



COMPARATIVE STUDIES
IN THE VALUE OF
HUMAN CAPITAL
IN AUSTRALIA AND JAPAN

By

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Statement of Original Nature of Thesis

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CONTENTS

	Page
Chapter 1 Background to the research	1
1.1 Introduction	1
1.2 The research approach	3
1.3 Justification for the research from a growth accounting perspective	6
1.4 Methodology	11
1.5 Outline of the thesis	12
Chapter 2 Literature review	14
2.1 Introduction	14
2.2 Theoretical issues in measuring human capital	16
2.3 Research in the estimation of human capital	27
2.4 Conclusion	55
Chapter 3 Methodology	57
3.1 Introduction	57
3.2 Human capital accumulation, national wealth and income	58
3.3 A Model for the estimation of human capital	67
3.4 Conclusion	72
Chapter 4 The data sources of estimation	74
4.1 Introduction	74
4.2 The data sources of Australia: population and vital statistics	76
4.3 The data sources of Australia: labour force, wage, GDP, and interest	83
4.4 The data sources of Japan: population and vital statistics	93
4.5 The data sources of Japan: labour force, wage, GDP, and	

interest	100
4.6 Conclusion	108
Chapter 5 Analysis of data	110
5.1 Introduction	110
5.2 Patterns of converted data	110
5.3 Estimation results	123
5.4 Conclusion	143
5.5 Further research	148
Statistical appendix	153
Statistical appendix A	155
Statistical appendix B	159
Statistical appendix C	243
Bibliography	336

The following symbols where shown in tables, mean:

- : Nil or not existent.
- ... : Not available (unknown).
- * : Where several items are summed, figures are presented only in the first column or in the last row and * is marked in other columns or rows as shown below.

Year	A	B	C
1985	X	*	
1986	Y	*	*

⇒ X=A+B
⇒ Y=A+B+C

Year	50~54	55~59	60~64
1985	X	*	*
1986		Y	*

⇒ X=50~64
⇒ Y=55~64

Age group	A	B	C
50~54	X	Y	Z
55~59	*	*	*
60~64		*	*
65~			*

↓ ↓ ↓
 X=50~59 Y=50~64 Z=50~

List of tables

- Table 1-1 : Annual Sources of Economic Growth
Table 1-2 : Contribution of Human Capital to Economic Growth
Table 2-1 : Private National Human Wealth
Table 3-1 : Average Growth Rates of Population in Australia and Japan
Table 3-2 : Labour Force Participation Rate
Table 5-1 : Improvement of Male Probability of Future Survival
Table 5-2 : Improvement of Female Probability of Future Survival
Table 5-3 : GDP in Australia and Japan
Table 5-4 : Total Value of Human Capital in Australia (\$ million)
Table 5-5 : Total Value of Human Capital in Japan (\$ thousand million)
Table 5-6 : Total Value of the Australian Human Capital by Use of Different Interest Rates (\$ million)
Table 5-7 : Total Value of the Japanese Human Capital by Use of Different Interest Rates (¥ thousand million)
Table 5-8 : Ratio of the Value of Human Capital to GDP
Table 5-9 : Growth of Male Human Capital by Age Group: Australia (1947=100)
Table 5-10 : Growth of Male Human Capital by Age Group: Japan (1947=100)
Table 5-11 : Growth of Female Human Capital by Age Group: Australia (1947=100)
Table 5-12 : Growth of Female Human Capital by Age Group: Japan (1947=100)
Table 5-13 : Human Capital and National Wealth (¥ thousand million)

Statistical appendices

Statistical appendix A: Background data of Chapter 1

- Table A-1 : Growth of Private Demand, Labour and Capital: Australia
Table A-2 : Distribution Income of Labour and Capital (\$ million): Australia
Table A-3 : Growth of Private Demand, Labour and Capital: Japan
Table A-4 : Distribution Income of Labour and Capital (¥ thousand million): Japan

Statistical appendix B

- Table B-1 : Male Population by Age (30th June)
Table B-2 : Female Population by Age (30th June)
Table B-3 : Male Probability of Survival (1 - Mortality Rate) from Aged 15 to Aged 64
Table B-4 : Female Probability of Survival (1 - Mortality Rate) from Aged 15 to Aged 64

- Table B-5 : Estimated Male Probability of Future Survival, Aged 15, 30, 45, and 60
- Table B-6 : Estimated Female Probability of Future Survival, Aged 15, 30, 45, and 60
- Table B-7 : Male Labour Force by Age Groups (thousands)
- Table B-8 : Males Not in the Labour Force by Age Groups (thousands)
- Table B-9 : Unemployed Males by Age Groups (thousands)
- Table B-10 : Rate of Male Unemployment by Age Groups Based on Census
- Table B-11 : Rate of Male Unemployment by Age Groups
- Table B-12 : Female Labour Force by Age Groups (thousands)
- Table B-13 : Females Not in the Labour Force by Age Groups (thousands)
- Table B-14 : Unemployed Females by Age Groups (thousands)
- Table B-15 : Rate of Female Unemployment by Age Groups Based on Census
- Table B-16 : Rate of Female Unemployment by Age Groups
- Table B-17 : Estimated Rate of Male Unemployment by Age
- Table B-18 : Estimated Rate of Female Unemployment by Age
- Table B-19 : Weekly Earnings of Full-time Male Workers (median earnings, \$)
- Table B-20 : Weekly Earnings of Full-time Male Workers (mean earnings, \$)
- Table B-21 : Weekly Earnings of Full-time Female Workers (median earnings, \$)
- Table B-22 : Weekly Earnings of Full-time Female Workers (mean earnings, \$)
- Table B-23 : Total Average Weekly Earnings (\$), 1946 to 1974
- Table B-24 : Estimated Yearly Earnings of Male Workers by Age (\$)
- Table B-25 : Estimated Yearly Earnings of Female Workers by Age (\$)
- Table B-26 : Gross Domestic Product, 1947 to 1996 (\$ million)
- Table B-27 : Principal Interest Rates of Australia (in percent per annum), 1946 to 1995
- Table B-28 : Value of Male Human Capital by Age Group (\$ million)
- Table B-29 : Value of Female Human Capital by Age Group (\$ million)

Statistical appendix C

- Table C-1 : Estimated Male Population by Age
- Table C-2 : Estimated Female Population by Age
- Table C-3 : Male Probability of Survival (1 - Mortality Rate) from Aged 15 to Aged 64
- Table C-4 : Female Probability of Survival (1 - Mortality Rate) from Aged 15 to Aged 64
- Table C-5 : Estimated Male Probability of Future Survival, Aged 15, 30, 45, and 60
- Table C-6 : Estimated Female Probability of Future Survival, Aged 15, 30, 45, and 60
- Table C-7 : Male Labour Force by Age Groups (ten thousand)
- Table C-8 : Males Not in the Labour Force by Age Groups (ten thousand)
- Table C-9 : Unemployed Males by Age Groups (ten thousand)

- Table C-10 : Rate of Male Unemployment by Age Groups
- Table C-11 : Female Labour Force by Age Groups (ten thousand)
- Table C-12 : Females Not in the Labour Force by Age Groups (ten thousand)
- Table C-13 : Unemployed Females by Age Groups (ten thousand)
- Table C-14 : Rate of Female Unemployment by Age Groups
- Table C-15 : Estimated Rate of Male Unemployment by Age
- Table C-16 : Estimated Rate of Female Unemployment by Age
- Table C-17 : Average Monthly Contractual Earnings of Male Workers by Age Groups (¥)
- Table C-18 : Estimated Annual Special Earnings of Male Regular Workers by Age Groups (¥)
- Table C-19 : Average Monthly Contractual Earnings of Female Workers by Age Groups (¥)
- Table C-20 : Estimated Annual Special Earnings of Female Regular Workers by Age Groups (¥)
- Table C-21 : Estimated Yearly Earnings of Male Workers by Age (¥)
- Table C-22 : Estimated Yearly Earnings of Female Workers by Age (¥)
- Table C-23 : Gross Domestic Product, 1947 to 1996 (¥ thousand million)
- Table C-24 : Official Interest Rate (in percent per annum)
- Table C-25 : Value of Male Human Capital by Age Group (¥ million)
- Table C-26 : Value of Female Human Capital by Age Group (¥ million)

List of figures

- Figure 1-1 : Trend of Residual (3-year moving average)
- Figure 2-1 : Lifetime Earnings at Different Discount Rates
- Figure 2-2 : Human Capital Earnings Profile
- Figure 3-1 : Components of Population Growth in Australia
- Figure 3-2 : Components of Population Growth in Japan
- Figure 4-1 : Australian Population Growth and Components of Growth, 1901~96
- Figure 4-2 : Japanese Population Growth and Components of Growth, 1901~96
- Figure 5-1 : Probability of Future Survival: Australian Male Aged 15
- Figure 5-2 : Probability of Future Survival: Japanese Male Aged 15
- Figure 5-3 : Probability of Future Survival: Australian Female Aged 15
- Figure 5-4 : Probability of Future Survival: Japanese Female Aged 15
- Figure 5-5 : Unemployment Rate: Australian Male
- Figure 5-6 : Unemployment Rate: Japanese Male
- Figure 5-7 : Unemployment Rate: Australian Female
- Figure 5-8 : Unemployment Rate: Japanese Female

- Figure 5-9 : Index of Wage: Australian Male
- Figure 5-10 : Index of Wage: Japanese Male
- Figure 5-11 : Index of Wage: Australian Female
- Figure 5-12 : Index of Wage: Japanese Female
- Figure 5-13 : Age-Wage Profile: Australian Male
- Figure 5-14 : Age-Wage Profile: Japanese Male
- Figure 5-15 : Age-Wage Profile: Australian Female
- Figure 5-16 : Age-Wage Profile: Japanese Female
- Figure 5-17 : Annual Growth of Human Capital in Australia
- Figure 5-18 : Annual Growth of Human Capital in Japan
- Figure 5-19 : Human Capital of Australian Male by Age Group
- Figure 5-20 : Human Capital of Japanese Male by Age Group
- Figure 5-21 : Human Capital of Australian Female by Age Group
- Figure 5-22 : Human Capital of Japanese Female by Age Group
- Figure 5-23 : Ratios Related to Human Capital and National Wealth



Chapter 1 Background to the research

1.1 Introduction

This thesis aims to estimate the total value of human capital in Australia and Japan. It is not an examination of theory. Rather, it examines in detail the data sources in Australia and Japan and develops a model by which estimates may be made to span as long a time series as the availability of reliable data will allow. The purpose of this work is to make an initial contribution to the analysis of the role of human capital in the process of economic development in the two nations.

Australia and Japan make an interesting pairing because, in any economic comparison between them, some sharp distinctions emerge. In particular, Australia is a country richly endowed with raw materials while Japan is not. This difference in the profile of their national wealth will likely have some effects on the process of economic development. Indeed, it is sometimes said that it is advantageous to be naturally endowed as in Australia. However, the experience of countries like Japan (and Germany) after World War II and some East Asian countries in more recent years suggest that other forces are also important in determining their economic success. It might be that, given the relative lack of endowed wealth, human capital has played a key role in the acceleration of economic growth in Japan and these like nations.

Australia and Japan provide not only contrasts but some important similarities. Despite that Australian wealth relies heavily on tangible, non-reproducible assets, while Japan's wealth focuses on human, intangible and reproducible assets, the standard of living in both countries is very similar and both operate with relatively sophisticated technology and skills. These facts provide the basis for interesting comparisons that will be brought out by the research of human capital.

The increasing emphasis given to human capital in economic development finds ready substantiation in the work of a number

of authors. Lester Thurow for one considers that human capital is becoming the pre-eminent determinant of economic success:

“Historically, individuals, firms and countries became rich if they possessed more natural resources, were born rich and enjoyed the advantages of having more capital (plant and equipment) per person, employed superior technologies, or had more skills than their competitors. Putting some combination of these four factors together with reasonable management was the route to success. ... Now new technologies and new institutions are combining to substantially alter these four traditional sources of competitive advantage. Natural resources essentially drop out of the competitive equation. Being born rich becomes less of an advantage than it used to be. Technology gets turned upside down. New product technologies become secondary; new process technologies become primary. And in the twenty first century, the education and skills of their workforce will end up being the dominant competitive weapon”. (Thurow, 1993, pp. 39-40)

Investment to increase the value of human beings may be becoming more important than both endowments and investments in the physical capital stock. This provides the justification and impetus for my research.

My purposes can be set against the intentions of previous researchers. According to Bernard Kiker, there are a number of reasons why economists have considered human beings as capital and have valued them in monetary terms. These are:

- (1) To measurably demonstrate the power of a nation;
- (2) To determine the economic effects of education, health and migration;
- (3) To propose tax schemes believed to improve equity;
- (4) To determine the total cost of war;
- (5) To increase awareness of the need for life and health conservation measures and of the economic importance of an individual life;
- (6) To aid courts and compensation boards in making fair decisions in cases dealing with compensation for personal injury and death.

(Wykstra, 1971, p. 3)

Clearly, my purposes are different in that they are broader. I intend to contribute to our understanding of economic development by making an international comparison of the value of human capital in Australia and Japan. To do this requires making consistent and, wherever possible, matching estimates over a relatively long time period. This will provide some of the basic data for a more detailed assessment of the process of economic development in these two very different economies.

1.2 The research approach

In his article Bernard Kiker names 56 economists who, in the history of economic thought over the period 1690 to the 1960s, considered human beings or their skills as capital.¹ From these works we see that there are two fundamental methods for calculating the value of human capital in monetary terms and these will concern us in subsequent chapters. One is the cost-of-production approach and the other is the capitalized-earnings approach. The cost-of-production approach consists of estimating the real costs incurred in producing, educating and maintaining a human being. The capitalized-earnings approach estimates the present value of an individual's future income stream.

The first economist to estimate the value of a human being was William Petty and his estimation was made around 1691. William Farr, Louis Dublin, Alfred Lotka, Ernst Engel, and Theodor Wittstein, and others subsequently added to the work. These authors developed a wide range of methods and have pursued a wide range of differing motivations, as Kiker's listing suggests.

¹ These included William Petty, Adam Smith, Jean Baptiste Say, John Stuart Mill, Nassau Senior, Friedrich List, Johann H. von Thunen, William Roscher, Walter Bagehot, Ernst Engel, Henry Sidgwick, Leon Walras, Alfred Marshall, Irving Fisher, Theodore Schultz, Gary Becker, among others.

After the 1960s, the idea of human capital has developed within the field of the economics of education. Theodore Schultz (1961, 1971), Gary Becker (1964) and Jacob Mincer (1974) are well-known pioneers in the field. The growth in this field of research is revealed in the fairly comprehensive annotated bibliography by Mark Blaug published in his book, *The Methodology of Economics*. In 1966, the bibliography contained 800 items; the second edition published in 1970, contained 1,350 items, and the third 1976 edition almost 2,000 items. Blaug describes how the economics of education spread rapidly:

“(until what) Mary Jean Bowman aptly called “the human investment revolution in economic thought” of the 1960s, it was not common to treat expenditures on such social services as health and education as analogous to investment in physical capital; certainly no one dreamed in those days of finding common analytical grounds between labor economics and the economics of the social services”. (Blaug, 1992, p. 207, parentheses added)

Blaug continues by pinpointing the key functional relationship found in the economics of education that goes to the heart of the human capital investment decision:

“the principal theoretical implication of the human capital research program is that the demand for postcompulsory education is responsive both to variations in the direct and indirect private costs of schooling and to variations in the earnings differentials associated with additional years of schooling”. (ibid., p. 208)

This responsiveness suggests a functional relationship between the net benefits of education and the amount of it undertaken. In this formulation, the costs of education include not just direct schooling costs but also the income foregone, i.e., if the person had not been in education then they could be working and earning. On the other side of the ledger, the returns to the investment in human capital come from the higher earnings that the person will receive during his or her working life. Thus we can conceive of a set of lifetime income profiles for holders of various amounts of education and

examining and describing these profiles has been one of the aims of the human capital research program. Another has been to evaluate the profitability of investment in human capital. This requires finding the discount rate that equalizes the present value of the returns to the present value of the costs of investment and may be defined as the private rate of return on education.

However, the interest in investment in human capital is not merely to assess its self-interested rationality. The costs and benefits that accrue to society from investment in education have provided a further important purpose in the study of human capital. In addition, as already indicated, this study is particularly interested in estimating human capital to help understand its link to economic growth. Although a large number of studies have been made of human capital, little is known about it in terms of both the international comparisons and its macro economic impacts. By providing newly compiled data and doing so on a consistent basis for Australia and Japan, this study will contribute further to understanding that link. By improving our estimates of human capital and our understanding of its accumulation in the process of economic growth, we can lay the foundations for a more detailed study of the economic growth of nations.

This thesis is an attempt to supply that information. It differs from that of the economics of education in that, rather than examining the costs of acquiring human capital assets, it employs the capitalized-earnings approach to measure the value of human capital in terms of the benefits it creates. As will be described, this approach is adopted because we can acquire the necessary data to estimate the present value of future income for any individual in both countries and we can do so for longer periods than with data on costs. As such, it makes a significant contribution to the field of study.

1.3 Justification for the research from a growth accounting perspective

The next introductory matter is to attempt to indicate the general significance of human capital in economic growth. Investigating the contribution to growth which, it can be argued, is made by investment in human capital does this. To do so I employ the production function or growth accounting approach originally elucidated by Edward Denison (1976).

A production function is one of tools used typically in economics. It shows the relationship between output (usually GDP) and factor inputs (usually labour and capital) assuming a given technology. A production function therefore expresses the relation between a volume of a flow variable and the volumes of stock variables. 'Growth accounting' uses the national production function to relate stocks of factor inputs to the growth of economic output. It is based on the idea that if the economy can be described by a simple production function, then economic growth can be split up into changes in the various inputs, plus a residual. This residual is especially important here and can be interpreted as a measure of growth due to technical change, i.e., to advances in knowledge and skills. Both technical change and advances in knowledge depend on the degree of development of human capital in a country. In other words, we may treat both technical change and advances in knowledge as the results of improvement of human capital and their importance as estimated by the residual in growth accounting. But, as shall be explained, the contribution of human capital is greater than just this residual. It also includes increases in the stock of human labour and these two items are summed to give the total growth effect.

We can examine this approach by conceiving firstly:

$$G(Y) = \alpha \cdot G(L) + \beta \cdot G(K) + G(R); \quad \alpha + \beta = 1 \quad (1-1)$$

where Y , L , K , R , α and β are private sector output, private sector labour, private sector capital and the residual, the relative income share of labour and the relative income share of capital in the private sector respectively, and $G ()$

represents the growth rate of any variable specified inside the parentheses (for example, $G(Y) = \Delta Y/Y$).

The equation is based on the assumptions that factor prices are competitively determined, there are constant returns to scale, disembodied technological progress and Hicksian neutrality.

Using data shown in the statistical appendix to Chapter 1 (Appendix A) it is possible to calculate the contribution of each factor of production in Australia and Japan based on changes in the stock of each and weighted by their factor incomes (This method is further described in Appendix A). The income growth not so explained is the residual and this is taken to indicate the importance of improvements in human capital assets. The results are presented in Table 1-1 and Figure 1-1 for Australia and Japan.

Table 1-1 indicates the annual values of sources of economic growth in the two countries. Data in Table 1-1 represent the ratio of the contribution of each factor to the total change in income, i.e., $\alpha \cdot (\Delta L/L)$, $\beta \cdot (\Delta K/K)$ and $\Delta R/R$ and therefore sum to 100%.² During the period of observation, annual values of $\Delta R/R$ have been unstable and this is a common feature in both countries. The maximum value of $\Delta R/R$ for Australia is 77.1% and the minimum value is 0.3% for Australia, and for Japan it is 78.4% and 2.7% respectively.

This irregularity makes analysis more difficult. To smooth the irregular movement of residuals, we apply a three-year moving average to the basic data for both countries. Figure 1-1 indicates the results of this calculation. It tells us that the Japanese values of the residual have a tendency to fluctuate markedly compared to Australian values. In terms of the moving average, the results show that Australia's maximum value of $\Delta R/R$ is 61.3% and the

² In Table 1-1, there is a discrepancy in Australian data on Y (private demand) and K (net capital stock), because of differences in the base year. That is, for the period 1970~71 to 1983~84, data on private demand and net capital stock are based on the prices of 1979~80, while, after 1985~86 they are based on prices of 1989~90. Japanese data are based on the market prices of 1990.

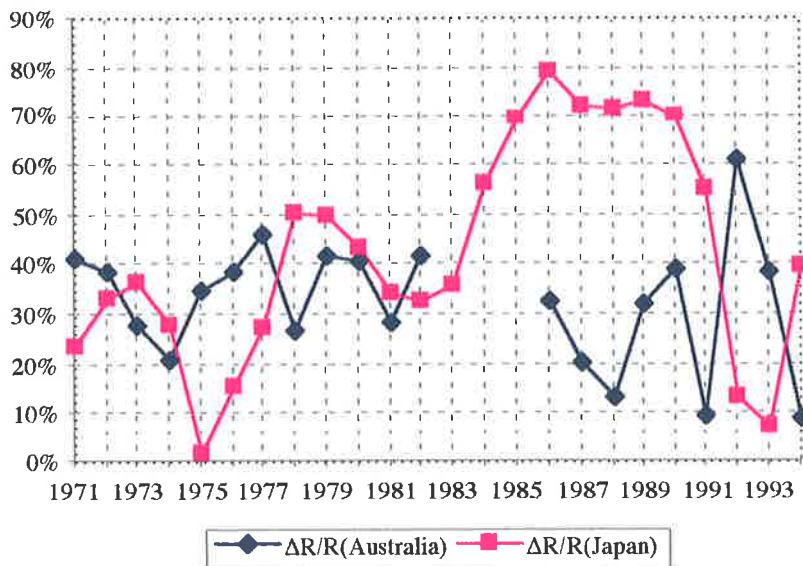
minimum value is 9.0%, while for Japan those values are 79.0% and 1.5%, respectively.

There is much that could be said in a more detailed examination of these residuals. However, we will not go too far into it here because the immediate purpose is somewhat limited. Suffice to say of growth accounting, that interpreting the residual is a complex matter and will likely vary among analysts. However, we want only to use recent movement of the residuals for the two countries as a proxy for the quantity of human capital so as to indicate its relative importance.

Table 1-1: Annual Sources of Economic Growth

Year	Australia			Japan			Year
	$\beta(\Delta K/K)$	$\alpha(\Delta L/L)$	$\Delta R/R$	$\beta(\Delta K/K)$	$\alpha(\Delta L/L)$	$\Delta R/R$	
1970~71	39%	43%	18%				
1971~72	49%	6%	45%	68%	3%	29%	1971
1972~73	37%	9%	54%	55%	1%	44%	1972
1973~74	50%	42%	8%	42%	8%	50%	1973
1974~75	44%	13%	43%	39%	49%	12%	1974
1975~76	16%	37%	46%	43%	46%	12%	1975
1976~77	42%	10%	48%	46%	50%	4%	1976
1977~78	38%	15%	47%	45%	34%	21%	1977
1978~79	21%	6%	73%	31%	18%	51%	1978
1979~80	46%	32%	22%	22%	16%	62%	1979
1980~81	45%	47%	7%	70%	16%	14%	1980
1981~82	42%	33%	25%	64%	20%	16%	1981
1982~83	30%	23%	46%	25%	14%	61%	1982
1983~84	10%	19%	71%	33%	64%	3%	1983
1984~85	16%	47%	37%	20%	47%	33%	1984
1985~86	29%	23%	47%	14%	8%	78%	1985
1986~87	22%	53%	25%	24%	3%	73%	1986
1987~88	16%	57%	27%	19%	11%	70%	1987
1988~89	12%	57%	30%	16%	11%	73%	1988
1989~90	28%	38%	35%	21%	6%	73%	1989
1990~91	36%	32%	33%	24%	0%	76%	1990
1991~92	13%	51%	36%	38%	8%	54%	1991
1992~93	16%	25%	59%	33%	35%	32%	1992
1993~94	15%	35%	50%	19%	78%	3%	1993
1994~95	25%	72%	3%	42%	26%	31%	1994
1995~96	29%	25%	46%	9%	15%	75%	1995

Figure 1-1: Trend of Residual (3-year moving average)



We have already seen that the residual is highly unstable in both nations and that it can be highly significant. Also, as previously indicated, the importance of human capital is not just that indicated by the residuals. It also includes change in the stock of labour. In other words, the sum of two sources, that is, the total quantities of both $\Delta R/R$ and $\alpha \cdot (\Delta L/L)$, indicate the total contribution of human capital to economic growth. This then allows us to look at each stage of economic growth in terms of the contribution of two large factors: human capital and physical capital ($\beta \cdot [\Delta K/K]$).

Using the values given by the three-year moving average, we obtain figures presented in Table 1-2. From Table 1-2, the values of physical capital of Australia and Japan are less than 50%, if we exclude observations from several early years in the series. This is an important observation: that the ratio of physical capital to total economic growth has trended downwards in the long-term and now the major contribution to growth is made by non-physical, human capital. In other words, the role of human capital to economic growth has been increasing.

Table 1-2: Contribution of Human Capital to Economic Growth

Year	Australia				Japan				Year
	$\alpha(\Delta L/L)$	$\Delta R/R$	(1)+(2)	$\beta(\Delta K/K)$	$\alpha(\Delta L/L)$	$\Delta R/R$	(1)+(2)	$\beta(\Delta K/K)$	
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	
1971~72	14%	41%	56%	44%	2%	24%	25%	75%	1971
1972~73	11%	39%	49%	51%	2%	33%	35%	65%	1972
1973~74	10%	28%	38%	62%	11%	36%	47%	53%	1973
1974~75	23%	21%	44%	56%	24%	28%	52%	48%	1974
1975~76	33%	35%	68%	32%	37%	2%	39%	61%	1975
1976~77	27%	39%	66%	34%	13%	16%	29%	71%	1976
1977~78	12%	46%	58%	42%	32%	27%	60%	40%	1977
1978~79	22%	27%	48%	52%	20%	51%	71%	29%	1978
1979~80	20%	42%	62%	38%	18%	50%	68%	32%	1979
1980~81	22%	41%	63%	37%	19%	43%	62%	38%	1980
1981~82	41%	28%	70%	30%	17%	34%	51%	49%	1981
1982~83	33%	42%	75%	25%	31%	33%	63%	37%	1982
1983~84	-	-	-	-	39%	36%	75%	25%	1983
1984~85	-	-	-	-	23%	56%	79%	21%	1984
1985~86	-	-	-	-	11%	70%	80%	20%	1985
1986~87	49%	33%	81%	19%	2%	79%	81%	19%	1986
1987~88	61%	20%	82%	18%	10%	72%	82%	18%	1987
1988~89	64%	13%	77%	23%	10%	72%	82%	18%	1988
1989~90	40%	32%	72%	28%	7%	73%	80%	20%	1989
1990~91	26%	39%	65%	35%	4%	70%	75%	25%	1990
1991~92	52%	10%	61%	39%	8%	55%	63%	37%	1991
1992~93	18%	61%	80%	20%	46%	14%	59%	41%	1992
1993~94	47%	38%	85%	15%	60%	8%	68%	32%	1993
1994~95	64%	9%	73%	27%	39%	40%	79%	21%	1994

Growth accounting is useful in indicating the importance of human capital and in providing justification for this study. However, it gives us information relating to the role of human capital only in the form of a ratio. My concern is not to compute the ratio of human capital provided by growth accounting but rather to estimate more accurately the annual monetary worth of human capital and to provide long-term comparisons between the two dissimilar nations of Australia and Japan. Such information should help in interpreting the picture of the economic activity of nations. However, to do so we need a model for estimation that both reflects sound theory and is practical from a measurement point of view. The theory will be reviewed in detail in the following chapter. Here, we will examine a summary of the model (a more detailed exposition is provided in Chapter 3).

1.4 Methodology

The basic model that I propose uses the capitalized-earnings approach, that is to say, the income approach. The income approach values the stock of human capital in terms of the earnings it provides and values human capital as the increase in income flow that it creates. The present value of investment in human capital is seen as the product of the probability of it producing a level of earnings in all subsequent time periods, discounted by the rate of interest and some uncertainty premium. This approach is shown in the equations (1-2) to (1-4).

The basic model relies on data that show income levels by age and is based on the proposition that the value of a nation's stock of human capital is equal to the expected lifetime labour income for its entire people from ages 15 to 64.

We may define the lifetime income for a given age group according to equation (1-2). For those aged 15 years, for example, the value of lifetime labour income can be defined as the sum of average incomes for all employed people as old or older, up to the age of retirement, that is, 65 years of age. Therefore,

$$\begin{aligned} & \text{the value of lifetime labour income of people aged 15} \\ & = \text{the sum from 15 to 64 of [(mean income at each age)} \\ & \quad \times \text{(the number of 15 year old people)]} \quad (1-2) \end{aligned}$$

However it is not certain that any individual will survive up to 65 years and so we must discount this sum by the average probability of survival for each year. Furthermore, we have to consider another uncertain factor that we face through our working lives, i.e., the rate of unemployment that must also be introduced into the equation. Hence, so we must discount the sum from 15 to 64 of (mean income at each age) \times (the number of persons at each age) by the 1-unemployment rate (that is, the average probability of acquiring income) for each year as well as the average probability of survival. Therefore,

$$\text{the value of lifetime labour income of people aged 15}$$

$$= \text{the sum from 15 to 64 of [(mean income at each age) } \\ \times (\text{the number of persons at each age}) \times (\text{mean probability} \\ \text{of survival from year to year } + n) \times (\text{mean probability of} \\ \text{earning income from year to year } + 1)] \quad (1-3)$$

Finally the present value of this income stream can be calculated for each group using an appropriate rate of discount, the equation becomes:

$$\text{Present value of lifetime labour income of ages 15} \\ = \text{the sum from 15 to 64 of [(mean income at each age) } \\ \times (\text{the number of persons at each age}) \times (\text{mean probability} \\ \text{of survival from year to year } + n) \times (\text{mean probability of} \\ \text{earning income from year to year } + 1) \div (1 + \text{discount} \\ \text{rate})^{\text{age} - 15}] \quad (1-4)$$

As we will discuss later, there are many data restrictions which necessitates some modifications to this simple model. In particular, it is difficult to acquire annual data on income and unemployment for every age and by gender. Consequently, we have to modify the approach. Thus my estimation of the stock of human capital in Australia and Japan is developed utilizing modified data, which I shall call 'converted data'.

1.5 Outline of the thesis

The plan of this thesis is as follows: firstly, Chapter 2 surveys the relevant literature. It is not a comprehensive survey of studies in human capital but, rather, the literature has been selected because of its usefulness for my research. In particular, the survey focuses on that literature which includes suggestions about how to estimate human capital.

Next, Chapter 3 describes the methodology I have selected and propounds the basic equations I will use in estimating human capital. Chapter 3 is therefore an exposition of my basic model for estimating human capital.

Chapter 4 discusses the sources of data that may be used in estimating human capital in Australia and Japan. In particular, it investigates the definition, availability and reliability of time series data on population, mortality, unemployment and earnings by age and gender from 1947 to 1995. In the instances where we cannot obtain continuous data, estimates are constructed for some values for some years or for some age groups. Chapter 4 also explains the method of estimating those values.

Finally, Chapter 5 consolidates the converted data that has been proposed in making the estimation and provides the results of those estimations of the value of human capital in Australia and Japan. It also contains some interesting facts and comparisons that emerge. Those are briefly analysed and the chapter concludes with a discussion of further research that I intend to develop.

The statistical appendices contain the detailed data on Australia and Japan used in my thesis with the converted data shown generally in red.

Note

1. Kiker, B. F. (1966), "The Historical Roots of the Concept of Human Capital", in *Human Capital Formation and Manpower Development*, Wykstra, R. A. (ed.), New York: The Free Press, 1971.

Chapter 2 Literature review

2.1 Introduction

This chapter summarizes some of the theoretical issues pertaining to the measurement of human capital and looks at some alternative approaches to its estimation. We start with a review of the theoretical issues established by the neo-classical approach and, particularly, at the development of theoretical issues that have arisen from the economics of education. Next, we examine alternative views, some of which challenge the neo-classical approach. In section 2.3, we examine the estimation problems that commonly arise in the measurement of human capital. This then leads to the selection of an approach for this study, based on the criteria of usefulness in overcoming problems in estimation. The process will also highlight the strengths and limitations of each approach. However, before examining theoretical matters, it is useful firstly to make clear the rational decision rules said to be fundamental in the accumulation of human capital.

In the literature on the economics of education two methods of calculating returns to an investment are said often to appear (Leite et al, 1969, pp. 84-87). Firstly, there is the internal rate of return method (IRR) which calculates the discount rate that equates the costs and returns of investment of human capital. It is the value for IRR that conforms the following equation:

$$C = [R_1 \div (1+IRR)] + [(R_2 \div (1+IRR)^2)] + \dots + [(R_n \div (1+IRR)^n]$$

where C = costs of investment, R_n = net returns from the investment in year n and because the costs are incurred over a period of time, they are discounted using an appropriate interest rate.

The investment criteria arising from this method are as follows:

- (a) invest as long as $IRR > r$, where r is the rate of interest reflecting the opportunity cost of the investment expenditure,
- (b) rank alternatives according to their internal rate of return.

Secondly, Leite isolates the net discounted present value method (NPV) under which the value is established by discounting the returns by the appropriate discount rate (d) such that:

$$\text{NPV} = -C + [R_1 \div (1+d)] + [(R_2 \div (1+d)^2)] + \dots + [(R_n \div (1+d)^n)]$$

When the costs are incurred over a period of time, they should also be discounted. The investment criteria of this method are as follows:

- (a) invest as long as NPV is positive
- (b) rank alternatives according to NPV

There is a range of difficulties associated with these methods. However, one matter is particularly important and recurs within this study:

“The choice of discount rate is crucial to both methods. Conceptually, for an individual, it should represent the opportunity cost of the investment, that is, it should be the rate of return on the next best alternative. With imperfect capital markets and a variety of interest rates the precise rate to be chosen is not clear, but for long term investment (for example, in education) the yield on undated government stock can be taken as a fair approximation. Theoretically, the rate should reflect society’s time preference and also the opportunity cost of funds drawn from the private sector. In the real world the two do not coincide, the latter always tending to be greater, and a policy decision is required to select the rate. In practice the choice tends to be arbitrary, but tends to approximate the yield on undated government stock”. (Leite et al, 1969, pp. 86-87)

Using this basic exposition as background, we now turn to an examination of the theoretical issues.

2.2 Theoretical issues in measuring human capital

We begin this section with a review of the main points from the neo-classical approach to human capital. According to the neo-classical literature, human capital is measured by the value of the additional production that results from investment in human capital assets, that is, the marginal product of labour (MP_L). This means that human capital can be valued according to the following simple equation:

$$HK = MP_L \div IRR \quad (2-1)$$

where

HK = value of human capital

MP_L = marginal product of labour

IRR = internal rate of return of human capital (the internal rate of return is the interest rate which would bring the net present value of an asset is zero).

Now if the market for human capital is in equilibrium, the condition of MP_L and IRR become,

MP_L = wage, and IRR = rate of interest = r ,

then, equation (2-1) becomes:

$$HK = \text{wage} \div r \quad (2-2)$$

This equation suggests that the measurement of human capital requires,

- (1) estimates of the expected costs and benefits of each type of investment and the probabilities associated with these expectations, and
- (2) an assumed discount rate.

The benefits will be in the form of higher future income (which, under equilibrium assumptions, is the same as higher MP_L). The costs are the direct costs of the investment activity plus the opportunity costs (that is, wages foregone). The discount rate is the real, long-term rate of investment.

If we assume that the actual outcomes are equilibrium outcomes, this technique can be considered simple and generates immediate results, i.e., in Australia, the total wage bill in 1995~96 was about

\$206 billion and the real rate of interest was almost 4.7%. In Japan, the amount of wage in 1995 was about ¥28.477 trillion and the real rate of interest was 2.6%. Hence, the value of human capital in each nation becomes,

$$\text{HK (Australia)} = 206 \div 0.047 \approx \$4.4 \text{ trillion}$$

$$\begin{aligned} \text{HK (Japan)} &= 28.477 \div 0.026 \approx \text{¥}1,095 \text{ trillion} \\ &\approx \$12.7 \text{ trillion (expressed by the exchange rate} \\ &\quad \text{at the end of 1995)} \end{aligned}$$

However these estimates may be criticized on the ground that markets are not a perfectly competitive equilibrium, that is,

$$\text{MP}_L \neq \text{wage, and IRR} \neq \text{rate of interest}$$

Disequilibrium conditions may exist both in Australia and Japan for many reasons, indeed for any reason that contravenes any of the assumptions of perfect competition. Therefore, we have to find an alternative approach for estimating human capital. In order to do so we will examine the literature to see how others have dealt with the limitations of the neo-classical approach.

We begin with a review of the theoretical issues that arise from debate in the economics of education. To do so we firstly make use of Mark Blaug's review (Blaug, 1985). According to his article, the basic, causal mechanism of the economic effects of education developed by the neo-classical view may be summarized in the following line of causation: education leads to increased human capital assets which increases the marginal product of labour and therefore increases income.

This simple relationship is consistent with the marginal productivity theory of income distribution, that is, that all factors of production (land, labour and capital) are paid their marginal products. It is supported by data, which show that education and income levels are positively correlated. However, Blaug explains how other researchers (often not economists) have challenged the neo-classical view. We will examine four such hypotheses as examples of these alternative views. These are: the Marxist view,

the screening hypothesis, the internal labour market hypothesis and the labour market segmentation hypothesis.

The Marxist view is critical of the line of causation drawn from the neo-classical view. Marxists argue that education is not primarily intended to raise productivity. Rather, education aims to socialize children (see, for example, Samuel Bowles and Herbert Gintis, 1976). It divides pupils into 2 groups: one of which have characteristics consistent with social elites (that is, capitalists) and are “streamed” into educational courses which teach them the leadership qualities required of the management and ownership class. The second (much larger) group are “streamed” for low skill, low wage jobs. This implies that education is largely economically irrelevant, i.e., it does not aim to increase the productive abilities of pupils but to divide them into workers and capitalists. Conclusive evidence for the Marxist view would be difficult to collect. However, if the approach were valuable we would expect it to be reflected in the attitudes of employers (i.e., employers would care less about what potential workers know than how they behave). Further, the hypothesis might be examined via the relationship between economic growth and changes to the education system (i.e., it would be expected that the education system would not teach relevant skills which must change with economic growth but would rather teach a social orientation which does not change directly in economic development). Finally, there will be no meaningful relationship between skills required on the job and education (i.e., the Marxist position is stronger the more true it is that skills are taught not at school but in the first few weeks on the job).

Turning now to the screening hypothesis (see, for example, Richard Layard and George Psacharopoulos, 1974), it begins by accepting the proposition that increased education leads to increased income but rejecting the neo-classical view that this link is created by the association of education with higher productivity. In other words, highly educated people might be paid more but not necessarily because they are more productive. Education is conceived as a screen or filter by which employers overcome their

lack of information about potential new employees. Education is therefore taken as a proxy for ability. Note that education might be only one such screen. Employers could also use age, gender, race, and so on, as additional proxies for ability. The strong correlation often observed between education and income is then interpreted as indicating that education is the most commonly used screen and this partly because it is socially acceptable.

The screening hypothesis leads to a number of predictions. For example, the hypothesis predicts that incomplete education does not increase income, i.e., employers will treat failure to complete a course as evidence of poor ability. However, data suggests that people with incomplete university degrees have higher incomes than those who do not start. The hypothesis also suggests that education will be positively associated with starting salaries but, over time, the association between education and income will weaken, i.e., employers realize that education is only a proxy for ability and once an employee has started work, his/her ability is measured more directly. However, the evidence suggests that the association continues throughout the worker's life. This has led to modifications to the screening hypothesis, directing attention to the determinants of promotion within the firm. A further prediction would be that education will not be positively associated with income for the self-employed because, for these people, there is no need for a screen. However, data suggests that better educated, self-employed people earn higher incomes. Finally, the screening hypothesis suggests that employers will establish cheaper proxies for ability, i.e., education is expensive to provide and unreliable as a substitute for information about ability and therefore employers will look for another proxy. However, education remains a widely accepted indicator of ability.

We can take from this brief review that there is some association between income and education and that the screening and Marxist hypothesis are, at best, only partial explanations. The question then arises as to what determines an individual lifetime income. Researchers have suggested two further factors that might account for the observed income profile: the internal labour market

hypothesis and the labour market segmentation hypothesis. These are thought to modify the impact of education on earnings.

The internal labour market hypothesis (see, for example, Lane V. Rawlins, and Lloyd Ulman, 1974) arises because, in explaining the lifetime income of individuals, it appears to be necessary to consider the way in which wages are determined within a firm. It is proposed that firms create an internal mechanism for promotion so that labour is hired for low paid and entry positions and lifetime income is determined by subsequent promotion. It is suggested that the internal labour market arises for a range of reasons: to improve the morale of workers, improve the efficiency of hiring (the firm always hires to fill the most basic positions), and to reduce reliance on using education as a screen (education might determine initial training but promotion and lifetime income will depend on the internal labour market).

The labour market segmentation hypothesis (see, for example, Edmund Phelps, 1972) addresses the observation that, while on average education is positively associated with income, there is a great dispersion of wage levels about the mean for any given level of education. The labour market segmentation hypothesis suggests that the impact of education on income is modified by other forms of statistical discrimination (for example, by gender, race, and so on) to segment the labour market. If this were so then two predictions arise: firstly, well-paid jobs will be positively correlated with factors other than education. This appears to be true. There is, for example, a strong correlation between income and gender. Secondly, there will be little mobility between well defined job clusters, that is, few women will begin as low paid workers but end up high paid managers. However, the evidence suggests this is not so.

There are a number of implications in these alternatives, non-neo-classical viewpoints. For example, it seems clear that education does not create human capital assets designed only to meet the needs of production. In other words, education has purposes other than increasing productivity alone. Hence, educational policies may

be fitted to a wide range of growth rates. Further, if the internal labour market hypothesis were correct, it would suggest that firms are more concerned to create high morale and cooperation among its workers than to expand each individual's stock of human capital. So, for example, we might expect firms faced with a downturn to sack some workers (especially minority groups if the labour market segmentation hypothesis holds) rather than reduce the wages of all employees because, while the latter course would reduce the morale of all workers, the former only demoralizes dismissed minorities. It is an interesting empirical question whether firms actually do apply the labour market segmentation hypothesis based on education but one that does not concern us centrally here.

We turn now to examine another alternative: Thurow's view of investment in human capital (Thurow, 1970). Thurow examines both the theoretical and estimation problems in the measurement of human capital. He is interested in human capital for four reasons: to provide estimates of an economy's total resources; to determine the optimal level of investment in human capital; to explain economic growth; and, to explain the income distribution.

Thurow defines human capital in a way consistent with physical capital, that is, its value is equal to its productive services or the value of the goods and services it produces. To examine the correct or optimal level of investment and to estimate the value of the stock of human capital, Thurow explains that:

price of human capital assets
 = the present value of the net future income stream derived
 from human capital discounted by the rate of interest and
 allowances for risk and uncertainty. (2-3)

Now, if it is a perfectly competitive world, the $MP_L = \text{wage}$, and:

future income stream
 = productive value of human capital
 = value of goods and services produced (2-4)

That is, labour can earn extra income from investment in human capital equal to the additional value of goods and services it produces. However, if there is imperfect competition, overinvestment or (more likely) underinvestment can result. Nevertheless to determine the right level of investment, Thurow begins by assuming the world is perfectly competitive.

As we have seen, it is rational to invest in human capital if the net income stream (discounted into the future) is positive. This is the same as stating that it is rational to invest if the internal rate of return (IRR) is greater than the interest rate. Investments are made and human capital accumulates until the point is reached where the IRR becomes to equal the interest rate. Then, in a perfectly competitive world, the value of the stock of human capital (HK) is equal to the ratio of the wage rate to the IRR, that is, the neo-classical relationship we have seen before:

$$HK = \text{wage} \div \text{IRR} \quad (2-5)$$

But, in the real world, markets are imperfect. For instance, if the marginal productivity of labour does not equal the wage, then, individuals will not invest just the right amount to achieve equilibrium. Other sources of market failure lead to sub-optimal investment decisions. For example, access to finance may be different to that which obtains under perfect competition. In addition the IRR is very difficult to estimate which makes this simple approach less useful.

Next, Thurow establishes that there is not one price for human capital but many. These variations further indicate imperfections in markets. Thurow also shows that the technical relations in producing human capital are not known. For example, we do not know how a specific increase in education expenditure will affect the ability of people to acquire skills. This means that there is great uncertainty in the relationship between investment in human capital and the marginal productivity of labour.

In addition, Thurow investigates the decision to invest. He shows the decision to invest depends on current income, interest rates

(and access to finance) and individual's time preferences. Thurow suspects that imperfections in the capital market lead to underinvestment in human capital. In particular, those individuals will not invest at the optimal rate because they are unable to gain access to sufficient finance.

Thurow also considers the role of the firm. He shows how the individual will invest to increase the present value of lifetime incomes and he adds the important point that the firm will also invest. Firms will do so partly to increase the marginal productivity of human capital and appropriate some gain for themselves and partly to increase the marginal productivity of capital, i.e., labour and capital are complementary. To the extent that firms gain through such investment, these benefits provide additional reasons for investment. These are reasons, which are not relevant to individuals, and therefore which will lead to underinvestment if individual decisions are relied upon.³

In addition, Thurow argues that firms have better access to finance and other factors that make them more able to invest in human capital than individuals. Therefore they have an important role in enhancing the investment in human capital. Nonetheless, he argues that the level of investment may still be less than optimal and the distribution of human capital investment may be inequitable. Both suggest that government might also have some role in achieving the optimal level of investment. The role for government in providing investment in human capital arise partly to achieve non-economic objectives (that is, equity and fairness), partly because of externalities associated with education (for example, benefits to society that individuals or firms undervalue) and partly because imperfections in the capital market lead firms and individuals to underinvest.

³ This view provides a critical perspective on Becker's distinction between general and specific training. Becker (1964) argued that firms will provide no general training because it is transferable to other firms. But Thurow points out that because they may have monopoly powers, firms may appropriate some of the gains in marginal productivity of labour that result from such training. Further, general training increases the marginal productivity of capital and this provides gains to the firm and, finally, general and specific training are not mutually exclusive. Hence, the sharp distinction drawn by Becker is not justified.

In short, Thurow's work shows that there will be underinvestment in human capital by the individual and the governments and companies should also invest. Imperfect competition means that rational individual decisions alone will lead to sub-optimal investment. This failure may arise due to any one or all of the following:

- (1) The price of labour is not right (that is, $MP_L \neq \text{wage}$). The monopolistic power of employers allows them to pay $\text{wage} < MP_L$, then individuals cannot gain the full benefits of their investment and will underinvest.
- (2) In addition the wage rate will not reflect the complementarity of labour and capital because of measurement problems, i.e., investment in human capital increases the marginal product of capital but it is difficult to measure how much of the increase is due to changes in human capital.
- (3) The price of finance is not right. Imperfections in the capital market mean that to borrow for investment in human capital will require the payment of an interest rate that is higher than for other investment opportunities. This leads to underinvestment and suggests either companies or governments have a role in assisting with access to finance.
- (4) Some of the benefits of investment are not measured, that is, are unpriced. These include benefits that accrue to society (so called externalities) from investment in human capital, i.e., society benefits in many ways from more educated people and these benefits are unpriced and ignored by individuals in their decision to invest.

Thurow provides a range of reasons that suggest how difficult it is to determine the right level of investment in human capital or to calculate the actual rate of return. As implied by equation (2-5), this means we cannot value the stock of human capital. In addition to these problems arising from various forms of market failure, Thurow also makes the following criticisms of the simple neo-classical line of causation previously provided.

Firstly, the theoretical position assumes that earnings are maximized when it is better to assume that humans maximize utility. Secondly, the existence of complementary consumption goods complicates the position, i.e., in the process of investing in human capital assets or producing with human capital assets, utility is affected by goods consumed at the same time. For example, students are investing in human capital but might also be enjoying (that is, consuming) schooling at the same time. To calculate how much schooling they should undertake we must take into account both the utility from future earnings and the utility from current consumption that results from schooling (of course, schooling may be disliked, i.e., it might create disutility). This is the problem of joint products.

Thirdly, there is the problem of self-produced consumption: Investment in human capital might increase the ability of people to produce non-marketed goods but because these are unpriced we have no way of including them in our calculation of the optimal level of investment (this is a matter to which we return below). Fourthly, changing preferences also create difficulties. People maximize utility and utility depends on tastes and preferences but our tastes and preferences change in ways that we cannot predict. This makes the *ex ante* value of human capital impossible to determine, that is, its value before investment is undertaken is highly uncertain (By contrast, the assumption of perfect competition include that tastes are known and unchanging).

A fifth difficulty arises with the joint costs of production and consumption, i.e., there are certain costs necessarily incurred to maintain life. If these costs were only necessary for production we would add them to the costs of acquiring human capital to get the total cost but they are for both production and consumption and we cannot know how much is for production alone. Sixthly, human capital has some characteristics of a natural resource: the ability to acquire human capital is partly inherent and, hence, acquisition is determined in part by the qualities of the existing stock. This suggests that the human capital production function is different

for each individual, i.e., labour is not homogenous and the costs and benefits of investment will be different for different people. This creates problems for firms in knowing whether to hire or to fire labour and means also that the value of human capital is dependent upon the characteristics of the investor.

Human capital investment decisions is also affected by the fact that some crucial decisions must be made when the investor is young, i.e., before an individual is assumed to be rational. There is also the problem of 'lumpy' investment, i.e., human capital investment has long gestation (itself a source of difficulty in knowing how much is the right level) and is often indivisible (it is impossible to do half a medical course and to become half a doctor). Therefore individuals cannot add marginal amounts of investment until the net present value equals zero.

Further, human beings are, economically speaking, a collection of assets. Some are complements and some substitutes but they cannot be separated. Therefore some of an individual's human capital will be idle and hence it is difficult to determine the increase in productive capacity due to investment in any one skill. There is also the problem of opportunity costs, i.e., for all individuals to make rational decisions (which will allocate the scarce supply of human capital asset investment opportunities between them) they must face the same opportunity costs. However, the more human capital one has the greater the opportunity cost of further investment (this is another aspect of inseparability). The nature of human capital assets also presents some unique financing difficulties. In particular, human capital cannot be separated from its owner, i.e., it is illiquid and it cannot be mortgaged. This problem will mean that financial markets will favour investment in physical not human capital.

Thurow concludes that there is a long list of differences between human and physical capital and of reasons to expect disequilibrium and sub-optimality in investment decisions. These differences mean that the decision to invest in one or the other is

never a simple calculation. Some economists take the simple view that human capital is just another sort of capital but Thurow says, “all of (these differences) require some modifications in investment theory as it has been developed for physical capital”. (ibid., p. 135)

He argues that the differences lead to systematically too much investment in physical capital, too little in human capital.

In conclusion to this section, we have seen, in the ways in which education and incomes are correlated, that neither the Marxist nor the screening hypothesis fits all the facts. Further, having examined the weakness of the neoclassical approach, it is clear that no readily available approach captures all the complexities involved in measuring the stock of human capital. Moreover, Thurow’s work shows that there are many theoretical problems related to valuing the stock of human capital. Further still, even a good measure of this value does not necessarily indicate the worth of human beings from a social or national point of view. Nonetheless, measuring human capital remains, in the long-term, a key element in opening the way for explaining the past and future economic growth of nations. Hence, we need to look more closely at the methods by which others have sought to measure it.

2.3 Research in the estimation of human capital

This section looks at some alternative approaches to the estimation of human capital. It begins by expanding upon the previously stated investment decision rules to provide a firm basis to understanding the rationality of investment decisions. Then we describe a number of previous attempts to estimate the value of human capital, from Engels and Wittstein in the 19th century to more recent work by Mincer, Jorgenson and Pachon et al. These approaches have been selected on the basis that they provide useful information to assist in estimating the value of human capital.

We have already mentioned two methods of calculating returns to an investment but we now return to examine the criterion for making choices among competing investment alternatives, following the work of Hu et al (1971) to give a more detailed explanation.

In general, the best basis for making choices among competing investment alternatives is that of maximizing the difference between the present value of benefits and the present value of costs. Three decision rules are useful: the expected net present value criterion, the cost-benefit ratio, and the expected internal rate of return. These three rules are equivalent only under some severe conditions, i.e., that capital markets are perfectly competitive; that all available projects are completely divisible; that there is no interdependency among projects; that all net returns can be reinvested at their own internal rates of return up to the terminal date of the longest-lived project.

The expected net present value criterion can be understood as requiring that one should adopt any project for which the present value of the discounted stream of net benefits is greater than zero. Or, if more than one project has net discounted benefits greater than zero at the given rate of interest, one should adopt that project with the highest present value of net benefits. Computationally, an equation for achieving this measure is as follows:

$$V_0 = [S_0 \div (1+i)^0] + [S_1 \div (1+i)^1] + \dots + [S_t \div (1+i)^t]$$

where V_0 is total net present value, i is the rate of interest used to discount; t is the time period; S_t is the sum of benefits, B_t , less costs, C_t

The second decision rule, the cost-benefit ratio, tells the decision-maker to invest in those projects for which the ratio of the present value of benefits to the present value of costs is greater than unity. The equation for this rule is as follows:

$$\{[B_0 \div (1+i)^0] + [B_1 \div (1+i)^1] + \dots + [B_t \div (1+i)^t]\} \div \{[C_0 \div (1+i)^0] + [C_1 \div (1+i)^1] + \dots + [C_t \div (1+i)^t]\} > 1$$

The internal rate of return calculation provides a simple percentage that can be compared to that interest rate which is taken to represent an acceptable rate of return on social or private investment return. Briefly defined, the internal rate of return is that interest rate which makes the discounted value of costs equal to the discounted value of benefits. One equation for this measure is as follows:

$$E(r) = \sum_{t=0}^n (B_t - C_t) (1+r)^t = 0$$

where r is the expected internal rate of return; B is the benefit per time period; C is the cost per time period; and t is a subscript denoting the time periods.

In practice, the above equation is relatively difficult to use and depends for its solution on a technique of successive approximation. However, the use of an electronic computer makes the solution of such a polynomial equation relatively straightforward at least in terms of the physical effort required.

A variant of this equation is available:

$$C \cdot \sum_{t=0}^n [1 + (1+r)^t] = B \cdot \sum_{t=0}^n [1 + (1+r)^t]$$

where r is the expected internal rate of return;
 C is the average cost per time period and assumed constant for all time periods;
 B is the average benefit per time period and assumed constant for all succeeding time period;
and t denotes the number of time periods.

This equation also depends for its solution on a technique of successive approximation.

However, if costs are assumed constant during the training period and if benefits are assumed constant and extend to infinity, the above equation reduces to that below and the rate of return can easily be obtained as follows:

$$r = [1 + (B \div C)]^{(1/t)} - 1$$

where r is the expected internal rate of return;
 t is the number of time periods of education in whatever units chosen, (years, months, etc.);

and B and C are the marginal benefits and marginal costs per unit of time and are assumed to be constant.

Thurow (op. cit., pp. 23-25) has added that the estimation of human capital also includes the risk and uncertainty associated with earnings streams. The left-hand side of the following equation (2-6) is an attempt to measure the benefits of investment. It is the basic equation applying to the capitalized-earnings approach. An interest rate (i) is used to discount an earnings stream (E_t) over the life expectancy (n) of the asset. The equation on the right hand side measures the costs of investment in human capital and corresponds to the cost-of-production approach.

$$CV = \sum_{t=0}^n [(\sum_{j=1}^m P_j E_j)_t \div (1 + i + u)^t] = \sum_{t=0}^n [(EVE)_t \div (1 + i + u)^t] \quad (2-6)$$

where

- CV = capital value
- P_j = probability that E_j will occur
- E_j = earnings in time period t
- EVE = expected value of earnings
- i = interest rate
- u = uncertainty premium
- t = time
- $j \rightarrow m$ = number of possible outcomes

This can be rewritten in terms of the net value of benefits set against costs:

$$NCV = \sum_{t=0}^n [(\sum_{j=1}^m P_j E_j)_t \div (1 + i + u)^t] - \sum_{t=0}^n [(\sum_{k=1}^s P_k C_k)_t \div (1 + i + u')^t] \quad (2-7)$$

where

- NCV = net capital value
- C_k = cost of acquiring k
- P_k = probability of cost of acquisition k
- u' = uncertainty premium for costs
- $k \rightarrow s$ = number of possible outcomes of costs

As I will explain below, primarily because of limitations imposed by data availability and comparability, I will be using the former equation to develop my estimates of human capital. Before doing

so, we can look at some of the applications of the cost-of-production approach.

One of the earliest attempts to estimate the cost of creating a productive human being was made by Ernst Engel (in the year 1883, see Cohen, 1975). His formulation of the total cost of producing a person up to age x can be expressed as the sum of an arithmetic progression:

$$C_x = (n + 2) \cdot [2c_0 + (n - 1)d] \quad (2-8)$$

where $n = x + 1$; c_0 is the cost incurred up to the point of birth; d is the annual increment in costs which is proportional to c_0 (that is, $d = k \cdot c_0$, where k is constant); and C_x is the total cost of producing a human being up to age x .

Equation (2-8) is applicable only for $x \leq 26$, i.e., when a person reaches age 26, his production is complete.

We can criticize Engels' basic assumption that the marginal cost of production in any given year after birth is constant as unrealistic. His estimates are also weakened in that he ignores depreciation and maintenance costs, and the existence of an interest rate.

Following Cohen (ibid.), in 1867 Theodore Wittstein presented a formulation that improved on Engel's in so far as it took into account the rate of interest as well as maintenance costs and the number of men living at age n in a life table (in 1867). In 1930 Louis Dublin and Alfred Lotka also conducted a thorough investigation of the costs involved in bringing up a child.

More recent formulations of the cost approach have been applied by E. R. Chang et al (1979). Their simple approach was chosen because it provides a treatment of human capital consistent with the current practices of national accounting used in measuring the value of non-human tangible assets. This at least treats education as investment, rather than as consumption as is currently the case in national accounts data. Chang et al consider only the measurement of investment in general education (that is, primary and secondary education) and they apply the following technique:

investment begins at 5 years of age and the productive life of human capital is 60 years (that is, until retirement at age 65). This is the time period over which costs are aggregated to provide estimates of the stock of human capital in any year, i.e., to provide estimates for 1994 we must go back as far as 1934 for cost data. Investment continues until age 17 when the productive life of an individual is assumed to start. After that, assets depreciate on a straight-line basis until they are valued at zero by age 65. For a particular point in time, say at the end of year t , they estimate the cost of general education embodied in human beings in the workforce as giving a lower bound to an estimate of the value of human capital. This is achieved in the following manner.

Firstly, given information about the total expenditure on general education and the number of pupils, they construct estimates of the average historical cost per pupil being taught in each of the years, $(t - x)$, $x < 60$; the historical cost is adjusted for price level changes by the use of a price index (they chose the GDP deflator). They assume that the average cost per pupil in each year is the same for all pupils of all ages and calculate the cost of education embodied in a person born in a particular year, q , (where $[16 < (t - q) < 66]$) equals the sum of the average cost of general education in each of the years $(q+v)$, $v = 5, \dots, 16$, i.e., by summing the average cost when the person born in year q was being educated. These costs are then discounted by $(1 + r)^{16-v}$ (where $r =$ the rate of interest, $v =$ the age when education cost was incurred for the cohort born in year q). Hence the present value of the cost of general education embodied in that person is given by the following equation.

$$\sum_{v=5}^{16} [C_{(q+v)} \div (1 + r)^{16-v}] \quad (2-9)$$

These costs are depreciated by means of a scaling factor equal to $[65 - (t - q)] \div (65 - 16)$ in year t , giving a straight-line function.

This process is repeated for all values of q to give the total for year t . The total is the present value in year t of general education expenditure for all people of workforce age (in year t) discounted

by the rate at which human capital assets are assumed to depreciate.

Although it is more comprehensive than the other approaches so far considered, there are a number of limitations inherent in this method of estimation. Firstly, only general education is used as an indication of investment in human capital. This excludes other forms of investment that add to skills (for example, training) or that lengthen asset life (for example, health expenditure). Secondly, this approach is based on some restrictive assumptions: that opportunity costs are zero, i.e., that income is not foregone while students attend school (although this may be more easily justified when considering students in primary and lower secondary education before the minimum school leaving age); that the consumption aspects of education are too small to be significant; that all people of a given age have survival functions which are independent of education (if well educated people tended to be more likely to survive then, by using average cost of education per person, we would be under-estimating the stock of human capital). In addition, this approach is not useful in explaining individual decision making regarding education or other human capital investment decisions nor in estimating the rate of return on different kinds of education nor in explaining the income distribution. In short, this approach fails to be entirely satisfying or comprehensive.

A second alternative approach is that developed by Keith Hancock and Sue Richardson (1985). Their work is of particular interest because it reverses the normal approach to measuring human capital. In valuing human capital it is usual to calculate the rate of return by measuring or estimating the costs and the benefits. However, in this paper, it is assumed that competition is sufficiently effective to create a single discount rate that approximately equates the net present value of different wage-time profiles. This rate would describe the time preference of society but for the systematic influences of other factors and the random influences of market failure. If it could be shown that

such a generally applicable time preference exists, it could be used to justify relatively straightforward methods of estimation.

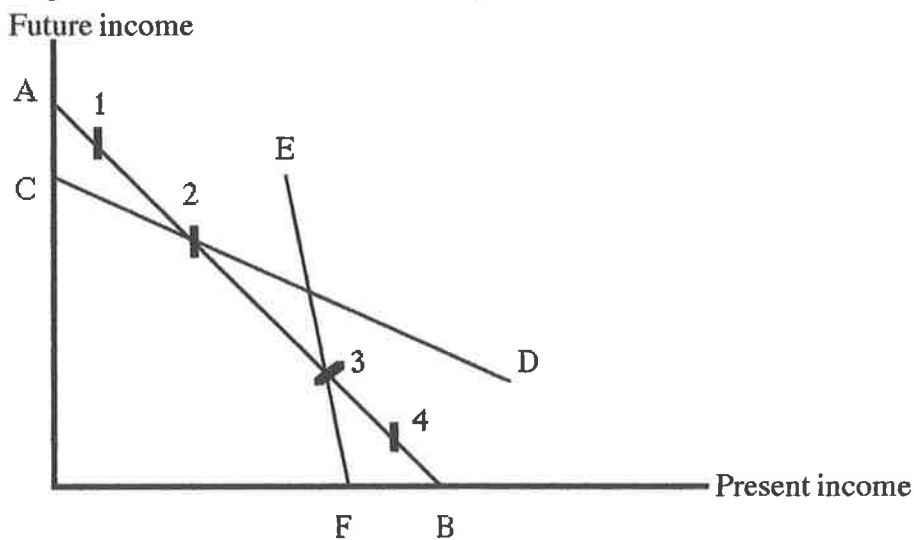
In essence, Hancock and Richardson argue that, to the extent that the labour market is competitive and a commonly perceived discount rate existed, we would not expect large differences in lifetime earnings. The competitive process will match skills acquired with skills required and will do so at a wage-time profile that gives lifetime earnings the same net present value for all occupations. For example, if a mathematician's wage were so low that it did not compensate him for his lack of income when studying, we would expect that fewer and fewer people would become mathematicians and that, as the supply fell, the wage rate would rise.

The theory of capital markets then adds that, if they too are competitive, the rate of interest equates to the perceived discount rate and will mean that the internal rate of return equals the rate of interest for all people. However, as Thurow points out, the rate of interest might not be the appropriate rate in this case because human capital assets have peculiar characteristics (that is, are illiquid, cannot be freely sold, and so on) and because the capital markets may fail. Hancock and Richardson attempt to find out whether there is a rate of discount other than the rate of interest that equates lifetime earnings.

Their method begins with income data from the 1976 Australian Census, classified by age, occupation and education. They find that low start incomes are associated with high-end incomes and vice versa. They suppose that pay differences are fully explained by the human capital model, i.e., everyone discounts future income at the same rate, future incomes are accurately foreseen, and labour so distributes itself as to achieve the rate of return on career choices implicit in the agreed discount rate. It follows from these assumptions that, at the unique and shared rate of discount, there are no differences in lifetime earnings. At 'false' discount rates, inequalities appear and adjustments ensue.

Figure 2-1 illustrates these statements for a hypothetical world of four occupations (or levels of qualification) and two time periods. The line AB corresponds to the true discount rate and shows a range of combinations of current income and future income that at that discount rate have the same present values. Points 1~4 correspond to four different occupations. There will be occupations (such as 1) which involve more study but higher incomes later and others (such as 4) involving more income at first but relatively less later. At a lower discount rate (shown by CD), occupation 1 has higher lifetime earnings than occupation 2, which, in turn, is superior to occupations 3 and 4. Further reductions in the discount rate increase the differences in lifetime income but do not alter the ranking. In such circumstances, the supply of labour for jobs like occupation 1 will grow and the wage will decline. This would move them towards the line CD. At a higher discount rate (shown by EF), occupation 4 is superior to occupation 3, which is superior to occupations 2 and 1. Then the supply of labour for these jobs like occupation 4 will grow and their wage will decline which would move them towards the line EF.

Figure 2-1: Lifetime Earnings at Different Discount Rates



This model leads to the proposition that only with an interest rate of AB do we have an equilibrium. If such an interest rate can be found which fits all occupations on one line it is strong evidence to suggest that the market is competitive and that the theory of human capital is plausible.

The authors show that such a discount rate which lies in the range of 8~12 per cent. If people could borrow and lend at rates in this range, they would invest just enough in human capital assets so as to be indifferent about any more investment. It is suggested that this discount rate reflects the average time preference of society, i.e., people are generally indifferent between $\$X$ now and $\$X(1+r)^n$ n periods later, when r is in the range of 8~12 per cent. Human capital investment will continue in each occupation until the rate of return on that investment equals the rate of interest and this time preference.

However, as the authors point out, there are a number of reasons to believe that the discount rate on investment in human capital does not equate to society's time preference. For example, if rates of return reflect not just income foregone and costs, but also innate ability, then the apparent discount rate will not represent time preferences. This could be the result of the fact that intelligent people value the future relative to the present value more highly than do unintelligent people or, similarly, if education involves not just foregoing income but also generating consumption benefits from education, then the discount rate and actual time preferences will diverge.

A third approach to valuing human capital focuses on resolving the apparent conflicts between the neo-classical human capital theory and the screening hypothesis. We have already considered the screening hypothesis in which education acts as a filter to separate potential employees according to some criteria and that this contradicts the basic neo-classical line of causation, i.e., that education enhances human capital assets, increases the marginal productivity of labour and results in higher incomes. However, Stephen Ferris and Daniel Shaw (1988) believe that this dichotomy between neo-classical human capital theory and the screening hypothesis is not useful and may be unnecessary. They propose firstly that education is productive, i.e., although individuals start with innate ability their education does produce skills which is what employers actually value. Secondly, they recognize that as

skills cannot be costlessly observed, screening will also be undertaken. Assuming that all individuals have the same costs in undertaking education (i.e., the costs are independent of an individual's ability), it is reasoned that screening is not being done by the education system (that is, we cannot infer ability or skills from education). Instead, employers must devise their own screening tests to infer skills by measuring ability (it is likely to be too expensive to test directly for skills). In other words, Ferris and Shaw believe that the screening hypothesis is not incompatible with the neo-classical approach.

The model employed by Ferris and Shaw begins with a relatively simple world in which information about skill levels is perfect (that is, costless). They begin by considering a community with M potential employers and N potential employees, where both employers and employees are risk neutral wealth maximizers. Potential employees appear identical but are assumed to differ with respect to their endowed abilities. The level of ability held by the i th employee is assumed to be representable by a scalar, a_i , where ability is unobservable but known to be distributed over the range $[a, \bar{a}]$. Although individuals have innate differences, they face the same present value education cost function that is convex and depends only upon the level of education, e , to be acquired, that is,

$$c_i = c(e), c_e > 0, c_{ee} > 0, i = 1, \dots, N \quad (2-10)$$

and the same quasi-concave skill transformation function, s , through which levels of ability and education are transformed into levels of skill,

$$s_i = s(a_i, e), s_e > 0, s_{ee} < 0, i = 1, \dots, N \quad (2-11)$$

Each potential employee is then assumed to face increasing costs when acquiring education and decreasing returns in transforming education into skill. Education and ability are assumed to be complements in production so that the partial derivatives s_a and s_{ae} are both positive.

Assuming that all employees face a wage-skill profile, $w(s)$, that in present value terms is an increasing function of the level of skill held, the individual choice problem is to

$$\text{Max}_e W_i = w [s(a_i, e)] - c(e)^4 \quad i = 1, \dots, N \quad (2-12)$$

Where W_i is the wealth of the i th employee.

This is maximized when the first order condition is:

$$w [s_e(a_i, e)] - c_e = 0,$$

i.e., wealth is maximized when education is acquired to the point where the incremental effect on earnings is just equal to the marginal cost of additional education (both in present value terms). Then, for all employees, W_i is maximized and the optimal level of e and s of the cost and skill functions depends on two conditions: the level of ability held by each employee and the shape of the wage-skill function.

Wealth maximizing agents interact competitively to establish an equilibrium wage-skill profile and corresponding match between employee ability levels and employer skill requirements. In competitive equilibrium, the ability of employers to observe the skill levels of potential employees has resulted in a job matching equilibrium in which employees with higher levels of innate ability are combined with employers who require higher levels of skill.⁵ In this way, the aggregate education costs of producing the skills required by society are minimized. Moreover, the ability to observe skill directly implies no divergence between private and social benefits and costs. Thus without transactions costs, individual maximizing behavior permits the maximization of all potential economic rents. Competition both within and across skill levels results in the proportioning of the social surplus according to the scarcity values of initial endowments.

The next step in the exposition of Ferris and Shaw's model is to relax the unrealistic assumption that information is costless. The authors assume that neither the level of innate ability nor the

⁴ The second order derivative of W_i shows that, under these conditions, ability, skills and education are positively correlated and that skill is maximised for minimum cost, that is those with highest ability get the most education and end up with the highest skill.

⁵ The article derives this equilibrium diagrammatically. The actual mechanism is obscured. As the authors put it "equilibrium requires only a description of the process by which competition induces the necessary price adjustments". (ibid., p. 237)

level of skill can be observed directly by employers. The difficulty in attempting to use the correlation that exists between the level of education attained and the level of acquired skill in the transaction costless equilibrium leads employers to adopt a reward structure based on educational attainment, i.e., employees appear indistinguishable to employers and the non-separability in production makes even *ex post* measurement of individual productivity prohibitively costly. Hence, there is no reason to expect the achievement of the equilibrium described above and, in this situation, employers would try using education as a proxy for skills and the link between wages and skills (that is, the wage-skill profile) is lost.

In other words, when employees have no mechanism to signal credibly their level of either skill or ability, the cost-minimizing correlation between levels of innate ability and levels of acquired education is lost. At each level of education, the forthcoming distribution of employee abilities and hence skills would be normal. This will produce an asymmetry in the job matching process for employers by levels of required skills. The inability to measure skill levels costlessly prevents the market from rewarding differentially levels of skill that arise for reasons other than education. This forces on the community the higher costs of producing required skill levels in a less efficient manner. This inability of employers to use education as a proxy for skills is a direct result of the fact that education levels are not related to ability. As a result, employers develop their own screen to measure ability. As the authors put it:

“To discriminate among potential employees, all of whom can be educated at the same cost, real resources must be used. The necessity of screening then means that the net benefits of hiring fall for both employers and employees. Moreover, the difficulty of the test and hence the incidence of measurement costs is not independent of the ability requirements of employees. Employers who require the highest skill levels, for example, must be able to isolate the relatively few employees with the highest levels of ability”.
(*ibid.*, p. 240)

The costs and difficulties in measuring ability mean that employers use relative education levels as a screen. This has effects on the lifetime wage profile:

“While relative evaluation reduces absolutely the costs of measurement for the community, relative measurement also impacts differentially across employers and thus on net returns across levels of education. The introduction of relative measurement costs into the equilibrium results in aggregate excess supply of labour and excess supplies that increase with the level skill required. This implies a differential fall in the net return realized by both employers and employees by education levels, reducing the incentive of employees to acquire additional levels of education and employers to hire employees with higher levels of education”. (ibid.)

In short, the screening equilibrium is distinguished from the transaction costless equilibrium by two features. Firstly, both the overall wage-skill profile and the average skill level of the community are lower in the new equilibrium. This reflects the deadweight loss imposed by costly measurement. Secondly, because measurement is costly, the supply of potential employees and the number of viable job opportunities are increasingly concentrated in the lower levels of skill. The social cost of coordinating the adaptation of higher levels of ability to the technical opportunities of society is now permanently higher. In short, the overall level of skill below the optimum and the returns to education for high ability individuals are less than under perfect competition. Both effects arise because of the costs of screening. They suggest that there is an efficiency role for policies that establish minimum education requirements.

If the minimum can be enforced costlessly, two interacting effects will be produced on the skill distributions of viable job offers and acceptances across the community. On the supply side, a higher education minimum increases the minimum level of skill held by the least able employees and permits them now to perform higher

skilled jobs. As employers come to recognize this, competition for jobs in this skill range increases and wages fall relative to those in adjacent skill groups. Individual optimizing behaviour then leads low cost skill producers to choose to acquire higher levels of education and skill. In this way minimum education requirements tend to push potential employees up the education scale.

On the demand side, the induced change in the proportions by which the levels of skill are produced does generate real social savings. The minimum education requirement reduces measurement costs for all employers requiring skill levels above the minimum. This implies that at the pre-existing wage skill profile, a large number of job opportunities now become viable and the general excess demand for labour that this creates bids upward the wage profile, particularly at the upper end of the skill distribution. As wage levels rise across skill requirements, the lowest skill level opportunities are screened from the job market at the same time that incentives to acquire skill through education are increased (ibid., p. 242). However, there are difficulties for policy makers in setting the minimum standard.

“In real world applications ... real care must be taken in establishing a minimum. The ability to produce a rise in the wage profile is not a sufficient justification for further increases in the required minimum nor is the substitution of ‘high tech’ for low skill level jobs necessarily desirable”. (ibid., p. 243)

We now turn to a fourth approach to the measurement of human capital: from the contribution of Jacob Mincer (1974). Mincer's purpose was to estimate the human capital earnings function, i.e., the relationship between the accumulated investments in human capital and the earnings of their owners. He then uses this function to assess how much of the existing inequality in the distribution of labour incomes can be attributed to individual differences in investments in human capital. Mincer also intends to examine the intricate yet apparently stable patterns of the earnings structure (i.e., the aggregate earnings distribution and its partition into

schooling age subgroups) in terms of human capital investment behavior. (ibid., p. 128)

His earnings function first appears in the following form:

$$V_s = Y_s \cdot \sum_{t=s+1}^n [1 \div (1+r)]^t \quad (2-13)$$

where n = length of working life plus length of schooling (= length of working life for persons without schooling)
 Y_s = annual earnings of an individual with s years of schooling
 V_s = present value of an individual's lifetime earnings at start of schooling
 r = discount rate
 t = 0, 1, 2, . . . , n time, in years

Assuming that the discounting process is continuous, the above equation can be reduced to the following form:

$$\ln Y_s = \ln Y_0 + r \cdot s \quad (2-14)$$

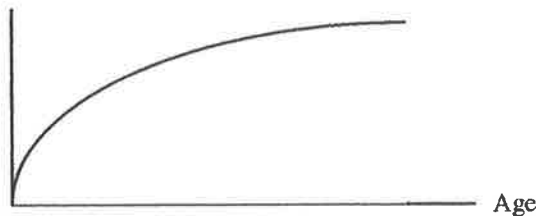
This equation means that the logarithm of earnings is a strict linear function of time spent at school. But equation (2-14) is only useful under the assumption that completion of schooling means completion of investment in human capital. This seems to be confirmed by Mincer's analysis of data in the 1960 U.S. Census, which shows that there is a weak correlation between earnings and years of schooling. He proposes that this indicates the importance of investments in human capital which occur after leaving school. In particular, he proposes that if we include experience as well as education we can estimate an accurate earnings function, where experience = current age minus age at graduation. This is a significant observation. Increasing age can be considered to lead to depreciation of human capital assets. However, Mincer suggests that as age increases so the stock of human capital assets also increases. It is also consistent with the observation that further investment is undertaken after schooling but that the amount decreases with age because the benefits decline (i.e., there is a shorter payback period) and the opportunity costs increase (i.e., the income-foregone increases). In

addition and related to the notion that increasing age is equivalent to depreciation, the costs of acquiring human capital assets also increases.

If increased income is the result of investment in human capital assets, then Mincer's model suggests that the rate of increase of income will decline with age as the rate of investment declines. This gives a curve that is concave from below, as is depicted in Figure 2-2.

Figure 2-2: Human Capital Earnings Profile

Rate of income growth



The precise shape of the profile will depend on how quickly investment declines with age (if experience is a type of investment then the curve is less concave). Mincer conceives of two possibilities. Firstly, if the earnings profiles were to decline in a linear way it implies that investment follows a parabolic path. Secondly, if it declines exponentially (that is, the negative impact of age on investment increases with age), a different investment profile is needed (such as the Gompertz curve).

Mincer uses these two alternatives to generate two possible human capital earning functions. He then expands the schooling model (= equation (2-14)) into a more complete earnings function, with the linear schooling term being augmented by a nonlinear, concave, year-of-experience term. He proposes two forms of the human capital earnings function: the logarithmic parabola (P) and the Gompertz curve (G), given by the following equations:

$$\ln E_{s,t} = \ln E_0 + r_s s + r_p k_0 t - (r_p k_0 + 2T) t^2 \quad \leftarrow \quad (P) \quad (2-15)$$

$$\ln E_{s,t} = \ln E_0 + r_s s + (r_p k_0 + \beta) \cdot (1 - e^{\beta t}) \quad \leftarrow \quad (G) \quad (2-16)$$

where, $E_{s,t}$ is gross annual earnings of a worker with s years of schooling and t years of work experience; "Gross" earnings

are inclusive, “net” earnings exclusive, of investment expenditures; r_s and r_p are rates of return on schooling and post-school investments, respectively; k_0 is the ratio of investment to gross earnings at the start of work experience; β is the annual decline of this ratio; and, T is the positive net investment period.

The coefficients of these two equations may be estimated, then the predicted results are compared to observed data and further re-estimation of the coefficients is undertaken.

The coefficients are

- (1) rates of return on schooling and post-school investments
- (2) the ratio of investment to gross earnings at the start of work experience
- (3) the rate of annual decline in the ratio of investment to gross earnings at the start of work experience

The results of estimation were

- (1) a positive correlation between earnings and schooling
- (2) an inconclusive correlation between earnings and experience
- (3) the rate of return on schooling increases with higher levels of schooling (but, interestingly, total earnings do not, i.e., the wage rate (per hour or per week) increases but the total annual wage does not. Perhaps well-paid people work less).
- (4) a positive correlation of schooling and post-school investment, that is, well educated people go on investing in human capital (note that this correlation is strong in money terms but not strong if we consider time, i.e., educated people spend more money on post-school education but they spend comparatively less time engaged in it).

It is possible to criticize Mincer’s approach on the grounds that the relationship between age and earnings influenced more strongly by the natural process of aging than by the effects of experience and other post-schooling investments, i.e., people’s productivity

initially increase with age (that is, they mature) but then decreases (that is, they get old). Similarly, earnings profiles are known to differ by occupation, sex, and colour in systematic ways that cannot be attributed to the aging phenomena. Mincer's model is only a partial explanation of the human capital earnings profile.

Regarding the income distribution, years of schooling only weakly explain income inequality. This is not surprising given that the cost and quality of schooling varies between schools and also that post-school investment might not be well correlated to schooling. Data tends to confirm this proposition because, while the link is strong for young people, it gets weaker as people get older. Mincer estimates that, overall, at least 50 per cent of aggregate earnings' inequality can be explained by the distribution of schooling and post-school investment. (ibid., p. 134)⁶

Mincer suggests there are two key areas for further research. Firstly, to incorporate other non-school investment into the earnings function (for example, pre-school parental investment) and, secondly, to further specify post-school investment. In particular, Mincer's assumption has been that experience equals age minus age at graduation. It would be better to measure experience directly and to specify the type of investment associated with experience (i.e., how much on the job training, how much formal, advanced education, and so on).

Jere Behrman (1987) takes up some of Mincer's suggestion. In particular, he attempts to incorporate non-school investment into the human capital earnings's function. He makes clear that investment in human capital is much more than just schooling:

“Parents make considerable investments in the human capital of their children, and the children themselves also make considerable investments. In many cases schooling is a major investment, but there also are considerable non-schooling investments in the children's health, nutrition, and general development. In some poor societies in which

⁶ Mincer shows that further adjustments to the data can raise the explanatory power of the model to “as much as two-thirds of the inequality of ‘normal’ (long run) earnings”. (ibid.)

schooling is quite limited, these non-schooling investments often appear to be much more considerable in magnitude than the schooling investments". (ibid., p. 301)

Behrman considers a two-period model. In period one investments are made in a child. In period two that child has become an adult and experiences outcomes which reflect the investments in him or her made in period one. The analysis is consistent with the standard, neo-classical approach and assumes that the investments made in period one are undertaken to maximize the utility (U) of the investor from expected adult income (E) for the child in period two.

$$U = U (E, \dots) \quad (2-17)$$

The expected adult incomes (E) are produced by schooling (S), other investment in the child (X), and endowments (G) so that:

$$E = E (S, X, G) \quad (2-18)$$

Now, the objective is to maximize the utility derived from expected incomes subject to a budget constraint (R^e), i.e.,

$$R^e = P^s + P^x + \dots \quad (2-19)$$

where P^s = price of schooling per unit
 P^x = price of other investments per unit

Then U is maximized when

$$E_s \div P^s = E_x \div P^x \quad (2-20)$$

where E_s = partial derivative of E with respect to S
 E_x = partial derivative of E with respect to X

i.e., where the ratio of marginal changes in expected incomes to prices is the same for all types of investment.

Now if we assume there is a constant elasticity of substitution (CES) production function for relation (2-18) then:

$$E = (a_G G^b + a_S S^b + a_X X^b)^{1/b} \quad (2-21)$$

where the elasticity of substitution between any two inputs is $\sigma = 1 + (1 - b)$.

With this production function, relation (2-20) can be rewritten as:

$$X = (P^s a_X \div P^x a_S)^\sigma S \quad (2-22)$$

and we can use a simplified function to describe the production of E.

If the production function in (2-18) is the same for all children (so a_x , a_s and σ are identical across children) and the relative prices of investment is the same for all children, then this relation implies that S and X are perfectly correlated across children (no matter what G). This perfect correlation holds across all children for whom these assumptions are satisfied, whether they are in the same or different families. Relation (2-22) also holds whether the investors are children, their parents or someone else. Because of such a perfect correlation, it would be impossible empirically in this case to identify the contribution of schooling alone to the outcome (E). Moreover, if schooling alone is included as a right hand side variable for the determination of some outcome of interest (for example, earnings, fertility, health), the estimated impact of schooling is biased upward because it incorporates the impact of all human capital investments, not just schooling. This problem has been identified by Mincer and means that if we take the derivative of E with respect to S alone, the implied rate of return will overestimate the impact of schooling. To overcome this problem he argues that:

“researchers at a minimum could be sensitive to the identification problem and to this possible bias and indicate its possible effect by presenting alternative estimates (in addition to their standard estimates) with their standard schooling return estimates adjusted by the order of magnitude of the share of schooling in total human capital investments in children”. (Behrman, op. cit., p. 303)

In conclusion he states that the probable importance of the identification problem and associated bias does not imply that there is over-investment in schooling, but only that standard procedures may overstate substantially the returns.

Turning now to a study more directly related to issues surrounding international comparisons S. J. Prais (1987, 1988) argues that more comparative research is needed into the outputs of the education and training systems, particularly at the level of

intermediate vocational qualifications. This is because, as we have seen, the production function is likely to differ between individuals and possibly between cultures. Then the key question is how effective is the system of schooling and vocational preparation? To answer this question Prais suggests we must examine firstly the inputs and outputs of the education system, i.e., the cost of education and the productive skills it creates. Secondly, we must consider also the distribution of education, i.e., does education go to those who can make most use of it (i.e., as was shown to be the case by Ferris and Shaw, under conditions of perfect competition, to those with ability) or is it distributed on some other basis?

Prais' approach is to conduct international comparisons to determine whether a country effectively uses its education budget to create skills at the lowest cost. He relates these comparisons to a number of key issues in the field. Firstly, can different quantities and effectiveness of investment in human capital be used as an explanation of different growth rates? As we have done in Chapter 1, following Denison's work, Prais suggests that the residual source of growth is plausibly related to education and vocational training. However, he concludes, not unreasonably, that we need further research into this issue, i.e., what education and training programs are available and do these generate skills to match industry's requirements and does this plausibly explain some of the differences in national economic performance. This parallels some of the reasoning behind my own research. It is an attempt to value human capital in different nations which uses a cost based approach to make international comparisons.

Secondly, Prais asks if human capital can be measured from observed rates of return on education? Prais cautions that there are other powerful influences at work. For example, there are egalitarian pressures that have compressed income differentials and distorted the influence of education as an investment. Further, while we expect that education levels are positively associated with innate ability, this means that observations of rates of return on education include the impact of ability and so observed rates

overestimate actual returns to education. In addition, it is a mistake to value education as investment in human capital because this is a crude measure of inputs only. It is necessary to calculate rates of return for different qualities of education, i.e., each country has a different intensity of education (including extra-curricula studies), different subjects and so on. It makes more sense to ask, for example, what is the rate of return on learning calculus not what is the rate of return on 5 years of maths training. To address these issues requires detailed research into a broad cross-section of the workforce and into schooling outputs and not simply schooling inputs. This research is essential to any cost-based, international comparisons.

The last approach to the measurement of human capital that we will consider in this chapter is the somewhat more radical approach proposed by Dale Jorgenson and Alvaro Pachon (1983). Their paper presents fully comparable measures of investment in human and non-human capital in a set of revised (so called full) national accounts which, for the first time, include imputed values for non-market (and therefore otherwise unrecorded) activities. As we shall see, these modifications alter significantly the values of private production and investment.

The authors define human capital in terms of lifetime labour incomes for all individuals in the population. The estimates of its value are based on a system of demographic accounts and the measurement of investment in non-human capital is based on economic accounts for the accumulation of investment goods. They apply these concepts to generate a new system of national accounts for the United States, covering the period 1947~73.

Focussing on the measurement of human capital, Jorgenson and Pachon establish a number of principles. Firstly, that human capital is accumulated through births, immigration and investment in education and is lost through deaths, emigration and aging. This means that human capital investments such as job-training and medical expenditure are not included as necessary and separate additions to human capital. It also raises some questions

concerning how to value the human capital of immigrants (the quality of their education will differ) and how to value newborn babies and children of less than school age. Secondly, to measure human capital and investment, we must have estimates of the annual income for individuals grouped by age, education, and, because of labour market segmentation, by gender. That is to say, this is fundamentally an income-based approach for which we need to cross reference income by gender and education. This will mean that a large database is required. The data base used in the study included the number of employed persons, hours worked and labour compensation per unit time for the United States on annual basis, cross-classified by gender, age, education, employment class, occupation and industry. Annual estimates of hours worked and labour compensation from market labour activities are derived by summing over employment classes, occupations and industries and by distributing the work force of each gender by individual years of age from 14 to 74 and by individual years of educational attainment from 1 to 18.

They assume that the time available for all market and non-market activities is constant over time and is equal to fourteen hours per day for all individuals. Annual time available for all individuals in the population is then allocated among work, schooling, household production, leisure and maintenance activities such as eating and sleeping. To estimate the lifetime labour incomes for all individuals in the US population they distinguish three stages in the life cycle: in the first stage individuals may participate in school but not in the labour market; in the second, individuals may enrol in school and also work; and, in the third stage, individuals may participate in the labour market but not in formal schooling.

For individuals in the third stage of the life cycle, total labour compensation is the sum of compensation for market labour activities after taxes and imputed compensation for non-market labour activities. For individuals in the second stage of the life cycle total labour compensation also includes imputed labour compensation for schooling. For individuals in the first stage of the

life cycle labour compensation includes only the imputed value of time spent in schooling.

For an individual in the third stage of the life cycle, they assume that the expected lifetime labour income in future time periods is equal to the incomes of individuals of the same gender and education but with the age that the individual will have in the future time period, adjusted for increases in real income which is assumed to be the rate of Harrod-neutral technical change, estimated to be 2 per cent per year. The authors weight income for each future year by the probability of survival, given the initial age of the individual. Finally they discount expected future incomes at a real rate of return of 4 per cent per year to obtain the lifetime labour income of an individual of a given gender, age and education, i.e.,

$$Y_{a,c}^g = \sum_{i=1}^n Y_{a+i,c}^g \cdot P_i \cdot (1+y)^i \cdot [1 + (1+r)^i] \quad (2-23)$$

where Y = lifetime labour income of an individual with gender (g), age (a) and education (e)

P = probability of survival

y = average rate of increase in real incomes (2 per cent)

r = rate of interest (4 per cent)

For this third group of individuals the only source of human capital is immigration and the value of human capital may be simply derived from the database. Depreciation through deaths need not be separately calculated.

For an individual at the second stage of the life cycle, combining formal schooling with the possibility of participation in the labour market, Jorgenson and Pachon consider first an individual completing the last (that is, 18th) year of schooling. They estimate the imputed labour compensation for the time spent in formal schooling as equal to the difference between the lifetime labour incomes of an individual with eighteen years of education and an individual with the same gender and age and one less year of education minus tuition and other fees for that grade of schooling. Total labour compensation is equal to the value of time spent in

formal schooling plus labour compensation for market and non-market activities other than formal schooling. The investment in human capital for the 18th year of school is as follows:

$$= Y_{a,18}^g - Y_{a,17}^g - (\text{tuition and other fees}) \quad (2-24)$$

Now, for an individual completing the 17th year of schooling, investment is as follows:

$$= Y_{a,17}^g - Y_{a,16}^g - (\text{tuition and other fees}) \quad (2-25)$$

In this case

$$Y_{a,17}^g \approx \sum_{i=1}^n Y_{a+i,e}^g \cdot P_i \cdot (1+y)^i \cdot [1 + (1+r)^i] \quad (2-26)$$

Because the students might go on to study the 18th year.

$$Y_{a,17}^g = (Y_{a+1,17}^g + \text{expected compensation for one more year at school or at work}) \cdot P \cdot [1 + (1+r)] \quad (2-27)$$

And expected compensation for one more year of school or work is equal to

$$e_p \cdot Y_{a,18}^g + (1 - e_p) \cdot Y_{a,17}^g \quad (2-28)$$

where e_p = probability of enrolment in grade eighteen

$$\therefore Y_{a,17}^g = Y_{a+1,17}^g + [e_p \cdot Y_{a,18}^g + (1 - e_p) \cdot Y_{a,17}^g] \cdot P \cdot [1 + (1+r)] \quad (2-29)$$

In the same way it is possible to value the lifetime labour incomes of all students and therefore to calculate the value of investment in human capital by each.

Finally, for individuals in the first stage of the life cycle, lifetime incomes can be determined for individuals completing one year of education, two years of education, and so on, working back from higher levels of education as outlined above. For individuals too young to be enrolled in school, imputed labour compensation is zero, but lifetime labour incomes are well defined. The value of a newborn entrant into the population is equal to the expected lifetime labour income of that individual at age zero.

Adding all three stages together, investment in human capital in any year is the sum of lifetime incomes for all individuals born in that year and all immigrants plus the imputed labour

compensation for formal schooling for all individuals enrolled in school. Then, according to the results of their estimation, the value of investment in human capital in current prices is by far the largest part of full investment (including non-human capital), varying from 0.918 to 0.964 as a proportion of full investment during the period 1947~73. The value of investment in human capital in current prices has risen from \$864.3 billion in 1947 to \$7.5 trillion dollars in 1973, giving an average rate of growth for this period of about 8.6%. Estimates of investment in human capital are also presented in constant prices (base year 1972) giving a value in 1947 of \$4.3 trillion dollars and \$7.2 trillion dollars in 1973 and an average rate of growth of some 2.0%.⁷

Jorgenson and Pachon also provide estimates of full private national wealth as the sum of human wealth and non-human wealth for the period 1947~73 both in current prices and in constant prices. The share of human wealth in full private national wealth is almost constant at 0.96. They explain that this constancy is the result of a substantial increase in the quantity of non-human wealth relative to the quantity of human wealth and a rise in the price of human relative to that of non-human wealth. Their estimates of the value of human wealth in current prices has risen from \$18.3 trillion in 1947 to \$108.7 trillion dollars in 1973. Thus the average growth rate of human wealth is about 7.1%. In constant price terms, the average rate of growth is 1.9%.

The authors finally compare their estimates of wealth, including both human and non-human wealth, with the estimates of John W. Kendrick (Kendrick, 1976). They emphasize that the most important innovation in their approach is to define human wealth in terms of lifetime labour incomes for all individuals in the population and to incorporate the value of non-market activities into the measurement of human capital. These two innovations give rise to important differences between their estimates and

⁷ In addition, their estimate of full gross private domestic product in current prices has changed from \$1.5 trillion dollars in 1947 to \$10.7 trillion dollars in 1973. In terms of constant prices, the value of 1947 was \$5.9 trillion dollars and in 1973 it was \$10.2 trillion dollars. This gives average rates of growth of 8.0% and 2.1% respectively.

those of Kendrick. Kendrick employs costs of education, including income foregone by students, as the basis for measuring investment in education. He employs costs of rearing as the basis for measuring investment through the addition of new members of the population.

Table 2-1 shows the big difference in the estimates produced by the two approaches. Jorgenson and Pachon's estimates of the ratio of human wealth to GNP in current prices fluctuates from 71.4 times (minimum) to 84.8 times (maximum). By contrast, the same ratios by Kendrick are from 3.3 (minimum) to 3.8 times (maximum) over the period 1947~69.

Table 2-1: Private National Human Wealth

Year	Billions of current dollars		Billions of 1958 dollars		Billions of current dollars GNP (5)*	(1)÷(5) (6)	(2)÷(5) (7)
	Jorgenson & Pachon (1)*	Kendrick (2)*	Jorgenson & Pachon (3)*	Kendrick (4)*			
	1947	18,289.2	825.5	30,412.1			
1948	20,059.3	908.8	30,991.8	1,206.3	261.6	76.7	3.5
1949	21,248.9	938.9	31,582.6	1,242.9	260.4	81.6	3.6
1950	22,344.9	991.3	32,167.4	1,280.5	288.3	77.5	3.4
1951	23,888.9	1,097.7	32,798.4	1,322.2	333.4	71.7	3.3
1952	25,107.2	1,172.6	33,465.4	1,366.9	351.6	71.4	3.3
1953	26,662.6	1,236.8	34,148.8	1,413.3	371.6	71.8	3.3
1954	28,915.1	1,294.4	34,891.9	1,460.0	372.5	77.6	3.5
1955	30,826.8	1,364.2	35,645.6	1,509.9	405.9	75.9	3.4
1956	33,191.5	1,462.7	36,445.9	1,565.6	428.2	77.5	3.4
1957	36,013.6	1,576.8	37,286.0	1,623.7	451.0	79.9	3.5
1958	38,109.1	1,682.6	38,109.1	1,682.6	456.8	83.4	3.7
1959	40,497.7	1,786.9	38,943.1	1,744.7	495.8	81.7	3.6
1960	42,442.1	1,901.4	39,978.7	1,615.1	515.3	82.4	3.7
1961	45,286.1	2,012.8	40,874.7	1,888.4	533.8	84.8	3.8
1962	47,820.0	2,137.4	41,743.2	1,962.5	574.6	83.2	3.7
1963	50,177.2	2,273.0	42,591.4	2,041.9	606.9	82.7	3.7
1964	54,474.9	2,423.9	43,431.4	2,126.8	649.8	83.8	3.7
1965	57,908.3	2,594.4	44,225.7	2,218.8	705.1	82.1	3.7
1966	62,448.2	2,818.7	44,985.7	2,323.4	772.0	80.9	3.7
1967	67,204.5	3,049.7	45,710.3	2,434.0	816.4	82.3	3.7
1968	71,979.5	3,344.4	46,405.8	2,550.1	892.7	80.6	3.7
1969	78,227.2	3,699.9	47,009.7	2,674.4	963.9	81.2	3.8

Notes: Figures in column (1), (2), (3) and (4) are quoted from Jorgenson and Pachon, op. cit., p. 334.

Figures in column (5) are derived from *Economic Report of the President*, 1988.

Despite its strong and consistent rationale, the method proposed by Jorgenson and Pachon has some limitations and raises some

questions. For example, it is not obvious that the human capital of small children can be valued in the same way as for adults, i.e., using the probability of enrolment at every level of schooling and the probability of survival (which increases with age at first). Secondly, the authors do not explicitly consider forms of investment in human capital other than formal education. Therefore their analysis implies the same human capital production function for all students and the same efficiency for all schools, a proposition which is even less likely to hold true in international comparisons such as this study is making. Finally, the analysis assumes that education is divisible into annual amounts. This too is likely to be unrealistic. It implies, for example, that withdrawal from a four-year undergraduate course after only 3 years will have the same rate of return as completion of a 3-year undergraduate course.

In short, we may say that the technique of Jorgenson and Pachon is an attempt to provide complete measures of aggregate human capital and aggregate annual investment and it is therefore one which is at once too broad for our purposes and also implies relationships in the accumulation of human capital which are questionable. However, while it is not intended to provide individual decision rules, nor to calculate rates of return, it does provide us with an important perspective in developing a useful measurement methodology and we will rely upon modifications of it in developing our own income-based model in the following chapter.

2.4 Conclusion

As we have seen, the ways in which education and other forms of investment in human capital and incomes are correlated suggest that no one theory captures all the complexities of human capital accumulation. Whether we try to value human capital by means of the costs of the relevant investments or the benefits they produce, we find a range of conceptual and measurement difficulties. Moreover the rational decision rules provided by neo-classical

choice theory, which relate marginal costs and benefits of investments, do not generally apply to the accumulation of human capital.

The many methodological problems and the general lack of relevant data makes accurate measurement of human capital assets particularly difficult. Clearly some simplifications are needed and these should be undertaken according to the availability of data and the purpose of the research. Given that my purpose is to provide sensible estimates of human capital in two dissimilar nations, my research has the additional requirement of needing to rely on publicly available, aggregate data common to both Australia and Japan. With these considerations on mind, the next chapter develops a model for estimating human capital in Australia and Japan.

Chapter 3 Methodology

3.1 Introduction

As we have seen in Chapter 2, the measurement of human capital can be approached from a cost or income perspective. It has also become clear that the two approaches will likely lead to different results and that either result will be a less than perfect measure of human capital. Clearly, a choice must be made between two relatively unsatisfactory alternatives.

In developing my own model for estimating the value of human capital, I will use the income approach. This is primarily for two reasons. Firstly, it avoids the problem inherent in the cost approach that human capital outputs are likely to vary for a given cost of inputs, both among individuals and, more importantly here, between nations. Secondly, there is the question of data limitations. As will be shown in the next two chapters, good quality data for a sensible income based approach can be obtained for both nations on a consistent basis. In Chapter 5, when discussing the prospects for extending this work with a cost based approach, we will review the data sources that are available for a cost based approach and show them to be clearly inferior.

The approach adopted here somewhat follows Jorgenson and Pachon. It relies on data which show income levels, population, the probability of survival and the rate of unemployment by age and gender and is based on the proposition that the value of a nation's stock of human capital is equal to the expected lifetime labour income for all its people from ages 15 to 64.

However, before discussing the model itself, I will first describe the position of human capital in relation to the flow of national income and the accumulation of national wealth in some detail to show how the measurement of human capital fits within the current conceptual framework of national economic accounting.

3.2 Human capital accumulation, national wealth and income

The stock of a nation's population is the only source of human capital. Hence, measuring the value of human capital starts by evaluating changes in the level of the population. The process of general population growth can be described by equation (3-1).

$$P_t = P_{t-1} + (B_t - D_t) + (IM_t - EM_t) \quad (3-1)$$

where P_t = population at the end of period t
 P_{t-1} = population at the end of period t-1
 B_t = flow of births during period t
 D_t = flow of deaths during period t
 IM_t = flow of immigrants during period t
 EM_t = flow of emigrants during period t

Equation (3-1) can be transformed into the following equation (3-2), which shows that the difference between the stock of population in two periods consists of the number of children born, the number of people who die and the amount of net migration.

$$P_t - P_{t-1} = \Delta P_t = (B_t - D_t) + (IM_t - EM_t) \quad (3-2)$$

where ΔP_t = change in the population stock

Table 3-1 shows the historical trend population growth rate for Australia and Japan in each given period. It can be seen that Australia's average growth rates are higher than for Japan for all periods except that from 1940 to 1949. Figure 3-1 and Figure 3-2 also illustrate movements in the components of population change over the period 1873~1995, where ΔP , $\Delta(B - D)$ and $\Delta(IM - EM)$ mean the change in population, the amount of natural increase and of net immigration respectively. It is clear that Australia's relatively high population growth rate has been particularly the result of the contribution of net migration and it indicates that Australia has relied relatively largely on net migration as the potential source of her human capital. By comparison, the composition of Japanese growth shows that it relied only on natural increase.

Table 3-1: Average Growth Rates of Population in Australia and Japan

Period	Australia (%)	Japan (%)	Period
1796 to 1799	7.5		
1800 to 1809	9.2		
1810 to 1819	7.7		
1820 to 1829	11.8		
1830 to 1839	7.1		
1840 to 1849	10.4		
1850 to 1859	7.8		
1860 to 1869	11.7		
1870 to 1879	3.7	0.7	1872 to 1879
1880 to 1889	3.1	0.8	1880 to 1889
1890 to 1899	3.6	0.9	1890 to 1899
1900 to 1909	1.8	1.1	1900 to 1909
1910 to 1919	1.5	1.3	1910 to 1919
1920 to 1929	2.0	1.4	1920 to 1929
1930 to 1939	1.9	1.1	1930 to 1939
1940 to 1949	0.8	1.4	1940 to 1949
1950 to 1959	2.3	1.2	1950 to 1959
1960 to 1969	2.0	1.0	1960 to 1969
1970 to 1979	1.6	1.3	1970 to 1979
1980 to 1989	1.5	0.6	1980 to 1989
1990 to 1995	1.1	0.3	1990 to 1995
1872 to 1995	1.9	1.0	1872 to 1995
(1796 to 1995)	4.3		

Sources: Wray Vamplew(ed.), *Australians: Historical Statistics*, pp. 44, 50, 51 and 56.

Australian Bureau of Statistics, *Australian Demography, Bulletin*, No. 67, 1949, pp. 150, 151, 152, 153, 165 and 167.

Australian Bureau of Statistics, *Births, Australia*, Various Years.

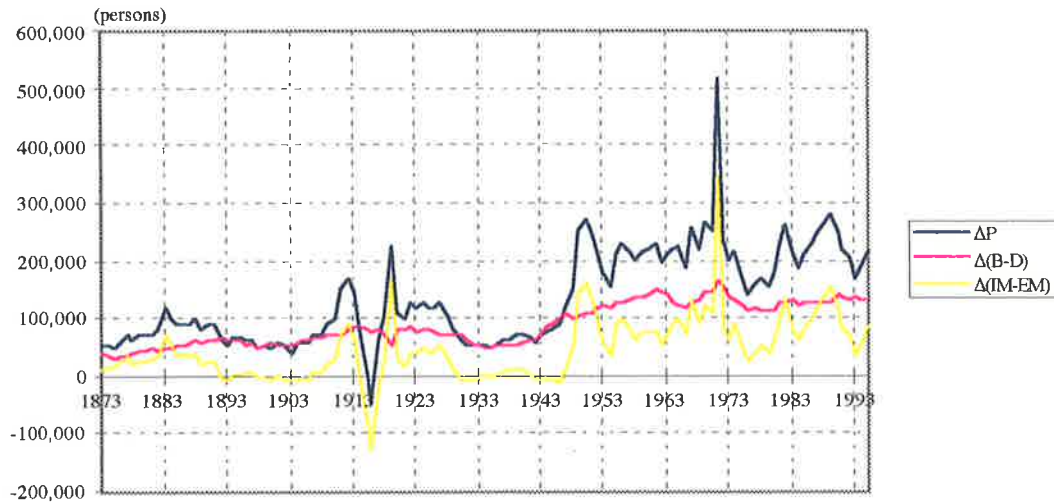
Australian Bureau of Statistics, *Australian Economic Indicators*, August, 1997, p. 69.

Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Nihon Chokitokei Soran* (Historical Statistics of Japan), Vol. 1, pp. 72-77.

Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Wagakuni Jinkono Gaikan* (Major Aspects of Population of Japan), Heisei 5nen Kokuse Chosa (1990 Census of Japan), Henshu Kaisetu (Abridged Report Series), No. 1, pp. 146 and 147.

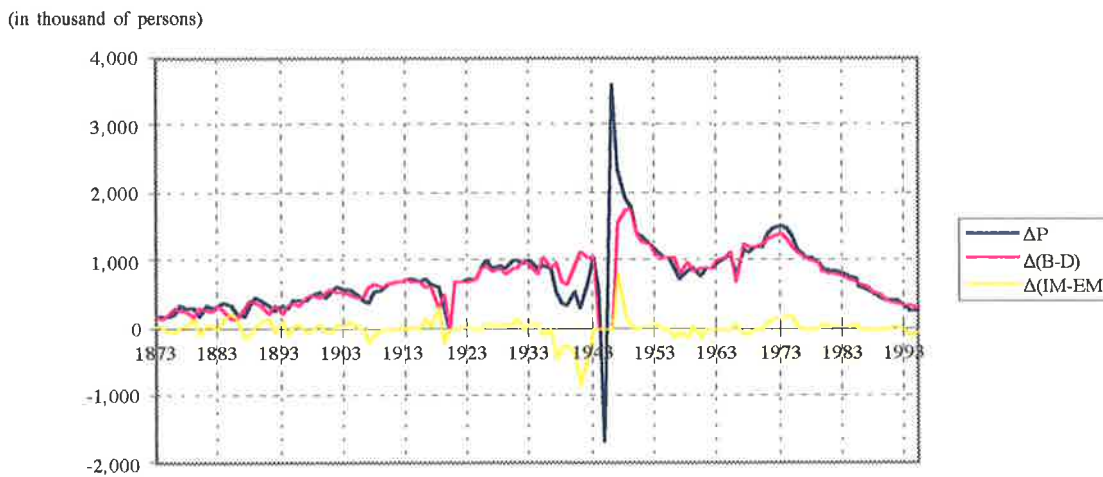
Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Wagakuni Jinkono Gaikan* (An Overview of Population of Japan), Heisei 7nen Kokuse Chosa (1995 Census of Japan), Henshu Kaisetu (Abridged Report Series), No. 1, pp. 128 and 129.

Figure 3-1: Components of Population Growth in Australia



Sources: Wray Vamplew(ed.), *Australians: Historical Statistics*, pp. 44, 50, 51 and 56.
 Australian Bureau of Statistics, *Australian Demography, Bulletin*, No. 67, 1949, pp. 150, 151, 152, 153, 165 and 167.
 Australian Bureau of Statistics, *Births, Australia*, Various Years.
 Australian Bureau of Statistics, *Australian Economic Indicators*, August, 1997, p. 69.

Figure 3-2: Components of Population Growth in Japan



Sources: Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Nihon Chokitokei Soran* (Historical Statistics of Japan), Vol. 1, pp. 72-77.
 Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Wagakuni Jinkono Gaikan* (Major Aspects of Population of Japan), Heise 5nen Kokuse Chosa (1990 Census of Japan), Henshu Kaisetu (Abridged Report Series), No. 1, pp. 146 and 147.
 Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Wagakuni Jinkono Gaikan* (An Overview of Population of Japan), Heise 7nen Kokuse Chosa (1995 Census of Japan), Henshu Kaisetu (Abridged Report Series), No. 1, pp. 128 and 129.

However, in measuring human capital, we are more concerned with the number of people of working age rather than of population levels as a whole. The labour force stock at the end of period t is defined as the stock of labour force at the end of previous period $(t - 1)$ plus the change in labour between those two periods. So we can write equation (3-3).

$$L_t = L_{t-1} + \Delta L_t \quad (3-3)$$

where L_t = labour force at the end of period t
 L_{t-1} = labour force at the end of period $t-1$
 ΔL_t = change in the labour force

The following equation shows the link between the stock of population and that of labour force.

$$L_t = \mu_t \cdot P_t \quad (3-4)$$

where μ_t = labour force participation rate at the end of period t (number in labour force ÷ number of labour force age)

Combining the two equations above gives us equation (3-5) which represents the change in the labour force decomposed into three factors, i.e., changes in population, changes in the participation rate and changes due to the combined effects (Jackson, 1989, pp. 54-58). This equation shows that change in the labour force is influenced by the number of new participants in the labour market and the change in the population.

$$\Delta L_t = \mu_{t-1} (P_t - P_{t-1}) + P_{t-1} (\mu_t - \mu_{t-1}) + (P_t - P_{t-1}) \cdot (\mu_t - \mu_{t-1}) \quad (3-5)$$

We can also express the change in the labour force as due to changes in the participation rate, the entry of new graduates and any increases of net migration. This relation can be summarized in the following equation:

$$\Delta L_t = (NI_t - WL_t) + \eta_t (IM_t - EM_t) \quad (3-6)$$

where NI_t = new participants during period t
 WL_t = withdrawals during period t
 η_t = labour force participation rate of net migration during period t

The following Table 3-2 shows the past values of male and female participation rates for Australia and Japan for some selected years. Although there has been some variability in male participation rates⁸ most change has occurred with females and we can observe that Australia has a long-term upward trend, while Japan has a downward trend. However, we also find some common features in the participation rates of both countries; in particular that the participation rates of the male labour force have been decreasing uniformly in the long-term and this trend is likely to continue in future. Increasing numbers of students enrolled in higher education will likely have a great influence on that trend. Further, we may say that, after 1990, Australia and Japan have had almost the same level of both male and female participation rates. This means that the two countries have been utilizing their labour forces at approximately the same rate.

Table 3-2: Labour Force Participation Rate

Year	Australia		Japan		Year
	Male	Female	Male	Female	
1871	1.00	0.29	0.91	0.67	1872
1881	0.97	0.28	0.90	0.67	1881
1891	0.98	0.30	0.88	0.62	1891
1901	0.98	0.31	0.86	0.59	1901
1911	0.95	0.25	0.83	0.53	1911
1921	0.94	0.24	0.81	0.49	1921
1933	0.88	0.25	0.79	0.44	1933
1947	0.88	0.25	0.86	0.50	1948
1954	0.88	0.27	0.85	0.55	1954
1961	0.86	0.29	0.85	0.54	1961
1971	0.83	0.41	0.83	0.49	1971
1981	0.77	0.44	0.80	0.48	1981
1991	0.74	0.52	0.78	0.51	1991

Note: Labour force participation rate is calculated as the ratio of labour force to the population aged 15 and over. However, Japanese ratios from 1872~1933 are based on the population aged 10 and over.

Sources: Wray Vamplew (ed.), *Australians: Historical Statistics*, pp. 44-56, and 147.

W. E. Norton and C. P. Aylmer, *Australian Economic Statistics, 1949-50 to 1986-87: I Tables*, pp. 98-99.

Australian Bureau of Statistics, *The Labour Force, Australia*, Various Years.

Australian Bureau of Statistics, *Australian Demography*, Various Years.

Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency),

Nihon Chokitokei Soran (Historical Statistics of Japan), Vol. 1, pp. 202-203, and 366-367.

⁸ Table 3-2, shows that values of labour force participation rates of Australian males from 1871 to 1921 were higher than after 1933. This may be because the figures of the male labour force from 1871 to 1921 include a number of workers aged less than 15. However, the same does not appear to be true for Australian females for whom the figures from 1871 to 1921 look no different, suggesting that before 1921 the female labour force aged 15 and under had not affected the labour force participation rates seriously.

Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency),
Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.
 Kosesho Daijinkanbo Tokei Johobu (Statistics and Information Department, Minister's
 Secretariat, Ministry of Health and Welfare), *Jinkodotai Tokei* (Vital Statistics Japan), Various
 Years.

Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency),
Jinkotokei Soran (Population Statistics of Japan), pp. 45-46.

A nation's human capital can be made more productive through re-education, job training and health care and so on. These changes also makes the labour force more employable and, in most cases, health care, education, job search and labour training are carried out jointly by individuals (households) acting in their own interests, governments or corporations.

We are now able to make an economic sketch of the economic processes in an economy which transform stocks into flows and vice versa. One such sketch may be given in the following form:

On a gross basis, production in a country is undertaken with its stocks at the beginning of the year. In addition, current economic activity can create new assets so that end of the year stocks differ from those at the beginning.

At the beginning of the year, we can describe a country's stocks from which it is able to produce income (Y) as follows:

$$W_{t-1} = K_{t-1} + H_{t-1} + E_{t-1} \quad (3-7)$$

Production and expenditure during the year can be described by the following equations.

$$Y_t = C_t + I_t + X_t - M_t \quad (3-8)$$

$$I_t = S_t \quad (3-9)$$

So that end of the year new stocks can be expressed as:

$$W_t = K_t + H_t + E_t \quad (3-10)$$

where W_t = net national wealth at the end of period t

K_t = physical capital at the end of period t

H_t = human capital at the end of period t

E_t = external assets at the end of period t

Y_t = production during period t

I_t = investment during period t

S_t = savings during period t
 X_t = exports during period t
 M_t = imports during period t

We can also note that the total flow of investment and lending is equal to the total flow of saving and borrowing, i.e., real assets (physical capital) and human capital grow through investment and, in addition financial assets build up through lending and liabilities increase with borrowing so that:

$$I_t + \Delta F_t = S_t + \Delta D_t \quad (3-11)$$

where ΔF_t = change in financial assets during period t
 ΔD_t = change in financial debt during period t

Finally, net national wealth accumulates through all past saving and increases with production in excess of consumption. These flow terms, combined with initial endowments provide accounting relationships for the stock variables. That is:

$$K_t = K_{t-1} + I_t \quad (3-12)$$

$$F_t = F_{t-1} + \Delta F_t \quad (3-13)$$

$$H_t = H_{t-1} + \Delta H_t \quad (3-14)$$

$$D_t = D_{t-1} + \Delta D_t \quad (3-15)$$

$$W_t = W_{t-1} + S_t \quad (3-16)$$

Now

$$K_t + H_t + F_t = D_t + W_t \quad (3-17)$$

That is, the sum of physical and human capital and financial assets equals the sum of wealth and indebtedness. This can be rewritten as:

$$\therefore W_t = K_t + H_t + F_t - D_t \quad (3-18)$$

From a national point of view, financial assets and liabilities may be held by foreigners or residents. The net result of locally acquired financial assets and locally held liabilities is the net addition to national wealth from international transactions, that is, $(F_t - D_t) = E_t$. Therefore

$$\therefore W_t = K_t + H_t + E_t \quad (3-19)$$

The above equations may be disaggregated according to the three economic sectors; households (h), corporations (c), and governments (g). From equation (3-18), we have that

$$\Delta W_t = \Delta K_t + \Delta H_t + \Delta F_t - \Delta D_t \quad (3-20)$$

where

$$(a) \Delta W_t = \Delta W_t^c + \Delta W_t^h + \Delta W_t^g \quad (3-21)$$

$$(b) \Delta K_t = \Delta K_t^c + \Delta K_t^h + \Delta K_t^g = I_t^c + I_t^h + I_t^g \quad (3-22)$$

$$(c) \Delta H_t = \Delta H_t^c + \Delta H_t^h + \Delta H_t^g \text{ (and } H_t = H_t^h, \text{ i.e., we assume that all human capital is owned by individuals)} \quad (3-23)$$

Having set it in context, we can now consider the components of ΔH_t (i.e., human capital investment) by each economic sector, for example, expenditure of education, health care and so on by households, expenditure of training, research and development and so on by corporations, expenditure of education, welfare, and so on by governments. Note that ΔH_t also should include additions to the stock of human capital due to immigration.

$$(d) \Delta F_t = \Delta F_t^c + \Delta F_t^h + \Delta F_t^g \quad (3-24)$$

$$(e) \Delta D_t = \Delta D_t^c + \Delta D_t^h + \Delta D_t^g \quad (3-25)$$

$$(f) \Delta E_t = \Delta F_t - \Delta D_t \quad (3-26)$$

These disaggregated equations can be consolidated, with care to avoid any double counting (e.g., financial assets do not add to national wealth, they merely alter its ownership and are therefore excluded from the estimates). National wealth is then the sum of physical and human capital and net national assets.

$$W_t = K_t^c + K_t^h + K_t^g + H_t^h + E_t \quad (3-27)$$

Focussing firstly on the accumulation of capital and wealth by households, we can construct the following equations.

$$W_t^h = W_{t-1}^h + Y_t^h - C_t^h \quad (3-28)$$

where Y_t^h = household disposable income

C_t^h = consumption (not including expenditure on education, housing and consumer durables which we usually treat as investment).

The net current balance equals the net additions to stocks (i.e., net capital balance)

$$S_t^h = Y_t^h - C_t^h \quad (3-29)$$

$$\therefore \Delta K_t^h + \Delta H_t^h + \Delta F_t^h = \Delta D_t^h + S_t^h \quad (3-30)$$

$$W_t^h = K_t^h + H_t^h + F_t^h - D_t^h \quad (3-31)$$

where

$$(a) K_t^h = K_{t-1}^h + I_t^h - \alpha K_{t-1}^h + \Delta P_t^{hk} \quad (3-32)$$

α = depreciation rate for housing, consumer durables.

ΔP_t^{hk} = capital gain or loss on real assets.

$$(b) H_t^h = H_{t-1}^h + \Delta H_t^h \quad (3-33)$$

$$(c) F_t^h = F_{t-1}^h + \Delta F_t^h + \Delta P_t^{hf} \quad (3-34)$$

ΔP_t^{hf} = capital gain or loss on financial assets.

$$(d) D_t^h = D_{t-1}^h + \Delta D_t^h \quad (3-35)$$

Equation (3-31) may be rewritten as follows.

$$\begin{aligned} W_t^h &= (K_{t-1}^h + I_t^h - \alpha K_{t-1}^h + \Delta P_t^{hk}) + (H_{t-1}^h + \Delta H_t^h) + (F_{t-1}^h + \Delta F_t^h + \Delta P_t^{hf}) - (D_{t-1}^h + \Delta D_t^h) \\ &= (I_t^h - \alpha K_{t-1}^h + \Delta H_t^h + \Delta F_t^h) + (\Delta P_t^{hk} + \Delta P_t^{hf}) + (K_{t-1}^h + H_{t-1}^h + F_{t-1}^h) - D_{t-1}^h - \Delta D_t^h \\ &= (S_t^h + \Delta D_t^h - \alpha K_{t-1}^h) + (\Delta P_t^{hk} + \Delta P_t^{hf}) + (K_{t-1}^h + H_{t-1}^h + F_{t-1}^h) - D_{t-1}^h - \Delta D_t^h \\ &= (S_t^h - \alpha K_{t-1}^h) + (\Delta P_t^{hk} + \Delta P_t^{hf}) + W_{t-1}^h \end{aligned} \quad (3-36)$$

i.e., the magnitude of W_t^h depends on the value of net savings, each stock's prices and the wealth held in the previous period.

We can now describe the accumulation of capital and wealth by corporations and by governments from the same point of view as for households.

Thus the equations of corporations are as follows.

$$K_t^c + F_t^c = D_t^c + W_t^c \quad (3-37)$$

$$\Delta K_t^c + \Delta H_t^c + \Delta F_t^c = \Delta D_t^c + S_t^c \quad (3-38)$$

But because human capital is owned by individuals and not by firms,

$$\Delta H_t^c = 0 \quad (3-39)$$

$$\therefore W_t^c = (K_t^c + F_t^c) - D_t^c \quad (3-40)$$

$$\text{where (a) } K_t^c = K_{t-1}^c + I_t^c - \beta K_{t-1}^c + \Delta P_t^{ck} \quad (3-41)$$

β = depreciation rate

$$(b) F_t^c = F_{t-1}^c + \Delta F_t^c + \Delta P_t^{cf} \quad (3-42)$$

$$\therefore W_t^c = (S_t^c - \beta K_{t-1}^c) + (\Delta P_t^{ck} + \Delta P_t^{cf}) + W_{t-1}^c \quad (3-43)$$

Similarly the accumulation of capital and wealth of governments can show by using the next equations.

$$K_t^g + F_t^g = D_t^g + W_t^g \quad (3-44)$$

$$\Delta K_t^g + \Delta H_t^g + \Delta F_t^g = \Delta D_t^g + S_t^g \quad (3-45)$$

$$\Delta H_t^g = 0 \text{ (for the same reason as for corporations)} \quad (3-46)$$

$$\therefore W_t^g = (K_t^g + F_t^g) - D_t^g \quad (3-47)$$

$$\text{where (a) } K_t^g = K_{t-1}^g + I_t^g - \chi K_{t-1}^g + \Delta P_t^{gk} \quad (3-48)$$

χ = depreciation rate

$$(b) F_t^g = F_{t-1}^g + \Delta F_t^g + \Delta P_t^{gf} \quad (3-49)$$

$$\therefore W_t^g = (S_t^g - \chi K_{t-1}^g) + (\Delta P_t^{gk} + \Delta P_t^{gf}) + W_{t-1}^g \quad (3-50)$$

These equations show clearly and comprehensively the structure of wealth accumulation in the national economy. However, they are less than perfectly useful because of data availability problems. In particular, no government or organization in Australia or Japan provide sufficient historical data on human capital investment by economic sectors to allow the components of the relevant equations to be estimated. Hence, to accomplish the practical measurement task for human capital, we must modify the approach to suit the availability of data. Specifically, we must abandon the idea of estimating human capital by economic sectors, and focus on estimating the consolidated value of human capital for all sectors in Australia and Japan. Further development of this approach is the objective of the next section.

3.3 A Model for the estimation of human capital

As we have made clear in Chapter 2, the measurement of the stock of human capital can be approached from a cost or income perspective. To overcome the problems associated with collecting data on the cost of investment in human capital (as described more fully in Chapter 5), the basic model which I propose uses the income approach. The income approach values the stock of human capital in terms of the increase in earnings it provides. The process

of estimation using this approach is shown in the following equations in this section.

Our basic equations rely on data which show earnings levels by age and is based on the proposition that the value of a nation's stock of human capital is equal to the expected lifetime labour income for all its people of workforce age, i.e., from 15 to 64.

Firstly, we may define the present value of the expected lifetime income for a given age group according to the equation (3-51). For those aged 15 years (P_{15}), for example, the value of lifetime labour income, V_{15} , can be defined as the sum of average incomes (Y_n) for all people as old or older, up to the age of retirement. The incomes need to be discounted by using an appropriate rate of discount, r . This gives the equation (3-51).

$$\begin{aligned} V_{15} &= \{P_{15} [Y_{15} \div (1+r)^0] + P_{15} [Y_{16} \div (1+r)^1] + \dots + P_{15} [Y_{64} \div (1+r)^{49}]\} \\ &= \sum_{n=15}^{64} P_{15} [Y_n \div (1+r)^{n-15}] \end{aligned} \quad (3-51)$$

where V_{15} = the present value of the expected lifetime income of ages 15 in year t
 Y_n = mean income at age n in year t
 P_{15} = the number of persons at age 15
 r = discount rate.

However it is not certain that any individual will survive up to 65. The average probability of future survival for each year is indicated by the term Z_t in equation (3-52). Furthermore we have to consider another uncertain factor which workers face through their lives in the labour force, i.e., the probability of unemployment. This term is introduced as the average probability of acquiring income (X_t) for each year (=1 - unemployment rate). Therefore the present value of the expected lifetime income of ages 15 (PV_{15}) can be described by equation (3-52).

$$\begin{aligned} PV_{15} &= \{ (P_{15} \cdot Z_{15}) [(Y_{15} \cdot X_{15}) \div (1+r)^0] + (P_{15} \cdot Z_{15 \sim 16}) [(Y_{16} \cdot X_{16}) \div (1+r)^1] + \dots + (P_{15} \cdot Z_{15 \sim 64}) [(Y_{64} \cdot X_{64}) \div (1+r)^{49}] \} \\ &= \sum_{n=15}^{64} (P_{15} \cdot Z_{15 \sim n}) [(Y_n \cdot X_t) \div (1+r)^{n-15}] \end{aligned} \quad (3-52)$$

- where PV_{15} = the present value of the expected lifetime income of ages 15 including Z_t and X_t in year t
- Z_t = mean probability of survival from ages n to ages $n + i$ in period t ($i = 0, \dots, 49$)
- X_t = mean probability of earning income from ages n to ages $n+1$ in year t

There are many data restrictions on the use of this equation, some of which require modifications to it. In particular, it is difficult to acquire annual data on earnings and unemployment rate for every age and by gender. Consequently we need some modifications allowing for the fact that earnings and unemployment data are available only in age groups of 5 years. These problems suggest two changes to the basic model. One is to modify equation (3-52), i.e., for a person aged 15 who belongs to the age group 15~19, for example, we can make the following equation (3-53).

$$PV_{15} = \{ (P_{15} \cdot Z_{15\sim19}) [(5 \cdot Y_{15\sim19} \cdot X_{15\sim19}) + (1+r)^0] + (P_{15} \cdot Z_{15\sim24}) [(5 \cdot Y_{20\sim24} \cdot X_{20\sim24}) + (1+r)^5] + \dots + (P_{15} \cdot Z_{15\sim64}) [(5 \cdot Y_{60\sim64} \cdot X_{60\sim64}) + (1+r)^{45}] \} \quad (3-53)$$

The same modifications should be made to other age groups. For example, each equation for a person aged 16, 17, 18, and 19 becomes:

$$PV_{16} = \{ (P_{16} \cdot Z_{16\sim19}) [(4 \cdot Y_{15\sim19} \cdot X_{15\sim19}) + (1+r)^0] + (P_{16} \cdot Z_{16\sim24}) [(5 \cdot Y_{20\sim24} \cdot X_{20\sim24}) + (1+r)^4] + \dots + (P_{16} \cdot Z_{16\sim64}) [(5 \cdot Y_{60\sim64} \cdot X_{60\sim64}) + (1+r)^{44}] \} \quad (3-54)$$

$$PV_{17} = \{ (P_{17} \cdot Z_{17\sim19}) [(3 \cdot Y_{15\sim19} \cdot X_{15\sim19}) + (1+r)^0] + (P_{17} \cdot Z_{17\sim24}) [(5 \cdot Y_{20\sim24} \cdot X_{20\sim24}) + (1+r)^3] + \dots + (P_{17} \cdot Z_{17\sim64}) [(5 \cdot Y_{60\sim64} \cdot X_{60\sim64}) + (1+r)^{43}] \} \quad (3-55)$$

$$PV_{18} = \{ (P_{18} \cdot Z_{18\sim19}) [(2 \cdot Y_{15\sim19} \cdot X_{15\sim19}) + (1+r)^0] + (P_{18} \cdot Z_{18\sim24}) [(5 \cdot Y_{20\sim24} \cdot X_{20\sim24}) + (1+r)^2] + \dots + (P_{18} \cdot Z_{18\sim64}) [(5 \cdot Y_{60\sim64} \cdot X_{60\sim64}) + (1+r)^{42}] \} \quad (3-56)$$

$$PV_{19} = \{ (P_{19} \cdot Z_{19}) [(Y_{15\sim19} \cdot X_{15\sim19}) + (1+r)^0] + (P_{19} \cdot Z_{19\sim24}) [(5 \cdot Y_{20\sim24} \cdot X_{20\sim24}) + (1+r)^1] + \dots + (P_{19} \cdot Z_{19\sim64}) [(5 \cdot Y_{60\sim64} \cdot X_{60\sim64}) + (1+r)^{41}] \} \quad (3-57)$$

The second change required is to estimate the annual value of earnings. In this case there are two possibilities. One is to build an econometric model and then estimate each value using this model. For example, we may consider the following model for estimating the annual value of earnings by age and gender:

$$Y_{ij} = a_{ij} + b_{ij}t + c_{ij}Y_A \quad (3-58)$$

where Y_{ij} = mean earnings of group age i and sex j
 Y_A = mean earnings of all workers
 i = age group, 15~19 ($i=1$), 20~24 ($i=2$), ..., 60~64 ($i=9$)
 j = male ($j=0$) or female ($j=1$)
 t = dummy variable for time trend
 a_{ij} , b_{ij} and, c_{ij} are parameters.

Let n_{ij} and n be the number of workers in group age i and sex j and the total number of workers respectively, then by definition:

$$\sum_i \sum_j n_{ij} = n \quad (3-59)$$

$$\sum_i \sum_j n_{ij} Y_{ij} = \sum_i \sum_j n_{ij} (a_{ij} + b_{ij}t + c_{ij}Y_A) = n Y_A$$

or

$$(\sum_i \sum_j n_{ij} a_{ij}) + (\sum_i \sum_j n_{ij} b_{ij}) + (\sum_i \sum_j n_{ij} c_{ij})Y_A = n Y_A \quad (3-60)$$

This suggests that $(\sum_i \sum_j n_{ij} c_{ij})Y_A = n Y_A$, then

$$\sum_i \sum_j w_{ij} c_{ij} = 1, \text{ where } w_{ij} = n_{ij} + n \quad (3-61)$$

$$\sum_i \sum_j n_{ij} a_{ij} = \sum_i \sum_j n_{ij} b_{ij} = 0 \quad (3-62)$$

For the estimates of the parameters of (3-58) for all groups to be consistent with conditions (3-59) and (3-60), equation (3-58) for all groups should be estimated simultaneously by (3-61) and (3-62). However, this approach is somewhat flawed. In particular, it involves an association of Y_{ij} and Y_A which is essentially arbitrary.

Hence, the second possible approach to the data problem needs to be considered. It is to proceed from the assumption that the value of earnings or the unemployment or mortality rate for each person in a given age group will be the same. Under this assumption we can utilize the compound rate of growth between age groups or different years to make the missing estimates. This method is described in more detail in the following chapter where it is used

extensively, initially to estimate population data and subsequently to create other converted data. I will leave a detailed exposition of the approach until then when it can be illustrated directly.

Returning now to the model itself, in principle, values for the elements of equation (3-52) can be obtained for Australia and Japan and collecting this data has been an important part of my research program. I also intend to extend this basic model to take account of the effect of net immigration. This will require data giving the age distribution of immigrants and emigrants.

The approach I am proposing has some obvious advantages in terms of measurement but it also has some disadvantages. In particular it relies heavily on there being unchanging values for future income levels classified by age, i.e., it assumes that say, 20 year olds today will have the same average incomes at age 40 as 40 year olds today. To improve on this situation, I have further assumed that the earnings of each age group grow at a constant rate ($= g$). Then a 20-year old, for example, will have $(1+g)^{20} \times$ earnings of a 40 year old today, where g is the projected average rate of growth of earnings.

Another weakness in my model is that its basic equation tell us little about human capital investment decisions, i.e., it does not imply that the value of human capital is determined by investment in education or training, it might be primarily on innate ability. However, this problem is most relevant to other objectives. Here, the purpose is to provide national estimates and to relate these to the aggregate process of economic development.

As to data sources, almost all the data I have used to make my estimates are drawn from Australian and Japanese governments. In the case of Japan, population and mortality data are available or can be calculated for most of the 20th century. However, the data on earnings by age are available only after 1958 and this limits the possible estimates. In addition, earnings and mortality data are only available in dissimilar age groups and, unemployment data based on census are available at 5 yearly

intervals after 1950. Nonetheless, by combining these we try to obtain annual estimates for a period 1947 to 1995.

The situation in Australia is a little different. Population and mortality data are readily available for most of the 20th century. However, unemployment data have been collected only after 1966 and earnings' data are available on a continuous basis only after 1975. Again, these data limitations reduce the length of the time series of estimates that we can create but, again, I have tried to acquire annual estimates by age and gender for the period 1947 to 95.

There are many more details pertaining to the data and these are the subject of the next chapter.

3.4 Conclusion

The current, widely accepted measures of economic activity are incomplete. In particular, they provide only a limited picture of the economy because they focus primarily on flow variables and tell us little about the contribution of stock variables, especially human resources, to economic growth. To the extent that stocks are included, primarily stocks of physical and reproducible capital are included.

My work aims to highlight the role of human capital often overlooked in the study of economic development and industrialization which focuses almost exclusively on physical capital. As shown in this chapter, my approach treats investment to increase the value of human beings in the same way as investment to increase the value of the physical stock.

However, our examination of the conceptual and methodological issues in Chapter 2 made clear that human capital assets have a number of peculiar characteristics and that conceiving accurately of investment in human capital is associated with a number of

difficulties. Nonetheless, I have proposed a basic equation as a simplification of what is a very complex phenomenon.

This study looks only at Australia and Japan and provides matching estimates. However, the simplified equation may also be applied to many other countries, especially in Asia where governments also collect the data that we need for the estimation. This could make for interesting extensions of my approach.

Chapter 4 The data sources of estimation

4.1 Introduction

In this chapter I will explain the data sources in Australia and Japan which I that we have used in making my estimations. These are largely Australian and Japanese government sources. In this section we deal briefly with the issue of the starting time of both countries' economic statistics. This will establish the time scale for my estimates. Then, in the following sections, we examine the basic data on population and other vital demographic statistics in Australia and Japan. We also look to the more detailed economic data on the labour force, GDP and other macro economic values that are necessary to the estimation methodology that has been chosen.

We can begin with a broad overview of the statistical collections in Australia and Japan. Beginning with Australia, George Palmer has noted that:

“In the period from 1788 to the granting of responsible government to each State in the 1850s (Western Australia, 1890, is the exception) the form of government in each Australian State was that of a Crown Colony in which the Governor, advised by a Legislative Council, was responsible for local administration under direct instructions from the Colonial Office in London. For the information of the Colonial Office annual returns (Blue Books) were prepared. Though primarily intended to provide guidance for the administrators, the Blue Books had the incidental important function of supplying information of a general statistical nature.

In the same period Censuses of population were instituted in Australia. Though simple population enumeration, known as ‘musters’, were frequently carried out from 1788 onwards, it was not until November, 1828, that the first actual Census was conducted, in New South Wales”. (Palmer, 1966, p. 2)

After that, the economic statistics of Australia have been developed in terms both of new statistical series being published and of improvements to existing statistics, in particular, after the end of World War II.

By contrast, the statistical development in Japan after the Meiji era can be divided into five stages; from 1871 to 1880, from 1881 to 1900 (the establishment of the Statistics Agency), from 1901 to 1941 (the establishment of the Central Statistical Committee), from 1942 to 1945 (a period of statistical lacuna) and from 1946 to the 1990s. According to Somucho Tokei Kyoku (the Statistics Bureau Management and Coordination Agency):

“The first stage began in 1871 when offices in charge of statistical matters were organized both in the *Dajokan* (the Cabinet) and in the Ministry of Finance, immediately after the commencement of Japan’s modernization following the Meiji Restoration (1868). At first, the two offices worked together in dealing with all the statistics covering land, population, products, public finance, foreign trade and other governmental statistics. But by a reorganization executed in 1876 of their division of duties, the statistics under the jurisdiction of the Ministry of Finance were limited to those on public finance and foreign trade, and the Statistics Section of the Cabinet was to be responsible for all other statistics. However, the duty of the latter office was not to engage itself in actual survey-taking, but to collect as broadly as possible statistics surveyed by other ministries and to compile overall statistical publications. In those days, most of the statistics prepared by the Ministries were obtained from tabular surveys which were based on the reports submitted by cities, towns and villages as to the tabulated results of figures kept on their administrative records. Among the surveys started in this period, the important ones were the Survey of Products taken from September 1870, the Survey on Permanent Domicile Population taken as of January 29, 1872 in accordance with the Family Register Law put into force in April of the preceding year and the National Land Survey conducted

according to the Revised Regulation on Land Tax of July 1873". (Somucho Tokei Kyoku, 1987, p. 8)

During the five stages, the statistical system in Japan has been developed not only a qualitatively but there has also been a quantitative explosion.

4.2 The data sources of Australia: population and vital statistics

The first separate censuses in Australia were conducted in New South Wales in 1828, Tasmania in 1841, South Australia in 1844, Victoria in 1854, Western Australia in 1848 and Queensland in 1861. However, as we have seen, population and mortality data for the nation as a whole are readily available only for most of the 20th century. These data are collected in compulsory census held five yearly.⁹ As one writer has put it:

Under Section 51 of the Commonwealth of Australia Constitution, the Parliament of Australia is empowered to 'make laws for the peace, order, and good government of the Commonwealth' with respect to, among other things, 'census and statistics'. ... The main information gained by, or derived from, a census may be classified under two basic headings: Demographic; and social and economic.

(1) Demographic

- (a) Number of people and distribution by area
- (b) Sex, age, and marital status
- (c) Birth rates (with separate recording of annual flow of births)

⁹ A Census and Statistics Act was passed in 1905 and provided that a census of population be taken in 1911 and every tenth year thereafter, but in 1930 the Act was amended to permit the taking of a census at other times and in 1977 a further amendment prescribed that a census be carried out every five years starting in 1981. Before 1911, censuses had been carried out in the various colonies, but not simultaneously until 3 April 1881, so that this date is the earliest date for which we have a count of the population as a whole; subsequently, simultaneous censuses were held in 1891 and 1901, so the 1911 census simply continued, albeit on a more formal basis, the established practice.

- (d) Death rates (with separate recording of annual flow of deaths)
 - (e) Life Tables (computed from death rates)
 - (2) Social and economic
 - (a) Education
 - (b) Duration of marriage
 - (c) Number of children
 - (d) Occupation and employment status
 - (e) Income
 - (f) Religion
 - (g) Nationality
 - (h) Place of birth
 - (I) Length of residence in Australia
- (Jackson, 1989, pp. 39-40)

According to another author in the field:

“The census of population and dwellings is by far the largest single statistical collection undertaken. Not only is the census the most important source of population statistics, but also it provides a large volume of information on such matters as work force characteristics of the population and numbers and types of dwellings”. (Palmer, *op. cit.*, p. 39)

To paraphrase further, census information is obtained on a *de facto* basis by householders filling in schedules left with them by a census collector. This is the so-called ‘householder’ method. The term *de facto* means that the information obtained relates to each person actually staying at a particular address (or other location), on a given night. It differs from a *de jure* method of enumeration that would associate persons with the dwellings in which they usually reside. (*ibid.*, p. 40)

However, there are some limitations with the census statistics.

“Deficiencies in the census statistics may arise either through failure to contact every dwelling and every person, or through the householder failing to provide accurate information. Other limitations are in some cases bound up

with the statistics not measuring satisfactorily some underlying concept, for example, unemployment". (ibid., p. 45)

Estimates of population between censuses are made at the end of each three-month period. The estimates are determined by adding natural increases plus net migration, measured from the previous census date, to the census population. Natural increase (i.e., the excess of births over deaths) is calculated on the basis of compulsory system of registration. Net migration estimates are derived from comprehensive records of overseas arrivals and departures.

However, many of the ratios in which we are interested (e.g., GDP per capita) require not the population at a certain date but the mean population for the calendar year or some other selected time frame and where this is necessary, estimates are made.¹⁰

In Australia the compulsory registration of births, deaths and marriages enables statistics dealing with these matters to be compiled. Because the administration of the relevant legislation is the responsibility of a Registrar-General in each State, there are some differences between States in the registration procedures employed. These demographic data may be described as follows:

"The statistics published in the bulletin *Demography* and in *Causes of Death*, based on registrations, are very extensive and in some cases involve detailed cross-classifications by several characteristics. ...

The following list is by no means exhaustive but serves to indicate the range of information that is provided.

¹⁰ Theoretically, the mean population should be obtained by considering the population at each instant of time over the year. In practice only quarterly estimates are usually available and these have to be employed to give an approximation to the true average value for the year. In Australia the mean population is calculated by the formula:

$$\text{mean population} = (a + 4b + 2c + 4d + e) \div 12$$

where a is the population at the end of the quarter immediately preceding the twelve month period, and b, c, d and e are the populations at the end of each of the four succeeding quarters.

This formula provides a close approximation to the mean of a population that progresses smoothly through the five values a, b, c, d and e.

- (A) Marriages: average age of bridegrooms and brides.
 - (B) Marriages: conjugal condition of bridegroom and bride
Classified by State.
 - (c) Marriages in each religious denomination classified by
State.
 - (d) Marriages: relative ages of bridegrooms and brides.
 - (e) Marriages: birthplaces of bridegrooms and brides.
 - (f) Marriages: occupation of bridegrooms.
 - (g) Live births: crude birth rates classified by State.
 - (h) Ex-nuptial live births: number classified by State
 - (i) Live births and confinements: age of mother.
 - (j) Confinements: age of parents.
 - (k) Nuptial confinements: age, duration of marriage and
Previous issue of mother.
 - (l) Nuptial confinements: occupation of father.
 - (m) Deaths: crude death rates classified by State.
 - (n) Deaths at single ages.
 - (o) Deaths classified by cause for each age group.
 - (p) Infant mortality rates classified by State.
 - (q) Deaths in each month of children under one year of
age classified by Statistical Division.
- (Palmer, op. cit., pp. 58-59)

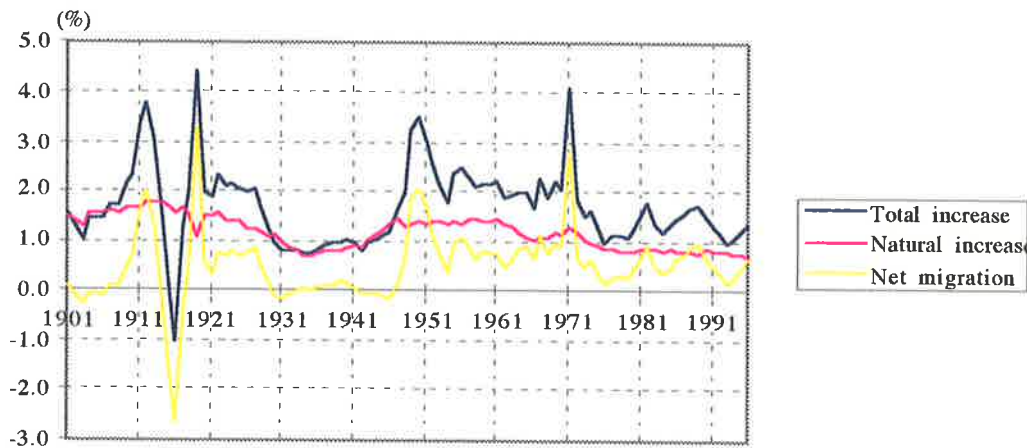
To employ these statistics in the estimation model previously described, we need to start with population levels by age and gender. In Australia in the years of 1941, 1945, and 1947 the statistics on population by age and gender groups may be obtained from *Australian Demography, Bulletin*, produced by the Australian Bureau of Statistics (ABS) and, after 1949, we can utilize the annual statistics on population by age and gender from the publication, *Estimated Resident Population by Sex and Age, States and Territories of Australia* also provided by the ABS. The level of the population in 1948 can be estimated using the geometric mean of the values of population in 1947 and 1949 by age and gender groups. The results are shown in Table B-1 and Table B-2 of Statistical Appendix B as red coloured figures. Concerning data on population prior to 1940, we can obtain figures by five-year age and gender groups at 10 yearly intervals such from 1861 (i.e.,

1870~1871, 1881, 1891 and 1901). These are compiled in Vamplew (1987). After 1921, annual data on population by five-year age and gender groups are also obtainable from *Australian Demography, Bulletin*, provided by the ABS.

Of course, population growth comprises natural increase (births minus deaths) and net migration (immigration minus emigration). When we review the contribution of each of these components to Australia's population growth (Figure 4-1 below), we see that fluctuations in the migration rate were the major factor in the variations in the rate of total increase. It can be reasoned that a large range of factors affect the rate of migration, e.g., economic conditions, government policy and the conditions in countries from which the migrants come. Hence, in broad terms, immigration rates have been high in times of prosperity, such as the early 1920s and the early 1950s, and have fallen in times of depression, such as the 1930s, and in times of war, as in the early 1940s.

Variations in the rate of natural increase are brought about by changes in the birth or death rate. The crude birth rate is a measure of the number of children born each year in proportion to the total population. It also depends on many factors, such as economic conditions, the number of women in the childbearing age groups, the rate of marriage and the willingness of couples to have children. The death rate is more stable and has fallen to less than 8 per thousand in Australia. Future variations in death rates are likely to be no more than marginal.

Figure 4-1: Australian Population Growth and Components of Growth, 1901~96



Sources: Wray Vamplew(ed.), *Australians: Historical Statistics*, pp. 44, 50, 51 and 56.
 Australian Bureau of Statistics, *Australian Demography, Bulletin*, No. 67, 1949, pp. 150, 151, 152, 153, 165 and 167.
 Australian Bureau of Statistics, *Births, Australia*, Various Years.
 Australian Bureau of Statistics, *Australian Economic Indicators*, August 1997, p. 69.

To make our estimates of human capital, we also require data on mortality rates classified by age and gender groups. These are available from the *Census of the Commonwealth of Australia*, and the *Australian Demography, Bulletin*, provided by the ABS for the following years: 1881~1890, 1891~1900, 1901~1910, 1920~1922, 1932~1934, 1946~1948, 1953~1955, 1960~1962, 1965~1967, 1970~1972, 1975~1977. After 1978, yearly data are obtainable from *Australian Demography, Bulletin*, and *Deaths, Australia*. Annual data on deaths by age groups and gender groups are available from 1901 and, after 1967, data on deaths classified by more detailed five-year age group are obtainable from *Deaths, Australia* provided by the ABS.

To obtain annual data on death by age for each of the earlier years, we can combine the annual and five yearly data from before and after 1978 respectively. Firstly, we assume that the actual mortality rate for 1946~48, 1953~1955, 1960~1962, 1965~1967, 1970~1972, 1975~1977, corresponds to the middle year of each of those periods. Next, we compute the geometric mean of changes in the mortality rate between each middle year, e.g., the geometric mean between 1947 and 1954. This process is continued for every age group and for other middle years. In

addition, we also assume that this computed growth rate can be applied to all people of the same age in each year between these middle years, i.e., if the growth rate from 1947 to 1954 is r , then the likelihood of death for a person aged 15 in 1948 can be written as follows:

$$\begin{aligned} & \text{The likelihood of death of a person aged 15 in 1948} \\ &= \text{The likelihood of death of a person aged 15 in 1947} \\ & \times (1 + r) \end{aligned}$$

Using this method, we can acquire annual mortality rates from 1947. Finally, we can convert these values to mean probabilities of survival, that is, $1 - \text{mortality rate}$, for those aged from 15 to 64 years. The results of these calculations are shown in Tables B-3 and B-4 of Appendix B and the red coloured figures indicate estimated values. Using these mean probabilities of survival, we calculate the future mean probability of survival of any person. For example, the future mean probability of survival of a person aged 15 in year t can be computed by the following process:

Mean probability of survival of a person aged 15 in year t

Age	15	16	17	18	...	64
Mean probability of survival	P_{15}	P_{16}	P_{17}	P_{18}	...	P_{64}

Therefore the future mean probability of survival of aged 15 becomes,

Age	15	16	17	18	...	64
Future mean probability of survival	P_{15}	(P_{15}) \times (P_{16})	(P_{15}) \times (P_{16}) \times (P_{17})	(P_{15}) \times (P_{16}) \times (P_{17}) \times (P_{18})	· · ·	(P_{15}) \times (P_{16}) \times · · (P_{64})

The results of these calculations by gender are shown in Table B-5 and Table B-6 of Appendix B. However, because showing all the results of this calculation for every age would take too much

space, the Tables are abbreviated to show only the probability of survival for selected ages.

4.3 The data sources of Australia: labour force, wage, GDP, and interest

We now turn from basic population data to the economic values which are needed for my estimates. We begin with data on the size and income of the labour force and then look at the GDP and interest rate data and data sources.

The population census provides the basic source of information concerning employment in Australia. However, the census unemployment statistics are not entirely satisfactory. A more precise measurement of unemployment would require putting a more detailed set of questions on this subject than it would be practical to include in a general-purpose population census. Partly in response, the ABS has been conducting monthly surveys of this kind, as is described below.

“The principal source of statistics on the civilian labour force is the ABS population survey, which consists of the monthly *Labour Force Survey* and attached supplementary surveys. The *Labour Force Survey* collects information on the labour force status of individuals (that is, whether they are employed, unemployed or not in the labour force) together with a range of demographic and other characteristics. It also provides the basis for analysis of unemployment and labour underutilisation”. (The ABS, 1992, p. 165)

The ABS also provides a brief historical overview of labour force data in Australia:

“The concept of the labour force has been viewed from a number of different perspectives. ... The earliest approaches, developed at the turn of the century, were based on the ‘gainful worker’ concept in which a person’s labour force status was described in terms of whether or not their usual activity constituted what might be

considered gainful work. Gainful work was broadly defined as work in an occupation from which a person may expect to gain some remuneration. Thus, only persons in a gainful occupation were considered to be in the labour force and persons who wanted but had not yet obtained gainful employment were excluded.

The economic downturn of the 1930s focused attention on the need for a statistical framework that allowed the measurement of unemployment and provided a distinction between the employed and the unemployed in the definition of the labour force. Out of this evolved the labour force framework, which was adopted by the International Labour Organization (ILO) at its 1954 Conference of Labour Statisticians and has been used as an international standard since then". (ibid.)

According to the Commonwealth Statistician,

"The ABS defines employed persons as persons aged 15 years and over who, during the survey week:

- (1) worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (including employees, employers and self-employed persons; or,
- (2) worked for one hour or more without pay in a family business or on a farm (i.e., unpaid family helpers); or
- (3) were employees who had a job but were not at work and were: on paid leave; on leave without pay for less than four weeks up to the end of the survey week; stood down without pay because of bad weather or plant breakdown at their place of employment for less than four weeks up to the end of the survey week; on strike or locked out; on workers' compensation and expected to be returning to their job; receiving wages or salary while undertaking full-time study; or
- (4) were employers or self-employed persons who had a job, business or farm, but were not at work. (Castles, 1986, p. 1)

The ABS defines unemployed persons as follows:

“Unemployed persons are those aged 15 and over who were not employed during the survey week, and

- (1) had actively looked for full-time or part-time work at any time in the four weeks up to the end of the survey week and:
 - (a) were available for work in the survey week, or would have been available except for temporary illness (i.e., lasting for less than four weeks to the end of the survey week); or
 - (b) were waiting to start a new job within four weeks from the end of the survey week and would have started in the survey week if the job had been available then; or,
- (2) were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown”. (ibid., pp. 1-2)

Labour force data in Australia are available in age brackets beginning with ages 15 to 19 and ending with ages 65 and over and they are also obtainable separately for women and men in the ABS publication, *The Labour Force, Australia*. The ABS has provided a time series of data on the labour force based on the above definition since 1966. Prior to 1965 a different approach to the measurement of unemployment and employment was used in Australia. These resulted in four sets of unemployment statistics being published:

- (1) those derived from the five-yearly population Censuses,
 - (2) the quarterly population sample survey, conducted by the Commonwealth Bureau of Census and Statistics (CBCS),
 - (3) the monthly registered unemployment figures compiled by the Department of Labour,
 - (4) the monthly statistics of persons receiving Unemployment Benefit compiled by the Department of Social Security.
- (Hancock et al, 1975, p. 501)

Because of differences in definition and method of measurement between these collections, strict comparability is not possible and a choice between them is necessary. I have chosen to use census data consistently, despite that it does not give annual data prior to 1965. While the Census population survey is not entirely free of inaccuracies (e.g., the Census does not include inactive unemployment, it is based on self-enumeration of the whole population, it is conducted on a particular day, etc.), it is at least designed to provide comprehensive measures of unemployment.

The time series of labour force, including unemployment, derived from the Censuses are summarized in Tables B-7 to B-16 of Statistical Appendix B. Table B-7 and Table B-12 show the historical trends in the male and female labour force respectively; Table B-8 and Table B-13 show the numbers of males and females who are not part of the labour force; Table B-9 and Table B-14 show the number of unemployed persons by gender, and Table B-10 and Table B-15 show the rate of male unemployment and female unemployment respectively, calculated from Censuses of population taken in 1911, 21, 33, 47, 54, and 61; Table B-11 and Table B-16 indicate the rate of unemployment by gender from 1966 to 1995.

We can estimate the annual, age-specific unemployment rate separately for women and men from 1947 to 1965 by employing a method of estimation basically the same as that used previously to estimate the future probability of survival, i.e., while our period of estimation starts in 1947, detailed time series data are available from 1966. Hence, we must use data from the Censuses of 1947, 54, and 61 and assume that the actual rate of unemployment for each age group corresponds to the middle age of each age group (e.g., the unemployment rate for the cohort aged 15 to 19 corresponds to the group aged 17). Then we can construct the table below (explanation to follow).

Table (example): Unemployment Rate

Year	Age																	
	15	16	17	18	19	20	21	22	23	24	...	27	...	60	61	62	63	64
1947			U_{47}					V_{47}					W_{47}					Z_{47}
.		
.		
1954			U_{54}					V_{54}					W_{54}					Z_{54}
.		
.		
1961			U_{61}					V_{61}					W_{61}					Z_{61}
.		
.		
1966			U_{66}					V_{66}					W_{66}					Z_{66}
.		
.		
1995			U_{95}					V_{95}					W_{95}					Z_{95}

Firstly, we compute the geometric mean by yearly age in 1947, 54, 61, and every year after 1966. For example, in 1947 we take the geometric means of U_{47} and V_{47} , V_{47} and W_{47} , and so on. If the rate of growth of unemployment between two age groups (for example, U_{47} and V_{47}) in 1947 is r , we estimate the unemployment rate of those aged 18 in 1947 by using the following equation:

$$\text{the unemployment rate of those aged 18} = U_{47} (1 + r) = U'_{47}$$

Similarly, the unemployment rate of those aged 19 becomes:

$$= U'_{47} (1 + r) = U''_{47}$$

Applying the rate of r to those aged 18, 19, 20, and 21, we acquire the estimated unemployment rate for them in 1947.

For those aged 15 and 16, we estimate the unemployment rate as follows:

$$\text{the unemployment rate of aged 16} = U_{47} \div (1+r) = U^*_{47}$$

$$\text{the unemployment rate of aged 15} = U^*_{47} \div (1+r) = U^{**}_{47}$$

In addition, for those aged 63 and 64, if the rate of growth between those aged 57 and aged 62 in 1947 is r' , the estimated unemployment rate for people aged 63 and 64 in 1947 becomes:

$$\text{the unemployment rate of aged 63} = Z_{47} (1 + r') = Z'_{47}$$

the unemployment rate of aged 64 = $Z'_{47} (1 + r') = Z''_{47}$

We repeat the same procedure to obtain data for other age cohorts.

Having obtained data by yearly age, we must also construct data for each year between 1947 to 1966. The method is to take the geometric mean of two years (e.g., of U_{47} and U_{54}) and apply this rate of growth to estimate the unemployment rate for 17-year-olds in every year for the period 1947 to 54. We repeat this same procedure for the years 1954 to 61 and 1961 to 66.

The result of these procedures is to give us a time series of data on the unemployment rate by age and gender from 1947 to 1995. Table B-17 and Table B-18 in Statistical Appendix B display the final results. By employing the data from Table B-17 and Table B-18, we can estimate the mean probability of earning income, as equal to $(1 - \text{unemployment rate})$.

We turn now the issue of Australian wage rates. The ABS has provided weekly data on earnings of full-time workers in five-year age groups (beginning with ages 15 to 19 and ending with ages 65 and over) and in gender groups on an annual basis since 1975 (in *Weekly Earnings of Employees, Australia*). These record two types of weekly earnings: one is a mean weekly earnings and the other one is a median weekly earnings. The ABS defines weekly earnings, weekly ordinary time earnings, weekly overtime earnings, and weekly total earnings as follows:

“Weekly earnings are defined as the amount of ‘last total pay’ (i.e., before taxation and other deductions have been made) prior to interview. For persons paid other than weekly, earnings were converted to a weekly equivalent. No adjustment was made for any back payment of wage increases or pre-payment of leave etc.

Weekly ordinary time earnings are defined as one week’s earnings of employees for the reference period attributable

to award¹¹ standard or agreed hours of work, calculated before taxation and any other deductions (e.g., superannuation, board and lodging) have been made. Included in ordinary time earnings are award payments, base rates of pay, overaward payments, penalty payments, shift and other allowances; commissions and retainers; bonuses and similar payments related to the reference period; payments under incentive or piecework; payments under profit-sharing schemes normally paid each pay period; payments for leave taken during the reference period; all workers' compensation payments made through the payroll; and salary payments made to directors. Excluded are overtime payments, retrospective pay, pay in advance, leave loadings, severance, termination and redundancy payments and other payments not related to the reference period. Weekly overtime earnings define as payment for hours in excess of award, standard or agreed hours of work and weekly total earnings define as weekly ordinary time earnings plus weekly overtime earnings". (The ABS, 1992, p. 232)

Table B-19 and Table B-20 indicate both median and mean weekly earnings of male full-time workers by age groups and Tables B-21 and B-22 show the same data for females.

While data after 1975 is readily available and comprehensive, data before that time is less so. Prior to 1975, there are problems with coverage and with the gender break up.¹²

"... information on earnings (was) derived from the payroll tax collection, supplemented by direct collections from government bodies, etc., with some adjustments being made to take into account the earnings of persons not

¹¹ "Awards" refer to terms of employment established (i.e., 'awarded') under the unique system of compulsory wage arbitration which operated in Australia up until the mid 1990s. (see Sekine, 1992)

¹² A comprehensive account of the history of the collection of data for nominal rates of wages paid in occupations in different industries is given in the *Labour Report* of the Commonwealth Bureau of Census and Statistics. (irregular; issued: July 1923 to 1973)

covered by these sources. It is therefore subject to the limitations arising out of the coverage of payroll tax. ...

As separate total income figures are not obtained for males and females on the payroll tax form, the estimates of average earnings are made on a 'male unit' basis. Male units represent total male employment plus a proportion of female employment determined by the ratio of female to male earnings. If, for example, there were 800,000 females in employment and it was estimated that the ratio of female to male earnings was 0.60 then 480,000 (0.60 of 800,000) would be added to the figure for male employment and the result would be divided into total earnings expressed on an average per week basis to obtain average weekly earnings". (Palmer, op. cit., pp. 95-96)

However, these extensions do not meet all our requirements. In particular, we only have total average weekly earnings in terms of per employed male or female (see Table B-23) and do not have data on earnings by age or age group. To estimate these data, we assume that from 1947 to 1974 the annual average weekly earnings for every age rise at the same rate as the growth of total average weekly earnings per employed male or female. The method of estimation is similar to that of estimating the annual unemployment rate and utilizes data in Tables B-20, B-22 and B-23 of Appendix B to estimate the annual average weekly earnings for those aged 15 to 64. Firstly, we compute the annual growth rate of total average weekly earnings from 1947 to 1975. Next we calculate the average weekly earnings by age in 1974. If the growth rate from 1974 to 75 is r , the average weekly earnings of those aged 15 in 1974 can be estimated as follows:

$$\begin{aligned} & \text{the average weekly earnings of aged 15 in 1974} \\ & = \text{the average weekly earnings of aged 15 in 1975} + (1 + r). \end{aligned}$$

We apply the same procedure to people of all other ages in 1974 and acquire the estimated values.

We can continue with the technique to make estimates for previous years, i.e., if the growth rate from 1973 to 74 is r' , the average weekly earnings of aged 15 in 1973 should be:

$$\begin{aligned} & \text{the average weekly earnings of aged 15 in 1973} \\ & = \text{the average weekly earnings of aged 15 in 1974} \div (1+r') \end{aligned}$$

As we repeat the same procedure retroactively for each age group for the period 1975 to 1995, we finally construct the time series data on estimated yearly earnings from 1947 to 1995. Table B-24 and Table B-25 show these estimates by age and gender.

The last data for investigation are those showing the value of GDP and interest in Australia. For Australia, national accounts data are for financial years ending at 30 June so that data for 1995 refers to the financial year 1994-95. According to Palmer (op. cit.):

“Though a number of estimates of Australian national income had been made in earlier years notably by T. A. Coghlan, J. T. Sutcliffe and C. G. Clark and J. G. Crawford, it was not until 1945 that official estimates of national income and expenditure were published. These were taken back to 1938-39 in the *National Income and Expenditure White Papers*. The latter are prepared annually by officers of the Commonwealth Bureau of Census and Statistics and presented to the Commonwealth Parliament on the occasion of the budget. ...Quarterly estimates were first published in 1960 (in the Commonwealth Bureau of Census and Statistics, *Quarterly Estimates of National Income and Expenditure*). (pp. 312-313)

More recent changes are summarized by Castles (1994):

“In 1963 a number of important changes in the structure and presentation of the national accounts and in the conceptual basis and definitions of the principal aggregates were introduced in a new publication entitled *Australian National Accounts: National Income and Expenditure, 1948-49 to 1961-62*. Constant price estimates of the principal expenditure aggregates were presented for the first time in this publication. ...

In the 1971-72 issue of *Australian National Accounts: National Income and Expenditure*, published in 1973, the structure of the accounts was revised to accord more closely to the international standard described in the United Nations publication *A System of National Accounts* (1968). (*Australian National Income, Expenditure and Product, 1992-93*, p. 103)¹³

Table B-26 shows the historical values of Australian GDP at current prices from 1947 to 1996.

Turning now to the matter of Australian interest rates that we must use to provide an appropriate discount rate to our estimates of human capital. It has been noted that, in Australia, as elsewhere:

“there are as many interest rates as there are different financial assets (or securities). The relationship between these interest rates is complex and depends in part on the risks perceived by potential buyers of securities, the term to maturity of the security, expectations about the rate of inflation and future interest rates, and the relative supplies of the different securities. It is said that three categories of interest rates can be distinguished; those rates which are either fixed administratively such as some rates paid or charged by banks; those rates which are largely influenced by government action such as the interest rate on government securities; and those rates which are determined by the supply and demand for money, as with the interest rate on bank-accepted commercial bills. The

¹³ Further changes are currently being considered. Castles continues that: After a long review process, a revised international national accounting standard has recently been published, entitled *System of National Accounts, 1993*. It was produced and published by an Intersecretariat Working Group, comprising representatives from five organizations involved in the use of economic statistics and the promotion of international statistical standards - United Nations, Organisation for Economic Co-operation and Development, International Monetary Fund, World Bank and Commission of the European Communities. The Australian national accounts will be reviewed to achieve the maximum possible alignment with these standards, with the major changes being implemented in 1996 to 1997.

pattern of these different interest rates over time has been quite distinctive". (Indices Economics, 1980, pp. 75-76)

Table B-27 shows the behaviour of some interest rates from 1946 to 1995. There appears to be no clearly superior rate for our purposes and so selection is difficult. Analytically, the rate chosen should be that which is relevant to the decision to invest in human capital and for this purpose I have chosen the median interest rate on deposits of saving banks. This interest rate is most closely connected with peoples' daily lives. The median interest rate from 1947 to 95 is 3.75 per cent (By comparison, the median interest rate of government bonds is 5.40 per cent). In the analysis which follows we will also employ some hypothetical interest rates so as to indicate the sensitivity of results to this selection.

4.4 The data sources of Japan: population and vital statistics

In this and the next section we discuss the data sources of Japan in a way which parallels the discussion for Australia. There are two fundamental laws in Japan concerning censuses and surveys: Tokei Ho (the Statistics Law) and Tokei Hokoku Chosei Ho (the Statistical Reports Coordination Law). They were established in order to secure the truthfulness and usefulness of statistics, while protecting the privacy of respondents and minimizing their reporting burden.

The Statistics Law was enacted in May 1947 as a fundamental law on statistical affairs of Japan. It aims at:

"securing the truthfulness of statistics, eliminating the duplication of statistical surveys, consolidating the statistical system and planning to improve and develop the statistical system". (quote from web page of Somu Cho (the Management and Coordination Agency))

This law stipulates that statistics which are highly important to policy planning and decision making of the government shall be designated by the Director-General of the Management and

Coordination Agency (MCA), and that governmental bodies must notify the Director-General of the MCA of plans to collect information to produce statistics other than those designated and approved by the Director-General. These two types of statistics are called designated statistics and notified statistics.

The Statistical Reports Coordination Law was enacted in August 1952, to reduce the reporting burden on the respondents to statistical surveys and to improve the efficiency of administrative operations. The law stipulates that national governmental bodies that plan to collect reports for statistics from 10 or more persons, whether private or juridical, are required to obtain prior approval from the Director-General of the MCA. The statistical surveys that the Director-General of the MCA approves are termed collections of statistical reports (approved statistical surveys).

In making estimates of the annual probability of survival, the unemployment rate and of yearly earnings by age and gender from 1947 to 1995 for Japan, we employ basically the same method that we have already discussed in previous sections for Australia using compound rates of growth. Therefore, here we focus only on an explanation of the data sources themselves.

The history of Japanese population statistics can be briefly described as follows:

“The population Census in Japan was taken for the first time in 1920. As regards the population prior to that time population estimates had been compiled since 1872 by the Cabinet Bureau of Statistics. The population from 1872 to 1898 was estimated on the basis of the permanent domicile population as of January 29, 1872 in the lunar calendar (March 8 in the solar calendar), by adding to it the live births, desertions of children and registrations of persons since then, and by subtracting from it the deaths and removals from registry as well as Japanese nationals living overseas at the end of the year.

The population as of the beginning of 1899 was estimated on the basis of the Japanese population in Japan proper,

obtained from the Population Census taken as of October 1, 1920, by retroactively adding to or subtracting from it the live births, deaths, desertions of children, registrations of persons, removals from registry and migration of Japanese nationals to and from abroad which had occurred before the end of September 1920.

The above two estimated population series were adjusted for the purpose of their linkage, first by allotting proportionately the discrepancy between the two series for the year 1899 according to the respective magnitude of increase during the period from 1872 to 1895 and the period from 1899 to 1920, and secondly by allotting them proportionately according to the magnitude of increase during each year". (Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), *Nihontokei Nenkan (Japan Statistical Yearbook)*, 1996, pp. 26-27)

The Population Census has been taken about every five years since 1920, and the sixteenth census was conducted in 1995.

"From the first census to the sixth, population had been enumerated on the *de facto* population concept. However, in the seventh census (for 1950) the principle for enumeration was changed to the *de jure* population concept, which has been adopted up to the present census.

The 1995 Population Census covered all households and individuals having residence within the territory of Japan as of October 1, and the census questionnaires were filled out by the method of self-entry (partly by enumerator's entry). The fieldwork of the census was executed through the channels of the Statistics Bureau, Management and Coordination Agency; prefectures; shi (cities), ku (wards), machi (towns) and mura (villages); and census enumerators. The tabulation results are based on "Results of Prompt Sample Tabulation" and "Preliminary Count of the Basis of Summary Sheets". (ibid., p. 27)

Survey items differed from census to census reflecting the needs of the times, but basic items such as sex, age, marital status and

relationship to the head of household have been the same throughout the census history. A number of the survey items differed between large-scale and simplified censuses. For example, the following items were sought in the large scale 1980 Census, whereas the asterisked items were not sought in the simplified 1985 census:

(1) name; (2) sex; (3) year and month of birth; (4) relationship to the head of household; (5) marital status; (6) nationality; (7) time moved into the present house*; (8) previous address*; (9) education*; (10) type of activity; (11) name of establishment and kind of business (industry); (12) kind of work (occupation); (13) employment status; (14) place of work or location of school; (15) journey to work or to attend school*; (16) type of household; (17) number of household members; (18) source of family income*; (19) type and tenure of dwelling; (20) number of dwelling rooms; (21) area of floor space of dwelling rooms; (22) type of building; (23) number of stories.

The data on population by age and gender groups are available in *Kokuse Chosa (Population Census)* conducted by Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency). The publication, *Nihon Chokitokei Soran (Historical Statistics of Japan)* published by Somucho Tokei Kyoku is also useful to review the historical trend of Japanese population data in detail.

The contribution of components of population growth in Japan since 1900 is presented at Figure 4-2. The value of net migration is calculated as the total increase minus natural increase. The figures include the discrepancy in 1920 caused by changes in the method of estimation and also reveal the lack of data from 1944 to 47, which resulted from the exigencies of war.

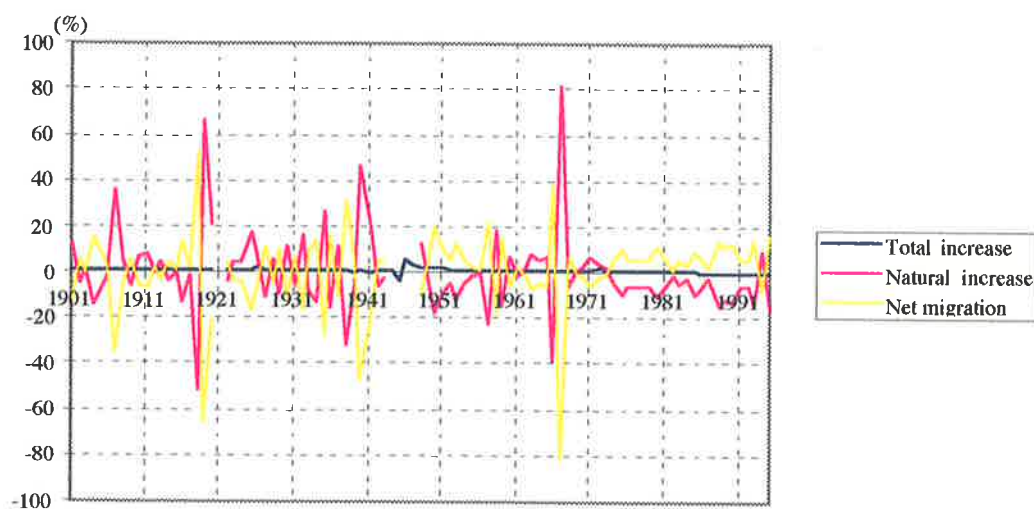
As to immigration, it should be noted that Japan is an island country and the number of international migrants is small with more importance being attached to internal movement. Before the World War II, statistics on migration between Japan and foreign

countries were limited to materials obtained from passports issued by Gaimu Sho (the Ministry of Foreign Affairs) and to a survey on Japanese nationals abroad conducted by Naimu Sho (the Ministry of Home Affairs) since 1876. After the war, persons who legally entered or departed from Japan have been recorded in the Statistical Survey on Legal Migrants carried out by Homu Sho (the Ministry of Justice) since 1949.

Another point to note is that the data show an anomalously high rate of natural increase in 1967. The reason for this is likely to be that the year of 1966 was a special year called *Hinoeuma* (horse) in the Chinese zodiac and, in Japan, many people believe that a girl born in this year will have a bad disposition and be shunned as a bride. Hence, there is a strong incentive to record girl births incorrectly as having occurred in 1967.

Over the last 95 years Japan's population has grown by 1.1 per cent per annum (compound) and natural increase contributed to Japan's overall growth rate more than did net migration. But it can be seen from Figure 4-2 that natural increase has been declining rapidly over the last three decades. This is because of a fall in fertility. A decline in the occurrence of marriage and a concomitant increase in the occurrence of *de facto* relationships may also partly explain this fall in fertility.

Figure 4-2: Japanese Population Growth and Components of Growth, 1901~96



Sources: Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Nihon Chokitokei Soran* (Historical Statistics of Japan), Vol. 1, pp. 72-77.
 Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Wagakuni Jinkono Gaikan* (Major Aspects of Population of Japan), Heise 5nen Kokuse Chosa (1990 Census of Japan), Henshu Kaisetu (Abridged Report Series), No. 1, pp. 146 and 147.
 Somucho Tokei Kyoku (Statistics Bureau, Management and Coordination Agency), *Wagakuni Jinkono Gaikan* (An Overview of Population of Japan), Heise 7nen Kokuse Chosa (1995 Census of Japan), Henshu Kaisetu (Abridged Report Series), No. 1, pp. 128 and 129.

To make the estimates of human capital using the methodology chosen in Chapter 3, it is necessary to estimate the population for every age between each census from 1947 to 1995. The estimation is made by using the geometric mean method described in the previous sections. The estimated population for Japan for those aged 15 to 64 by gender are shown in Table C-1 and Table C-2 of Statistical Appendix C.

We now turn to the other vital demographic statistics of Japan. According to the Statistics Bureau of the MCA:

“Surveys on vital statistics had been conducted since 1872. Subsequently in 1899, the Cabinet Bureau of Statistics took charge to bring the survey into conformity with the Civil Registration Law as amended in 1898. Then in 1945, the survey system was completely revised, taking the termination of the war as an opportunity. In 1947, the survey was legalized as the Designated Statistics No. 5 and the jurisdiction of the survey was transferred to Kose Sho (the Ministry of Health and Welfare) in September of the same year.

Findings of survey are obtained from the questionnaires submitted by shi (cities), machi (towns), and mura (villages) for every declaration of live birth, death, marriage, divorce or fetal death ... pursuant to the provisions of the Civil Registration Law and the Regulations Regarding Declaration of Fetal Deaths. (Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), *Nihontokei Nenkan* (Japan Statistical Yearbook), 1996, p. 28)

The questionnaires go into great detail. For example, the number of items included in each questionnaire is 18 for births, 19 for deaths, 19 for fetal deaths, 12 for marriages, and 12 for divorces.¹⁴ Kose Sho (the Ministry of Health and Welfare) has provided *Jinko Dotai Tokei (Vital Statistics)* in every year after 1947.

To calculate the probability of survival, we use *Dai Juhatikai Semehyo (the 18th Life Tables)* provided by Kosesho Daijinkanbo Tokeijohobu (Statistics and Information Department, Minister's Secretariat, Ministry of Health and Welfare) which show the complete historical collection of Japanese life tables. Two kinds of life tables are available: the complete life tables and the abridged life tables. The complete life tables are based on the precise results of the population censuses and the abridged life tables are based on the annual population estimates. The complete life tables have been published from the first issue for 1891~1898 in 1902 through to the eighteenth in 1995, except the seventh table for 1940. The abridged life tables have been compiled annually since 1945.

We use the information from these tables to compute the probability of continued life, defined as the average probability that a person is expected to live after reaching a specified age. While the expectation of life at age 0 is often referred to as the average life span, our concern is with the estimation of probabilities for people aged from 15 to 64 years by gender. To do so we calculate the probability of survival as equal to $1 - \text{mortality rate}$.

We apply the same method of estimation as we did in previous sections, using data from the completed life tables from 1947 to

¹⁴ For example, the survey items for births are as follows: (1) name of child; (2) sex; (3) legitimacy; (4) date and time of birth; (5) place of birth; (6) address; (7) nationality; (8) weight; (9) sex and precedence in case of twins; (10) kind of place of birth; (11) weeks of pregnancy; (12) number of children ever delivered; (13) witness; (14) names of parents; (15) ages of parents when child was born; (16) starting date of living together; (17) principal business of household when child was born; (18) occupation of parents when child was born (only at the time of the Population Census).

1995. The final results are shown in Table C-3 and Table C-4 of Statistical Appendix C from which we can calculate the probability of survival for a person of selected age and gender as is shown in Table C-5 for males and Table C-6 for females.

4.5 The data sources of Japan: labour force, wage, GDP, and interest

As regards statistics on the labour force in Japan, the following statistics are available: *Kokuse Chosa* (the Population Census); *Rodoryoku Chosa* (the Labor Force Survey); *Shugyokozo Kihonchosa* (the Employment Status Survey) all of which are conducted by Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency).

Labour force data has developed in Japan much as in Australia, as is indicated by Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency):

“In the prewar censuses for 1920, 1930 and 1940, the labour force status was grasped according to the usual status principle where the population was classified into “gainful workers” and “persons other than gainful workers”. Whereas in the postwar censuses, the actual status approach has been adopted, in which labour force was surveyed on the basis of actual status during a week ending the census date.

The labour force status of the population 15 years old and over is classified as follows:

Employed: Referring to all persons who did any work for pay or profit during the survey week. They include self-employed workers and family workers as well as employees, and also include the following persons absent from work.

Absent from work: Referring to persons who had a job but did not work during the survey week (self-employed workers who did not work for less than 30 days and



employees who received or were to receive wages or salaries).

Unemployed: Referring to persons who had no job but were able to work and actually seeking a job during the survey week". (Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), *Nihon Chokitokei Soran (Historical Statistics of Japan)*, vol. 1, p. 363)

The Labour Force Survey has been conducted monthly since July 1947 by Sorifu Tokei Kyoku (the Statistics Bureau, Prime Minister's Office), now Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency). It was designated in April 1950 as Designated Statistics No. 30 under the Statistics Law. The purpose of the survey is to provide up-to-date employment and unemployment data, primarily at the national level. It is a sampling survey of households and individuals covering, from 1983, about 40,000 households and their members. The survey is taken at the end of each month and refers to the week ending the last day of each month. It covers about 100,000 persons 15 years old and over. The following items are surveyed:

- (1) Items for all household members
Name, sex, date of birth, and relationship to the head of household.
- (2) Items for household members 15 years old and over
Marital status, type of activity, name of establishment and kind of business (industry), number of employees of the whole enterprise, kind of work (occupation), employment status, hours of work during a week, whether mainly seeking job or not, reasons for seeking job, and whether wishing to have an additional job or to change the job.
- (3) Items concerning household
Kind of household, numbers of household members, and change in household members.

The classification and definition of labour force status are approximately the same as in the Population Census.

In addition to the Labour Force Survey, the MCA also conducts an Employment Status Survey.

“It was first taken in 1956 ... to shed light on the labour force status of the nation and the structural factors affecting it. It had been taken, as a rule, every three years until 1982, but the interval was extended to five years from the 1987 survey. ... The survey aims to ascertain the status of the labour force on the basis of the prevailing conditions as of the survey date, seeking the number of working days, hours worked and income as well as desires for employment, and comparing persons both with a job and without a job and investigating changes in employment and in the place of work from the preceding year, etc. The 1992 survey covered a national sample of about 430,000 households and all persons 15 years old and over residing in these households”. (Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), *Nihontokei Nenkan* (Japan Statistical Yearbook), 1996, p. 75)

The most significant feature of this Survey is that it shows the status of employment on the basis of usual status as of the survey date as compared to actual status during the week on which the Population Census or the Labour Force Survey is based.¹⁵

The Survey defines working persons and persons not working as follows:

“Working persons: those who are usually engaged in work for pay or profit and who are expected to continue working after October 1, and those with a job but not at work at present because of seasonal job or illness.

¹⁵ Besides the items sought in the Population Census or the Labour Force Survey, the Survey also includes the following items:

Regarding a person's main job

(1) annual working days; (2) weekly working hours; (3) regularity of work; (4) annual income; (5) years worked

Regarding any secondary job

(1) working status; (2) industry; (3) annual income

Regarding any previous job

(1) time of quitting; (2) reasons for quitting; (3) employment status; (4) industry; (5) occupation.

Persons not working: those who do not have a job for pay or profit, that is, persons who usually do not work at all and those who work only temporarily or occasionally". (Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), 1987, Vol. 1, p. 363)

The Labour Force Survey provides useful information on the size of the labour force and the number of unemployed persons and the unemployment rate by gender and age groups, after 1948.¹⁶ Tables from C-7 to C-10 are developed from these data for the male labour force and Tables C-11 to C-14 show data for the female labour force. We particularly make use of Table C-10 and Table C-14 which show the annual unemployment rate from 1948.¹⁶ Estimates of the annual unemployment rate by age and gender are undertaken using the same method as we discussed in section 4-2 and 4-3 for Australia and are shown in Tables C-15 and C-16. We can acquire time series data on the mean probability of earning income (1 - unemployment rate) from these two Tables.

We now turn to consider earnings data. According to Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency) (1987, Vol. 4, p. 226), before World War II, the prime data source was the "*Chingin Hyo* (Tables of Wages)" giving wages by occupation from 1900 through to 1922, published by Noshomu Sho (the Ministry of Agriculture and Commerce). Data to 1939 were subsequently published by Shoko Sho (the Ministry of Commerce and Industry), as the "*Chingintokei Hyo* (Tables of Wage Statistics)". In addition, a wage survey by industry was taken as part of the "*Shokuko, Kofu Chingin Maituki Kinro tokei Chosa* (Monthly Wage Survey of Workmen and Miners)" started in 1923 by Naimu Sho (the Social Affairs Bureau, Ministry of Home Affairs). The survey, after its period under the jurisdiction of Naikaku Tokei Kyoku (the Cabinet Bureau of Statistics), became

¹⁶ A slight adjustment is required to account for the fact that, for the period 1948 to 54, the age group begins with ages 14 to 19 and, after that, with ages 15 to 19. To do so we assume that we can convert the figures of those in the age bracket with ages 14 to 19 to those in the age bracket 15 to 19.

the “*Maituki Kinrotokei Chosa* (Monthly Labour Survey)” taken by Rodo Sho (the Ministry of Labour).

After the war, the “*Kojinbetu Chingin Chosa* (Survey of Wages by Individual Worker)” was initiated in 1948 by Rodo Sho (the Ministry of Labour) in order to obtain data on the wage structure. Since 1964, the survey has been enlarged under the name of the “*Chinginkozo Kihon Tokei Chosa* (Basic Survey on Wage Structure)”, based on which detailed data on the actual conditions of wage structure have been published. In addition, the “*Hiyatoi Romusha Chingin Chosa* (Wage Survey on Day Labourers)” was started from 1948 by Rodo Sho (the Ministry of Labour), and has been conducted monthly, since 1957 under the name of the “*Okugai Rodosha Shokushubetu Chingin Chosa* (Outdoor Employees’ Wage Survey by Occupation)”.

In addition, the “*Shokushubetu Minkan Kyuyo Jitai Chosa* (Survey of Compensation in Private Industry by Occupation)” has been taken annually since 1948 by Jinjiin (the National Personnel Authority) in order to study the salaries and wages of government employees as compared with those of private firms. Based on this survey, data on wages and salaries at private firms by position and occupation have been made public annually.

In addition to the foregoing surveys, the following surveys are available in regard to wage statistics.

Ringyo Rodosha Shokushubetu Chingin Chosa (Occupational Wage Survey of Forestry Employees) by Rodo Sho (the Ministry of Labour), (since 1954)

Minkan Kyuyo Jitaitokei Chosa (Survey of Wages and Salaries of Private Firms) by Kokuze Cho (the Tax Administration), (since 1947)

Chiho Komuin Kyuyo Jitai Chosa (Survey of Wages and Salaries of Public Servants of Local Governments) by Jiti Sho (the Ministry of Home Affairs), (since 1955)

Chingin Jijo Chosa (Wage Survey) by Chuo Rodo Iinkai (the Central Labour Relations Committee), (since 1952)

The best of these surveys which provides us with the most comprehensive information on wages is the “*Chingin Kozo Kihon Tokei Chosa* (Basic Survey of Wage Structure)” conducted by Rodo Sho (the Ministry of Labour). The aim of this survey is to obtain information on the wage structure for regular employees in major industries, in terms of industry, region, size of enterprises, sex, type of worker, educational level, occupational category, type of occupation, type of employment, type of work, age, length of service, and experience. It covers firms in mining, construction, manufacturing, utilities, transport and communication, wholesale and retail trade, restaurants, finance and insurance, real estate and other services.

The survey has been carried out every three years on a large scale and for other years on a small scale. It covers a sample of establishments with 5 or more regular employees in the case of the large-scale survey (and with 10 or more regular employees for the small-scale survey). The survey for 1995 covered approximately 71,000 establishments and 1,500,000 employees. It defines earnings as follows:

“Contractual cash earnings (including overtime earnings): earnings paid according to methods and conditions previously determined by labour contracts, collective agreements, or wage regulations of establishments, calculated over a period not exceeding three months.

Overtime pay: part of contractual cash earnings, including earnings for work exceeding scheduled working hours, for night work, for work on days off, and for overnight duty.

Scheduled cash earnings: part of contractual cash earnings, excluding earnings for work exceeding scheduled working hours.

Annual bonuses and other special cash earnings: summer and year-end bonuses and earnings paid for temporary or unforeseen reasons not based on any previous agreement, contract, or rule, as well as earnings which, although terms are fixed, are calculated over a period exceeding three months”. (Rododaijin Kanboseisaku Chosabu (Policy Planning and Research Department, Minister’s Secretariat,

Ministry of Labour), 1998, *Rodotokei Nenpo* (Year Book of Labour Statistics), p. 378)

We define the wage of Japanese employees as the sum of total yearly average scheduled cash earnings plus total annual bonuses and other special cash earnings. The data on total average scheduled cash earnings are available at monthly terms after 1954. However, data on total annual bonuses and other special cash earnings are obtainable only after 1964. Hence, our first problem is to try to estimate the value of total annual bonuses and other special cash earnings for the period 1954 to 63. We begin with the ratio of total annual bonuses and other special cash earnings to total average scheduled cash earnings for every age group in 1964. We assume that for the period 1954 to 63 this ratio had been constant. Then each scheduled cash earning from 1954 to 63 is multiplied by each age and gender group's ratio. Table C-17 and Table C-19 show the total monthly average scheduled cash earnings by age groups and gender, and Table C-18 and Table C-20 also show the total annual bonuses and other special cash earnings, including estimated values by age groups and gender respectively.

After we convert the monthly scheduled cash earnings to yearly values and add the yearly cash earnings and annual bonuses and other special cash earnings, we can compute the time series data on the yearly wage by age and gender for 1947 to 1995. The method of computation is the same as we have explained in section 4-2 and 4-3 and so we do not describe it in detail again. Table C-21 and Table C-22 show the final results of the estimation.

We now consider the economic data on GDP and interest rates. The first official estimates of Japanese national income compiled by government was made in 1928 by Naikaku Tokei Kyoku (the Cabinet Bureau of Statistics), as the "National Income in 1925", followed by estimates made in 1930 and in 1935 when the Population Censuses were taken. After the war, the task of compiling national income statistics was transferred to Keizai Ante Honbu (the Economic Stabilization Board, now Keizai Kikaku Cho

(the Economic Planning Agency)), and in 1953, the "Report on National Income Statistics of 1951" was submitted to the Cabinet for the first time, which made possible the annual publication of the report thereafter. In line with international developments in the method and standard of estimation employed by the United Nations as well as in the OECD and many foreign countries, the national income statistics in Japan underwent several revisions and, finally, in 1978 the system was switched completely to the new System of National Accounts (SNA).¹⁷ The new SNA figures are available for every year, in principle, after 1955.

Table C-23 in the Statistical Appendix C shows the movement of GDP for the period 1947 to 1996. Figures from 1947 to 1970 are Gross National Expenditure (GNE). GNE is the sum of GDE (=GDP) and the net receipts of factor incomes from the rest of the world and the external items include exports and imports of goods and services as well as factor incomes from (to) the rest of the world. For the early period, the annual sum of the net receipts of factor incomes from the rest of the world and external items were negligible, therefore, we are able to treat GDP as equal to GNE in these years.

The final item for discussion is that of Japanese interest rates. Like Australia, Japan has a large number of possible rates to use. For example, the official discount rate. This is the standard rate of interest on loans made by the central bank to private financial institutions and is determined by vote in Nihon Ginko Seisaku linkai (the Policy Board of the Bank of Japan). It represents a central interest rate, influencing the level of overall interest rates in Japan. In addition, the interest rate on deposits is published by the Bank of Japan as a guideline for financial institutions. The interest rate on postal savings is also determined by the Cabinet,

¹⁷ The new SNA is a system that consolidates systematically as well as synthetically the following five economic accounts, with national income accounts as their nucleus, the national income accounts, the input-output tables, the flow of funds accounts, the national balance sheet and the balance of payments. Under this system, the whole picture of the economic activities in terms of flows (income), stocks (assets), commodities (non-financial transactions) and money (financial transactions) was made clear.

based on the findings of Yusei Singikai (the Postal Services Advisory Council for the Minister of Posts and Telecommunications). This rate has been altered in parallel with change in the interest rates on deposits of private financial institutions.

As for short-term rates, each financial institution independently decides its own lending rate within a maximum limit in parallel with changes in the official discount rate. As for long-term rates, no maximum limit is set and each financial institution decides its rate independently. Averages of agreed interest rates on loans and discounts refer to a weighted average of the above short-term and long-term rates calculated by the Bank of Japan (Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), 1987, Vol. 3, p. 131). To make our estimations of the value of human capital in Japan, I have chosen to use the median value of official discount rate as a primary discount rate because this is the central interest rate in Japan. Table C-23 shows the trend of annual official discount rate after 1947. The median value for this period is 5.84 per cent. Again, in making estimates of human capital in the next chapter we will also employ other hypothetical interest rates to indicate the sensitivity of our results to this selection.

4.6 Conclusion

We have considered the sources of data that we must use for the estimation of human capital in Australia and Japan. The discussion did not cover the full range of economic statistics provided by two countries' governments or organizations, nor did it follow every nuance in definition and collection procedures. However, fortunately, both Australia and Japan have adopted almost the same definitions and coverage, although there are differences in the starting year of each time series data. However, with some manipulation, we now have available a wide range of information with which to make our estimates.

Interested readers should also note that much information can now be sourced from the Internet. Some of the key addresses are listed below:

Australia:

The Australian Bureau of Statistics: <http://www.abs.gov.au/>

The Reserve Bank of Australia: <http://www.rba.gov.au/>

The Social Sciences Data Archives (SSDA) at the Australian National University: <http://www.ssda.anu.edu.au/>

Commonwealth Register of Surveys of Businesses (Statistical Clearing House): <http://www.sch.abs.gov.au/>

The Australian Financial Review: <http://www.afr.com.au/>

Japan:

Keizai Kikaku Cho (The Economic Planning Agency):

<http://www.epa.go.jp/>

Nihon Ginko (The Bank of Japan): <http://www.boj.or.jp>

Tsusan Sho (The Ministry of International Trade and Industry):

<http://www.miti.go.jp/>

Okura Sho (The Ministry of Finance): <http://www.mof.go.jp/>

Rodo Sho (The Ministry of Labour): <http://www.mol.go.jp/>

Somu Cho (The Management and Coordination Agency):

<http://www.stat.go.jp/>

The Japan Times: <http://www.japantimes.co.jp/>

Chapter 5 Analysis of data

5.1 Introduction

The purpose of this chapter is to demonstrate and discuss the results of my estimation of the value of human capital in Australia and Japan. It considers both the results and the converted data that has been created to reach those results. The converted data play an important role in the estimation procedure and, hence, our confidence in the results turns on the quality of the converted data. We have estimated converted data by age and gender in four areas: population, the probability of future survival, the rate of unemployment and earnings.

The results that are presented in this Chapter reveal some interesting facts. Given the contrasts between Australia and Japan that were described in Chapter 1, we reveal features of human capital accumulation, which are common to both as well as others that are significantly different. The final sections include the conclusion which may be drawn from the estimates and indicate the direction for future research.

5.2 Patterns of converted data

Our estimations of human capital in Australia and Japan are developed using annual data on population, the mortality and unemployment rates and yearly earnings by age and gender. However, the forms in which these data are available in both countries do not fit our requirements precisely. As previously described, we need to extend the time series by use of compound growth rates. Having already discussed this procedure in the preceding chapter, here we look at the patterns of converted data on mortality rate, unemployment rate, and yearly earnings.

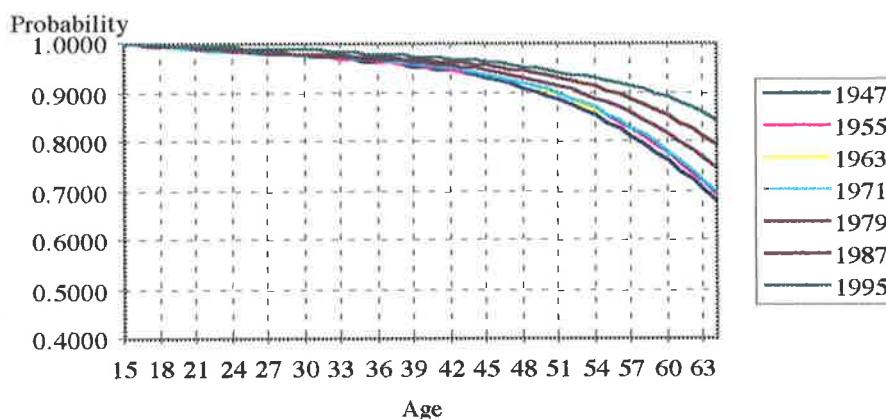
Firstly, we compare converted data for the two countries' on the annual probability of survival derived from the mortality rate. The annual probability of survival is the probability of future life

and can be defined as the probability that a person aged x in year t can survive until aged y . It may be calculated as the product of the annual probability of survival ($1 - \text{mortality rate}$) at the age of x years in year t ($x = 15, 16, \dots, 64, t = 1947, \dots, 1995$).

Figures from 5-1 to 5-4 use the example of the estimated probability of future survival for a person aged 15 in both countries. The year of observation is selected at eight years interval (The detailed data from which these Figures are derived are shown in Tables B-5, B-6, C-5, and C-6 of the appropriate Appendices).

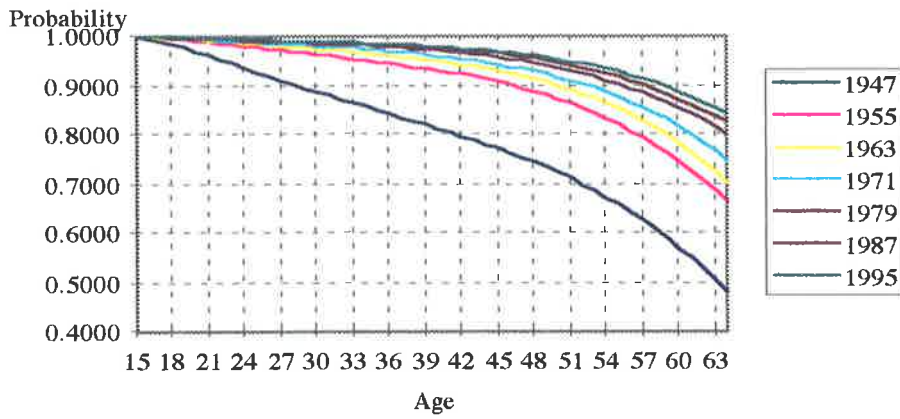
From the Figures it can be seen clearly that the probability of future survival for both males and females in Australia and Japan has risen steadily. In particular, the curves which describe the probability for the Japanese male and female in 1947 more closely approximates a straight line but, in subsequent years, as the male and female probability of survival have jumped dramatically, the curves become more non-linear and approach the top line of the Figures, indicating that the probability of survival is slowly approaching 1.00. The figures show that Australia and Japan have now reached a very similar probability of future survival. In other words, we may say that both countries currently maintain almost the same efficiency in the utilization of their potential human resources.

Figure 5-1: Probability of Future Survival: Australian Male Aged 15



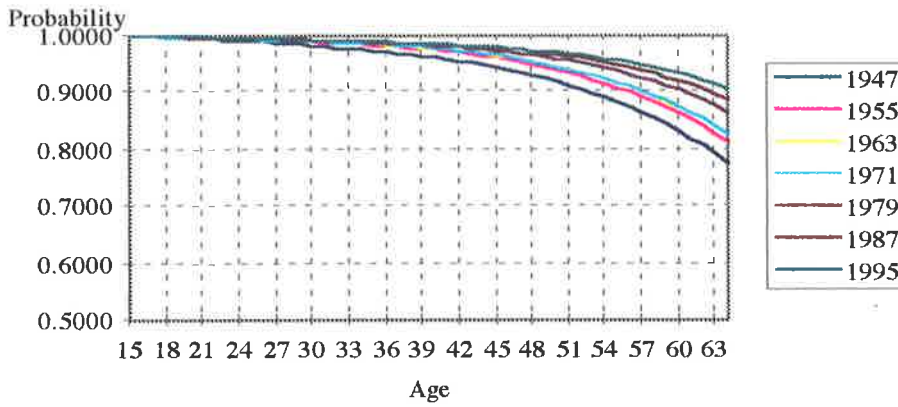
Source: Table B-5.

Figure 5-2: Probability of Future Survival: Japanese Male Aged 15



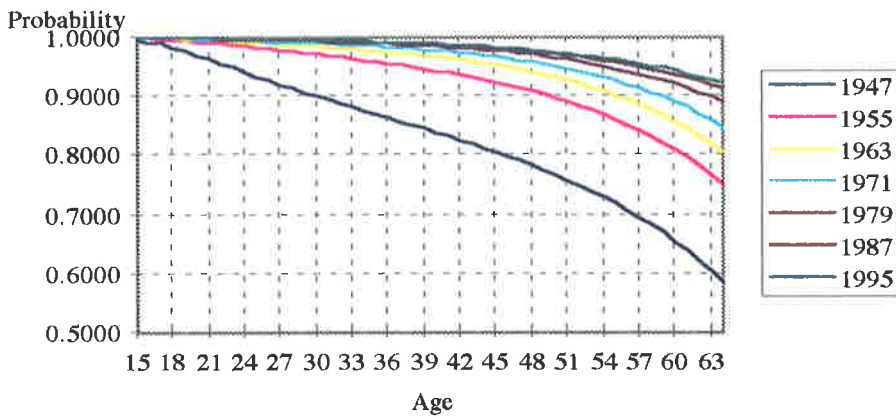
Source: Table C-5.

Figure 5-3: Probability of Future Survival: Australian Female Aged 15



Source: Table B-6.

Figure 5-4: Probability of Future Survival: Japanese Female Aged 15



Source: Table C-6.

Tables 5-1 and 5-2 indicate the improvements made in the probability of survival in Australia and Japan for persons aged 15, 30, 45, and 60 in each observed year. The figures express the compound rate of growth of the probability of survival from selected ages to the probability of survival for aged 64 in the year. It is a measure of the degree of progression the length of expected life.

When we compare the growth rates for selected males in Australia in 1947 with those for each corresponding Japanese male, all rates are higher in Japan, thereafter those gaps narrow, and roughly speaking, after 1963, the two countries have been maintaining the same rate of improvement. We can see the same tendency for females in two countries. We would also anticipate that the two countries will continue to improve the probability of future survival at a rate similar to that we have seen.

Table 5-1: Improvement of Male Probability of Survival to Age 64

Australia	1947	1955	1963	1971	1979	1987	1995
Aged 15	0.8%	0.7%	0.7%	0.7%	0.6%	0.5%	0.3%
Aged 30	1.1%	1.0%	1.0%	1.0%	0.8%	0.6%	0.5%
Aged 45	1.6%	1.6%	1.6%	1.6%	1.2%	1.0%	0.7%
Aged 60	2.8%	2.8%	2.8%	2.8%	2.2%	1.8%	1.3%
Japan	1947	1955	1963	1971	1979	1987	1995
Aged 15	1.5%	0.8%	0.7%	0.6%	0.5%	0.4%	0.4%
Aged 30	1.8%	1.1%	1.0%	0.8%	0.6%	0.5%	0.5%
Aged 45	2.5%	1.6%	1.5%	1.2%	0.9%	0.8%	0.7%
Aged 60	4.2%	2.9%	2.7%	2.2%	1.6%	1.4%	1.4%

Source: Table B-5 and Table C-5.

Table 5-2: Improvement of Female Probability of Future Survival

Australia	1947	1955	1963	1971	1979	1987	1995
Aged 15	0.5%	0.4%	0.4%	0.4%	0.3%	0.2%	0.2%
Aged 30	0.7%	0.6%	0.5%	0.5%	0.4%	0.3%	0.3%
Aged 45	1.0%	0.9%	0.8%	0.8%	0.6%	0.5%	0.4%
Aged 60	1.7%	1.5%	1.4%	1.4%	1.1%	0.9%	0.8%
Japan	1947	1955	1963	1971	1979	1987	1995
Aged 15	1.1%	0.6%	0.4%	0.3%	0.2%	0.2%	0.2%
Aged 30	1.3%	0.8%	0.6%	0.5%	0.3%	0.3%	0.2%
Aged 45	1.7%	1.1%	0.9%	0.7%	0.5%	0.4%	0.3%
Aged 60	2.8%	1.9%	1.5%	1.2%	0.9%	0.7%	0.6%

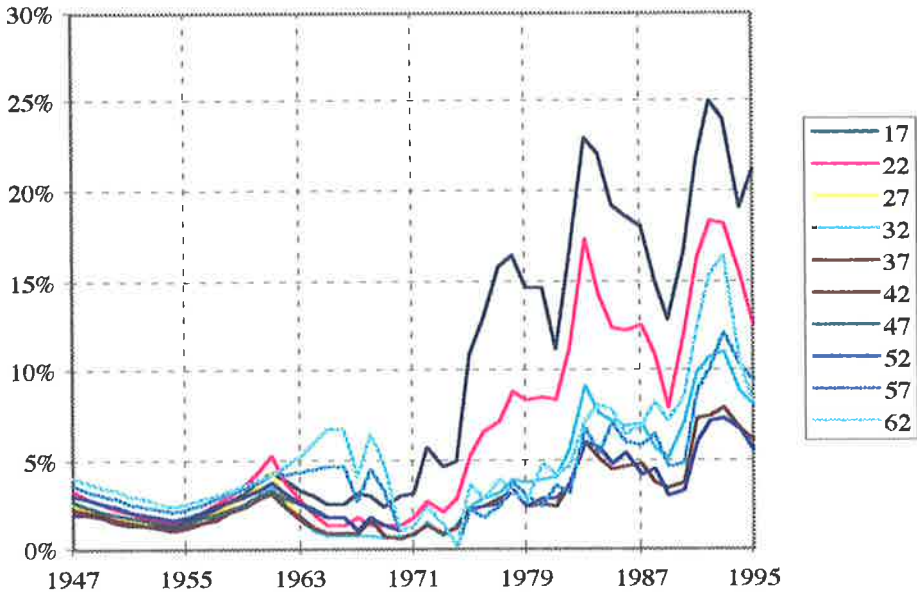
Source: Table B-6 and Table C-6.

Next, we examine the unemployment rate data. Firstly, we look at the trend in unemployment rates for ages at 5 yearly intervals after 17 years of age. These are shown in Figures 5-5 to 5-8. They show us that, during the period of observation, the Japanese unemployment rate for males and females in all groups has not exceeded 10 per cent. However, the situation in Australia is very different and we observe a number of cases where the rate of unemployment exceeded 10 per cent. Particularly after 1979 we find a remarkable increase in the unemployment rate for young males. We can anticipate that this will affect the calculation of the value of human capital. In particular, it will lower the value of human capital for younger age cohorts in Australia relative to Japan.

As well as these important differences we can point to some common features in Australia and Japan. For example, one common feature is that the unemployment rates for males aged 17, 22, 57, and 62 tend to be higher than for others. It would seem that the young and the old have a tendency to suffer most from poor economic conditions. For females, a similar picture emerges although it is predominantly young not old females who suffer most unemployment.

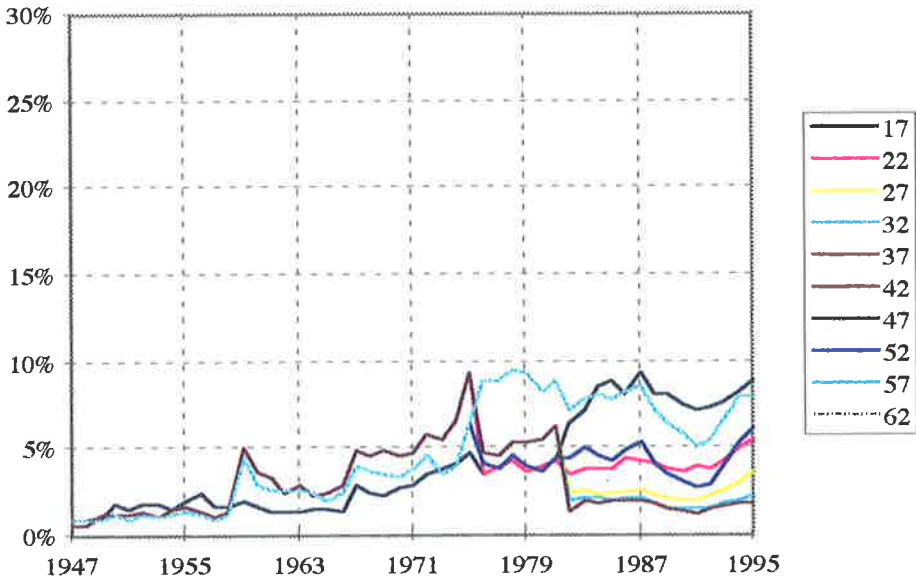
The discrepancy in unemployment rates between Australia and Japan might be declining. In 1995, in Japan, the total number of new graduates employed was 61,000 less than in the preceding year, probably because companies held back on recruiting due to the recession. Despite the 31,000 increase in university graduates, those who succeeded in obtaining jobs increased by a mere 6,000. The job situation for workers in the 55~64 age bracket has also been worse and the number of workers forced out of jobs has been increasing as a result of corporate restructuring. These data raise a number of questions but, as they do not relate directly to the task at hand, they must be left aside even if a close examination of them might help not a little in understanding the employment problems occurring in Australia and Japan.

Figure 5-5: Unemployment Rate: Australian Male



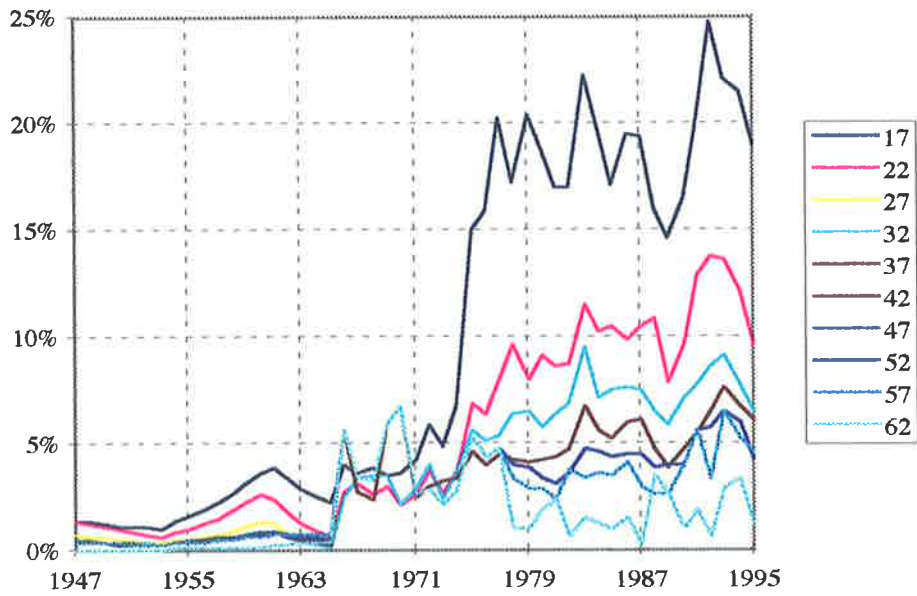
Source: Table B-17.

Figure 5-6: Unemployment Rate: Japanese Male



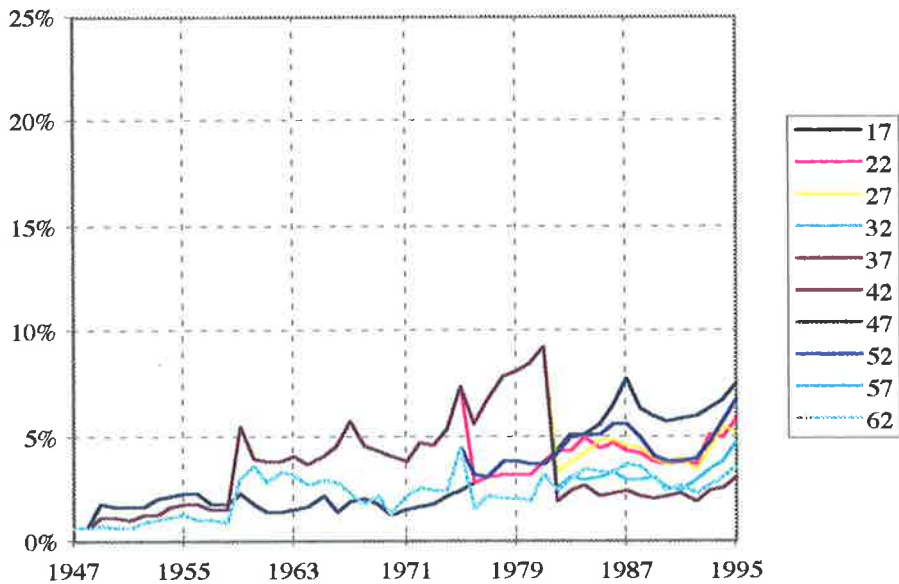
Source: Table C-15.

Figure 5-7: Unemployment Rate: Australian Female



Source: Table B-18.

Figure 5-8: Unemployment Rate: Japanese Female



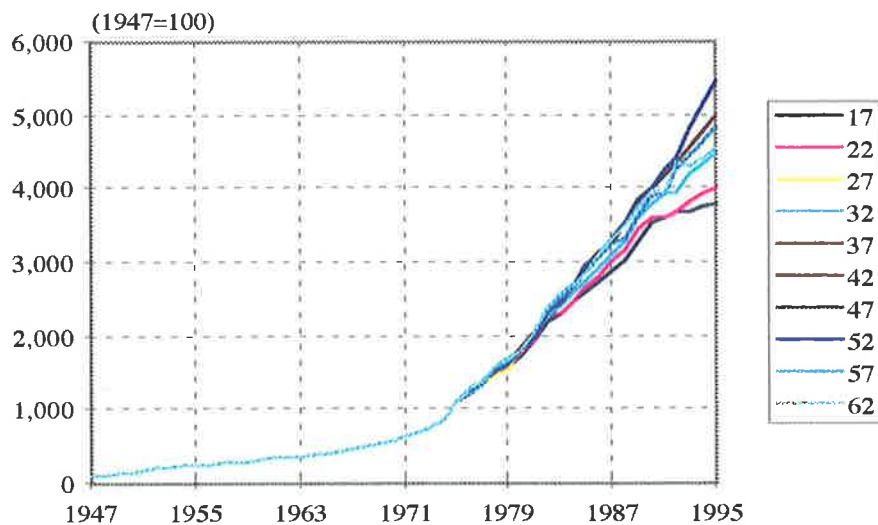
Source: Table C-16.

We now turn to the earnings data that we will employ in making our estimates of human capital. Tables B-24, B-25, C-21, and C-22 (in Statistical Appendices B and C) provide the basic information on both a male and a female yearly earnings in the two countries. To compare the two countries' annual earnings, firstly, we

compute the index of earnings for selected ages, i.e., at five yearly intervals from age 17. The basis of the index is earnings for each selected person based on age and using 1947 as the base year.

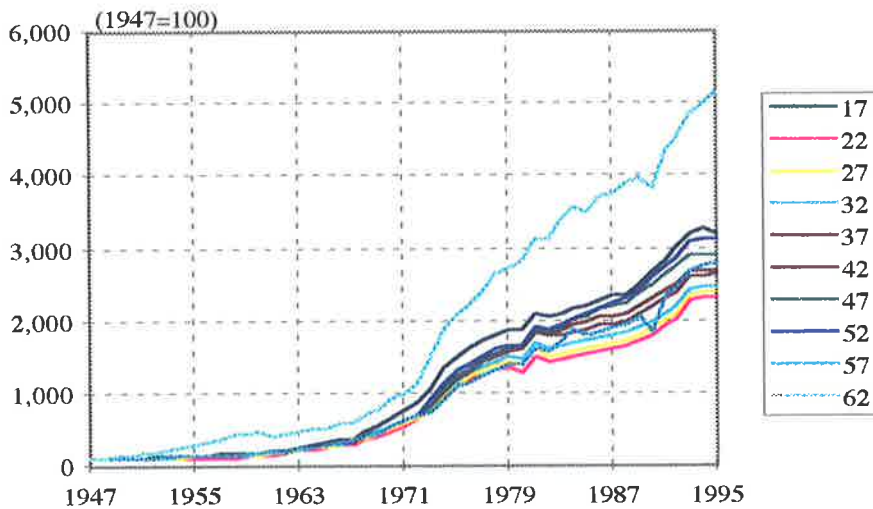
Looking at male earnings first, Figures 5-9 and 5-10 report data for Australia and Japan respectively, both show significant gains over all age groups. In Australia, for example, the index in 1995 shows that the change in earnings for a male aged 17 is 3,804. This means that there has been a 3,704 per cent increase in earnings for an Australian male aged 17 from 1947 to 1995. However, this impressive gain ranks last among the indexes in 1995. The maximum gains to 1995 are 5,462 and that corresponds to the indexes for an Australian males aged 47 and 52. By comparison, from Figure 5-10, the change in earnings for a Japanese male aged 17 has been 3,193 and ranks second among the indexes in 1995. The maximum gain has been for a male aged 62 with a maximum value of 5,153. Compared to other indexes this is an impressively high rate of growth.

Figure 5-9: Index of Wage: Australian Male



Source: Table B-24.

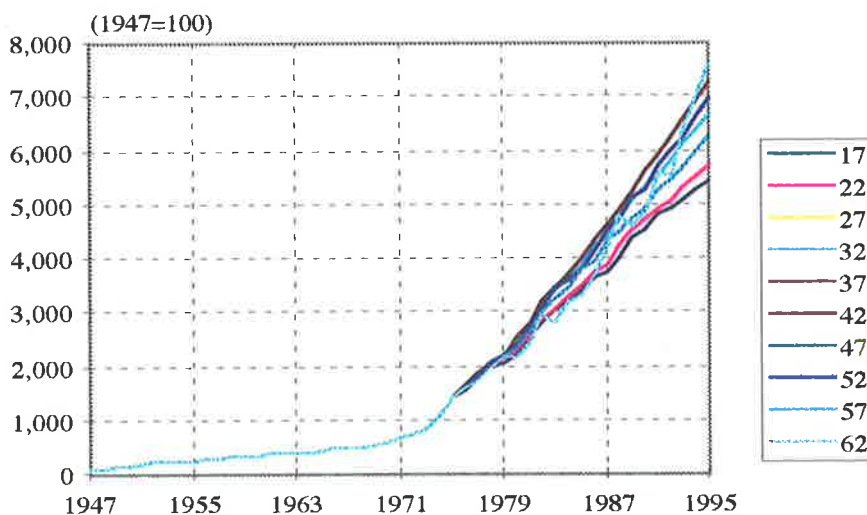
Figure 5-10: Index of Wage: Japanese Male



Source: Table C-21.

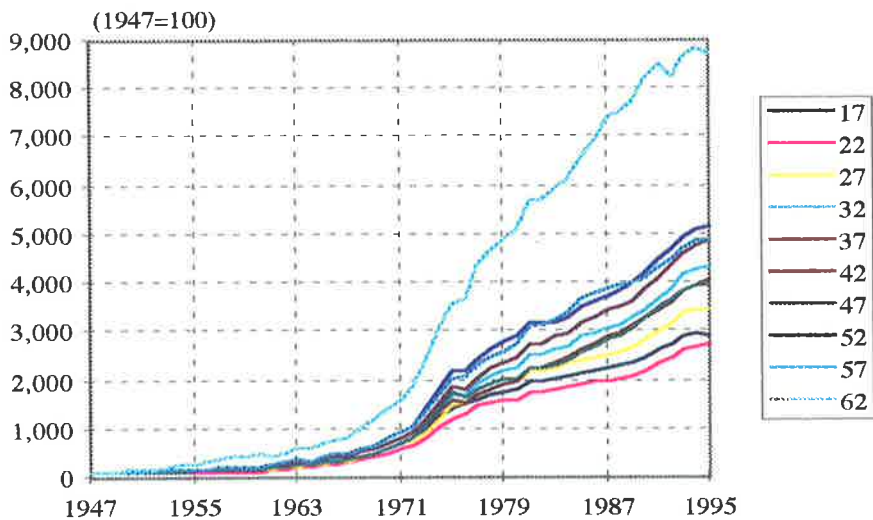
The following two Figures 5-11 and 5-12 indicate the change in a female earnings in Australia and Japan. From Figure 5-11, the maximum index in 1995 for Australian females is 7,627, corresponding to a female aged 62. The index ranked second in the same year is 7,268 corresponds to females aged 37 and 42. From Figure 5-12, the indexes ranked first and second in Japan are 8,721 and 5,146, corresponding to females aged 62 and 52 respectively. Thus, for both men and women, the greatest gains are for the oldest cohorts.

Figure 5-11: Index of Wage: Australian Female



Source: Table B-25.

Figure 5-12: Index of Wage: Japanese Female



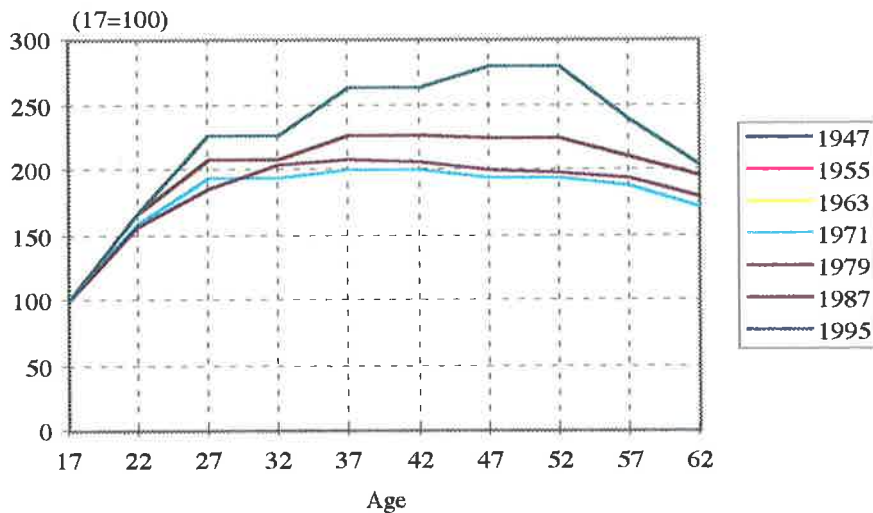
Source: Table C-22.

The above four Figures show that there has been a sharp increase in earnings after 1970s in the two countries. However, when we look at the growth of earnings, they are much higher in Australia than in Japan. In particular, the growth of earnings for an Australian male is about two times higher than that for a Japanese male, excluding the growth for a Japanese male aged 62. This same observation holds true for females in the two nations. A further common feature has been the growth in female earnings, which has been at a higher rate of growth than for males, thus narrowing the earnings gap.

We are now able to compare lifetime earnings in Australia and Japan and the following four Figures show the age-wage profile in both nations. We can construct the profile by setting the earnings for a person aged 17 in a selected year as the base. Figures 5-13 and 5-14 indicate the age-wage profile for males in Australia and Japan. Comparing the two Figures, we can make the following observations; firstly, the age-wage profiles for an Australian male is relatively flat, while those for a Japanese male is steep. But the Australian age-wage profiles appear to be changing its shape gradually becoming more similar to those for Japan. This is especially pronounced for the age-wage profile in 1995.

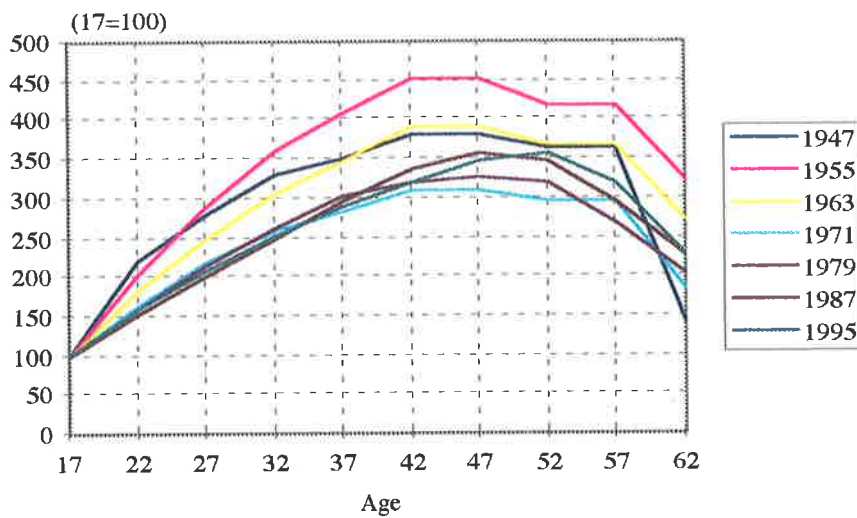
Secondly, the Japanese age-wage profiles show that male earnings increase with age but reach a maximum at the age of 42 years. Earnings for the maximum period are about 3.5 times larger than earnings at the age of 17 years. However, after this maximum is reached, the earnings tend to level off and then decline rapidly. While the earnings for an Australian male increase sharply from the age of 17 to the late twenties, after that, earnings remain steady until around the age of 52 years. During this period earnings are about 2 times larger than earnings at the age of 17 years. Thereafter earnings decline more gently than in Japan. From Figure 5-13, we can see no clear peak in Australian earnings.

Figure 5-13: Age-Wage Profile: Australian Male



Source: Table B-24.

Figure 5-14: Age-Wage Profile: Japanese Male



Source: Table C-21.

Figures 5-15 and 5-16 show the age-wage profiles for females in Australia and Japan. These figures show that the age-wage profiles for Australian females are similar to those for Japanese females and that those age-wage profiles are flat like those observed for Australian males. We must also observe that our calculated age-wage profile for Australian females in 1995 has a different shape to the curve from other age-wage profiles. This is likely to be because the yearly earnings in 1995 are derived from estimates using the compound rate of growth. Those might well be over-estimates for the age group 60-64 in 1995, which could account for the unusual shape of the curve in 1995. We expect that if we could acquire the actual data on earnings in 1995, the age-wage profile in that year would become similar to that of the other curves.

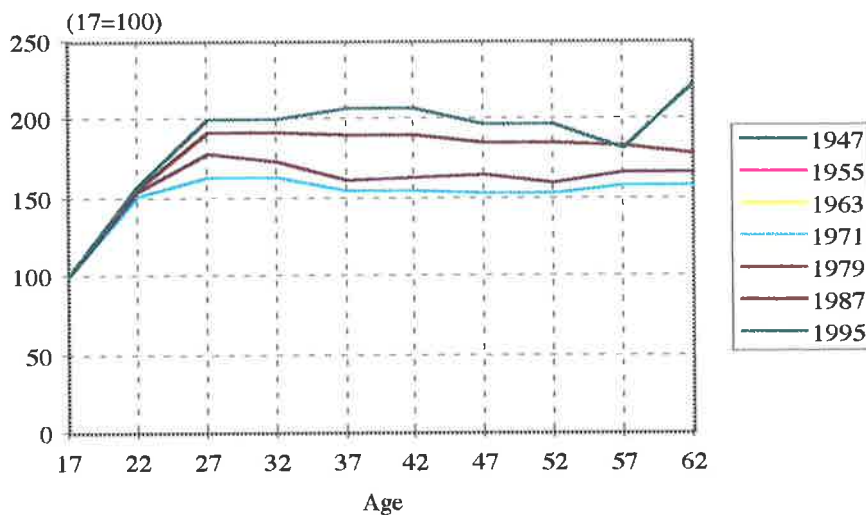
We should also note the anomalous shape of the Japanese age-wage profile in 1947. It might be that the exigencies of the immediate post war years affected the data quality and this likely accounts for the discrepancy.

The female age-wage profiles in both Australia and Japan suggest that female earnings increase with age up to the late twenties and approximate the maximum by the age of 27. Female earnings during the maximum period are about 2 times larger than those

at age 17 and earnings remain close to that maximum until the age of 57 years. After that, we can observe no clear decline in the Australian age-wage profiles and find only a slight decline in the Japanese age-wage profiles, quite unlike the situation for men.

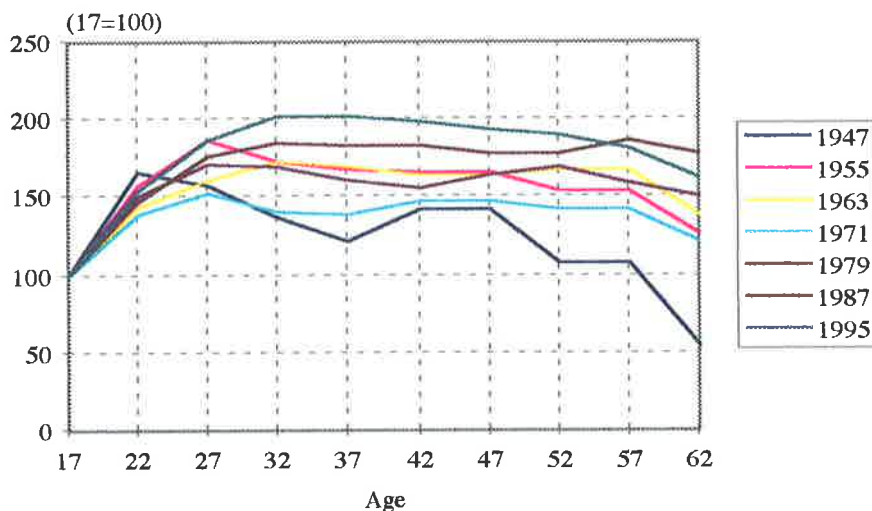
These few comparisons allude to a large number of interesting matters but, again, the questions of age-wage profiles and lifetime earnings are too involved a subject to be treated here in detail.

Figure 5-15: Age-Wage Profile: Australian Female



Source: Table B-25.

Figure 5-16: Age-Wage Profile: Japanese Female



Source: Table C-22.

5.3 Estimation results

In this section we compare the estimates of human capital in Australia with those in Japan and particularly we will focus on the historical fluctuations in those estimates in both countries.

Firstly, we look at the movement of GDP to establish a baseline for broadly comparing economic activities in both countries. Table 5-3 tells us how the performance of the economy in both countries has been changing in the long term. From the Table we can note that, Australia's nominal GDP in 1995 was about 156 times larger than in 1947, giving an average annual rate of growth of GDP was 11.1 per cent. On the other hand, during the same period Japan's nominal GDP grew by about 369 times and the average annual rate of growth of GDP was 13.1 per cent.

From 1947 to 1995 the average rate of Australia's population growth was 1.84 per cent per annum. Hence, the average rate of growth of Australia's standard of living (GDP per head of population) increased in nominal terms by about 9.3 per cent per annum. As for Japan, the average rate of growth of population has been 0.99 per cent, therefore, the average rate of growth of the standard of living in nominal terms was about 12.1 per cent. We might say that during the past 48 years two countries have been improving their peoples' living standard with high rates of growth.

Table 5-3: GDP in Australia and Japan

Year	Australia		Japan	
	GDP (\$ million)	1947=100	GDP (¥ thousand million)	1947=100
1947	3,121	100	1,309.0	100
1948	3,747	120	2,666.0	204
1949	4,516	145	3,375.0	258
1950	5,237	168	3,947.0	302
1951	7,061	226	5,444.0	416
1952	7,486	240	6,261.0	478
1953	8,766	281	7,059.0	539
1954	9,518	305	7,829.0	598
1955	9,937	318	8,399.1	642
1956	10,879	349	9,446.7	722

1957	11,910	382	10,874.3	831
1958	12,100	388	11,545.4	882
1959	12,961	415	13,188.6	1,008
1960	14,163	454	15,998.0	1,222
1961	15,152	485	19,306.4	1,475
1962	15,716	504	21,900.8	1,673
1963	16,924	542	25,054.7	1,914
1964	18,780	602	29,446.0	2,250
1965	20,523	658	32,772.8	2,504
1966	21,601	692	38,073.2	2,909
1967	23,876	765	44,626.1	3,409
1968	25,619	821	52,825.1	4,036
1969	28,809	923	62,065.7	4,741
1970	31,796	1,019	73,344.9	5,603
1971	35,284	1,131	80,701.3	6,165
1972	39,320	1,260	92,394.4	7,058
1973	44,695	1,432	112,498.1	8,594
1974	52,758	1,690	134,243.8	10,255
1975	64,091	2,054	148,327.1	11,331
1976	77,018	2,468	166,573.3	12,725
1977	88,162	2,825	185,622.0	14,180
1978	95,461	3,059	204,404.1	15,615
1979	109,549	3,510	221,546.6	16,925
1980	124,478	3,988	240,175.9	18,348
1981	141,037	4,519	257,962.9	19,707
1982	160,665	5,148	270,600.7	20,672
1983	173,571	5,561	281,767.1	21,525
1984	195,689	6,270	300,543.0	22,960
1985	216,203	6,927	320,418.7	24,478
1986	241,551	7,740	335,457.2	25,627
1987	264,725	8,482	349,759.6	26,720
1988	298,076	9,551	373,973.2	28,569
1989	335,364	10,745	399,998.3	30,558
1990	366,516	11,744	430,039.8	32,853
1991	377,128	12,084	458,299.1	35,011
1992	389,608	12,483	471,020.7	35,983
1993	404,912	12,974	475,381.1	36,316
1994	455,141	14,583	479,260.1	36,613
1995	486,997	15,604	483,220.2	36,915

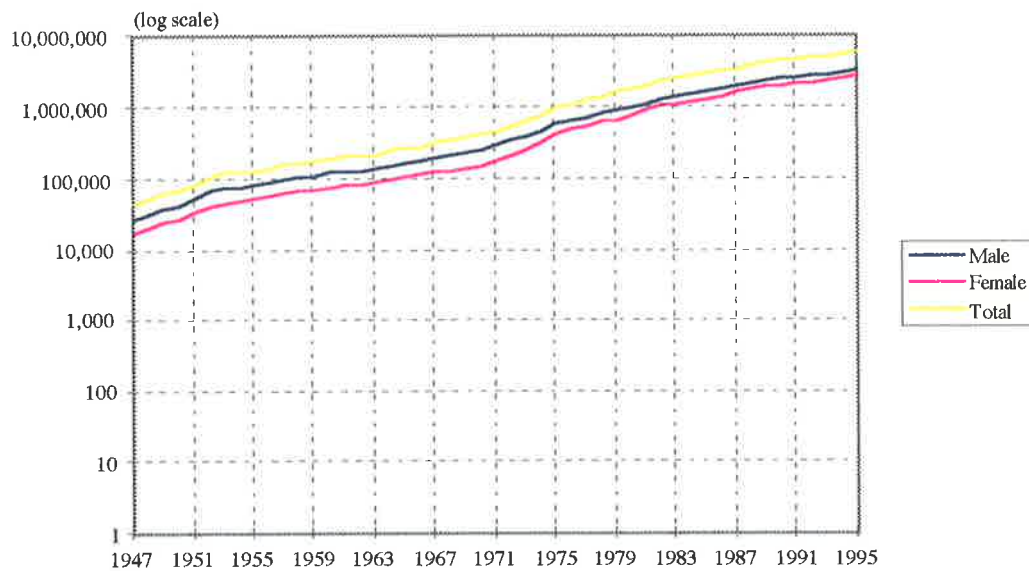
Source: Table B-26 and Table C-23.

We are now able to calculate and broadly compare the total value of human capital in Australia and Japan. The results of our estimation are shown in Table 5-4 and Table 5-5 below. Firstly, we look at the annual growth of human capital in Australia and Japan as is indicated in Figures 5-17 and 5-18. From 1947 to 1995 the average annual rate of growth for Australian human capital has been 10.7 per cent and male and female average rates of growth have been 10.4 and 11.2 per cent respectively. As for Japan, the average rate of growth for total, male, and female human capital has been 8.9, 8.7, and 9.3 per cent respectively.

Then the difference of total average annual rate of growth between two countries is 1.8 per cent, with Australia maintaining the higher average.

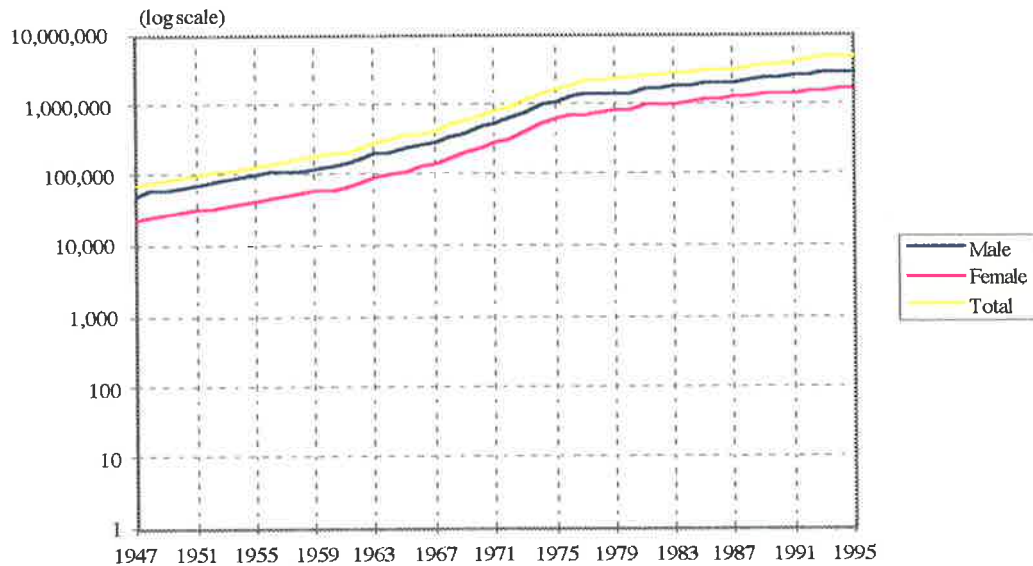
The two Figures also show the relatively rapid growth in the value of female human capital compared with the growth for male human capital. However, in Australia the difference in the growth rates between males and females has been narrowing sharply after the late 1970s. On the other hand, in Japan, the growth in the value of female human capital began to approach that for males but, thereafter, the gap failed to narrow further.

Figure 5-17: Annual growth of Human Capital in Australia



Source: Table 5-4.

Figure 5-18: Annual growth of Human Capital in Japan



Source: Table 5-5.

For reasons explained in Chapter 4, the values of Australia's human capital in Table 5-4 are estimated using the median interest rate on deposits over the period 1947-95 as a discount rate. From Table B-27, this rate is 3.75%. As for Japan, the discount rate used is the standard rate of interest on loans made by the central bank to private financial institutions. We use the median value of this official discount rate as a primary discount rate. From Table C-23, the median value for the period 1947 to 1995 is 5.84 per cent. However, because the selection of the rates remains somewhat arbitrary and because of the importance of this parameter in our estimates, I have also employed some hypothetical interest rates (3, 6, 9, and 12 per cent per annum). These hypothetical interest rates correspond to the range of actual interest rates in the two countries.

Using the selected interest rates of 3.75 per cent and 5.84 per cent, in 1995 the total value of human capital in Australia was \$6.092 trillion and was about 133 times larger than in 1947. In the same year the total value of human capital in Japan was ¥4,570 trillion and about 59 times larger than in 1947. As the exchange rate of the Japanese yen to the Australian dollar in 1995 was 78.33 yen on average, therefore, the total value of

human capital in Japan valued in Australian dollars was \$60.65 trillion. According to our results, the growth of Australian human capital from 1947 to 1995 was about two times higher than that for Japan. Furthermore, for Australia, the value of male human capital in 1995 is \$3.292 trillion, an increase of 116 times over the value in 1947. The value of female human capital in Australia is \$2.8 trillion, being 161 times larger than in 1947. By comparison, the values of male and female human capital in Japan are ¥2,873,225 thousand million (\approx \$36.68 trillion) and ¥1,697,482 thousand million (\approx \$21.67 trillion) in 1995, increases of 54 and 72 times respectively.

The results of our estimates using hypothetical interest rates to discount future costs and benefits are shown in Tables 5-6 and 5-7. The Tables show that the value of human capital depends on the size of interest rate. However, each of the comparisons made above still hold true at these different interest rates.

The major cause of the discrepancy in human capital growth rates in Australia and Japan is not the discount rate selected. Instead, as we have discussed in considering the converted data on yearly earnings in the previous section, the high growth of Australian earnings, both male and female, is about two times higher than that of males and females in Japan. This difference accounts for the majority of the discrepancy in human capital growth rates. It suggests that our estimates of human capital are affected strongly by the growth of earnings.

In Tables 5-4 and 5-5, another common feature emerges from the estimates for both countries, i.e., the proportion of the value of female to total human capital is lower than for males. This proportion for Australia in 1947 was 37.9 per cent and, by 1995, it had risen to 46.0 per cent. For Japan in 1947 it was 30.8 per cent, rising to 37.1 per cent in 1995.

Table 5-4: Total Value of Human Capital in Australia (\$ million)

Year	Male	1947=100	Female	1947=100	Total	1947=100	Total/GDP
1947	28,423	100	17,368	100	45,791	100	14.7
1948	32,544	115	20,507	118	53,051	116	14.2
1949	37,603	132	23,589	136	61,192	134	13.6
1950	42,672	150	26,798	154	69,470	152	13.3
1951	52,393	184	33,520	193	85,912	188	12.2
1952	66,563	234	42,477	245	109,040	238	14.6
1953	74,011	260	46,697	269	120,709	264	13.8
1954	77,965	274	49,781	287	127,746	279	13.4
1955	82,647	291	52,241	301	134,888	295	13.6
1956	89,869	316	57,139	329	147,007	321	13.5
1957	99,534	350	63,594	366	163,128	356	13.7
1958	103,426	364	66,612	384	170,039	371	14.1
1959	107,998	380	69,556	400	177,554	388	13.7
1960	118,608	417	76,312	439	194,920	426	13.8
1961	126,235	444	81,749	471	207,983	454	13.7
1962	133,016	468	86,440	498	219,456	479	14.0
1963	140,001	493	90,625	522	230,626	504	13.6
1964	151,060	531	97,807	563	248,867	543	13.3
1965	166,439	586	107,493	619	273,932	598	13.3
1966	176,714	622	109,773	632	286,487	626	13.3
1967	198,422	698	118,650	683	317,072	692	13.3
1968	213,672	752	128,830	742	342,502	748	13.4
1969	237,873	837	139,046	801	376,919	823	13.1
1970	266,173	936	154,102	887	420,275	918	13.2
1971	300,365	1,057	184,055	1,060	484,420	1,058	13.7
1972	341,893	1,203	216,258	1,245	558,150	1,219	14.2
1973	383,469	1,349	250,853	1,444	634,323	1,385	14.2
1974	458,230	1,612	322,458	1,857	780,688	1,705	14.8
1975	573,213	2,017	420,623	2,422	993,836	2,170	15.5
1976	663,084	2,333	496,601	2,859	1,159,684	2,533	15.1
1977	741,391	2,608	557,662	3,211	1,299,053	2,837	14.7
1978	826,551	2,908	638,072	3,674	1,464,623	3,199	15.3
1979	910,024	3,202	697,709	4,017	1,607,733	3,511	14.7
1980	1,014,548	3,570	789,060	4,543	1,803,608	3,939	14.5
1981	1,153,113	4,057	903,962	5,205	2,057,075	4,492	14.6
1982	1,351,293	4,754	1,039,125	5,983	2,390,418	5,220	14.9
1983	1,411,325	4,965	1,118,880	6,442	2,530,205	5,526	14.6
1984	1,553,056	5,464	1,229,889	7,081	2,782,945	6,078	14.2
1985	1,709,179	6,013	1,331,393	7,666	3,040,571	6,640	14.1
1986	1,859,636	6,543	1,468,306	8,454	3,327,942	7,268	13.8
1987	2,014,183	7,087	1,628,502	9,376	3,642,684	7,955	13.8
1988	2,184,965	7,687	1,767,720	10,178	3,952,685	8,632	13.3
1989	2,456,835	8,644	1,925,667	11,087	4,382,502	9,571	13.1
1990	2,586,090	9,099	2,043,486	11,766	4,629,576	10,110	12.6
1991	2,613,284	9,194	2,191,655	12,619	4,804,939	10,493	12.7
1992	2,716,668	9,558	2,299,468	13,240	5,016,136	10,954	12.9
1993	2,876,386	10,120	2,417,601	13,920	5,293,986	11,561	13.1
1994	3,094,890	10,889	2,598,084	14,959	5,692,974	12,433	12.5
1995	3,291,866	11,582	2,800,796	16,126	6,092,662	13,305	12.5

Source: Table B-28 and Table B-29.

Table 5-5: Total Value of Human Capital in Japan (¥ thousand million)

Year	Male	1947=100	Female	1947=100	Total	1947=100	Total/GDP
1947	53,201	100	23,720	100	76,922	100	58.8
1948	57,686	108	25,659	108	83,345	108	31.3
1949	62,452	117	27,653	117	90,105	117	26.7
1950	67,762	127	29,952	126	97,714	127	24.8
1951	73,621	138	32,462	137	106,083	138	19.5
1952	79,021	149	34,961	147	113,982	148	18.2
1953	85,346	160	37,730	159	123,077	160	17.4
1954	91,793	173	40,700	172	132,493	172	16.9
1955	98,945	186	43,990	185	142,936	186	17.0
1956	106,477	200	47,470	200	153,947	200	16.3
1957	114,782	216	51,262	216	166,044	216	15.3
1958	123,219	232	55,428	234	178,647	232	15.5
1959	126,895	239	57,996	244	184,891	240	14.0
1960	140,527	264	63,308	267	203,835	265	12.7
1961	154,767	291	69,783	294	224,551	292	11.6
1962	171,653	323	84,156	355	255,809	333	11.7
1963	197,897	372	96,191	406	294,088	382	11.7
1964	217,854	409	102,411	432	320,265	416	10.9
1965	254,182	478	122,995	519	377,177	490	11.5
1966	276,131	519	135,961	573	412,092	536	10.8
1967	299,384	563	146,827	619	446,211	580	10.0
1968	360,390	677	178,081	751	538,470	700	10.2
1969	411,691	774	202,410	853	614,101	798	9.9
1970	495,244	931	252,924	1,066	748,168	973	10.2
1971	563,141	1,059	289,360	1,220	852,501	1,108	10.6
1972	638,403	1,200	331,395	1,397	969,799	1,261	10.5
1973	783,715	1,473	431,733	1,820	1,215,448	1,580	10.8
1974	984,775	1,851	553,381	2,333	1,538,156	2,000	11.5
1975	1,119,280	2,104	658,245	2,775	1,777,525	2,311	12.0
1976	1,229,605	2,311	673,136	2,838	1,902,740	2,474	11.4
1977	1,351,987	2,541	748,876	3,157	2,100,863	2,731	11.3
1978	1,437,249	2,702	805,025	3,394	2,242,274	2,915	11.0
1979	1,519,887	2,857	848,474	3,577	2,368,361	3,079	10.7
1980	1,535,495	2,886	883,467	3,725	2,418,963	3,145	10.1
1981	1,752,849	3,295	984,266	4,149	2,737,115	3,558	10.6
1982	1,743,747	3,278	1,003,451	4,230	2,747,199	3,571	10.2
1983	1,815,017	3,412	1,037,605	4,374	2,852,621	3,708	10.1
1984	1,900,876	3,573	1,076,778	4,539	2,977,654	3,871	9.9
1985	1,955,954	3,677	1,154,132	4,866	3,110,086	4,043	9.7
1986	2,017,363	3,792	1,194,193	5,034	3,211,556	4,175	9.6
1987	2,053,565	3,860	1,249,121	5,266	3,302,686	4,294	9.4
1988	2,135,141	4,013	1,285,316	5,419	3,420,457	4,447	9.1
1989	2,259,830	4,248	1,350,749	5,694	3,610,579	4,694	9.0
1990	2,345,789	4,409	1,442,221	6,080	3,788,010	4,924	8.8
1991	2,559,500	4,811	1,517,369	6,397	4,076,869	5,300	8.9
1992	2,652,539	4,986	1,578,041	6,653	4,230,580	5,500	9.0
1993	2,845,869	5,349	1,656,787	6,985	4,502,657	5,854	9.5
1994	2,859,440	5,375	1,690,798	7,128	4,550,238	5,915	9.5
1995	2,873,225	5,401	1,697,482	7,156	4,570,708	5,942	9.5

Source: Table C-25 and Table C-26.

Table 5-6: Total Value of the Australian Human Capital by Use of
Different Interest Rates (\$ million)

Discount rate = 3 per cent					Discount rate = 6 per cent				
Year	Male	Female	Total	Total/GDP	Year	Male	Female	Total	Total/GDP
1947	31,051	19,002	50,053	16.0	1947	22,517	13,718	36,235	11.6
1948	35,548	22,431	57,978	15.5	1948	25,792	16,206	41,998	11.2
1949	41,066	25,796	66,862	14.8	1949	29,814	18,652	48,465	10.7
1950	46,597	29,302	75,899	14.5	1950	33,837	21,193	55,030	10.5
1951	57,204	36,647	93,851	13.3	1951	41,558	26,516	68,074	9.6
1952	72,673	46,436	119,109	15.9	1952	52,800	33,609	86,409	11.5
1953	80,794	51,044	131,838	15.0	1953	58,729	36,957	95,686	10.9
1954	85,096	54,418	139,514	14.7	1954	61,890	39,391	101,282	10.6
1955	90,206	57,106	147,312	14.8	1955	65,610	41,340	106,950	10.8
1956	98,094	62,462	160,556	14.8	1956	71,334	45,212	116,545	10.7
1957	108,653	69,530	178,183	15.0	1957	78,992	50,301	129,293	10.9
1958	112,898	72,836	185,734	15.3	1958	82,092	52,678	134,770	11.1
1959	117,913	76,077	193,990	15.0	1959	85,681	54,970	140,650	10.9
1960	129,542	83,492	213,034	15.0	1960	94,023	60,267	154,291	10.9
1961	137,920	89,465	227,385	15.0	1961	99,985	64,519	164,505	10.9
1962	145,377	94,642	240,019	15.3	1962	105,282	68,152	173,434	11.0
1963	153,040	99,249	252,289	14.9	1963	110,762	71,414	182,175	10.8
1964	165,162	107,139	272,301	14.5	1964	119,455	77,035	196,490	10.5
1965	182,018	117,774	299,792	14.6	1965	131,546	84,622	216,167	10.5
1966	193,285	120,252	313,537	14.5	1966	139,613	86,462	226,075	10.5
1967	217,155	130,051	347,206	14.5	1967	156,540	93,320	249,861	10.5
1968	233,855	141,246	375,101	14.6	1968	168,550	101,266	269,816	10.5
1969	260,437	152,427	412,864	14.3	1969	187,467	109,340	296,807	10.3
1970	291,574	168,919	460,493	14.5	1970	209,496	121,204	330,700	10.4
1971	329,060	201,913	530,973	15.0	1971	236,343	144,452	380,795	10.8
1972	374,584	237,314	611,898	15.6	1972	268,955	169,591	438,546	11.2
1973	420,228	275,310	695,538	15.6	1973	301,495	196,672	498,168	11.1
1974	502,362	353,995	856,357	16.2	1974	359,896	252,621	612,517	11.6
1975	628,406	461,861	1,090,267	17.0	1975	450,193	329,312	779,505	12.2
1976	727,278	545,174	1,272,452	16.5	1976	520,129	388,952	909,081	11.8
1977	813,328	612,125	1,425,453	16.2	1977	581,209	436,868	1,018,077	11.5
1978	907,226	701,152	1,608,378	16.8	1978	647,137	498,506	1,145,644	12.0
1979	999,017	767,058	1,766,075	16.1	1979	712,096	544,428	1,256,523	11.5
1980	1,113,308	866,534	1,979,842	15.9	1980	794,636	617,165	1,411,801	11.3
1981	1,265,589	993,064	2,258,652	16.0	1981	902,769	706,402	1,609,170	11.4
1982	1,483,421	1,141,773	2,625,194	16.3	1982	1,057,213	811,663	1,868,876	11.6
1983	1,550,160	1,228,996	2,779,156	16.0	1983	1,102,591	874,366	1,976,956	11.4
1984	1,704,791	1,350,676	3,055,467	15.6	1984	1,215,071	961,659	2,176,730	11.1
1985	1,875,690	1,461,911	3,337,601	15.4	1985	1,337,930	1,041,364	2,379,294	11.0
1986	2,041,418	1,612,154	3,653,572	15.1	1986	1,454,697	1,148,589	2,603,286	10.8
1987	2,211,242	1,790,145	4,001,387	15.1	1987	1,575,265	1,270,128	2,845,393	10.7
1988	2,396,780	1,942,261	4,339,041	14.6	1988	1,712,226	1,380,423	3,092,649	10.4
1989	2,694,216	2,113,102	4,807,318	14.3	1989	1,926,658	1,508,372	3,435,030	10.2
1990	2,836,560	2,242,103	5,078,663	13.9	1990	2,026,819	1,601,064	3,627,883	9.9
1991	2,864,735	2,406,137	5,270,872	14.0	1991	2,050,744	1,714,526	3,765,270	10.0
1992	2,979,112	2,523,386	5,502,498	14.1	1992	2,129,958	1,800,602	3,930,559	10.1
1993	3,151,783	2,652,987	5,804,770	14.3	1993	2,259,361	1,893,434	4,152,795	10.3
1994	3,391,031	2,850,575	6,241,606	13.7	1994	2,431,484	2,035,682	4,467,166	9.8
1995	3,607,025	3,073,862	6,680,887	13.7	1995	2,585,822	2,193,061	4,778,883	9.8

Discount rate = 9 per cent

Year	Male	Female	Total	Total/GDP
1947	17,537	10,665	28,202	9.0
1948	20,094	12,605	32,698	8.7
1949	23,234	14,514	37,748	8.4
1950	26,369	16,493	42,863	8.2
1951	32,393	20,639	53,033	7.5
1952	41,155	26,163	67,318	9.0
1953	45,791	28,775	74,566	8.5
1954	48,274	30,664	78,938	8.3
1955	51,176	32,182	83,358	8.4
1956	55,636	35,192	90,828	8.3
1957	61,601	39,141	100,742	8.5
1958	64,031	40,984	105,016	8.7
1959	66,807	42,742	109,549	8.5
1960	73,261	46,834	120,095	8.5
1961	77,850	50,111	127,960	8.4
1962	81,930	52,889	134,818	8.6
1963	86,165	55,398	141,563	8.4
1964	92,890	59,736	152,626	8.1
1965	102,242	65,595	167,837	8.2
1966	108,477	67,067	175,544	8.1
1967	121,469	72,288	193,757	8.1
1968	130,772	78,404	209,176	8.2
1969	145,318	84,700	230,018	8.0
1970	162,197	93,914	256,111	8.1
1971	182,921	111,676	294,596	8.3
1972	208,099	131,012	339,111	8.6
1973	233,157	151,907	385,064	8.6
1974	278,035	194,970	473,005	9.0
1975	347,738	253,954	601,692	9.4
1976	401,244	299,994	701,239	9.1
1977	448,045	336,946	784,991	8.9
1978	498,257	383,520	881,777	9.2
1979	547,883	418,347	966,230	8.8
1980	611,877	475,001	1,086,878	8.7
1981	694,871	543,221	1,238,091	8.8
1982	813,055	623,937	1,436,992	8.9
1983	846,647	672,053	1,518,700	8.7
1984	934,182	739,632	1,673,814	8.6
1985	1,028,991	801,083	1,830,074	8.5
1986	1,118,120	883,589	2,001,708	8.3
1987	1,210,519	974,261	2,184,780	8.3
1988	1,318,120	1,060,188	2,378,309	8.0
1989	1,484,181	1,161,596	2,645,777	7.9
1990	1,560,285	1,233,113	2,793,398	7.6
1991	1,580,179	1,318,522	2,898,701	7.7
1992	1,639,727	1,385,656	3,025,383	7.8
1993	1,742,134	1,457,633	3,199,768	7.9
1994	1,875,428	1,567,850	3,443,279	7.6
1995	1,994,030	1,688,116	3,682,145	7.6

Discount rate = 12 per cent

Year	Male	Female	Total	Total/GDP
1947	14,370	8,736	23,105	7.4
1948	16,467	10,327	26,795	7.2
1949	19,044	11,895	30,939	6.9
1950	21,613	13,518	35,130	6.7
1951	26,552	16,917	43,469	6.2
1952	33,731	21,445	55,176	7.4
1953	37,539	23,587	61,126	7.0
1954	39,584	25,131	64,715	6.8
1955	41,964	26,374	68,338	6.9
1956	45,617	28,839	74,456	6.8
1957	50,506	32,067	82,573	6.9
1958	52,507	33,573	86,080	7.1
1959	54,772	34,999	89,771	6.9
1960	60,038	38,335	98,373	6.9
1961	63,769	41,003	104,772	6.9
1962	67,091	43,256	110,347	7.0
1963	70,546	45,299	115,845	6.8
1964	76,034	48,837	124,871	6.6
1965	83,662	53,616	137,279	6.7
1966	88,748	54,853	143,600	6.6
1967	99,291	59,069	158,360	6.6
1968	106,889	64,049	170,937	6.7
1969	118,705	69,225	187,930	6.5
1970	132,385	76,773	209,158	6.6
1971	149,259	91,143	240,402	6.8
1972	169,761	106,872	276,633	7.0
1973	190,140	123,909	314,050	7.0
1974	226,580	158,948	385,528	7.3
1975	283,321	206,891	490,212	7.6
1976	326,603	244,379	570,982	7.4
1977	364,488	274,435	638,922	7.2
1978	404,986	311,865	716,851	7.5
1979	445,062	339,902	784,964	7.2
1980	497,291	386,171	883,462	7.1
1981	564,619	441,404	1,006,023	7.1
1982	660,167	506,882	1,167,049	7.3
1983	686,630	545,716	1,232,346	7.1
1984	758,194	600,889	1,359,083	6.9
1985	835,239	650,841	1,486,080	6.9
1986	907,224	717,804	1,625,028	6.7
1987	982,021	789,861	1,771,882	6.7
1988	1,070,503	860,277	1,930,780	6.5
1989	1,205,892	944,155	2,150,047	6.4
1990	1,267,031	1,002,242	2,269,274	6.2
1991	1,283,717	1,070,517	2,354,234	6.2
1992	1,331,200	1,125,322	2,456,523	6.3
1993	1,415,718	1,184,225	2,599,943	6.4
1994	1,524,480	1,274,169	2,798,649	6.1
1995	1,620,560	1,371,447	2,992,007	6.1

Table 5-7: Total Value of the Japanese Human Capital by Use of Different Interest Rates (¥ thousand million)

Discount rate = 3 per cent					Discount rate = 6 per cent				
Year	Male	Female	Total	Total/GDP	Year	Male	Female	Total	Total/GDP
1947	72,692	31,711	104,404	79.8	1947	52,385	23,382	75,767	57.9
1948	79,178	34,411	113,589	42.6	1948	56,788	25,289	82,077	30.8
1949	86,136	37,228	123,364	36.6	1949	61,465	27,250	88,715	26.3
1950	93,907	40,475	134,382	34.0	1950	66,676	29,510	96,186	24.4
1951	102,462	44,017	146,478	26.9	1951	72,426	31,978	104,405	19.2
1952	110,237	47,530	157,767	25.2	1952	77,730	34,435	112,166	17.9
1953	119,362	51,430	170,792	24.2	1953	83,942	37,159	121,101	17.2
1954	128,726	55,635	184,361	23.5	1954	90,271	40,078	130,349	16.6
1955	139,133	60,302	199,435	23.7	1955	97,293	43,312	140,605	16.7
1956	150,006	65,231	215,237	22.8	1956	104,690	46,733	151,422	16.0
1957	162,013	70,608	232,621	21.4	1957	112,845	50,461	163,306	15.0
1958	174,285	76,542	250,828	21.7	1958	121,128	54,555	175,683	15.2
1959	179,441	80,230	259,671	19.7	1959	124,743	57,078	181,822	13.8
1960	198,599	87,491	286,090	17.9	1960	138,148	62,309	200,457	12.5
1961	217,977	96,180	314,157	16.3	1961	152,168	68,690	220,858	11.4
1962	240,262	116,150	356,412	16.3	1962	168,820	82,831	251,651	11.5
1963	278,398	132,971	411,369	16.4	1963	194,586	94,670	289,256	11.5
1964	305,923	141,255	447,178	15.2	1964	214,228	100,805	315,033	10.7
1965	357,447	169,860	527,307	16.1	1965	249,932	121,058	370,990	11.3
1966	387,480	187,841	575,321	15.1	1966	271,542	133,817	405,359	10.6
1967	418,961	202,731	621,692	13.9	1967	294,445	144,516	438,961	9.8
1968	503,301	245,672	748,973	14.2	1968	354,478	175,284	529,762	10.0
1969	573,497	279,025	852,522	13.7	1969	404,986	199,240	604,226	9.7
1970	688,792	348,534	1,037,326	14.1	1970	487,215	248,965	736,179	10.0
1971	780,991	397,128	1,178,119	14.6	1971	554,088	284,884	838,972	10.4
1972	883,065	454,608	1,337,673	14.5	1972	628,218	326,279	954,497	10.3
1973	1,084,275	592,740	1,677,015	14.9	1973	771,204	425,041	1,196,245	10.6
1974	1,360,413	758,327	2,118,741	15.8	1974	969,122	544,851	1,513,973	11.3
1975	1,544,301	900,587	2,444,888	16.5	1975	1,101,548	648,141	1,749,689	11.8
1976	1,686,336	919,081	2,605,417	15.6	1976	1,210,473	662,882	1,873,356	11.2
1977	1,852,574	1,023,280	2,875,855	15.5	1977	1,331,007	737,443	2,068,450	11.1
1978	1,969,089	1,099,890	3,068,979	15.0	1978	1,414,965	792,739	2,207,704	10.8
1979	2,078,513	1,157,898	3,236,411	14.6	1979	1,496,454	835,569	2,332,024	10.5
1980	2,101,754	1,205,475	3,307,229	13.8	1980	1,511,759	870,036	2,381,795	9.9
1981	2,395,272	1,342,577	3,737,849	14.5	1981	1,725,899	969,319	2,695,218	10.4
1982	2,382,970	1,365,000	3,747,970	13.9	1982	1,716,946	988,346	2,705,291	10.0
1983	2,483,321	1,410,613	3,893,934	13.8	1983	1,787,039	1,022,019	2,809,058	10.0
1984	2,602,129	1,463,258	4,065,387	13.5	1984	1,871,542	1,060,627	2,932,170	9.8
1985	2,672,335	1,569,413	4,241,748	13.2	1985	1,925,951	1,136,785	3,062,736	9.6
1986	2,758,642	1,624,581	4,383,223	13.1	1986	1,986,353	1,176,227	3,162,580	9.4
1987	2,809,681	1,700,976	4,510,658	12.9	1987	2,021,961	1,230,277	3,252,239	9.3
1988	2,924,136	1,750,308	4,674,444	12.5	1988	2,102,201	1,265,931	3,368,132	9.0
1989	3,095,742	1,838,630	4,934,372	12.3	1989	2,224,951	1,330,407	3,555,358	8.9
1990	3,204,703	1,963,690	5,168,393	12.0	1990	2,309,877	1,420,486	3,730,363	8.7
1991	3,507,371	2,063,357	5,570,729	12.2	1991	2,519,982	1,494,595	4,014,576	8.8
1992	3,632,819	2,140,985	5,773,804	12.3	1992	2,611,660	1,554,515	4,166,175	8.8
1993	3,890,547	2,245,017	6,135,565	12.9	1993	2,802,262	1,632,187	4,434,448	9.3
1994	3,906,984	2,289,988	6,196,973	12.9	1994	2,815,705	1,665,733	4,481,438	9.4
1995	3,925,748	2,296,437	6,222,186	12.9	1995	2,829,292	1,672,403	4,501,695	9.3

Discount rate = 9 per cent

Year	Male	Female	Total	Total/GDP
1947	40,532	18,431	58,963	45.0
1948	43,788	19,890	63,678	23.9
1949	47,220	21,371	68,591	20.3
1950	51,039	23,079	74,118	18.8
1951	55,261	24,946	80,207	14.7
1952	59,202	26,812	86,015	13.7
1953	63,813	28,877	92,690	13.1
1954	68,486	31,083	99,569	12.7
1955	73,665	33,524	107,190	12.8
1956	79,159	36,111	115,270	12.2
1957	85,212	38,930	124,142	11.4
1958	91,334	42,014	133,348	11.5
1959	94,073	43,896	137,969	10.5
1960	104,220	47,957	152,177	9.5
1961	115,026	52,946	167,972	8.7
1962	128,197	63,781	191,978	8.8
1963	147,249	72,821	220,070	8.8
1964	162,370	77,703	240,073	8.2
1965	189,165	93,208	282,373	8.6
1966	205,857	102,998	308,855	8.1
1967	223,625	111,295	334,920	7.5
1968	269,615	135,066	404,682	7.7
1969	308,599	153,647	462,246	7.4
1970	371,695	191,995	563,690	7.7
1971	423,641	220,347	643,988	8.0
1972	481,262	252,487	733,749	7.9
1973	590,718	328,502	919,220	8.2
1974	743,127	421,659	1,164,786	8.7
1975	845,323	502,031	1,347,354	9.1
1976	933,130	514,585	1,447,715	8.7
1977	1,026,724	572,140	1,598,864	8.6
1978	1,091,801	615,091	1,706,893	8.4
1979	1,156,320	648,852	1,805,172	8.1
1980	1,167,409	675,656	1,843,065	7.7
1981	1,334,650	752,973	2,087,623	8.1
1982	1,327,943	769,406	2,097,349	7.8
1983	1,381,397	796,081	2,177,478	7.7
1984	1,446,457	826,464	2,272,921	7.6
1985	1,490,762	885,356	2,376,118	7.4
1986	1,536,907	915,939	2,452,846	7.3
1987	1,564,169	957,445	2,521,614	7.2
1988	1,625,454	985,302	2,610,756	7.0
1989	1,720,310	1,035,872	2,756,183	6.9
1990	1,789,535	1,105,846	2,895,382	6.7
1991	1,948,562	1,164,728	3,113,289	6.8
1992	2,020,477	1,213,305	3,233,781	6.9
1993	2,171,085	1,275,192	3,446,277	7.2
1994	2,182,595	1,301,916	3,484,511	7.3
1995	2,193,387	1,308,141	3,501,527	7.2

Discount rate = 12 per cent

Year	Male	Female	Total	Total/GDP
1947	33,013	15,236	48,249	36.9
1948	35,578	16,418	51,996	19.5
1949	38,265	17,604	55,869	16.6
1950	41,251	18,973	60,224	15.3
1951	44,559	20,472	65,030	11.9
1952	47,677	21,973	69,650	11.1
1953	51,321	23,634	74,955	10.6
1954	55,001	25,403	80,404	10.3
1955	59,076	27,361	86,437	10.3
1956	63,423	29,438	92,860	9.8
1957	68,210	31,702	99,912	9.2
1958	73,038	34,174	107,212	9.3
1959	75,236	35,670	110,906	8.4
1960	83,369	38,994	122,363	7.6
1961	92,121	43,083	135,204	7.0
1962	102,985	51,863	154,848	7.1
1963	118,030	59,173	177,203	7.1
1964	130,314	63,250	193,564	6.6
1965	151,640	75,800	227,440	6.9
1966	165,215	83,747	248,962	6.5
1967	179,680	90,536	270,215	6.1
1968	216,853	109,911	326,763	6.2
1969	248,525	125,121	373,646	6.0
1970	299,586	156,330	455,916	6.2
1971	341,998	179,787	521,785	6.5
1972	389,059	206,102	595,161	6.4
1973	477,500	267,817	745,317	6.6
1974	601,149	344,074	945,222	7.0
1975	684,136	409,827	1,093,963	7.4
1976	757,631	420,899	1,178,530	7.1
1977	834,015	467,770	1,301,785	7.0
1978	887,138	502,914	1,390,051	6.8
1979	940,546	530,796	1,471,343	6.6
1980	949,157	552,724	1,501,881	6.3
1981	1,086,332	616,101	1,702,433	6.6
1982	1,081,118	630,517	1,711,635	6.3
1983	1,124,421	652,689	1,777,110	6.3
1984	1,177,381	677,804	1,855,185	6.2
1985	1,214,814	725,817	1,940,631	6.1
1986	1,252,263	750,871	2,003,134	6.0
1987	1,274,498	784,597	2,059,095	5.9
1988	1,324,174	807,551	2,131,725	5.7
1989	1,401,585	849,243	2,250,828	5.6
1990	1,460,049	906,525	2,366,574	5.5
1991	1,587,985	955,560	2,543,546	5.5
1992	1,647,315	996,461	2,643,776	5.6
1993	1,772,040	1,048,073	2,820,113	5.9
1994	1,782,192	1,070,370	2,852,563	6.0
1995	1,791,266	1,076,051	2,867,316	5.9

Next, we can compare the value of human capital in Australia and Japan by examining the ratio of the value of human capital to GDP. The annual estimates of those ratios have already been

shown in the last columns in Table 5-4 to Table 5-7 but for convenience, we summarize all the estimates together in Table 5-8.

For the period of observation and using 3.75 per cent as a discount rate, the ratio of human capital to GDP in Australia has been on a decreasing trend and, in 1951, the ratio fell to its lowest point of 12.2. After 1952 the ratio returned to 14.6 and then, with erratic movements, fell to the present level of 12.5. In the case of Japan and using our selected discount rate of 5.84 per cent, the ratio also decreased from 1947 to 1992, accompanied by some fluctuations. During the period of observation the lowest point was 8.8 in 1990 and the highest point is 58.8 in 1947 (although the data from 1947 to 1950 seem anomalous, perhaps because recorded GDP was unusually low, perhaps in turn due to the exigencies of war). After 1993 the ratio has remained steady.

To describe the major characteristics of these ratios for the whole period, we employ the statistical measures of median, mean and standard deviation as is shown at the bottom of Table 5-8. When we apply the selected discount rates to estimate the value of human capital, the median ratio in Australia is 13.7 and that in Japan is 10.8, but the mean ratios in Australia and Japan become 13.8 and 13.6 respectively, i.e., the mean ratios in the two countries are very similar. However, as we have some doubts about the data quality of GDP in the early years after 1947, we can recalculate the statistical measures, excluding the period from 1947 to 1950. Then, the new median and the new mean become 10.7 and 11.6 respectively (The values of other statistical measures are shown in Table 5-8). Hence, we cannot say that the means in the two countries are close. On the other hand, when we use the same hypothetical interest rate to estimate the value of human capital in the two countries, the magnitude of median ratio changes and become very similar again, e.g., in the case of 3 per cent, the median ratios in Australia and Japan are almost identical at 15.0 and 14.6 (1951~95) respectively. Furthermore, in the case of 6, 9, and 12 per cent (1951~95), the median ratios in Australia and Japan become 10.8 and 10.5; 8.4 and 8.1; 6.9 and

6.6, respectively. These ratios, while not identical, are very similar to each other. The same does not seem to be true for mean values, which are similar only in the case of 9 per cent and 12 per cent per annum discount rates.

Mean and median are the statistical measures that represent the middle of the data range. The fact that they are close suggests that there is a central ratio of the value of human capital to GDP at any given discount rate. Using the selected interest rate which construct Table 5-8, we can calculate that the mean ratio in Australia is 13.8 and the standard deviation is 0.76, i.e., the ratio moves normally within the range:

$$= 13.8 \pm 0.76 \rightarrow 13.04 < \text{average ratio} < 14.56$$

To the extent that this is a valid indication of normal values, we may say that, after 1990 (and except for 1993) Australia has been faced with an unusual situation in which the value of human capital has declined outside its normal bounds in relation to GDP.

While we cannot utilize the Japanese mean and standard deviation for the whole period because of data quality problems we have already mentioned, if we use the mean and standard deviation based on the data from 1951 to 1995, we can also estimate the average as

$$= 11.6 \pm 2.78 \rightarrow 8.82 < \text{average ratio} < 14.38$$

According to this calculation, Japan's value of human capital has continued to move within a normal range in relation to GDP.

Table 5-8: Ratio of the Value of Human Capital to GDP

Year	3.75%	5.84%	Discount rate =3%		Discount rate =6%		Discount rate =9%		Discount rate =12%	
	Australia	Japan	Australia	Japan	Australia	Japan	Australia	Japan	Australia	Japan
1947	14.7	58.8	16.0	79.8	11.6	57.9	9.0	45.0	7.4	36.9
1948	14.2	31.3	15.5	42.6	11.2	30.8	8.7	23.9	7.2	19.5
1949	13.6	26.7	14.8	36.6	10.7	26.3	8.4	20.3	6.9	16.6
1950	13.3	24.8	14.5	34.0	10.5	24.4	8.2	18.8	6.7	15.3
1951	12.2	19.5	13.3	26.9	9.6	19.2	7.5	14.7	6.2	11.9
1952	14.6	18.2	15.9	25.2	11.5	17.9	9.0	13.7	7.4	11.1
1953	13.8	17.4	15.0	24.2	10.9	17.2	8.5	13.1	7.0	10.6
1954	13.4	16.9	14.7	23.5	10.6	16.6	8.3	12.7	6.8	10.3
1955	13.6	17.0	14.8	23.7	10.8	16.7	8.4	12.8	6.9	10.3
1956	13.5	16.3	14.8	22.8	10.7	16.0	8.3	12.2	6.8	9.8

1957	13.7	15.3	15.0	21.4	10.9	15.0	8.5	11.4	6.9	9.2
1958	14.1	15.5	15.3	21.7	11.1	15.2	8.7	11.5	7.1	9.3
1959	13.7	14.0	15.0	19.7	10.9	13.8	8.5	10.5	6.9	8.4
1960	13.8	12.7	15.0	17.9	10.9	12.5	8.5	9.5	6.9	7.6
1961	13.7	11.6	15.0	16.3	10.9	11.4	8.4	8.7	6.9	7.0
1962	14.0	11.7	15.3	16.3	11.0	11.5	8.6	8.8	7.0	7.1
1963	13.6	11.7	14.9	16.4	10.8	11.5	8.4	8.8	6.8	7.1
1964	13.3	10.9	14.5	15.2	10.5	10.7	8.1	8.2	6.6	6.6
1965	13.3	11.5	14.6	16.1	10.5	11.3	8.2	8.6	6.7	6.9
1966	13.3	10.8	14.5	15.1	10.5	10.6	8.1	8.1	6.6	6.5
1967	13.3	10.0	14.5	13.9	10.5	9.8	8.1	7.5	6.6	6.1
1968	13.4	10.2	14.6	14.2	10.5	10.0	8.2	7.7	6.7	6.2
1969	13.1	9.9	14.3	13.7	10.3	9.7	8.0	7.4	6.5	6.0
1970	13.2	10.2	14.5	14.1	10.4	10.0	8.1	7.7	6.6	6.2
1971	13.7	10.6	15.0	14.6	10.8	10.4	8.3	8.0	6.8	6.5
1972	14.2	10.5	15.6	14.5	11.2	10.3	8.6	7.9	7.0	6.4
1973	14.2	10.8	15.6	14.9	11.1	10.6	8.6	8.2	7.0	6.6
1974	14.8	11.5	16.2	15.8	11.6	11.3	9.0	8.7	7.3	7.0
1975	15.5	12.0	17.0	16.5	12.2	11.8	9.4	9.1	7.6	7.4
1976	15.1	11.4	16.5	15.6	11.8	11.2	9.1	8.7	7.4	7.1
1977	14.7	11.3	16.2	15.5	11.5	11.1	8.9	8.6	7.2	7.0
1978	15.3	11.0	16.8	15.0	12.0	10.8	9.2	8.4	7.5	6.8
1979	14.7	10.7	16.1	14.6	11.5	10.5	8.8	8.1	7.2	6.6
1980	14.5	10.1	15.9	13.8	11.3	9.9	8.7	7.7	7.1	6.3
1981	14.6	10.6	16.0	14.5	11.4	10.4	8.8	8.1	7.1	6.6
1982	14.9	10.2	16.3	13.9	11.6	10.0	8.9	7.8	7.3	6.3
1983	14.6	10.1	16.0	13.8	11.4	10.0	8.7	7.7	7.1	6.3
1984	14.2	9.9	15.6	13.5	11.1	9.8	8.6	7.6	6.9	6.2
1985	14.1	9.7	15.4	13.2	11.0	9.6	8.5	7.4	6.9	6.1
1986	13.8	9.6	15.1	13.1	10.8	9.4	8.3	7.3	6.7	6.0
1987	13.8	9.4	15.1	12.9	10.7	9.3	8.3	7.2	6.7	5.9
1988	13.3	9.1	14.6	12.5	10.4	9.0	8.0	7.0	6.5	5.7
1989	13.1	9.0	14.3	12.3	10.2	8.9	7.9	6.9	6.4	5.6
1990	12.6	8.8	13.9	12.0	9.9	8.7	7.6	6.7	6.2	5.5
1991	12.7	8.9	14.0	12.2	10.0	8.8	7.7	6.8	6.2	5.5
1992	12.9	9.0	14.1	12.3	10.1	8.8	7.8	6.9	6.3	5.6
1993	13.1	9.5	14.3	12.9	10.3	9.3	7.9	7.2	6.4	5.9
1994	12.5	9.5	13.7	12.9	9.8	9.4	7.6	7.3	6.1	6.0
1995	12.5	9.5	13.7	12.9	9.8	9.3	7.6	7.2	6.1	5.9
Max	15.5	58.8	17.0	79.8	12.2	57.9	9.4	45.0	7.6	36.9
Min	12.2	8.8	13.3	12.0	9.6	8.7	7.5	6.7	6.1	5.5
Median	13.7	10.8	15.0	15.0	10.8	10.6	8.4	8.2	6.9	6.6
Mean	13.8	13.6	15.1	18.7	10.8	13.4	8.4	10.3	6.8	8.4
S.D.	0.76	8.12	0.85	11.04	0.59	7.99	0.45	6.21	0.37	5.08
		1951~95		1951~95		1951~95		1951~95		1951~95
Max		19.5		26.9		19.2		14.7		11.9
Min		8.8		12.0		8.7		6.7		5.5
Median		10.7		14.6		10.5		8.1		6.6
Mean		11.6		16.1		11.5		8.8		7.1
S.D.		2.78		3.95		2.74		2.06		1.64

Note: S.D. is the standard deviation.

Finally we look at the growth the value of human capital for some selected ages (15, 17, 22, 27, 32, 37, 42, 47, 52, 57, and 62). The

value of human capital by each age is shown in Tables B-28, B-29, C-25, and C-26 of the Statistical Appendices.

Figures from 5-19 to 5-22 are schematized by using index numbers. The indexes are computed at eight yearly intervals from the base of the value of human capital for males or females aged 15 in years. Firstly, Figure 5-19 indicates the progress of male human capital in Australia. The Figures tells us that the peak value of human capital obtains in a person's youth. For example, during the period of observation the age group giving the peak value of human capital in Australia and Japan is as follows:

Males in Australia

Year	1947	1955	1963	1971	1979	1987	1995
Age	21	29	16	24	18	26	23

Males in Japan

Year	1947	1955	1963	1971	1979	1987	1995
Age	20	23	18	22	31	37	46

Females in Australia

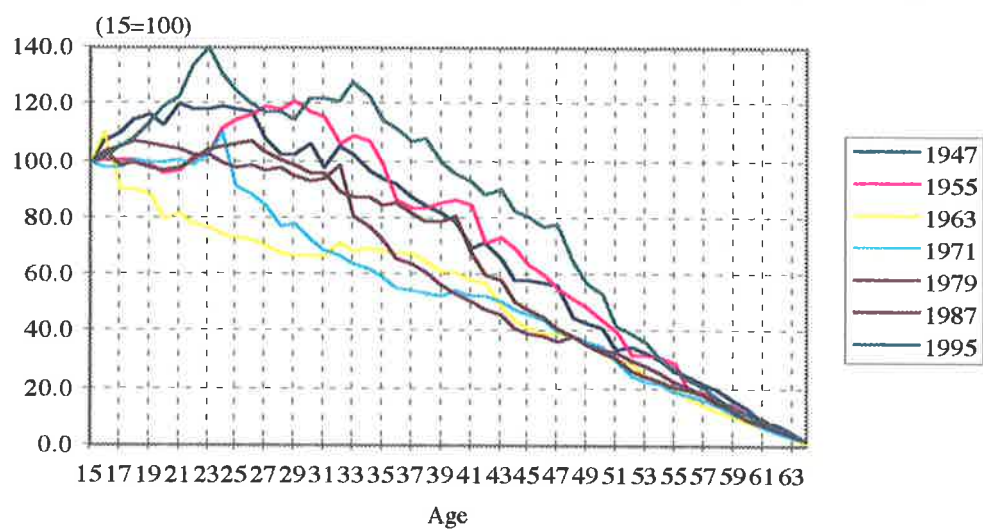
Year	1947	1955	1963	1971	1979	1987	1995
Age	21, 22, 24	29	16	24	18	26	23

Females in Japan

Year	1947	1955	1963	1971	1979	1987	1995
Age	16	19	17	22	31	37	22

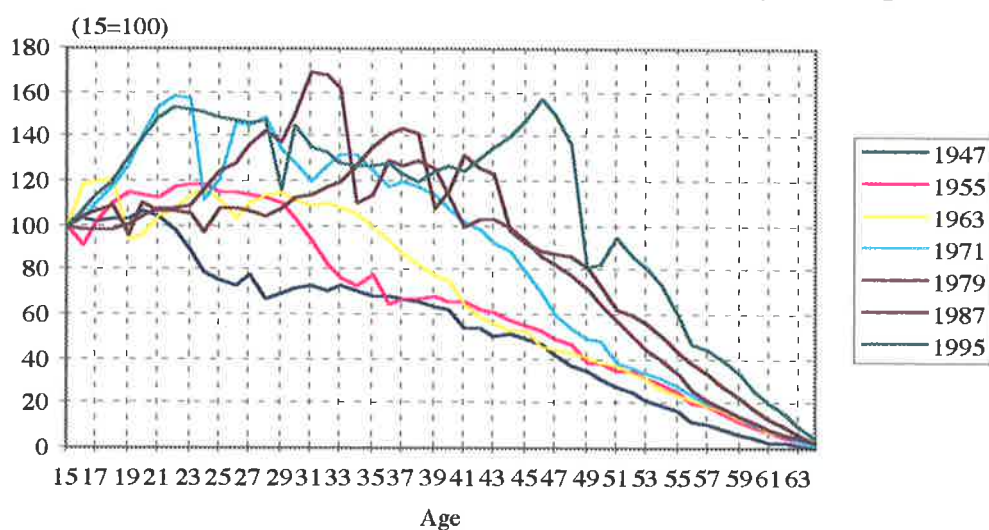
From the above tables, we find that there has been an oscillating tendency in the peak age, i.e., in 1947 the peak value of human capital occurs for males aged 20 or 21 years and for females aged 16, 21, 22 or 24 years. After that, the age giving the peak value gets older and reaches its maximum before declining thereafter. However, this oscillation is not evident in all cases: the case of males in Japan is an exception. As the table shows, the peak value of human capital for Japanese males peaks at older and older ages. This tendency is inversely related to the youthfulness of the population and we may say, that the situation in Japan reflects the decreasing proportion of youthful males in the population.

Figure 5-19: Human Capital of Australian Male by Age Group



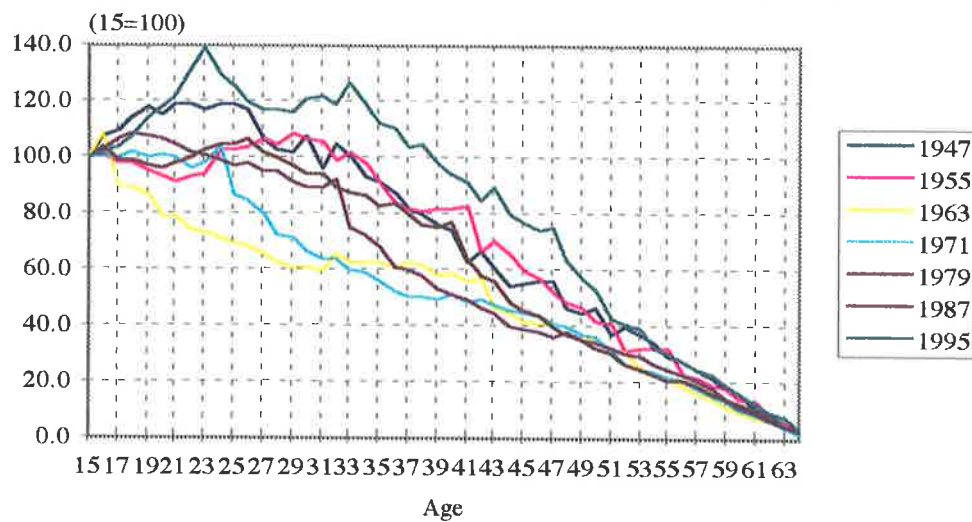
Source: B-28.

Figure 5-20: Human Capital of Japanese Male by Age Group



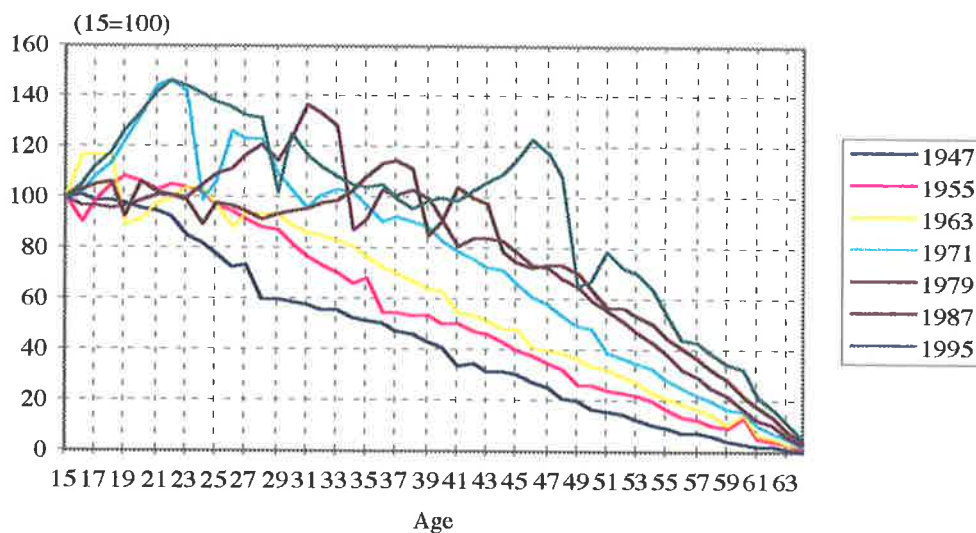
Source: C-25.

Figure 5-21: Human Capital of Australian Female by Age Group



Source: B-29.

Figure 5-22: Human Capital of Japanese Female by Age Group



Source: C-26.

The following four Tables from 5-9 to 5-12 indicate the growth of human capital for selected ages group from 1947 to 1995. The index is set by the value of each selected age group in 1947 and from its changes we can indicate the pace by which a selected age group has been expanding its human capital. For example, from Table 5-9, which shows the growth of male groups in Australia, the largest index in 1995 is 14,112 for the 47 age group. However, the index for this age group ranked lowest in both 1979 and 1987. This then indicates the pattern of growth and show

that this age group has expanded the value of its human capital most quickly during the period from 1987 to 1995. The Table also shows the ranking for other selected age groups. It indicates that, for some male age groups, a low ranking in early years is associated with a high rank in 1995. However, the opposite trend is evident in other groups.

It might be that this pattern of change is partly explained by Australia's system of compulsory wage arbitration awards to which we referred earlier. However, the relationship is likely to be complex and outside the immediate scope of this study.

Table 5-9: Growth of Male Human Capital by Age Group: Australia
(1947=100)

Year	15	17	22	27	32	37	42	47	52	57	62
1995	10,096	9,668	11,440	10,929	11,651	12,315	12,477	14,112	11,443	9,410	9,160
(Ranking)	8	9	6	7	4	3	2	1	5	10	11
1987	7,950	7,172	6,742	7,577	6,737	7,431	6,762	5,861	5,879	6,409	7,075
(Ranking)	1	4	7	2	8	3	6	11	10	9	5
1979	3,815	3,652	3,304	3,424	3,570	2,770	2,581	2,519	3,251	3,162	3,027
(Ranking)	1	2	5	4	3	9	10	11	6	7	8
1971	1,372	1,224	1,142	1,071	871	846	1,005	990	959	1,013	983
(Ranking)	1	2	3	4	10	11	6	7	9	5	8
1963	673	556	443	439	460	521	545	478	557	450	475
(Ranking)	1	3	10	11	8	5	4	6	2	9	7
1955	289	265	248	320	293	277	290	286	263	248	250
(Ranking)	4	7	10	1	2	6	3	5	8	10	9
1947	100	100	100	100	100	100	100	100	100	100	100

Source: B-28.

Table 5-10 shows the same data for male groups in Japan. It shows that, unlike Australia, male age groups with lower or higher ranking in the early years tends to keep its ranking, with few exceptions. For example, the 42, 47, 52, 57, and 62 age groups have maintained their high rankings for a long time, while the 15, 17, and 22 age groups have remained in the lower ranking. Those facts suggest that in Japan the growth of value of human capital for high age groups tends to greater than for young age groups. We can surmise that this has some relation to the seniority salary system

widely practised in Japan.¹⁸

Table 5-10: Growth of Male Human Capital by Age Group: Japan
(1947=100)

Year	15	17	22	27	32	37	42	47	52	57	62
1995	2,734	3,044	4,271	5,171	5,116	5,025	6,659	9,794	9,135	11,058	20,605
(Ranking)	11	10	9	6	7	8	5	3	4	2	1
1987	2,392	2,497	2,589	3,279	3,942	5,109	5,636	5,014	5,607	7,192	10,921
(Ranking)	11	10	9	8	7	5	3	6	4	2	1
1979	1,753	1,687	1,933	3,087	4,126	3,304	3,367	3,481	3,460	3,360	5,665
(Ranking)	11	10	9	8	2	7	5	3	4	6	1
1971	664	717	1,071	1,244	1,186	1,175	1,213	961	925	1,236	2,006
(Ranking)	11	10	7	2	5	6	4	8	9	3	1
1963	292	344	322	415	452	377	324	312	378	508	857
(Ranking)	11	7	9	4	3	6	8	10	5	2	1
1955	154	153	184	227	179	152	180	180	205	260	403
(Ranking)	9	10	5	3	8	11	6	6	4	2	1
1947	100	100	100	100	100	100	100	100	100	100	100

Source: C-25.

The next two Tables indicate the growth of human capital for female age groups in the two countries. In Australia, we find several features. One is that the ranking for the 32, 37, and 42 age groups has been comparatively high during the whole period of observation (except for 1971 and 1979). The other one is the sharp drop in the ranking of the 15 and 17 age groups, these two groups, particularly the 15 age group, kept its high ranking before 1987 but, in 1995, the ranking drops to near the bottom.

¹⁸ This system bases an employee's rank, salary, and qualifications within an enterprise on the length of service in that company. Wage increases and promotions are also highly dependent on the employee's school background, sex, and type of work. This system can be traced to a period of serious labour shortages during World War I when the Yokosuka Naval Shipyard adopted it as a means of securing enough technical and skilled workers. The seniority system enables employees to benefit from stability of employment: the longer they work at a single company, even at comparatively low wages, the greater their overall remuneration. Employers can benefit from strong worker loyalty and stability and the resultant ease with which they can formulate personnel plans. They suffer, however, from the necessity of carrying along surplus workers and growing inflexibility within their organizations. With the steady increase in numbers of employees in higher age brackets, the pyramidal personnel structure has started to crumble as Japanese corporations begin to suffer from skyrocketing labour costs. The problem will only get worse as the average age of Japan's population continues to grow, putting increasing pressure on companies to place more emphasis on employee ability and less on seniority. (Kodansha International, 1995, pp. 131-132)

Furthermore, the older age groups, such as the 57 and 62 age groups, have maintained almost a fixed ranking from 1947 to 1995.

Table 5-11: Growth of Female Human Capital by Age Group: Australia
(1947=100)

Year	15	17	22	27	32	37	42	47	52	57	62
1995	14,046	13,331	15,530	15,330	16,054	17,783	17,897	18,710	14,368	14,326	15,830
(Ranking)	10	11	6	7	4	3	2	1	8	9	5
1987	10,608	9,560	8,895	10,135	9,047	10,266	9,222	7,413	7,031	8,130	9,266
(Ranking)	1	4	8	3	7	2	6	10	11	9	5
1979	4,838	4,690	4,155	4,289	4,285	3,520	3,363	3,079	3,719	4,082	3,985
(Ranking)	1	2	5	3	4	9	10	11	8	6	7
1971	1,400	1,275	1,136	1,047	851	863	1,040	1,005	948	1,056	1,027
(Ranking)	1	2	3	5	11	10	6	8	9	4	7
1963	735	597	461	453	465	560	634	526	576	478	572
(Ranking)	1	3	10	11	9	6	2	7	4	8	5
1955	314	282	246	313	297	312	315	292	249	283	289
(Ranking)	2	9	11	3	5	4	1	6	10	8	7
1947	100	100	100	100	100	100	100	100	100	100	100

Source: B-29.

Finally, we look at the following Table 5-12 that shows the growth in human capital for Japanese females of selected ages. It is clear that, unlike the preceding Tables, 5-12 shows that the ranking for each age group has remained the same, with very few exceptions. This is because the growth rates of human capital among Japanese females have been similar for all ages.

Table 5-12: Growth of Female Human Capital by Age Group: Japan
(1947=100)

Year	15	17	22	27	32	37	42	47	52	57	62
1995	3,389	3,855	5,384	6,051	6,850	7,148	10,094	16,097	17,316	20,713	34,803
(Ranking)	11	10	9	8	7	6	5	4	3	2	1
1987	3,015	3,214	3,295	3,842	5,271	7,253	8,760	8,928	12,037	15,938	24,516
(Ranking)	11	10	9	8	7	6	5	4	3	2	1
1979	2,027	1,986	2,226	3,203	4,874	4,313	4,959	5,927	7,344	8,502	12,335
(Ranking)	10	11	9	8	6	7	5	4	3	2	1
1971	717	789	1,138	1,189	1,292	1,389	1,579	1,672	1,856	2,275	3,289
(Ranking)	11	10	9	8	7	6	5	4	3	2	1
1963	299	354	325	376	458	439	460	481	613	701	970
(Ranking)	11	9	10	8	6	7	5	4	3	2	1
1955	149	150	171	185	197	172	205	209	247	279	357
(Ranking)	11	10	9	7	6	8	5	4	3	2	1
1947	100	100	100	100	100	100	100	100	100	100	100

Source: C-26.

5.4 Conclusion

This study aims to examine how human capital was invested in Australia and Japan in the post-war period. There are several studies that emphasize the role of physical capital in the economic development of countries. This study, quite distinct from those previous works, recognizes the special importance of investment in the person and estimates the investment effort made in Australia and Japan. The total value of human capital in the two countries each developed under different cultures is provided for the period 1947 to 1995. The estimate is expected to assist further our understanding of how the economic development and industrialization efforts been promoted in the two countries.

There are two approaches to measure the value of human capital. That is, the capitalized-earnings approach (income approach) and the cost-of-production approach (cost approach). The former is a more direct approach expected to bring more accurate results. In this study, however, the author is forced to employ the latter given the limited availability of the required data and information from published sources. For example, detailed data on costs, on education and maintaining a human being, on an annual and long-term basis are not publicly available in either Australia or Japan.

The capitalized-earnings approach is an alternative approach to the cost approach. It has several drawbacks when employed to estimate the aimed value of human capital invested. I give below some of the reasons why. One drawback is that in this study, the value of human capital is measured at nominal value. The use of nominal value is selected because we aim to estimate the investment made in a long period of over five decades in which the pattern of labour market and employment practices have been altered considerably in both economies. This makes any tasks of formulating an adequate index to deflate wage figures for the whole period very difficult. When a new price index chained to some indices is created, the index numbers can easily become

distorted if one item is much less or much more significant than others.

We should, therefore, argue that the difference between the nominal value and the real value of human capital is interpreted as not only the cause of the inflation, but also the cause of the approach using the estimation. Additional concern lies in the ways that the labour market in Japan is structured. It is important to note that the capitalized-earnings approach assumes that the labour market is at a competitive equilibrium. This is not so. Earlier studies indicate that labour market in Japan is less competitive observing wages and salaries paid often below the level of marginal labour productivity than that in Australia. It is, therefore, expected that the valuation of human capital by the capitalized-earnings approach underestimates Japanese value compared to the Australian.

The following observations may illustrate the imperfect natures of Japanese labour market:

Firstly, there have been special efforts made in Japan to build and maintain an '*equitable society*', particularly in the post-war years. This effort has sustained by way of keeping the wage and salary differentials minimal between blue collar (mostly those with middle to high school leavers) and white collar workers (mostly university qualifications). For example, the proportion of the number of university graduates employees with in the manufacturing industry increased from 23 percent in 1960 to 45 percent in 1995. For females the proportion increased from 3 percent in 1975 to 10 percent in 1995. During the same period the wage and salary differentials between university graduates and blue collar workers for males (which was calculated as the ratio of monthly earnings of university graduates to that of blue collar workers) declined from 1.57 times in 1960 to 1.42 times in 1995. It reached a peak of 1.65 times in 1970, after that the ratio was steady at around 1.42 times. For females the ratio remained steady at around 1.50 times over the period of observation. In addition, in the case of all industries the wage and salary

differentials between university graduates and blue collar workers have narrowed considerably. For example, the differentials for males declined from 1.26 times in 1965 to 1.19 times in 1995 and the differentials for females also declined from 1.44 times in 1975 to 1.29 times in 1995 (see Rododaijin Kanboseisaku Chosabu, *Rodotokei Nenpo*, various years).

Secondly, Japanese researchers have long suspected that employees in Japan, particularly white collar educated people, have (up to their mid thirties) customarily accepted salary payments determined at less than their marginal productivity (see Minami¹⁹).

Thirdly, from the perspective of a national economy, for example, the share of wages that is defined as the ratio of compensation of employees to national income measured at factor cost, rose from 50 percent in 1955 to 54 percent in 1970, and after 1975 the share levelled off around 67 or 68 percent in Japan. On the other hand, the share of wages in Australia rose from 65 percent in 1960 to 69 percent in 1970, it reached a peak of 74 percent in 1975, and after 1980 the share levelled off around 70 percent. That is, the difference of the share of wages in total value added between Australia and Japan in 1960 was 15 percent, and after 1965 the difference has narrowed gradually. This indicates that from the period 1970 to 1995 wage earnings grew at a faster rate than national income in Japan but not in Australia. From the period 1970 to 1995 the average growth rates of national income and wages in Japan were 4.6 percent and 5.0 percent respectively, and the average growth rate of wage per employee was 7.1 percent. For Australia the average growth rates of national income, wages, and wage per employee were 10.9 percent, 10.7 percent, and 9.0 percent respectively. The above fact indicates that the relative share of wages in Japan has been controlled at a lower proportion. In other words, the share of corporation income has grown at much faster rate in Japan than in Australia.

¹⁹ Minami, R. (1996), *Nihon no Keizai Hatari* (The Economic Development of Japan), Tokyo: Toyo Keizai Shinposha; 2nd ed., p. 224.

Fourthly, the Japanese people are said to put a great deal of effort into investment in human resources, but, alas, it has brought them less reward in terms of wage and salary payments. For example, the recent statistics in Japan (see Keizai Kikaku Cho, *Kokumin Keizai Keisan Nenpo*, 1998) show that in 1970 the educational expenditure by the Japanese households amounted to ¥10,109 (thousand million, 1990 prices) and the proportion of the educational expenditure to GDP was 5.1 percent, and this proportion rose to 7.5 percent in 1995 (note: the educational expenditure includes the spending on recreation, entertainment, education, and cultural services). For Australia, the same proportion that derived from the data measured at 1989-90 prices, rose from 3.2 percent in 1981 to 4.4 percent in 1995 (see the Australian Bureau of Statistics, *Australian National Income, Expenditure and Product*, 1997 and other years).

Fifthly, given the observations several studies were generated by economists and economic historians as well as statisticians seeking plausible explanations.²⁰ They suggested that Japan's unique patterns of employment, management practices and the observed behaviour of working people as possible explanations. There is also the readiness of employees to take part in training programs at work and outside, leading to possible over-supply and under-use of qualified people. Many researchers agree that all above explanatory factors are relevant at various extents as explanations for fewer rewards. Investigations are still promoted by researchers studying the country's economic development record and estimating the production function of the economy. So far, however, the puzzle has not been adequately solved.

Sixthly, in addition, some of personal and social expenditures in both Australia and Japan are designed to increase labour's productive capacities. In 1995 the educational expenditure by the Japanese households was almost ¥35,000 (thousand million, 1990 prices). Since education, recreation, entertainment and cultural

²⁰ For instance, see Koike, K., Ishihara, K., Mouer, R., Shimada, H., Minami, R (1969), Horiuchi, A.

services serve other purposes besides creating productive capacities; not all of their costs can be allocated to increasing productive capacities, although increasing productive capacities is certainly one of their major functions. Medical care and health expenses by households also affect productive capacities, in 1995 totaled ¥28,000 (thousand million, 1990 prices) was expended towards this purpose. The proportion of the sum of educational and health expenditures to GDP in Japan was 13.4 percent, while Australia was expended 8.6 percent in 1995.

In the present national accounting (the SNA), the spending on education and health is regarded exclusively as 'consumption' expenditure and not 'investment' expenditure, but if these expenditures are included in the investment category, Japan is estimated to have spent around 14 percent of GDP. The countervailing amount in Australia in 1995 is estimated at 9 percent. This should be viewed as another reason to suspect that the Japanese value of investment in human capital must be underestimated in comparison with the Australian counterparts.

It is reported that since 1970s more people in Japan have allocated an increasing part of their household disposable income to the purpose of investment in human resources; namely towards education and training for themselves and their family members for gaining satisfaction from leisure and hobby activities, and in search of self development. From a point of skill formation, much of this expenditure can not be regarded as investment aiming to getting a better job or getting a better salary despite the fact such spending in Japan must have contributed towards making them better workers. We observe their expenditures, as such are not reflected by the increase of their wages or incomes directly. The fuller study of Japan's labour market structure, employment systems and labour-management relations and their comparison with Australia is in itself a large task. It is a task beyond the present study that should be explored in the future.

We argue that the estimated results of this study should not be taken to conclude that the Japanese people have made smaller efforts in the accumulation of human capital than their Australian counterparts. The statistical estimates presented in this study must be read carefully taking the special concerns noted above. This study is the first attempt to compare the value of human capital in two countries that have developed under different cultures. A delicate balance needs to be maintained in interpreting cultural data that I have endeavoured to do in this study. I hope the research outcome here will serve as a pioneering effort for future researchers.

5.5 Further research

There are a number of directions for further research that I intend to develop. One of these is to analyse the relation between physical and human capital. The definition of physical capital differs among researchers but if we interpret the definition as widely as possible it approximates common definitions of national wealth. Then, if we use the information on both national wealth and human capital together, we can analyse how they relate to each other from a national, economic point of view. The results of such analysis could provide useful information for us as guides for economic planning or economic policy development.

The first survey on national wealth in Japan was conducted by the Bank of Japan in 1905. This survey has been carried out twelve times to 1970. The national wealth surveys vary considerably in the estimation method, which makes comparison over a long period difficult. However, since 1955, the new annual SNA figures provide closing balance-sheet accounts for the nation which indicate the national wealth of the whole Japanese economy. These would be a useful starting point for a time series of data on national wealth in Japan of similar length to our estimates of human capital.

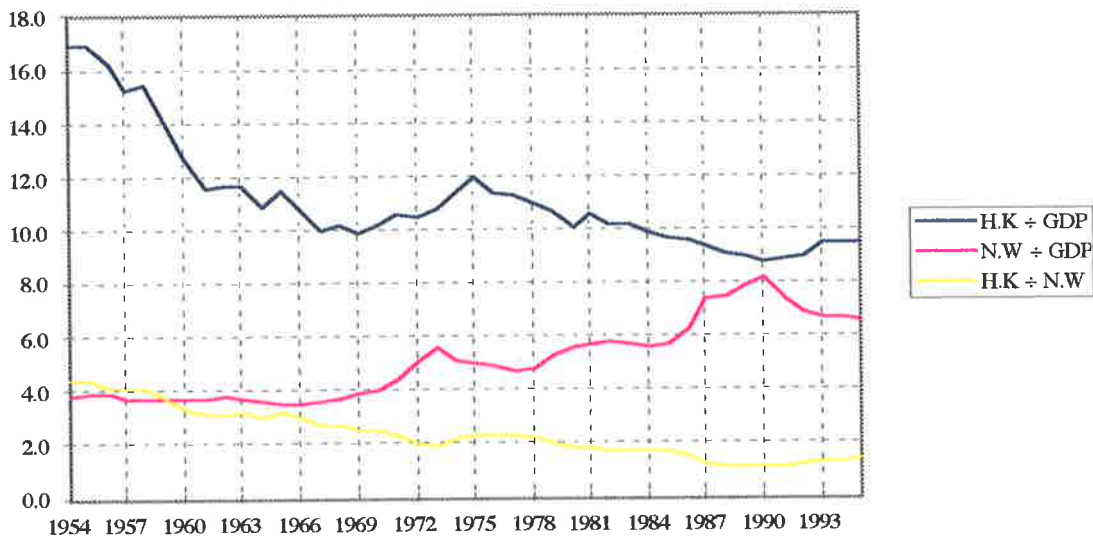
As for Australia, T. A. Coghlan made the first estimate of private wealth in the 1892 issue of his "*Seven colonies of Australasia*". After that, G. H. Knibbs (1918), C. H. Wickens, who published the estimates in 1921, 23, 27, and 29, J. M. Garland and R. W. Goldsmith (1959) tried to estimate the national wealth of Australia. After the 1950s, some further research was devoted to estimating the private national wealth in Australia. However, to date, the ABS has not provided the detailed information on national wealth such as is available in Japan. This suggests problems on the Australian side that would need to be solved to support further work in combining estimates of human capital. However, utilizing our estimates of the value of human capital and the information on national wealth for Japan, we can make the following Table 5-21.

The value of human capital is calculated using 5.84 per cent as a discount rate. This value is then used to develop a number of ratios: the ratio of the value of human capital to GDP, the ratio of the value of national wealth to GDP and, particularly, the ratio of human capital to national wealth. Furthermore we are interested in the relationship among those ratios. To reveal them more clearly, we draw Figure 5-23, which shows that two ratios, the ratio of the value of human capital to GDP and the ratio of the value of national wealth to GDP, are in inverse proportion to each other. We look that about eight times are on the borderline between two ratios. If this is true, we may say that human capital and national wealth are in inverse proportion and the borderline is about eight times. Naturally, we cannot yet explore this apparent association but it would seem to suggest the value of further international comparative research that I hope to undertake in future.

Table 5-13: Human Capital and National Wealth (¥ thousand million)

Year	Human capital	Human capital ÷ GDP	National Wealth	National Wealth ÷ GDP	Human capital ÷ National Wealth
1954	132,493	16.9	30,182.2	3.9	4.4
1955	142,936	17.0	32,704.8	3.9	4.4
1956	153,947	16.3	37,102.8	3.9	4.1
1957	166,044	15.3	40,481.4	3.7	4.1
1958	178,647	15.5	43,752.0	3.8	4.1
1959	184,891	14.0	49,584.0	3.8	3.7
1960	203,835	12.7	59,819.7	3.7	3.4
1961	224,551	11.6	72,297.1	3.7	3.1
1962	255,809	11.7	83,460.9	3.8	3.1
1963	294,088	11.7	92,923.7	3.7	3.2
1964	320,265	10.9	107,292.5	3.6	3.0
1965	377,177	11.5	118,028.4	3.6	3.2
1966	412,092	10.8	137,211.9	3.6	3.0
1967	446,211	10.0	163,842.1	3.7	2.7
1968	538,470	10.2	197,671.3	3.7	2.7
1969	614,101	9.9	241,682.8	3.9	2.5
1970	748,168	10.2	296,467.3	4.0	2.5
1971	852,501	10.6	352,859.8	4.4	2.4
1972	969,799	10.5	473,379.9	5.1	2.0
1973	1,215,448	10.8	624,072.1	5.5	1.9
1974	1,538,156	11.5	685,723.9	5.1	2.2
1975	1,777,525	12.0	739,585.8	5.0	2.4
1976	1,902,740	11.4	814,906.7	4.9	2.3
1977	2,100,863	11.3	883,505.2	4.8	2.4
1978	2,242,274	11.0	989,289.6	4.8	2.3
1979	2,368,361	10.7	1,166,035.8	5.3	2.0
1980	2,418,963	10.1	1,339,614.4	5.6	1.8
1981	2,737,115	10.6	1,475,868.5	5.7	1.9
1982	2,747,199	10.2	1,571,281.4	5.8	1.7
1983	2,852,621	10.1	1,632,202.4	5.8	1.7
1984	2,977,654	9.9	1,714,545.4	5.7	1.7
1985	3,110,086	9.7	1,837,542.6	5.7	1.7
1986	3,211,556	9.6	2,114,435.0	6.3	1.5
1987	3,302,686	9.4	2,576,482.0	7.4	1.3
1988	3,420,457	9.1	2,800,181.1	7.5	1.2
1989	3,610,579	9.0	3,190,188.6	8.0	1.1
1990	3,788,010	8.8	3,522,376.0	8.2	1.1
1991	4,076,869	8.9	3,411,772.2	7.4	1.2
1992	4,230,580	9.0	3,250,193.3	6.9	1.3
1993	4,502,657	9.5	3,223,659.8	6.8	1.4
1994	4,550,238	9.5	3,214,782.4	6.7	1.4
1995	4,570,708	9.5	3,191,663.9	6.6	1.4

Figure 5-23: Ratios Related to Human Capital and National Wealth



A further research direction is to estimate the value of human capital using a cost accounting approach. The value of human capital estimated by using an income approach is one-sided and might distort our understanding of human capital investment decisions. It might be, for example, that lifetime earnings are more the result of innate ability than of investment decisions. For this and other reasons previously discussed it would be preferable to make estimates of human capital using both the income and cost approach. In Japan, government has provided continuous information on educational expenditure since 1949, which can be useful as an estimate of cost of investment in human capital.

For Australia, the information on educational expenditure appears to be more limited. Annual data on educational expenditure by sector are obtainable for earlier years from the *Official Year Book of the Commonwealth of Australia*, by Commonwealth Bureau of Census and for later years from the Statistics, and *Year Book Australia*, by the ABS. The information on educational expenditure in the government sector is obtainable from 1917 and, in the private sector, from 1962. But there are some data limitations and problems with comparability between States. Similarly, difficulties exist with cost data for Australian Universities.

Other research possibilities exist. For example, one is to evaluate the contribution of immigrants in the total value of human capital. This has become an increasingly important matter in Japan where severe shortages of labour triggered by the economic boom of the late 1980s have attracted a large influx of male foreign workers, mostly from Asian countries. The revision of the Immigration Control Law also extended the right of long-term residence to descendants of Japanese emigrants and removed restrictions on their ability to work in Japan. Many Brazilians of Japanese descent have sought to take advantage of this change in the law. Aside from the approximately 80,000 foreigners who are legally employed each year, there are also many foreigners who enter the country on a tourist or student visa and who work illegally.

Under these circumstances, it is increasingly important for Japan to evaluate the role of foreign workers. But Japan has little useful information on foreign workers concerning their age distribution, their educational backgrounds and so on. By contrast, in Australia where immigration has long been important, such useful information already exists and a comparative study of the role of immigrants in the two countries would provide interesting information.

In addition to these immediately apparent directions for future research, further consideration of some of the matters raised here, such as the comparative growth rates of male and female human capital, provide further interesting possibilities. In short, the estimation of human capital raises many interesting and important issues and this thesis has attempted to progress our understanding of them by making some initial, comparable estimates.

Statistical appendix

Statistical appendices demonstrate the background statistics based on my thesis. The characteristics of those data have already explained in Chapter 4, then the following Tables only show the figures and their sources. In each Table, actual figures express in black colour, but many Tables include the estimated values. Those values are expressed in red figures estimated using the geometric mean. For example, a Table likes Table 1, we assume that A_2 , A_3 , and A_4 can calculate using the geometric mean of the period between 1948 and 1952. That is, if the geometric mean is r_1 , each value of A_2 , A_3 , A_4 is given by the next equations.

$$A_2 = W(1+r_1), A_3 = A_2(1+r_1), A_4 = A_3(1+r_1)$$

where W , X , Y , and Z are actual values.

We also assume that A_1 can compute its value using the equation, $A_1 = W \div (1+r)$ and furthermore, values of A_6 , A_7 , and A_8 are able to acquire using the geometric mean of the period between 1990 and 1992, that is, if the geometric mean of this period is r_2 ,

$$A_6 = Z(1+r_2), A_7 = A_6(1+r_2), A_8 = A_7(1+r_2)$$

But a Table likes Table 2, we assume those values of A_5 , A_6 , A_7 , and A_8 can acquire using the growth rate from 1990 to 1991.

Table 1

1947	1948	1949	1950	1951	1952	...	1990	1991	1992	1993	1994	1995
A_1	W	A_2	A_3	A_4	X	...	Y	A_5	Z	A_6	A_7	A_8

Table 2

1947	1948	1949	1950	1951	1952	...	1990	1991	1992	1993	1994	1995
A_1	W	A_2	A_3	A_4	X	...	Y	Z	A_5	A_6	A_7	A_8

In the case of Table 3, we assume that values of A_1 , A_2 , A_3 , ..., D_1 , D_2 , D_3 , ..., can acquire using the annual growth rate of total value. Because of the limitation of data, from 1947 to 1963 we only use the annual total value. Therefore, if the growth rate of total value from 1964 to 1965 is r , we estimate each value in 1964 using the following equations.

$$A_{18} = A \div (1+r), B_{18} = B \div (1+r), C_{18} = C \div (1+r), \dots, D_{18} = D \div (1+r)$$

As we repeat the same procedure, finally we compute the each value of the second row, that is, the values in 1947.

Table 3

Age	15	16	17	...	64	Total
1947	A_1	B_1	C_1	...	D_1	V
1948	A_2	B_2	C_2	...	D_2	W
1949	A_3	B_3	C_3	...	D_3	X
.
.
1964	A_{18}	B_{18}	C_{18}	...	D_{18}	Y
1965	A	B	C	...	D	Z

Statistical appendix A: Background data of Chapter 1

The Background data of Australia shown in Table A-1 and Table A-2, which are collected from following sources:

- (1) The Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product 1992-93* (5204.0), 1994.
- (2) The Australian Bureau of Statistics, *Australian Economic Indicators* (1350.0), August, 1997.
- (3) W. E. Norton and C. P. Aylmer, *Australian Economic Statistics 1949-50 to 1986-87: I Tables*, 1988.

The Japanese data shown in Table A-3 and Table A-4, which are collected from following sources:

- (1) Keizai Kikaku Cho (the Economic Planning Agency), *Kokumin Keizai Keisan Nenpo* (Annual Report on National Accounts), 1997.
- (2) Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), *Nihon Tokei Nenkan* (Japan Statistical Yearbook), Various Years.

Table A-1: Growth of Private Demand, Labour and Capital: Australia

Year	Y = private demand	$\Delta Y/Y$	L	$\Delta L/L$	K	$\Delta K/K$
	(\$ million. At average 1979-80 prices)				(\$ million. At average 1979-80 prices)	
1969-70	65,546		8,039,341		127,850	
1970-71	69,828	0.065	8,414,020	0.047	136,136	0.065
1971-72	73,460	0.052	8,457,442	0.005	144,996	0.065
1972-73	77,350	0.053	8,371,515	-0.010	153,587	0.059
1973-74	80,228	0.037	8,628,628	0.031	162,139	0.056
1974-75	79,836	-0.005	8,306,981	-0.037	170,837	0.054
1975-76	81,346	0.019	8,079,969	-0.027	176,650	0.034
1976-77	84,087	0.034	7,995,314	-0.010	183,351	0.038
1977-78	84,278	0.002	7,893,282	-0.013	190,325	0.038
1978-79	89,458	0.061	8,227,562	0.042	196,544	0.033
1979-80	91,122	0.019	8,231,102	0.000	203,949	0.038
1980-81	93,868	0.030	8,182,440	-0.006	211,137	0.035
1981-82	95,685	0.019	7,868,944	-0.038	220,564	0.045
1982-83	93,621	-0.022	7,416,347	-0.058	230,728	0.046
1983-84	99,280	0.060	7,464,967	0.007	236,516	0.025
	(\$ million. At average 1989-90 prices)				(\$ million. At average 1989-90 prices)	
1984-85	235,098		7,904,801	0.059	572,307	
1985-86	242,400	0.031	8,433,894	0.067	592,794	0.036
1986-87	248,497	0.025	8,822,169	0.046	613,390	0.035
1987-88	267,467	0.076	9,414,208	0.067	632,037	0.030
1988-89	280,937	0.050	10,535,075	0.119	656,675	0.039
1989-90	286,949	0.021	10,920,322	0.037	688,387	0.048
1990-91	283,469	-0.012	10,651,576	-0.025	715,235	0.039

1991~92	283,200	-0.001	9,972,338	-0.064	733,473	0.025
1992~93	295,534	0.044	10,177,081	0.021	746,762	0.018
1993~94	314,030	0.063	11,058,130	0.087	764,450	0.024
1994~95	327,226	0.042	11,489,140	0.039	785,676	0.028
1995~96	342,383	0.046	11,642,256	0.013	812,015	0.034

Note: Private demand (Y) = GDP - public expenditure

Public expenditure includes final consumption expenditure of government, gross fixed capital expenditure of public enterprises and general government.

Total net capital stock (K) = dwellings + non-dwelling construction + equipment + real estate transfer expenses.

Employed persons = all persons employed - public administration and defence - community services - finance, property and business services. But, for the period 1969 to 1973~74

Employed persons = all persons employed - government employees

L = employed persons · weekly hours worked of wage and salary earners · 52.14

Table A-2: Distribution Income of Labour and Capital (\$ million): Australia

Year	Wages salaries and supplements (1)	Gross operating surplus (2)	Total income = (1) + (2) (3)	α = (1) ÷ (3)	β = (2) ÷ (3)
1969~70	16,172	11,383	27,555	0.59	0.41
1970~71	18,563	12,054	30,617	0.61	0.39
1971~72	20,719	13,487	34,206	0.61	0.39
1972~73	23,139	15,932	39,071	0.59	0.41
1973~74	28,405	18,489	46,894	0.61	0.39
1974~75	36,530	20,327	56,857	0.64	0.36
1975~76	42,071	24,105	66,176	0.64	0.36
1976~77	47,463	27,977	75,440	0.63	0.37
1977~78	52,176	30,157	82,333	0.63	0.37
1978~79	56,095	36,934	93,029	0.60	0.40
1979~80	62,590	42,015	104,605	0.60	0.40
1980~81	72,641	46,155	118,796	0.61	0.39
1981~82	84,214	49,116	133,330	0.63	0.37
1982~83	93,423	51,706	145,129	0.64	0.36
1983~84	98,943	64,466	163,409	0.61	0.39
1984~85	109,380	72,026	181,406	0.60	0.40
1985~86	120,292	82,369	202,661	0.59	0.41
1986~87	131,405	92,571	223,976	0.59	0.41
1987~88	146,763	96,318	243,081	0.60	0.40
1988~89	163,782	113,312	277,094	0.59	0.41
1989~90	182,329	121,875	304,204	0.60	0.40
1990~91	189,981	120,463	310,444	0.61	0.39
1991~92	193,727	123,384	317,111	0.61	0.39
1992~93	200,851	131,880	332,731	0.60	0.40
1993~94	211,208	140,286	351,494	0.60	0.40
1994~95	224,567	148,179	372,746	0.60	0.40
1995~96	240,162	160,991	401,153	0.60	0.40

Note: Gross operating surplus = total gross operating surplus - gross operating surplus of public enterprises

Total income = wages, salaries and supplements of private employees + gross operating surplus

Table A-3: Growth of Private Demand, Labour and Capital: Japan

Year	Y = private demand	$\Delta Y/Y$	L	$\Delta L/L$	K	$\Delta K/K$
	(¥ thousand million. At market prices of 1990)				(¥ thousand million. At market prices of 1990)	
1969	140,781.2		11,491,200		153,879.6	
1970	156,989.6	0.115	11,484,185	-0.001	185,791.3	0.207
1971	161,335.3	0.028	11,440,377	-0.004	215,671.0	0.161
1972	174,633.9	0.082	11,420,817	-0.002	246,913.6	0.145
1973	192,792.7	0.104	11,554,015	0.012	281,996.4	0.142
1974	189,995.3	-0.015	11,067,241	-0.042	309,443.1	0.097
1975	190,652.0	0.003	10,800,293	-0.024	334,014.4	0.079
1976	196,816.3	0.032	11,046,059	0.023	357,951.0	0.072
1977	202,771.3	0.030	11,191,631	0.013	379,852.9	0.061
1978	212,835.9	0.050	11,324,998	0.012	403,077.5	0.061
1979	228,037.4	0.071	11,502,336	0.016	428,225.8	0.062
1980	230,823.7	0.012	11,542,647	0.004	451,393.5	0.054
1981	234,463.6	0.016	11,589,169	0.004	473,620.3	0.049
1982	242,491.3	0.034	11,659,338	0.006	493,544.7	0.042
1983	247,210.8	0.019	11,852,489	0.017	510,472.6	0.034
1984	256,728.0	0.038	12,123,234	0.023	528,998.7	0.036
1985	270,275.3	0.053	12,046,871	-0.006	549,543.1	0.039
1986	280,265.5	0.037	12,062,940	0.001	571,168.2	0.039
1987	295,778.3	0.055	12,161,585	0.008	597,012.2	0.045
1988	320,366.6	0.083	12,312,930	0.012	629,939.8	0.055
1989	341,116.7	0.065	12,378,708	0.005	667,954.2	0.060
1990	360,036.1	0.055	12,379,100	0.000	711,215.0	0.065
1991	370,738.6	0.030	12,415,334	0.003	752,429.2	0.058
1992	367,426.9	-0.009	12,275,970	-0.011	784,334.1	0.042
1993	361,862.1	-0.015	11,955,574	-0.026	805,781.8	0.027
1994	363,558.0	0.005	11,916,973	-0.003	823,208.3	0.022
1995	371,703.7	0.022	11,967,438	0.004	832,352.9	0.011

Note: Private demand (Y) = GDP - public demand

Total net capital stock (K) = non-financial incorporated enterprises + financial institutions + private non-profit institutions serving households + households (including unincorporated enterprises)

Employed persons = all persons employed - government services

L = employed persons · monthly hours worked of regular workers · 12

Table A-4: Distribution Income of Labour and Capital (¥ thousand million): Japan

Year	Wages, salaries and supplements	Gross operating surplus	Total income = (1) + (2)	α = (1) ÷ (3)	β = (2) ÷ (3)
	(1)	(2)	(3)		
1969	30,399.6	19,233.7	49,633	0.61	0.39
1970	36,613.7	22,089.2	58,703	0.62	0.38
1971	43,245.4	21,119.6	64,365	0.67	0.33
1972	50,376.4	23,907.0	74,283	0.68	0.32
1973	62,990.5	28,265.0	91,256	0.69	0.31
1974	80,963.0	27,775.7	108,739	0.74	0.26
1975	94,679.3	26,799.9	121,479	0.78	0.22

1976	106,597.4	31,315.7	137,913	0.77	0.23
1977	118,351.5	33,925.2	152,277	0.78	0.22
1978	126,612.7	42,270.1	168,883	0.75	0.25
1979	137,207.6	45,462.2	182,670	0.75	0.25
1980	153,890.8	43,394.2	197,285	0.78	0.22
1981	167,380.8	42,972.6	210,353	0.80	0.20
1982	176,065.0	45,490.7	221,556	0.79	0.21
1983	185,718.4	46,584.6	232,303	0.80	0.20
1984	195,386.7	51,801.9	247,189	0.79	0.21
1985	204,246.5	58,397.4	262,644	0.78	0.22
1986	212,989.4	61,417.6	274,407	0.78	0.22
1987	218,219.4	65,924.2	284,144	0.77	0.23
1988	228,424.5	73,110.3	301,535	0.76	0.24
1989	246,260.8	71,080.7	317,342	0.78	0.22
1990	269,998.3	68,295.2	338,294	0.80	0.20
1991	291,757.6	70,181.7	361,939	0.81	0.19
1992	296,807.6	72,226.4	369,034	0.80	0.20
1993	300,487.2	71,168.3	371,656	0.81	0.19
1994	300,975.7	72,345.5	373,321	0.81	0.19
1995	304,701.1	70,454.2	375,155	0.81	0.19

Note: Gross operating surplus = entrepreneurial income (excluding public enterprises)

Total income = wages, salaries and supplements of private employees + gross operating surplus

Statistical appendix B

Statistical appendix B demonstrates the background statistics based on the estimation of Australia from 1947 to 1995. The characteristics of those data have already explained in chapter 4, then the following Tables only show the figures and their sources, but many Tables include estimated values expressed in red figures.

Table B-1: Male Population by Age (30th June)

Age	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
15	55,777	54,636	53,519	54,544	57,020	60,529	61,570	63,225	64,550	68,030
16	58,620	56,439	54,339	54,396	55,335	57,749	61,129	61,922	64,116	65,437
17	59,576	58,115	56,689	55,509	55,360	56,293	58,442	61,180	63,034	65,127
18	61,581	60,578	59,592	58,076	56,536	56,495	56,913	59,319	62,417	64,225
19	61,970	61,190	60,419	61,094	59,106	57,924	57,074	56,641	60,749	63,938
20	59,340	60,849	62,397	62,207	62,426	60,975	58,654	56,823	58,377	62,789
21	62,987	63,647	64,314	64,647	63,916	64,690	61,768	59,684	58,757	61,003
22	61,928	62,555	63,189	67,130	66,632	66,189	65,383	60,944	61,377	61,185
23	62,247	64,430	66,690	66,500	69,423	68,998	67,064	66,446	62,408	63,341
24	62,988	64,209	65,453	70,432	69,026	72,101	70,100	68,082	68,095	64,534
25	62,818	64,211	65,634	69,329	73,037	71,758	73,126	69,803	70,118	70,483
26	62,910	64,496	66,121	69,613	72,001	75,543	72,740	72,813	71,963	72,506
27	58,610	62,038	65,666	69,987	72,243	74,210	76,479	73,546	74,707	74,082
28	56,114	60,638	65,526	69,212	72,483	74,249	74,945	76,948	75,074	76,496
29	57,045	58,982	60,984	68,875	71,637	74,370	74,863	75,529	78,273	76,609
30	60,064	59,044	58,041	63,970	71,296	73,371	74,871	75,665	76,575	79,628
31	56,358	57,456	58,576	60,376	66,119	72,934	73,863	70,829	76,527	77,749
32	61,477	61,559	61,641	60,535	62,030	67,655	73,546	74,186	71,742	77,559
33	61,002	59,520	58,074	63,682	61,906	63,261	68,135	73,981	75,044	72,677
34	58,630	60,955	63,372	60,343	65,126	62,941	63,593	69,577	74,822	75,931
35	58,158	60,450	62,833	65,714	61,951	66,113	63,200	62,874	70,323	75,714
36	58,484	59,407	60,345	65,502	67,379	62,993	66,355	62,464	63,422	71,126
37	56,970	58,322	59,706	62,561	66,843	68,507	63,325	64,024	62,848	64,026
38	56,034	57,936	59,902	61,702	64,127	67,904	68,831	66,917	64,347	63,307
39	55,663	56,971	58,310	61,709	63,137	65,088	68,179	69,489	67,238	64,765
40	55,882	56,550	57,226	59,988	62,972	64,037	65,313	70,395	69,812	67,833
41	50,656	53,594	56,703	58,706	61,132	63,779	64,217	61,282	70,741	70,216
42	53,480	55,082	56,731	58,024	59,764	61,893	63,919	65,704	61,587	70,925
43	51,239	51,271	51,304	57,908	58,928	60,456	61,985	64,226	65,955	61,894
44	46,751	50,264	54,042	52,330	58,619	59,461	60,557	61,811	64,380	66,251
45	48,595	50,162	51,780	54,872	52,849	59,003	59,508	60,687	61,877	64,602
46	50,488	48,745	47,062	52,339	55,316	53,084	58,964	58,095	60,717	61,957
47	51,178	49,908	48,670	47,444	52,686	55,454	52,957	56,542	58,046	60,688
48	43,096	46,568	50,320	48,877	47,629	52,730	55,233	56,854	56,378	57,911
49	43,024	46,777	50,857	50,410	48,976	47,515	52,461	54,527	56,580	56,143
50	43,588	43,187	42,789	50,904	50,401	48,779	47,239	52,727	54,184	56,315
51	38,424	40,480	42,645	42,719	50,792	50,135	48,481	44,282	52,394	53,910
52	42,010	42,530	43,056	42,490	42,521	50,478	49,726	48,044	43,952	52,101
53	42,131	39,833	37,660	42,867	42,196	42,179	50,002	49,953	47,641	43,581
54	41,362	41,261	41,161	37,413	42,498	41,818	41,744	51,055	49,420	47,215
55	38,947	40,075	41,235	40,809	37,025	42,092	41,376	38,869	50,474	48,934
56	40,936	40,619	40,304	40,770	40,401	36,503	41,570	39,907	38,301	49,928

57	39,831	38,803	37,802	39,768	40,251	39,810	35,921	37,690	39,353	37,762
58	40,403	40,009	39,618	37,264	39,183	39,569	39,176	39,183	37,064	38,716
59	38,811	38,591	38,373	39,009	36,631	38,395	38,830	37,499	38,439	36,370
60	36,768	37,771	38,801	37,638	38,270	35,832	37,554	38,442	36,724	37,758
61	30,224	33,478	37,083	38,035	36,844	37,465	35,008	33,197	37,638	35,973
62	32,508	33,764	35,068	36,302	37,186	35,923	36,572	35,981	32,320	36,818
63	31,100	29,738	28,435	34,207	35,355	36,110	34,919	35,445	35,019	31,353
64	28,557	29,556	30,590	27,477	33,252	34,231	35,016	35,882	34,381	33,961

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
74,808	73,419	83,276	87,528	89,575	110,556	103,042	103,330	106,312	107,406	109,900
68,688	75,316	73,871	83,848	87,878	90,088	111,157	103,775	104,201	106,480	108,300
66,255	69,342	75,843	74,566	84,179	88,404	90,748	112,028	104,950	103,467	107,800
66,214	67,039	70,126	76,838	75,801	84,926	89,401	92,063	113,807	105,415	104,900
65,579	66,939	68,085	71,690	77,355	76,696	86,361	91,046	93,887	114,080	107,400
65,426	66,187	68,026	70,172	74,022	78,050	78,052	87,944	92,351	92,340	116,200
64,410	66,073	67,390	70,274	74,204	74,351	78,985	79,250	89,045	91,282	93,700
62,391	65,004	67,339	69,505	71,691	74,241	74,976	79,809	80,390	89,234	93,000
62,335	62,920	66,202	69,181	71,079	71,580	74,805	75,798	81,167	80,953	91,700
64,610	62,887	64,123	67,936	70,535	71,037	72,378	76,000	77,490	82,900	82,400
65,865	65,172	64,101	65,893	69,234	70,700	72,058	73,797	77,740	79,906	85,200
71,868	66,459	66,390	65,729	67,430	69,463	71,674	73,336	75,322	77,495	80,400
73,871	72,403	67,523	67,757	67,175	67,642	70,302	72,872	74,659	76,248	78,700
75,155	74,285	73,289	68,667	69,111	67,365	68,382	71,322	74,020	75,837	78,200
77,354	75,486	75,068	74,285	69,493	69,286	68,060	69,214	72,278	74,850	76,900
77,426	77,662	76,113	75,981	76,844	69,699	69,907	68,801	69,996	73,752	76,000
80,413	77,736	78,217	76,887	75,304	76,950	70,271	70,527	69,570	68,172	73,700
78,528	80,693	78,277	78,861	77,195	75,303	77,451	70,855	71,349	69,922	71,200
78,246	78,766	81,186	78,866	78,517	77,224	75,759	78,064	71,607	71,881	71,500
73,295	78,557	79,246	81,688	78,315	78,523	77,698	76,302	78,749	71,927	71,900
76,517	73,573	78,971	79,682	81,081	78,248	78,916	78,136	77,007	78,449	72,700
76,253	76,748	73,890	79,412	79,847	81,053	78,605	79,361	78,760	77,857	78,400
71,572	76,546	77,078	74,287	77,061	79,822	81,346	79,030	79,948	77,927	79,000
64,348	71,834	76,904	77,431	79,199	76,989	80,075	81,694	79,602	82,278	80,200
63,600	64,543	72,127	77,211	78,059	79,150	77,251	80,406	82,193	80,952	81,900
65,055	63,730	64,729	72,316	79,780	78,167	79,379	77,344	80,727	83,107	80,100
68,114	65,169	63,835	64,867	69,623	79,849	78,325	79,385	77,525	77,523	82,200
70,452	68,230	65,244	63,974	65,502	69,546	79,923	78,453	79,634	80,344	80,900
71,080	70,503	68,304	65,323	64,792	65,352	69,574	80,068	78,703	78,775	78,200
62,030	71,099	70,575	68,299	64,276	64,561	65,349	69,716	80,291	76,787	78,300
66,316	62,017	71,098	70,516	67,518	64,126	64,539	65,362	69,818	79,224	78,800
64,603	66,186	61,932	71,013	68,428	67,357	64,030	64,427	65,281	71,005	78,700
61,944	64,399	66,077	61,783	68,344	68,166	67,148	63,853	64,315	62,796	71,400
60,566	61,740	64,199	65,845	67,536	68,007	67,839	66,910	63,688	64,106	63,900
57,716	60,312	61,479	63,877	64,064	67,154	67,705	67,521	66,630	65,902	62,500
55,937	57,376	60,042	61,111	65,434	63,656	66,828	67,333	67,169	65,947	64,600
56,013	55,531	57,111	59,665	58,877	64,960	63,254	66,422	66,942	64,723	64,800
53,536	55,577	55,206	56,648	58,223	58,324	64,524	62,749	65,957	67,553	67,000
51,729	53,046	55,107	54,685	56,328	57,667	57,851	63,956	62,180	63,973	65,500
43,173	51,188	52,541	54,538	54,142	55,737	57,161	57,231	63,313	61,614	63,400
46,754	42,658	50,672	51,969	51,289	53,468	55,145	56,558	56,568	60,021	61,300
48,355	46,220	42,126	50,044	50,583	50,598	52,794	54,488	55,878	57,454	58,700
49,271	47,654	45,620	41,401	47,029	49,861	49,879	52,030	53,747	53,727	57,400

37,157	48,508	46,913	44,841	45,699	46,245	49,131	49,074	51,220	54,041	54,200
38,078	36,436	47,682	45,965	43,451	44,856	45,439	48,208	48,174	50,857	52,200
35,662	37,317	35,653	46,716	45,097	42,557	43,948	44,512	47,255	48,378	49,400
37,042	34,876	36,607	34,790	42,415	44,130	41,656	43,034	43,603	44,349	47,400
35,159	36,179	34,071	35,715	35,870	41,389	43,177	40,622	42,098	43,834	45,100
35,880	34,172	35,233	33,103	34,185	34,874	40,338	42,022	39,519	40,253	41,300
30,307	34,849	33,135	34,174	33,238	33,199	33,776	39,115	40,669	38,776	38,800

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
113,100	112,973	114,741	118,638	123,204	125,464	129,614	131,456	137,251	135,343	134,297
110,500	113,838	113,817	113,901	121,321	122,725	125,265	129,595	131,532	136,696	135,068
109,000	111,413	114,843	112,918	116,726	121,378	122,322	124,758	129,373	131,533	136,085
108,900	110,405	112,897	114,485	114,838	117,546	121,828	121,737	124,321	129,525	131,859
106,100	110,545	111,983	112,618	116,131	115,826	118,762	121,916	121,222	125,685	129,797
108,700	107,545	112,189	111,651	114,016	117,474	116,797	119,156	121,847	122,703	126,798
117,000	109,956	108,550	111,658	114,775	115,478	118,841	116,171	118,997	122,858	123,661
95,600	119,462	112,260	108,921	115,455	115,775	117,106	118,684	115,520	119,838	123,774
95,600	98,924	122,790	113,386	113,052	116,168	117,069	117,436	118,657	116,729	120,612
93,700	98,376	101,154	122,950	117,510	114,013	117,132	116,976	117,763	119,461	118,027
84,000	95,952	100,234	102,727	126,923	118,001	115,180	117,010	116,885	118,404	120,290
86,700	86,145	97,656	99,939	107,606	127,699	118,932	115,889	116,847	118,433	119,250
82,000	88,620	87,804	96,586	104,177	108,179	128,940	119,488	116,254	117,887	120,118
80,100	83,601	90,094	89,680	100,861	104,198	109,298	129,689	119,542	117,083	118,855
79,500	81,801	84,867	91,516	93,779	101,185	104,731	109,707	130,022	120,156	117,895
78,000	80,962	83,062	86,131	93,421	94,134	101,891	104,577	109,771	129,825	120,769
77,100	79,370	82,227	83,459	91,455	93,354	94,753	102,023	103,957	109,495	129,648
74,600	78,444	80,612	82,342	87,196	91,493	93,587	94,892	101,708	104,380	109,268
71,900	75,725	79,643	80,453	85,475	87,499	91,906	93,381	94,583	101,578	104,777
72,200	72,967	76,570	79,391	82,977	85,400	88,158	91,971	92,773	94,139	101,537
72,400	73,111	73,742	77,676	81,725	83,576	85,529	88,325	91,570	92,857	93,897
73,300	73,240	73,896	74,295	82,363	82,341	84,426	85,258	88,322	91,647	92,949
78,800	74,061	73,928	74,090	76,683	82,499	83,276	84,841	84,678	87,778	91,842
79,400	79,633	74,512	74,905	75,394	76,008	82,813	83,767	85,041	84,960	87,213
80,600	80,142	80,090	75,982	77,042	75,607	75,608	82,797	84,006	84,428	85,255
82,200	81,169	80,578	81,361	77,724	77,075	76,075	74,965	82,599	82,995	83,876
80,400	82,791	81,430	80,696	85,141	77,346	77,307	76,279	74,038	81,869	82,149
82,400	80,734	82,955	82,511	81,056	84,644	77,022	77,267	76,240	74,064	81,182
80,900	82,589	80,676	83,083	84,015	81,294	84,217	76,519	77,005	75,735	74,231
78,400	81,089	82,612	80,788	85,004	83,298	81,668	83,576	75,862	76,460	75,263
78,300	78,431	81,024	81,891	81,046	84,747	82,724	81,764	82,850	75,750	75,799
78,700	78,278	78,263	80,802	86,306	81,568	84,472	81,876	81,779	82,582	75,589
78,400	78,520	78,034	77,602	80,888	86,209	82,044	83,977	80,854	80,885	82,220
71,200	78,234	78,152	77,663	80,288	79,897	86,135	82,372	83,357	80,629	79,949
63,600	70,958	77,725	77,753	79,279	79,958	78,937	85,795	82,472	82,737	80,404
62,200	63,390	70,384	77,168	78,991	78,886	79,616	77,784	85,381	81,478	82,044
64,200	61,829	62,906	69,699	79,780	78,304	78,491	79,216	76,575	83,861	80,492
64,300	63,783	61,400	61,658	69,403	78,538	77,606	77,948	78,629	76,487	82,421
66,400	63,789	63,149	60,846	62,467	69,179	77,235	76,646	77,244	77,620	76,431
64,900	65,640	63,031	62,070	61,945	61,698	69,039	75,811	75,671	76,243	76,594
62,700	64,135	64,803	60,132	63,058	61,526	60,990	68,741	74,247	74,755	75,210
60,600	61,913	63,291	62,907	60,991	62,485	61,164	60,078	68,315	73,252	73,801
57,900	59,778	60,993	61,698	63,052	60,462	61,946	60,527	59,110	66,946	72,305

56,400	56,888	58,797	59,478	62,163	61,802	59,934	61,188	59,819	58,210	65,680
53,100	55,334	55,788	56,249	59,546	61,306	60,513	59,233	60,365	58,450	57,258
51,100	52,022	54,031	53,347	56,578	58,330	60,385	59,049	58,432	59,046	57,120
48,300	49,978	50,806	51,017	55,086	55,710	57,081	59,372	57,576	57,503	57,850
46,300	47,213	48,667	48,864	50,039	53,906	54,799	55,659	58,340	56,772	56,569
43,900	45,022	45,820	45,860	48,861	49,046	52,624	53,730	54,234	56,981	55,849
39,900	42,519	43,596	44,152	46,121	47,400	47,980	51,220	52,559	52,888	55,642

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
132,834	128,084	126,968	128,978	130,981	136,837	138,450	148,503	146,926	140,969	136,892
134,434	132,827	129,114	127,725	129,260	131,368	137,114	139,242	149,078	147,866	142,030
134,883	134,736	133,197	130,039	128,245	129,318	132,021	137,636	140,106	149,863	149,281
135,872	134,991	135,667	134,199	130,773	128,749	129,700	132,824	137,906	141,153	151,034
132,485	135,887	135,833	137,165	135,254	131,584	129,692	130,346	133,744	138,543	142,911
130,443	133,031	136,447	137,600	137,822	135,634	132,184	130,460	131,312	134,651	139,359
127,909	130,645	133,949	138,186	138,208	137,888	136,062	132,623	131,499	132,431	135,618
124,615	128,728	131,430	135,237	138,979	138,626	138,550	137,023	133,327	132,616	133,364
124,760	125,753	130,469	133,101	135,428	139,284	139,538	139,442	138,140	134,130	133,829
121,565	125,887	127,544	131,837	133,644	135,399	140,215	140,874	140,174	139,305	135,039
119,372	122,475	127,727	128,865	132,083	134,018	135,952	141,572	141,636	141,117	140,818
121,212	120,889	124,185	129,517	129,422	132,240	135,178	137,149	143,094	142,843	142,301
119,966	122,382	123,235	125,029	130,348	129,752	132,992	136,711	138,670	145,134	144,150
121,738	121,216	124,215	124,350	124,918	131,092	130,702	134,266	137,364	140,958	147,316
119,547	123,591	123,048	125,425	124,659	124,590	132,235	132,059	135,229	138,437	143,156
118,322	120,706	126,094	124,119	125,864	124,436	124,728	133,760	133,063	136,609	139,600
121,245	119,191	122,512	127,200	124,277	125,932	124,659	125,206	134,664	134,401	137,969
129,364	121,900	120,648	124,122	127,498	124,096	126,296	125,106	126,753	135,858	135,743
108,803	129,291	123,091	121,949	124,786	127,378	124,169	126,927	126,546	128,580	137,288
105,088	108,747	129,908	124,799	122,577	125,006	127,597	124,696	127,739	128,264	130,675
101,368	105,264	109,097	131,878	125,683	122,609	125,646	128,004	125,736	128,835	129,872
93,335	101,352	106,590	110,890	133,165	126,209	122,985	126,520	129,123	127,101	129,981
92,936	93,018	101,706	107,108	112,175	133,987	126,664	123,571	127,182	130,660	128,458
92,015	93,112	93,041	103,022	107,086	113,208	135,043	127,457	124,992	127,940	131,943
86,696	92,220	93,744	94,346	103,907	106,756	114,282	136,194	128,260	126,439	128,782
85,422	86,255	92,801	94,297	95,262	104,529	106,589	115,556	135,359	129,174	128,141
83,176	85,820	86,182	93,353	94,528	95,772	105,192	106,449	116,184	134,828	130,160
81,172	82,602	86,475	87,080	93,474	94,489	96,376	106,098	107,584	116,885	134,118
80,410	80,257	82,221	86,541	87,619	93,335	94,651	97,104	106,368	108,553	117,603
74,303	79,727	79,503	82,775	86,224	87,906	93,226	94,910	96,833	106,706	109,682
74,754	74,430	79,265	80,439	83,015	85,749	88,291	93,353	95,315	96,645	107,073
75,187	74,211	74,730	79,925	81,102	83,059	85,318	88,722	93,503	95,676	96,422
75,412	74,606	73,858	74,613	80,364	81,621	83,142	85,041	88,735	93,732	95,991
81,854	75,336	74,167	74,215	74,317	80,806	82,216	83,354	85,561	88,816	93,966
79,038	81,525	75,310	74,315	74,311	73,926	81,199	82,711	83,551	86,109	88,838
80,186	78,139	81,134	75,123	74,329	74,324	73,618	81,571	82,416	83,771	86,624
81,358	80,019	77,256	80,719	74,785	74,266	74,406	73,177	81,002	82,187	83,915
79,415	80,700	79,849	77,429	80,121	74,400	74,226	74,492	73,529	80,486	81,886
80,855	78,331	80,063	79,357	77,422	79,494	73,967	74,201	74,268	73,451	79,881
76,300	79,317	77,247	79,646	78,693	77,439	78,784	73,558	73,676	73,999	73,624
75,570	76,188	77,794	77,061	79,074	78,048	77,423	78,068	73,257	73,185	73,713
74,176	74,601	76,118	77,599	76,726	78,453	77,475	77,477	77,564	72,974	72,637
72,728	73,170	73,533	75,150	77,321	76,299	77,768	76,737	76,881	77,045	72,649
71,217	71,691	72,074	72,947	74,083	76,902	75,803	77,126	76,251	76,298	76,524

64,244	70,212	70,618	71,369	72,276	72,816	76,618	75,426	76,418	75,799	75,638
56,246	62,822	69,162	70,088	70,543	71,573	71,603	76,196	74,722	75,590	75,280
55,734	55,278	61,378	68,390	69,431	69,722	70,947	70,320	75,314	74,009	74,829
56,590	54,353	54,339	60,652	67,488	68,723	68,792	70,226	69,607	74,365	73,238
55,507	55,304	52,927	53,368	59,741	66,569	67,843	67,829	69,317	68,826	73,376
54,906	54,531	54,041	51,957	52,261	58,885	65,501	67,028	66,436	68,340	68,001

1990	1991	1992	1993	1994	1995
133,435	130,302	128,923	128,016	128,389	128,576
137,988	134,460	130,945	129,477	128,588	128,146
143,013	138,828	135,254	131,552	130,185	129,507
150,469	143,609	139,573	135,860	132,328	130,597
152,521	151,574	144,649	140,504	136,872	135,091
144,162	153,276	152,468	145,447	141,514	139,588
139,630	144,650	153,739	152,989	146,070	142,729
136,182	139,358	144,832	153,988	153,467	153,207
133,961	135,961	139,137	144,853	154,234	159,150
134,588	133,879	135,821	139,014	145,128	148,285
135,668	134,802	133,888	135,669	139,327	141,193
142,069	135,732	134,799	133,732	135,877	136,962
143,390	142,552	135,912	134,817	133,939	133,502
145,269	143,811	143,055	136,139	135,353	134,962
149,434	145,831	144,368	143,244	136,493	133,238
145,030	150,817	146,569	144,562	143,759	143,359
140,168	146,198	151,449	146,747	145,040	144,194
139,066	140,113	146,658	151,399	146,921	144,732
136,718	139,440	140,605	146,616	151,646	154,225
138,171	137,216	139,874	140,674	146,772	149,919
132,262	138,601	137,739	139,908	140,964	141,495
131,214	133,269	139,069	137,723	139,977	141,118
130,488	131,829	133,624	138,947	137,805	137,238
129,326	130,704	131,961	133,516	139,017	141,852
133,002	129,825	131,006	131,906	133,487	134,285
129,243	133,659	130,220	130,962	131,943	132,436
129,387	129,227	134,010	130,161	131,012	131,440
130,710	130,034	129,292	133,955	130,147	128,284
133,088	130,677	130,157	129,139	133,946	136,416
118,033	131,541	130,665	130,174	129,102	128,569
110,532	118,028	131,531	130,481	130,112	129,928
107,020	110,939	117,869	131,296	130,287	129,785
95,962	106,530	110,803	117,584	131,081	138,400
96,054	95,189	106,260	110,539	117,313	120,854
93,910	95,812	95,034	105,989	110,374	112,634
88,748	93,601	95,630	94,719	105,760	111,754
87,040	88,348	93,228	95,293	94,494	94,097
83,907	87,242	88,005	92,815	94,952	96,039
81,409	83,818	86,837	87,588	92,517	95,085
79,158	80,753	83,312	86,465	87,203	87,574
73,648	78,211	80,305	82,790	85,969	87,604
73,388	73,471	77,680	79,813	82,321	83,604
71,954	72,867	72,879	77,180	79,312	80,400
72,160	71,128	72,247	72,346	76,557	78,754
75,779	71,625	70,369	71,733	71,703	71,688

74,829	74,917	70,760	69,704	70,915	71,528
74,592	73,906	74,008	70,025	68,827	68,236
73,865	73,826	72,881	73,130	69,047	67,092
72,342	72,838	72,645	71,880	72,033	72,110
72,187	71,292	71,571	71,618	70,647	70,166

Sources: Australian Bureau of Statistics, Australian Demography, Bulletin, Various Years.
 Australian Bureau of Statistics, Estimated Resident Population by Sex and Age
 States and Territories of Australia, Various Years.

Table B-2: Female Population by Age (30th June)

Age	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
15	53,594	52,531	51,490	53,083	55,017	58,437	58,740	61,252	61,659	65,234
16	57,167	54,533	52,021	52,105	53,640	55,439	58,787	58,954	61,799	62,283
17	57,587	55,850	54,166	52,770	52,655	54,055	55,762	58,413	59,496	62,448
18	59,610	58,671	57,746	54,984	53,339	53,018	54,390	56,291	59,032	60,178
19	61,184	59,650	58,155	58,560	55,615	53,704	53,368	54,574	57,031	59,823
20	59,917	60,102	60,287	59,186	59,329	56,049	54,067	53,801	55,387	57,958
21	61,697	61,863	62,030	61,502	60,118	59,791	56,458	54,938	54,587	56,386
22	62,000	61,452	60,909	63,470	62,562	60,618	60,216	55,743	55,790	55,627
23	61,775	62,306	62,842	62,756	64,635	63,163	61,038	61,337	56,722	56,886
24	63,075	63,189	63,304	65,048	64,030	65,317	63,670	62,368	62,353	57,921
25	63,678	63,420	63,164	65,645	66,552	64,805	65,894	63,978	63,365	63,572
26	63,548	63,985	64,425	65,580	67,285	67,408	65,446	66,257	64,957	64,481
27	58,840	61,801	64,910	66,670	67,184	68,163	68,094	66,496	67,273	65,986
28	57,146	60,867	64,831	66,823	68,226	68,082	68,743	69,840	67,483	68,222
29	57,677	58,877	60,101	66,632	68,337	69,139	68,600	69,607	70,793	68,404
30	61,955	60,027	58,159	61,693	68,137	69,225	69,662	70,567	70,517	71,669
31	56,420	57,462	58,524	59,147	63,004	69,061	69,750	67,021	71,404	71,355
32	62,442	62,565	62,689	59,518	60,440	63,908	69,606	70,743	67,872	72,216
33	61,516	59,329	57,219	63,605	60,426	61,178	64,362	69,542	71,553	68,625
34	58,234	60,737	63,348	58,188	64,503	61,058	61,536	65,732	70,343	72,298
35	58,031	60,193	62,436	64,416	59,132	65,137	61,345	61,702	66,395	71,113
36	56,469	57,800	59,163	63,495	65,396	59,811	65,449	61,849	62,136	67,081
37	54,458	56,643	58,915	60,177	64,446	66,099	60,214	62,774	62,234	62,585
38	54,256	55,766	57,319	59,870	61,050	65,110	66,478	64,770	63,123	62,526
39	52,423	53,818	55,250	58,212	60,676	61,611	65,453	66,260	65,138	63,425
40	52,704	53,814	54,947	56,084	58,930	61,135	61,855	69,050	66,604	65,488
41	45,526	49,133	53,025	55,581	56,702	59,339	61,305	57,126	69,355	66,977
42	49,768	51,472	53,234	53,590	56,111	57,099	59,554	62,485	57,373	69,710
43	47,021	46,487	45,959	53,797	54,053	56,474	57,265	59,516	62,675	57,688
44	43,265	46,533	50,047	46,421	54,225	54,367	56,574	56,833	59,704	62,917
45	45,313	46,300	47,308	50,426	46,756	54,468	54,446	55,750	56,980	59,853
46	47,693	45,575	43,551	47,637	50,683	46,942	54,519	53,353	55,843	57,120
47	49,976	47,669	45,469	43,840	47,842	50,790	46,938	50,943	53,399	55,965
48	43,122	45,361	47,717	45,704	43,954	47,885	50,739	51,439	50,912	53,468
49	43,243	46,458	49,911	47,881	45,759	43,959	47,808	48,739	51,380	50,893
50	46,624	44,793	43,033	50,010	47,881	45,739	43,829	49,374	48,648	51,278
51	39,257	41,137	43,106	43,192	50,006	47,804	45,599	40,413	49,236	48,575
52	44,150	45,238	46,352	43,165	43,214	49,881	47,619	44,884	40,308	49,176
53	44,266	41,472	38,855	46,232	43,146	43,077	49,661	47,708	44,700	40,206
54	43,176	43,416	43,658	38,709	46,122	43,000	42,856	50,761	47,438	44,562
55	39,940	41,789	43,723	43,468	38,557	45,976	42,767	39,048	50,503	47,258
56	41,174	41,862	42,561	43,501	43,322	38,315	45,741	41,479	38,798	50,300

57	39,537	39,416	39,295	42,305	43,296	43,003	38,055	39,705	41,215	38,616
58	39,793	40,130	40,469	38,995	42,037	42,993	42,654	43,441	39,362	41,014
59	38,077	38,396	38,717	40,138	38,701	41,699	42,585	40,449	43,023	39,062
60	39,312	39,119	38,927	38,338	39,753	38,342	41,260	44,855	40,027	42,648
61	30,135	33,474	37,183	38,517	37,958	39,374	37,887	35,982	44,464	39,630
62	33,309	35,776	38,425	36,733	38,149	37,505	38,913	39,780	35,531	44,042
63	32,346	30,708	29,152	37,877	36,234	37,635	36,934	39,651	39,242	35,036
64	29,450	30,794	32,199	28,628	37,339	35,688	36,978	38,427	39,079	38,666

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
71,350	70,276	80,240	83,588	84,613	104,714	97,982	98,611	101,223	102,934	104,800
65,761	71,783	70,652	80,646	84,207	84,995	105,132	98,509	99,283	101,299	103,800
62,892	66,242	72,261	71,141	80,278	84,662	85,456	105,772	99,226	98,691	103,000
63,245	63,568	67,032	72,936	72,165	80,994	85,419	86,466	107,114	99,947	99,600
61,209	64,137	64,629	67,993	72,856	73,176	82,150	86,792	88,107	108,507	102,000
60,959	62,234	65,308	65,743	69,158	74,009	74,368	83,545	88,085	88,331	110,100
59,148	62,083	63,483	66,353	67,872	70,165	74,878	75,420	84,503	88,778	89,600
57,656	60,390	63,393	64,518	67,136	68,942	70,885	75,700	76,163	85,215	89,400
56,922	58,943	61,726	64,474	65,990	68,295	69,892	71,794	76,632	76,860	87,300
58,208	58,182	60,238	62,780	65,768	67,032	69,347	71,001	72,901	78,048	77,100
59,276	59,405	59,406	61,237	64,330	66,734	68,018	70,523	72,071	74,404	78,800
64,889	60,352	60,510	60,383	62,691	65,282	67,620	69,156	71,601	72,883	74,900
65,674	65,955	61,347	61,416	61,090	63,539	66,059	68,658	70,230	72,537	73,100
67,045	66,682	66,890	62,189	62,784	61,802	64,294	66,939	69,647	71,564	74,200
69,227	67,937	67,608	67,712	62,716	63,494	62,511	65,213	67,876	70,341	72,600
69,327	70,026	68,768	68,388	70,834	63,446	64,134	63,403	66,029	69,326	72,000
72,500	70,071	70,797	69,509	68,360	71,433	64,046	64,928	64,268	64,072	69,100
72,158	73,276	70,842	71,454	70,030	68,854	72,050	64,805	65,807	65,567	67,500
73,021	72,854	74,013	71,411	71,297	70,460	69,439	72,773	65,610	66,426	66,100
69,413	73,656	73,558	74,543	71,304	71,703	70,980	70,108	73,569	66,309	66,800
73,008	70,035	74,252	74,106	75,040	71,672	72,200	71,566	70,833	72,608	67,000
71,738	73,583	70,546	74,794	75,400	75,362	72,081	72,752	72,200	72,198	73,100
67,633	72,259	74,082	71,048	72,463	75,672	75,735	72,560	73,344	71,924	73,000
63,011	68,067	72,741	74,487	75,895	72,715	76,021	76,099	73,120	75,887	73,600
62,860	63,319	68,451	73,083	73,839	76,119	73,020	76,388	76,579	74,482	75,300
63,747	63,093	63,539	68,735	77,997	74,138	76,340	73,383	76,725	77,874	74,600
65,781	63,980	63,262	63,743	65,140	78,233	74,293	76,648	73,694	72,902	76,200
67,261	66,001	64,140	63,389	64,917	65,259	78,386	74,539	76,956	76,720	77,100
69,988	67,443	66,159	64,164	63,453	64,974	65,371	78,570	74,768	75,814	74,700
57,905	70,110	67,596	66,175	63,087	63,424	65,043	65,498	78,834	73,905	76,000
63,071	57,990	70,241	67,604	65,379	63,013	63,451	65,104	65,716	75,615	75,200
59,951	63,153	58,080	70,214	66,820	65,366	63,030	63,462	65,173	68,894	75,700
57,225	59,983	63,182	58,040	65,468	66,742	65,344	62,961	63,442	61,935	68,700
56,031	57,229	59,975	63,068	64,110	65,328	66,624	65,243	62,915	63,984	63,500
53,439	56,028	57,177	59,818	60,123	64,005	65,179	66,487	65,102	64,211	62,900
50,821	53,401	55,910	57,062	63,642	60,038	63,898	64,993	66,277	65,401	64,500
51,209	50,758	53,293	55,783	53,324	63,489	59,900	63,712	64,882	63,033	63,800
48,518	51,081	50,674	53,130	54,494	53,145	63,297	59,722	63,643	66,974	66,900
49,100	48,395	50,943	50,474	52,590	54,297	52,947	63,103	59,568	62,022	65,600
40,136	48,953	48,239	50,707	51,006	52,388	54,070	52,755	62,887	60,394	62,200
44,491	39,918	48,815	48,044	47,666	50,770	52,162	53,934	52,538	57,533	59,900
47,098	44,294	39,761	48,574	47,257	47,422	50,547	51,969	53,678	55,711	57,100
50,085	46,893	44,054	39,439	43,892	47,039	47,210	50,253	51,698	51,915	55,000

38,409	49,780	46,619	43,704	44,190	43,665	46,821	46,941	49,998	52,686	52,600
40,781	38,076	49,513	46,166	42,292	43,897	43,407	46,531	46,626	49,071	51,900
38,754	40,454	37,791	49,052	48,625	41,963	43,645	42,999	46,178	48,946	48,800
42,354	38,376	40,139	37,400	43,845	48,164	41,707	43,252	42,690	43,688	46,300
39,333	41,910	38,013	39,708	39,342	43,353	47,728	41,328	42,917	44,518	45,500
43,586	38,817	41,460	37,493	39,659	38,921	42,760	47,174	40,866	42,213	41,900
34,457	42,993	38,326	40,826	38,588	39,196	38,404	42,138	46,590	40,394	41,900

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
108,400	108,170	110,100	111,590	117,466	120,765	124,070	124,961	128,816	128,538	127,412
105,300	109,108	108,926	110,196	115,352	117,542	120,928	124,140	125,199	129,182	129,188
104,400	106,025	109,847	109,037	113,664	115,586	117,749	120,997	124,091	125,796	129,524
104,000	105,572	107,305	110,377	111,821	114,561	116,225	117,736	121,166	124,795	126,734
101,100	105,675	107,263	108,336	113,270	113,093	115,908	116,414	117,806	122,428	125,816
103,500	102,884	107,248	108,092	110,201	114,474	114,608	116,432	116,370	118,894	123,525
111,300	105,106	104,029	107,665	110,503	111,168	115,881	115,034	116,614	117,490	120,043
90,500	112,596	106,186	104,423	111,330	111,421	112,654	116,704	115,398	117,201	118,591
90,400	91,738	113,760	106,688	109,454	112,122	113,049	113,964	117,234	116,219	118,084
88,500	91,857	93,017	114,511	112,208	110,178	113,552	114,295	114,958	117,820	117,000
78,200	90,100	93,136	96,339	120,000	113,338	111,642	114,611	115,343	115,727	118,665
79,900	79,839	91,451	95,380	100,044	120,796	114,976	112,533	115,337	116,873	116,708
75,900	81,461	81,193	91,356	98,217	100,480	122,005	116,167	113,069	115,832	118,477
74,200	77,313	82,752	84,391	95,116	97,909	101,321	122,750	116,892	114,227	116,372
75,100	75,385	78,543	84,513	87,412	95,910	97,854	101,678	123,097	117,246	115,144
73,400	76,266	76,535	80,171	86,820	87,789	96,915	97,560	101,582	123,604	117,542
72,700	74,543	77,378	77,960	84,421	87,063	88,443	97,608	96,963	102,181	124,085
69,700	73,600	75,697	78,866	80,143	84,668	87,512	88,791	97,881	98,327	102,772
68,100	70,695	74,594	76,209	80,939	80,992	85,192	87,699	88,659	97,996	99,621
66,700	69,065	71,532	75,851	78,499	80,743	82,075	85,439	87,510	88,675	97,956
67,400	67,598	69,820	73,619	77,398	79,471	80,635	82,955	85,357	87,800	88,880
67,400	68,211	68,305	70,834	77,797	77,748	80,570	80,429	83,465	86,001	88,212
73,500	68,192	68,819	69,694	73,100	78,130	78,274	81,479	79,833	82,975	86,632
73,400	74,166	68,795	70,826	70,793	72,416	78,703	78,583	82,159	80,478	82,338
74,000	73,948	74,685	71,015	72,446	71,198	71,883	79,044	78,783	81,411	81,162
75,500	74,443	74,386	76,520	72,388	72,218	71,715	71,158	79,152	78,116	80,782
74,800	75,949	74,792	74,091	80,089	71,956	72,103	72,049	70,297	78,487	77,485
76,400	75,132	76,130	76,841	74,226	79,621	71,569	71,900	72,262	70,514	77,751
77,200	76,635	75,234	77,045	77,907	74,779	79,182	71,047	71,510	71,721	70,763
74,800	77,326	76,706	75,679	78,763	77,196	75,458	78,594	70,373	71,379	71,091
76,200	74,945	77,323	76,984	76,422	78,676	76,578	75,981	77,827	70,459	71,167
75,400	76,151	74,833	77,816	80,370	76,551	78,635	75,837	76,357	78,078	70,537
75,700	75,357	76,079	74,601	78,652	80,576	76,750	78,518	74,970	75,673	78,328
68,500	75,675	75,303	75,587	76,687	77,569	80,926	76,835	78,240	75,147	75,070
63,300	68,490	75,440	74,725	77,192	76,717	76,551	81,126	76,799	77,854	75,398
62,600	63,232	68,201	75,065	76,466	76,869	76,874	75,365	81,209	76,418	77,405
64,300	62,421	62,945	68,013	78,600	76,292	76,524	76,769	74,069	80,156	75,981
63,700	64,119	62,128	62,300	67,579	77,372	76,157	76,023	76,709	74,358	79,142
66,600	63,432	63,920	61,705	63,544	68,092	76,133	75,828	75,538	75,896	74,733
65,300	66,288	63,079	62,212	63,290	63,007	68,687	74,833	75,419	75,065	75,160
61,900	65,105	65,871	61,438	63,685	63,088	62,547	69,108	73,402	74,910	74,589
59,600	61,552	64,741	63,269	63,173	63,332	62,901	61,917	69,450	73,756	74,460
56,800	59,298	61,085	62,430	63,969	63,460	62,943	62,622	61,295	68,590	74,224
54,600	56,449	58,940	59,056	63,226	63,232	63,738	62,464	62,246	61,119	67,832

52,200	54,227	55,857	56,778	60,868	63,236	62,494	63,846	61,919	61,697	60,953
51,600	51,787	53,592	55,249	58,086	60,572	63,271	61,585	63,933	61,595	61,209
48,300	51,162	51,222	54,416	60,664	57,990	60,301	63,190	60,751	63,180	61,313
45,800	47,846	50,425	51,396	52,396	59,783	57,801	59,893	63,151	60,593	62,437
45,000	45,260	47,162	49,341	52,349	52,285	58,836	57,528	59,478	62,217	60,427
41,500	44,460	44,585	46,702	50,690	51,352	52,177	57,692	57,228	58,603	61,187

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
126,402	122,435	121,554	122,974	125,044	130,938	132,116	142,521	140,568	134,008	129,695
128,173	126,952	123,633	122,345	123,237	125,339	131,230	132,968	143,249	141,371	134,993
129,849	129,148	127,808	124,588	122,870	123,503	125,877	131,566	134,092	144,315	142,693
130,433	130,984	130,698	128,866	125,424	123,429	123,964	126,689	132,428	135,649	145,833
128,194	131,513	132,573	132,115	129,793	126,344	124,542	124,927	128,170	133,937	137,810
126,779	129,322	132,797	134,011	132,804	130,300	127,296	125,718	126,522	129,652	135,479
124,319	127,473	130,646	134,190	134,455	133,061	131,004	128,270	127,419	128,019	131,033
121,026	125,117	128,438	131,691	134,752	134,527	133,607	131,769	129,526	128,838	129,253
119,764	122,078	126,314	129,740	132,027	135,025	135,075	134,332	133,382	130,878	130,486
118,822	121,114	123,832	127,808	130,319	132,187	135,920	136,198	135,902	135,299	132,436
117,945	119,985	123,190	125,681	128,574	130,840	132,982	137,619	137,798	137,857	137,367
119,559	119,004	121,758	125,396	126,668	129,217	131,874	134,232	140,196	139,888	140,096
117,428	120,606	120,580	123,140	126,628	127,249	130,247	133,303	136,256	143,033	141,938
119,809	118,416	122,201	122,375	123,790	127,624	128,419	131,696	134,787	138,701	145,846
116,721	121,345	119,843	123,857	123,318	124,182	128,926	129,860	133,373	136,638	141,127
115,968	117,184	123,307	121,328	124,766	124,018	124,830	130,558	131,347	135,314	138,375
117,574	117,114	118,208	124,816	122,180	125,282	124,938	125,695	132,156	133,076	137,165
124,217	117,961	118,754	119,956	125,459	122,684	126,090	126,014	127,404	133,981	134,703
103,175	124,654	118,867	119,901	121,243	125,746	123,193	127,186	127,420	129,414	135,773
100,659	103,737	125,553	120,384	120,325	122,181	126,155	124,059	128,129	129,012	131,362
97,767	101,926	104,748	126,925	121,262	120,442	123,199	126,828	125,063	129,246	130,603
88,842	97,767	103,538	106,080	127,745	121,689	120,746	124,329	128,295	126,254	130,263
88,406	88,922	97,976	103,440	106,849	128,207	122,365	121,082	124,867	129,918	127,320
87,178	88,753	89,309	99,246	103,114	107,317	128,757	123,090	122,311	125,370	131,465
81,644	87,837	89,323	90,308	100,121	102,318	107,949	129,617	123,734	123,688	126,063
81,648	81,089	88,689	89,711	90,957	100,752	101,733	108,737	129,135	124,566	125,184
80,004	82,253	80,737	88,846	89,660	91,413	101,409	101,288	109,802	128,608	125,330
76,769	79,300	82,980	81,471	88,586	89,540	92,009	102,216	102,552	110,901	128,312
77,046	76,142	78,647	82,782	81,876	88,259	89,450	92,604	102,128	103,807	112,007
71,027	76,391	75,570	78,947	82,333	82,213	87,882	89,370	92,254	102,133	105,085
70,547	71,300	75,830	76,318	79,108	81,812	82,588	87,616	89,663	91,959	102,059
70,906	69,995	71,699	76,398	76,819	79,068	81,447	83,037	88,116	89,986	91,690
70,567	70,727	69,495	71,400	76,858	77,231	79,088	81,016	83,024	88,461	90,252
78,512	70,631	70,569	69,926	70,967	77,250	77,703	79,229	81,411	83,046	88,864
74,368	78,767	70,741	70,773	70,212	70,545	77,666	78,193	79,511	81,799	83,055
75,574	73,734	79,029	70,688	70,893	70,486	70,176	78,063	78,237	79,761	82,240
76,923	75,787	73,161	78,323	70,423	70,943	70,828	69,733	77,750	78,314	80,060
75,529	76,467	76,028	73,421	77,542	70,209	71,065	71,131	70,207	77,509	78,344
77,987	75,109	76,091	75,514	73,538	76,736	69,980	71,137	71,067	70,757	77,231
75,001	76,933	74,751	75,887	74,865	73,660	75,993	69,788	70,802	71,041	71,302
74,317	75,363	75,880	74,695	75,573	74,249	73,766	75,299	69,890	70,536	71,017
74,101	73,528	75,687	76,357	74,500	75,301	73,697	73,826	75,618	69,933	70,274
73,943	73,666	72,725	75,015	76,758	74,264	74,970	73,056	73,651	75,972	70,122
74,571	73,456	73,202	72,943	74,259	77,105	74,043	74,654	73,330	73,495	76,302
66,964	74,969	72,962	73,126	73,090	73,505	77,461	73,867	74,721	73,593	73,277

60,736	66,198	75,412	72,764	73,000	73,270	72,805	77,897	73,785	74,790	73,817
60,635	60,586	65,486	74,885	72,585	72,964	73,348	72,000	77,556	73,712	74,819
60,930	60,138	60,471	65,258	74,218	72,311	72,971	73,456	71,980	77,108	73,501
61,570	60,655	59,647	59,748	64,887	73,454	71,995	72,805	72,991	71,904	76,682
60,171	60,846	60,280	59,042	58,866	64,510	72,740	71,676	72,004	72,551	71,782

1990	1991	1992	1993	1994	1995
127,006	123,737	121,607	121,348	121,436	121,480
130,768	128,043	124,333	122,142	121,880	121,749
135,923	131,824	128,774	124,869	122,799	121,777
143,813	136,676	132,567	129,435	125,631	123,771
147,467	145,021	137,972	133,771	130,922	129,520
139,502	148,612	146,198	139,004	135,171	133,294
136,342	140,684	149,286	146,960	139,909	136,511
131,899	136,633	140,995	149,487	147,419	146,396
130,339	132,445	136,763	141,137	149,778	154,295
131,755	131,266	132,727	136,922	141,743	144,217
134,022	133,043	131,880	133,169	137,742	140,087
139,153	135,274	133,874	132,282	133,976	134,831
141,827	140,766	136,269	134,435	133,133	132,487
143,493	143,063	141,922	136,933	135,201	134,343
148,282	144,789	144,273	142,584	137,762	135,413
143,092	150,468	145,971	144,826	143,259	142,482
139,684	144,560	151,373	146,444	145,527	145,071
138,588	140,526	145,392	151,722	146,853	144,477
135,912	139,589	141,278	145,666	152,200	155,576
137,173	136,808	140,395	141,531	146,143	148,505
132,928	138,108	137,654	140,727	142,000	142,641
131,837	133,901	138,715	137,844	141,129	142,801
130,816	132,577	134,574	138,884	138,093	137,699
128,182	130,987	133,069	134,670	139,114	141,391
132,715	128,586	131,400	133,175	134,883	135,745
126,266	133,555	128,939	131,432	133,298	134,241
126,253	126,248	133,810	129,035	131,608	132,914
125,745	126,972	126,566	133,787	129,076	126,783
127,538	125,893	127,081	126,635	133,823	137,569
112,953	126,465	126,074	127,048	126,663	126,471
106,138	113,571	126,548	126,029	127,050	127,564
101,795	106,942	113,565	126,370	125,943	125,730
91,139	101,356	106,885	113,428	126,285	133,250
90,419	90,392	101,232	106,751	113,322	116,758
89,150	90,386	90,302	101,047	106,592	109,478
82,939	89,327	90,274	90,132	100,953	106,841
82,552	82,616	89,203	90,084	90,006	89,967
80,211	82,807	82,431	89,006	89,932	90,399
78,337	80,227	82,566	82,241	88,800	92,273
76,841	78,195	80,010	82,364	82,077	81,934
71,758	76,361	78,013	79,820	82,191	83,403
70,911	72,143	76,131	77,744	79,631	80,592
69,838	70,717	71,905	75,911	77,515	78,330
70,178	69,326	70,424	71,630	75,622	77,701
76,452	70,101	68,996	70,146	71,367	71,985
72,895	76,553	69,700	68,674	69,843	70,435

73,885	72,468	76,086	69,413	68,278	67,717
74,697	73,845	71,983	75,678	68,945	65,807
73,168	74,469	73,282	71,446	75,156	77,083
76,008	72,754	73,842	72,743	70,855	69,929

Sources: Australian Bureau of Statistics, Australian Demography, Bulletin, Various Years.

Australian Bureau of Statistics, Estimated Resident Population by Sex and Age States and Territories of Australia, Various Years.

Table B-3: Male Probability of Survival (1 - Mortality Rate) from Aged 15 to Aged 64

Age	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
15	0.99885	0.99886	0.99887	0.99888	0.99888	0.99889	0.99890	0.99891	0.99896	0.99901
16	0.99758	0.99759	0.99759	0.99760	0.99760	0.99761	0.99762	0.99762	0.99772	0.99782
17	0.99620	0.99619	0.99618	0.99617	0.99616	0.99615	0.99614	0.99613	0.99627	0.99640
18	0.99472	0.99469	0.99465	0.99462	0.99458	0.99455	0.99452	0.99448	0.99462	0.99476
19	0.99313	0.99307	0.99301	0.99295	0.99288	0.99282	0.99276	0.99270	0.99284	0.99299
20	0.99145	0.99137	0.99128	0.99120	0.99111	0.99102	0.99094	0.99085	0.99102	0.99118
21	0.98973	0.98962	0.98952	0.98941	0.98931	0.98920	0.98910	0.98899	0.98918	0.98937
22	0.98799	0.98787	0.98775	0.98763	0.98751	0.98739	0.98727	0.98715	0.98737	0.98758
23	0.98629	0.98616	0.98603	0.98590	0.98576	0.98563	0.98550	0.98537	0.98561	0.98586
24	0.98465	0.98450	0.98436	0.98422	0.98407	0.98393	0.98378	0.98364	0.98392	0.98420
25	0.98304	0.98289	0.98274	0.98258	0.98243	0.98228	0.98212	0.98197	0.98228	0.98259
26	0.98144	0.98128	0.98112	0.98096	0.98080	0.98065	0.98049	0.98033	0.98067	0.98101
27	0.97981	0.97965	0.97950	0.97934	0.97918	0.97903	0.97887	0.97871	0.97908	0.97945
28	0.97813	0.97799	0.97784	0.97769	0.97754	0.97739	0.97725	0.97710	0.97748	0.97787
29	0.97639	0.97626	0.97613	0.97600	0.97586	0.97573	0.97560	0.97547	0.97587	0.97628
30	0.97458	0.97447	0.97436	0.97425	0.97414	0.97403	0.97392	0.97381	0.97423	0.97465
31	0.97269	0.97260	0.97252	0.97244	0.97236	0.97228	0.97219	0.97211	0.97255	0.97299
32	0.97073	0.97068	0.97063	0.97057	0.97052	0.97047	0.97042	0.97036	0.97082	0.97128
33	0.96871	0.96869	0.96867	0.96864	0.96862	0.96860	0.96857	0.96855	0.96902	0.96950
34	0.96661	0.96662	0.96662	0.96663	0.96664	0.96665	0.96665	0.96666	0.96715	0.96764
35	0.96441	0.96445	0.96448	0.96452	0.96456	0.96460	0.96464	0.96468	0.96518	0.96569
36	0.96206	0.96214	0.96221	0.96228	0.96236	0.96243	0.96250	0.96257	0.96309	0.96361
37	0.95954	0.95965	0.95977	0.95988	0.95999	0.96010	0.96021	0.96032	0.96085	0.96138
38	0.95683	0.95698	0.95713	0.95729	0.95744	0.95759	0.95775	0.95790	0.95844	0.95897
39	0.95388	0.95408	0.95428	0.95448	0.95468	0.95488	0.95509	0.95529	0.95582	0.95635
40	0.95067	0.95092	0.95118	0.95143	0.95168	0.95194	0.95219	0.95245	0.95298	0.95351
41	0.94714	0.94746	0.94777	0.94809	0.94841	0.94873	0.94905	0.94936	0.94988	0.95040
42	0.94326	0.94365	0.94404	0.94443	0.94482	0.94521	0.94560	0.94599	0.94650	0.94700
43	0.93900	0.93947	0.93994	0.94042	0.94089	0.94136	0.94183	0.94230	0.94279	0.94328
44	0.93431	0.93487	0.93543	0.93599	0.93655	0.93712	0.93768	0.93824	0.93871	0.93919
45	0.92913	0.92979	0.93045	0.93111	0.93177	0.93243	0.93310	0.93376	0.93422	0.93468
46	0.92343	0.92419	0.92496	0.92572	0.92649	0.92726	0.92803	0.92880	0.92925	0.92970
47	0.91715	0.91802	0.91890	0.91978	0.92066	0.92155	0.92243	0.92331	0.92376	0.92421
48	0.91024	0.91123	0.91223	0.91323	0.91423	0.91522	0.91622	0.91723	0.91768	0.91813
49	0.90267	0.90378	0.90490	0.90601	0.90713	0.90825	0.90937	0.91049	0.91096	0.91142
50	0.89437	0.89560	0.89684	0.89807	0.89931	0.90055	0.90179	0.90304	0.90352	0.90399
51	0.88530	0.88665	0.88800	0.88935	0.89071	0.89206	0.89342	0.89478	0.89529	0.89579
52	0.87541	0.87687	0.87833	0.87979	0.88125	0.88272	0.88419	0.88566	0.88619	0.88673
53	0.86465	0.86621	0.86776	0.86932	0.87088	0.87245	0.87402	0.87559	0.87617	0.87675
54	0.85298	0.85462	0.85626	0.85791	0.85956	0.86121	0.86286	0.86452	0.86516	0.86580
55	0.84036	0.84207	0.84378	0.84550	0.84722	0.84894	0.85067	0.85240	0.85311	0.85381
56	0.82674	0.82851	0.83028	0.83206	0.83384	0.83562	0.83740	0.83919	0.83998	0.84077
57	0.81213	0.81394	0.81575	0.81757	0.81940	0.82123	0.82306	0.82489	0.82576	0.82663

58	0.79650	0.79835	0.80019	0.80205	0.80390	0.80577	0.80763	0.80950	0.81044	0.81138
59	0.77983	0.78170	0.78357	0.78545	0.78734	0.78922	0.79112	0.79301	0.79400	0.79499
60	0.76207	0.76396	0.76585	0.76775	0.76966	0.77157	0.77348	0.77540	0.77642	0.77744
61	0.74314	0.74506	0.74697	0.74890	0.75082	0.75276	0.75469	0.75664	0.75765	0.75867
62	0.72299	0.72493	0.72688	0.72883	0.73079	0.73275	0.73472	0.73669	0.73768	0.73866
63	0.70157	0.70355	0.70553	0.70752	0.70951	0.71151	0.71352	0.71553	0.71646	0.71739
64	0.67888	0.68090	0.68292	0.68495	0.68699	0.68903	0.69108	0.69314	0.69400	0.69486

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99906	0.99910	0.99915	0.99920	0.99925	0.99924	0.99923	0.99923	0.99922	0.99921	0.99922
0.99791	0.99801	0.99811	0.99820	0.99830	0.99827	0.99825	0.99822	0.99820	0.99817	0.99816
0.99654	0.99667	0.99680	0.99694	0.99707	0.99701	0.99696	0.99690	0.99684	0.99678	0.99673
0.99490	0.99503	0.99517	0.99531	0.99545	0.99538	0.99531	0.99524	0.99518	0.99511	0.99497
0.99313	0.99328	0.99342	0.99356	0.99371	0.99361	0.99352	0.99342	0.99333	0.99324	0.99304
0.99134	0.99150	0.99166	0.99182	0.99199	0.99185	0.99172	0.99158	0.99145	0.99131	0.99107
0.98955	0.98974	0.98993	0.99011	0.99030	0.99014	0.98997	0.98981	0.98964	0.98948	0.98919
0.98780	0.98802	0.98823	0.98845	0.98867	0.98848	0.98830	0.98812	0.98794	0.98776	0.98744
0.98611	0.98636	0.98661	0.98686	0.98710	0.98691	0.98672	0.98652	0.98633	0.98614	0.98581
0.98448	0.98476	0.98504	0.98532	0.98560	0.98541	0.98522	0.98503	0.98484	0.98465	0.98432
0.98291	0.98322	0.98353	0.98384	0.98415	0.98397	0.98378	0.98359	0.98340	0.98321	0.98288
0.98136	0.98170	0.98204	0.98238	0.98273	0.98254	0.98235	0.98216	0.98196	0.98177	0.98147
0.97981	0.98018	0.98055	0.98092	0.98128	0.98109	0.98090	0.98071	0.98052	0.98033	0.98005
0.97826	0.97865	0.97903	0.97942	0.97981	0.97963	0.97944	0.97926	0.97907	0.97889	0.97863
0.97668	0.97709	0.97750	0.97790	0.97831	0.97814	0.97796	0.97779	0.97761	0.97744	0.97720
0.97508	0.97550	0.97593	0.97635	0.97678	0.97662	0.97646	0.97629	0.97613	0.97597	0.97574
0.97344	0.97388	0.97432	0.97476	0.97520	0.97505	0.97490	0.97475	0.97459	0.97444	0.97423
0.97174	0.97220	0.97266	0.97312	0.97357	0.97343	0.97328	0.97314	0.97299	0.97284	0.97265
0.96997	0.97045	0.97093	0.97140	0.97188	0.97173	0.97158	0.97143	0.97128	0.97113	0.97098
0.96813	0.96863	0.96912	0.96961	0.97010	0.96994	0.96978	0.96962	0.96947	0.96931	0.96919
0.96619	0.96670	0.96721	0.96771	0.96822	0.96804	0.96787	0.96769	0.96751	0.96734	0.96725
0.96413	0.96465	0.96517	0.96569	0.96621	0.96601	0.96581	0.96561	0.96541	0.96521	0.96516
0.96191	0.96244	0.96296	0.96349	0.96402	0.96380	0.96357	0.96335	0.96313	0.96290	0.96290
0.95950	0.96004	0.96057	0.96111	0.96164	0.96139	0.96114	0.96089	0.96064	0.96039	0.96043
0.95689	0.95742	0.95796	0.95849	0.95903	0.95875	0.95848	0.95820	0.95793	0.95765	0.95774
0.95403	0.95456	0.95509	0.95562	0.95615	0.95585	0.95556	0.95526	0.95497	0.95467	0.95481
0.95092	0.95144	0.95196	0.95247	0.95299	0.95268	0.95237	0.95205	0.95174	0.95143	0.95162
0.94751	0.94801	0.94851	0.94902	0.94952	0.94919	0.94886	0.94853	0.94820	0.94787	0.94811
0.94377	0.94425	0.94474	0.94523	0.94572	0.94537	0.94502	0.94467	0.94432	0.94397	0.94425
0.93966	0.94013	0.94060	0.94107	0.94155	0.94118	0.94081	0.94044	0.94007	0.93970	0.94002
0.93514	0.93560	0.93606	0.93652	0.93698	0.93658	0.93619	0.93579	0.93540	0.93500	0.93535
0.93016	0.93061	0.93106	0.93151	0.93197	0.93154	0.93112	0.93069	0.93026	0.92984	0.93021
0.92466	0.92511	0.92556	0.92601	0.92646	0.92600	0.92553	0.92507	0.92461	0.92415	0.92455
0.91859	0.91904	0.91949	0.91995	0.92040	0.91990	0.91939	0.91889	0.91839	0.91788	0.91832
0.91188	0.91235	0.91281	0.91327	0.91374	0.91318	0.91263	0.91208	0.91153	0.91098	0.91144
0.90447	0.90495	0.90543	0.90591	0.90639	0.90579	0.90519	0.90458	0.90398	0.90338	0.90388
0.89629	0.89679	0.89730	0.89780	0.89831	0.89765	0.89700	0.89634	0.89569	0.89504	0.89557
0.88727	0.88781	0.88834	0.88888	0.88942	0.88871	0.88800	0.88729	0.88659	0.88588	0.88645
0.87734	0.87792	0.87850	0.87909	0.87967	0.87891	0.87814	0.87738	0.87661	0.87585	0.87643
0.86644	0.86708	0.86772	0.86836	0.86900	0.86818	0.86736	0.86654	0.86572	0.86490	0.86552
0.85452	0.85523	0.85594	0.85665	0.85737	0.85648	0.85560	0.85472	0.85384	0.85296	0.85360
0.84155	0.84234	0.84313	0.84392	0.84471	0.84376	0.84281	0.84186	0.84091	0.83997	0.84065
0.82749	0.82836	0.82923	0.83010	0.83097	0.82994	0.82892	0.82789	0.82687	0.82585	0.82656
0.81231	0.81325	0.81419	0.81513	0.81608	0.81497	0.81386	0.81275	0.81164	0.81054	0.81128

0.79598	0.79698	0.79797	0.79896	0.79996	0.79876	0.79756	0.79636	0.79517	0.79398	0.79475
0.77846	0.77948	0.78050	0.78153	0.78255	0.78126	0.77996	0.77867	0.77738	0.77609	0.77692
0.75969	0.76071	0.76174	0.76276	0.76379	0.76239	0.76100	0.75961	0.75822	0.75683	0.75771
0.73965	0.74064	0.74164	0.74263	0.74362	0.74212	0.74063	0.73913	0.73764	0.73616	0.73708
0.71833	0.71926	0.72019	0.72113	0.72207	0.72046	0.71885	0.71725	0.71566	0.71407	0.71504
0.69572	0.69658	0.69745	0.69831	0.69918	0.69744	0.69572	0.69399	0.69227	0.69056	0.69162

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99922	0.99923	0.99923	0.99924	0.99925	0.99926	0.99928	0.99929	0.99930	0.99920	0.99911
0.99815	0.99813	0.99812	0.99811	0.99813	0.99815	0.99818	0.99820	0.99822	0.99809	0.99795
0.99667	0.99661	0.99655	0.99649	0.99653	0.99657	0.99660	0.99664	0.99667	0.99660	0.99653
0.99483	0.99470	0.99456	0.99442	0.99446	0.99449	0.99453	0.99456	0.99460	0.99474	0.99488
0.99284	0.99264	0.99244	0.99224	0.99228	0.99232	0.99236	0.99240	0.99244	0.99275	0.99305
0.99083	0.99058	0.99034	0.99010	0.99017	0.99024	0.99031	0.99038	0.99045	0.99078	0.99111
0.98890	0.98862	0.98833	0.98804	0.98816	0.98827	0.98839	0.98851	0.98862	0.98889	0.98916
0.98713	0.98681	0.98650	0.98618	0.98634	0.98649	0.98665	0.98680	0.98695	0.98711	0.98727
0.98549	0.98517	0.98485	0.98453	0.98470	0.98488	0.98505	0.98523	0.98540	0.98544	0.98548
0.98398	0.98365	0.98332	0.98299	0.98318	0.98338	0.98357	0.98376	0.98396	0.98389	0.98382
0.98256	0.98223	0.98191	0.98158	0.98179	0.98199	0.98219	0.98239	0.98259	0.98244	0.98228
0.98116	0.98086	0.98055	0.98025	0.98045	0.98066	0.98086	0.98107	0.98127	0.98106	0.98085
0.97977	0.97949	0.97921	0.97893	0.97914	0.97935	0.97957	0.97978	0.98000	0.97975	0.97951
0.97837	0.97811	0.97785	0.97760	0.97782	0.97805	0.97828	0.97851	0.97874	0.97848	0.97821
0.97695	0.97671	0.97647	0.97623	0.97648	0.97674	0.97699	0.97724	0.97750	0.97722	0.97695
0.97551	0.97528	0.97505	0.97482	0.97511	0.97539	0.97568	0.97596	0.97625	0.97597	0.97570
0.97402	0.97380	0.97359	0.97338	0.97369	0.97401	0.97432	0.97463	0.97495	0.97469	0.97443
0.97247	0.97228	0.97209	0.97190	0.97224	0.97258	0.97292	0.97326	0.97360	0.97337	0.97314
0.97082	0.97067	0.97052	0.97036	0.97073	0.97109	0.97146	0.97183	0.97219	0.97199	0.97179
0.96907	0.96895	0.96883	0.96871	0.96911	0.96950	0.96990	0.97029	0.97069	0.97053	0.97038
0.96716	0.96708	0.96699	0.96690	0.96733	0.96777	0.96820	0.96863	0.96906	0.96898	0.96889
0.96511	0.96506	0.96501	0.96496	0.96543	0.96590	0.96637	0.96684	0.96731	0.96730	0.96729
0.96289	0.96289	0.96288	0.96287	0.96338	0.96388	0.96439	0.96489	0.96539	0.96548	0.96556
0.96047	0.96051	0.96054	0.96058	0.96112	0.96166	0.96221	0.96275	0.96329	0.96348	0.96367
0.95782	0.95790	0.95798	0.95807	0.95865	0.95923	0.95981	0.96039	0.96097	0.96127	0.96158
0.95495	0.95508	0.95522	0.95535	0.95596	0.95657	0.95718	0.95779	0.95840	0.95883	0.95926
0.95181	0.95200	0.95219	0.95238	0.95302	0.95366	0.95429	0.95493	0.95557	0.95612	0.95668
0.94834	0.94858	0.94881	0.94905	0.94972	0.95040	0.95107	0.95175	0.95242	0.95311	0.95381
0.94453	0.94480	0.94508	0.94536	0.94607	0.94679	0.94750	0.94822	0.94894	0.94978	0.95062
0.94034	0.94065	0.94097	0.94129	0.94205	0.94280	0.94356	0.94432	0.94507	0.94608	0.94710
0.93570	0.93605	0.93640	0.93676	0.93756	0.93837	0.93918	0.93998	0.94079	0.94200	0.94320
0.93059	0.93096	0.93134	0.93172	0.93259	0.93346	0.93433	0.93520	0.93607	0.93749	0.93892
0.92495	0.92536	0.92576	0.92616	0.92710	0.92804	0.92898	0.92992	0.93087	0.93254	0.93422
0.91875	0.91919	0.91962	0.92006	0.92107	0.92209	0.92310	0.92411	0.92513	0.92709	0.92905
0.91191	0.91237	0.91283	0.91330	0.91440	0.91550	0.91661	0.91771	0.91882	0.92110	0.92337
0.90437	0.90487	0.90537	0.90586	0.90707	0.90828	0.90949	0.91071	0.91192	0.91453	0.91715
0.89611	0.89664	0.89718	0.89772	0.89905	0.90037	0.90170	0.90304	0.90437	0.90733	0.91031
0.88702	0.88759	0.88815	0.88872	0.89020	0.89168	0.89317	0.89465	0.89614	0.89946	0.90279
0.87702	0.87760	0.87819	0.87877	0.88045	0.88212	0.88381	0.88549	0.88718	0.89085	0.89453
0.86614	0.86675	0.86737	0.86799	0.86987	0.87175	0.87364	0.87553	0.87743	0.88143	0.88546
0.85425	0.85489	0.85554	0.85618	0.85830	0.86043	0.86256	0.86469	0.86683	0.87117	0.87552
0.84134	0.84202	0.84271	0.84339	0.84577	0.84815	0.85053	0.85293	0.85533	0.85998	0.86465
0.82726	0.82797	0.82868	0.82939	0.83207	0.83475	0.83744	0.84015	0.84286	0.84780	0.85277
0.81203	0.81278	0.81353	0.81428	0.81727	0.82027	0.82329	0.82631	0.82935	0.83456	0.83982
0.79553	0.79630	0.79708	0.79786	0.80126	0.80456	0.80793	0.81132	0.81472	0.82022	0.82576

0.77775	0.77858	0.77941	0.78024	0.78395	0.78767	0.79142	0.79518	0.79896	0.80473	0.81055
0.75859	0.75948	0.76036	0.76124	0.76534	0.76947	0.77362	0.77779	0.78198	0.78804	0.79415
0.73801	0.73894	0.73986	0.74079	0.74533	0.74989	0.75448	0.75909	0.76374	0.77010	0.77651
0.71601	0.71699	0.71796	0.71894	0.72392	0.72894	0.73400	0.73909	0.74421	0.75087	0.75759
0.69268	0.69375	0.69482	0.69588	0.70129	0.70675	0.71224	0.71778	0.72336	0.73032	0.73735

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99920	0.99920	0.99926	0.99920	0.99930	0.99938	0.99933	0.99933	0.99936	0.99931	0.99938
0.99816	0.99817	0.99829	0.99819	0.99841	0.99859	0.99845	0.99846	0.99853	0.99841	0.99858
0.99688	0.99691	0.99710	0.99697	0.99732	0.99762	0.99736	0.99739	0.99749	0.99730	0.99760
0.99539	0.99546	0.99572	0.99557	0.99607	0.99647	0.99608	0.99614	0.99627	0.99601	0.99646
0.99374	0.99385	0.99419	0.99402	0.99467	0.99518	0.99464	0.99474	0.99489	0.99456	0.99520
0.99199	0.99218	0.99259	0.99239	0.99318	0.99379	0.99311	0.99325	0.99342	0.99301	0.99385
0.99021	0.99048	0.99097	0.99074	0.99165	0.99234	0.99153	0.99171	0.99191	0.99140	0.99243
0.98846	0.98881	0.98939	0.98910	0.99011	0.99091	0.98996	0.99017	0.99040	0.98978	0.99101
0.98677	0.98721	0.98787	0.98752	0.98860	0.98951	0.98843	0.98868	0.98893	0.98816	0.98957
0.98516	0.98569	0.98641	0.98600	0.98712	0.98818	0.98696	0.98723	0.98752	0.98659	0.98814
0.98363	0.98424	0.98503	0.98454	0.98569	0.98693	0.98555	0.98585	0.98616	0.98506	0.98672
0.98218	0.98286	0.98372	0.98313	0.98430	0.98572	0.98419	0.98452	0.98484	0.98358	0.98531
0.98078	0.98152	0.98246	0.98176	0.98296	0.98456	0.98287	0.98323	0.98356	0.98214	0.98391
0.97943	0.98023	0.98124	0.98044	0.98165	0.98341	0.98158	0.98197	0.98230	0.98072	0.98251
0.97811	0.97899	0.98004	0.97915	0.98039	0.98226	0.98031	0.98073	0.98106	0.97934	0.98113
0.97681	0.97777	0.97886	0.97787	0.97918	0.98109	0.97907	0.97948	0.97983	0.97797	0.97974
0.97552	0.97657	0.97769	0.97661	0.97800	0.97991	0.97784	0.97823	0.97861	0.97661	0.97835
0.97422	0.97536	0.97649	0.97535	0.97685	0.97872	0.97663	0.97696	0.97738	0.97525	0.97694
0.97290	0.97410	0.97526	0.97408	0.97570	0.97752	0.97542	0.97569	0.97615	0.97390	0.97551
0.97154	0.97278	0.97398	0.97279	0.97455	0.97631	0.97421	0.97441	0.97489	0.97253	0.97404
0.97011	0.97137	0.97261	0.97144	0.97337	0.97508	0.97298	0.97310	0.97359	0.97116	0.97253
0.96861	0.96985	0.97115	0.97001	0.97213	0.97379	0.97172	0.97176	0.97222	0.96976	0.97098
0.96700	0.96822	0.96945	0.96848	0.97079	0.97242	0.97039	0.97037	0.97079	0.96832	0.96941
0.96526	0.96646	0.96774	0.96685	0.96932	0.97093	0.96896	0.96888	0.96927	0.96680	0.96782
0.96336	0.96454	0.96587	0.96507	0.96771	0.96929	0.96740	0.96727	0.96766	0.96518	0.96619
0.96126	0.96242	0.96381	0.96312	0.96593	0.96747	0.96568	0.96551	0.96595	0.96341	0.96452
0.95890	0.96007	0.96154	0.96096	0.96396	0.96546	0.96377	0.96356	0.96411	0.96147	0.96277
0.95626	0.95745	0.95902	0.95857	0.96177	0.96324	0.96164	0.96142	0.96214	0.95935	0.96092
0.95328	0.95452	0.95622	0.95589	0.95935	0.96081	0.95926	0.95906	0.95997	0.95703	0.95892
0.94995	0.95123	0.95310	0.95288	0.95666	0.95815	0.95663	0.95649	0.95759	0.95450	0.95671
0.94622	0.94756	0.94963	0.94953	0.95368	0.95523	0.95372	0.95368	0.95493	0.95176	0.95426
0.94207	0.94347	0.94577	0.94579	0.95035	0.95203	0.95051	0.95060	0.95195	0.94879	0.95151
0.93747	0.93891	0.94146	0.94163	0.94662	0.94851	0.94697	0.94720	0.94861	0.94556	0.94843
0.93238	0.93385	0.93667	0.93702	0.94245	0.94461	0.94305	0.94345	0.94487	0.94201	0.94498
0.92677	0.92826	0.93136	0.93192	0.93776	0.94029	0.93873	0.93928	0.94070	0.93810	0.94111
0.92058	0.92209	0.92548	0.92630	0.93250	0.93548	0.93393	0.93464	0.93610	0.93377	0.93680
0.91377	0.91534	0.91899	0.92006	0.92660	0.93012	0.92860	0.92948	0.93099	0.92895	0.93202
0.90628	0.90796	0.91181	0.91317	0.91999	0.92414	0.92264	0.92375	0.92534	0.92360	0.92670
0.89809	0.89993	0.90392	0.90557	0.91264	0.91746	0.91600	0.91738	0.91908	0.91767	0.92083
0.88914	0.89120	0.89528	0.89721	0.90452	0.90999	0.90859	0.91033	0.91211	0.91110	0.91435
0.87941	0.88174	0.88585	0.88806	0.89559	0.90167	0.90034	0.90251	0.90436	0.90384	0.90721
0.86884	0.87150	0.87561	0.87809	0.88585	0.89241	0.89120	0.89384	0.89576	0.89579	0.89936
0.85739	0.86040	0.86453	0.86724	0.87525	0.88220	0.88112	0.88424	0.88625	0.88688	0.89071
0.84501	0.84838	0.85256	0.85544	0.86374	0.87099	0.87006	0.87363	0.87584	0.87700	0.88116
0.83165	0.83531	0.83966	0.84262	0.85128	0.85877	0.85798	0.86199	0.86450	0.86607	0.87061
0.81725	0.82111	0.82578	0.82867	0.83779	0.84554	0.84483	0.84926	0.85223	0.85402	0.85897

0.80171	0.80569	0.81086	0.81353	0.82319	0.83128	0.83057	0.83541	0.83900	0.84083	0.84617
0.78497	0.78896	0.79482	0.79712	0.80742	0.81600	0.81518	0.82042	0.82473	0.82648	0.83215
0.76694	0.77087	0.77758	0.77939	0.79047	0.79965	0.79860	0.80424	0.80934	0.81098	0.81687
0.74754	0.75137	0.75905	0.76032	0.77233	0.78219	0.78081	0.78684	0.79272	0.79430	0.80034

1990	1991	1992	1993	1994	1995
0.99944	0.99946	0.99948	0.99950	0.99952	0.99954
0.99871	0.99877	0.99883	0.99889	0.99895	0.99901
0.99780	0.99792	0.99804	0.99816	0.99828	0.99840
0.99672	0.99693	0.99714	0.99735	0.99756	0.99777
0.99552	0.99582	0.99612	0.99642	0.99671	0.99701
0.99421	0.99461	0.99501	0.99541	0.99581	0.99621
0.99286	0.99335	0.99384	0.99432	0.99481	0.99530
0.99149	0.99205	0.99260	0.99316	0.99372	0.99427
0.99012	0.99075	0.99137	0.99200	0.99262	0.99325
0.98876	0.98946	0.99016	0.99087	0.99157	0.99228
0.98739	0.98818	0.98898	0.98977	0.99056	0.99135
0.98603	0.98693	0.98783	0.98873	0.98963	0.99053
0.98466	0.98569	0.98671	0.98774	0.98877	0.98980
0.98328	0.98445	0.98563	0.98680	0.98798	0.98916
0.98189	0.98321	0.98453	0.98585	0.98718	0.98850
0.98051	0.98196	0.98342	0.98488	0.98634	0.98780
0.97914	0.98069	0.98224	0.98380	0.98535	0.98691
0.97779	0.97937	0.98096	0.98256	0.98415	0.98575
0.97645	0.97803	0.97962	0.98121	0.98280	0.98440
0.97512	0.97664	0.97817	0.97970	0.98123	0.98276
0.97377	0.97522	0.97666	0.97811	0.97956	0.98101
0.97240	0.97375	0.97511	0.97647	0.97783	0.97919
0.97096	0.97224	0.97353	0.97482	0.97611	0.97740
0.96945	0.97069	0.97193	0.97318	0.97443	0.97568
0.96784	0.96908	0.97032	0.97156	0.97281	0.97406
0.96611	0.96739	0.96867	0.96995	0.97123	0.97252
0.96428	0.96560	0.96693	0.96825	0.96958	0.97091
0.96231	0.96369	0.96507	0.96645	0.96784	0.96923
0.96019	0.96162	0.96304	0.96447	0.96590	0.96734
0.95791	0.95936	0.96081	0.96226	0.96372	0.96518
0.95544	0.95688	0.95833	0.95978	0.96123	0.96269
0.95274	0.95417	0.95559	0.95702	0.95845	0.95988
0.94980	0.95118	0.95256	0.95394	0.95533	0.95672
0.94656	0.94790	0.94924	0.95058	0.95192	0.95327
0.94299	0.94430	0.94560	0.94691	0.94822	0.94953
0.93903	0.94034	0.94165	0.94296	0.94427	0.94559
0.93463	0.93599	0.93736	0.93874	0.94011	0.94148
0.92972	0.93122	0.93272	0.93423	0.93574	0.93725
0.92423	0.92596	0.92769	0.92942	0.93115	0.93289
0.91811	0.92015	0.92220	0.92426	0.92632	0.92839
0.91129	0.91373	0.91618	0.91864	0.92111	0.92358
0.90371	0.90661	0.90952	0.91244	0.91537	0.91831
0.89532	0.89871	0.90211	0.90553	0.90895	0.91240
0.88603	0.88994	0.89386	0.89779	0.90175	0.90572
0.87578	0.88020	0.88464	0.88910	0.89359	0.89810
0.86448	0.86943	0.87441	0.87941	0.88445	0.88952
0.85204	0.85755	0.86309	0.86867	0.87428	0.87993

0.83844	0.84451	0.85062	0.85678	0.86298	0.86923
0.82362	0.83027	0.83697	0.84372	0.85053	0.85740
0.80757	0.81481	0.82211	0.82948	0.83692	0.84442

Sources: Australian Bureau of Statistics, Australian Demography, Bulletin, No. 43, pp. 272-273.

Australian Bureau of Statistics, Census of the Commonwealth of Australia, 1933, pp. 6-7.

Australian Bureau of Statistics, Deaths, Australia, Various Years.

Table B-4: Female Probability of Survival (1 - Mortality Rate) from Aged 15 to Aged 64

Age	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
15	0.99939	0.99941	0.99943	0.99945	0.99946	0.99948	0.99950	0.99952	0.99953	0.99955
16	0.99874	0.99878	0.99881	0.99885	0.99889	0.99893	0.99896	0.99900	0.99902	0.99905
17	0.99804	0.99810	0.99816	0.99821	0.99827	0.99833	0.99838	0.99844	0.99847	0.99850
18	0.99727	0.99736	0.99744	0.99752	0.99760	0.99769	0.99777	0.99785	0.99788	0.99791
19	0.99644	0.99655	0.99666	0.99678	0.99689	0.99701	0.99712	0.99723	0.99727	0.99730
20	0.99553	0.99568	0.99583	0.99599	0.99614	0.99629	0.99644	0.99659	0.99663	0.99667
21	0.99454	0.99474	0.99494	0.99514	0.99534	0.99554	0.99574	0.99594	0.99598	0.99603
22	0.99348	0.99373	0.99399	0.99424	0.99450	0.99475	0.99501	0.99526	0.99532	0.99537
23	0.99233	0.99265	0.99297	0.99329	0.99361	0.99393	0.99425	0.99457	0.99464	0.99471
24	0.99109	0.99148	0.99188	0.99228	0.99267	0.99307	0.99347	0.99387	0.99395	0.99403
25	0.98977	0.99025	0.99073	0.99121	0.99169	0.99217	0.99265	0.99313	0.99323	0.99333
26	0.98837	0.98894	0.98951	0.99008	0.99065	0.99122	0.99180	0.99237	0.99248	0.99260
27	0.98691	0.98757	0.98824	0.98891	0.98957	0.99024	0.99091	0.99157	0.99170	0.99184
28	0.98539	0.98615	0.98691	0.98767	0.98844	0.98920	0.98997	0.99073	0.99088	0.99103
29	0.98382	0.98468	0.98554	0.98640	0.98726	0.98812	0.98898	0.98984	0.99001	0.99017
30	0.98220	0.98315	0.98411	0.98506	0.98602	0.98697	0.98793	0.98889	0.98907	0.98926
31	0.98051	0.98156	0.98261	0.98366	0.98471	0.98576	0.98681	0.98787	0.98808	0.98828
32	0.97874	0.97988	0.98103	0.98217	0.98332	0.98447	0.98562	0.98677	0.98700	0.98723
33	0.97687	0.97811	0.97935	0.98059	0.98184	0.98309	0.98434	0.98559	0.98584	0.98609
34	0.97489	0.97623	0.97757	0.97892	0.98026	0.98161	0.98296	0.98431	0.98458	0.98486
35	0.97281	0.97424	0.97569	0.97713	0.97857	0.98002	0.98147	0.98292	0.98322	0.98352
36	0.97060	0.97213	0.97367	0.97522	0.97676	0.97831	0.97985	0.98141	0.98173	0.98206
37	0.96827	0.96990	0.97154	0.97318	0.97482	0.97646	0.97811	0.97976	0.98012	0.98047
38	0.96582	0.96755	0.96928	0.97101	0.97275	0.97449	0.97623	0.97797	0.97837	0.97876
39	0.96324	0.96506	0.96688	0.96870	0.97053	0.97236	0.97419	0.97603	0.97646	0.97689
40	0.96050	0.96241	0.96432	0.96623	0.96814	0.97006	0.97198	0.97391	0.97438	0.97485
41	0.95758	0.95957	0.96157	0.96357	0.96557	0.96758	0.96959	0.97160	0.97211	0.97263
42	0.95446	0.95654	0.95862	0.96070	0.96279	0.96488	0.96698	0.96909	0.96964	0.97020
43	0.95111	0.95327	0.95544	0.95761	0.95978	0.96196	0.96414	0.96633	0.96694	0.96755
44	0.94751	0.94975	0.95200	0.95425	0.95651	0.95877	0.96104	0.96332	0.96398	0.96464
45	0.94361	0.94594	0.94828	0.95062	0.95296	0.95531	0.95767	0.96003	0.96075	0.96146
46	0.93940	0.94181	0.94424	0.94666	0.94910	0.95154	0.95399	0.95644	0.95722	0.95799
47	0.93480	0.93731	0.93983	0.94236	0.94489	0.94743	0.94998	0.95253	0.95337	0.95422
48	0.92978	0.93240	0.93503	0.93766	0.94030	0.94295	0.94561	0.94827	0.94919	0.95011
49	0.92432	0.92705	0.92980	0.93255	0.93532	0.93809	0.94087	0.94366	0.94465	0.94565
50	0.91839	0.92126	0.92413	0.92702	0.92992	0.93282	0.93573	0.93865	0.93973	0.94082
51	0.91201	0.91501	0.91803	0.92105	0.92409	0.92714	0.93019	0.93326	0.93442	0.93559
52	0.90520	0.90835	0.91150	0.91466	0.91784	0.92103	0.92422	0.92743	0.92870	0.92996
53	0.89800	0.90127	0.90456	0.90786	0.91117	0.91449	0.91783	0.92117	0.92254	0.92390
54	0.89038	0.89378	0.89719	0.90062	0.90406	0.90751	0.91097	0.91445	0.91592	0.91739
55	0.88230	0.88582	0.88935	0.89290	0.89646	0.90003	0.90362	0.90722	0.90881	0.91040
56	0.87366	0.87730	0.88096	0.88463	0.88832	0.89202	0.89573	0.89947	0.90118	0.90289
57	0.86440	0.86817	0.87195	0.87576	0.87957	0.88341	0.88726	0.89113	0.89297	0.89481

58	0.85447	0.85837	0.86229	0.86623	0.87018	0.87415	0.87815	0.88216	0.88413	0.88610
59	0.84380	0.84784	0.85190	0.85597	0.86007	0.86418	0.86832	0.87247	0.87458	0.87669
60	0.83233	0.83650	0.84069	0.84491	0.84914	0.85340	0.85767	0.86197	0.86422	0.86646
61	0.81995	0.82426	0.82859	0.83295	0.83732	0.84173	0.84615	0.85060	0.85297	0.85535
62	0.80662	0.81106	0.81553	0.82002	0.82454	0.82908	0.83365	0.83824	0.84075	0.84327
63	0.79230	0.79687	0.80147	0.80609	0.81074	0.81542	0.82012	0.82485	0.82749	0.83014
64	0.77692	0.78161	0.78632	0.79106	0.79583	0.80063	0.80546	0.81032	0.81310	0.81588

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99956	0.99958	0.99959	0.99961	0.99962	0.99961	0.99961	0.99960	0.99960	0.99959	0.99959
0.99907	0.99909	0.99911	0.99914	0.99916	0.99915	0.99914	0.99913	0.99912	0.99911	0.99909
0.99852	0.99855	0.99858	0.99860	0.99863	0.99862	0.99860	0.99859	0.99857	0.99856	0.99852
0.99794	0.99797	0.99800	0.99803	0.99806	0.99804	0.99801	0.99799	0.99797	0.99794	0.99788
0.99734	0.99737	0.99740	0.99744	0.99747	0.99744	0.99741	0.99738	0.99734	0.99731	0.99724
0.99671	0.99675	0.99679	0.99683	0.99687	0.99683	0.99679	0.99675	0.99671	0.99667	0.99659
0.99608	0.99613	0.99617	0.99622	0.99627	0.99622	0.99617	0.99613	0.99608	0.99604	0.99596
0.99543	0.99548	0.99554	0.99559	0.99565	0.99560	0.99555	0.99550	0.99545	0.99540	0.99533
0.99477	0.99484	0.99491	0.99497	0.99504	0.99499	0.99493	0.99487	0.99482	0.99476	0.99470
0.99411	0.99420	0.99428	0.99436	0.99444	0.99438	0.99432	0.99425	0.99419	0.99413	0.99407
0.99343	0.99353	0.99363	0.99373	0.99383	0.99376	0.99369	0.99362	0.99355	0.99348	0.99343
0.99272	0.99283	0.99295	0.99306	0.99318	0.99311	0.99303	0.99296	0.99289	0.99281	0.99278
0.99197	0.99210	0.99223	0.99236	0.99250	0.99242	0.99235	0.99227	0.99219	0.99212	0.99209
0.99118	0.99133	0.99147	0.99162	0.99177	0.99169	0.99161	0.99153	0.99145	0.99137	0.99136
0.99034	0.99051	0.99067	0.99084	0.99101	0.99092	0.99084	0.99076	0.99067	0.99059	0.99059
0.98945	0.98963	0.98982	0.99001	0.99020	0.99011	0.99002	0.98993	0.98984	0.98975	0.98976
0.98849	0.98870	0.98891	0.98912	0.98932	0.98923	0.98913	0.98904	0.98894	0.98885	0.98888
0.98746	0.98769	0.98792	0.98815	0.98837	0.98828	0.98818	0.98808	0.98799	0.98789	0.98793
0.98634	0.98659	0.98684	0.98709	0.98735	0.98725	0.98715	0.98705	0.98695	0.98685	0.98691
0.98513	0.98541	0.98568	0.98596	0.98623	0.98613	0.98603	0.98593	0.98584	0.98574	0.98581
0.98382	0.98412	0.98442	0.98472	0.98502	0.98492	0.98482	0.98472	0.98462	0.98452	0.98461
0.98239	0.98271	0.98304	0.98337	0.98370	0.98360	0.98350	0.98340	0.98330	0.98320	0.98329
0.98083	0.98119	0.98155	0.98191	0.98227	0.98216	0.98205	0.98195	0.98184	0.98173	0.98184
0.97915	0.97954	0.97993	0.98033	0.98072	0.98060	0.98048	0.98037	0.98025	0.98013	0.98025
0.97731	0.97774	0.97817	0.97860	0.97903	0.97890	0.97877	0.97864	0.97852	0.97839	0.97852
0.97532	0.97579	0.97626	0.97673	0.97720	0.97706	0.97691	0.97677	0.97662	0.97648	0.97663
0.97314	0.97366	0.97417	0.97468	0.97520	0.97504	0.97488	0.97472	0.97456	0.97440	0.97457
0.97076	0.97132	0.97188	0.97244	0.97300	0.97283	0.97265	0.97248	0.97230	0.97213	0.97232
0.96816	0.96876	0.96937	0.96998	0.97059	0.97040	0.97021	0.97001	0.96982	0.96963	0.96984
0.96530	0.96596	0.96662	0.96728	0.96794	0.96773	0.96752	0.96731	0.96710	0.96689	0.96712
0.96217	0.96289	0.96361	0.96432	0.96504	0.96480	0.96457	0.96433	0.96409	0.96386	0.96412
0.95877	0.95955	0.96032	0.96110	0.96188	0.96161	0.96134	0.96107	0.96080	0.96053	0.96082
0.95506	0.95591	0.95675	0.95760	0.95845	0.95813	0.95782	0.95750	0.95719	0.95687	0.95720
0.95103	0.95195	0.95287	0.95379	0.95471	0.95434	0.95398	0.95361	0.95324	0.95287	0.95324
0.94665	0.94765	0.94865	0.94965	0.95065	0.95023	0.94980	0.94938	0.94895	0.94853	0.94893
0.94190	0.94298	0.94407	0.94515	0.94624	0.94576	0.94527	0.94479	0.94431	0.94382	0.94427
0.93676	0.93794	0.93911	0.94029	0.94146	0.94092	0.94037	0.93983	0.93928	0.93874	0.93922
0.93122	0.93249	0.93376	0.93503	0.93630	0.93570	0.93509	0.93448	0.93387	0.93326	0.93380
0.92527	0.92663	0.92800	0.92938	0.93075	0.93007	0.92940	0.92872	0.92804	0.92737	0.92795
0.91886	0.92034	0.92182	0.92330	0.92479	0.92403	0.92328	0.92253	0.92177	0.92102	0.92167
0.91199	0.91358	0.91518	0.91677	0.91838	0.91754	0.91671	0.91588	0.91505	0.91423	0.91493
0.90460	0.90632	0.90804	0.90977	0.91150	0.91058	0.90966	0.90875	0.90783	0.90692	0.90767
0.89666	0.89851	0.90036	0.90222	0.90408	0.90308	0.90208	0.90108	0.90008	0.89909	0.89987
0.88808	0.89007	0.89206	0.89405	0.89605	0.89497	0.89389	0.89281	0.89174	0.89066	0.89148

0.87880	0.88093	0.88305	0.88519	0.88732	0.88617	0.88503	0.88388	0.88274	0.88159	0.88244
0.86872	0.87098	0.87324	0.87552	0.87779	0.87659	0.87539	0.87420	0.87300	0.87181	0.87268
0.85774	0.86014	0.86254	0.86495	0.86736	0.86613	0.86491	0.86368	0.86246	0.86123	0.86213
0.84579	0.84833	0.85087	0.85341	0.85597	0.85473	0.85349	0.85225	0.85101	0.84978	0.85072
0.83280	0.83547	0.83814	0.84083	0.84352	0.84229	0.84105	0.83982	0.83859	0.83736	0.83836
0.81868	0.82149	0.82431	0.82714	0.82997	0.82876	0.82754	0.82632	0.82511	0.82390	0.82498

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99959	0.99959	0.99959	0.99959	0.99960	0.99961	0.99961	0.99962	0.99963	0.99962	0.99962
0.99908	0.99906	0.99905	0.99903	0.99906	0.99909	0.99912	0.99915	0.99918	0.99918	0.99917
0.99847	0.99843	0.99838	0.99834	0.99840	0.99846	0.99852	0.99858	0.99864	0.99866	0.99867
0.99781	0.99775	0.99769	0.99762	0.99770	0.99778	0.99786	0.99794	0.99802	0.99807	0.99812
0.99716	0.99708	0.99700	0.99692	0.99703	0.99713	0.99723	0.99733	0.99743	0.99749	0.99755
0.99652	0.99644	0.99636	0.99628	0.99640	0.99652	0.99665	0.99677	0.99689	0.99693	0.99697
0.99589	0.99581	0.99573	0.99566	0.99580	0.99595	0.99609	0.99624	0.99639	0.99639	0.99640
0.99527	0.99520	0.99514	0.99507	0.99523	0.99540	0.99556	0.99572	0.99589	0.99586	0.99584
0.99465	0.99459	0.99453	0.99447	0.99466	0.99484	0.99502	0.99521	0.99539	0.99535	0.99531
0.99402	0.99397	0.99392	0.99387	0.99407	0.99427	0.99448	0.99468	0.99488	0.99485	0.99481
0.99339	0.99334	0.99330	0.99325	0.99348	0.99370	0.99392	0.99415	0.99437	0.99435	0.99432
0.99274	0.99270	0.99266	0.99263	0.99287	0.99312	0.99336	0.99361	0.99386	0.99385	0.99385
0.99206	0.99204	0.99201	0.99198	0.99225	0.99252	0.99278	0.99305	0.99332	0.99334	0.99336
0.99135	0.99133	0.99132	0.99131	0.99160	0.99189	0.99218	0.99247	0.99276	0.99281	0.99285
0.99059	0.99059	0.99058	0.99058	0.99090	0.99122	0.99154	0.99186	0.99218	0.99225	0.99232
0.98977	0.98979	0.98980	0.98981	0.99016	0.99051	0.99086	0.99121	0.99156	0.99165	0.99174
0.98890	0.98893	0.98896	0.98899	0.98937	0.98976	0.99014	0.99052	0.99091	0.99101	0.99112
0.98797	0.98801	0.98806	0.98810	0.98852	0.98894	0.98936	0.98978	0.99021	0.99032	0.99044
0.98696	0.98702	0.98707	0.98713	0.98759	0.98805	0.98851	0.98897	0.98943	0.98957	0.98971
0.98588	0.98594	0.98601	0.98608	0.98658	0.98708	0.98758	0.98808	0.98858	0.98875	0.98892
0.98469	0.98477	0.98486	0.98494	0.98548	0.98602	0.98656	0.98710	0.98764	0.98785	0.98806
0.98339	0.98349	0.98358	0.98368	0.98426	0.98485	0.98543	0.98602	0.98661	0.98686	0.98711
0.98195	0.98206	0.98217	0.98228	0.98291	0.98355	0.98418	0.98482	0.98545	0.98576	0.98606
0.98038	0.98050	0.98063	0.98075	0.98143	0.98212	0.98280	0.98349	0.98417	0.98454	0.98490
0.97866	0.97880	0.97893	0.97907	0.97981	0.98054	0.98127	0.98201	0.98274	0.98318	0.98361
0.97679	0.97695	0.97710	0.97726	0.97804	0.97882	0.97960	0.98038	0.98116	0.98167	0.98218
0.97475	0.97493	0.97510	0.97528	0.97610	0.97693	0.97776	0.97859	0.97941	0.98001	0.98061
0.97251	0.97271	0.97290	0.97309	0.97397	0.97485	0.97573	0.97661	0.97749	0.97818	0.97888
0.97005	0.97026	0.97047	0.97068	0.97161	0.97255	0.97348	0.97442	0.97535	0.97617	0.97698
0.96736	0.96759	0.96783	0.96807	0.96905	0.97004	0.97103	0.97202	0.97301	0.97395	0.97489
0.96439	0.96465	0.96492	0.96518	0.96623	0.96728	0.96834	0.96939	0.97044	0.97152	0.97261
0.96112	0.96141	0.96170	0.96199	0.96312	0.96425	0.96538	0.96651	0.96764	0.96887	0.97011
0.95753	0.95785	0.95818	0.95851	0.95972	0.96093	0.96214	0.96336	0.96457	0.96597	0.96737
0.95360	0.95397	0.95433	0.95470	0.95601	0.95732	0.95863	0.95994	0.96125	0.96281	0.96437
0.94934	0.94975	0.95015	0.95056	0.95197	0.95339	0.95481	0.95623	0.95765	0.95937	0.96109
0.94471	0.94516	0.94561	0.94605	0.94758	0.94912	0.95066	0.95220	0.95374	0.95562	0.95750
0.93971	0.94020	0.94068	0.94117	0.94283	0.94450	0.94616	0.94783	0.94951	0.95154	0.95357
0.93433	0.93487	0.93540	0.93594	0.93773	0.93952	0.94132	0.94313	0.94493	0.94710	0.94928
0.92854	0.92912	0.92971	0.93029	0.93222	0.93416	0.93609	0.93803	0.93998	0.94229	0.94460
0.92232	0.92297	0.92362	0.92427	0.92634	0.92840	0.93047	0.93255	0.93463	0.93706	0.93950
0.91563	0.91633	0.91703	0.91773	0.91994	0.92216	0.92438	0.92661	0.92885	0.93139	0.93395
0.90841	0.90916	0.90991	0.91065	0.91303	0.91541	0.91779	0.92019	0.92259	0.92524	0.92791
0.90065	0.90144	0.90222	0.90301	0.90555	0.90811	0.91067	0.91324	0.91581	0.91857	0.92134
0.89230	0.89312	0.89395	0.89477	0.89750	0.90024	0.90298	0.90573	0.90850	0.91135	0.91420
0.88328	0.88413	0.88497	0.88582	0.88875	0.89170	0.89465	0.89761	0.90058	0.90353	0.90648

0.87355	0.87442	0.87529	0.87617	0.87932	0.88248	0.88565	0.88883	0.89203	0.89507	0.89813
0.86303	0.86393	0.86484	0.86574	0.86912	0.87252	0.87592	0.87934	0.88278	0.88595	0.88914
0.85166	0.85260	0.85355	0.85449	0.85812	0.86176	0.86541	0.86908	0.87277	0.87612	0.87948
0.83935	0.84034	0.84134	0.84233	0.84812	0.85395	0.85982	0.86573	0.87168	0.87040	0.86912
0.82606	0.82714	0.82823	0.82931	0.83533	0.84138	0.84748	0.85363	0.85982	0.85891	0.85799

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99968	0.99966	0.99967	0.99969	0.99971	0.99971	0.99973	0.99970	0.99971	0.99971	0.99973
0.99929	0.99926	0.99929	0.99934	0.99939	0.99937	0.99940	0.99934	0.99936	0.99936	0.99941
0.99884	0.99881	0.99886	0.99895	0.99903	0.99898	0.99901	0.99892	0.99895	0.99895	0.99904
0.99834	0.99832	0.99839	0.99853	0.99864	0.99855	0.99857	0.99845	0.99849	0.99848	0.99863
0.99780	0.99780	0.99790	0.99809	0.99822	0.99809	0.99809	0.99794	0.99800	0.99797	0.99819
0.99723	0.99726	0.99740	0.99763	0.99778	0.99762	0.99759	0.99741	0.99750	0.99744	0.99773
0.99665	0.99672	0.99690	0.99716	0.99732	0.99714	0.99707	0.99687	0.99700	0.99690	0.99726
0.99607	0.99620	0.99642	0.99667	0.99684	0.99667	0.99656	0.99634	0.99652	0.99638	0.99678
0.99548	0.99568	0.99594	0.99618	0.99636	0.99621	0.99604	0.99581	0.99604	0.99586	0.99631
0.99490	0.99518	0.99546	0.99567	0.99586	0.99575	0.99552	0.99530	0.99557	0.99536	0.99584
0.99433	0.99469	0.99498	0.99516	0.99536	0.99529	0.99500	0.99480	0.99510	0.99487	0.99537
0.99378	0.99423	0.99450	0.99464	0.99486	0.99482	0.99447	0.99431	0.99463	0.99439	0.99490
0.99323	0.99376	0.99402	0.99414	0.99436	0.99434	0.99395	0.99383	0.99416	0.99392	0.99443
0.99269	0.99327	0.99352	0.99364	0.99386	0.99386	0.99342	0.99334	0.99367	0.99343	0.99396
0.99216	0.99276	0.99301	0.99314	0.99335	0.99336	0.99288	0.99284	0.99316	0.99293	0.99347
0.99160	0.99223	0.99249	0.99265	0.99283	0.99284	0.99235	0.99234	0.99265	0.99242	0.99296
0.99103	0.99164	0.99194	0.99214	0.99230	0.99232	0.99180	0.99181	0.99211	0.99187	0.99244
0.99041	0.99102	0.99137	0.99160	0.99173	0.99177	0.99124	0.99127	0.99155	0.99130	0.99189
0.98975	0.99034	0.99076	0.99103	0.99113	0.99120	0.99064	0.99070	0.99098	0.99068	0.99132
0.98903	0.98961	0.99011	0.99040	0.99048	0.99058	0.99002	0.99011	0.99036	0.99003	0.99071
0.98825	0.98881	0.98940	0.98972	0.98979	0.98992	0.98935	0.98946	0.98971	0.98932	0.99007
0.98739	0.98794	0.98864	0.98897	0.98904	0.98919	0.98864	0.98876	0.98900	0.98857	0.98937
0.98644	0.98699	0.98781	0.98813	0.98823	0.98837	0.98788	0.98799	0.98823	0.98777	0.98862
0.98540	0.98596	0.98689	0.98719	0.98735	0.98746	0.98706	0.98713	0.98739	0.98691	0.98780
0.98426	0.98481	0.98588	0.98614	0.98638	0.98644	0.98616	0.98617	0.98646	0.98598	0.98689
0.98299	0.98355	0.98474	0.98498	0.98531	0.98530	0.98516	0.98511	0.98544	0.98497	0.98590
0.98158	0.98216	0.98347	0.98368	0.98412	0.98405	0.98402	0.98394	0.98433	0.98385	0.98479
0.98002	0.98064	0.98204	0.98224	0.98279	0.98268	0.98274	0.98265	0.98310	0.98260	0.98358
0.97829	0.97897	0.98042	0.98065	0.98130	0.98116	0.98129	0.98123	0.98173	0.98120	0.98224
0.97635	0.97714	0.97859	0.97889	0.97963	0.97951	0.97966	0.97967	0.98021	0.97965	0.98076
0.97420	0.97513	0.97655	0.97692	0.97777	0.97772	0.97785	0.97796	0.97851	0.97794	0.97911
0.97184	0.97292	0.97428	0.97472	0.97571	0.97577	0.97584	0.97606	0.97662	0.97606	0.97729
0.96923	0.97049	0.97179	0.97226	0.97342	0.97362	0.97364	0.97396	0.97451	0.97401	0.97527
0.96637	0.96781	0.96908	0.96952	0.97090	0.97126	0.97121	0.97163	0.97216	0.97178	0.97304
0.96324	0.96486	0.96616	0.96649	0.96811	0.96865	0.96854	0.96906	0.96957	0.96935	0.97060
0.95983	0.96163	0.96302	0.96315	0.96502	0.96576	0.96561	0.96622	0.96674	0.96669	0.96794
0.95612	0.95809	0.95964	0.95952	0.96162	0.96258	0.96237	0.96309	0.96367	0.96377	0.96506
0.95207	0.95423	0.95599	0.95560	0.95788	0.95907	0.95881	0.95965	0.96033	0.96056	0.96193
0.94768	0.95001	0.95203	0.95136	0.95379	0.95525	0.95491	0.95589	0.95671	0.95702	0.95854
0.94293	0.94542	0.94772	0.94680	0.94934	0.95109	0.95063	0.95179	0.95280	0.95312	0.95484
0.93778	0.94041	0.94301	0.94186	0.94452	0.94659	0.94597	0.94731	0.94855	0.94884	0.95078
0.93222	0.93496	0.93786	0.93648	0.93933	0.94173	0.94090	0.94245	0.94394	0.94415	0.94631
0.92620	0.92904	0.93224	0.93060	0.93371	0.93646	0.93541	0.93718	0.93891	0.93903	0.94137
0.91967	0.92261	0.92608	0.92417	0.92762	0.93073	0.92946	0.93145	0.93342	0.93344	0.93591
0.91257	0.91564	0.91936	0.91713	0.92100	0.92446	0.92302	0.92523	0.92742	0.92736	0.92988
0.90485	0.90808	0.91202	0.90948	0.91378	0.91759	0.91605	0.91846	0.92089	0.92072	0.92326

0.89644	0.89988	0.90402	0.90115	0.90590	0.91005	0.90852	0.91110	0.91379	0.91348	0.91603
0.88730	0.89100	0.89528	0.89215	0.89732	0.90177	0.90039	0.90305	0.90605	0.90561	0.90818
0.87738	0.88139	0.88577	0.88242	0.88801	0.89273	0.89162	0.89424	0.89766	0.89706	0.89967
0.86664	0.87096	0.87541	0.87190	0.87791	0.88286	0.88213	0.88457	0.88851	0.88777	0.89045

1990	1991	1992	1993	1994	1995
0.99971	0.99974	0.99977	0.99980	0.99983	0.99986
0.99937	0.99943	0.99949	0.99955	0.99961	0.99967
0.99898	0.99907	0.99916	0.99925	0.99934	0.99943
0.99856	0.99867	0.99878	0.99889	0.99900	0.99911
0.99811	0.99825	0.99839	0.99853	0.99867	0.99881
0.99765	0.99781	0.99797	0.99813	0.99829	0.99845
0.99719	0.99736	0.99753	0.99770	0.99787	0.99804
0.99673	0.99690	0.99707	0.99724	0.99741	0.99758
0.99629	0.99645	0.99661	0.99676	0.99692	0.99708
0.99585	0.99598	0.99611	0.99624	0.99637	0.99650
0.99541	0.99550	0.99559	0.99568	0.99577	0.99586
0.99497	0.99500	0.99503	0.99506	0.99509	0.99512
0.99452	0.99449	0.99446	0.99443	0.99440	0.99437
0.99407	0.99398	0.99389	0.99380	0.99371	0.99362
0.99360	0.99345	0.99330	0.99315	0.99300	0.99285
0.99311	0.99291	0.99271	0.99252	0.99232	0.99212
0.99260	0.99238	0.99216	0.99194	0.99172	0.99150
0.99205	0.99182	0.99159	0.99137	0.99114	0.99091
0.99147	0.99125	0.99102	0.99079	0.99056	0.99033
0.99086	0.99064	0.99042	0.99021	0.98999	0.98977
0.99021	0.99000	0.98979	0.98958	0.98937	0.98917
0.98951	0.98930	0.98910	0.98889	0.98868	0.98847
0.98877	0.98856	0.98836	0.98815	0.98794	0.98773
0.98798	0.98776	0.98754	0.98733	0.98711	0.98689
0.98713	0.98690	0.98668	0.98645	0.98622	0.98599
0.98621	0.98598	0.98574	0.98550	0.98527	0.98503
0.98521	0.98497	0.98473	0.98450	0.98426	0.98402
0.98411	0.98388	0.98364	0.98340	0.98317	0.98293
0.98290	0.98268	0.98245	0.98222	0.98200	0.98177
0.98157	0.98135	0.98113	0.98092	0.98070	0.98049
0.98007	0.97987	0.97966	0.97946	0.97925	0.97904
0.97841	0.97822	0.97804	0.97785	0.97766	0.97748
0.97656	0.97639	0.97623	0.97606	0.97589	0.97573
0.97449	0.97436	0.97423	0.97411	0.97398	0.97385
0.97219	0.97212	0.97205	0.97198	0.97192	0.97185
0.96964	0.96965	0.96966	0.96967	0.96968	0.96969
0.96684	0.96696	0.96707	0.96719	0.96731	0.96742
0.96376	0.96402	0.96427	0.96452	0.96477	0.96502
0.96041	0.96082	0.96124	0.96165	0.96207	0.96249
0.95676	0.95735	0.95793	0.95852	0.95911	0.95969
0.95280	0.95356	0.95431	0.95507	0.95583	0.95659
0.94849	0.94940	0.95030	0.95121	0.95212	0.95303
0.94381	0.94484	0.94588	0.94691	0.94795	0.94899
0.93868	0.93983	0.94099	0.94214	0.94329	0.94445
0.93307	0.93433	0.93558	0.93684	0.93811	0.93937
0.92689	0.92827	0.92965	0.93104	0.93242	0.93381
0.92011	0.92162	0.92314	0.92467	0.92619	0.92772

0.91266	0.91433	0.91601	0.91769	0.91937	0.92105
0.90452	0.90636	0.90820	0.91005	0.91190	0.91376
0.89564	0.89765	0.89967	0.90169	0.90371	0.90574

Sources: Australian Bureau of Statistics, Australian Demography, Bulletin, No. 43, pp. 272-273.
 Australian Bureau of Statistics, Census of the Commonwealth of Australia, 1933, pp. 8-9.
 Australian Bureau of Statistics, Deaths, Australia, Various Years.

Table B-5: Estimated Male Probability of Future Survival, Aged 15, 30, 45, and 60

Aged 15	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
15	0.99885	0.99886	0.99887	0.99888	0.99888	0.99889	0.99890	0.99891	0.99896	0.99901
16	0.99758	0.99759	0.99759	0.99760	0.99760	0.99761	0.99762	0.99762	0.99772	0.99782
17	0.99620	0.99619	0.99618	0.99617	0.99616	0.99615	0.99614	0.99613	0.99627	0.99640
18	0.99472	0.99469	0.99465	0.99462	0.99458	0.99455	0.99452	0.99448	0.99462	0.99476
19	0.99313	0.99307	0.99301	0.99295	0.99288	0.99282	0.99276	0.99270	0.99284	0.99299
20	0.99145	0.99137	0.99128	0.99120	0.99111	0.99102	0.99094	0.99085	0.99102	0.99118
21	0.98973	0.98962	0.98952	0.98941	0.98931	0.98920	0.98910	0.98899	0.98918	0.98937
22	0.98799	0.98787	0.98775	0.98763	0.98751	0.98739	0.98727	0.98715	0.98737	0.98758
23	0.98629	0.98616	0.98603	0.98590	0.98576	0.98563	0.98550	0.98537	0.98561	0.98586
24	0.98465	0.98450	0.98436	0.98422	0.98407	0.98393	0.98378	0.98364	0.98392	0.98420
25	0.98304	0.98289	0.98274	0.98258	0.98243	0.98228	0.98212	0.98197	0.98228	0.98259
26	0.98144	0.98128	0.98112	0.98096	0.98080	0.98065	0.98049	0.98033	0.98067	0.98101
27	0.97981	0.97965	0.97950	0.97934	0.97918	0.97903	0.97887	0.97871	0.97908	0.97945
28	0.97813	0.97799	0.97784	0.97769	0.97754	0.97739	0.97725	0.97710	0.97748	0.97787
29	0.97639	0.97626	0.97613	0.97600	0.97586	0.97573	0.97560	0.97547	0.97587	0.97628
30	0.97458	0.97447	0.97436	0.97425	0.97414	0.97403	0.97392	0.97381	0.97423	0.97465
31	0.97269	0.97260	0.97252	0.97244	0.97236	0.97228	0.97219	0.97211	0.97255	0.97299
32	0.97073	0.97068	0.97063	0.97057	0.97052	0.97047	0.97042	0.97036	0.97082	0.97128
33	0.96871	0.96869	0.96867	0.96864	0.96862	0.96860	0.96857	0.96855	0.96902	0.96950
34	0.96661	0.96662	0.96662	0.96663	0.96664	0.96665	0.96665	0.96666	0.96715	0.96764
35	0.96441	0.96445	0.96448	0.96452	0.96456	0.96460	0.96464	0.96468	0.96518	0.96569
36	0.96206	0.96214	0.96221	0.96228	0.96236	0.96243	0.96250	0.96257	0.96309	0.96361
37	0.95954	0.95965	0.95977	0.95988	0.95999	0.96010	0.96021	0.96032	0.96085	0.96138
38	0.95683	0.95698	0.95713	0.95729	0.95744	0.95759	0.95775	0.95790	0.95844	0.95897
39	0.95388	0.95408	0.95428	0.95448	0.95468	0.95488	0.95509	0.95529	0.95582	0.95635
40	0.95067	0.95092	0.95118	0.95143	0.95168	0.95194	0.95219	0.95245	0.95298	0.95351
41	0.94714	0.94746	0.94777	0.94809	0.94841	0.94873	0.94905	0.94936	0.94988	0.95040
42	0.94326	0.94365	0.94404	0.94443	0.94482	0.94521	0.94560	0.94599	0.94650	0.94700
43	0.93900	0.93947	0.93994	0.94042	0.94089	0.94136	0.94183	0.94230	0.94279	0.94328
44	0.93431	0.93487	0.93543	0.93599	0.93655	0.93712	0.93768	0.93824	0.93871	0.93919
45	0.92913	0.92979	0.93045	0.93111	0.93177	0.93243	0.93310	0.93376	0.93422	0.93468
46	0.92343	0.92419	0.92496	0.92572	0.92649	0.92726	0.92803	0.92880	0.92925	0.92970
47	0.91715	0.91802	0.91890	0.91978	0.92066	0.92155	0.92243	0.92331	0.92376	0.92421
48	0.91024	0.91123	0.91223	0.91323	0.91423	0.91522	0.91622	0.91723	0.91768	0.91813
49	0.90267	0.90378	0.90490	0.90601	0.90713	0.90825	0.90937	0.91049	0.91096	0.91142
50	0.89437	0.89560	0.89684	0.89807	0.89931	0.90055	0.90179	0.90304	0.90352	0.90399
51	0.88530	0.88665	0.88800	0.88935	0.89071	0.89206	0.89342	0.89478	0.89529	0.89579
52	0.87541	0.87687	0.87833	0.87979	0.88125	0.88272	0.88419	0.88566	0.88619	0.88673
53	0.86465	0.86621	0.86776	0.86932	0.87088	0.87245	0.87402	0.87559	0.87617	0.87675
54	0.85298	0.85462	0.85626	0.85791	0.85956	0.86121	0.86286	0.86452	0.86516	0.86580
55	0.84036	0.84207	0.84378	0.84550	0.84722	0.84894	0.85067	0.85240	0.85311	0.85381
56	0.82674	0.82851	0.83028	0.83206	0.83384	0.83562	0.83740	0.83919	0.83998	0.84077

57	0.81213	0.81394	0.81575	0.81757	0.81940	0.82123	0.82306	0.82489	0.82576	0.82663
58	0.79650	0.79835	0.80019	0.80205	0.80390	0.80577	0.80763	0.80950	0.81044	0.81138
59	0.77983	0.78170	0.78357	0.78545	0.78734	0.78922	0.79112	0.79301	0.79400	0.79499
60	0.76207	0.76396	0.76585	0.76775	0.76966	0.77157	0.77348	0.77540	0.77642	0.77744
61	0.74314	0.74506	0.74697	0.74890	0.75082	0.75276	0.75469	0.75664	0.75765	0.75867
62	0.72299	0.72493	0.72688	0.72883	0.73079	0.73275	0.73472	0.73669	0.73768	0.73866
63	0.70157	0.70355	0.70553	0.70752	0.70951	0.71151	0.71352	0.71553	0.71646	0.71739
64	0.67888	0.68090	0.68292	0.68495	0.68699	0.68903	0.69108	0.69314	0.69400	0.69486

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99906	0.99910	0.99915	0.99920	0.99925	0.99924	0.99923	0.99923	0.99922	0.99921	0.99922
0.99791	0.99801	0.99811	0.99820	0.99830	0.99827	0.99825	0.99822	0.99820	0.99817	0.99816
0.99654	0.99667	0.99680	0.99694	0.99707	0.99701	0.99696	0.99690	0.99684	0.99678	0.99673
0.99490	0.99503	0.99517	0.99531	0.99545	0.99538	0.99531	0.99524	0.99518	0.99511	0.99497
0.99313	0.99328	0.99342	0.99356	0.99371	0.99361	0.99352	0.99342	0.99333	0.99324	0.99304
0.99134	0.99150	0.99166	0.99182	0.99199	0.99185	0.99172	0.99158	0.99145	0.99131	0.99107
0.98955	0.98974	0.98993	0.99011	0.99030	0.99014	0.98997	0.98981	0.98964	0.98948	0.98919
0.98780	0.98802	0.98823	0.98845	0.98867	0.98848	0.98830	0.98812	0.98794	0.98776	0.98744
0.98611	0.98636	0.98661	0.98686	0.98710	0.98691	0.98672	0.98652	0.98633	0.98614	0.98581
0.98448	0.98476	0.98504	0.98532	0.98560	0.98541	0.98522	0.98503	0.98484	0.98465	0.98432
0.98291	0.98322	0.98353	0.98384	0.98415	0.98397	0.98378	0.98359	0.98340	0.98321	0.98288
0.98136	0.98170	0.98204	0.98238	0.98273	0.98254	0.98235	0.98216	0.98196	0.98177	0.98147
0.97981	0.98018	0.98055	0.98092	0.98128	0.98109	0.98090	0.98071	0.98052	0.98033	0.98005
0.97826	0.97865	0.97903	0.97942	0.97981	0.97963	0.97944	0.97926	0.97907	0.97889	0.97863
0.97668	0.97709	0.97750	0.97790	0.97831	0.97814	0.97796	0.97779	0.97761	0.97744	0.97720
0.97508	0.97550	0.97593	0.97635	0.97678	0.97662	0.97646	0.97629	0.97613	0.97597	0.97574
0.97344	0.97388	0.97432	0.97476	0.97520	0.97505	0.97490	0.97475	0.97459	0.97444	0.97423
0.97174	0.97220	0.97266	0.97312	0.97357	0.97343	0.97328	0.97314	0.97299	0.97284	0.97265
0.96997	0.97045	0.97093	0.97140	0.97188	0.97173	0.97158	0.97143	0.97128	0.97113	0.97098
0.96813	0.96863	0.96912	0.96961	0.97010	0.96994	0.96978	0.96962	0.96947	0.96931	0.96919
0.96619	0.96670	0.96721	0.96771	0.96822	0.96804	0.96787	0.96769	0.96751	0.96734	0.96725
0.96413	0.96465	0.96517	0.96569	0.96621	0.96601	0.96581	0.96561	0.96541	0.96521	0.96516
0.96191	0.96244	0.96296	0.96349	0.96402	0.96380	0.96357	0.96335	0.96313	0.96290	0.96290
0.95950	0.96004	0.96057	0.96111	0.96164	0.96139	0.96114	0.96089	0.96064	0.96039	0.96043
0.95689	0.95742	0.95796	0.95849	0.95903	0.95875	0.95848	0.95820	0.95793	0.95765	0.95774
0.95403	0.95456	0.95509	0.95562	0.95615	0.95585	0.95556	0.95526	0.95497	0.95467	0.95481
0.95092	0.95144	0.95196	0.95247	0.95299	0.95268	0.95237	0.95205	0.95174	0.95143	0.95162
0.94751	0.94801	0.94851	0.94902	0.94952	0.94919	0.94886	0.94853	0.94820	0.94787	0.94811
0.94377	0.94425	0.94474	0.94523	0.94572	0.94537	0.94502	0.94467	0.94432	0.94397	0.94425
0.93966	0.94013	0.94060	0.94107	0.94155	0.94118	0.94081	0.94044	0.94007	0.93970	0.94002
0.93514	0.93560	0.93606	0.93652	0.93698	0.93658	0.93619	0.93579	0.93540	0.93500	0.93535
0.93016	0.93061	0.93106	0.93151	0.93197	0.93154	0.93112	0.93069	0.93026	0.92984	0.93021
0.92466	0.92511	0.92556	0.92601	0.92646	0.92600	0.92553	0.92507	0.92461	0.92415	0.92455
0.91859	0.91904	0.91949	0.91995	0.92040	0.91990	0.91939	0.91889	0.91839	0.91788	0.91832
0.91188	0.91235	0.91281	0.91327	0.91374	0.91318	0.91263	0.91208	0.91153	0.91098	0.91144
0.90447	0.90495	0.90543	0.90591	0.90639	0.90579	0.90519	0.90458	0.90398	0.90338	0.90388
0.89629	0.89679	0.89730	0.89780	0.89831	0.89765	0.89700	0.89634	0.89569	0.89504	0.89557
0.88727	0.88781	0.88834	0.88888	0.88942	0.88871	0.88800	0.88729	0.88659	0.88588	0.88645
0.87734	0.87792	0.87850	0.87909	0.87967	0.87891	0.87814	0.87738	0.87661	0.87585	0.87643
0.86644	0.86708	0.86772	0.86836	0.86900	0.86818	0.86736	0.86654	0.86572	0.86490	0.86552
0.85452	0.85523	0.85594	0.85665	0.85737	0.85648	0.85560	0.85472	0.85384	0.85296	0.85360
0.84155	0.84234	0.84313	0.84392	0.84471	0.84376	0.84281	0.84186	0.84091	0.83997	0.84065
0.82749	0.82836	0.82923	0.83010	0.83097	0.82994	0.82892	0.82789	0.82687	0.82585	0.82656

0.81231	0.81325	0.81419	0.81513	0.81608	0.81497	0.81386	0.81275	0.81164	0.81054	0.81128
0.79598	0.79698	0.79797	0.79896	0.79996	0.79876	0.79756	0.79636	0.79517	0.79398	0.79475
0.77846	0.77948	0.78050	0.78153	0.78255	0.78126	0.77996	0.77867	0.77738	0.77609	0.77692
0.75969	0.76071	0.76174	0.76276	0.76379	0.76239	0.76100	0.75961	0.75822	0.75683	0.75771
0.73965	0.74064	0.74164	0.74263	0.74362	0.74212	0.74063	0.73913	0.73764	0.73616	0.73708
0.71833	0.71926	0.72019	0.72113	0.72207	0.72046	0.71885	0.71725	0.71566	0.71407	0.71504
0.69572	0.69658	0.69745	0.69831	0.69918	0.69744	0.69572	0.69399	0.69227	0.69056	0.69162

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99922	0.99923	0.99923	0.99924	0.99925	0.99926	0.99928	0.99929	0.99930	0.99920	0.99911
0.99815	0.99813	0.99812	0.99811	0.99813	0.99815	0.99818	0.99820	0.99822	0.99809	0.99795
0.99667	0.99661	0.99655	0.99649	0.99653	0.99657	0.99660	0.99664	0.99667	0.99660	0.99653
0.99483	0.99470	0.99456	0.99442	0.99446	0.99449	0.99453	0.99456	0.99460	0.99474	0.99488
0.99284	0.99264	0.99244	0.99224	0.99228	0.99232	0.99236	0.99240	0.99244	0.99275	0.99305
0.99083	0.99058	0.99034	0.99010	0.99017	0.99024	0.99031	0.99038	0.99045	0.99078	0.99111
0.98890	0.98862	0.98833	0.98804	0.98816	0.98827	0.98839	0.98851	0.98862	0.98889	0.98916
0.98713	0.98681	0.98650	0.98618	0.98634	0.98649	0.98665	0.98680	0.98695	0.98711	0.98727
0.98549	0.98517	0.98485	0.98453	0.98470	0.98488	0.98505	0.98523	0.98540	0.98544	0.98548
0.98398	0.98365	0.98332	0.98299	0.98318	0.98338	0.98357	0.98376	0.98396	0.98389	0.98382
0.98256	0.98223	0.98191	0.98158	0.98179	0.98199	0.98219	0.98239	0.98259	0.98244	0.98228
0.98116	0.98086	0.98055	0.98025	0.98045	0.98066	0.98086	0.98107	0.98127	0.98106	0.98085
0.97977	0.97949	0.97921	0.97893	0.97914	0.97935	0.97957	0.97978	0.98000	0.97975	0.97951
0.97837	0.97811	0.97785	0.97760	0.97782	0.97805	0.97828	0.97851	0.97874	0.97848	0.97821
0.97695	0.97671	0.97647	0.97623	0.97648	0.97674	0.97699	0.97724	0.97750	0.97722	0.97695
0.97551	0.97528	0.97505	0.97482	0.97511	0.97539	0.97568	0.97596	0.97625	0.97597	0.97570
0.97402	0.97380	0.97359	0.97338	0.97369	0.97401	0.97432	0.97463	0.97495	0.97469	0.97443
0.97247	0.97228	0.97209	0.97190	0.97224	0.97258	0.97292	0.97326	0.97360	0.97337	0.97314
0.97082	0.97067	0.97052	0.97036	0.97073	0.97109	0.97146	0.97183	0.97219	0.97199	0.97179
0.96907	0.96895	0.96883	0.96871	0.96911	0.96950	0.96990	0.97029	0.97069	0.97053	0.97038
0.96716	0.96708	0.96699	0.96690	0.96733	0.96777	0.96820	0.96863	0.96906	0.96898	0.96889
0.96511	0.96506	0.96501	0.96496	0.96543	0.96590	0.96637	0.96684	0.96731	0.96730	0.96729
0.96289	0.96289	0.96288	0.96287	0.96338	0.96388	0.96439	0.96489	0.96539	0.96548	0.96556
0.96047	0.96051	0.96054	0.96058	0.96112	0.96166	0.96221	0.96275	0.96329	0.96348	0.96367
0.95782	0.95790	0.95798	0.95807	0.95865	0.95923	0.95981	0.96039	0.96097	0.96127	0.96158
0.95495	0.95508	0.95522	0.95535	0.95596	0.95657	0.95718	0.95779	0.95840	0.95883	0.95926
0.95181	0.95200	0.95219	0.95238	0.95302	0.95366	0.95429	0.95493	0.95557	0.95612	0.95668
0.94834	0.94858	0.94881	0.94905	0.94972	0.95040	0.95107	0.95175	0.95242	0.95311	0.95381
0.94453	0.94480	0.94508	0.94536	0.94607	0.94679	0.94750	0.94822	0.94894	0.94978	0.95062
0.94034	0.94065	0.94097	0.94129	0.94205	0.94280	0.94356	0.94432	0.94507	0.94608	0.94710
0.93570	0.93605	0.93640	0.93676	0.93756	0.93837	0.93918	0.93998	0.94079	0.94200	0.94320
0.93059	0.93096	0.93134	0.93172	0.93259	0.93346	0.93433	0.93520	0.93607	0.93749	0.93892
0.92495	0.92536	0.92576	0.92616	0.92710	0.92804	0.92898	0.92992	0.93087	0.93254	0.93422
0.91875	0.91919	0.91962	0.92006	0.92107	0.92209	0.92310	0.92411	0.92513	0.92709	0.92905
0.91191	0.91237	0.91283	0.91330	0.91440	0.91550	0.91661	0.91771	0.91882	0.92110	0.92337
0.90437	0.90487	0.90537	0.90586	0.90707	0.90828	0.90949	0.91071	0.91192	0.91453	0.91715
0.89611	0.89664	0.89718	0.89772	0.89905	0.90037	0.90170	0.90304	0.90437	0.90733	0.91031
0.88702	0.88759	0.88815	0.88872	0.89020	0.89168	0.89317	0.89465	0.89614	0.89946	0.90279
0.87702	0.87760	0.87819	0.87877	0.88045	0.88212	0.88381	0.88549	0.88718	0.89085	0.89453
0.86614	0.86675	0.86737	0.86799	0.86987	0.87175	0.87364	0.87553	0.87743	0.88143	0.88546
0.85425	0.85489	0.85554	0.85618	0.85830	0.86043	0.86256	0.86469	0.86683	0.87117	0.87552
0.84134	0.84202	0.84271	0.84339	0.84577	0.84815	0.85053	0.85293	0.85533	0.85998	0.86465
0.82726	0.82797	0.82868	0.82939	0.83207	0.83475	0.83744	0.84015	0.84286	0.84780	0.85277
0.81203	0.81278	0.81353	0.81428	0.81727	0.82027	0.82329	0.82631	0.82935	0.83456	0.83982

0.79553	0.79630	0.79708	0.79786	0.80120	0.80456	0.80793	0.81132	0.81472	0.82022	0.82576
0.77775	0.77858	0.77941	0.78024	0.78395	0.78767	0.79142	0.79518	0.79896	0.80473	0.81055
0.75859	0.75948	0.76036	0.76124	0.76534	0.76947	0.77362	0.77779	0.78198	0.78804	0.79415
0.73801	0.73894	0.73986	0.74079	0.74533	0.74989	0.75448	0.75909	0.76374	0.77010	0.77651
0.71601	0.71699	0.71796	0.71894	0.72392	0.72894	0.73400	0.73909	0.74421	0.75087	0.75759
0.69268	0.69375	0.69482	0.69588	0.70129	0.70675	0.71224	0.71778	0.72336	0.73032	0.73735

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99920	0.99920	0.99926	0.99920	0.99930	0.99938	0.99933	0.99933	0.99936	0.99931	0.99938
0.99816	0.99817	0.99829	0.99819	0.99841	0.99859	0.99845	0.99846	0.99853	0.99841	0.99858
0.99688	0.99691	0.99710	0.99697	0.99732	0.99762	0.99736	0.99739	0.99749	0.99730	0.99760
0.99539	0.99546	0.99572	0.99557	0.99607	0.99647	0.99608	0.99614	0.99627	0.99601	0.99646
0.99374	0.99385	0.99419	0.99402	0.99467	0.99518	0.99464	0.99474	0.99489	0.99456	0.99520
0.99199	0.99218	0.99259	0.99239	0.99318	0.99379	0.99311	0.99325	0.99342	0.99301	0.99385
0.99021	0.99048	0.99097	0.99074	0.99165	0.99234	0.99153	0.99171	0.99191	0.99140	0.99243
0.98846	0.98881	0.98939	0.98910	0.99011	0.99091	0.98996	0.99017	0.99040	0.98978	0.99101
0.98677	0.98721	0.98787	0.98752	0.98860	0.98951	0.98843	0.98868	0.98893	0.98816	0.98957
0.98516	0.98569	0.98641	0.98600	0.98712	0.98818	0.98696	0.98723	0.98752	0.98659	0.98814
0.98363	0.98424	0.98503	0.98454	0.98569	0.98693	0.98555	0.98585	0.98616	0.98506	0.98672
0.98218	0.98286	0.98372	0.98313	0.98430	0.98572	0.98419	0.98452	0.98484	0.98358	0.98531
0.98078	0.98152	0.98246	0.98176	0.98296	0.98456	0.98287	0.98323	0.98356	0.98214	0.98391
0.97943	0.98023	0.98124	0.98044	0.98165	0.98341	0.98158	0.98197	0.98230	0.98072	0.98251
0.97811	0.97899	0.98004	0.97915	0.98039	0.98226	0.98031	0.98073	0.98106	0.97934	0.98113
0.97681	0.97777	0.97886	0.97787	0.97918	0.98109	0.97907	0.97948	0.97983	0.97797	0.97974
0.97552	0.97657	0.97769	0.97661	0.97800	0.97991	0.97784	0.97823	0.97861	0.97661	0.97835
0.97422	0.97536	0.97649	0.97535	0.97685	0.97872	0.97663	0.97696	0.97738	0.97525	0.97694
0.97290	0.97410	0.97526	0.97408	0.97570	0.97752	0.97542	0.97569	0.97615	0.97390	0.97551
0.97154	0.97278	0.97398	0.97279	0.97455	0.97631	0.97421	0.97441	0.97489	0.97253	0.97404
0.97011	0.97137	0.97261	0.97144	0.97337	0.97508	0.97298	0.97310	0.97359	0.97116	0.97253
0.96861	0.96985	0.97115	0.97001	0.97213	0.97379	0.97172	0.97176	0.97222	0.96976	0.97098
0.96700	0.96822	0.96945	0.96848	0.97079	0.97242	0.97039	0.97037	0.97079	0.96832	0.96941
0.96526	0.96646	0.96774	0.96685	0.96932	0.97093	0.96896	0.96888	0.96927	0.96680	0.96782
0.96336	0.96454	0.96587	0.96507	0.96771	0.96929	0.96740	0.96727	0.96766	0.96518	0.96619
0.96126	0.96242	0.96381	0.96312	0.96593	0.96747	0.96568	0.96551	0.96595	0.96341	0.96452
0.95890	0.96007	0.96154	0.96096	0.96396	0.96546	0.96377	0.96356	0.96411	0.96147	0.96277
0.95626	0.95745	0.95902	0.95857	0.96177	0.96324	0.96164	0.96142	0.96214	0.95935	0.96092
0.95328	0.95452	0.95622	0.95589	0.95935	0.96081	0.95926	0.95906	0.95997	0.95703	0.95892
0.94995	0.95123	0.95310	0.95288	0.95666	0.95815	0.95663	0.95649	0.95759	0.95450	0.95671
0.94622	0.94756	0.94963	0.94953	0.95368	0.95523	0.95372	0.95368	0.95493	0.95176	0.95426
0.94207	0.94347	0.94577	0.94579	0.95035	0.95203	0.95051	0.95060	0.95195	0.94879	0.95151
0.93747	0.93891	0.94146	0.94163	0.94662	0.94851	0.94697	0.94720	0.94861	0.94556	0.94843
0.93238	0.93385	0.93667	0.93702	0.94245	0.94461	0.94305	0.94345	0.94487	0.94201	0.94498
0.92677	0.92826	0.93136	0.93192	0.93776	0.94029	0.93873	0.93928	0.94070	0.93810	0.94111
0.92058	0.92209	0.92548	0.92630	0.93250	0.93548	0.93393	0.93464	0.93610	0.93377	0.93680
0.91377	0.91534	0.91899	0.92006	0.92660	0.93012	0.92860	0.92948	0.93099	0.92895	0.93202
0.90628	0.90796	0.91181	0.91317	0.91999	0.92414	0.92264	0.92375	0.92534	0.92360	0.92670
0.89809	0.89993	0.90392	0.90557	0.91264	0.91746	0.91600	0.91738	0.91908	0.91767	0.92083
0.88914	0.89120	0.89528	0.89721	0.90452	0.90999	0.90859	0.91033	0.91211	0.91110	0.91435
0.87941	0.88174	0.88585	0.88806	0.89559	0.90167	0.90034	0.90251	0.90436	0.90384	0.90721
0.86884	0.87150	0.87561	0.87809	0.88585	0.89241	0.89120	0.89384	0.89576	0.89579	0.89936
0.85739	0.86040	0.86453	0.86724	0.87525	0.88220	0.88112	0.88424	0.88625	0.88688	0.89071
0.84501	0.84838	0.85256	0.85544	0.86374	0.87099	0.87006	0.87363	0.87584	0.87700	0.88116
0.83165	0.83531	0.83966	0.84262	0.85128	0.85877	0.85798	0.86199	0.86450	0.86607	0.87061

0.81725	0.82111	0.82578	0.82867	0.83779	0.84554	0.84483	0.84926	0.85223	0.85402	0.85897
0.80171	0.80569	0.81086	0.81353	0.82319	0.83128	0.83057	0.83541	0.83900	0.84083	0.84617
0.78497	0.78896	0.79482	0.79712	0.80742	0.81600	0.81518	0.82042	0.82473	0.82648	0.83215
0.76694	0.77087	0.77758	0.77939	0.79047	0.79965	0.79860	0.80424	0.80934	0.81098	0.81687
0.74754	0.75137	0.75905	0.76032	0.77233	0.78219	0.78081	0.78684	0.79272	0.79430	0.80034

1990	1991	1992	1993	1994	1995
0.99944	0.99946	0.99948	0.99950	0.99952	0.99954
0.99871	0.99877	0.99883	0.99889	0.99895	0.99901
0.99780	0.99792	0.99804	0.99816	0.99828	0.99840
0.99672	0.99693	0.99714	0.99735	0.99756	0.99777
0.99552	0.99582	0.99612	0.99642	0.99671	0.99701
0.99421	0.99461	0.99501	0.99541	0.99581	0.99621
0.99286	0.99335	0.99384	0.99432	0.99481	0.99530
0.99149	0.99205	0.99260	0.99316	0.99372	0.99427
0.99012	0.99075	0.99137	0.99200	0.99262	0.99325
0.98876	0.98946	0.99016	0.99087	0.99157	0.99228
0.98739	0.98818	0.98898	0.98977	0.99056	0.99135
0.98603	0.98693	0.98783	0.98873	0.98963	0.99053
0.98466	0.98569	0.98671	0.98774	0.98877	0.98980
0.98328	0.98445	0.98563	0.98680	0.98798	0.98916
0.98189	0.98321	0.98453	0.98585	0.98718	0.98850
0.98051	0.98196	0.98342	0.98488	0.98634	0.98780
0.97914	0.98069	0.98224	0.98380	0.98535	0.98691
0.97779	0.97937	0.98096	0.98256	0.98415	0.98575
0.97645	0.97803	0.97962	0.98121	0.98280	0.98440
0.97512	0.97664	0.97817	0.97970	0.98123	0.98276
0.97377	0.97522	0.97666	0.97811	0.97956	0.98101
0.97240	0.97375	0.97511	0.97647	0.97783	0.97919
0.97096	0.97224	0.97353	0.97482	0.97611	0.97740
0.96945	0.97069	0.97193	0.97318	0.97443	0.97568
0.96784	0.96908	0.97032	0.97156	0.97281	0.97406
0.96611	0.96739	0.96867	0.96995	0.97123	0.97252
0.96428	0.96560	0.96693	0.96825	0.96958	0.97091
0.96231	0.96369	0.96507	0.96645	0.96784	0.96923
0.96019	0.96162	0.96304	0.96447	0.96590	0.96734
0.95791	0.95936	0.96081	0.96226	0.96372	0.96518
0.95544	0.95688	0.95833	0.95978	0.96123	0.96269
0.95274	0.95417	0.95559	0.95702	0.95845	0.95988
0.94980	0.95118	0.95256	0.95394	0.95533	0.95672
0.94656	0.94790	0.94924	0.95058	0.95192	0.95327
0.94299	0.94430	0.94560	0.94691	0.94822	0.94953
0.93903	0.94034	0.94165	0.94296	0.94427	0.94559
0.93463	0.93599	0.93736	0.93874	0.94011	0.94148
0.92972	0.93122	0.93272	0.93423	0.93574	0.93725
0.92423	0.92596	0.92769	0.92942	0.93115	0.93289
0.91811	0.92015	0.92220	0.92426	0.92632	0.92839
0.91129	0.91373	0.91618	0.91864	0.92111	0.92358
0.90371	0.90661	0.90952	0.91244	0.91537	0.91831
0.89532	0.89871	0.90211	0.90553	0.90895	0.91240
0.88603	0.88994	0.89386	0.89779	0.90175	0.90572
0.87578	0.88020	0.88464	0.88910	0.89359	0.89810
0.86448	0.86943	0.87441	0.87941	0.88445	0.88952

0.85204	0.85755	0.86309	0.86867	0.87428	0.87993
0.83844	0.84451	0.85062	0.85678	0.86298	0.86923
0.82362	0.83027	0.83697	0.84372	0.85053	0.85740
0.80757	0.81481	0.82211	0.82948	0.83692	0.84442

Aged30	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
30	0.99814	0.99816	0.99819	0.99821	0.99823	0.99825	0.99828	0.99830	0.99832	0.99834
31	0.99620	0.99625	0.99631	0.99636	0.99641	0.99646	0.99651	0.99656	0.99660	0.99664
32	0.99420	0.99428	0.99436	0.99444	0.99453	0.99461	0.99469	0.99477	0.99482	0.99488
33	0.99213	0.99224	0.99235	0.99247	0.99258	0.99269	0.99280	0.99291	0.99298	0.99306
34	0.98998	0.99012	0.99026	0.99041	0.99055	0.99069	0.99083	0.99097	0.99106	0.99115
35	0.98772	0.98790	0.98807	0.98825	0.98842	0.98859	0.98877	0.98894	0.98905	0.98915
36	0.98532	0.98553	0.98574	0.98595	0.98616	0.98637	0.98658	0.98679	0.98691	0.98703
37	0.98274	0.98299	0.98324	0.98348	0.98373	0.98398	0.98423	0.98448	0.98461	0.98474
38	0.97996	0.98025	0.98054	0.98083	0.98112	0.98141	0.98170	0.98200	0.98213	0.98227
39	0.97694	0.97728	0.97762	0.97796	0.97830	0.97864	0.97898	0.97931	0.97945	0.97959
40	0.97365	0.97404	0.97444	0.97483	0.97522	0.97562	0.97601	0.97641	0.97654	0.97667
41	0.97004	0.97049	0.97095	0.97141	0.97187	0.97233	0.97278	0.97324	0.97337	0.97349
42	0.96607	0.96660	0.96713	0.96766	0.96819	0.96872	0.96926	0.96979	0.96990	0.97001
43	0.96170	0.96232	0.96293	0.96354	0.96416	0.96477	0.96539	0.96601	0.96610	0.96620
44	0.95689	0.95760	0.95831	0.95901	0.95972	0.96043	0.96113	0.96184	0.96192	0.96201
45	0.95159	0.95240	0.95320	0.95401	0.95482	0.95563	0.95643	0.95724	0.95732	0.95739
46	0.94575	0.94666	0.94758	0.94849	0.94941	0.95033	0.95124	0.95216	0.95223	0.95229
47	0.93932	0.94035	0.94138	0.94240	0.94344	0.94447	0.94550	0.94653	0.94660	0.94667
48	0.93225	0.93339	0.93454	0.93569	0.93684	0.93799	0.93914	0.94030	0.94037	0.94044
49	0.92449	0.92576	0.92703	0.92830	0.92957	0.93084	0.93212	0.93339	0.93348	0.93357
50	0.91599	0.91738	0.91877	0.92016	0.92156	0.92295	0.92435	0.92575	0.92585	0.92596
51	0.90671	0.90821	0.90972	0.91123	0.91274	0.91425	0.91577	0.91729	0.91742	0.91755
52	0.89658	0.89819	0.89981	0.90143	0.90305	0.90467	0.90630	0.90793	0.90810	0.90828
53	0.88556	0.88727	0.88899	0.89070	0.89242	0.89415	0.89588	0.89761	0.89783	0.89806
54	0.87360	0.87540	0.87720	0.87901	0.88082	0.88263	0.88444	0.88626	0.88655	0.88684
55	0.86067	0.86254	0.86442	0.86629	0.86817	0.87006	0.87195	0.87384	0.87420	0.87456
56	0.84673	0.84866	0.85059	0.85252	0.85446	0.85640	0.85835	0.86030	0.86075	0.86120
57	0.83176	0.83373	0.83570	0.83768	0.83967	0.84165	0.84365	0.84564	0.84618	0.84671
58	0.81576	0.81776	0.81976	0.82177	0.82379	0.82581	0.82783	0.82986	0.83048	0.83109
59	0.79868	0.80071	0.80274	0.80477	0.80681	0.80885	0.81090	0.81296	0.81363	0.81431
60	0.78049	0.78253	0.78458	0.78664	0.78869	0.79076	0.79283	0.79490	0.79561	0.79633
61	0.76111	0.76317	0.76524	0.76732	0.76939	0.77148	0.77357	0.77567	0.77639	0.77711
62	0.74047	0.74256	0.74465	0.74676	0.74886	0.75098	0.75309	0.75522	0.75592	0.75661
63	0.71853	0.72065	0.72278	0.72492	0.72706	0.72921	0.73137	0.73353	0.73418	0.73482
64	0.69529	0.69745	0.69962	0.70180	0.70398	0.70617	0.70837	0.71057	0.71116	0.71174

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99836	0.99837	0.99839	0.99841	0.99843	0.99844	0.99846	0.99847	0.99849	0.99850	0.99851
0.99667	0.99671	0.99675	0.99679	0.99682	0.99684	0.99687	0.99689	0.99691	0.99693	0.99696
0.99494	0.99499	0.99505	0.99510	0.99516	0.99519	0.99521	0.99524	0.99527	0.99530	0.99535
0.99313	0.99320	0.99328	0.99335	0.99343	0.99345	0.99347	0.99350	0.99352	0.99355	0.99364
0.99125	0.99134	0.99143	0.99152	0.99161	0.99162	0.99164	0.99165	0.99166	0.99168	0.99180
0.98926	0.98937	0.98947	0.98958	0.98968	0.98968	0.98968	0.98967	0.98967	0.98966	0.98982
0.98715	0.98727	0.98739	0.98751	0.98763	0.98760	0.98757	0.98754	0.98752	0.98749	0.98768
0.98487	0.98500	0.98513	0.98526	0.98539	0.98534	0.98529	0.98523	0.98518	0.98513	0.98537
0.98241	0.98255	0.98268	0.98282	0.98296	0.98288	0.98280	0.98272	0.98264	0.98256	0.98284
0.97973	0.97987	0.98001	0.98015	0.98029	0.98018	0.98007	0.97997	0.97986	0.97976	0.98008

0.97681	0.97694	0.97708	0.97721	0.97735	0.97722	0.97709	0.97696	0.97684	0.97671	0.97709
0.97362	0.97374	0.97387	0.97399	0.97412	0.97397	0.97383	0.97368	0.97353	0.97339	0.97383
0.97012	0.97024	0.97035	0.97046	0.97057	0.97041	0.97024	0.97008	0.96991	0.96975	0.97023
0.96630	0.96639	0.96649	0.96659	0.96668	0.96650	0.96631	0.96613	0.96595	0.96576	0.96628
0.96209	0.96217	0.96225	0.96234	0.96242	0.96221	0.96201	0.96180	0.96159	0.96139	0.96195
0.95746	0.95753	0.95761	0.95768	0.95775	0.95752	0.95728	0.95705	0.95681	0.95658	0.95718
0.95236	0.95243	0.95249	0.95256	0.95263	0.95236	0.95210	0.95183	0.95157	0.95130	0.95192
0.94673	0.94680	0.94687	0.94693	0.94700	0.94669	0.94639	0.94609	0.94578	0.94548	0.94612
0.94051	0.94059	0.94066	0.94073	0.94080	0.94046	0.94011	0.93976	0.93941	0.93907	0.93975
0.93365	0.93374	0.93382	0.93391	0.93399	0.93360	0.93320	0.93280	0.93240	0.93201	0.93271
0.92606	0.92617	0.92627	0.92638	0.92648	0.92603	0.92558	0.92513	0.92468	0.92423	0.92497
0.91769	0.91782	0.91795	0.91809	0.91822	0.91771	0.91721	0.91670	0.91620	0.91569	0.91647
0.90845	0.90862	0.90879	0.90897	0.90914	0.90857	0.90801	0.90745	0.90689	0.90633	0.90713
0.89828	0.89850	0.89873	0.89895	0.89917	0.89855	0.89793	0.89731	0.89669	0.89607	0.89689
0.88712	0.88741	0.88769	0.88798	0.88827	0.88759	0.88690	0.88622	0.88554	0.88486	0.88572
0.87492	0.87529	0.87565	0.87601	0.87637	0.87563	0.87488	0.87413	0.87339	0.87264	0.87352
0.86164	0.86209	0.86254	0.86299	0.86344	0.86262	0.86180	0.86099	0.86017	0.85935	0.86027
0.84725	0.84778	0.84832	0.84885	0.84939	0.84849	0.84759	0.84670	0.84580	0.84491	0.84584
0.83171	0.83232	0.83294	0.83355	0.83417	0.83318	0.83220	0.83121	0.83023	0.82924	0.83021
0.81498	0.81566	0.81634	0.81702	0.81769	0.81661	0.81553	0.81445	0.81338	0.81230	0.81330
0.79704	0.79775	0.79847	0.79918	0.79990	0.79872	0.79754	0.79636	0.79518	0.79400	0.79505
0.77783	0.77855	0.77927	0.78000	0.78072	0.77943	0.77815	0.77686	0.77558	0.77430	0.77539
0.75731	0.75801	0.75871	0.75941	0.76011	0.75871	0.75732	0.75592	0.75454	0.75315	0.75428
0.73547	0.73612	0.73677	0.73742	0.73807	0.73656	0.73505	0.73355	0.73205	0.73055	0.73172
0.71233	0.71291	0.71350	0.71409	0.71468	0.71303	0.71139	0.70976	0.70813	0.70650	0.70776

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99852	0.99854	0.99855	0.99856	0.99859	0.99862	0.99866	0.99869	0.99872	0.99872	0.99872
0.99699	0.99702	0.99705	0.99708	0.99714	0.99721	0.99727	0.99733	0.99739	0.99741	0.99742
0.99541	0.99546	0.99551	0.99557	0.99566	0.99575	0.99584	0.99593	0.99602	0.99606	0.99610
0.99372	0.99381	0.99390	0.99399	0.99411	0.99422	0.99434	0.99446	0.99457	0.99465	0.99472
0.99193	0.99205	0.99218	0.99230	0.99245	0.99259	0.99274	0.99288	0.99303	0.99315	0.99328
0.98998	0.99013	0.99029	0.99045	0.99063	0.99082	0.99100	0.99119	0.99137	0.99156	0.99175
0.98788	0.98807	0.98826	0.98846	0.98868	0.98890	0.98913	0.98935	0.98958	0.98984	0.99011
0.98561	0.98584	0.98608	0.98632	0.98658	0.98684	0.98710	0.98736	0.98762	0.98798	0.98834
0.98312	0.98341	0.98369	0.98397	0.98427	0.98457	0.98487	0.98517	0.98546	0.98593	0.98640
0.98041	0.98074	0.98107	0.98140	0.98174	0.98207	0.98241	0.98275	0.98309	0.98368	0.98426
0.97747	0.97785	0.97824	0.97862	0.97899	0.97936	0.97973	0.98010	0.98046	0.98118	0.98189
0.97426	0.97470	0.97514	0.97558	0.97597	0.97637	0.97677	0.97716	0.97756	0.97841	0.97925
0.97071	0.97120	0.97168	0.97216	0.97260	0.97303	0.97347	0.97391	0.97435	0.97533	0.97631
0.96681	0.96733	0.96786	0.96838	0.96886	0.96934	0.96982	0.97030	0.97078	0.97191	0.97305
0.96252	0.96308	0.96365	0.96422	0.96474	0.96526	0.96578	0.96631	0.96683	0.96813	0.96944
0.95777	0.95837	0.95897	0.95957	0.96014	0.96072	0.96130	0.96187	0.96245	0.96395	0.96546
0.95254	0.95316	0.95378	0.95441	0.95505	0.95569	0.95633	0.95697	0.95762	0.95934	0.96107
0.94677	0.94742	0.94807	0.94872	0.94943	0.95015	0.95086	0.95158	0.95229	0.95427	0.95626
0.94043	0.94110	0.94178	0.94247	0.94326	0.94405	0.94484	0.94563	0.94643	0.94870	0.95097
0.93342	0.93412	0.93483	0.93554	0.93642	0.93731	0.93820	0.93908	0.93997	0.94256	0.94516
0.92571	0.92645	0.92718	0.92792	0.92892	0.92992	0.93091	0.93191	0.93291	0.93585	0.93879
0.91725	0.91802	0.91880	0.91958	0.92070	0.92182	0.92294	0.92406	0.92519	0.92848	0.93179
0.90794	0.90875	0.90956	0.91037	0.91164	0.91292	0.91420	0.91549	0.91677	0.92042	0.92409
0.89771	0.89853	0.89935	0.90017	0.90165	0.90314	0.90462	0.90611	0.90760	0.91161	0.91563
0.88657	0.88742	0.88827	0.88913	0.89082	0.89252	0.89422	0.89592	0.89763	0.90198	0.90635
0.87440	0.87528	0.87615	0.87703	0.87898	0.88092	0.88287	0.88483	0.88678	0.89147	0.89618

0.86118	0.86210	0.86301	0.86393	0.86614	0.86835	0.87057	0.87279	0.87502	0.88002	0.88505
0.84678	0.84771	0.84865	0.84959	0.85211	0.85463	0.85717	0.85971	0.86226	0.86756	0.87289
0.83119	0.83216	0.83313	0.83411	0.83696	0.83981	0.84268	0.84555	0.84844	0.85401	0.85963
0.81429	0.81529	0.81629	0.81729	0.82050	0.82372	0.82696	0.83021	0.83348	0.83934	0.84524
0.79609	0.79714	0.79819	0.79924	0.80283	0.80644	0.81006	0.81370	0.81735	0.82349	0.82967
0.77649	0.77758	0.77868	0.77978	0.78378	0.78780	0.79184	0.79590	0.79998	0.80641	0.81289
0.75542	0.75655	0.75769	0.75883	0.76328	0.76775	0.77225	0.77677	0.78132	0.78805	0.79483
0.73290	0.73408	0.73526	0.73645	0.74136	0.74631	0.75128	0.75630	0.76134	0.76837	0.77546
0.70902	0.71029	0.71156	0.71283	0.71818	0.72358	0.72901	0.73449	0.74001	0.74734	0.75474

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99867	0.99876	0.99880	0.99870	0.99876	0.99881	0.99873	0.99873	0.99875	0.99860	0.99859
0.99735	0.99753	0.99760	0.99741	0.99756	0.99761	0.99748	0.99745	0.99750	0.99721	0.99717
0.99603	0.99629	0.99638	0.99613	0.99638	0.99639	0.99624	0.99616	0.99625	0.99583	0.99574
0.99468	0.99501	0.99513	0.99483	0.99522	0.99518	0.99501	0.99487	0.99500	0.99444	0.99427
0.99329	0.99366	0.99382	0.99351	0.99404	0.99394	0.99378	0.99356	0.99372	0.99305	0.99277
0.99183	0.99222	0.99242	0.99213	0.99284	0.99269	0.99252	0.99223	0.99238	0.99165	0.99123
0.99029	0.99067	0.99094	0.99067	0.99157	0.99138	0.99123	0.99086	0.99099	0.99022	0.98966
0.98865	0.98900	0.98919	0.98911	0.99020	0.98998	0.98988	0.98944	0.98953	0.98875	0.98805
0.98687	0.98720	0.98745	0.98744	0.98871	0.98847	0.98842	0.98793	0.98798	0.98719	0.98643
0.98492	0.98524	0.98554	0.98562	0.98707	0.98680	0.98683	0.98629	0.98634	0.98553	0.98478
0.98278	0.98307	0.98345	0.98363	0.98525	0.98494	0.98507	0.98449	0.98460	0.98373	0.98307
0.98037	0.98067	0.98112	0.98143	0.98324	0.98290	0.98312	0.98250	0.98273	0.98175	0.98129
0.97766	0.97800	0.97855	0.97899	0.98101	0.98063	0.98095	0.98031	0.98071	0.97958	0.97941
0.97462	0.97500	0.97570	0.97624	0.97854	0.97816	0.97853	0.97791	0.97851	0.97721	0.97736
0.97121	0.97165	0.97252	0.97318	0.97580	0.97545	0.97584	0.97529	0.97608	0.97463	0.97511
0.96740	0.96790	0.96898	0.96975	0.97275	0.97249	0.97288	0.97242	0.97337	0.97184	0.97262
0.96316	0.96372	0.96503	0.96593	0.96936	0.96923	0.96960	0.96928	0.97033	0.96880	0.96982
0.95846	0.95906	0.96064	0.96168	0.96556	0.96564	0.96598	0.96582	0.96692	0.96550	0.96667
0.95325	0.95389	0.95575	0.95698	0.96130	0.96168	0.96199	0.96199	0.96311	0.96188	0.96315
0.94751	0.94818	0.95033	0.95177	0.95652	0.95727	0.95758	0.95774	0.95887	0.95789	0.95922
0.94118	0.94188	0.94434	0.94603	0.95115	0.95238	0.95268	0.95301	0.95417	0.95346	0.95482
0.93422	0.93499	0.93771	0.93966	0.94513	0.94692	0.94724	0.94775	0.94897	0.94854	0.94994
0.92657	0.92745	0.93038	0.93262	0.93839	0.94083	0.94117	0.94190	0.94321	0.94308	0.94453
0.91819	0.91924	0.92234	0.92486	0.93090	0.93403	0.93440	0.93541	0.93682	0.93703	0.93854
0.90905	0.91033	0.91352	0.91632	0.92261	0.92643	0.92684	0.92822	0.92972	0.93032	0.93193
0.89909	0.90067	0.90390	0.90698	0.91351	0.91795	0.91842	0.92025	0.92182	0.92290	0.92466
0.88829	0.89020	0.89345	0.89679	0.90357	0.90853	0.90910	0.91140	0.91305	0.91469	0.91666
0.87658	0.87887	0.88214	0.88571	0.89275	0.89813	0.89882	0.90161	0.90336	0.90559	0.90784
0.86393	0.86658	0.86993	0.87366	0.88102	0.88672	0.88754	0.89080	0.89275	0.89550	0.89811
0.85027	0.85324	0.85677	0.86057	0.86831	0.87428	0.87521	0.87893	0.88119	0.88434	0.88736
0.83554	0.83873	0.84261	0.84632	0.85454	0.86081	0.86179	0.86595	0.86868	0.87204	0.87549
0.81966	0.82298	0.82738	0.83086	0.83965	0.84630	0.84725	0.85183	0.85519	0.85857	0.86245
0.80255	0.80589	0.81101	0.81409	0.82357	0.83073	0.83155	0.83654	0.84066	0.84392	0.84816
0.78411	0.78741	0.79342	0.79599	0.80628	0.81409	0.81464	0.82005	0.82497	0.82809	0.83258
0.76427	0.76750	0.77452	0.77651	0.78778	0.79632	0.79649	0.80230	0.80802	0.81105	0.81573

1990	1991	1992	1993	1994	1995
0.99859	0.99873	0.99887	0.99901	0.99915	0.99929
0.99719	0.99743	0.99767	0.99791	0.99815	0.99839
0.99582	0.99610	0.99637	0.99665	0.99693	0.99721
0.99445	0.99473	0.99501	0.99529	0.99557	0.99585
0.99310	0.99332	0.99354	0.99376	0.99397	0.99419

0.99173	0.99187	0.99201	0.99215	0.99228	0.99242
0.99033	0.99038	0.99043	0.99048	0.99053	0.99058
0.98886	0.98884	0.98882	0.98881	0.98879	0.98877
0.98732	0.98726	0.98720	0.98714	0.98708	0.98703
0.98568	0.98562	0.98556	0.98551	0.98545	0.98539
0.98393	0.98391	0.98389	0.98387	0.98385	0.98383
0.98206	0.98209	0.98212	0.98215	0.98218	0.98221
0.98006	0.98014	0.98023	0.98032	0.98041	0.98050
0.97790	0.97804	0.97817	0.97831	0.97845	0.97859
0.97557	0.97574	0.97590	0.97607	0.97624	0.97640
0.97306	0.97322	0.97339	0.97355	0.97372	0.97388
0.97031	0.97046	0.97060	0.97075	0.97089	0.97104
0.96731	0.96742	0.96753	0.96763	0.96774	0.96785
0.96401	0.96408	0.96415	0.96422	0.96428	0.96435
0.96038	0.96042	0.96046	0.96050	0.96053	0.96057
0.95635	0.95639	0.95644	0.95649	0.95654	0.95659
0.95186	0.95198	0.95209	0.95220	0.95232	0.95243
0.94686	0.94712	0.94738	0.94763	0.94789	0.94815
0.94128	0.94177	0.94226	0.94275	0.94325	0.94374
0.93504	0.93586	0.93669	0.93752	0.93835	0.93918
0.92809	0.92933	0.93058	0.93182	0.93307	0.93432
0.92038	0.92209	0.92381	0.92553	0.92726	0.92899
0.91183	0.91405	0.91628	0.91852	0.92076	0.92301
0.90237	0.90513	0.90790	0.91068	0.91346	0.91625
0.89193	0.89523	0.89854	0.90186	0.90520	0.90854
0.88042	0.88427	0.88814	0.89203	0.89594	0.89986
0.86776	0.87219	0.87665	0.88113	0.88564	0.89017
0.85390	0.85893	0.86398	0.86907	0.87419	0.87934
0.83881	0.84444	0.85012	0.85583	0.86158	0.86737
0.82246	0.82872	0.83503	0.84138	0.84779	0.85424

Aged 45	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
45	0.99446	0.99457	0.99468	0.99479	0.99489	0.99500	0.99511	0.99522	0.99521	0.99520
46	0.98835	0.98858	0.98881	0.98903	0.98926	0.98948	0.98971	0.98994	0.98992	0.98990
47	0.98163	0.98198	0.98233	0.98268	0.98303	0.98338	0.98373	0.98408	0.98407	0.98405
48	0.97424	0.97472	0.97520	0.97568	0.97616	0.97664	0.97712	0.97760	0.97759	0.97758
49	0.96614	0.96675	0.96736	0.96797	0.96858	0.96920	0.96981	0.97042	0.97043	0.97044
50	0.95726	0.95800	0.95875	0.95949	0.96024	0.96098	0.96173	0.96248	0.96250	0.96253
51	0.94755	0.94842	0.94930	0.95017	0.95105	0.95192	0.95280	0.95368	0.95374	0.95379
52	0.93697	0.93796	0.93896	0.93995	0.94095	0.94195	0.94295	0.94395	0.94405	0.94415
53	0.92545	0.92656	0.92766	0.92877	0.92988	0.93099	0.93211	0.93322	0.93337	0.93352
54	0.91296	0.91416	0.91537	0.91658	0.91779	0.91900	0.92021	0.92142	0.92164	0.92186
55	0.89945	0.90073	0.90202	0.90332	0.90461	0.90591	0.90721	0.90850	0.90880	0.90910
56	0.88487	0.88623	0.88759	0.88896	0.89032	0.89169	0.89306	0.89443	0.89482	0.89521
57	0.86923	0.87065	0.87206	0.87349	0.87491	0.87633	0.87776	0.87919	0.87967	0.88015
58	0.85251	0.85397	0.85543	0.85690	0.85836	0.85984	0.86131	0.86279	0.86335	0.86391
59	0.83466	0.83616	0.83766	0.83917	0.84067	0.84218	0.84370	0.84521	0.84584	0.84647
60	0.81565	0.81718	0.81872	0.82026	0.82180	0.82334	0.82489	0.82644	0.82711	0.82778
61	0.79540	0.79696	0.79854	0.80011	0.80169	0.80327	0.80485	0.80644	0.80712	0.80780
62	0.77383	0.77544	0.77705	0.77867	0.78029	0.78192	0.78355	0.78518	0.78584	0.78649
63	0.75090	0.75256	0.75423	0.75590	0.75758	0.75926	0.76094	0.76263	0.76324	0.76385
64	0.72661	0.72834	0.73006	0.73179	0.73353	0.73527	0.73701	0.73876	0.73930	0.73985

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99519	0.99518	0.99517	0.99516	0.99515	0.99512	0.99509	0.99506	0.99503	0.99500	0.99504
0.98989	0.98987	0.98986	0.98984	0.98983	0.98976	0.98970	0.98963	0.98957	0.98951	0.98957
0.98404	0.98402	0.98401	0.98399	0.98398	0.98387	0.98377	0.98366	0.98356	0.98345	0.98355
0.97757	0.97757	0.97756	0.97755	0.97754	0.97739	0.97724	0.97709	0.97694	0.97678	0.97692
0.97044	0.97045	0.97045	0.97046	0.97046	0.97026	0.97005	0.96985	0.96964	0.96944	0.96960
0.96256	0.96258	0.96261	0.96263	0.96266	0.96240	0.96214	0.96188	0.96161	0.96135	0.96155
0.95385	0.95390	0.95396	0.95402	0.95407	0.95375	0.95343	0.95311	0.95279	0.95247	0.95272
0.94425	0.94434	0.94444	0.94454	0.94464	0.94426	0.94387	0.94349	0.94311	0.94273	0.94301
0.93368	0.93383	0.93398	0.93413	0.93428	0.93384	0.93339	0.93295	0.93250	0.93206	0.93236
0.92208	0.92230	0.92252	0.92273	0.92295	0.92244	0.92193	0.92142	0.92091	0.92040	0.92075
0.90940	0.90970	0.91000	0.91030	0.91059	0.91001	0.90943	0.90885	0.90827	0.90769	0.90807
0.89560	0.89599	0.89638	0.89676	0.89715	0.89650	0.89584	0.89518	0.89453	0.89387	0.89429
0.88063	0.88111	0.88159	0.88208	0.88256	0.88181	0.88107	0.88033	0.87958	0.87884	0.87930
0.86448	0.86504	0.86561	0.86618	0.86674	0.86590	0.86506	0.86422	0.86339	0.86255	0.86305
0.84710	0.84773	0.84836	0.84899	0.84962	0.84868	0.84774	0.84680	0.84586	0.84493	0.84547
0.82845	0.82912	0.82979	0.83046	0.83114	0.83008	0.82903	0.82799	0.82694	0.82589	0.82649
0.80848	0.80916	0.80984	0.81052	0.81120	0.81004	0.80888	0.80772	0.80656	0.80540	0.80606
0.78715	0.78781	0.78847	0.78913	0.78979	0.78851	0.78723	0.78595	0.78467	0.78340	0.78412
0.76445	0.76506	0.76567	0.76628	0.76689	0.76549	0.76408	0.76268	0.76128	0.75989	0.76066
0.74040	0.74094	0.74149	0.74204	0.74258	0.74103	0.73949	0.73795	0.73641	0.73487	0.73575

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99507	0.99511	0.99514	0.99518	0.99524	0.99530	0.99535	0.99541	0.99547	0.99568	0.99589
0.98963	0.98970	0.98976	0.98983	0.98996	0.99008	0.99021	0.99034	0.99047	0.99092	0.99137
0.98364	0.98374	0.98383	0.98393	0.98413	0.98434	0.98455	0.98476	0.98497	0.98568	0.98640
0.97705	0.97718	0.97731	0.97744	0.97773	0.97802	0.97832	0.97861	0.97890	0.97992	0.98095
0.96977	0.96993	0.97009	0.97026	0.97065	0.97104	0.97144	0.97183	0.97222	0.97359	0.97495
0.96176	0.96196	0.96216	0.96236	0.96287	0.96338	0.96390	0.96441	0.96492	0.96665	0.96838
0.95297	0.95321	0.95346	0.95371	0.95435	0.95500	0.95564	0.95629	0.95693	0.95904	0.96116
0.94330	0.94358	0.94387	0.94415	0.94497	0.94578	0.94659	0.94741	0.94822	0.95072	0.95322
0.93266	0.93297	0.93327	0.93358	0.93461	0.93564	0.93667	0.93771	0.93874	0.94161	0.94450
0.92109	0.92144	0.92178	0.92212	0.92338	0.92464	0.92590	0.92716	0.92842	0.93167	0.93492
0.90845	0.90883	0.90920	0.90958	0.91110	0.91263	0.91415	0.91568	0.91721	0.92081	0.92443
0.89472	0.89514	0.89557	0.89599	0.89779	0.89960	0.90141	0.90322	0.90504	0.90898	0.91295
0.87975	0.88021	0.88066	0.88112	0.88325	0.88539	0.88754	0.88969	0.89184	0.89611	0.90040
0.86356	0.86406	0.86456	0.86507	0.86755	0.87004	0.87253	0.87504	0.87755	0.88212	0.88673
0.84600	0.84654	0.84708	0.84762	0.85049	0.85337	0.85626	0.85916	0.86207	0.86697	0.87188
0.82709	0.82770	0.82830	0.82890	0.83217	0.83546	0.83876	0.84207	0.84539	0.85059	0.85582
0.80673	0.80739	0.80805	0.80872	0.81243	0.81615	0.81989	0.82365	0.82743	0.83295	0.83851
0.78484	0.78555	0.78627	0.78700	0.79118	0.79538	0.79961	0.80385	0.80813	0.81398	0.81989
0.76144	0.76222	0.76300	0.76378	0.76846	0.77317	0.77790	0.78267	0.78746	0.79366	0.79991
0.73663	0.73752	0.73840	0.73929	0.74444	0.74962	0.75484	0.76010	0.76540	0.77194	0.77853

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99608	0.99614	0.99636	0.99648	0.99688	0.99696	0.99696	0.99706	0.99722	0.99713	0.99744
0.99171	0.99184	0.99230	0.99255	0.99340	0.99362	0.99360	0.99384	0.99411	0.99402	0.99457
0.98687	0.98705	0.98779	0.98819	0.98951	0.98994	0.98989	0.99029	0.99062	0.99063	0.99134
0.98151	0.98173	0.98276	0.98335	0.98514	0.98588	0.98581	0.98637	0.98672	0.98691	0.98774
0.97560	0.97585	0.97719	0.97800	0.98025	0.98136	0.98128	0.98201	0.98236	0.98282	0.98370
0.96908	0.96937	0.97102	0.97210	0.97475	0.97635	0.97627	0.97716	0.97755	0.97828	0.97919
0.96191	0.96227	0.96421	0.96556	0.96858	0.97075	0.97069	0.97177	0.97222	0.97323	0.97419
0.95403	0.95451	0.95668	0.95832	0.96167	0.96451	0.96447	0.96577	0.96632	0.96762	0.96863

0.94541	0.94607	0.94840	0.95035	0.95399	0.95754	0.95753	0.95912	0.95978	0.96141	0.96249
0.93599	0.93689	0.93933	0.94158	0.94550	0.94974	0.94978	0.95174	0.95251	0.95453	0.95572
0.92574	0.92695	0.92944	0.93197	0.93617	0.94105	0.94116	0.94356	0.94441	0.94692	0.94826
0.91462	0.91618	0.91870	0.92151	0.92598	0.93140	0.93160	0.93450	0.93543	0.93849	0.94005
0.90256	0.90452	0.90707	0.91012	0.91490	0.92073	0.92107	0.92446	0.92550	0.92916	0.93101
0.88954	0.89187	0.89451	0.89774	0.90287	0.90904	0.90951	0.91338	0.91463	0.91880	0.92103
0.87547	0.87814	0.88098	0.88428	0.88985	0.89628	0.89687	0.90120	0.90278	0.90736	0.91000
0.86031	0.86321	0.86642	0.86965	0.87574	0.88247	0.88312	0.88789	0.88997	0.89473	0.89784
0.84396	0.84700	0.85076	0.85376	0.86048	0.86759	0.86823	0.87342	0.87615	0.88091	0.88446
0.82633	0.82940	0.83393	0.83653	0.84400	0.85164	0.85213	0.85774	0.86126	0.86588	0.86980
0.80735	0.81039	0.81585	0.81793	0.82628	0.83458	0.83481	0.84082	0.84519	0.84964	0.85383
0.78693	0.78989	0.79640	0.79791	0.80732	0.81636	0.81621	0.82263	0.82783	0.83216	0.83655

1990	1991	1992	1993	1994	1995
0.99742	0.99742	0.99742	0.99742	0.99742	0.99742
0.99461	0.99459	0.99457	0.99455	0.99453	0.99451
0.99153	0.99147	0.99141	0.99135	0.99130	0.99124
0.98815	0.98805	0.98795	0.98786	0.98776	0.98766
0.98443	0.98430	0.98417	0.98404	0.98391	0.98379
0.98029	0.98017	0.98006	0.97994	0.97982	0.97970
0.97570	0.97565	0.97560	0.97555	0.97550	0.97545
0.97057	0.97067	0.97077	0.97087	0.97096	0.97106
0.96485	0.96519	0.96553	0.96587	0.96621	0.96655
0.95845	0.95913	0.95982	0.96051	0.96119	0.96188
0.95133	0.95244	0.95355	0.95467	0.95578	0.95690
0.94342	0.94502	0.94662	0.94822	0.94983	0.95144
0.93466	0.93678	0.93891	0.94104	0.94317	0.94531
0.92497	0.92764	0.93032	0.93300	0.93570	0.93840
0.91426	0.91749	0.92072	0.92397	0.92723	0.93050
0.90246	0.90626	0.91007	0.91390	0.91775	0.92161
0.88948	0.89388	0.89830	0.90273	0.90720	0.91168
0.87528	0.88028	0.88532	0.89038	0.89547	0.90059
0.85981	0.86544	0.87111	0.87681	0.88255	0.88833
0.84305	0.84933	0.85565	0.86201	0.86843	0.87489

Aged 60	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
60	0.97722	0.97730	0.97738	0.97746	0.97755	0.97763	0.97771	0.97779	0.97785	0.97792
61	0.95296	0.95312	0.95329	0.95346	0.95363	0.95379	0.95396	0.95413	0.95422	0.95431
62	0.92711	0.92738	0.92764	0.92791	0.92818	0.92844	0.92871	0.92898	0.92906	0.92915
63	0.89964	0.90002	0.90040	0.90078	0.90116	0.90154	0.90192	0.90230	0.90234	0.90239
64	0.87055	0.87105	0.87155	0.87205	0.87255	0.87305	0.87355	0.87405	0.87405	0.87404

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.97798	0.97805	0.97811	0.97818	0.97824	0.97809	0.97793	0.97778	0.97762	0.97747	0.97756
0.95441	0.95450	0.95459	0.95469	0.95478	0.95447	0.95416	0.95384	0.95353	0.95322	0.95340
0.92923	0.92932	0.92940	0.92949	0.92958	0.92910	0.92862	0.92814	0.92766	0.92718	0.92744
0.90244	0.90249	0.90253	0.90258	0.90263	0.90197	0.90132	0.90066	0.90001	0.89935	0.89970
0.87404	0.87403	0.87403	0.87402	0.87401	0.87316	0.87230	0.87145	0.87060	0.86975	0.87023

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.97765	0.97774	0.97783	0.97792	0.97847	0.97901	0.97956	0.98010	0.98065	0.98111	0.98158
0.95357	0.95375	0.95393	0.95411	0.95525	0.95638	0.95753	0.95867	0.95981	0.96077	0.96172
0.92770	0.92796	0.92822	0.92848	0.93026	0.93205	0.93383	0.93562	0.93742	0.93889	0.94036

0.90005	0.90039	0.90074	0.90109	0.90355	0.90601	0.90849	0.91096	0.91345	0.91545	0.91745
0.87072	0.87121	0.87170	0.87219	0.87530	0.87842	0.88156	0.88470	0.88785	0.89039	0.89293

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.98268	0.98300	0.98347	0.98345	0.98415	0.98459	0.98467	0.98523	0.98581	0.98609	0.98663
0.96400	0.96454	0.96570	0.96548	0.96700	0.96799	0.96806	0.96917	0.97050	0.97085	0.97193
0.94387	0.94451	0.94660	0.94600	0.94848	0.95019	0.95011	0.95177	0.95400	0.95429	0.95582
0.92219	0.92285	0.92607	0.92496	0.92857	0.93116	0.93080	0.93301	0.93620	0.93639	0.93828
0.89886	0.89951	0.90400	0.90233	0.90726	0.91083	0.91006	0.91281	0.91697	0.91713	0.91928

1990	1991	1992	1993	1994	1995
0.98709	0.98776	0.98843	0.98910	0.98977	0.99044
0.97290	0.97427	0.97564	0.97702	0.97839	0.97977
0.95736	0.95945	0.96154	0.96364	0.96575	0.96785
0.94044	0.94327	0.94611	0.94896	0.95181	0.95468
0.92211	0.92571	0.92932	0.93294	0.93658	0.94023

Table B-6: Estimated Female Probability of Future Survival, Aged 15, 30, 45, and 60

Aged 15	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
15	0.99939	0.99941	0.99943	0.99945	0.99946	0.99948	0.99950	0.99952	0.99953	0.99955
16	0.99874	0.99878	0.99881	0.99885	0.99889	0.99893	0.99896	0.99900	0.99902	0.99905
17	0.99804	0.99810	0.99816	0.99821	0.99827	0.99833	0.99838	0.99844	0.99847	0.99850
18	0.99727	0.99736	0.99744	0.99752	0.99760	0.99769	0.99777	0.99785	0.99788	0.99791
19	0.99644	0.99655	0.99666	0.99678	0.99689	0.99701	0.99712	0.99723	0.99727	0.99730
20	0.99553	0.99568	0.99583	0.99599	0.99614	0.99629	0.99644	0.99659	0.99663	0.99667
21	0.99454	0.99474	0.99494	0.99514	0.99534	0.99554	0.99574	0.99594	0.99598	0.99603
22	0.99348	0.99373	0.99399	0.99424	0.99450	0.99475	0.99501	0.99526	0.99532	0.99537
23	0.99233	0.99265	0.99297	0.99329	0.99361	0.99393	0.99425	0.99457	0.99464	0.99471
24	0.99109	0.99148	0.99188	0.99228	0.99267	0.99307	0.99347	0.99387	0.99395	0.99403
25	0.98977	0.99025	0.99073	0.99121	0.99169	0.99217	0.99265	0.99313	0.99323	0.99333
26	0.98837	0.98894	0.98951	0.99008	0.99065	0.99122	0.99180	0.99237	0.99248	0.99260
27	0.98691	0.98757	0.98824	0.98891	0.98957	0.99024	0.99091	0.99157	0.99170	0.99184
28	0.98539	0.98615	0.98691	0.98767	0.98844	0.98920	0.98997	0.99073	0.99088	0.99103
29	0.98382	0.98468	0.98554	0.98640	0.98726	0.98812	0.98898	0.98984	0.99001	0.99017
30	0.98220	0.98315	0.98411	0.98506	0.98602	0.98697	0.98793	0.98889	0.98907	0.98926
31	0.98051	0.98156	0.98261	0.98366	0.98471	0.98576	0.98681	0.98787	0.98808	0.98828
32	0.97874	0.97988	0.98103	0.98217	0.98332	0.98447	0.98562	0.98677	0.98700	0.98723
33	0.97687	0.97811	0.97935	0.98059	0.98184	0.98309	0.98434	0.98559	0.98584	0.98609
34	0.97489	0.97623	0.97757	0.97892	0.98026	0.98161	0.98296	0.98431	0.98458	0.98486
35	0.97281	0.97424	0.97569	0.97713	0.97857	0.98002	0.98147	0.98292	0.98322	0.98352
36	0.97060	0.97213	0.97367	0.97522	0.97676	0.97831	0.97985	0.98141	0.98173	0.98206
37	0.96827	0.96990	0.97154	0.97318	0.97482	0.97646	0.97811	0.97976	0.98012	0.98047
38	0.96582	0.96755	0.96928	0.97101	0.97275	0.97449	0.97623	0.97797	0.97837	0.97876
39	0.96324	0.96506	0.96688	0.96870	0.97053	0.97236	0.97419	0.97603	0.97646	0.97689
40	0.96050	0.96241	0.96432	0.96623	0.96814	0.97006	0.97198	0.97391	0.97438	0.97485
41	0.95758	0.95957	0.96157	0.96357	0.96557	0.96758	0.96959	0.97160	0.97211	0.97263
42	0.95446	0.95654	0.95862	0.96070	0.96279	0.96488	0.96698	0.96909	0.96964	0.97020
43	0.95111	0.95327	0.95544	0.95761	0.95978	0.96196	0.96414	0.96633	0.96694	0.96755
44	0.94751	0.94975	0.95200	0.95425	0.95651	0.95877	0.96104	0.96332	0.96398	0.96464
45	0.94361	0.94594	0.94828	0.95062	0.95296	0.95531	0.95767	0.96003	0.96075	0.96146
46	0.93940	0.94181	0.94424	0.94666	0.94910	0.95154	0.95399	0.95644	0.95722	0.95799
47	0.93480	0.93731	0.93983	0.94236	0.94489	0.94743	0.94998	0.95253	0.95337	0.95422
48	0.92978	0.93240	0.93503	0.93766	0.94030	0.94295	0.94561	0.94827	0.94919	0.95011

49	0.92432	0.92705	0.92980	0.93255	0.93532	0.93809	0.94087	0.94366	0.94665	0.94565
50	0.91839	0.92126	0.92413	0.92702	0.92992	0.93282	0.93573	0.93865	0.93973	0.94082
51	0.91201	0.91501	0.91803	0.92105	0.92409	0.92714	0.93019	0.93326	0.93442	0.93559
52	0.90520	0.90835	0.91150	0.91466	0.91784	0.92103	0.92422	0.92743	0.92870	0.92996
53	0.89800	0.90127	0.90456	0.90786	0.91117	0.91449	0.91783	0.92117	0.92254	0.92390
54	0.89038	0.89378	0.89719	0.90062	0.90406	0.90751	0.91097	0.91445	0.91592	0.91739
55	0.88230	0.88582	0.88935	0.89290	0.89646	0.90003	0.90362	0.90722	0.90881	0.91040
56	0.87366	0.87730	0.88096	0.88463	0.88832	0.89202	0.89573	0.89947	0.90118	0.90289
57	0.86440	0.86817	0.87195	0.87576	0.87957	0.88341	0.88726	0.89113	0.89297	0.89481
58	0.85447	0.85837	0.86229	0.86623	0.87018	0.87415	0.87815	0.88216	0.88413	0.88610
59	0.84380	0.84784	0.85190	0.85597	0.86007	0.86418	0.86832	0.87247	0.87458	0.87669
60	0.83233	0.83650	0.84069	0.84491	0.84914	0.85340	0.85767	0.86197	0.86422	0.86646
61	0.81995	0.82426	0.82859	0.83295	0.83732	0.84173	0.84615	0.85060	0.85297	0.85535
62	0.80662	0.81106	0.81553	0.82002	0.82454	0.82908	0.83365	0.83824	0.84075	0.84327
63	0.79230	0.79687	0.80147	0.80609	0.81074	0.81542	0.82012	0.82485	0.82749	0.83014
64	0.77692	0.78161	0.78632	0.79106	0.79583	0.80063	0.80546	0.81032	0.81310	0.81588

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99956	0.99958	0.99959	0.99961	0.99962	0.99961	0.99961	0.99960	0.99960	0.99959	0.99959
0.99907	0.99909	0.99911	0.99914	0.99916	0.99915	0.99914	0.99913	0.99912	0.99911	0.99909
0.99852	0.99855	0.99858	0.99860	0.99863	0.99862	0.99860	0.99859	0.99857	0.99856	0.99852
0.99794	0.99797	0.99800	0.99803	0.99806	0.99804	0.99801	0.99799	0.99797	0.99794	0.99788
0.99734	0.99737	0.99740	0.99744	0.99747	0.99744	0.99741	0.99738	0.99734	0.99731	0.99724
0.99671	0.99675	0.99679	0.99683	0.99687	0.99683	0.99679	0.99675	0.99671	0.99667	0.99659
0.99608	0.99613	0.99617	0.99622	0.99627	0.99622	0.99617	0.99613	0.99608	0.99604	0.99596
0.99543	0.99548	0.99554	0.99559	0.99565	0.99560	0.99555	0.99550	0.99545	0.99540	0.99533
0.99477	0.99484	0.99491	0.99497	0.99504	0.99499	0.99493	0.99487	0.99482	0.99476	0.99470
0.99411	0.99420	0.99428	0.99436	0.99444	0.99438	0.99432	0.99425	0.99419	0.99413	0.99407
0.99343	0.99353	0.99363	0.99373	0.99383	0.99376	0.99369	0.99362	0.99355	0.99348	0.99343
0.99272	0.99283	0.99295	0.99306	0.99318	0.99311	0.99303	0.99296	0.99289	0.99281	0.99278
0.99197	0.99210	0.99223	0.99236	0.99250	0.99242	0.99235	0.99227	0.99219	0.99212	0.99209
0.99118	0.99133	0.99147	0.99162	0.99177	0.99169	0.99161	0.99153	0.99145	0.99137	0.99136
0.99034	0.99051	0.99067	0.99084	0.99101	0.99092	0.99084	0.99076	0.99067	0.99059	0.99059
0.98945	0.98963	0.98982	0.99001	0.99020	0.99011	0.99002	0.98993	0.98984	0.98975	0.98976
0.98849	0.98870	0.98891	0.98912	0.98932	0.98923	0.98913	0.98904	0.98894	0.98885	0.98888
0.98746	0.98769	0.98792	0.98815	0.98837	0.98828	0.98818	0.98808	0.98799	0.98789	0.98793
0.98634	0.98659	0.98684	0.98709	0.98735	0.98725	0.98715	0.98705	0.98695	0.98685	0.98691
0.98513	0.98541	0.98568	0.98596	0.98623	0.98613	0.98603	0.98593	0.98584	0.98574	0.98581
0.98382	0.98412	0.98442	0.98472	0.98502	0.98492	0.98482	0.98472	0.98462	0.98452	0.98461
0.98239	0.98271	0.98304	0.98337	0.98370	0.98360	0.98350	0.98340	0.98330	0.98320	0.98329
0.98083	0.98119	0.98155	0.98191	0.98227	0.98216	0.98205	0.98195	0.98184	0.98173	0.98184
0.97915	0.97954	0.97993	0.98033	0.98072	0.98060	0.98048	0.98037	0.98025	0.98013	0.98025
0.97731	0.97774	0.97817	0.97860	0.97903	0.97890	0.97877	0.97864	0.97852	0.97839	0.97852
0.97532	0.97579	0.97626	0.97673	0.97720	0.97706	0.97691	0.97677	0.97662	0.97648	0.97663
0.97314	0.97366	0.97417	0.97468	0.97520	0.97504	0.97488	0.97472	0.97456	0.97440	0.97457
0.97076	0.97132	0.97188	0.97244	0.97300	0.97283	0.97265	0.97248	0.97230	0.97213	0.97232
0.96816	0.96876	0.96937	0.96998	0.97059	0.97040	0.97021	0.97001	0.96982	0.96963	0.96984
0.96530	0.96596	0.96662	0.96728	0.96794	0.96773	0.96752	0.96731	0.96710	0.96689	0.96712
0.96217	0.96289	0.96361	0.96432	0.96504	0.96480	0.96457	0.96433	0.96409	0.96386	0.96412
0.95877	0.95955	0.96032	0.96110	0.96188	0.96161	0.96134	0.96107	0.96080	0.96053	0.96082
0.95506	0.95591	0.95675	0.95760	0.95845	0.95813	0.95782	0.95750	0.95719	0.95687	0.95720
0.95103	0.95195	0.95287	0.95379	0.95471	0.95434	0.95398	0.95361	0.95324	0.95287	0.95324
0.94665	0.94765	0.94865	0.94965	0.95065	0.95023	0.94980	0.94938	0.94895	0.94853	0.94893

0.94190	0.94298	0.94407	0.94515	0.94624	0.94576	0.94527	0.94479	0.94431	0.94382	0.94427
0.93676	0.93794	0.93911	0.94029	0.94146	0.94092	0.94037	0.93983	0.93928	0.93874	0.93922
0.93122	0.93249	0.93376	0.93503	0.93630	0.93570	0.93509	0.93448	0.93387	0.93326	0.93380
0.92527	0.92663	0.92800	0.92938	0.93075	0.93007	0.92940	0.92872	0.92804	0.92737	0.92795
0.91886	0.92034	0.92182	0.92330	0.92479	0.92403	0.92328	0.92253	0.92177	0.92102	0.92167
0.91199	0.91358	0.91518	0.91677	0.91838	0.91754	0.91671	0.91588	0.91505	0.91423	0.91493
0.90460	0.90632	0.90804	0.90977	0.91150	0.91058	0.90966	0.90875	0.90783	0.90692	0.90767
0.89666	0.89851	0.90036	0.90222	0.90408	0.90308	0.90208	0.90108	0.90008	0.89909	0.89987
0.88808	0.89007	0.89206	0.89405	0.89605	0.89497	0.89389	0.89281	0.89174	0.89066	0.89148
0.87880	0.88093	0.88305	0.88519	0.88732	0.88617	0.88503	0.88388	0.88274	0.88159	0.88244
0.86872	0.87098	0.87324	0.87552	0.87779	0.87659	0.87539	0.87420	0.87300	0.87181	0.87268
0.85774	0.86014	0.86254	0.86495	0.86736	0.86613	0.86491	0.86368	0.86246	0.86123	0.86213
0.84579	0.84833	0.85087	0.85341	0.85597	0.85473	0.85349	0.85225	0.85101	0.84978	0.85072
0.83280	0.83547	0.83814	0.84083	0.84352	0.84229	0.84105	0.83982	0.83859	0.83736	0.83836
0.81868	0.82149	0.82431	0.82714	0.82997	0.82876	0.82754	0.82632	0.82511	0.82390	0.82498

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99959	0.99959	0.99959	0.99959	0.99960	0.99961	0.99961	0.99962	0.99963	0.99962	0.99962
0.99908	0.99906	0.99905	0.99903	0.99906	0.99909	0.99912	0.99915	0.99918	0.99918	0.99917
0.99847	0.99843	0.99838	0.99834	0.99840	0.99846	0.99852	0.99858	0.99864	0.99866	0.99867
0.99781	0.99775	0.99769	0.99762	0.99770	0.99778	0.99786	0.99794	0.99802	0.99807	0.99812
0.99716	0.99708	0.99700	0.99692	0.99703	0.99713	0.99723	0.99733	0.99743	0.99749	0.99755
0.99652	0.99644	0.99636	0.99628	0.99640	0.99652	0.99665	0.99677	0.99689	0.99693	0.99697
0.99589	0.99581	0.99573	0.99566	0.99580	0.99595	0.99609	0.99624	0.99639	0.99639	0.99640
0.99527	0.99520	0.99514	0.99507	0.99523	0.99540	0.99556	0.99572	0.99589	0.99586	0.99584
0.99465	0.99459	0.99453	0.99447	0.99466	0.99484	0.99502	0.99521	0.99539	0.99535	0.99531
0.99402	0.99397	0.99392	0.99387	0.99407	0.99427	0.99448	0.99468	0.99488	0.99485	0.99481
0.99339	0.99334	0.99330	0.99325	0.99348	0.99370	0.99392	0.99415	0.99437	0.99435	0.99432
0.99274	0.99270	0.99266	0.99263	0.99287	0.99312	0.99336	0.99361	0.99386	0.99385	0.99385
0.99206	0.99204	0.99201	0.99198	0.99225	0.99252	0.99278	0.99305	0.99332	0.99334	0.99336
0.99135	0.99133	0.99132	0.99131	0.99160	0.99189	0.99218	0.99247	0.99276	0.99281	0.99285
0.99059	0.99059	0.99058	0.99058	0.99090	0.99122	0.99154	0.99186	0.99218	0.99225	0.99232
0.98977	0.98979	0.98980	0.98981	0.99016	0.99051	0.99086	0.99121	0.99156	0.99165	0.99174
0.98890	0.98893	0.98896	0.98899	0.98937	0.98976	0.99014	0.99052	0.99091	0.99101	0.99112
0.98797	0.98801	0.98806	0.98810	0.98852	0.98894	0.98936	0.98978	0.99021	0.99032	0.99044
0.98696	0.98702	0.98707	0.98713	0.98759	0.98805	0.98851	0.98897	0.98943	0.98957	0.98971
0.98588	0.98594	0.98601	0.98608	0.98658	0.98708	0.98758	0.98808	0.98858	0.98875	0.98892
0.98469	0.98477	0.98486	0.98494	0.98548	0.98602	0.98656	0.98710	0.98764	0.98785	0.98806
0.98339	0.98349	0.98358	0.98368	0.98426	0.98485	0.98543	0.98602	0.98661	0.98686	0.98711
0.98195	0.98206	0.98217	0.98228	0.98291	0.98355	0.98418	0.98482	0.98545	0.98576	0.98606
0.98038	0.98050	0.98063	0.98075	0.98143	0.98212	0.98280	0.98349	0.98417	0.98454	0.98490
0.97866	0.97880	0.97893	0.97907	0.97981	0.98054	0.98127	0.98201	0.98274	0.98318	0.98361
0.97679	0.97695	0.97710	0.97726	0.97804	0.97882	0.97960	0.98038	0.98116	0.98167	0.98218
0.97475	0.97493	0.97510	0.97528	0.97610	0.97693	0.97776	0.97859	0.97941	0.98001	0.98061
0.97251	0.97271	0.97290	0.97309	0.97397	0.97485	0.97573	0.97661	0.97749	0.97818	0.97888
0.97005	0.97026	0.97047	0.97068	0.97161	0.97255	0.97348	0.97442	0.97535	0.97617	0.97698
0.96736	0.96759	0.96783	0.96807	0.96905	0.97004	0.97103	0.97202	0.97301	0.97395	0.97489
0.96439	0.96465	0.96492	0.96518	0.96623	0.96728	0.96834	0.96939	0.97044	0.97152	0.97261
0.96112	0.96141	0.96170	0.96199	0.96312	0.96425	0.96538	0.96651	0.96764	0.96887	0.97011
0.95753	0.95785	0.95818	0.95851	0.95972	0.96093	0.96214	0.96336	0.96457	0.96597	0.96737
0.95360	0.95397	0.95433	0.95470	0.95601	0.95732	0.95863	0.95994	0.96125	0.96281	0.96437
0.94934	0.94975	0.95015	0.95056	0.95197	0.95339	0.95481	0.95623	0.95765	0.95937	0.96109
0.94471	0.94516	0.94561	0.94605	0.94758	0.94912	0.95066	0.95220	0.95374	0.95562	0.95750

0.93971	0.94020	0.94068	0.94117	0.94283	0.94450	0.94616	0.94783	0.94951	0.95154	0.95357
0.93433	0.93487	0.93540	0.93594	0.93773	0.93952	0.94132	0.94313	0.94493	0.94710	0.94928
0.92854	0.92912	0.92971	0.93029	0.93222	0.93416	0.93609	0.93803	0.93998	0.94229	0.94460
0.92232	0.92297	0.92362	0.92427	0.92634	0.92840	0.93047	0.93255	0.93463	0.93706	0.93950
0.91563	0.91633	0.91703	0.91773	0.91994	0.92216	0.92438	0.92661	0.92885	0.93139	0.93395
0.90841	0.90916	0.90991	0.91065	0.91303	0.91541	0.91779	0.92019	0.92259	0.92524	0.92791
0.90065	0.90144	0.90222	0.90301	0.90555	0.90811	0.91067	0.91324	0.91581	0.91857	0.92134
0.89230	0.89312	0.89395	0.89477	0.89750	0.90024	0.90298	0.90573	0.90850	0.91135	0.91420
0.88328	0.88413	0.88497	0.88582	0.88875	0.89170	0.89465	0.89761	0.90058	0.90353	0.90648
0.87355	0.87442	0.87529	0.87617	0.87932	0.88248	0.88565	0.88883	0.89203	0.89507	0.89813
0.86303	0.86393	0.86484	0.86574	0.86912	0.87252	0.87592	0.87934	0.88278	0.88595	0.88914
0.85166	0.85260	0.85355	0.85449	0.85812	0.86176	0.86541	0.86908	0.87277	0.87612	0.87948
0.83935	0.84034	0.84134	0.84233	0.84812	0.85395	0.85982	0.86573	0.87168	0.87040	0.86912
0.82606	0.82714	0.82823	0.82931	0.83533	0.84138	0.84748	0.85363	0.85982	0.85891	0.85799

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99968	0.99966	0.99967	0.99969	0.99971	0.99971	0.99973	0.99970	0.99971	0.99971	0.99973
0.99929	0.99926	0.99929	0.99934	0.99939	0.99937	0.99940	0.99934	0.99936	0.99936	0.99941
0.99884	0.99881	0.99886	0.99895	0.99903	0.99898	0.99901	0.99892	0.99895	0.99895	0.99904
0.99834	0.99832	0.99839	0.99853	0.99864	0.99855	0.99857	0.99845	0.99849	0.99848	0.99863
0.99780	0.99780	0.99790	0.99809	0.99822	0.99809	0.99809	0.99794	0.99800	0.99797	0.99819
0.99723	0.99726	0.99740	0.99763	0.99778	0.99762	0.99759	0.99741	0.99750	0.99744	0.99773
0.99665	0.99672	0.99690	0.99716	0.99732	0.99714	0.99707	0.99687	0.99700	0.99690	0.99726
0.99607	0.99620	0.99642	0.99667	0.99684	0.99667	0.99656	0.99634	0.99652	0.99638	0.99678
0.99548	0.99568	0.99594	0.99618	0.99636	0.99621	0.99604	0.99581	0.99604	0.99586	0.99631
0.99490	0.99518	0.99546	0.99567	0.99586	0.99575	0.99552	0.99530	0.99557	0.99536	0.99584
0.99433	0.99469	0.99498	0.99516	0.99536	0.99529	0.99500	0.99480	0.99510	0.99487	0.99537
0.99378	0.99423	0.99450	0.99464	0.99486	0.99482	0.99447	0.99431	0.99463	0.99439	0.99490
0.99323	0.99376	0.99402	0.99414	0.99436	0.99434	0.99395	0.99383	0.99416	0.99392	0.99443
0.99269	0.99327	0.99352	0.99364	0.99386	0.99386	0.99342	0.99334	0.99367	0.99343	0.99396
0.99216	0.99276	0.99301	0.99314	0.99335	0.99336	0.99288	0.99284	0.99316	0.99293	0.99347
0.99160	0.99223	0.99249	0.99265	0.99283	0.99284	0.99235	0.99234	0.99265	0.99242	0.99296
0.99103	0.99164	0.99194	0.99214	0.99230	0.99232	0.99180	0.99181	0.99211	0.99187	0.99244
0.99041	0.99102	0.99137	0.99160	0.99173	0.99177	0.99124	0.99127	0.99155	0.99130	0.99189
0.98975	0.99034	0.99076	0.99103	0.99113	0.99120	0.99064	0.99070	0.99098	0.99068	0.99132
0.98903	0.98961	0.99011	0.99040	0.99048	0.99058	0.99002	0.99011	0.99036	0.99003	0.99071
0.98825	0.98881	0.98940	0.98972	0.98979	0.98992	0.98935	0.98946	0.98971	0.98932	0.99007
0.98739	0.98794	0.98864	0.98897	0.98904	0.98919	0.98864	0.98876	0.98900	0.98857	0.98937
0.98644	0.98699	0.98781	0.98813	0.98823	0.98837	0.98788	0.98799	0.98823	0.98777	0.98862
0.98540	0.98596	0.98689	0.98719	0.98735	0.98746	0.98706	0.98713	0.98739	0.98691	0.98780
0.98426	0.98481	0.98588	0.98614	0.98638	0.98644	0.98616	0.98617	0.98646	0.98598	0.98689
0.98299	0.98355	0.98474	0.98498	0.98531	0.98530	0.98516	0.98511	0.98544	0.98497	0.98590
0.98158	0.98216	0.98347	0.98368	0.98412	0.98405	0.98402	0.98394	0.98433	0.98385	0.98479
0.98002	0.98064	0.98204	0.98224	0.98279	0.98268	0.98274	0.98265	0.98310	0.98260	0.98358
0.97829	0.97897	0.98042	0.98065	0.98130	0.98116	0.98129	0.98123	0.98173	0.98120	0.98224
0.97635	0.97714	0.97859	0.97889	0.97963	0.97951	0.97966	0.97967	0.98021	0.97965	0.98076
0.97420	0.97513	0.97655	0.97692	0.97777	0.97772	0.97785	0.97796	0.97851	0.97794	0.97911
0.97184	0.97292	0.97428	0.97472	0.97571	0.97577	0.97584	0.97606	0.97662	0.97606	0.97729
0.96923	0.97049	0.97179	0.97226	0.97342	0.97362	0.97364	0.97396	0.97451	0.97401	0.97527
0.96637	0.96781	0.96908	0.96952	0.97090	0.97126	0.97121	0.97163	0.97216	0.97178	0.97304
0.96324	0.96486	0.96616	0.96649	0.96811	0.96865	0.96854	0.96906	0.96957	0.96935	0.97060
0.95983	0.96163	0.96302	0.96315	0.96502	0.96576	0.96561	0.96622	0.96674	0.96669	0.96794
0.95612	0.95809	0.95964	0.95952	0.96162	0.96258	0.96237	0.96309	0.96367	0.96377	0.96506

0.95207	0.95423	0.95599	0.95560	0.95788	0.95907	0.95881	0.95965	0.96033	0.96056	0.96193
0.94768	0.95001	0.95203	0.95136	0.95379	0.95525	0.95491	0.95589	0.95671	0.95702	0.95854
0.94293	0.94542	0.94772	0.94680	0.94934	0.95109	0.95063	0.95179	0.95280	0.95312	0.95484
0.93778	0.94041	0.94301	0.94186	0.94452	0.94659	0.94597	0.94731	0.94855	0.94884	0.95078
0.93222	0.93496	0.93786	0.93648	0.93933	0.94173	0.94090	0.94245	0.94394	0.94415	0.94631
0.92620	0.92904	0.93224	0.93060	0.93371	0.93646	0.93541	0.93718	0.93891	0.93903	0.94137
0.91967	0.92261	0.92608	0.92417	0.92762	0.93073	0.92946	0.93145	0.93342	0.93344	0.93591
0.91257	0.91564	0.91936	0.91713	0.92100	0.92446	0.92302	0.92523	0.92742	0.92736	0.92988
0.90485	0.90808	0.91202	0.90948	0.91378	0.91759	0.91605	0.91846	0.92089	0.92072	0.92326
0.89644	0.89988	0.90402	0.90115	0.90590	0.91005	0.90852	0.91110	0.91379	0.91348	0.91603
0.88730	0.89100	0.89528	0.89215	0.89732	0.90177	0.90039	0.90305	0.90605	0.90561	0.90818
0.87738	0.88139	0.88577	0.88242	0.88801	0.89273	0.89162	0.89424	0.89766	0.89706	0.89967
0.86664	0.87096	0.87541	0.87190	0.87791	0.88286	0.88213	0.88457	0.88851	0.88777	0.89045

1990	1991	1992	1993	1994	1995
0.99971	0.99974	0.99977	0.99980	0.99983	0.99986
0.99937	0.99943	0.99949	0.99955	0.99961	0.99967
0.99898	0.99907	0.99916	0.99925	0.99934	0.99943
0.99856	0.99867	0.99878	0.99889	0.99900	0.99911
0.99811	0.99825	0.99839	0.99853	0.99867	0.99881
0.99765	0.99781	0.99797	0.99813	0.99829	0.99845
0.99719	0.99736	0.99753	0.99770	0.99787	0.99804
0.99673	0.99690	0.99707	0.99724	0.99741	0.99758
0.99629	0.99645	0.99661	0.99676	0.99692	0.99708
0.99585	0.99598	0.99611	0.99624	0.99637	0.99650
0.99541	0.99550	0.99559	0.99568	0.99577	0.99586
0.99497	0.99500	0.99503	0.99506	0.99509	0.99512
0.99452	0.99449	0.99446	0.99443	0.99440	0.99437
0.99407	0.99398	0.99389	0.99380	0.99371	0.99362
0.99360	0.99345	0.99330	0.99315	0.99300	0.99285
0.99311	0.99291	0.99271	0.99252	0.99232	0.99212
0.99260	0.99238	0.99216	0.99194	0.99172	0.99150
0.99205	0.99182	0.99159	0.99137	0.99114	0.99091
0.99147	0.99125	0.99102	0.99079	0.99056	0.99033
0.99086	0.99064	0.99042	0.99021	0.98999	0.98977
0.99021	0.99000	0.98979	0.98958	0.98937	0.98917
0.98951	0.98930	0.98910	0.98889	0.98868	0.98847
0.98877	0.98856	0.98836	0.98815	0.98794	0.98773
0.98798	0.98776	0.98754	0.98733	0.98711	0.98689
0.98713	0.98690	0.98668	0.98645	0.98622	0.98599
0.98621	0.98598	0.98574	0.98550	0.98527	0.98503
0.98521	0.98497	0.98473	0.98450	0.98426	0.98402
0.98411	0.98388	0.98364	0.98340	0.98317	0.98293
0.98290	0.98268	0.98245	0.98222	0.98200	0.98177
0.98157	0.98135	0.98113	0.98092	0.98070	0.98049
0.98007	0.97987	0.97966	0.97946	0.97925	0.97904
0.97841	0.97822	0.97804	0.97785	0.97766	0.97748
0.97656	0.97639	0.97623	0.97606	0.97589	0.97573
0.97449	0.97436	0.97423	0.97411	0.97398	0.97385
0.97219	0.97212	0.97205	0.97198	0.97192	0.97185
0.96964	0.96965	0.96966	0.96967	0.96968	0.96969
0.96684	0.96696	0.96707	0.96719	0.96731	0.96742
0.96376	0.96402	0.96427	0.96452	0.96477	0.96502

0.96041	0.96082	0.96124	0.96165	0.96207	0.96249
0.95676	0.95735	0.95793	0.95852	0.95911	0.95969
0.95280	0.95356	0.95431	0.95507	0.95583	0.95659
0.94849	0.94940	0.95030	0.95121	0.95212	0.95303
0.94381	0.94484	0.94588	0.94691	0.94795	0.94899
0.93868	0.93983	0.94099	0.94214	0.94329	0.94445
0.93307	0.93433	0.93558	0.93684	0.93811	0.93937
0.92689	0.92827	0.92965	0.93104	0.93242	0.93381
0.92011	0.92162	0.92314	0.92467	0.92619	0.92772
0.91266	0.91433	0.91601	0.91769	0.91937	0.92105
0.90452	0.90636	0.90820	0.91005	0.91190	0.91376
0.89564	0.89765	0.89967	0.90169	0.90371	0.90574

Aged 30	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
30	0.99835	0.99845	0.99855	0.99865	0.99874	0.99884	0.99894	0.99904	0.99906	0.99908
31	0.99663	0.99683	0.99703	0.99722	0.99742	0.99762	0.99781	0.99801	0.99805	0.99809
32	0.99483	0.99512	0.99542	0.99572	0.99601	0.99631	0.99661	0.99690	0.99697	0.99703
33	0.99293	0.99333	0.99372	0.99412	0.99452	0.99491	0.99531	0.99571	0.99579	0.99588
34	0.99092	0.99142	0.99192	0.99242	0.99292	0.99341	0.99391	0.99441	0.99452	0.99463
35	0.98880	0.98940	0.99000	0.99060	0.99120	0.99181	0.99241	0.99301	0.99315	0.99328
36	0.98656	0.98726	0.98796	0.98866	0.98937	0.99007	0.99078	0.99148	0.99164	0.99181
37	0.98419	0.98499	0.98579	0.98660	0.98740	0.98820	0.98901	0.98982	0.99001	0.99021
38	0.98170	0.98260	0.98350	0.98440	0.98530	0.98621	0.98711	0.98801	0.98824	0.98847
39	0.97908	0.98007	0.98107	0.98206	0.98306	0.98405	0.98505	0.98605	0.98631	0.98658
40	0.97630	0.97738	0.97847	0.97955	0.98064	0.98173	0.98282	0.98391	0.98422	0.98452
41	0.97333	0.97450	0.97568	0.97686	0.97803	0.97921	0.98039	0.98158	0.98193	0.98228
42	0.97016	0.97142	0.97269	0.97395	0.97522	0.97649	0.97776	0.97903	0.97943	0.97983
43	0.96675	0.96810	0.96946	0.97081	0.97217	0.97353	0.97489	0.97625	0.97670	0.97715
44	0.96309	0.96453	0.96597	0.96741	0.96886	0.97031	0.97176	0.97321	0.97371	0.97421
45	0.95913	0.96066	0.96219	0.96373	0.96526	0.96680	0.96834	0.96989	0.97045	0.97100
46	0.95484	0.95647	0.95809	0.95972	0.96135	0.96299	0.96462	0.96626	0.96688	0.96750
47	0.95017	0.95190	0.95363	0.95536	0.95709	0.95883	0.96057	0.96231	0.96300	0.96369
48	0.94507	0.94691	0.94875	0.95059	0.95244	0.95429	0.95615	0.95801	0.95877	0.95954
49	0.93951	0.94148	0.94344	0.94542	0.94739	0.94937	0.95135	0.95334	0.95419	0.95503
50	0.93349	0.93559	0.93770	0.93981	0.94192	0.94404	0.94616	0.94829	0.94922	0.95015
51	0.92700	0.92925	0.93150	0.93376	0.93602	0.93829	0.94056	0.94284	0.94386	0.94488
52	0.92009	0.92248	0.92488	0.92728	0.92969	0.93210	0.93453	0.93695	0.93807	0.93919
53	0.91276	0.91530	0.91783	0.92038	0.92293	0.92549	0.92806	0.93063	0.93185	0.93307
54	0.90502	0.90769	0.91036	0.91304	0.91573	0.91842	0.92112	0.92384	0.92516	0.92650
55	0.89681	0.89960	0.90240	0.90521	0.90803	0.91086	0.91369	0.91654	0.91798	0.91943
56	0.88803	0.89095	0.89389	0.89683	0.89978	0.90275	0.90572	0.90870	0.91027	0.91185
57	0.87861	0.88168	0.88475	0.88783	0.89093	0.89403	0.89715	0.90028	0.90198	0.90369
58	0.86852	0.87172	0.87494	0.87817	0.88141	0.88467	0.88793	0.89121	0.89305	0.89490
59	0.85768	0.86103	0.86440	0.86778	0.87117	0.87458	0.87799	0.88143	0.88341	0.88539
60	0.84602	0.84952	0.85303	0.85656	0.86010	0.86366	0.86723	0.87082	0.87294	0.87506
61	0.83343	0.83709	0.84075	0.84443	0.84813	0.85185	0.85558	0.85933	0.86158	0.86384
62	0.81988	0.82368	0.82750	0.83133	0.83519	0.83906	0.84294	0.84685	0.84924	0.85164
63	0.80533	0.80927	0.81323	0.81721	0.82121	0.82522	0.82926	0.83332	0.83585	0.83838
64	0.78970	0.79377	0.79786	0.80197	0.80611	0.81026	0.81444	0.81863	0.82130	0.82398

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99910	0.99912	0.99914	0.99916	0.99918	0.99917	0.99917	0.99916	0.99916	0.99915	0.99916
0.99814	0.99818	0.99822	0.99826	0.99830	0.99829	0.99828	0.99826	0.99825	0.99824	0.99827

0.99709	0.99715	0.99722	0.99728	0.99734	0.99733	0.99731	0.99730	0.99729	0.99727	0.99732
0.99596	0.99605	0.99613	0.99622	0.99631	0.99629	0.99627	0.99626	0.99624	0.99623	0.99628
0.99474	0.99485	0.99496	0.99507	0.99518	0.99516	0.99515	0.99513	0.99512	0.99510	0.99517
0.99342	0.99355	0.99369	0.99382	0.99396	0.99394	0.99392	0.99391	0.99389	0.99388	0.99396
0.99197	0.99213	0.99230	0.99246	0.99262	0.99261	0.99259	0.99257	0.99255	0.99253	0.99263
0.99040	0.99060	0.99079	0.99099	0.99118	0.99116	0.99113	0.99111	0.99108	0.99106	0.99117
0.98870	0.98893	0.98916	0.98939	0.98962	0.98958	0.98955	0.98951	0.98948	0.98944	0.98957
0.98685	0.98711	0.98738	0.98765	0.98792	0.98787	0.98782	0.98777	0.98773	0.98768	0.98782
0.98483	0.98514	0.98545	0.98576	0.98607	0.98601	0.98594	0.98588	0.98582	0.98575	0.98591
0.98263	0.98299	0.98334	0.98369	0.98405	0.98397	0.98389	0.98381	0.98373	0.98365	0.98383
0.98023	0.98063	0.98103	0.98143	0.98183	0.98174	0.98164	0.98155	0.98146	0.98136	0.98156
0.97760	0.97805	0.97850	0.97895	0.97940	0.97929	0.97917	0.97906	0.97895	0.97884	0.97905
0.97471	0.97522	0.97572	0.97622	0.97672	0.97659	0.97646	0.97633	0.97620	0.97607	0.97631
0.97156	0.97212	0.97268	0.97324	0.97379	0.97364	0.97348	0.97333	0.97317	0.97301	0.97328
0.96812	0.96874	0.96937	0.96999	0.97061	0.97042	0.97023	0.97004	0.96985	0.96966	0.96995
0.96438	0.96507	0.96576	0.96645	0.96714	0.96691	0.96667	0.96644	0.96620	0.96596	0.96629
0.96030	0.96107	0.96184	0.96260	0.96337	0.96308	0.96279	0.96250	0.96221	0.96192	0.96229
0.95588	0.95673	0.95758	0.95843	0.95928	0.95893	0.95858	0.95823	0.95789	0.95754	0.95795
0.95109	0.95202	0.95295	0.95389	0.95483	0.95442	0.95401	0.95360	0.95320	0.95279	0.95324
0.94590	0.94693	0.94795	0.94898	0.95001	0.94953	0.94906	0.94859	0.94812	0.94765	0.94815
0.94031	0.94143	0.94255	0.94367	0.94480	0.94426	0.94373	0.94320	0.94266	0.94213	0.94267
0.93429	0.93552	0.93674	0.93797	0.93920	0.93859	0.93799	0.93738	0.93678	0.93617	0.93677
0.92783	0.92916	0.93050	0.93184	0.93318	0.93249	0.93181	0.93113	0.93045	0.92977	0.93043
0.92088	0.92234	0.92379	0.92525	0.92671	0.92595	0.92519	0.92443	0.92367	0.92291	0.92362
0.91343	0.91501	0.91659	0.91818	0.91977	0.91892	0.91807	0.91723	0.91638	0.91554	0.91629
0.90540	0.90712	0.90884	0.91056	0.91228	0.91135	0.91042	0.90948	0.90855	0.90762	0.90842
0.89675	0.89860	0.90046	0.90232	0.90418	0.90317	0.90215	0.90114	0.90013	0.89912	0.89995
0.88738	0.88937	0.89137	0.89337	0.89537	0.89429	0.89321	0.89213	0.89105	0.88997	0.89082
0.87719	0.87933	0.88146	0.88361	0.88576	0.88462	0.88349	0.88235	0.88122	0.88009	0.88097
0.86611	0.86838	0.87066	0.87294	0.87523	0.87407	0.87290	0.87174	0.87057	0.86941	0.87032
0.85405	0.85646	0.85888	0.86130	0.86373	0.86255	0.86138	0.86020	0.85902	0.85785	0.85880
0.84092	0.84348	0.84603	0.84860	0.85118	0.85000	0.84883	0.84766	0.84649	0.84532	0.84632
0.82667	0.82937	0.83207	0.83478	0.83751	0.83635	0.83519	0.83403	0.83288	0.83172	0.83282

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99918	0.99919	0.99921	0.99922	0.99925	0.99928	0.99932	0.99935	0.99938	0.99940	0.99942
0.99830	0.99833	0.99836	0.99839	0.99846	0.99852	0.99859	0.99865	0.99872	0.99876	0.99879
0.99736	0.99740	0.99745	0.99749	0.99760	0.99770	0.99780	0.99791	0.99801	0.99806	0.99811
0.99634	0.99640	0.99646	0.99651	0.99666	0.99680	0.99695	0.99709	0.99723	0.99730	0.99737
0.99524	0.99531	0.99539	0.99546	0.99564	0.99582	0.99601	0.99619	0.99638	0.99647	0.99657
0.99405	0.99413	0.99422	0.99430	0.99453	0.99475	0.99498	0.99520	0.99543	0.99557	0.99571
0.99273	0.99283	0.99293	0.99303	0.99330	0.99357	0.99384	0.99411	0.99438	0.99457	0.99475
0.99128	0.99139	0.99151	0.99162	0.99194	0.99226	0.99258	0.99290	0.99322	0.99346	0.99370
0.98969	0.98982	0.98995	0.99007	0.99044	0.99082	0.99119	0.99156	0.99193	0.99223	0.99252
0.98796	0.98810	0.98824	0.98838	0.98880	0.98922	0.98965	0.99007	0.99049	0.99086	0.99122
0.98607	0.98623	0.98639	0.98655	0.98702	0.98749	0.98796	0.98843	0.98890	0.98934	0.98979
0.98401	0.98419	0.98437	0.98455	0.98507	0.98558	0.98610	0.98662	0.98714	0.98767	0.98820
0.98175	0.98195	0.98215	0.98234	0.98291	0.98348	0.98405	0.98462	0.98519	0.98582	0.98645
0.97927	0.97948	0.97969	0.97991	0.98053	0.98116	0.98179	0.98242	0.98304	0.98379	0.98454
0.97655	0.97679	0.97703	0.97727	0.97795	0.97864	0.97932	0.98000	0.98068	0.98156	0.98243
0.97355	0.97382	0.97409	0.97436	0.97511	0.97585	0.97660	0.97735	0.97809	0.97911	0.98013
0.97025	0.97054	0.97084	0.97113	0.97196	0.97279	0.97361	0.97444	0.97527	0.97644	0.97762
0.96662	0.96696	0.96729	0.96762	0.96853	0.96944	0.97035	0.97126	0.97218	0.97352	0.97486

0.96267	0.96304	0.96341	0.96378	0.96479	0.96580	0.96681	0.96782	0.96883	0.97033	0.97184
0.95836	0.95877	0.95918	0.95959	0.96071	0.96183	0.96295	0.96408	0.96520	0.96686	0.96853
0.95369	0.95414	0.95459	0.95505	0.95629	0.95753	0.95877	0.96002	0.96126	0.96308	0.96491
0.94864	0.94913	0.94962	0.95012	0.95149	0.95286	0.95424	0.95561	0.95699	0.95897	0.96095
0.94321	0.94375	0.94429	0.94484	0.94634	0.94785	0.94936	0.95087	0.95238	0.95450	0.95663
0.93736	0.93795	0.93854	0.93914	0.94078	0.94243	0.94408	0.94573	0.94739	0.94965	0.95191
0.93109	0.93174	0.93240	0.93306	0.93484	0.93663	0.93841	0.94021	0.94200	0.94438	0.94677
0.92433	0.92504	0.92575	0.92646	0.92839	0.93033	0.93227	0.93422	0.93617	0.93867	0.94118
0.91704	0.91780	0.91856	0.91931	0.92141	0.92352	0.92563	0.92774	0.92986	0.93247	0.93509
0.90921	0.91000	0.91080	0.91159	0.91387	0.91615	0.91844	0.92073	0.92303	0.92575	0.92847
0.90078	0.90161	0.90244	0.90328	0.90574	0.90821	0.91069	0.91317	0.91566	0.91847	0.92128
0.89168	0.89253	0.89339	0.89424	0.89692	0.89960	0.90228	0.90498	0.90768	0.91059	0.91350
0.88185	0.88273	0.88361	0.88450	0.88739	0.89029	0.89321	0.89613	0.89906	0.90207	0.90508
0.87123	0.87215	0.87306	0.87397	0.87710	0.88024	0.88340	0.88656	0.88974	0.89287	0.89602
0.85975	0.86071	0.86166	0.86262	0.86600	0.86939	0.87280	0.87621	0.87965	0.88296	0.88629
0.84732	0.84833	0.84934	0.85034	0.85591	0.86152	0.86716	0.87284	0.87856	0.87720	0.87584
0.83391	0.83500	0.83610	0.83720	0.84300	0.84884	0.85472	0.86064	0.86660	0.86562	0.86463

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99944	0.99946	0.99947	0.99950	0.99948	0.99948	0.99946	0.99949	0.99948	0.99948	0.99949
0.99886	0.99887	0.99892	0.99899	0.99894	0.99895	0.99891	0.99896	0.99894	0.99893	0.99896
0.99824	0.99824	0.99834	0.99845	0.99837	0.99840	0.99834	0.99841	0.99838	0.99835	0.99841
0.99757	0.99756	0.99773	0.99787	0.99776	0.99782	0.99774	0.99784	0.99780	0.99773	0.99783
0.99684	0.99682	0.99707	0.99724	0.99711	0.99720	0.99711	0.99724	0.99718	0.99707	0.99722
0.99606	0.99602	0.99637	0.99655	0.99642	0.99654	0.99645	0.99659	0.99653	0.99637	0.99657
0.99519	0.99514	0.99560	0.99580	0.99566	0.99580	0.99573	0.99589	0.99581	0.99561	0.99588
0.99423	0.99418	0.99476	0.99495	0.99484	0.99497	0.99496	0.99511	0.99503	0.99480	0.99512
0.99319	0.99314	0.99384	0.99401	0.99396	0.99406	0.99414	0.99424	0.99419	0.99394	0.99429
0.99204	0.99199	0.99281	0.99295	0.99298	0.99303	0.99323	0.99328	0.99325	0.99300	0.99338
0.99076	0.99072	0.99167	0.99178	0.99191	0.99189	0.99222	0.99221	0.99223	0.99198	0.99238
0.98934	0.98932	0.99039	0.99047	0.99071	0.99063	0.99108	0.99103	0.99111	0.99085	0.99126
0.98777	0.98779	0.98895	0.98903	0.98937	0.98924	0.98979	0.98973	0.98987	0.98959	0.99005
0.98602	0.98611	0.98731	0.98742	0.98787	0.98772	0.98832	0.98830	0.98849	0.98818	0.98870
0.98407	0.98427	0.98548	0.98565	0.98619	0.98606	0.98668	0.98673	0.98696	0.98662	0.98721
0.98190	0.98224	0.98342	0.98366	0.98432	0.98426	0.98486	0.98501	0.98525	0.98490	0.98555
0.97952	0.98001	0.98114	0.98145	0.98224	0.98229	0.98284	0.98309	0.98334	0.98301	0.98371
0.97689	0.97756	0.97863	0.97898	0.97994	0.98013	0.98062	0.98098	0.98122	0.98094	0.98168
0.97401	0.97486	0.97589	0.97622	0.97740	0.97775	0.97818	0.97864	0.97885	0.97870	0.97944
0.97085	0.97190	0.97296	0.97316	0.97459	0.97512	0.97549	0.97604	0.97625	0.97625	0.97698
0.96742	0.96864	0.96980	0.96980	0.97148	0.97222	0.97253	0.97318	0.97340	0.97357	0.97430
0.96367	0.96508	0.96639	0.96615	0.96806	0.96901	0.96927	0.97003	0.97030	0.97063	0.97140
0.95960	0.96119	0.96272	0.96220	0.96429	0.96548	0.96569	0.96657	0.96694	0.96740	0.96825
0.95517	0.95694	0.95873	0.95793	0.96017	0.96163	0.96175	0.96278	0.96330	0.96383	0.96484
0.95038	0.95231	0.95439	0.95334	0.95569	0.95745	0.95745	0.95865	0.95936	0.95990	0.96111
0.94519	0.94726	0.94965	0.94836	0.95085	0.95292	0.95275	0.95414	0.95508	0.95559	0.95703
0.93958	0.94177	0.94446	0.94294	0.94562	0.94802	0.94765	0.94925	0.95044	0.95087	0.95253
0.93351	0.93581	0.93880	0.93702	0.93996	0.94272	0.94211	0.94393	0.94537	0.94571	0.94756
0.92693	0.92934	0.93260	0.93055	0.93383	0.93695	0.93612	0.93816	0.93984	0.94009	0.94206
0.91978	0.92231	0.92583	0.92347	0.92717	0.93064	0.92963	0.93190	0.93381	0.93396	0.93599
0.91200	0.91469	0.91844	0.91576	0.91990	0.92372	0.92262	0.92508	0.92723	0.92727	0.92933
0.90352	0.90643	0.91038	0.90738	0.91197	0.91613	0.91503	0.91767	0.92008	0.91998	0.92205
0.89432	0.89750	0.90158	0.89831	0.90333	0.90780	0.90684	0.90956	0.91229	0.91205	0.91415
0.88432	0.88781	0.89200	0.88851	0.89395	0.89870	0.89801	0.90069	0.90384	0.90344	0.90559

0.87349	0.87731	0.88157	0.87792	0.88379	0.88876	0.88845	0.89095	0.89463	0.89409	0.89630
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1990	1991	1992	1993	1994	1995
0.99951	0.99946	0.99941	0.99936	0.99931	0.99926
0.99899	0.99892	0.99885	0.99878	0.99871	0.99864
0.99844	0.99836	0.99828	0.99820	0.99812	0.99804
0.99786	0.99778	0.99770	0.99762	0.99754	0.99746
0.99724	0.99717	0.99710	0.99703	0.99696	0.99689
0.99658	0.99653	0.99647	0.99641	0.99635	0.99629
0.99589	0.99583	0.99577	0.99571	0.99565	0.99559
0.99514	0.99508	0.99502	0.99496	0.99490	0.99484
0.99434	0.99427	0.99420	0.99414	0.99407	0.99400
0.99349	0.99341	0.99333	0.99325	0.99317	0.99309
0.99257	0.99248	0.99239	0.99230	0.99221	0.99212
0.99155	0.99146	0.99137	0.99128	0.99120	0.99111
0.99045	0.99036	0.99027	0.99018	0.99010	0.99001
0.98923	0.98915	0.98908	0.98900	0.98892	0.98884
0.98789	0.98782	0.98775	0.98768	0.98761	0.98754
0.98639	0.98633	0.98627	0.98621	0.98615	0.98609
0.98471	0.98467	0.98463	0.98459	0.98455	0.98451
0.98285	0.98283	0.98281	0.98279	0.98277	0.98275
0.98077	0.98079	0.98080	0.98082	0.98084	0.98086
0.97845	0.97853	0.97861	0.97869	0.97876	0.97884
0.97589	0.97604	0.97620	0.97636	0.97651	0.97667
0.97307	0.97333	0.97359	0.97386	0.97412	0.97439
0.96997	0.97037	0.97077	0.97117	0.97157	0.97197
0.96660	0.96716	0.96772	0.96829	0.96885	0.96941
0.96292	0.96366	0.96439	0.96513	0.96587	0.96660
0.95894	0.95984	0.96075	0.96165	0.96256	0.96347
0.95460	0.95566	0.95671	0.95777	0.95883	0.95989
0.94989	0.95107	0.95225	0.95344	0.95463	0.95582
0.94473	0.94603	0.94733	0.94864	0.94994	0.95125
0.93908	0.94049	0.94189	0.94330	0.94472	0.94613
0.93286	0.93439	0.93592	0.93746	0.93899	0.94053
0.92603	0.92770	0.92937	0.93104	0.93272	0.93440
0.91854	0.92036	0.92219	0.92401	0.92585	0.92768
0.91035	0.91234	0.91433	0.91633	0.91833	0.92033
0.90141	0.90357	0.90574	0.90791	0.91008	0.91226

Aged 45	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
45	0.99589	0.99599	0.99609	0.99619	0.99629	0.99639	0.99649	0.99659	0.99665	0.99671
46	0.99144	0.99164	0.99185	0.99205	0.99225	0.99246	0.99266	0.99286	0.99299	0.99311
47	0.98659	0.98691	0.98722	0.98754	0.98785	0.98817	0.98849	0.98880	0.98900	0.98920
48	0.98129	0.98173	0.98217	0.98262	0.98306	0.98350	0.98394	0.98438	0.98466	0.98494
49	0.97552	0.97610	0.97668	0.97726	0.97784	0.97842	0.97901	0.97959	0.97995	0.98032
50	0.96927	0.97000	0.97073	0.97146	0.97220	0.97293	0.97366	0.97440	0.97485	0.97531
51	0.96253	0.96342	0.96432	0.96521	0.96611	0.96700	0.96790	0.96879	0.96934	0.96989
52	0.95535	0.95641	0.95746	0.95851	0.95957	0.96063	0.96169	0.96275	0.96340	0.96405
53	0.94775	0.94896	0.95017	0.95138	0.95260	0.95381	0.95503	0.95625	0.95701	0.95777
54	0.93971	0.94107	0.94243	0.94380	0.94516	0.94653	0.94790	0.94927	0.95014	0.95102
55	0.93118	0.93268	0.93419	0.93570	0.93722	0.93873	0.94025	0.94177	0.94277	0.94377
56	0.92206	0.92372	0.92538	0.92704	0.92870	0.93037	0.93204	0.93372	0.93485	0.93599
57	0.91229	0.91410	0.91592	0.91774	0.91957	0.92139	0.92323	0.92506	0.92634	0.92761

58	0.90181	0.90378	0.90577	0.90775	0.90975	0.91174	0.91374	0.91575	0.91717	0.91859
59	0.89055	0.89270	0.89485	0.89701	0.89917	0.90134	0.90351	0.90569	0.90726	0.90883
60	0.87844	0.88076	0.88308	0.88541	0.88775	0.89009	0.89244	0.89480	0.89651	0.89823
61	0.86538	0.86787	0.87037	0.87288	0.87540	0.87792	0.88045	0.88299	0.88485	0.88671
62	0.85131	0.85398	0.85665	0.85934	0.86203	0.86473	0.86744	0.87016	0.87217	0.87418
63	0.83620	0.83903	0.84188	0.84474	0.84760	0.85048	0.85336	0.85626	0.85841	0.86057
64	0.81997	0.82296	0.82597	0.82899	0.83202	0.83506	0.83811	0.84117	0.84348	0.84579

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99677	0.99682	0.99688	0.99694	0.99700	0.99697	0.99695	0.99692	0.99690	0.99687	0.99690
0.99324	0.99336	0.99349	0.99361	0.99374	0.99368	0.99362	0.99355	0.99349	0.99343	0.99349
0.98940	0.98960	0.98979	0.98999	0.99019	0.99008	0.98997	0.98986	0.98976	0.98965	0.98974
0.98522	0.98549	0.98577	0.98605	0.98633	0.98617	0.98600	0.98584	0.98567	0.98551	0.98565
0.98068	0.98104	0.98141	0.98177	0.98214	0.98191	0.98169	0.98146	0.98124	0.98102	0.98119
0.97576	0.97622	0.97667	0.97713	0.97758	0.97729	0.97701	0.97672	0.97644	0.97615	0.97637
0.97044	0.97099	0.97154	0.97209	0.97264	0.97229	0.97194	0.97159	0.97124	0.97089	0.97115
0.96470	0.96535	0.96601	0.96666	0.96731	0.96690	0.96648	0.96606	0.96564	0.96523	0.96554
0.95853	0.95929	0.96005	0.96082	0.96158	0.96109	0.96060	0.96011	0.95962	0.95913	0.95950
0.95190	0.95278	0.95365	0.95453	0.95541	0.95484	0.95427	0.95371	0.95314	0.95257	0.95301
0.94477	0.94578	0.94678	0.94779	0.94879	0.94814	0.94749	0.94684	0.94619	0.94554	0.94603
0.93712	0.93826	0.93940	0.94054	0.94169	0.94094	0.94020	0.93946	0.93872	0.93798	0.93852
0.92889	0.93017	0.93145	0.93274	0.93402	0.93319	0.93236	0.93153	0.93071	0.92988	0.93046
0.92001	0.92144	0.92286	0.92430	0.92573	0.92481	0.92390	0.92299	0.92208	0.92117	0.92179
0.91040	0.91197	0.91355	0.91513	0.91671	0.91572	0.91474	0.91375	0.91277	0.91179	0.91244
0.89995	0.90167	0.90340	0.90513	0.90687	0.90582	0.90478	0.90374	0.90270	0.90167	0.90235
0.88858	0.89045	0.89233	0.89421	0.89609	0.89502	0.89394	0.89287	0.89180	0.89073	0.89144
0.87620	0.87822	0.88025	0.88228	0.88432	0.88323	0.88214	0.88105	0.87997	0.87888	0.87964
0.86274	0.86491	0.86709	0.86927	0.87146	0.87037	0.86929	0.86821	0.86712	0.86604	0.86686
0.84812	0.85044	0.85278	0.85512	0.85746	0.85639	0.85532	0.85425	0.85318	0.85212	0.85302

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99693	0.99696	0.99699	0.99702	0.99709	0.99716	0.99722	0.99729	0.99736	0.99751	0.99766
0.99355	0.99360	0.99366	0.99372	0.99387	0.99402	0.99417	0.99433	0.99448	0.99479	0.99510
0.98984	0.98993	0.99003	0.99012	0.99036	0.99060	0.99084	0.99108	0.99133	0.99181	0.99229
0.98578	0.98592	0.98606	0.98619	0.98654	0.98688	0.98723	0.98757	0.98791	0.98856	0.98921
0.98137	0.98155	0.98173	0.98191	0.98237	0.98283	0.98329	0.98375	0.98421	0.98503	0.98585
0.97659	0.97681	0.97704	0.97726	0.97784	0.97843	0.97902	0.97961	0.98019	0.98118	0.98216
0.97142	0.97168	0.97195	0.97221	0.97294	0.97366	0.97439	0.97512	0.97584	0.97699	0.97814
0.96586	0.96618	0.96649	0.96681	0.96767	0.96854	0.96940	0.97027	0.97114	0.97244	0.97373
0.95987	0.96024	0.96061	0.96098	0.96199	0.96300	0.96402	0.96503	0.96605	0.96749	0.96893
0.95344	0.95388	0.95432	0.95476	0.95592	0.95707	0.95823	0.95939	0.96055	0.96213	0.96370
0.94652	0.94702	0.94751	0.94800	0.94932	0.95064	0.95196	0.95328	0.95461	0.95631	0.95801
0.93907	0.93961	0.94015	0.94069	0.94218	0.94368	0.94517	0.94667	0.94817	0.94999	0.95181
0.93104	0.93162	0.93221	0.93279	0.93447	0.93615	0.93784	0.93952	0.94121	0.94314	0.94507
0.92241	0.92304	0.92366	0.92428	0.92616	0.92804	0.92992	0.93180	0.93369	0.93572	0.93775
0.91309	0.91374	0.91439	0.91504	0.91714	0.91923	0.92134	0.92345	0.92556	0.92769	0.92983
0.90303	0.90371	0.90439	0.90507	0.90740	0.90973	0.91207	0.91442	0.91677	0.91901	0.92127
0.89215	0.89287	0.89358	0.89430	0.89688	0.89946	0.90205	0.90465	0.90726	0.90965	0.91205
0.88040	0.88116	0.88192	0.88268	0.88552	0.88837	0.89123	0.89410	0.89697	0.89955	0.90214
0.86767	0.86849	0.86930	0.87012	0.87521	0.88033	0.88547	0.89065	0.89586	0.89368	0.89150
0.85393	0.85484	0.85576	0.85667	0.86200	0.86737	0.87277	0.87820	0.88367	0.88188	0.88009

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99780	0.99794	0.99791	0.99799	0.99810	0.99817	0.99815	0.99825	0.99827	0.99825	0.99832
0.99538	0.99567	0.99559	0.99574	0.99599	0.99617	0.99610	0.99631	0.99633	0.99633	0.99646
0.99271	0.99319	0.99305	0.99324	0.99366	0.99398	0.99385	0.99417	0.99418	0.99424	0.99440
0.98978	0.99044	0.99028	0.99043	0.99109	0.99158	0.99138	0.99180	0.99179	0.99196	0.99213
0.98657	0.98743	0.98729	0.98733	0.98824	0.98891	0.98865	0.98917	0.98915	0.98948	0.98964
0.98308	0.98413	0.98409	0.98393	0.98508	0.98596	0.98566	0.98627	0.98626	0.98677	0.98693
0.97928	0.98050	0.98063	0.98022	0.98162	0.98271	0.98235	0.98307	0.98312	0.98379	0.98399
0.97513	0.97655	0.97691	0.97621	0.97780	0.97913	0.97872	0.97956	0.97972	0.98052	0.98080
0.97064	0.97224	0.97286	0.97188	0.97362	0.97522	0.97474	0.97572	0.97603	0.97690	0.97734
0.96577	0.96753	0.96845	0.96722	0.96908	0.97098	0.97037	0.97154	0.97204	0.97291	0.97357
0.96049	0.96240	0.96364	0.96217	0.96416	0.96639	0.96561	0.96697	0.96770	0.96854	0.96943
0.95480	0.95683	0.95838	0.95668	0.95886	0.96142	0.96044	0.96201	0.96300	0.96376	0.96487
0.94863	0.95077	0.95263	0.95067	0.95312	0.95605	0.95483	0.95662	0.95786	0.95854	0.95984
0.94194	0.94419	0.94634	0.94410	0.94691	0.95020	0.94876	0.95078	0.95226	0.95283	0.95427
0.93467	0.93706	0.93947	0.93692	0.94015	0.94379	0.94218	0.94443	0.94615	0.94662	0.94812
0.92676	0.92932	0.93197	0.92909	0.93278	0.93678	0.93507	0.93752	0.93949	0.93984	0.94137
0.91815	0.92092	0.92379	0.92059	0.92474	0.92908	0.92738	0.93000	0.93223	0.93246	0.93400
0.90880	0.91184	0.91487	0.91139	0.91598	0.92063	0.91908	0.92179	0.92435	0.92442	0.92600
0.89864	0.90201	0.90514	0.90145	0.90647	0.91140	0.91013	0.91280	0.91578	0.91569	0.91732
0.88763	0.89133	0.89456	0.89071	0.89617	0.90132	0.90045	0.90293	0.90645	0.90621	0.90792

1990	1991	1992	1993	1994	1995
0.99848	0.99849	0.99850	0.99851	0.99852	0.99853
0.99678	0.99681	0.99684	0.99687	0.99690	0.99693
0.99490	0.99495	0.99500	0.99505	0.99510	0.99515
0.99279	0.99288	0.99297	0.99306	0.99315	0.99324
0.99045	0.99060	0.99074	0.99089	0.99104	0.99119
0.98785	0.98808	0.98831	0.98853	0.98876	0.98899
0.98500	0.98533	0.98567	0.98600	0.98634	0.98668
0.98186	0.98234	0.98281	0.98328	0.98376	0.98423
0.97845	0.97909	0.97972	0.98036	0.98100	0.98164
0.97473	0.97554	0.97635	0.97717	0.97798	0.97880
0.97069	0.97168	0.97266	0.97365	0.97464	0.97562
0.96631	0.96744	0.96858	0.96972	0.97085	0.97200
0.96153	0.96280	0.96406	0.96533	0.96660	0.96787
0.95631	0.95769	0.95908	0.96047	0.96186	0.96325
0.95059	0.95208	0.95358	0.95507	0.95657	0.95807
0.94430	0.94591	0.94753	0.94915	0.95077	0.95239
0.93739	0.93914	0.94090	0.94266	0.94442	0.94618
0.92980	0.93171	0.93362	0.93554	0.93746	0.93938
0.92151	0.92359	0.92567	0.92776	0.92985	0.93194
0.91246	0.91471	0.91697	0.91923	0.92150	0.92377

Aged 60	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
60	0.98640	0.98662	0.98685	0.98707	0.98730	0.98752	0.98775	0.98797	0.98815	0.98834
61	0.97173	0.97219	0.97264	0.97310	0.97356	0.97401	0.97447	0.97493	0.97530	0.97566
62	0.95593	0.95662	0.95731	0.95800	0.95870	0.95939	0.96008	0.96077	0.96133	0.96188
63	0.93896	0.93988	0.94080	0.94173	0.94265	0.94357	0.94449	0.94542	0.94616	0.94691
64	0.92074	0.92188	0.92302	0.92417	0.92531	0.92646	0.92761	0.92876	0.92970	0.93064

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.98852	0.98871	0.98889	0.98908	0.98926	0.98919	0.98912	0.98904	0.98897	0.98890	0.98894

0.97603	0.97640	0.97677	0.97714	0.97751	0.97739	0.97727	0.97715	0.97703	0.97690	0.97699
0.96244	0.96299	0.96355	0.96411	0.96466	0.96451	0.96436	0.96421	0.96406	0.96391	0.96406
0.94765	0.94840	0.94914	0.94989	0.95064	0.95048	0.95031	0.95015	0.94999	0.94983	0.95004
0.93159	0.93253	0.93348	0.93442	0.93537	0.93521	0.93504	0.93488	0.93472	0.93456	0.93489

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.98898	0.98902	0.98906	0.98910	0.98938	0.98966	0.98994	0.99022	0.99050	0.99064	0.99079
0.97707	0.97716	0.97724	0.97733	0.97791	0.97849	0.97907	0.97965	0.98023	0.98055	0.98087
0.96420	0.96435	0.96449	0.96463	0.96553	0.96642	0.96732	0.96822	0.96911	0.96967	0.97022
0.95026	0.95048	0.95069	0.95091	0.95428	0.95767	0.96107	0.96449	0.96791	0.96333	0.95878
0.93522	0.93555	0.93588	0.93621	0.93988	0.94358	0.94728	0.95100	0.95474	0.95061	0.94651

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99154	0.99174	0.99202	0.99165	0.99216	0.99257	0.99245	0.99269	0.99296	0.99284	0.99288
0.98233	0.98278	0.98331	0.98258	0.98361	0.98441	0.98429	0.98473	0.98529	0.98504	0.98511
0.97232	0.97309	0.97381	0.97276	0.97429	0.97546	0.97548	0.97603	0.97696	0.97655	0.97666
0.96145	0.96259	0.96346	0.96215	0.96418	0.96568	0.96598	0.96651	0.96790	0.96733	0.96751
0.94967	0.95121	0.95220	0.95068	0.95322	0.95500	0.95570	0.95606	0.95804	0.95731	0.95760

1990	1991	1992	1993	1994	1995
0.99338	0.99352	0.99366	0.99380	0.99394	0.99408
0.98611	0.98641	0.98670	0.98700	0.98730	0.98760
0.97813	0.97860	0.97908	0.97955	0.98002	0.98050
0.96941	0.97007	0.97074	0.97140	0.97207	0.97273
0.95989	0.96075	0.96161	0.96247	0.96334	0.96420

Table B-7: Male Labour Force by Age Groups (thousands)

Year (August)	15~19	20~24	25~34	35~44	45~54	55~59	60~64	65~
1966	345.8	401.6	713.6	774.5	638.6	254.7	174.2	97.4
1967	338.3	418.4	743.4	777.4	647.5	260.3	175.6	101.6
1968	326.0	450.2	744.2	751.3	658.8	264.7	184.6	96.3
1969	327.8	467.3	802.8	756.4	679.7	270.4	183.5	100.7
1970	334.1	493.9	841.8	769.2	683.0	275.7	187.7	98.7
1971	332.6	514.6	876.6	778.0	696.2	276.7	190.9	100.8
1972	331.0	509.3	943.0	764.5	721.3	278.5	197.3	106.0
1973	352.1	514.4	964.3	753.2	727.2	270.9	202.2	103.6
1974	343.6	514.8	995.9	760.2	735.7	267.0	198.3	91.6
1975	363.3	517.8	1,013.4	774.4	745.0	272.8	190.9	85.2
1976	373.8	522.1	1,031.5	768.4	741.0	279.3	179.7	75.3
1977	393.9	530.6	1,072.2	785.7	737.4	286.6	174.9	74.4
1978	401.4	534.8	1,094.0	804.4	718.9	284.1	168.5	67.1
1979	405.3	552.9	1,113.8	827.8	708.3	294.4	149.7	66.5
1980	411.9	568.5	1,136.0	858.4	703.3	305.2	142.6	66.5
1981	401.5	589.0	1,164.4	886.0	701.7	300.0	150.8	65.0
1982	405.0	587.1	1,171.3	940.3	693.7	294.4	146.2	58.1
1983	377.8	595.0	1,193.6	981.3	698.3	294.7	137.2	55.3
1984	384.9	596.2	1,195.1	1,016.9	706.4	293.7	146.4	59.6
1985	382.7	597.9	1,203.7	1,057.8	716.0	294.1	147.3	60.7
1986	401.2	589.4	1,230.2	1,091.0	730.6	290.8	158.8	59.9
1987	404.3	588.0	1,254.3	1,127.6	746.1	282.4	158.8	62.8

1988	402.8	593.5	1,269.8	1,162.2	750.4	275.2	169.6	64.3
1989	426.9	596.7	1,309.5	1,180.4	793.5	277.6	180.7	67.2
1990	411.9	605.0	1,317.0	1,221.3	834.1	278.6	184.9	69.1
1991	369.2	613.8	1,326.7	1,240.1	872.3	266.4	180.8	77.1
1992	362.4	633.3	1,314.1	1,239.7	913.3	281.1	173.5	80.5
1993	346.2	628.1	1,318.1	1,252.2	947.3	272.0	165.6	74.0
1994	347.2	626.1	1,287.5	1,239.4	971.2	288.5	165.9	82.8
1995	360.8	637.7	1,298.6	1,256.3	1,012.5	304.1	158.8	94.3

Note: Figures in 1995 are based at June.

Sources: I. Castles, *The Labour Force, Australia, Historical Summary, 1966 to 1984*.
 Australian Bureau of Statistics, *The Labour Force, Australia, Various Years*.

Table B-8: Males Not in the Labour Force by Age Groups (thousands)

Year (August)	15~19	20~24	25~34	35~44	45~54	55~59	60~64	65~
1966	173.4	27.0	16.8	15.0	27.3	25.5	45.2	320.4
1967	184.6	35.4	17.5	18.3	29.8	24.8	48.1	323.3
1968	204.1	36.5	18.3	16.9	29.6	26.5	47.6	331.8
1969	214.9	42.3	18.9	18.6	29.8	27.4	53.9	344.4
1970	211.8	41.2	20.7	16.5	29.2	26.6	54.8	348.2
1971	227.3	47.8	23.4	17.5	35.1	27.7	59.3	361.5
1972	234.8	46.1	22.2	18.8	33.2	28.9	60.6	369.2
1973	229.9	51.5	22.7	20.9	40.7	35.9	63.5	382.7
1974	245.8	57.2	30.8	21.9	45.3	37.8	75.6	406.1
1975	242.2	56.9	33.5	25.6	48.4	37.9	87.4	424.6
1976	247.1	52.9	33.0	25.4	47.3	42.1	101.1	451.3
1977	240.4	51.2	34.3	24.3	53.8	45.5	106.3	469.2
1978	256.2	62.3	46.3	37.1	66.1	62.6	113.8	493.2
1979	254.6	60.2	49.1	37.9	68.5	64.8	130.0	512.5
1980	243.6	59.5	53.5	36.4	66.2	61.0	141.6	531.3
1981	248.0	56.3	56.9	44.5	67.1	69.7	143.5	550.5
1982	243.6	70.4	63.4	48.2	77.0	78.0	160.5	573.5
1983	271.0	69.0	57.2	52.1	74.5	82.0	183.2	590.2
1984	267.6	71.0	62.1	57.1	78.1	89.0	190.6	603.3
1985	280.8	68.6	70.2	57.8	79.4	90.7	198.3	623.7
1986	284.2	72.2	67.3	65.2	80.9	93.2	193.2	653.1
1987	299.5	69.7	71.3	66.4	87.2	96.8	196.9	677.7
1988	311.7	65.1	85.0	71.7	109.1	98.9	190.2	702.3
1989	288.9	72.1	72.1	84.8	100.8	92.9	182.2	725.9
1990	297.1	76.7	80.7	74.0	96.5	87.9	180.8	747.4
1991	320.8	91.2	80.1	82.1	99.3	104.1	184.0	766.8
1992	308.2	90.0	96.3	89.7	112.9	98.1	187.5	789.1
1993	310.8	102.7	91.5	90.6	125.1	115.3	189.9	821.8
1994	304.4	98.1	104.2	99.6	127.2	109.3	184.6	834.3
1995	288.1	86.4	100.8	100.7	119.6	104.9	189.4	841.2

Note: Figures in 1995 are based at June.

Sources: I. Castles, *The Labour Force, Australia, Historical Summary, 1966 to 1984*.
 Australian Bureau of Statistics, *The Labour Force, Australia, Various Years*.

Table B-9: Unemployed Males by Age Groups (thousands)

Year (August)	15~19	20~24	25~34	35~44	45~54	55~59	60~64
1966	8.8	5.6	5.1	7.1	11.7	*	*
1967	10.5	7.3	6.1	7.2	11.9	*	*
1968	9.5	5.8	6.1	11.9	*	*	*
1969	7.6	6.1	4.9	5.4	8.7	*	*
1970	9.8	6.4	6.9	4.7	7.5	*	*
1971	10.6	9.0	6.3	7.2	9.0	*	*
1972	18.7	13.3	14.5	10.2	17.2	*	*
1973	16.3	10.8	7.9	7.0	9.4	*	*
1974	17.1	14.9	13.3	9.4	1.4	*	*
1975	39.4	27.0	24.1	17.6	16.7	6.2	7.0
1976	47.8	33.9	28.7	18.3	17.3	5.1	5.1
1977	62.2	38.4	34.3	22.7	18.2	6.6	6.7
1978	65.7	47.2	42.2	26.3	23.5	10.5	5.2
1979	59.2	46.4	40.8	20.1	17.1	8.8	4.0
1980	60.5	48.2	44.8	21.3	19.8	7.5	6.9
1981	44.8	49.1	47.5	21.2	19.5	10.7	6.4
1982	66.0	66.0	64.3	33.8	25.2	9.2	6.7
1983	86.7	102.7	108.5	59.0	41.4	19.7	9.9
1984	85.0	84.9	91.3	51.2	40.1	15.9	11.9
1985	73.7	74.2	86.2	46.6	34.7	20.7	11.5
1986	74.9	72.5	83.7	50.1	39.8	17.5	10.1
1987	72.9	73.9	87.2	53.6	31.7	16.3	10.9
1988	60.7	64.4	71.4	43.9	33.5	17.5	13.9
1989	55.0	47.6	66.8	41.3	23.4	12.7	13.0
1990	68.4	73.5	92.6	46.2	27.0	13.3	15.7
1991	80.5	100.2	131.1	91.3	52.6	23.4	22.3
1992	91.1	115.9	141.7	93.0	66.0	28.7	26.7
1993	83.1	114.6	144.8	98.7	68.6	32.9	27.3
1994	66.5	96.3	113.3	84.0	65.3	29.6	17.3
1995	76.4	80.4	104.5	76.3	56.1	28.5	13.1

Note: Figures in 1995 are based at June.

Sources: I. Castles, *The Labour Force, Australia, Historical Summary, 1966 to 1984*.
 Australian Bureau of Statistics, *The Labour Force, Australia, Various Years*.

Table B-10: Rate of Male Unemployment by Age Groups Based on Census

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64
1911	0.026	0.035	0.030	0.028	0.026	0.027	0.028	0.033	0.036	0.041
1921	0.045	0.034	0.034	0.028	0.028	0.023	0.023	0.018	0.018	0.032
1933	0.283	0.260	0.228	0.225	0.226	0.246	0.271	0.296	0.351	0.216
1947	0.020	0.032	0.025	0.022	0.021	0.023	0.026	0.030	0.035	0.041
1954	0.014	0.015	0.012	0.011	0.010	0.012	0.013	0.016	0.021	0.024
1961	0.044	0.053	0.043	0.035	0.033	0.032	0.033	0.037	0.041	0.041

Source: The Commonwealth Bureau of Census and Statistics, *Census of the Commonwealth of Australia, 1911, 1921, 1933, 1947, 1954, and 1961*.

Table B-11: Rate of Male Unemployment by Age Groups

Year (August)	15~19	20~24	25~34	35~44	45~54	55~59	60~64	Total
1966	0.026	0.014	0.007	0.009	0.018	0.046	0.067	0.012
1967	0.031	0.017	0.008	0.009	0.011	0.028	0.041	0.011

1968	0.029	0.013	0.008	0.016	0.018	0.045	0.064	0.010
1969	0.023	0.013	0.006	0.007	0.013	0.032	0.047	0.009
1970	0.029	0.013	0.008	0.006	0.011	0.011	0.011	0.010
1971	0.032	0.017	0.007	0.009	0.013	0.013	0.013	0.011
1972	0.056	0.026	0.015	0.013	0.024	0.024	0.024	0.020
1973	0.046	0.021	0.008	0.009	0.013	0.013	0.013	0.014
1974	0.050	0.029	0.013	0.012	0.002	0.002	0.002	0.015
1975	0.108	0.052	0.024	0.023	0.022	0.023	0.036	0.036
1976	0.128	0.065	0.028	0.024	0.023	0.018	0.028	0.040
1977	0.158	0.072	0.032	0.029	0.025	0.023	0.039	0.048
1978	0.164	0.088	0.039	0.033	0.033	0.037	0.031	0.055
1979	0.146	0.084	0.037	0.024	0.024	0.030	0.027	0.048
1980	0.147	0.085	0.039	0.025	0.028	0.025	0.048	0.051
1981	0.112	0.083	0.041	0.024	0.028	0.036	0.042	0.048
1982	0.163	0.112	0.055	0.036	0.036	0.031	0.046	0.064
1983	0.229	0.173	0.091	0.060	0.059	0.067	0.072	0.100
1984	0.221	0.142	0.076	0.050	0.057	0.054	0.081	0.088
1985	0.193	0.124	0.072	0.044	0.048	0.070	0.078	0.079
1986	0.187	0.123	0.068	0.046	0.054	0.060	0.064	0.078
1987	0.180	0.126	0.070	0.048	0.042	0.058	0.069	0.076
1988	0.151	0.109	0.056	0.038	0.045	0.064	0.082	0.066
1989	0.129	0.080	0.051	0.035	0.029	0.046	0.072	0.055
1990	0.166	0.121	0.070	0.038	0.032	0.048	0.085	0.069
1991	0.218	0.163	0.099	0.074	0.060	0.088	0.123	0.103
1992	0.251	0.183	0.108	0.075	0.072	0.102	0.154	0.115
1993	0.240	0.182	0.110	0.079	0.072	0.121	0.165	0.116
1994	0.192	0.154	0.088	0.068	0.067	0.103	0.104	0.096
1995	0.212	0.126	0.080	0.061	0.055	0.094	0.082	0.087

Note: Figures in 1995 are based at June.

Sources: I. Castles, *The Labour Force, Australia, Historical Summary, 1966 to 1984*.
 Australian Bureau of Statistics, *The Labour Force, Australia, Various Years*.

Table B-12: Female Labour Force by Age Groups (thousands)

Year (August)	15~19	20~24	25~34	35~44	45~54	55~59	60~64	65~
1966	326.4	248.4	251.1	300.2	243.6	68.8	33.6	25.7
1967	315.1	285.4	261.6	307.9	254.2	81.1	37.1	26.3
1968	312.8	298.7	280.4	308.0	274.5	87.2	38.4	23.4
1969	301.3	323.1	311.2	323.3	275.4	85.5	38.2	24.5
1970	310.7	335.5	350.9	342.7	298.7	88.3	40.6	22.9
1971	306.6	341.3	360.0	365.4	312.6	93.6	45.8	27.0
1972	319.5	344.9	385.3	369.4	333.8	98.6	45.8	24.9
1973	317.2	349.8	430.7	389.2	344.9	98.8	46.2	24.0
1974	321.5	366.8	472.3	404.3	347.1	97.4	46.3	27.5
1975	342.3	378.4	496.9	418.4	352.4	98.4	45.8	27.2
1976	333.3	385.2	510.9	426.1	371.6	102.4	45.0	25.4
1977	359.3	404.7	550.4	445.2	364.6	105.9	45.2	25.9
1978	366.4	400.1	577.5	459.1	356.5	106.8	42.2	21.9
1979	352.2	422.9	582.5	476.9	347.9	95.6	40.0	19.2
1980	378.0	445.1	626.3	508.7	351.5	108.1	41.7	24.0
1981	362.8	454.5	643.1	523.9	360.9	110.4	38.6	21.7
1982	353.9	459.1	660.3	556.2	364.8	96.5	32.3	21.6
1983	358.7	469.4	659.5	581.9	359.8	105.5	41.6	18.4

1984	350.7	475.5	691.9	610.1	375.4	103.4	41.3	22.9
1985	358.9	485.5	737.3	665.1	380.8	101.2	40.6	18.7
1986	374.0	487.4	782.7	728.0	420.4	106.1	46.7	19.0
1987	364.1	490.3	822.5	768.6	438.5	111.2	48.5	26.5
1988	385.8	491.1	841.1	826.4	466.5	113.5	53.4	26.4
1989	393.2	508.4	896.4	871.2	505.6	115.6	50.2	23.8
1990	386.4	525.6	906.0	925.8	540.8	120.8	60.2	25.2
1991	347.6	528.5	919.8	944.5	579.0	128.8	53.4	27.3
1992	348.1	535.9	916.0	950.7	631.0	135.7	44.9	25.5
1993	314.5	538.1	922.3	943.6	668.8	137.5	52.0	28.8
1994	337.5	539.4	937.9	948.2	688.1	146.0	50.5	27.4
1995	371.0	541.5	973.9	992.6	745.7	160.0	58.5	32.2

Note: Figures in 1995 are based at June.

Sources: I. Castles, The Labour Force, Australia, Historical Summary, 1966 to 1984.

Australian Bureau of Statistics, The Labour Force, Australia, Various Years.

Table B-13: Females Not in the Labour Force by Age Groups (thousands)

Year (August)	15~19	20~24	25~34	35~44	45~54	55~59	60~64	65~
1966	191.7	178.4	456.2	459.8	420.2	199.9	184.4	536.7
1967	200.6	177.9	467.1	448.6	423.6	197.5	186.6	544.7
1968	212.0	194.2	467.3	439.6	420.5	200.7	193.0	556.9
1969	232.0	191.4	476.7	428.5	420.0	211.4	205.0	566.1
1970	234.4	201.3	472.8	408.8	412.5	215.2	208.6	574.6
1971	253.9	218.2	499.2	381.8	409.3	218.5	213.0	589.3
1972	249.0	214.1	523.4	379.9	401.4	216.5	222.1	605.2
1973	259.5	214.4	515.9	366.5	401.6	215.8	230.5	622.6
1974	268.4	208.1	519.9	357.1	410.8	212.7	241.1	633.8
1975	255.1	201.1	529.8	350.7	408.7	216.9	247.6	649.7
1976	276.0	194.9	549.1	352.9	389.9	222.6	252.8	671.7
1977	264.5	184.4	541.7	351.2	390.3	229.3	252.1	690.8
1978	270.8	197.8	553.9	350.2	394.7	247.2	263.7	750.9
1979	288.0	188.6	574.9	358.5	395.9	269.5	264.3	777.4
1980	260.1	181.1	558.9	357.2	386.3	263.2	268.2	796.7
1981	272.6	188.7	571.9	378.3	375.7	260.5	284.3	822.6
1982	276.8	197.0	570.6	402.3	372.8	275.3	301.2	846.8
1983	270.2	193.4	588.8	421.2	381.3	267.7	303.3	873.2
1984	279.6	186.8	568.9	429.1	374.0	270.9	316.5	894.2
1985	281.5	173.8	542.3	417.3	377.6	272.3	323.7	924.9
1986	287.1	165.7	520.4	397.8	351.9	263.8	321.1	958.4
1987	315.0	157.8	507.1	399.3	354.8	254.4	320.1	983.0
1988	303.1	156.6	514.6	384.9	351.6	248.4	315.4	1,014.0
1989	295.5	148.1	482.6	376.3	346.7	244.2	318.1	1,047.2
1990	294.4	141.3	486.8	357.4	345.5	236.0	308.1	1,073.2
1991	313.6	160.6	482.1	369.5	344.7	231.9	311.4	1,103.4
1992	293.6	173.1	494.4	376.5	345.7	233.4	315.1	1,132.8
1993	313.3	177.5	488.8	401.6	353.7	239.2	303.2	1,157.7
1994	283.1	169.9	471.3	404.1	370.1	241.9	302.0	1,171.7
1995	245.5	164.6	441.4	379.9	349.3	236.2	293.2	1,185.0

Note: Figures in 1995 are based at June.

Sources: I. Castles, The Labour Force, Australia, Historical Summary, 1966 to 1984.

Australian Bureau of Statistics, The Labour Force, Australia, Various Years.

Table B-14: Unemployed Females by Age Groups (thousands)

Year (August)	15-19	20-24	25-34	35-44	45-54	55-59	60-64
1966	13.0	6.8	6.4	16.9	*	*	*
1967	11.3	8.8	8.7	8.3	8.6	*	*
1968	12.1	7.9	9.7	7.5	8.8	*	*
1969	10.7	9.8	11.0	19.2	*	*	*
1970	11.4	7.0	7.4	23.0	*	*	*
1971	12.9	9.0	10.3	9.0	8.3	*	*
1972	18.8	12.9	15.4	11.2	9.5	*	*
1973	15.6	9.0	10.4	12.8	7.4	*	*
1974	21.8	13.2	16.9	13.7	9.6	*	*
1975	51.4	26.1	27.7	19.2	18.3	*	*
1976	53.0	24.4	26.5	17.1	16.3	*	*
1977	73.0	32.4	29.5	19.9	17.4	*	*
1978	63.1	38.3	36.7	19.3	14.4	3.6	0.4
1979	71.8	33.8	38.0	19.9	13.3	2.7	0.4
1980	70.9	40.4	35.9	21.8	12.0	3.1	0.8
1981	61.8	39.4	40.7	23.2	11.2	2.6	0.9
1982	60.2	40.3	45.3	26.7	13.1	3.6	0.2
1983	79.7	53.9	62.7	39.5	17.1	3.6	0.6
1984	69.1	48.9	48.9	34.3	17.3	3.8	0.5
1985	61.5	50.7	55.4	35.1	16.7	3.6	0.4
1986	72.9	48.0	59.5	43.6	19.0	4.4	0.7
1987	70.5	51.6	61.9	47.1	19.8	3.4	0.1
1988	61.5	53.4	55.1	39.7	18.1	3.0	1.9
1989	57.4	40.3	52.3	33.5	20.5	3.1	1.3
1990	63.6	50.6	64.6	43.4	21.6	4.9	0.6
1991	70.3	68.2	71.5	52.3	32.8	7.3	1.0
1992	86.2	73.4	78.7	61.6	36.6	4.6	0.3
1993	69.5	73.6	84.4	71.7	43.3	9.0	1.5
1994	72.4	65.4	72.3	63.6	41.6	7.6	1.7
1995	70.3	51.9	63.6	61.2	32.1	7.5	0.7

Note: Figures in 1995 are based at June.

Sources: I. Castles, The Labour Force, Australia, Historical Summary, 1966 to 1984.

Australian Bureau of Statistics, The Labour Force, Australia, Various Years.

Table B-15: Rate of Female Unemployment by Age Groups Based on Census

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64
1911	0.010	0.010	0.006	0.004	0.003	0.003	0.003	0.003	0.003	0.002
1921	0.007	0.005	0.005	0.005	0.005	0.004	0.004	0.003	0.003	0.006
1933	0.155	0.127	0.123	0.134	0.129	0.138	0.143	0.144	0.092	0.083
1947	0.014	0.013	0.007	0.005	0.005	0.004	0.005	0.004	0.004	0.001
1954	0.013	0.009	0.004	0.003	0.003	0.003	0.004	0.004	0.003	0.001
1961	0.038	0.024	0.012	0.009	0.009	0.009	0.009	0.008	0.007	0.003

Source: The Commonwealth Bureau of Census and Statistics, Census of the Commonwealth of Australia, 1911, 1921, 1933, 1947, 1954, and 1961.

Table B-16: Rate of Female Unemployment by Age Groups

Year (August)	15-19	20-24	25-34	35-44	45-54	55-59	60-64	Total
1966	0.040	0.027	0.025	0.056	0.056	0.056	0.056	0.029
1967	0.036	0.031	0.033	0.027	0.034	0.034	0.034	0.030

1968	0.039	0.026	0.035	0.024	0.032	0.032	0.032	0.029
1969	0.035	0.030	0.035	0.059	0.059	0.059	0.059	0.031
1970	0.037	0.021	0.021	0.067	0.067	0.067	0.067	0.028
1971	0.042	0.026	0.029	0.025	0.026	0.026	0.026	0.027
1972	0.059	0.037	0.040	0.030	0.028	0.028	0.028	0.036
1973	0.049	0.026	0.024	0.033	0.022	0.022	0.022	0.028
1974	0.068	0.036	0.036	0.034	0.028	0.028	0.028	0.037
1975	0.150	0.069	0.056	0.046	0.052	0.052	0.052	0.067
1976	0.159	0.063	0.052	0.040	0.044	0.044	0.044	0.063
1977	0.203	0.080	0.054	0.045	0.048	0.048	0.048	0.076
1978	0.172	0.096	0.064	0.042	0.040	0.034	0.009	0.076
1979	0.204	0.080	0.065	0.042	0.038	0.028	0.010	0.078
1980	0.188	0.091	0.057	0.043	0.034	0.029	0.019	0.075
1981	0.170	0.087	0.063	0.044	0.031	0.024	0.023	0.072
1982	0.170	0.088	0.069	0.048	0.036	0.037	0.006	0.075
1983	0.222	0.115	0.095	0.068	0.048	0.034	0.014	0.100
1984	0.197	0.103	0.071	0.056	0.046	0.037	0.012	0.084
1985	0.171	0.104	0.075	0.053	0.044	0.036	0.010	0.081
1986	0.195	0.098	0.076	0.060	0.045	0.041	0.015	0.084
1987	0.194	0.105	0.075	0.061	0.045	0.031	0.002	0.084
1988	0.159	0.109	0.066	0.048	0.039	0.026	0.036	0.073
1989	0.146	0.079	0.058	0.038	0.041	0.027	0.026	0.062
1990	0.165	0.096	0.071	0.047	0.040	0.041	0.010	0.072
1991	0.202	0.129	0.078	0.055	0.057	0.057	0.019	0.087
1992	0.248	0.137	0.086	0.065	0.058	0.034	0.007	0.096
1993	0.221	0.137	0.092	0.076	0.065	0.065	0.029	0.099
1994	0.215	0.121	0.077	0.067	0.060	0.052	0.034	0.089
1995	0.189	0.096	0.065	0.062	0.043	0.047	0.012	0.075

Note: Figures in 1995 are based at June.

Sources: I. Castles, *The Labour Force, Australia, Historical Summary, 1966 to 1984*.
 Australian Bureau of Statistics, *The Labour Force, Australia, Various Years*.

Table B-17: Estimated Rate of Male Unemployment by Age

Year	15	16	17	18	19	20	21	22	23	24	25	26
1947	0.017	0.018	0.020	0.022	0.024	0.027	0.029	0.032	0.031	0.029	0.028	0.026
1948	0.016	0.017	0.019	0.021	0.022	0.024	0.027	0.029	0.027	0.026	0.025	0.024
1949	0.016	0.017	0.018	0.019	0.021	0.022	0.024	0.026	0.024	0.023	0.022	0.021
1950	0.015	0.016	0.017	0.018	0.019	0.020	0.022	0.023	0.022	0.021	0.020	0.019
1951	0.015	0.015	0.016	0.017	0.018	0.019	0.020	0.020	0.020	0.019	0.018	0.017
1952	0.014	0.015	0.015	0.016	0.016	0.017	0.018	0.018	0.018	0.017	0.016	0.015
1953	0.014	0.014	0.015	0.015	0.015	0.016	0.016	0.016	0.016	0.015	0.014	0.014
1954	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.015	0.014	0.013	0.013	0.012
1955	0.016	0.016	0.016	0.017	0.017	0.017	0.017	0.017	0.017	0.016	0.016	0.015
1956	0.019	0.019	0.019	0.020	0.020	0.020	0.021	0.021	0.020	0.019	0.019	0.018
1957	0.022	0.022	0.023	0.023	0.024	0.024	0.025	0.025	0.024	0.023	0.022	0.021
1958	0.026	0.026	0.027	0.027	0.028	0.029	0.030	0.030	0.029	0.028	0.027	0.026
1959	0.030	0.031	0.032	0.033	0.033	0.034	0.035	0.036	0.035	0.034	0.032	0.031
1960	0.035	0.036	0.037	0.039	0.040	0.041	0.042	0.044	0.042	0.040	0.039	0.037
1961	0.041	0.042	0.044	0.046	0.047	0.049	0.051	0.053	0.050	0.048	0.046	0.044
1962	0.039	0.039	0.038	0.038	0.038	0.038	0.038	0.038	0.035	0.033	0.031	0.029
1963	0.037	0.035	0.034	0.032	0.031	0.029	0.028	0.027	0.025	0.023	0.021	0.019
1964	0.034	0.032	0.029	0.027	0.025	0.023	0.021	0.019	0.017	0.016	0.014	0.012
1965	0.033	0.029	0.026	0.023	0.020	0.018	0.016	0.014	0.012	0.011	0.009	0.008

1966	0.033	0.029	0.026	0.023	0.020	0.018	0.016	0.014	0.012	0.011	0.009	0.008
1967	0.039	0.035	0.031	0.028	0.025	0.022	0.019	0.017	0.015	0.013	0.011	0.010
1968	0.041	0.034	0.029	0.025	0.021	0.018	0.015	0.013	0.012	0.011	0.010	0.009
1969	0.029	0.026	0.023	0.021	0.018	0.016	0.015	0.013	0.011	0.010	0.008	0.007
1970	0.041	0.035	0.029	0.025	0.021	0.018	0.015	0.013	0.012	0.011	0.010	0.009
1971	0.041	0.036	0.032	0.028	0.025	0.022	0.020	0.017	0.015	0.012	0.010	0.009
1972	0.077	0.066	0.056	0.048	0.041	0.036	0.031	0.026	0.024	0.021	0.019	0.017
1973	0.064	0.054	0.046	0.039	0.034	0.029	0.025	0.021	0.017	0.014	0.012	0.010
1974	0.062	0.055	0.050	0.045	0.040	0.036	0.032	0.029	0.025	0.021	0.018	0.016
1975	0.145	0.125	0.108	0.094	0.081	0.070	0.060	0.052	0.045	0.038	0.033	0.028
1976	0.168	0.146	0.128	0.112	0.098	0.085	0.074	0.065	0.055	0.046	0.039	0.033
1977	0.216	0.184	0.158	0.135	0.116	0.099	0.085	0.072	0.061	0.052	0.044	0.038
1978	0.210	0.185	0.164	0.145	0.128	0.113	0.100	0.088	0.075	0.063	0.054	0.046
1979	0.182	0.163	0.146	0.131	0.117	0.105	0.094	0.084	0.071	0.060	0.051	0.043
1980	0.183	0.164	0.147	0.132	0.118	0.106	0.095	0.085	0.073	0.062	0.054	0.046
1981	0.125	0.118	0.112	0.105	0.099	0.094	0.088	0.083	0.072	0.063	0.054	0.047
1982	0.189	0.176	0.163	0.151	0.140	0.130	0.121	0.112	0.097	0.084	0.073	0.063
1983	0.257	0.243	0.229	0.217	0.205	0.193	0.183	0.173	0.152	0.134	0.117	0.103
1984	0.263	0.241	0.221	0.202	0.185	0.170	0.155	0.142	0.126	0.111	0.098	0.087
1985	0.230	0.210	0.193	0.176	0.162	0.148	0.136	0.124	0.111	0.100	0.089	0.080
1986	0.221	0.203	0.187	0.172	0.158	0.145	0.134	0.123	0.109	0.097	0.086	0.077
1987	0.208	0.194	0.180	0.168	0.156	0.145	0.135	0.126	0.112	0.099	0.088	0.078
1988	0.172	0.161	0.151	0.141	0.132	0.124	0.116	0.109	0.095	0.083	0.073	0.064
1989	0.156	0.142	0.129	0.117	0.106	0.097	0.088	0.080	0.073	0.067	0.061	0.056
1990	0.188	0.177	0.166	0.156	0.147	0.138	0.129	0.121	0.109	0.098	0.088	0.078
1991	0.245	0.231	0.218	0.206	0.194	0.183	0.173	0.163	0.148	0.134	0.121	0.109
1992	0.285	0.268	0.251	0.236	0.221	0.208	0.195	0.183	0.165	0.148	0.133	0.120
1993	0.268	0.254	0.240	0.227	0.215	0.204	0.193	0.182	0.165	0.149	0.135	0.122
1994	0.209	0.200	0.192	0.183	0.175	0.168	0.161	0.154	0.138	0.123	0.110	0.098
1995	0.261	0.235	0.212	0.191	0.172	0.155	0.140	0.126	0.115	0.105	0.096	0.088

27	28	29	30	31	32	33	34	35	36	37	38	39
0.025	0.024	0.024	0.023	0.023	0.022	0.022	0.022	0.021	0.021	0.021	0.021	0.022
0.022	0.022	0.021	0.021	0.020	0.020	0.020	0.020	0.019	0.019	0.019	0.019	0.020
0.020	0.020	0.019	0.019	0.018	0.018	0.018	0.018	0.017	0.017	0.017	0.018	0.018
0.018	0.018	0.017	0.017	0.017	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
0.016	0.016	0.016	0.015	0.015	0.015	0.014	0.014	0.014	0.014	0.014	0.014	0.015
0.015	0.014	0.014	0.014	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
0.013	0.013	0.013	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.011	0.012	0.012
0.012	0.012	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.010	0.010	0.011	0.011
0.014	0.014	0.014	0.013	0.013	0.013	0.013	0.013	0.012	0.012	0.012	0.012	0.013
0.017	0.017	0.016	0.016	0.015	0.015	0.015	0.015	0.015	0.015	0.014	0.015	0.015
0.021	0.020	0.019	0.019	0.018	0.018	0.018	0.017	0.017	0.017	0.017	0.017	0.017
0.025	0.024	0.023	0.022	0.022	0.021	0.021	0.021	0.021	0.020	0.020	0.020	0.020
0.030	0.029	0.028	0.027	0.026	0.025	0.025	0.024	0.024	0.024	0.024	0.024	0.024
0.036	0.034	0.033	0.032	0.031	0.029	0.029	0.029	0.029	0.028	0.028	0.028	0.028
0.043	0.041	0.039	0.038	0.036	0.035	0.035	0.034	0.034	0.034	0.033	0.033	0.033
0.027	0.026	0.026	0.025	0.024	0.023	0.024	0.024	0.024	0.024	0.024	0.024	0.024
0.017	0.017	0.017	0.016	0.016	0.016	0.016	0.016	0.017	0.017	0.017	0.017	0.017
0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.012	0.012	0.013	0.013	0.013
0.007	0.007	0.007	0.007	0.007	0.007	0.008	0.008	0.008	0.009	0.009	0.009	0.009
0.007	0.007	0.007	0.007	0.007	0.007	0.008	0.008	0.008	0.009	0.009	0.009	0.009
0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.009	0.009

0.008	0.008	0.008	0.008	0.008	0.008	0.009	0.011	0.012	0.014	0.016	0.016	0.016
0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.007	0.007	0.007	0.007	0.007	0.007
0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.007	0.007	0.006	0.006	0.006	0.006
0.007	0.007	0.007	0.007	0.007	0.007	0.008	0.008	0.008	0.009	0.009	0.009	0.009
0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.014	0.014	0.013	0.013	0.013
0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.009	0.009
0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.012	0.012	0.012
0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.023	0.023	0.023	0.023	0.023	0.023
0.028	0.028	0.028	0.028	0.028	0.028	0.027	0.026	0.025	0.025	0.024	0.024	0.024
0.032	0.032	0.032	0.032	0.032	0.032	0.031	0.031	0.030	0.029	0.029	0.029	0.029
0.039	0.039	0.039	0.039	0.039	0.039	0.037	0.036	0.035	0.034	0.033	0.033	0.033
0.037	0.037	0.037	0.037	0.037	0.037	0.034	0.031	0.029	0.026	0.024	0.024	0.024
0.039	0.039	0.039	0.039	0.039	0.039	0.036	0.033	0.030	0.027	0.025	0.025	0.025
0.041	0.041	0.041	0.041	0.041	0.041	0.037	0.033	0.030	0.027	0.024	0.024	0.024
0.055	0.055	0.055	0.055	0.055	0.055	0.050	0.046	0.043	0.039	0.036	0.036	0.036
0.091	0.091	0.091	0.091	0.091	0.091	0.084	0.077	0.071	0.065	0.060	0.060	0.060
0.076	0.076	0.076	0.076	0.076	0.076	0.070	0.065	0.059	0.055	0.050	0.050	0.050
0.072	0.072	0.072	0.072	0.072	0.072	0.065	0.059	0.054	0.049	0.044	0.044	0.044
0.068	0.068	0.068	0.068	0.068	0.068	0.063	0.058	0.054	0.050	0.046	0.046	0.046
0.070	0.070	0.070	0.070	0.070	0.070	0.064	0.060	0.055	0.051	0.048	0.048	0.048
0.056	0.056	0.056	0.056	0.056	0.056	0.052	0.048	0.044	0.041	0.038	0.038	0.038
0.051	0.051	0.051	0.051	0.051	0.051	0.047	0.044	0.041	0.038	0.035	0.035	0.035
0.070	0.070	0.070	0.070	0.070	0.070	0.062	0.055	0.048	0.043	0.038	0.038	0.038
0.099	0.099	0.099	0.099	0.099	0.099	0.093	0.088	0.083	0.078	0.074	0.074	0.074
0.108	0.108	0.108	0.108	0.108	0.108	0.100	0.093	0.087	0.081	0.075	0.075	0.075
0.110	0.110	0.110	0.110	0.110	0.110	0.103	0.096	0.090	0.084	0.079	0.079	0.079
0.088	0.088	0.088	0.088	0.088	0.088	0.084	0.079	0.075	0.071	0.068	0.068	0.068
0.080	0.080	0.080	0.080	0.080	0.080	0.076	0.072	0.068	0.064	0.061	0.061	0.061

40	41	42	43	44	45	46	47	48	49	50	51	52
0.022	0.022	0.023	0.023	0.024	0.025	0.025	0.026	0.027	0.028	0.029	0.029	0.030
0.020	0.020	0.021	0.021	0.022	0.022	0.023	0.024	0.024	0.025	0.026	0.027	0.028
0.018	0.018	0.019	0.019	0.020	0.020	0.021	0.022	0.022	0.023	0.024	0.025	0.025
0.016	0.017	0.017	0.018	0.018	0.018	0.019	0.019	0.020	0.021	0.022	0.022	0.023
0.015	0.015	0.015	0.016	0.016	0.017	0.017	0.018	0.018	0.019	0.020	0.021	0.021
0.013	0.014	0.014	0.014	0.015	0.015	0.016	0.016	0.017	0.017	0.018	0.019	0.020
0.012	0.012	0.013	0.013	0.013	0.014	0.014	0.015	0.015	0.016	0.016	0.017	0.018
0.011	0.011	0.012	0.012	0.012	0.013	0.013	0.013	0.014	0.014	0.015	0.016	0.016
0.013	0.013	0.013	0.014	0.014	0.014	0.015	0.015	0.016	0.016	0.017	0.018	0.018
0.015	0.015	0.015	0.016	0.016	0.016	0.017	0.017	0.018	0.019	0.019	0.020	0.021
0.018	0.018	0.018	0.018	0.019	0.019	0.019	0.020	0.020	0.021	0.022	0.023	0.023
0.020	0.021	0.021	0.021	0.021	0.022	0.022	0.022	0.023	0.024	0.025	0.025	0.026
0.024	0.024	0.024	0.024	0.025	0.025	0.025	0.026	0.026	0.027	0.028	0.029	0.030
0.028	0.028	0.028	0.028	0.028	0.029	0.029	0.029	0.030	0.031	0.032	0.032	0.033
0.033	0.032	0.032	0.032	0.033	0.033	0.033	0.033	0.034	0.035	0.036	0.037	0.037
0.024	0.024	0.023	0.024	0.025	0.026	0.028	0.029	0.029	0.030	0.030	0.031	0.031
0.017	0.017	0.017	0.018	0.020	0.021	0.023	0.025	0.025	0.025	0.026	0.026	0.026
0.013	0.013	0.013	0.014	0.015	0.017	0.019	0.021	0.021	0.021	0.022	0.022	0.022
0.009	0.009	0.009	0.011	0.012	0.014	0.016	0.018	0.018	0.018	0.018	0.018	0.018
0.009	0.009	0.009	0.011	0.012	0.014	0.016	0.018	0.018	0.018	0.018	0.018	0.018
0.009	0.009	0.009	0.010	0.010	0.010	0.011	0.011	0.011	0.011	0.011	0.011	0.011
0.016	0.016	0.016	0.016	0.017	0.017	0.018	0.018	0.018	0.018	0.018	0.018	0.018
0.007	0.007	0.007	0.008	0.009	0.010	0.011	0.013	0.013	0.013	0.013	0.013	0.013

0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
0.022	0.023	0.023	0.023	0.023	0.025	0.027	0.030	0.033	0.036	0.040	0.044
0.022	0.021	0.020	0.019	0.018	0.020	0.022	0.024	0.026	0.028	0.031	0.033
0.024	0.024	0.024	0.023	0.023	0.026	0.028	0.031	0.035	0.039	0.043	0.047
0.034	0.034	0.035	0.036	0.037	0.036	0.034	0.033	0.032	0.031	0.030	0.029
0.025	0.026	0.027	0.029	0.030	0.029	0.029	0.028	0.027	0.027	0.026	0.026
0.027	0.027	0.026	0.025	0.025	0.028	0.032	0.037	0.042	0.048	0.055	0.063
0.029	0.031	0.032	0.034	0.036	0.037	0.038	0.040	0.041	0.042	0.044	0.045
0.035	0.034	0.033	0.032	0.031	0.034	0.036	0.039	0.042	0.046	0.049	0.053
0.061	0.062	0.064	0.065	0.067	0.068	0.069	0.070	0.071	0.072	0.073	0.074
0.056	0.056	0.055	0.055	0.054	0.059	0.064	0.069	0.075	0.081	0.088	0.096
0.052	0.056	0.061	0.065	0.070	0.072	0.073	0.075	0.076	0.078	0.080	0.081
0.056	0.057	0.058	0.059	0.060	0.061	0.062	0.062	0.063	0.064	0.064	0.065
0.045	0.048	0.051	0.054	0.058	0.060	0.062	0.064	0.066	0.069	0.071	0.074
0.048	0.051	0.055	0.059	0.064	0.067	0.070	0.074	0.078	0.082	0.086	0.091
0.032	0.035	0.038	0.042	0.046	0.050	0.055	0.060	0.066	0.072	0.079	0.086
0.035	0.038	0.041	0.044	0.048	0.054	0.060	0.067	0.076	0.085	0.095	0.107
0.065	0.070	0.076	0.081	0.088	0.094	0.101	0.108	0.115	0.123	0.132	0.141
0.077	0.083	0.089	0.095	0.102	0.111	0.120	0.131	0.142	0.154	0.167	0.181
0.080	0.089	0.099	0.109	0.121	0.129	0.137	0.146	0.155	0.165	0.175	0.187
0.073	0.080	0.087	0.094	0.103	0.103	0.103	0.104	0.104	0.104	0.105	0.105
0.062	0.068	0.076	0.084	0.094	0.091	0.089	0.087	0.085	0.082	0.080	0.078

Table B-18: Estimated Rate of Female Unemployment by Age

Year	15	16	17	18	19	20	21	22	23	24	25	26
1947	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.013	0.012	0.011	0.009	0.008
1948	0.014	0.013	0.013	0.013	0.013	0.012	0.012	0.012	0.011	0.009	0.008	0.007
1949	0.013	0.013	0.012	0.012	0.012	0.011	0.011	0.011	0.010	0.008	0.008	0.007
1950	0.013	0.012	0.012	0.011	0.011	0.010	0.010	0.010	0.009	0.008	0.007	0.006
1951	0.013	0.012	0.011	0.011	0.010	0.010	0.009	0.009	0.008	0.007	0.006	0.005
1952	0.012	0.011	0.011	0.010	0.009	0.009	0.008	0.008	0.007	0.006	0.005	0.005
1953	0.012	0.011	0.010	0.009	0.009	0.008	0.007	0.007	0.006	0.005	0.005	0.004
1954	0.016	0.015	0.013	0.012	0.011	0.010	0.010	0.009	0.008	0.007	0.006	0.005
1955	0.019	0.017	0.016	0.015	0.013	0.012	0.011	0.011	0.009	0.008	0.007	0.006
1956	0.022	0.020	0.019	0.017	0.016	0.015	0.014	0.013	0.011	0.010	0.008	0.007
1957	0.026	0.024	0.022	0.021	0.019	0.018	0.016	0.015	0.013	0.012	0.010	0.009
1958	0.030	0.028	0.026	0.024	0.023	0.021	0.020	0.018	0.016	0.014	0.012	0.011
1959	0.035	0.033	0.031	0.029	0.027	0.025	0.023	0.022	0.019	0.017	0.015	0.013
1960	0.041	0.039	0.036	0.034	0.032	0.030	0.028	0.026	0.023	0.020	0.017	0.015
1961	0.046	0.042	0.038	0.035	0.032	0.029	0.026	0.024	0.021	0.018	0.016	0.014
1962	0.043	0.038	0.033	0.029	0.026	0.023	0.020	0.017	0.015	0.013	0.011	0.009
1963	0.041	0.035	0.029	0.025	0.021	0.017	0.015	0.012	0.010	0.009	0.007	0.006
1964	0.039	0.031	0.025	0.021	0.017	0.014	0.011	0.009	0.007	0.006	0.005	0.004
1965	0.037	0.029	0.022	0.017	0.013	0.010	0.008	0.006	0.005	0.004	0.003	0.003
1966	0.046	0.043	0.040	0.037	0.034	0.032	0.030	0.027	0.027	0.027	0.026	0.026
1967	0.038	0.037	0.036	0.035	0.034	0.033	0.032	0.031	0.031	0.032	0.032	0.033
1968	0.045	0.042	0.039	0.036	0.033	0.031	0.028	0.026	0.028	0.029	0.031	0.033
1969	0.038	0.037	0.035	0.034	0.033	0.032	0.031	0.030	0.031	0.032	0.033	0.034
1970	0.046	0.041	0.037	0.033	0.029	0.026	0.023	0.021	0.021	0.021	0.021	0.021
1971	0.051	0.046	0.042	0.038	0.035	0.032	0.029	0.026	0.027	0.027	0.028	0.028
1972	0.070	0.064	0.059	0.054	0.049	0.045	0.041	0.037	0.038	0.038	0.039	0.040

1973	0.063	0.056	0.049	0.043	0.038	0.033	0.029	0.026	0.025	0.025	0.025	0.024
1974	0.087	0.077	0.068	0.060	0.053	0.046	0.041	0.036	0.036	0.036	0.036	0.036
1975	0.205	0.175	0.150	0.128	0.110	0.094	0.081	0.069	0.066	0.063	0.061	0.058
1976	0.230	0.191	0.159	0.132	0.110	0.091	0.076	0.063	0.061	0.058	0.056	0.054
1977	0.295	0.245	0.203	0.169	0.140	0.116	0.096	0.080	0.074	0.068	0.063	0.058
1978	0.218	0.194	0.172	0.153	0.136	0.121	0.108	0.096	0.088	0.081	0.075	0.069
1979	0.296	0.246	0.204	0.169	0.140	0.116	0.096	0.080	0.077	0.074	0.071	0.068
1980	0.251	0.217	0.188	0.162	0.140	0.121	0.105	0.091	0.083	0.076	0.069	0.063
1981	0.223	0.195	0.170	0.149	0.130	0.114	0.099	0.087	0.081	0.076	0.072	0.067
1982	0.222	0.194	0.170	0.149	0.131	0.114	0.100	0.088	0.084	0.080	0.076	0.072
1983	0.289	0.254	0.222	0.195	0.171	0.150	0.131	0.115	0.111	0.106	0.103	0.099
1984	0.256	0.224	0.197	0.173	0.152	0.133	0.117	0.103	0.095	0.089	0.082	0.076
1985	0.209	0.189	0.171	0.155	0.141	0.127	0.115	0.104	0.098	0.092	0.086	0.080
1986	0.256	0.223	0.195	0.170	0.148	0.129	0.113	0.098	0.094	0.089	0.084	0.080
1987	0.247	0.219	0.194	0.171	0.152	0.134	0.119	0.105	0.098	0.092	0.086	0.080
1988	0.186	0.172	0.159	0.148	0.137	0.127	0.117	0.109	0.098	0.089	0.080	0.072
1989	0.186	0.165	0.146	0.129	0.114	0.101	0.090	0.079	0.075	0.070	0.066	0.062
1990	0.204	0.183	0.165	0.148	0.133	0.119	0.107	0.096	0.091	0.085	0.080	0.076
1991	0.242	0.221	0.202	0.185	0.169	0.154	0.141	0.129	0.117	0.105	0.095	0.086
1992	0.314	0.279	0.248	0.220	0.195	0.174	0.154	0.137	0.125	0.114	0.104	0.094
1993	0.268	0.243	0.221	0.201	0.182	0.166	0.151	0.137	0.126	0.116	0.107	0.099
1994	0.270	0.240	0.215	0.191	0.171	0.152	0.136	0.121	0.111	0.101	0.092	0.084
1995	0.249	0.217	0.189	0.165	0.144	0.126	0.110	0.096	0.089	0.082	0.076	0.071

27	28	29	30	31	32	33	34	35	36	37	38	39
0.007	0.007	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.004
0.007	0.006	0.006	0.005	0.005	0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004
0.006	0.006	0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003
0.005	0.005	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.002	0.002
0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.004	0.004	0.004	0.004
0.008	0.007	0.007	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.009	0.009	0.008	0.007	0.007	0.007	0.006	0.006	0.006	0.006	0.006	0.006	0.006
0.011	0.010	0.010	0.009	0.008	0.008	0.008	0.008	0.007	0.007	0.007	0.007	0.007
0.013	0.012	0.011	0.011	0.010	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.008
0.012	0.012	0.011	0.010	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
0.008	0.007	0.007	0.007	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.005	0.005	0.005
0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
0.025	0.025	0.025	0.025	0.025	0.025	0.030	0.035	0.041	0.048	0.056	0.056	0.056
0.033	0.033	0.033	0.033	0.033	0.033	0.032	0.031	0.029	0.028	0.027	0.027	0.027
0.035	0.035	0.035	0.035	0.035	0.035	0.032	0.030	0.028	0.026	0.024	0.024	0.024
0.035	0.035	0.035	0.035	0.035	0.035	0.039	0.044	0.048	0.054	0.059	0.059	0.059
0.021	0.021	0.021	0.021	0.021	0.021	0.027	0.034	0.042	0.053	0.067	0.067	0.067
0.029	0.029	0.029	0.029	0.029	0.029	0.028	0.027	0.026	0.025	0.025	0.025	0.025
0.040	0.040	0.040	0.040	0.040	0.040	0.038	0.036	0.034	0.032	0.030	0.030	0.030
0.024	0.024	0.024	0.024	0.024	0.024	0.026	0.027	0.029	0.031	0.033	0.033	0.033
0.036	0.036	0.036	0.036	0.036	0.036	0.035	0.035	0.035	0.034	0.034	0.034	0.034

0.056	0.056	0.056	0.056	0.056	0.056	0.054	0.052	0.050	0.048	0.046	0.046	0.046
0.052	0.052	0.052	0.052	0.052	0.052	0.049	0.047	0.045	0.042	0.040	0.040	0.040
0.054	0.054	0.054	0.054	0.054	0.054	0.052	0.050	0.048	0.046	0.045	0.045	0.045
0.064	0.064	0.064	0.064	0.064	0.064	0.059	0.054	0.050	0.046	0.042	0.042	0.042
0.065	0.065	0.065	0.065	0.065	0.065	0.060	0.055	0.050	0.046	0.042	0.042	0.042
0.057	0.057	0.057	0.057	0.057	0.057	0.054	0.051	0.048	0.045	0.043	0.043	0.043
0.063	0.063	0.063	0.063	0.063	0.063	0.059	0.055	0.051	0.048	0.044	0.044	0.044
0.069	0.069	0.069	0.069	0.069	0.069	0.064	0.059	0.055	0.052	0.048	0.048	0.048
0.095	0.095	0.095	0.095	0.095	0.095	0.089	0.083	0.078	0.073	0.068	0.068	0.068
0.071	0.071	0.071	0.071	0.071	0.071	0.068	0.064	0.062	0.059	0.056	0.056	0.056
0.075	0.075	0.075	0.075	0.075	0.075	0.070	0.065	0.061	0.057	0.053	0.053	0.053
0.076	0.076	0.076	0.076	0.076	0.076	0.072	0.069	0.066	0.063	0.060	0.060	0.060
0.075	0.075	0.075	0.075	0.075	0.075	0.072	0.069	0.067	0.064	0.061	0.061	0.061
0.066	0.066	0.066	0.066	0.066	0.066	0.062	0.058	0.054	0.051	0.048	0.048	0.048
0.058	0.058	0.058	0.058	0.058	0.058	0.054	0.049	0.045	0.042	0.038	0.038	0.038
0.071	0.071	0.071	0.071	0.071	0.071	0.066	0.060	0.055	0.051	0.047	0.047	0.047
0.078	0.078	0.078	0.078	0.078	0.078	0.073	0.068	0.063	0.059	0.055	0.055	0.055
0.086	0.086	0.086	0.086	0.086	0.086	0.081	0.077	0.073	0.069	0.065	0.065	0.065
0.092	0.092	0.092	0.092	0.092	0.092	0.088	0.085	0.082	0.079	0.076	0.076	0.076
0.077	0.077	0.077	0.077	0.077	0.077	0.075	0.073	0.071	0.069	0.067	0.067	0.067
0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.064	0.063	0.062	0.062	0.062	0.062

40	41	42	43	44	45	46	47	48	49	50	51	52
0.004	0.004	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.004	0.004	0.004	0.004
0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003
0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003
0.003	0.003	0.003	0.003	0.003	0.003	0.004	0.004	0.003	0.003	0.003	0.003	0.003
0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.002
0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.002	0.002	0.002
0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.005	0.004	0.004	0.004	0.004	0.004
0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.005
0.006	0.006	0.006	0.006	0.006	0.006	0.007	0.007	0.007	0.006	0.006	0.006	0.006
0.007	0.007	0.007	0.007	0.007	0.007	0.008	0.008	0.008	0.007	0.007	0.007	0.007
0.008	0.008	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.008	0.008	0.008	0.008
0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.008	0.008	0.008
0.006	0.007	0.007	0.007	0.007	0.007	0.007	0.008	0.007	0.007	0.007	0.007	0.007
0.005	0.005	0.005	0.005	0.005	0.006	0.006	0.007	0.006	0.006	0.006	0.006	0.006
0.003	0.003	0.004	0.004	0.004	0.005	0.005	0.006	0.005	0.005	0.005	0.005	0.005
0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.005	0.005	0.004	0.004	0.004	0.004
0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056
0.027	0.027	0.027	0.028	0.030	0.031	0.032	0.034	0.034	0.034	0.034	0.034	0.034
0.024	0.024	0.024	0.026	0.027	0.029	0.030	0.032	0.032	0.032	0.032	0.032	0.032
0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059
0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067
0.025	0.025	0.025	0.025	0.025	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026
0.030	0.030	0.030	0.030	0.030	0.029	0.029	0.028	0.028	0.028	0.028	0.028	0.028
0.033	0.033	0.033	0.030	0.028	0.026	0.023	0.022	0.022	0.022	0.022	0.022	0.022
0.034	0.034	0.034	0.033	0.031	0.030	0.029	0.028	0.028	0.028	0.028	0.028	0.028
0.046	0.046	0.046	0.047	0.048	0.049	0.051	0.052	0.052	0.052	0.052	0.052	0.052
0.040	0.040	0.040	0.041	0.042	0.042	0.043	0.044	0.044	0.044	0.044	0.044	0.044

0.045	0.045	0.045	0.045	0.046	0.047	0.047	0.048	0.048	0.048	0.048	0.048	0.048
0.042	0.042	0.042	0.042	0.041	0.041	0.041	0.040	0.040	0.040	0.040	0.040	0.040
0.042	0.042	0.042	0.041	0.040	0.040	0.039	0.038	0.038	0.038	0.038	0.038	0.038
0.043	0.043	0.043	0.041	0.039	0.037	0.036	0.034	0.034	0.034	0.034	0.034	0.034
0.044	0.044	0.044	0.041	0.038	0.036	0.033	0.031	0.031	0.031	0.031	0.031	0.031
0.048	0.048	0.048	0.045	0.043	0.040	0.038	0.036	0.036	0.036	0.036	0.036	0.036
0.068	0.068	0.068	0.063	0.059	0.055	0.051	0.048	0.048	0.048	0.048	0.048	0.048
0.056	0.056	0.056	0.054	0.052	0.050	0.048	0.046	0.046	0.046	0.046	0.046	0.046
0.053	0.053	0.053	0.051	0.049	0.047	0.046	0.044	0.044	0.044	0.044	0.044	0.044
0.060	0.060	0.060	0.057	0.054	0.051	0.048	0.045	0.045	0.045	0.045	0.045	0.045
0.061	0.061	0.061	0.058	0.054	0.051	0.048	0.045	0.045	0.045	0.045	0.045	0.045
0.048	0.048	0.048	0.046	0.044	0.042	0.040	0.039	0.039	0.039	0.039	0.039	0.039
0.038	0.038	0.038	0.039	0.039	0.040	0.040	0.041	0.041	0.041	0.041	0.041	0.041
0.047	0.047	0.047	0.045	0.044	0.043	0.041	0.040	0.040	0.040	0.040	0.040	0.040
0.055	0.055	0.055	0.056	0.056	0.056	0.056	0.057	0.057	0.057	0.057	0.057	0.057
0.065	0.065	0.065	0.063	0.062	0.061	0.059	0.058	0.058	0.058	0.058	0.058	0.058
0.076	0.076	0.076	0.074	0.071	0.069	0.067	0.065	0.065	0.065	0.065	0.065	0.065
0.067	0.067	0.067	0.066	0.064	0.063	0.062	0.060	0.060	0.060	0.060	0.060	0.060
0.062	0.062	0.062	0.057	0.053	0.050	0.046	0.043	0.043	0.043	0.043	0.043	0.043

53	54	55	56	57	58	59	60	61	62	63	64
0.004	0.004	0.004	0.004	0.004	0.003	0.002	0.001	0.001	0.001	0.000	0.000
0.003	0.004	0.004	0.004	0.004	0.002	0.002	0.001	0.001	0.001	0.000	0.000
0.003	0.003	0.003	0.003	0.003	0.002	0.002	0.001	0.001	0.000	0.000	0.000
0.003	0.003	0.003	0.003	0.003	0.002	0.001	0.001	0.001	0.000	0.000	0.000
0.003	0.003	0.003	0.003	0.003	0.002	0.001	0.001	0.001	0.000	0.000	0.000
0.002	0.003	0.003	0.003	0.003	0.002	0.001	0.001	0.001	0.000	0.000	0.000
0.002	0.002	0.002	0.002	0.003	0.002	0.001	0.001	0.001	0.000	0.000	0.000
0.004	0.004	0.004	0.004	0.003	0.003	0.002	0.002	0.001	0.001	0.001	0.001
0.004	0.004	0.004	0.004	0.004	0.003	0.002	0.002	0.001	0.001	0.001	0.001
0.005	0.005	0.004	0.004	0.004	0.003	0.002	0.002	0.001	0.001	0.001	0.001
0.005	0.005	0.005	0.005	0.005	0.004	0.003	0.002	0.002	0.001	0.001	0.001
0.006	0.006	0.005	0.005	0.005	0.004	0.003	0.002	0.002	0.001	0.001	0.001
0.006	0.006	0.006	0.006	0.006	0.004	0.003	0.002	0.002	0.001	0.001	0.001
0.007	0.007	0.007	0.006	0.006	0.005	0.004	0.003	0.002	0.002	0.001	0.001
0.008	0.008	0.008	0.007	0.007	0.006	0.005	0.004	0.003	0.003	0.002	0.002
0.007	0.007	0.007	0.007	0.007	0.006	0.005	0.004	0.004	0.003	0.003	0.002
0.006	0.006	0.007	0.007	0.008	0.006	0.005	0.005	0.004	0.003	0.003	0.002
0.005	0.006	0.006	0.007	0.008	0.007	0.006	0.005	0.004	0.004	0.003	0.003
0.005	0.005	0.006	0.007	0.008	0.007	0.006	0.006	0.005	0.004	0.004	0.003
0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056
0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059
0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067
0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026
0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028
0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022
0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028
0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052
0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044
0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.048
0.039	0.038	0.036	0.035	0.034	0.026	0.020	0.016	0.012	0.009	0.007	0.006

0.036	0.034	0.032	0.030	0.028	0.023	0.019	0.015	0.012	0.010	0.008	0.007
0.033	0.032	0.031	0.030	0.029	0.026	0.024	0.023	0.021	0.019	0.018	0.016
0.029	0.028	0.026	0.025	0.024	0.024	0.023	0.023	0.023	0.023	0.023	0.023
0.036	0.036	0.037	0.037	0.037	0.026	0.018	0.013	0.009	0.006	0.004	0.003
0.044	0.042	0.039	0.036	0.034	0.029	0.024	0.020	0.017	0.014	0.012	0.010
0.044	0.042	0.040	0.038	0.037	0.029	0.024	0.019	0.015	0.012	0.010	0.008
0.042	0.040	0.039	0.037	0.036	0.028	0.021	0.016	0.013	0.010	0.008	0.006
0.044	0.044	0.043	0.042	0.041	0.034	0.028	0.023	0.018	0.015	0.012	0.010
0.042	0.039	0.036	0.033	0.031	0.018	0.010	0.006	0.004	0.002	0.001	0.001
0.036	0.033	0.031	0.029	0.026	0.028	0.030	0.032	0.034	0.036	0.038	0.040
0.037	0.034	0.032	0.029	0.027	0.027	0.026	0.026	0.026	0.026	0.026	0.026
0.040	0.040	0.040	0.040	0.041	0.031	0.023	0.017	0.013	0.010	0.008	0.006
0.057	0.057	0.057	0.057	0.057	0.045	0.036	0.029	0.023	0.019	0.015	0.012
0.052	0.047	0.042	0.038	0.034	0.024	0.018	0.013	0.009	0.007	0.005	0.003
0.065	0.065	0.065	0.065	0.065	0.056	0.047	0.040	0.034	0.029	0.024	0.021
0.059	0.057	0.055	0.054	0.052	0.048	0.044	0.040	0.037	0.034	0.031	0.028
0.044	0.045	0.045	0.046	0.047	0.036	0.027	0.021	0.016	0.012	0.009	0.007

Table B-19: Weekly Earnings of Full-time Male Workers (median earnings, \$)

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54
1975	80	128	151	*	152	*	146	*
1976	90	145	173	*	173	*	166	*
1977	101	158	191	*	193	*	183	*
1978	106	172	203	212	214	208	201	200
1979	113	181	214	230	231	224	218	215
1980	123	203	245	*	255	*	238	*
1981	136	223	271	*	290	*	264	*
1982	157	255	311	*	327	*	309	*
1983	164	263	327	*	350	*	328	*
1984	174	285	350	*	380	*	354	*
1985	184	308	377	*	408	*	385	*
1986	194	321	391	*	440	*	409	*
1987	205	341	426	*	464	*	447	*
1988	212	359	451	*	500	*	470	*
1989	234	390	488	*	538	*	509	*
1990	246	412	510	*	515	*	531	*
1991	256	417	528	*	577	*	549	*
1992	266	426	535	*	591	*	582	*
1993	263	441	559	*	632	*	617	*

Year	55~59	60~64	65~	Total
1975	142	132	128	139
1976	158	151	142	159
1977	174	167	157	175
1978	193	184	166	193
1979	206	199	181	205
1980	225	213	*	225
1981	257	242	*	252
1982	296	284	*	293
1983	315	300	*	309
1984	335	315	*	334
1985	362	335	*	358

1986	384	358	*	382
1987	408	380	*	407
1988	424	396	*	431
1989	457	434	*	468
1990	483	464	*	495
1991	498	467	*	512
1992	519	481	*	526
1993	555	492	*	552

Source: Australian Bureau of Statistics, Weekly Earnings of Employees, Australia, Various Years.

Table B-20: Weekly Earnings of Full-time Male Workers (mean earnings, \$)

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54
1975	85	135	164	*	170	*	165	*
1976	93	152	187	*	193	*	190	*
1977	106	166	205	*	215	*	209	*
1978	113	183	217	232	239	232	228	224
1979	123	193	229	250	257	253	245	244
1980	134	215	266	*	282	*	271	*
1981	149	239	293	*	314	*	298	*
1982	169	275	337	*	365	*	348	*
1983	177	283	356	*	382	*	368	*
1984	191	305	384	*	412	*	402	*
1985	200	327	408	*	447	*	440	*
1986	209	343	431	*	479	*	463	*
1987	221	368	459	*	500	*	494	*
1988	233	385	488	*	542	*	524	*
1989	253	421	536	*	595	*	569	*
1990	271	438	559	*	614	*	595	*
1991	276	439	581	*	641	*	633	*
1992	283	447	584	*	663	*	657	*
1993	283	467	618	*	700	*	717	*

Year	55~59	60~64	65~	Total
1975	159	145	126	152
1976	177	168	166	174
1977	197	182	182	192
1978	221	209	200	210
1979	238	220	200	210
1980	257	238	*	249
1981	295	270	*	277
1982	341	312	*	322
1983	364	341	*	341
1984	383	352	*	367
1985	411	372	*	395
1986	438	408	*	419
1987	466	434	*	440
1988	475	458	*	476
1989	522	492	*	519
1990	560	521	*	545
1991	565	515	*	570
1992	610	572	*	590
1993	637	563	*	626

Source: Australian Bureau of Statistics, Weekly Earnings of Employees, Australia, Various Years.

Table B-21: Weekly Earnings of Full-time Female Workers (median earnings, \$)

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54
1975	75	114	122	*	113	*	113	*
1976	85	131	142	*	131	*	128	*
1977	95	147	158	*	149	*	145	*
1978	101	158	176	173	162	159	161	160
1979	108	166	189	179	174	171	170	168
1980	117	184	209	*	198	*	190	*
1981	131	205	232	*	217	*	213	*
1982	146	229	260	*	251	*	238	*
1983	152	241	280	*	272	*	263	*
1984	166	261	303	*	292	*	286	*
1985	178	279	321	*	307	*	300	*
1986	188	295	351	*	335	*	317	*
1987	196	310	376	*	359	*	345	*
1988	209	329	397	*	378	*	366	*
1989	228	355	431	*	414	*	398	*
1990	238	379	455	*	442	*	420	*
1991	258	394	475	*	464	*	451	*
1992	262	405	493	*	490	*	471	*
1993	268	424	517	*	519	*	488	*

Year	55~59	60~64	65~	Total
1975	118	*	110	109
1976	133	*	126	128
1977	142	*	136	142
1978	157	*	154	155
1979	175	*	173	165
1980	184	179	*	183
1981	218	210	*	206
1982	245	238	*	232
1983	259	236	*	250
1984	275	285	*	270
1985	298	281	*	288
1986	328	308	*	310
1987	345	346	*	332
1988	352	374	*	350
1989	385	376	*	381
1990	395	393	*	405
1991	413	441	*	430
1992	439	453	*	451
1993	466	492	*	479

Source: Australian Bureau of Statistics, Weekly Earnings of Employees, Australia, Various Years.

Table B-22: Weekly Earnings of Full-time Female Workers (mean earnings, \$)

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54
1975	78	118	128	*	121	*	120	*
1976	87	136	150	*	143	*	136	*
1977	98	151	168	*	159	*	152	*
1978	107	166	187	183	173	173	173	174
1979	113	174	201	196	182	185	187	181
1980	122	190	223	*	217	*	203	*

1981	140	213	247	*	240	*	231	*
1982	154	237	280	*	270	*	257	*
1983	166	253	304	*	293	*	289	*
1984	175	271	325	*	315	*	304	*
1985	187	289	344	*	338	*	321	*
1986	198	309	378	*	366	*	350	*
1987	206	322	395	*	391	*	382	*
1988	217	349	422	*	413	*	397	*
1989	239	375	457	*	444	*	429	*
1990	249	393	476	*	478	*	444	*
1991	265	409	497	*	503	*	481	*
1992	270	421	521	*	529	*	507	*
1993	277	439	546	*	556	*	524	*

Year	55~59	60~64	65~	Total
1975	124	*	120	113
1976	140	*	133	131
1977	151	*	133	147
1978	171	*	164	162
1979	188	*	186	174
1980	204	189	*	193
1981	231	216	*	218
1982	262	255	*	245
1983	284	245	*	267
1984	299	278	*	286
1985	329	289	*	305
1986	341	321	*	332
1987	378	368	*	355
1988	388	414	*	377
1989	413	399	*	409
1990	428	419	*	432
1991	460	482	*	461
1992	476	478	*	486
1993	493	551	*	510

Source: Australian Bureau of Statistics, Weekly Earnings of Employees, Australia, Various Years.

Table B-23: Total Average Weekly Earnings (\$), 1946 to 1974

Year	Male	Female
1946	12.85	6.28
1947	13.36	6.69
1948	15.02	7.82
1949	17.02	8.90
1950	18.60	9.89
1951	22.21	12.15
1952	27.50	15.18
1953	30.19	16.51
1954	31.59	17.45
1955	32.97	18.07
1956	35.18	19.45
1957	38.37	21.25
1958	39.55	21.89
1959	40.70	22.40
1960	43.90	24.10

1961	46.00	25.30
1962	47.20	26.00
1963	48.40	26.60
1964	50.90	28.00
1965	54.60	30.00
1966	57.00	31.40
1967	61.90	32.50
1968	65.50	34.39
1969	70.40	37.00
1970	76.30	40.10
1971	84.80	45.40
1972	93.00	51.20
1973	101.50	57.80
1974	118.30	73.10

Source: Wray Vamplew (ed.), *Australians: Historical Statistics*, p. 157.

Table B-24: Estimated Yearly Earnings of Male Workers by Age (\$)

Year	15	16	17	18	19	20	21	22	23	24
1947	332	364	399	438	481	527	578	634	659	686
1948	373	409	449	492	540	592	650	713	741	770
1949	423	464	509	558	612	671	736	808	840	873
1950	462	507	556	610	669	734	805	883	918	954
1951	552	605	664	728	799	876	961	1,054	1,096	1,139
1952	683	749	822	902	989	1,085	1,190	1,305	1,357	1,411
1953	750	823	902	990	1,086	1,191	1,306	1,433	1,490	1,549
1954	785	861	944	1,036	1,136	1,246	1,367	1,500	1,559	1,621
1955	819	898	985	1,081	1,186	1,301	1,427	1,565	1,627	1,692
1956	874	958	1,051	1,153	1,265	1,388	1,522	1,670	1,736	1,805
1957	953	1,045	1,147	1,258	1,380	1,514	1,660	1,821	1,894	1,969
1958	982	1,077	1,182	1,296	1,422	1,560	1,711	1,877	1,952	2,029
1959	1,011	1,109	1,216	1,334	1,464	1,606	1,761	1,932	2,009	2,088
1960	1,090	1,196	1,312	1,439	1,579	1,732	1,900	2,084	2,166	2,252
1961	1,143	1,253	1,375	1,508	1,654	1,815	1,991	2,183	2,270	2,360
1962	1,172	1,286	1,411	1,547	1,697	1,862	2,042	2,240	2,329	2,422
1963	1,202	1,319	1,446	1,587	1,741	1,909	2,094	2,297	2,389	2,483
1964	1,264	1,387	1,521	1,669	1,830	2,008	2,203	2,416	2,512	2,612
1965	1,356	1,488	1,632	1,790	1,964	2,154	2,363	2,592	2,695	2,801
1966	1,416	1,553	1,704	1,869	2,050	2,249	2,466	2,706	2,813	2,925
1967	1,537	1,686	1,850	2,029	2,226	2,442	2,679	2,938	3,055	3,176
1968	1,627	1,785	1,958	2,147	2,355	2,584	2,834	3,109	3,232	3,361
1969	1,749	1,918	2,104	2,308	2,532	2,777	3,046	3,342	3,474	3,612
1970	1,895	2,079	2,280	2,501	2,744	3,010	3,302	3,622	3,765	3,915
1971	2,106	2,310	2,534	2,780	3,050	3,345	3,669	4,025	4,185	4,351
1972	2,310	2,534	2,779	3,049	3,344	3,669	4,024	4,414	4,590	4,772
1973	2,521	2,765	3,033	3,328	3,650	4,004	4,392	4,818	5,009	5,208
1974	2,938	3,223	3,536	3,878	4,254	4,667	5,119	5,615	5,838	6,070
1975	3,683	4,040	4,432	4,862	5,333	5,850	6,417	7,039	7,319	7,609
1976	3,984	4,395	4,849	5,350	5,902	6,512	7,184	7,926	8,261	8,611
1977	4,619	5,053	5,527	6,046	6,613	7,234	7,913	8,656	9,029	9,418
1978	4,859	5,351	5,892	6,489	7,145	7,869	8,665	9,542	9,873	10,215
1979	5,356	5,861	6,414	7,018	7,680	8,404	9,196	10,064	10,414	10,776
1980	5,783	6,357	6,987	7,680	8,442	9,279	10,199	11,211	11,698	12,207
1981	6,431	7,069	7,769	8,539	9,386	10,316	11,338	12,462	12,980	13,520

1982	7,253	7,995	8,812	9,713	10,707	11,802	13,009	14,339	14,934	15,554
1983	7,650	8,402	9,229	10,137	11,135	12,231	13,434	14,756	15,449	16,175
1984	8,259	9,069	9,959	10,937	12,010	13,188	14,482	15,904	16,653	17,438
1985	8,567	9,452	10,429	11,506	12,695	14,007	15,454	17,051	17,822	18,629
1986	8,939	9,870	10,898	12,033	13,286	14,670	16,198	17,885	18,721	19,596
1987	9,397	10,406	11,524	12,761	14,131	15,648	17,328	19,189	20,056	20,962
1988	9,938	10,988	12,149	13,433	14,852	16,422	18,157	20,075	21,050	22,072
1989	10,761	11,915	13,192	14,607	16,173	17,907	19,826	21,952	23,038	24,179
1990	11,662	12,837	14,131	15,555	17,122	18,848	20,748	22,839	23,980	25,179
1991	11,953	13,116	14,391	15,791	17,327	19,012	20,862	22,891	24,210	25,606
1992	12,291	13,467	14,756	16,169	17,717	19,413	21,272	23,308	24,588	25,938
1993	12,077	13,350	14,756	16,311	18,030	19,930	22,030	24,351	25,754	27,238
1994	12,219	13,525	14,971	16,571	18,343	20,304	22,474	24,877	26,374	27,961
1995	12,363	13,703	15,189	16,836	18,661	20,685	22,928	25,414	27,009	28,704

25	26	27	28	29	30	31	32	33	34	35
713	741	770	770	770	770	770	770	776	782	787
801	833	866	866	866	866	866	866	872	878	885
908	944	981	981	981	981	981	981	988	995	1,003
992	1,032	1,073	1,073	1,073	1,073	1,073	1,073	1,080	1,088	1,096
1,185	1,232	1,281	1,281	1,281	1,281	1,281	1,281	1,290	1,299	1,308
1,467	1,525	1,586	1,586	1,586	1,586	1,586	1,586	1,597	1,609	1,620
1,611	1,675	1,741	1,741	1,741	1,741	1,741	1,741	1,754	1,766	1,779
1,685	1,752	1,822	1,822	1,822	1,822	1,822	1,822	1,835	1,848	1,861
1,759	1,829	1,901	1,901	1,901	1,901	1,901	1,901	1,915	1,929	1,943
1,877	1,951	2,028	2,028	2,028	2,028	2,028	2,028	2,043	2,058	2,073
2,047	2,128	2,212	2,212	2,212	2,212	2,212	2,212	2,228	2,245	2,261
2,110	2,193	2,280	2,280	2,280	2,280	2,280	2,280	2,297	2,313	2,330
2,171	2,257	2,347	2,347	2,347	2,347	2,347	2,347	2,364	2,381	2,398
2,342	2,435	2,531	2,531	2,531	2,531	2,531	2,531	2,550	2,568	2,587
2,454	2,551	2,652	2,652	2,652	2,652	2,652	2,652	2,672	2,691	2,710
2,518	2,618	2,722	2,722	2,722	2,722	2,722	2,722	2,741	2,761	2,781
2,582	2,684	2,791	2,791	2,791	2,791	2,791	2,791	2,811	2,831	2,852
2,715	2,823	2,935	2,935	2,935	2,935	2,935	2,935	2,956	2,978	2,999
2,913	3,028	3,148	3,148	3,148	3,148	3,148	3,148	3,171	3,194	3,217
3,041	3,161	3,287	3,287	3,287	3,287	3,287	3,287	3,310	3,334	3,358
3,302	3,433	3,569	3,569	3,569	3,569	3,569	3,569	3,595	3,621	3,647
3,494	3,633	3,777	3,777	3,777	3,777	3,777	3,777	3,804	3,832	3,859
3,755	3,905	4,059	4,059	4,059	4,059	4,059	4,059	4,089	4,118	4,148
4,070	4,232	4,400	4,400	4,400	4,400	4,400	4,400	4,431	4,463	4,496
4,524	4,703	4,890	4,890	4,890	4,890	4,890	4,890	4,925	4,961	4,996
4,961	5,158	5,363	5,363	5,363	5,363	5,363	5,363	5,401	5,440	5,480
5,415	5,629	5,853	5,853	5,853	5,853	5,853	5,853	5,895	5,938	5,980
6,311	6,561	6,822	6,822	6,822	6,822	6,822	6,822	6,871	6,920	6,970
7,911	8,225	8,551	8,551	8,551	8,551	8,551	8,551	8,613	8,675	8,738
8,975	9,355	9,751	9,751	9,751	9,751	9,751	9,751	9,812	9,875	9,937
9,824	10,248	10,689	10,689	10,689	10,689	10,689	10,689	10,792	10,895	10,999
10,569	10,936	11,315	11,467	11,622	11,778	11,937	12,097	12,169	12,242	12,315
11,151	11,539	11,941	12,152	12,367	12,586	12,809	13,036	13,108	13,181	13,254
12,738	13,292	13,870	13,870	13,870	13,870	13,870	13,870	14,033	14,198	14,365
14,082	14,668	15,278	15,278	15,278	15,278	15,278	15,278	15,491	15,707	15,926
16,200	16,872	17,572	17,572	17,572	17,572	17,572	17,572	17,855	18,142	18,434
16,935	17,730	18,563	18,563	18,563	18,563	18,563	18,563	18,826	19,094	19,365

18,261	19,121	20,023	20,023	20,023	20,023	20,023	20,023	20,307	20,595	20,886
19,472	20,353	21,274	21,274	21,274	21,274	21,274	21,274	21,666	22,066	22,472
20,512	21,470	22,474	22,474	22,474	22,474	22,474	22,474	22,953	23,443	23,943
21,909	22,899	23,934	23,934	23,934	23,934	23,934	23,934	24,347	24,767	25,194
23,144	24,267	25,446	25,446	25,446	25,446	25,446	25,446	25,985	26,537	27,100
25,375	26,631	27,949	27,949	27,949	27,949	27,949	27,949	28,538	29,141	29,756
26,438	27,760	29,148	29,148	29,148	29,148	29,148	29,148	29,700	30,263	30,836
27,082	28,644	30,295	30,295	30,295	30,295	30,295	30,295	30,896	31,510	32,135
27,363	28,866	30,451	30,451	30,451	30,451	30,451	30,451	31,234	32,037	32,860
28,808	30,468	32,224	32,224	32,224	32,224	32,224	32,224	33,037	33,871	34,726
29,644	31,429	33,320	33,320	33,320	33,320	33,320	33,320	34,231	35,167	36,128
30,505	32,419	34,454	34,454	34,454	34,454	34,454	34,454	35,468	36,512	37,587

36	37	38	39	40	41	42	43	44	45	46
793	799	799	799	799	799	799	794	789	784	780
891	898	898	898	898	898	898	892	887	882	876
1,010	1,017	1,017	1,017	1,017	1,017	1,017	1,011	1,005	999	993
1,104	1,112	1,112	1,112	1,112	1,112	1,112	1,105	1,099	1,092	1,086
1,318	1,327	1,327	1,327	1,327	1,327	1,327	1,320	1,312	1,304	1,296
1,632	1,644	1,644	1,644	1,644	1,644	1,644	1,634	1,624	1,615	1,605
1,792	1,805	1,805	1,805	1,805	1,805	1,805	1,794	1,783	1,773	1,762
1,875	1,888	1,888	1,888	1,888	1,888	1,888	1,877	1,866	1,855	1,844
1,957	1,971	1,971	1,971	1,971	1,971	1,971	1,959	1,947	1,936	1,924
2,088	2,103	2,103	2,103	2,103	2,103	2,103	2,090	2,078	2,065	2,053
2,277	2,293	2,293	2,293	2,293	2,293	2,293	2,280	2,266	2,253	2,239
2,347	2,364	2,364	2,364	2,364	2,364	2,364	2,350	2,336	2,322	2,308
2,415	2,433	2,433	2,433	2,433	2,433	2,433	2,418	2,404	2,390	2,375
2,605	2,624	2,624	2,624	2,624	2,624	2,624	2,608	2,593	2,577	2,562
2,730	2,750	2,750	2,750	2,750	2,750	2,750	2,733	2,717	2,701	2,685
2,801	2,821	2,821	2,821	2,821	2,821	2,821	2,804	2,788	2,771	2,755
2,872	2,893	2,893	2,893	2,893	2,893	2,893	2,876	2,859	2,842	2,825
3,021	3,042	3,042	3,042	3,042	3,042	3,042	3,024	3,006	2,988	2,971
3,240	3,264	3,264	3,264	3,264	3,264	3,264	3,244	3,225	3,206	3,187
3,383	3,407	3,407	3,407	3,407	3,407	3,407	3,387	3,367	3,347	3,327
3,673	3,700	3,700	3,700	3,700	3,700	3,700	3,678	3,656	3,634	3,613
3,887	3,915	3,915	3,915	3,915	3,915	3,915	3,892	3,869	3,846	3,823
4,178	4,208	4,208	4,208	4,208	4,208	4,208	4,183	4,158	4,133	4,109
4,528	4,561	4,561	4,561	4,561	4,561	4,561	4,534	4,507	4,480	4,453
5,032	5,069	5,069	5,069	5,069	5,069	5,069	5,039	5,009	4,979	4,949
5,519	5,559	5,559	5,559	5,559	5,559	5,559	5,526	5,493	5,460	5,428
6,023	6,067	6,067	6,067	6,067	6,067	6,067	6,031	5,995	5,959	5,924
7,020	7,071	7,071	7,071	7,071	7,071	7,071	7,029	6,987	6,946	6,904
8,801	8,864	8,864	8,864	8,864	8,864	8,864	8,812	8,759	8,707	8,655
10,000	10,064	10,064	10,064	10,064	10,064	10,064	10,032	10,001	9,969	9,938
11,104	11,211	11,211	11,211	11,211	11,211	11,211	11,147	11,085	11,022	10,960
12,388	12,462	12,388	12,315	12,242	12,169	12,097	12,055	12,013	11,972	11,930
13,327	13,401	13,359	13,317	13,275	13,234	13,192	13,108	13,024	12,940	12,857
14,534	14,704	14,704	14,704	14,704	14,704	14,704	14,588	14,472	14,357	14,244
16,148	16,373	16,373	16,373	16,373	16,373	16,373	16,202	16,034	15,867	15,702
18,731	19,032	19,032	19,032	19,032	19,032	19,032	18,851	18,672	18,495	18,320
19,640	19,919	19,919	19,919	19,919	19,919	19,919	19,770	19,623	19,477	19,332
21,183	21,483	21,483	21,483	21,483	21,483	21,483	21,378	21,273	21,168	21,065
22,886	23,308	23,308	23,308	23,308	23,308	23,308	23,234	23,161	23,088	23,015

24,454	24,976	24,976	24,976	24,976	24,976	24,976	24,807	24,639	24,472	24,307
25,629	26,071	26,071	26,071	26,071	26,071	26,071	26,009	25,946	25,883	25,821
27,674	28,261	28,261	28,261	28,261	28,261	28,261	28,071	27,882	27,694	27,508
30,384	31,025	31,025	31,025	31,025	31,025	31,025	30,749	30,475	30,204	29,936
31,420	32,016	32,016	32,016	32,016	32,016	32,016	31,815	31,616	31,418	31,221
32,773	33,424	33,424	33,424	33,424	33,424	33,424	33,340	33,256	33,173	33,089
33,705	34,571	34,571	34,571	34,571	34,571	34,571	34,508	34,445	34,383	34,320
35,602	36,500	36,500	36,500	36,500	36,500	36,500	36,676	36,852	37,029	37,207
37,116	38,130	38,130	38,130	38,130	38,130	38,130	38,456	38,784	39,114	39,448
38,694	39,833	39,833	39,833	39,833	39,833	39,833	40,322	40,816	41,317	41,824

47	48	49	50	51	52	53	54	55	56	57
775	775	775	775	775	775	769	764	758	753	747
871	871	871	871	871	871	865	858	852	846	839
987	987	987	987	987	987	980	973	965	958	951
1,079	1,079	1,079	1,079	1,079	1,079	1,071	1,063	1,055	1,048	1,040
1,288	1,288	1,288	1,288	1,288	1,288	1,279	1,269	1,260	1,251	1,242
1,595	1,595	1,595	1,595	1,595	1,595	1,584	1,572	1,560	1,549	1,537
1,752	1,752	1,752	1,752	1,752	1,752	1,739	1,726	1,713	1,700	1,688
1,833	1,833	1,833	1,833	1,833	1,833	1,819	1,806	1,793	1,779	1,766
1,913	1,913	1,913	1,913	1,913	1,913	1,899	1,885	1,871	1,857	1,843
2,041	2,041	2,041	2,041	2,041	2,041	2,026	2,011	1,996	1,981	1,967
2,226	2,226	2,226	2,226	2,226	2,226	2,210	2,193	2,177	2,161	2,145
2,294	2,294	2,294	2,294	2,294	2,294	2,277	2,261	2,244	2,227	2,211
2,361	2,361	2,361	2,361	2,361	2,361	2,344	2,326	2,309	2,292	2,275
2,547	2,547	2,547	2,547	2,547	2,547	2,528	2,509	2,491	2,472	2,454
2,669	2,669	2,669	2,669	2,669	2,669	2,649	2,629	2,610	2,591	2,572
2,738	2,738	2,738	2,738	2,738	2,738	2,718	2,698	2,678	2,658	2,639
2,808	2,808	2,808	2,808	2,808	2,808	2,787	2,767	2,746	2,726	2,706
2,953	2,953	2,953	2,953	2,953	2,953	2,931	2,910	2,888	2,867	2,846
3,168	3,168	3,168	3,168	3,168	3,168	3,144	3,121	3,098	3,075	3,052
3,307	3,307	3,307	3,307	3,307	3,307	3,282	3,258	3,234	3,210	3,187
3,591	3,591	3,591	3,591	3,591	3,591	3,565	3,538	3,512	3,486	3,461
3,800	3,800	3,800	3,800	3,800	3,800	3,772	3,744	3,716	3,689	3,662
4,084	4,084	4,084	4,084	4,084	4,084	4,054	4,024	3,994	3,965	3,936
4,427	4,427	4,427	4,427	4,427	4,427	4,394	4,361	4,329	4,297	4,266
4,920	4,920	4,920	4,920	4,920	4,920	4,883	4,847	4,812	4,776	4,741
5,395	5,395	5,395	5,395	5,395	5,395	5,356	5,316	5,277	5,238	5,199
5,888	5,888	5,888	5,888	5,888	5,888	5,845	5,802	5,759	5,717	5,674
6,863	6,863	6,863	6,863	6,863	6,863	6,812	6,762	6,712	6,663	6,614
8,604	8,604	8,604	8,604	8,604	8,604	8,540	8,477	8,414	8,352	8,291
9,907	9,907	9,907	9,907	9,907	9,907	9,768	9,630	9,495	9,361	9,229
10,898	10,898	10,898	10,898	10,898	10,898	10,770	10,643	10,518	10,394	10,272
11,889	11,847	11,805	11,763	11,721	11,680	11,649	11,617	11,586	11,555	11,524
12,775	12,765	12,754	12,744	12,733	12,723	12,660	12,597	12,534	12,472	12,410
14,131	14,131	14,131	14,131	14,131	14,131	13,982	13,834	13,688	13,544	13,401
15,539	15,539	15,539	15,539	15,539	15,539	15,507	15,476	15,445	15,413	15,382
18,146	18,146	18,146	18,146	18,146	18,146	18,072	17,999	17,926	17,853	17,781
19,189	19,189	19,189	19,189	19,189	19,189	19,147	19,105	19,063	19,022	18,980
20,961	20,961	20,961	20,961	20,961	20,961	20,759	20,559	20,361	20,165	19,971
22,943	22,943	22,943	22,943	22,943	22,943	22,632	22,326	22,023	21,725	21,431
24,142	24,142	24,142	24,142	24,142	24,142	23,876	23,612	23,351	23,094	22,839
25,759	25,759	25,759	25,759	25,759	25,759	25,460	25,164	24,872	24,584	24,299

27,323	27,323	27,323	27,323	27,323	27,323	26,792	26,271	25,760	25,259	24,768
29,669	29,669	29,669	29,669	29,669	29,669	29,162	28,664	28,174	27,692	27,219
31,025	31,025	31,025	31,025	31,025	31,025	30,651	30,282	29,917	29,556	29,200
33,006	33,006	33,006	33,006	33,006	33,006	32,265	31,540	30,831	30,138	29,461
34,258	34,258	34,258	34,258	34,258	34,258	33,753	33,256	32,766	32,283	31,807
37,386	37,386	37,386	37,386	37,386	37,386	36,512	35,658	34,825	34,010	33,215
39,785	39,785	39,785	39,785	39,785	39,785	38,705	37,655	36,633	35,639	34,672
42,337	42,337	42,337	42,337	42,337	42,337	41,030	39,763	38,536	37,347	36,194

58	59	60	61	62	63	64
733	720	707	694	681	669	657
824	809	794	780	766	752	738
934	917	900	884	867	852	836
1,021	1,002	984	966	948	931	914
1,219	1,197	1,175	1,153	1,132	1,112	1,091
1,509	1,482	1,455	1,428	1,402	1,376	1,351
1,657	1,627	1,597	1,568	1,539	1,511	1,484
1,734	1,702	1,671	1,641	1,611	1,581	1,552
1,809	1,776	1,744	1,712	1,681	1,650	1,620
1,931	1,895	1,861	1,827	1,793	1,761	1,728
2,106	2,067	2,030	1,993	1,956	1,920	1,885
2,170	2,131	2,092	2,054	2,016	1,979	1,943
2,234	2,193	2,153	2,114	2,075	2,037	2,000
2,409	2,365	2,322	2,280	2,238	2,197	2,157
2,525	2,479	2,433	2,389	2,345	2,302	2,260
2,591	2,543	2,497	2,451	2,406	2,362	2,319
2,656	2,608	2,560	2,513	2,468	2,422	2,378
2,794	2,743	2,692	2,643	2,595	2,548	2,501
2,997	2,942	2,888	2,835	2,784	2,733	2,683
3,128	3,071	3,015	2,960	2,906	2,853	2,801
3,397	3,335	3,274	3,215	3,156	3,098	3,042
3,595	3,529	3,465	3,401	3,339	3,278	3,218
3,864	3,793	3,724	3,656	3,589	3,524	3,459
4,188	4,111	4,036	3,962	3,890	3,819	3,749
4,654	4,569	4,486	4,404	4,323	4,244	4,167
5,104	5,011	4,919	4,830	4,741	4,655	4,570
5,571	5,469	5,369	5,271	5,175	5,080	4,987
6,493	6,374	6,258	6,143	6,031	5,921	5,813
8,139	7,991	7,845	7,701	7,561	7,423	7,287
9,133	9,039	8,945	8,852	8,760	8,669	8,579
10,111	9,952	9,795	9,642	9,490	9,341	9,194
11,396	11,269	11,144	11,020	10,898	10,777	10,657
12,216	12,026	11,838	11,653	11,471	11,292	11,116
13,196	12,995	12,797	12,602	12,410	12,221	12,035
15,112	14,847	14,586	14,330	14,079	13,831	13,589
17,467	17,160	16,857	16,560	16,269	15,982	15,700
18,734	18,491	18,251	18,014	17,781	17,550	17,322
19,636	19,308	18,985	18,667	18,354	18,047	17,745
21,008	20,593	20,186	19,788	19,397	19,014	18,639
22,517	22,200	21,887	21,578	21,274	20,975	20,679
23,955	23,617	23,283	22,954	22,630	22,310	21,995
24,588	24,409	24,232	24,056	23,881	23,708	23,536
26,898	26,582	26,269	25,960	25,654	25,352	25,054

28,781	28,369	27,962	27,561	27,166	26,777	26,393
28,920	28,389	27,868	27,356	26,854	26,361	25,877
31,401	30,999	30,603	30,212	29,826	29,444	29,068
32,405	31,614	30,843	30,091	29,356	28,640	27,942
33,711	32,776	31,868	30,984	30,125	29,290	28,478
35,070	33,981	32,926	31,904	30,914	29,954	29,024

Table B-25: Estimated Yearly Earnings of Female Workers by Age (\$)

Year	15	16	17	18	19	20	21	22	23	24
1947	241	262	284	309	336	365	396	430	437	445
1948	282	306	332	361	392	426	463	503	511	520
1949	321	348	378	411	446	485	527	572	582	591
1950	356	387	420	457	496	539	585	636	646	657
1951	437	475	516	561	609	662	719	781	794	807
1952	547	594	645	701	761	827	898	976	992	1,008
1953	594	646	702	762	828	899	977	1,061	1,079	1,096
1954	629	683	742	806	875	951	1,033	1,122	1,141	1,159
1955	651	707	768	834	906	984	1,069	1,162	1,181	1,200
1956	701	761	827	898	976	1,060	1,151	1,251	1,271	1,292
1957	765	831	903	981	1,066	1,158	1,257	1,366	1,388	1,411
1958	788	856	930	1,011	1,098	1,193	1,296	1,408	1,431	1,454
1959	807	876	952	1,034	1,123	1,220	1,326	1,440	1,464	1,488
1960	868	943	1,024	1,113	1,209	1,313	1,426	1,549	1,575	1,601
1961	911	990	1,075	1,168	1,269	1,378	1,497	1,627	1,653	1,680
1962	936	1,017	1,105	1,200	1,304	1,417	1,539	1,672	1,699	1,727
1963	958	1,041	1,130	1,228	1,334	1,449	1,574	1,710	1,738	1,767
1964	1,008	1,095	1,190	1,293	1,404	1,525	1,657	1,800	1,830	1,860
1965	1,080	1,174	1,275	1,385	1,505	1,634	1,776	1,929	1,960	1,993
1966	1,131	1,228	1,334	1,450	1,575	1,711	1,858	2,019	2,052	2,086
1967	1,170	1,271	1,381	1,500	1,630	1,771	1,923	2,090	2,124	2,159
1968	1,238	1,345	1,462	1,588	1,725	1,874	2,035	2,211	2,247	2,284
1969	1,332	1,448	1,572	1,708	1,856	2,016	2,190	2,379	2,418	2,458
1970	1,444	1,569	1,704	1,851	2,011	2,185	2,373	2,578	2,620	2,663
1971	1,635	1,776	1,929	2,096	2,277	2,473	2,687	2,919	2,967	3,015
1972	1,844	2,003	2,176	2,364	2,568	2,789	3,030	3,292	3,346	3,401
1973	2,082	2,261	2,456	2,668	2,899	3,149	3,421	3,716	3,777	3,839
1974	2,633	2,860	3,107	3,375	3,666	3,983	4,326	4,700	4,777	4,855
1975	3,446	3,744	4,067	4,418	4,800	5,214	5,664	6,153	6,254	6,356
1976	3,794	4,149	4,536	4,960	5,424	5,931	6,485	7,091	7,232	7,375
1977	4,299	4,687	5,110	5,571	6,075	6,623	7,221	7,874	8,043	8,217
1978	4,680	5,110	5,579	6,091	6,651	7,261	7,928	8,656	8,864	9,078
1979	4,958	5,405	5,892	6,423	7,003	7,634	8,322	9,073	9,338	9,612
1980	5,328	5,822	6,361	6,951	7,595	8,298	9,067	9,907	10,230	10,563
1981	6,172	6,712	7,300	7,939	8,634	9,390	10,212	11,106	11,440	11,784
1982	6,758	7,367	8,030	8,753	9,541	10,400	11,337	12,358	12,777	13,210
1983	7,313	7,956	8,656	9,417	10,245	11,146	12,126	13,192	13,686	14,198
1984	7,661	8,361	9,125	9,959	10,869	11,863	12,947	14,131	14,654	15,196
1985	8,192	8,938	9,751	10,638	11,605	12,661	13,813	15,069	15,604	16,157
1986	8,641	9,445	10,324	11,285	12,336	13,485	14,740	16,112	16,775	17,465
1987	8,984	9,823	10,741	11,745	12,843	14,043	15,355	16,790	17,490	18,220
1988	9,356	10,289	11,315	12,443	13,684	15,048	16,548	18,198	18,902	19,634
1989	10,407	11,388	12,462	13,637	14,923	16,329	17,869	19,554	20,342	21,163
1990	10,817	11,851	12,984	14,224	15,584	17,073	18,705	20,492	21,293	22,124

1991	11,616	12,669	13,818	15,071	16,437	17,928	19,553	21,326	22,174	23,055
1992	11,787	12,882	14,079	15,387	16,816	18,378	20,086	21,952	22,908	23,906
1993	12,014	13,173	14,444	15,837	17,365	19,040	20,877	22,891	23,911	24,978
1994	12,441	13,645	14,966	16,414	18,003	19,745	21,655	23,751	24,854	26,008
1995	12,884	14,135	15,507	17,012	18,664	20,476	22,463	24,644	25,834	27,081

25	26	27	28	29	30	31	32	33	34	35
452	459	467	467	467	467	467	467	462	456	451
528	537	546	546	546	546	546	546	539	533	527
601	611	621	621	621	621	621	621	614	607	600
668	679	690	690	690	690	690	690	682	675	667
820	833	847	847	847	847	847	847	838	828	819
1,025	1,041	1,058	1,058	1,058	1,058	1,058	1,058	1,047	1,035	1,023
1,114	1,133	1,151	1,151	1,151	1,151	1,151	1,151	1,138	1,126	1,113
1,178	1,198	1,217	1,217	1,217	1,217	1,217	1,217	1,204	1,190	1,177
1,220	1,240	1,260	1,260	1,260	1,260	1,260	1,260	1,246	1,232	1,218
1,313	1,335	1,357	1,357	1,357	1,357	1,357	1,357	1,342	1,327	1,312
1,434	1,458	1,482	1,482	1,482	1,482	1,482	1,482	1,465	1,449	1,433
1,478	1,502	1,527	1,527	1,527	1,527	1,527	1,527	1,510	1,493	1,476
1,512	1,537	1,562	1,562	1,562	1,562	1,562	1,562	1,545	1,527	1,510
1,627	1,654	1,681	1,681	1,681	1,681	1,681	1,681	1,662	1,643	1,625
1,708	1,736	1,764	1,764	1,764	1,764	1,764	1,764	1,745	1,725	1,706
1,755	1,784	1,813	1,813	1,813	1,813	1,813	1,813	1,793	1,773	1,753
1,796	1,825	1,855	1,855	1,855	1,855	1,855	1,855	1,834	1,814	1,794
1,890	1,921	1,953	1,953	1,953	1,953	1,953	1,953	1,931	1,909	1,888
2,025	2,058	2,092	2,092	2,092	2,092	2,092	2,092	2,069	2,046	2,023
2,120	2,155	2,190	2,190	2,190	2,190	2,190	2,190	2,165	2,141	2,117
2,194	2,230	2,267	2,267	2,267	2,267	2,267	2,267	2,241	2,216	2,191
2,322	2,360	2,398	2,398	2,398	2,398	2,398	2,398	2,372	2,345	2,319
2,498	2,539	2,580	2,580	2,580	2,580	2,580	2,580	2,552	2,523	2,495
2,707	2,752	2,797	2,797	2,797	2,797	2,797	2,797	2,765	2,734	2,704
3,065	3,115	3,166	3,166	3,166	3,166	3,166	3,166	3,131	3,096	3,061
3,456	3,513	3,571	3,571	3,571	3,571	3,571	3,571	3,531	3,491	3,452
3,902	3,966	4,031	4,031	4,031	4,031	4,031	4,031	3,986	3,941	3,897
4,935	5,016	5,098	5,098	5,098	5,098	5,098	5,098	5,041	4,985	4,929
6,461	6,567	6,674	6,674	6,674	6,674	6,674	6,674	6,600	6,526	6,453
7,521	7,670	7,821	7,821	7,821	7,821	7,821	7,821	7,747	7,673	7,600
8,394	8,575	8,760	8,760	8,760	8,760	8,760	8,760	8,664	8,569	8,475
9,297	9,521	9,751	9,709	9,667	9,625	9,583	9,542	9,435	9,330	9,226
9,893	10,183	10,481	10,428	10,376	10,323	10,272	10,220	10,070	9,921	9,776
10,906	11,261	11,628	11,628	11,628	11,628	11,628	11,628	11,565	11,502	11,439
12,138	12,503	12,879	12,879	12,879	12,879	12,879	12,879	12,805	12,732	12,659
13,658	14,121	14,600	14,600	14,600	14,600	14,600	14,600	14,494	14,389	14,285
14,729	15,280	15,851	15,851	15,851	15,851	15,851	15,851	15,735	15,619	15,505
15,758	16,342	16,946	16,946	16,946	16,946	16,946	16,946	16,841	16,736	16,632
16,730	17,323	17,937	17,937	17,937	17,937	17,937	17,937	17,874	17,811	17,749
18,183	18,931	19,710	19,710	19,710	19,710	19,710	19,710	19,583	19,457	19,332
18,980	19,772	20,596	20,596	20,596	20,596	20,596	20,596	20,555	20,513	20,471
20,394	21,184	22,004	22,004	22,004	22,004	22,004	22,004	21,910	21,815	21,722
22,017	22,905	23,829	23,829	23,829	23,829	23,829	23,829	23,692	23,556	23,420
22,989	23,887	24,820	24,820	24,820	24,820	24,820	24,820	24,841	24,862	24,883
23,972	24,924	25,915	25,915	25,915	25,915	25,915	25,915	25,977	26,040	26,102
24,947	26,033	27,166	27,166	27,166	27,166	27,166	27,166	27,249	27,333	27,416

26,091	27,255	28,470	28,470	28,470	28,470	28,470	28,470	28,574	28,677	28,782
27,216	28,480	29,802	29,802	29,802	29,802	29,802	29,802	29,938	30,075	30,213
28,389	29,760	31,197	31,197	31,197	31,197	31,197	31,197	31,369	31,541	31,715

36	37	38	39	40	41	42	43	44	45	46
446	441	441	441	441	441	441	440	440	439	438
522	516	516	516	516	516	516	515	514	513	512
593	587	587	587	587	587	587	586	585	584	583
660	652	652	652	652	652	652	651	650	649	648
810	801	801	801	801	801	801	799	798	797	795
1,012	1,001	1,001	1,001	1,001	1,001	1,001	999	997	996	994
1,101	1,088	1,088	1,088	1,088	1,088	1,088	1,087	1,085	1,083	1,081
1,164	1,151	1,151	1,151	1,151	1,151	1,151	1,149	1,147	1,145	1,143
1,205	1,191	1,191	1,191	1,191	1,191	1,191	1,189	1,187	1,185	1,183
1,297	1,283	1,283	1,283	1,283	1,283	1,283	1,280	1,278	1,276	1,274
1,417	1,401	1,401	1,401	1,401	1,401	1,401	1,398	1,396	1,394	1,391
1,460	1,443	1,443	1,443	1,443	1,443	1,443	1,441	1,439	1,436	1,434
1,493	1,477	1,477	1,477	1,477	1,477	1,477	1,474	1,472	1,469	1,467
1,607	1,589	1,589	1,589	1,589	1,589	1,589	1,586	1,584	1,581	1,578
1,687	1,668	1,668	1,668	1,668	1,668	1,668	1,665	1,662	1,660	1,657
1,734	1,714	1,714	1,714	1,714	1,714	1,714	1,711	1,708	1,706	1,703
1,774	1,754	1,754	1,754	1,754	1,754	1,754	1,751	1,748	1,745	1,742
1,867	1,846	1,846	1,846	1,846	1,846	1,846	1,843	1,840	1,837	1,834
2,000	1,978	1,978	1,978	1,978	1,978	1,978	1,975	1,971	1,968	1,965
2,094	2,070	2,070	2,070	2,070	2,070	2,070	2,067	2,063	2,060	2,056
2,167	2,143	2,143	2,143	2,143	2,143	2,143	2,139	2,136	2,132	2,128
2,293	2,267	2,267	2,267	2,267	2,267	2,267	2,263	2,260	2,256	2,252
2,467	2,439	2,439	2,439	2,439	2,439	2,439	2,435	2,431	2,427	2,423
2,674	2,644	2,644	2,644	2,644	2,644	2,644	2,639	2,635	2,631	2,626
3,027	2,993	2,993	2,993	2,993	2,993	2,993	2,988	2,983	2,978	2,973
3,414	3,376	3,376	3,376	3,376	3,376	3,376	3,370	3,364	3,359	3,353
3,854	3,811	3,811	3,811	3,811	3,811	3,811	3,804	3,798	3,792	3,785
4,874	4,819	4,819	4,819	4,819	4,819	4,819	4,811	4,803	4,795	4,787
6,381	6,309	6,309	6,309	6,309	6,309	6,309	6,299	6,288	6,278	6,268
7,528	7,456	7,456	7,456	7,456	7,456	7,456	7,382	7,308	7,235	7,163
8,383	8,291	8,291	8,291	8,291	8,291	8,291	8,216	8,143	8,070	7,997
9,123	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021	9,021
9,632	9,490	9,521	9,552	9,584	9,615	9,646	9,667	9,688	9,709	9,730
11,377	11,315	11,315	11,315	11,315	11,315	11,315	11,165	11,017	10,871	10,727
12,586	12,514	12,514	12,514	12,514	12,514	12,514	12,419	12,324	12,231	12,137
14,181	14,079	14,079	14,079	14,079	14,079	14,079	13,940	13,803	13,668	13,534
15,391	15,278	15,278	15,278	15,278	15,278	15,278	15,236	15,194	15,152	15,111
16,528	16,425	16,425	16,425	16,425	16,425	16,425	16,309	16,193	16,078	15,965
17,686	17,624	17,624	17,624	17,624	17,624	17,624	17,443	17,264	17,087	16,912
19,208	19,084	19,084	19,084	19,084	19,084	19,084	18,914	18,746	18,579	18,414
20,429	20,388	20,388	20,388	20,388	20,388	20,388	20,293	20,199	20,105	20,012
21,628	21,535	21,535	21,535	21,535	21,535	21,535	21,365	21,197	21,030	20,865
23,285	23,151	23,151	23,151	23,151	23,151	23,151	22,993	22,835	22,679	22,524
24,903	24,924	24,924	24,924	24,924	24,924	24,924	24,559	24,199	23,845	23,496
26,165	26,228	26,228	26,228	26,228	26,228	26,228	25,994	25,763	25,533	25,306
27,500	27,584	27,584	27,584	27,584	27,584	27,584	27,350	27,119	26,889	26,662
28,886	28,991	28,991	28,991	28,991	28,991	28,991	28,650	28,312	27,978	27,649
30,351	30,490	30,490	30,490	30,490	30,490	30,490	30,159	29,833	29,510	29,190

31,890	32,065	32,065	32,065	32,065	32,065	32,065	32,065	31,749	31,435	31,125	30,818
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47	48	49	50	51	52	53	54	55	56	57
438	438	438	438	438	438	440	443	446	449	452
511	511	511	511	511	511	515	518	522	525	529
582	582	582	582	582	582	586	590	593	597	601
647	647	647	647	647	647	651	655	660	664	668
794	794	794	794	794	794	799	805	810	815	821
992	992	992	992	992	992	999	1,005	1,012	1,019	1,025
1,079	1,079	1,079	1,079	1,079	1,079	1,086	1,094	1,101	1,108	1,115
1,141	1,141	1,141	1,141	1,141	1,141	1,149	1,156	1,164	1,172	1,179
1,181	1,181	1,181	1,181	1,181	1,181	1,189	1,197	1,205	1,213	1,221
1,272	1,272	1,272	1,272	1,272	1,272	1,280	1,289	1,297	1,306	1,314
1,389	1,389	1,389	1,389	1,389	1,389	1,398	1,407	1,417	1,426	1,435
1,431	1,431	1,431	1,431	1,431	1,431	1,441	1,450	1,460	1,469	1,479
1,465	1,465	1,465	1,465	1,465	1,465	1,474	1,484	1,494	1,504	1,513
1,576	1,576	1,576	1,576	1,576	1,576	1,586	1,597	1,607	1,618	1,628
1,654	1,654	1,654	1,654	1,654	1,654	1,665	1,676	1,687	1,698	1,709
1,700	1,700	1,700	1,700	1,700	1,700	1,711	1,722	1,734	1,745	1,757
1,739	1,739	1,739	1,739	1,739	1,739	1,751	1,762	1,774	1,785	1,797
1,831	1,831	1,831	1,831	1,831	1,831	1,843	1,855	1,867	1,879	1,892
1,961	1,961	1,961	1,961	1,961	1,961	1,974	1,987	2,000	2,014	2,027
2,053	2,053	2,053	2,053	2,053	2,053	2,067	2,080	2,094	2,108	2,121
2,125	2,125	2,125	2,125	2,125	2,125	2,139	2,153	2,167	2,181	2,196
2,249	2,249	2,249	2,249	2,249	2,249	2,263	2,278	2,293	2,308	2,323
2,419	2,419	2,419	2,419	2,419	2,419	2,435	2,451	2,467	2,483	2,500
2,622	2,622	2,622	2,622	2,622	2,622	2,639	2,656	2,674	2,692	2,709
2,968	2,968	2,968	2,968	2,968	2,968	2,988	3,008	3,027	3,047	3,067
3,348	3,348	3,348	3,348	3,348	3,348	3,370	3,392	3,414	3,437	3,459
3,779	3,779	3,779	3,779	3,779	3,779	3,804	3,829	3,854	3,880	3,905
4,779	4,779	4,779	4,779	4,779	4,779	4,811	4,843	4,874	4,907	4,939
6,257	6,257	6,257	6,257	6,257	6,257	6,298	6,340	6,381	6,423	6,466
7,091	7,091	7,091	7,091	7,091	7,091	7,133	7,174	7,216	7,258	7,300
7,926	7,926	7,926	7,926	7,926	7,926	7,915	7,905	7,894	7,884	7,874
9,021	9,031	9,042	9,052	9,062	9,073	9,041	9,010	8,979	8,947	8,916
9,751	9,687	9,624	9,562	9,500	9,438	9,510	9,582	9,655	9,729	9,803
10,585	10,585	10,585	10,585	10,585	10,585	10,595	10,606	10,616	10,627	10,637
12,045	12,045	12,045	12,045	12,045	12,045	12,045	12,045	12,045	12,045	12,045
13,401	13,401	13,401	13,401	13,401	13,401	13,452	13,504	13,557	13,609	13,661
15,069	15,069	15,069	15,069	15,069	15,069	15,017	14,964	14,912	14,860	14,809
15,851	15,851	15,851	15,851	15,851	15,851	15,799	15,747	15,694	15,643	15,591
16,738	16,738	16,738	16,738	16,738	16,738	16,820	16,903	16,987	17,071	17,155
18,250	18,250	18,250	18,250	18,250	18,250	18,155	18,061	17,967	17,874	17,781
19,919	19,919	19,919	19,919	19,919	19,919	19,877	19,835	19,793	19,752	19,710
20,701	20,701	20,701	20,701	20,701	20,701	20,606	20,512	20,418	20,324	20,231
22,369	22,369	22,369	22,369	22,369	22,369	22,200	22,032	21,865	21,699	21,535
23,151	23,151	23,151	23,151	23,151	23,151	22,982	22,814	22,647	22,482	22,317
25,081	25,081	25,081	25,081	25,081	25,081	24,858	24,637	24,418	24,201	23,986
26,436	26,436	26,436	26,436	26,436	26,436	26,105	25,778	25,454	25,135	24,820
27,323	27,323	27,323	27,323	27,323	27,323	26,992	26,664	26,341	26,022	25,706
28,874	28,874	28,874	28,874	28,874	28,874	28,478	28,087	27,702	27,322	26,947
30,513	30,513	30,513	30,513	30,513	30,513	30,046	29,586	29,133	28,687	28,247

58	59	60	61	62	63	64
452	452	452	452	452	452	452
529	529	529	529	529	529	529
601	601	601	601	601	601	601
668	668	668	668	668	668	668
821	821	821	821	821	821	821
1,025	1,025	1,025	1,025	1,025	1,025	1,025
1,115	1,115	1,115	1,115	1,115	1,115	1,115
1,179	1,179	1,179	1,179	1,179	1,179	1,179
1,221	1,221	1,221	1,221	1,221	1,221	1,221
1,314	1,314	1,314	1,314	1,314	1,314	1,314
1,435	1,435	1,435	1,435	1,435	1,435	1,435
1,479	1,479	1,479	1,479	1,479	1,479	1,479
1,513	1,513	1,513	1,513	1,513	1,513	1,513
1,628	1,628	1,628	1,628	1,628	1,628	1,628
1,709	1,709	1,709	1,709	1,709	1,709	1,709
1,757	1,757	1,757	1,757	1,757	1,757	1,757
1,797	1,797	1,797	1,797	1,797	1,797	1,797
1,892	1,892	1,892	1,892	1,892	1,892	1,892
2,027	2,027	2,027	2,027	2,027	2,027	2,027
2,121	2,121	2,121	2,121	2,121	2,121	2,121
2,196	2,196	2,196	2,196	2,196	2,196	2,196
2,323	2,323	2,323	2,323	2,323	2,323	2,323
2,500	2,500	2,500	2,500	2,500	2,500	2,500
2,709	2,709	2,709	2,709	2,709	2,709	2,709
3,067	3,067	3,067	3,067	3,067	3,067	3,067
3,459	3,459	3,459	3,459	3,459	3,459	3,459
3,905	3,905	3,905	3,905	3,905	3,905	3,905
4,939	4,939	4,939	4,939	4,939	4,939	4,939
6,466	6,466	6,466	6,466	6,466	6,466	6,466
7,300	7,300	7,300	7,300	7,300	7,300	7,300
7,874	7,874	7,874	7,874	7,874	7,874	7,874
8,916	8,916	8,916	8,916	8,916	8,916	8,916
9,803	9,803	9,803	9,803	9,803	9,803	9,803
10,476	10,317	10,161	10,007	9,855	9,706	9,558
11,884	11,726	11,569	11,415	11,263	11,113	10,964
13,588	13,514	13,441	13,369	13,296	13,225	13,153
14,377	13,959	13,553	13,158	12,775	12,403	12,042
15,365	15,143	14,924	14,708	14,496	14,286	14,080
16,716	16,288	15,871	15,465	15,069	14,684	14,308
17,567	17,356	17,147	16,941	16,738	16,537	16,338
19,605	19,500	19,395	19,292	19,189	19,086	18,984
20,496	20,763	21,034	21,309	21,587	21,869	22,155
21,387	21,240	21,094	20,949	20,805	20,662	20,520
22,222	22,128	22,034	21,941	21,848	21,755	21,663
24,211	24,438	24,668	24,899	25,133	25,369	25,607
24,841	24,862	24,883	24,903	24,924	24,945	24,966
26,285	26,876	27,480	28,099	28,731	29,377	30,038
27,798	28,675	29,580	30,514	31,477	32,470	33,495
29,397	30,594	31,840	33,136	34,486	35,890	37,351

Table B-26: Gross Domestic Product, 1947 to 1996 (\$ million)

Year	GDP
1947	3,121
1948	3,747
1949	4,516
1950	5,237
1951	7,061
1952	7,486
1953	8,766
1954	9,518
1955	9,937
1956	10,879
1957	11,910
1958	12,100
1959	12,961
1960	14,163
1961	15,152
1962	15,716
1963	16,924
1964	18,780
1965	20,523
1966	21,601
1967	23,876
1968	25,619
1969	28,809
1970	31,796
1971	35,284
1972	39,320
1973	44,695
1974	52,758
1975	64,091
1976	77,018
1977	88,162
1978	95,461
1979	109,549
1980	124,478
1981	141,037
1982	160,665
1983	173,571
1984	195,689
1985	216,203
1986	241,551
1987	264,725
1988	298,076
1989	335,364
1990	366,516
1991	377,128
1992	389,608
1993	404,912
1994	455,141
1995	486,997
1996	505,736

Note: Figures of 1947 and 1948 are derived from *Australians: Historical Statistics*,

by Wray Vamplew (ed.), p. 139.

Source: I. Castles, Australian National Accounts: National Income, Expenditure and Product, 1992-93, pp. 15, 80, 81 and 82.
Australian Bureau of Statistics, Australian National Accounts: National Income, Expenditure and Product, Various Years.

Table B-27: Principal Interest Rates of Australia (in percent per annum), 1946 to 1995

Year (30 June)	Deposits		Government bonds
	Savings banks	Trading banks	
1946	1.63	1.00	3.25
1947	1.63	3.21
1948	1.63	3.17
1949	1.63	3.13
1950	1.50	1.50	3.12
1951	1.50	1.50	3.17
1952	1.50	1.50	3.75
1953	1.75	1.75	4.53
1954	1.75	1.75	4.40
1955	1.88	2.00	4.52
1956	2.13	3.00	4.53
1957	2.13	3.50	5.09
1958	2.13	3.50	5.00
1959	3.00	3.50	4.97
1960	3.00	3.50	4.83
1961	3.25	4.50	5.34
1962	3.50	4.00	4.88
1963	3.00	3.50	4.72
1964	3.25	4.00	4.29
1965	3.50	4.50	4.76
1966	3.50	4.50	5.15
1967	3.50	4.50	5.02
1968	3.50	4.75	5.10
1969	3.75	4.75	4.91
1970	4.00	5.50	5.64
1971	4.00	6.50	6.41
1972	4.00	6.50	5.71
1973	4.00	6.50	5.30
1974	4.88	8.00	8.05
1975	4.88	10.00	8.04
1976	4.88	10.00	8.45
1977	4.88	10.00	8.80
1978	4.88	10.00	8.28
1979	4.88	10.00	8.46
1980	4.88	10	9.95
1981	4.88	11.9	11.08
1982	4.88	15	13.87
1983	4.88	12.8	12.43
1984	3.75	10.1	12.2
1985	3.75	12.5	13.45
1986	13.2		12.8
1987	12.79		13

1988	11.79	11.7
1989	16.95	15.4
1990	14.98	14.05
1991	10.39	10.55
1992	6.41	6.35
1993	5.21	5.45
1994	4.69	8.05
1995	7.44	

Note: One of the results of the significant amendments made to the Act in January 1990 was the abolition of the distinction between trading and saving banks. The period from 1984 to 1985 figures of saving banks are the rates of passbook account and those of trading banks are the rates of fixed deposits less than \$5,000, the period is 3 months and less than 6 months. After 1984 figures of government are 2 year bond and after 1986 the rates of deposits are the authorised dealers' weighted average rate.

Sources: Wray Vamplew(ed.), *Australians: Historical Statistics*, p. 240.

Australian Bureau of Statistics, *Banking Australia*, Various Years.

Australian Bureau of Statistics, *Australian Economic Indicators*, March, 1995, p. 107.

Australian Bureau of Statistics, *Australian Economic Indicators*, August, 1997, p. 84.

Table B-28: Value of Male Human Capital by Age Group (\$ million)

Year	15	16	17	18	19	20	21	22	23
1947	800	854	879	919	934	900	959	944	947
1948	883	926	966	1,019	1,039	1,040	1,093	1,075	1,105
1949	983	1,013	1,071	1,139	1,166	1,212	1,255	1,234	1,299
1950	1,097	1,111	1,149	1,216	1,292	1,324	1,382	1,437	1,420
1951	1,373	1,352	1,371	1,417	1,495	1,590	1,635	1,707	1,774
1952	1,808	1,751	1,730	1,757	1,818	1,928	2,054	2,104	2,188
1953	2,023	2,039	1,976	1,947	1,971	2,040	2,158	2,287	2,340
1954	2,177	2,165	2,168	2,127	2,050	2,072	2,186	2,235	2,431
1955	2,315	2,335	2,326	2,331	2,290	2,217	2,241	2,344	2,378
1956	2,597	2,537	2,559	2,553	2,566	2,539	2,477	2,488	2,570
1957	3,107	2,896	2,832	2,863	2,863	2,877	2,846	2,760	2,751
1958	3,133	3,262	3,044	2,978	3,002	2,990	2,999	2,954	2,853
1959	3,643	3,280	3,413	3,193	3,130	3,151	3,136	3,138	3,078
1960	4,110	3,997	3,602	3,755	3,538	3,489	3,511	3,477	3,454
1961	4,383	4,364	4,237	3,860	3,978	3,835	3,863	3,738	3,699
1962	5,602	4,635	4,610	4,481	4,087	4,190	4,011	4,011	3,858
1963	5,389	5,902	4,884	4,869	4,750	4,326	4,398	4,181	4,161
1964	5,708	5,821	6,370	5,297	5,291	5,149	4,662	4,701	4,454
1965	6,319	6,289	6,421	7,047	5,871	5,818	5,636	5,094	5,131
1966	6,663	6,707	6,607	6,812	7,445	6,071	6,030	5,902	5,341
1967	7,411	7,417	7,486	7,373	7,626	8,315	6,738	6,698	6,590
1968	8,046	7,984	7,985	8,074	7,946	8,203	8,871	7,258	7,239
1969	8,683	8,884	8,815	8,842	8,943	8,768	9,009	9,803	8,099
1970	9,568	9,640	9,864	9,817	9,839	9,936	9,663	10,010	10,926
1971	10,977	10,704	10,761	11,046	10,981	10,976	11,034	10,784	11,204
1972	12,381	12,390	12,095	12,053	12,323	12,200	12,348	12,446	12,163
1973	13,877	13,792	13,839	13,574	13,522	13,830	13,668	13,731	13,751
1974	16,698	16,397	16,244	16,387	16,151	16,021	16,393	16,190	16,159
1975	20,778	20,844	20,384	20,169	20,443	20,168	19,786	20,269	20,031
1976	24,441	23,866	23,877	23,297	23,019	23,384	23,006	22,417	23,017

1977	26,442	27,216	26,638	26,630	26,178	25,824	26,048	25,511	24,855
1978	28,500	29,227	29,971	29,498	29,428	29,062	28,567	28,723	28,005
1979	30,531	31,472	32,109	32,829	32,422	32,257	31,876	31,200	31,271
1980	32,506	34,350	35,445	36,055	36,771	36,380	36,005	35,637	34,841
1981	35,992	37,247	39,043	40,336	40,882	41,475	41,011	40,408	40,137
1982	41,354	41,742	43,248	45,334	46,969	47,647	48,254	47,473	46,798
1983	42,466	42,748	43,196	44,784	47,002	48,494	49,115	49,737	48,646
1984	48,555	47,563	47,691	48,273	50,054	52,222	53,592	54,221	54,633
1985	53,134	53,692	52,662	52,601	53,366	55,053	57,199	58,605	59,171
1986	60,493	57,881	58,287	57,199	56,963	57,719	59,243	61,608	62,878
1987	63,617	65,862	63,053	63,106	62,101	61,721	62,397	63,664	66,135
1988	65,489	70,056	72,297	69,217	68,918	67,794	67,307	67,834	68,807
1989	70,558	74,660	79,896	82,147	78,823	77,758	76,340	75,494	75,907
1990	70,705	74,547	78,649	84,091	86,453	82,696	80,854	79,374	78,331
1991	68,698	72,329	76,080	80,044	85,766	87,862	83,801	81,375	79,774
1992	68,951	71,503	75,291	79,073	83,245	88,947	90,702	86,183	83,257
1993	71,974	74,375	77,088	81,078	85,227	89,484	95,233	96,717	91,510
1994	76,922	78,680	81,230	84,059	88,349	92,631	96,729	102,540	103,666
1995	80,790	82,362	84,995	87,357	91,902	96,359	99,717	108,018	112,869

24	25	26	27	28	29	30	31	32	33
954	945	939	865	817	818	849	784	841	819
1,096	1,089	1,085	1,032	995	954	941	901	949	901
1,270	1,265	1,264	1,241	1,222	1,121	1,051	1,044	1,080	1,000
1,497	1,465	1,458	1,450	1,415	1,388	1,270	1,179	1,163	1,202
1,756	1,847	1,805	1,792	1,773	1,728	1,694	1,546	1,426	1,399
2,277	2,252	2,351	2,284	2,255	2,226	2,164	2,117	1,931	1,774
2,436	2,525	2,490	2,590	2,504	2,466	2,430	2,359	2,310	2,103
2,480	2,527	2,614	2,612	2,696	2,609	2,575	2,373	2,444	2,395
2,584	2,644	2,691	2,764	2,740	2,817	2,714	2,670	2,462	2,531
2,607	2,830	2,887	2,918	2,973	2,935	3,005	2,889	2,834	2,609
2,840	2,877	3,113	3,165	3,178	3,225	3,180	3,251	3,122	3,057
2,840	2,925	2,958	3,188	3,228	3,234	3,278	3,230	3,297	3,163
2,969	2,950	3,030	3,049	3,266	3,298	3,295	3,333	3,281	3,344
3,378	3,257	3,222	3,287	3,287	3,507	3,534	3,521	3,552	3,490
3,656	3,568	3,447	3,398	3,450	3,421	3,728	3,597	3,627	3,625
3,813	3,772	3,675	3,540	3,478	3,526	3,494	3,796	3,653	3,680
4,009	3,966	3,911	3,794	3,639	3,570	3,611	3,572	3,870	3,718
4,446	4,289	4,225	4,151	4,006	3,831	3,750	3,782	3,735	4,041
4,876	4,859	4,667	4,573	4,471	4,302	4,102	4,010	4,043	3,984
5,445	5,213	5,011	4,875	4,781	4,649	4,510	4,101	4,134	4,173
5,896	6,058	5,667	5,486	5,377	5,211	5,072	4,840	4,597	4,534
7,063	6,290	6,434	6,016	5,794	5,666	5,473	5,321	5,060	4,789
8,019	7,771	6,916	7,036	6,546	6,312	6,152	5,934	5,766	5,467
8,963	8,826	8,526	7,583	7,675	7,127	6,872	6,696	6,455	6,267
12,099	10,047	9,691	9,263	8,483	8,533	7,910	7,543	7,318	7,024
12,592	13,517	11,363	10,881	10,392	9,525	9,346	9,005	8,442	8,131
13,443	13,829	14,840	12,435	11,815	11,310	10,365	10,117	9,750	9,162
16,109	15,750	16,132	17,306	14,476	13,679	13,114	12,008	11,669	11,265
19,886	19,780	19,433	19,824	21,230	17,706	16,628	15,969	14,609	14,127
22,784	22,501	22,324	21,983	22,308	23,927	19,905	18,560	17,864	16,330
25,385	25,048	24,879	24,523	24,046	24,345	25,932	21,545	20,216	19,349
27,366	27,791	27,391	27,367	26,791	26,259	26,544	28,079	23,284	21,931

30,447	29,816	30,129	29,609	29,764	28,915	28,269	28,568	30,010	24,804
34,828	33,755	33,106	33,211	32,499	32,715	31,523	30,687	30,917	32,276
39,178	39,086	37,766	37,148	37,008	36,212	36,630	35,106	34,077	34,243
46,325	45,147	45,129	43,214	42,510	42,385	41,435	41,922	40,358	39,090
48,065	47,438	46,288	46,286	43,897	43,327	43,241	42,176	42,713	41,239
53,133	52,481	51,535	50,174	50,140	47,108	46,484	46,449	45,164	45,712
59,479	57,556	56,973	55,650	54,140	54,194	50,547	49,926	49,956	48,475
63,568	63,777	61,524	60,902	59,219	57,638	57,740	53,425	52,736	52,824
67,138	67,708	68,102	65,527	64,257	62,591	60,904	60,917	56,634	55,811
71,510	72,314	72,883	73,524	70,684	68,677	67,007	65,144	65,030	60,739
76,589	79,684	80,145	80,591	81,518	78,364	75,553	73,784	71,687	71,553
78,778	79,303	82,722	82,936	83,211	84,730	81,359	77,755	76,239	74,026
78,739	79,259	79,553	83,020	82,930	83,227	85,141	81,596	77,269	75,939
81,530	80,416	80,784	81,021	84,545	84,548	85,024	86,984	83,362	79,063
88,119	86,063	84,654	84,891	84,975	88,588	88,543	88,977	90,839	87,020
97,890	94,061	91,549	89,778	89,943	89,874	93,755	93,648	93,886	95,881
105,543	100,604	97,427	94,513	94,767	92,749	98,893	98,532	97,944	103,341

34	35	36	37	38	39	40	41	42	43
773	751	738	702	673	650	634	557	570	527
906	880	846	811	785	751	724	665	662	595
1,070	1,040	977	943	922	874	833	800	775	677
1,117	1,192	1,162	1,084	1,042	1,014	957	909	869	838
1,444	1,345	1,431	1,386	1,296	1,242	1,203	1,133	1,072	1,021
1,732	1,783	1,661	1,764	1,704	1,590	1,520	1,468	1,379	1,301
1,926	1,875	1,926	1,795	1,902	1,833	1,706	1,627	1,568	1,468
2,210	1,957	1,902	1,903	1,939	1,960	1,929	1,629	1,690	1,596
2,476	2,280	2,011	1,946	1,942	1,975	1,993	1,959	1,651	1,707
2,675	2,614	2,402	2,111	2,035	2,026	2,062	2,070	2,024	1,706
2,810	2,874	2,802	2,568	2,250	2,165	2,151	2,185	2,188	2,132
3,095	2,840	2,898	2,823	2,582	2,258	2,166	2,149	2,178	2,174
3,203	3,127	2,862	2,916	2,836	2,589	2,257	2,159	2,137	2,161
3,548	3,391	3,306	3,020	3,069	2,978	2,710	2,358	2,252	2,221
3,548	3,600	3,468	3,269	3,275	3,142	3,120	2,642	2,406	2,299
3,671	3,584	3,631	3,491	3,282	3,283	3,150	3,120	2,630	2,387
3,740	3,721	3,624	3,661	3,512	3,296	3,289	3,147	3,107	2,611
3,874	3,885	3,858	3,750	3,776	3,615	3,377	3,360	3,212	3,164
4,296	4,114	4,114	4,075	3,953	3,970	3,786	3,523	3,501	3,339
4,095	4,373	4,243	4,145	4,263	4,080	4,067	3,676	3,685	3,487
4,473	4,430	4,673	4,597	4,548	4,520	4,295	4,274	4,071	3,800
4,715	4,629	4,582	4,809	4,721	4,662	4,618	4,379	4,342	4,116
5,166	5,070	4,967	4,903	5,136	5,029	4,947	4,892	4,615	4,558
5,912	5,578	5,468	5,342	5,248	5,490	5,367	5,261	5,188	4,874
6,800	6,518	6,098	5,939	5,852	5,778	6,012	5,784	5,725	5,569
7,744	7,472	7,365	6,695	6,415	6,379	6,251	6,640	6,118	6,123
8,773	8,412	8,108	7,933	7,125	6,899	6,834	6,653	7,049	6,541
10,607	10,088	9,746	9,394	9,112	8,103	7,929	7,822	7,552	7,986
13,655	12,850	12,136	11,796	11,355	10,926	9,615	9,492	9,311	8,911
15,723	15,212	14,361	13,454	13,179	12,680	12,125	10,551	10,529	10,285
17,610	17,031	16,453	15,396	14,530	14,058	13,433	12,858	11,266	11,135
20,846	18,880	18,274	17,624	16,303	15,507	14,827	14,093	13,497	11,941
23,508	22,216	20,007	19,450	18,764	17,203	16,469	15,556	14,702	14,078
26,675	25,326	23,871	21,401	20,878	20,120	18,280	17,635	16,424	15,408

35,531	29,279	28,012	26,114	23,286	22,830	21,955	19,770	19,196	17,622
39,362	40,845	33,652	31,773	29,795	26,561	25,799	24,775	22,373	21,478
39,883	40,180	41,736	34,386	32,024	30,269	26,989	26,001	24,914	22,582
44,151	42,534	42,909	44,541	36,704	33,705	32,085	28,530	27,264	26,030
49,064	47,481	45,565	45,890	47,708	39,307	35,634	34,119	30,268	28,721
51,129	51,593	50,004	47,761	48,032	49,964	41,199	36,815	35,524	31,406
55,505	53,719	54,123	52,178	50,061	50,075	51,432	42,890	38,511	36,845
59,671	58,894	56,950	57,230	54,617	52,521	52,119	52,740	44,233	39,652
67,078	65,516	64,286	62,124	62,211	59,101	57,134	56,272	56,101	47,482
73,732	69,400	67,536	65,708	63,532	63,643	60,140	58,441	57,191	56,286
73,648	73,157	69,012	66,801	64,622	62,531	62,609	58,761	57,282	55,645
77,635	75,284	74,653	70,242	67,708	65,507	63,348	63,306	59,192	57,624
82,417	80,730	78,068	77,152	72,390	69,722	67,370	65,044	64,899	60,528
91,634	86,720	84,642	81,679	80,511	75,423	72,609	70,090	67,561	67,331
99,269	92,391	90,641	86,470	87,392	80,771	77,644	74,973	71,063	73,243

44	45	46	47	48	49	50	51	52	53
464	464	462	449	361	343	330	274	282	263
562	540	504	494	440	421	368	326	321	281
687	634	553	548	541	520	415	390	370	302
730	736	674	585	576	566	541	429	400	377
979	849	853	779	672	658	642	611	480	444
1,233	1,178	1,017	1,018	924	793	772	748	707	551
1,383	1,308	1,244	1,070	1,066	964	823	797	767	719
1,481	1,399	1,286	1,198	1,151	1,051	963	763	777	753
1,607	1,486	1,400	1,282	1,189	1,136	1,031	941	741	749
1,761	1,652	1,521	1,427	1,301	1,200	1,141	1,031	935	729
1,794	1,845	1,726	1,585	1,480	1,343	1,234	1,166	1,046	942
2,114	1,774	1,818	1,694	1,552	1,443	1,301	1,188	1,116	993
2,153	2,087	1,746	1,784	1,656	1,509	1,397	1,254	1,138	1,059
2,240	2,225	2,152	1,793	1,826	1,686	1,529	1,409	1,255	1,130
2,200	2,224	2,164	2,071	1,955	1,765	1,710	1,452	1,347	1,216
2,273	2,172	2,190	2,122	2,022	1,900	1,707	1,643	1,384	1,275
2,363	2,245	2,137	2,146	2,070	1,965	1,838	1,640	1,568	1,309
2,654	2,393	2,263	2,146	2,147	2,061	1,946	1,809	1,601	1,519
3,281	2,743	2,460	2,319	2,191	2,180	2,080	1,953	1,802	1,580
3,274	3,247	2,791	2,362	2,301	2,249	2,131	1,970	1,926	1,696
3,668	3,551	3,404	2,957	2,527	2,352	2,303	2,178	2,111	1,922
3,844	3,691	3,560	3,394	2,942	2,498	2,313	2,249	2,110	2,027
4,312	4,011	3,842	3,689	3,509	3,027	2,562	2,355	2,277	2,120
4,812	4,542	4,214	4,026	3,853	3,649	3,135	2,645	2,424	2,326
5,222	5,094	4,827	4,443	4,249	4,051	3,813	3,252	2,701	2,487
5,973	5,479	5,603	5,031	4,773	4,489	4,242	4,045	3,304	2,775
6,464	6,330	5,853	5,928	5,251	5,006	4,685	4,391	4,135	3,399
7,474	7,291	7,154	6,661	6,685	5,835	5,583	5,198	4,826	4,482
9,389	8,843	8,507	8,361	7,838	7,775	6,686	6,427	5,937	5,444
9,780	10,287	9,757	9,244	9,107	8,578	8,420	7,125	6,865	6,285
10,844	10,342	10,829	10,161	9,675	9,449	8,818	8,559	7,320	6,919
11,693	11,349	10,883	11,353	10,557	10,121	9,808	9,101	8,772	7,614
12,553	12,163	11,757	11,307	11,737	10,801	10,402	9,974	9,152	8,706
14,753	13,250	12,684	12,215	11,785	12,142	11,034	10,661	10,087	9,125
16,427	15,763	14,276	13,528	12,996	12,581	12,870	11,585	11,259	10,550
19,813	18,537	17,699	15,843	15,075	14,390	13,812	14,026	12,649	12,112

21,452	19,899	18,692	17,767	15,722	14,991	14,242	13,550	13,657	12,340
23,650	22,209	20,662	19,451	18,396	16,016	15,259	14,376	13,502	13,434
27,276	24,850	23,041	21,483	20,261	19,008	16,295	15,489	14,442	13,352
29,599	28,017	25,570	23,478	21,987	20,767	19,411	16,423	15,677	14,545
32,387	30,707	28,941	26,311	24,224	22,501	21,021	19,468	16,553	15,552
37,551	32,697	31,045	29,094	26,294	24,216	22,276	20,553	18,811	15,925
42,660	40,032	34,572	32,921	30,736	27,605	25,453	23,192	21,155	19,147
48,152	43,397	40,339	34,629	33,081	30,746	27,495	25,384	22,894	20,632
54,010	46,602	41,994	38,529	32,767	31,254	28,787	25,466	23,403	20,751
55,814	54,074	46,508	41,831	38,249	32,482	30,888	28,299	24,940	22,795
58,862	56,745	54,727	46,792	41,808	37,924	31,891	29,998	27,111	23,520
62,663	60,788	58,385	56,117	47,759	42,537	38,381	32,089	29,946	26,851
66,701	64,910	62,200	63,351	52,570	46,342	43,255	34,040	32,218	29,298

54	55	56	57	58	59	60	61	62	63
240	207	198	174	156	130	104	69	57	37
270	241	222	191	174	146	120	87	67	40
306	282	250	211	196	165	141	109	79	43
305	305	278	244	202	183	150	123	89	57
414	332	330	295	254	206	182	142	110	71
506	468	370	362	319	268	212	180	132	90
556	507	463	360	347	299	244	185	147	96
713	499	466	396	364	303	262	184	152	102
719	675	466	431	359	323	261	217	142	105
732	697	647	440	399	325	285	221	173	100
728	725	682	625	417	371	293	248	179	124
888	680	671	622	560	365	316	240	190	122
936	829	627	611	556	490	309	258	183	129
1,044	915	802	596	571	508	436	264	207	130
1,083	943	846	707	608	501	440	336	217	140
1,141	1,005	865	766	628	528	423	356	255	146
1,197	1,060	922	782	681	545	445	342	271	172
1,257	1,139	996	853	710	604	471	369	265	186
1,486	1,217	1,090	940	790	643	531	397	292	186
1,509	1,347	1,170	980	870	708	568	422	317	197
1,721	1,527	1,328	1,165	972	811	647	504	365	227
1,830	1,620	1,421	1,217	1,046	852	691	529	386	248
2,017	1,808	1,585	1,373	1,153	972	770	600	432	279
2,152	2,034	1,808	1,567	1,336	1,100	900	688	503	322
2,351	2,094	1,994	1,758	1,500	1,231	986	766	560	357
2,551	2,387	2,102	1,953	1,703	1,416	1,136	899	623	413
2,810	2,576	2,381	2,071	1,873	1,612	1,295	1,005	742	458
3,714	3,016	2,753	2,507	2,145	1,879	1,583	1,215	890	580
4,988	4,155	3,302	2,987	2,666	2,235	1,878	1,530	1,091	714
5,703	5,144	4,311	3,359	3,017	2,650	2,173	1,743	1,351	855
6,288	5,659	5,040	4,136	3,179	2,767	2,359	1,863	1,401	953
7,094	6,426	5,761	5,094	4,111	3,123	2,642	2,182	1,633	1,099
7,624	6,952	6,220	5,490	4,762	3,732	2,762	2,225	1,723	1,148
8,553	7,543	6,713	5,909	5,112	4,333	3,266	2,326	1,738	1,196
9,446	8,754	7,801	6,774	5,868	4,982	4,116	2,961	1,995	1,317
11,277	10,036	9,198	7,999	6,853	5,803	4,800	3,792	2,556	1,522
11,650	10,784	9,544	8,662	7,353	6,233	5,144	4,114	3,051	1,834
12,102	11,187	10,208	8,898	7,905	6,469	5,349	4,212	3,150	2,061

13,109	11,782	10,681	9,599	8,252	7,213	5,675	4,550	3,352	2,235
13,343	13,002	11,735	10,445	9,293	7,888	6,732	5,045	3,841	2,517
14,258	13,000	12,503	11,127	9,761	8,484	7,002	5,725	4,028	2,718
14,795	13,398	12,129	11,506	10,104	8,728	7,364	5,863	4,497	2,827
16,270	14,905	13,317	11,939	11,112	9,514	7,981	6,425	4,780	3,240
18,508	15,758	14,229	12,486	11,032	10,004	8,299	6,677	5,007	3,305
18,332	16,157	13,685	12,099	10,378	9,002	7,893	6,272	4,736	3,144
20,122	17,702	15,476	12,966	11,304	9,490	8,002	6,742	5,018	3,363
21,201	18,388	15,905	13,639	11,174	9,493	7,690	6,189	4,860	3,196
23,142	20,702	17,826	15,274	12,933	10,418	8,625	6,735	5,102	3,578
24,629	22,318	19,124	16,338	14,031	10,978	9,164	7,029	5,215	3,765

64	Total
17	28,423
20	32,544
24	37,603
23	42,672
34	52,393
43	66,563
49	74,011
53	77,965
53	82,647
55	89,869
54	99,534
63	103,426
62	107,998
69	118,608
70	126,235
71	133,016
73	140,001
88	151,060
97	166,439
97	176,714
109	198,422
115	213,672
134	237,873
156	266,173
176	300,365
199	341,893
226	383,469
270	458,230
347	573,213
424	663,084
451	741,391
561	826,551
580	910,024
599	1,014,548
684	1,153,113
753	1,351,293
819	1,411,325
924	1,553,056
1,097	1,709,179
1,268	1,859,636

1,326	2,014,183
1,432	2,184,965
1,525	2,456,835
1,668	2,586,090
1,555	2,613,284
1,673	2,716,668
1,600	2,876,386
1,772	3,094,890
1,848	3,291,866

Table B-29: Value of Female Human Capital by Age Group (\$ million)

Year	15	16	17	18	19	20	21	22	23
1947	490	528	537	560	577	566	583	583	576
1948	562	590	610	646	659	666	684	677	681
1949	628	642	675	724	733	761	782	765	783
1950	722	716	732	768	822	832	864	888	871
1951	920	907	899	917	960	1,027	1,039	1,077	1,103
1952	1,223	1,174	1,155	1,141	1,161	1,214	1,294	1,306	1,350
1953	1,340	1,356	1,298	1,276	1,258	1,277	1,332	1,414	1,421
1954	1,477	1,438	1,439	1,396	1,360	1,344	1,371	1,385	1,511
1955	1,539	1,560	1,516	1,515	1,471	1,432	1,410	1,435	1,447
1956	1,752	1,692	1,712	1,662	1,660	1,612	1,567	1,540	1,562
1957	2,090	1,949	1,882	1,906	1,854	1,851	1,795	1,742	1,706
1958	2,119	2,189	2,040	1,972	2,000	1,945	1,940	1,879	1,819
1959	2,471	2,201	2,274	2,125	2,060	2,087	2,027	2,016	1,948
1960	2,764	2,698	2,404	2,484	2,328	2,257	2,277	2,205	2,187
1961	2,939	2,960	2,850	2,582	2,621	2,494	2,447	2,411	2,352
1962	3,750	3,080	3,099	2,987	2,714	2,751	2,607	2,552	2,508
1963	3,598	3,907	3,207	3,231	3,123	2,835	2,852	2,689	2,630
1964	3,818	3,860	4,186	3,448	3,479	3,357	3,028	3,027	2,847
1965	4,205	4,173	4,212	4,581	3,788	3,795	3,638	3,265	3,258
1966	4,323	4,302	4,230	4,315	4,706	3,837	3,851	3,679	3,288
1967	4,593	4,601	4,608	4,488	4,619	4,996	4,062	4,034	3,906
1968	5,033	4,945	4,949	4,967	4,852	4,978	5,348	4,328	4,287
1969	5,334	5,439	5,333	5,346	5,375	5,242	5,346	5,698	4,600
1970	5,901	5,904	6,009	5,911	5,935	5,944	5,756	5,844	6,202
1971	6,859	6,852	6,847	6,984	6,891	6,892	6,859	6,623	6,710
1972	8,072	8,022	7,985	7,917	8,064	7,866	7,883	7,909	7,712
1973	9,462	9,321	9,258	9,249	9,180	9,315	9,040	9,022	9,003
1974	12,185	12,025	11,832	11,775	11,809	11,710	11,834	11,458	11,404
1975	15,558	15,688	15,485	15,219	15,157	15,222	15,048	15,217	14,747
1976	18,590	18,373	18,470	18,241	17,886	17,758	17,821	17,588	17,740
1977	20,421	20,894	20,657	20,745	20,539	20,061	19,866	19,778	19,485
1978	22,462	23,148	23,535	23,296	23,335	23,046	22,455	22,158	21,945
1979	23,699	24,476	25,187	25,626	25,434	25,318	24,903	24,223	23,846
1980	25,693	27,123	28,027	28,803	29,224	28,954	28,662	28,150	27,370
1981	28,667	29,645	31,091	32,180	32,952	33,227	32,803	32,249	31,592
1982	32,478	32,866	33,969	35,576	36,836	37,629	37,828	37,140	36,463
1983	34,777	34,905	35,361	36,587	38,275	39,478	40,164	40,308	39,394
1984	39,569	38,567	38,609	39,111	40,474	42,080	43,185	43,724	43,777
1985	42,645	43,077	41,937	41,826	42,455	43,725	45,208	46,166	46,557
1986	49,543	47,084	47,350	46,232	46,107	46,793	47,998	49,396	50,249
1987	51,962	53,950	51,346	51,441	50,384	50,197	50,867	51,856	53,351

1988	53,165	57,088	59,208	56,425	56,356	55,038	54,668	55,159	55,962
1989	55,999	59,303	63,649	65,904	62,942	62,369	60,618	59,884	60,315
1990	56,922	59,655	62,989	67,553	70,043	66,820	65,659	63,647	62,778
1991	57,693	60,786	63,598	66,873	71,798	74,261	70,755	68,947	66,819
1992	58,316	60,830	64,142	67,073	70,735	75,741	77,923	73,903	71,719
1993	60,711	62,298	64,802	68,201	71,398	74,954	79,826	81,530	77,006
1994	64,466	65,990	67,676	70,320	74,253	77,470	80,795	85,499	86,923
1995	68,801	70,326	71,596	73,901	78,352	81,475	84,067	90,536	95,478

24	25	26	27	28	29	30	31	32	33
583	582	574	524	502	498	526	471	512	494
684	679	677	645	626	596	597	562	601	558
781	771	777	772	760	693	660	652	686	614
894	892	881	883	872	856	779	734	725	760
1,083	1,113	1,112	1,095	1,096	1,080	1,059	962	906	888
1,383	1,357	1,395	1,391	1,369	1,368	1,347	1,320	1,199	1,125
1,469	1,504	1,475	1,514	1,506	1,479	1,477	1,453	1,423	1,290
1,522	1,545	1,581	1,565	1,619	1,588	1,583	1,477	1,530	1,474
1,576	1,584	1,604	1,639	1,619	1,672	1,638	1,629	1,520	1,571
1,575	1,711	1,714	1,731	1,763	1,739	1,792	1,753	1,741	1,623
1,729	1,742	1,884	1,881	1,892	1,923	1,893	1,945	1,900	1,886
1,780	1,798	1,805	1,946	1,938	1,944	1,970	1,937	1,988	1,939
1,884	1,839	1,851	1,851	1,989	1,979	1,979	2,002	1,967	2,015
2,111	2,038	1,986	1,993	1,988	2,131	2,117	2,114	2,134	2,091
2,323	2,248	2,165	2,082	2,108	2,073	2,303	2,184	2,196	2,192
2,439	2,402	2,322	2,230	2,137	2,160	2,123	2,348	2,222	2,230
2,585	2,509	2,464	2,375	2,277	2,179	2,198	2,156	2,381	2,250
2,789	2,741	2,655	2,600	2,497	2,394	2,289	2,303	2,256	2,483
3,070	3,003	2,947	2,851	2,785	2,671	2,555	2,443	2,455	2,400
3,305	3,114	3,010	2,953	2,866	2,769	2,680	2,430	2,437	2,417
3,417	3,455	3,244	3,124	3,123	3,008	2,933	2,766	2,653	2,547
4,156	3,633	3,667	3,436	3,310	3,298	3,170	3,086	2,904	2,783
4,558	4,420	3,866	3,887	3,631	3,481	3,460	3,318	3,212	3,022
5,017	4,963	4,807	4,204	4,213	3,929	3,758	3,725	3,569	3,440
7,134	5,937	5,808	5,488	4,994	4,922	4,592	4,388	4,358	4,129
7,832	8,288	6,829	6,616	6,313	5,712	5,582	5,335	4,974	4,928
8,763	8,918	9,390	7,705	7,395	7,129	6,416	6,251	5,966	5,596
11,348	11,040	11,235	11,764	9,625	9,151	8,915	7,995	7,767	7,417
14,660	14,552	14,123	14,389	14,981	12,217	11,532	11,340	10,129	9,814
17,246	17,131	16,932	16,380	16,679	17,286	14,027	13,154	13,032	11,573
19,594	19,059	19,025	18,602	18,059	18,234	18,891	15,334	14,473	14,132
21,590	21,703	21,114	21,159	20,471	19,939	20,025	20,785	16,915	16,099
23,498	23,123	23,192	22,490	22,602	21,677	21,190	21,124	21,931	17,888
27,008	26,558	26,088	26,123	25,276	25,506	24,235	23,811	23,556	24,424
30,798	30,411	29,777	29,150	29,136	28,160	28,532	26,913	26,581	26,132
35,733	34,889	34,491	33,485	32,816	32,729	31,568	31,949	30,180	29,623
38,717	37,958	37,080	36,669	35,367	34,737	34,625	33,379	33,712	32,016
42,667	41,956	41,070	39,988	39,545	37,912	37,275	37,040	35,647	35,873
46,645	45,348	44,588	43,561	42,373	41,940	40,005	39,413	39,121	37,557
50,737	50,943	49,260	48,370	47,115	45,770	45,299	42,895	42,259	41,873
54,201	54,680	55,221	53,138	51,899	50,671	49,204	48,778	46,297	45,548
57,660	58,425	58,817	59,509	56,940	55,310	53,970	52,257	51,758	49,137
60,956	62,823	63,516	63,631	64,472	61,471	59,342	57,866	55,854	55,280

63,223	63,938	65,853	66,418	66,318	67,588	64,278	61,791	60,324	58,161
66,072	66,663	67,312	69,381	69,647	69,579	71,328	67,551	64,681	63,235
69,486	68,768	69,357	69,953	71,974	72,237	72,112	73,731	69,768	66,737
74,577	72,243	71,299	71,799	72,249	74,275	74,437	74,211	75,744	71,583
82,136	79,517	76,858	75,690	75,945	76,411	78,410	78,542	78,089	79,674
89,112	86,247	82,510	80,376	80,558	80,211	83,321	83,692	82,158	87,136

34	35	36	37	38	39	40	41	42	43
459	448	427	403	393	371	364	306	326	299
560	544	512	491	473	446	435	387	395	346
666	643	597	582	554	522	506	476	465	390
681	739	713	662	644	612	575	556	521	508
929	834	904	872	808	784	743	697	671	628
1,101	1,150	1,034	1,119	1,078	997	965	913	855	821
1,209	1,180	1,233	1,111	1,199	1,154	1,064	1,028	971	907
1,366	1,256	1,233	1,225	1,236	1,235	1,256	1,013	1,078	997
1,514	1,400	1,283	1,257	1,248	1,258	1,255	1,273	1,025	1,087
1,675	1,614	1,491	1,362	1,331	1,319	1,329	1,325	1,341	1,078
1,757	1,810	1,742	1,608	1,465	1,428	1,413	1,421	1,414	1,429
1,921	1,790	1,841	1,770	1,631	1,483	1,442	1,425	1,430	1,419
1,963	1,941	1,806	1,857	1,784	1,640	1,486	1,442	1,422	1,425
2,140	2,084	2,060	1,916	1,965	1,884	1,730	1,563	1,512	1,487
2,149	2,216	2,181	2,052	2,103	1,999	2,061	1,677	1,626	1,544
2,224	2,178	2,242	2,204	2,072	2,119	2,014	2,071	1,681	1,626
2,254	2,246	2,196	2,258	2,217	2,081	2,123	2,013	2,066	1,674
2,345	2,345	2,334	2,278	2,337	2,292	2,149	2,187	2,069	2,117
2,637	2,487	2,482	2,468	2,407	2,462	2,407	2,253	2,288	2,159
2,362	2,530	2,461	2,399	2,476	2,374	2,422	2,210	2,262	2,171
2,523	2,479	2,649	2,588	2,552	2,551	2,465	2,453	2,413	2,270
2,672	2,646	2,591	2,765	2,700	2,659	2,646	2,554	2,536	2,488
2,890	2,769	2,734	2,674	2,845	2,772	2,723	2,707	2,605	2,581
3,226	3,079	2,945	2,902	2,838	3,011	2,926	2,867	2,839	2,725
4,029	3,831	3,610	3,476	3,456	3,385	3,559	3,358	3,388	3,299
4,687	4,529	4,459	4,102	3,887	3,887	3,790	4,087	3,685	3,757
5,467	5,272	5,052	4,971	4,510	4,335	4,293	4,170	4,492	4,101
7,005	6,745	6,602	6,279	6,179	5,516	5,372	5,265	5,086	5,468
9,374	8,919	8,469	8,397	7,922	7,785	6,837	6,745	6,547	6,282
11,192	10,688	10,225	9,560	9,610	8,988	8,795	7,595	7,578	7,264
12,522	12,132	11,621	10,956	10,376	10,234	9,560	9,336	8,138	8,014
15,533	13,820	13,440	12,925	12,021	11,580	11,250	10,517	10,269	9,079
17,129	16,322	14,545	14,186	13,705	12,557	12,269	11,726	10,957	10,688
19,925	19,172	17,991	15,990	15,576	15,023	13,495	13,296	12,427	11,543
27,085	22,152	21,443	19,849	17,679	17,254	16,692	14,781	14,752	13,552
29,181	30,158	24,684	23,547	22,080	19,609	18,984	18,293	16,294	16,051
31,195	30,836	31,831	26,062	24,592	23,316	20,654	19,821	19,034	17,067
34,194	33,036	32,683	33,682	27,550	25,631	24,592	21,705	20,646	19,724
37,751	36,145	34,690	34,382	35,333	28,890	26,511	25,689	22,616	21,292
40,061	40,133	38,515	36,682	36,428	37,420	30,577	27,697	27,130	23,811
45,011	43,133	43,394	41,372	39,649	39,193	39,914	33,067	30,042	29,050
48,101	47,272	45,253	45,583	43,007	41,429	40,679	40,884	34,260	31,105
52,466	51,118	49,910	47,700	48,102	44,984	43,497	42,332	42,051	35,544
57,634	54,759	53,168	51,566	49,302	49,731	46,019	44,673	43,110	42,271
60,917	60,363	57,362	55,580	53,649	51,379	51,981	47,783	46,646	44,801

65,200	62,760	61,998	58,870	56,879	54,803	52,391	52,882	48,560	47,241
68,375	66,746	64,094	63,212	59,898	57,804	55,586	53,087	53,446	49,025
75,219	71,763	69,934	66,996	65,970	62,437	60,141	57,781	55,046	55,327
81,824	77,216	75,848	71,663	71,987	67,528	65,156	62,848	58,303	61,414

44	45	46	47	48	49	50	51	52	53
267	270	275	277	230	221	228	183	195	184
336	323	307	310	283	278	256	224	233	202
412	377	335	337	340	341	280	267	272	215
425	447	408	362	362	364	363	298	282	285
611	510	533	485	428	427	427	424	347	327
766	743	618	645	584	514	511	508	502	408
869	809	782	649	674	609	533	528	522	513
923	876	810	745	723	656	635	494	520	521
1,004	928	878	809	741	717	648	624	484	506
1,140	1,049	967	913	839	765	736	663	636	490
1,146	1,208	1,109	1,020	960	878	797	764	686	654
1,431	1,145	1,205	1,103	1,011	949	863	781	744	664
1,412	1,420	1,134	1,189	1,085	991	925	839	756	716
1,487	1,471	1,475	1,175	1,228	1,116	1,017	946	853	764
1,489	1,493	1,474	1,392	1,310	1,178	1,190	949	918	835
1,539	1,479	1,482	1,458	1,372	1,288	1,154	1,161	920	886
1,614	1,524	1,462	1,461	1,431	1,342	1,256	1,120	1,121	883
1,711	1,646	1,549	1,481	1,475	1,440	1,344	1,254	1,113	1,107
2,207	1,780	1,704	1,598	1,523	1,510	1,468	1,367	1,270	1,119
2,052	2,031	1,787	1,548	1,537	1,478	1,438	1,318	1,326	1,157
2,238	2,143	2,082	1,821	1,617	1,535	1,503	1,414	1,404	1,297
2,336	2,302	2,199	2,127	1,850	1,638	1,547	1,511	1,418	1,397
2,525	2,368	2,324	2,215	2,138	1,854	1,635	1,535	1,493	1,391
2,693	2,627	2,456	2,405	2,288	2,196	1,896	1,664	1,556	1,508
3,141	3,092	3,018	2,788	2,714	2,571	2,466	2,125	1,844	1,720
3,684	3,459	3,513	3,313	3,104	2,994	2,832	2,769	2,254	1,997
4,107	4,053	3,809	3,864	3,575	3,388	3,242	3,060	2,939	2,436
5,054	4,965	4,925	4,633	4,695	4,255	4,080	3,864	3,641	3,429
6,736	6,302	6,074	6,059	5,699	5,765	5,115	4,956	4,647	4,366
6,916	7,389	6,993	6,611	6,630	6,235	6,295	5,460	5,353	4,964
7,711	7,347	7,845	7,312	6,967	6,904	6,458	6,428	5,631	5,396
8,844	8,567	8,197	8,765	8,066	7,753	7,589	7,073	6,961	6,176
9,558	9,188	8,916	8,544	9,125	8,275	8,027	7,773	7,233	7,047
11,187	10,070	9,518	9,242	8,850	9,433	8,407	8,191	7,795	7,180
12,599	12,208	11,124	10,366	10,095	9,671	10,287	9,026	8,845	8,298
14,817	13,841	13,365	12,024	11,310	10,962	10,447	11,002	9,756	9,441
16,614	15,416	14,419	13,856	12,248	11,559	11,088	10,416	10,786	9,559
17,775	17,079	15,904	14,931	14,317	12,491	11,878	11,327	10,568	10,823
20,226	18,346	17,430	16,272	15,334	14,651	12,607	12,066	11,422	10,551
22,221	21,025	19,190	17,989	16,859	15,890	15,091	12,766	12,269	11,489
25,433	23,909	22,675	20,568	19,364	18,099	16,983	16,027	13,677	13,012
29,637	25,796	24,354	23,050	20,783	19,599	18,230	17,005	15,914	13,662
32,235	30,207	26,132	24,712	23,318	20,813	19,604	18,072	16,658	15,373
36,141	32,735	30,211	25,981	24,707	23,272	20,603	19,428	17,792	16,279
43,529	37,745	34,257	31,230	26,732	25,572	24,087	21,144	20,016	18,212
45,332	43,933	37,989	34,376	31,226	26,625	25,344	23,742	20,694	19,434
47,592	45,608	44,102	38,101	34,441	31,212	26,558	25,216	23,556	20,464

50,692	49,144	47,005	45,391	39,146	35,277	31,896	27,038	25,567	23,761
54,719	53,398	50,827	51,913	43,741	39,317	36,654	29,368	27,949	26,877

54	55	56	57	58	59	60	61	62	63
168	144	137	119	107	90	79	50	42	28
198	177	163	139	126	106	92	64	53	31
226	210	188	158	145	122	104	81	65	34
223	233	214	189	156	140	114	94	69	48
327	254	262	238	206	166	145	114	88	57
382	379	290	295	264	224	175	147	108	74
414	384	377	285	285	249	205	154	122	79
519	370	361	314	307	250	236	155	131	90
502	496	350	338	288	275	218	198	122	92
508	500	489	341	323	269	250	190	162	88
500	515	501	483	331	307	249	222	158	120
629	476	485	466	442	296	268	208	174	110
634	596	446	448	424	394	256	222	162	120
718	631	586	432	428	395	357	223	182	117
758	657	599	505	454	380	372	274	189	130
800	719	617	555	460	405	330	309	214	131
844	755	673	570	505	410	351	274	241	147
866	822	727	638	532	462	363	299	219	171
1,106	857	804	703	607	495	418	316	244	158
1,054	932	829	701	635	517	439	321	251	162
1,151	1,028	901	787	672	580	464	360	272	171
1,281	1,127	997	862	739	618	520	398	290	194
1,360	1,240	1,077	941	799	672	546	441	317	204
1,392	1,349	1,218	1,042	898	744	608	475	359	229
1,622	1,486	1,406	1,258	1,063	894	740	596	432	283
1,861	1,737	1,583	1,454	1,283	1,080	878	750	497	339
2,109	1,959	1,807	1,642	1,461	1,278	1,042	816	646	386
2,894	2,445	2,259	2,050	1,853	1,590	1,370	1,068	786	547
4,031	3,454	2,843	2,608	2,322	2,077	1,706	1,432	1,042	685
4,636	4,185	3,637	2,911	2,639	2,298	2,020	1,570	1,254	809
4,979	4,599	4,151	3,497	2,781	2,456	2,087	1,751	1,289	904
5,798	5,331	4,886	4,421	3,615	2,848	2,438	1,999	1,562	1,032
6,351	5,848	5,364	4,863	4,384	3,448	2,664	2,175	1,677	1,156
6,846	6,188	5,513	4,975	4,393	3,890	2,900	2,152	1,625	1,109
7,586	7,104	6,468	5,597	4,987	4,313	3,762	2,649	1,861	1,243
8,866	8,090	7,590	6,761	5,869	5,142	4,348	3,651	2,434	1,516
9,025	8,372	7,499	6,920	5,885	4,990	4,177	3,343	2,581	1,516
9,668	8,993	8,330	7,409	6,824	5,654	4,763	3,849	2,904	1,997
10,666	9,548	8,697	7,950	6,923	6,256	4,939	4,014	3,021	2,006
10,484	10,437	9,350	8,351	7,584	6,532	5,831	4,381	3,407	2,289
12,101	11,061	10,975	9,685	8,604	7,657	6,418	5,498	3,899	2,687
12,820	11,809	10,767	10,639	9,234	8,130	7,065	5,718	4,608	2,944
13,196	12,122	10,954	9,861	9,532	7,970	6,800	5,608	4,205	2,978
14,866	12,828	11,608	10,352	9,287	8,845	7,168	5,928	4,586	3,056
16,575	15,013	13,050	11,655	10,284	9,165	8,575	6,676	5,246	3,627
17,546	15,822	14,154	12,124	10,625	9,122	7,850	7,008	5,084	3,530
19,169	17,272	15,531	13,881	11,866	10,310	8,707	7,288	6,170	4,021
20,567	19,175	17,179	15,337	13,588	11,410	9,662	7,848	6,175	4,663
22,383	21,261	19,059	17,066	15,469	12,822	10,912	8,759	6,662	5,430

64	Total
13	17,368
16	20,507
19	23,589
19	26,798
30	33,520
36	42,477
40	46,697
44	49,781
47	52,241
50	57,139
49	63,594
62	66,612
57	69,556
65	76,312
65	81,749
68	86,440
68	90,625
78	97,807
93	107,493
80	109,773
87	118,650
92	128,830
103	139,046
111	154,102
137	184,055
168	216,258
193	250,853
247	322,458
349	420,623
394	496,601
434	557,662
536	638,072
579	697,709
565	789,060
638	903,962
765	1,039,125
694	1,118,880
891	1,229,889
1,024	1,331,393
1,147	1,468,306
1,352	1,628,502
1,527	1,767,720
1,421	1,925,667
1,621	2,043,486
1,823	2,191,655
1,820	2,299,468
2,120	2,417,601
2,285	2,598,084
2,571	2,800,796

Statistical appendix C

Statistical appendix C demonstrates the background statistics based on the estimation of Japan from 1947 to 1995. The characteristics of those data have already explained in chapter 4, then the following Tables only show the figures and their sources, but many Tables include estimated values expressed in red figures.

Table C-1: Estimated Male Population by Age

Age	1947	1948	1949	1950	1951	1952	1953	1954	1955
15	871,785	875,977	880,189	884,422	888,809	893,219	897,650	902,103	906,578
16	861,470	861,194	860,918	860,642	847,336	834,235	821,337	808,638	796,136
17	826,178	840,323	854,710	869,344	866,024	862,717	859,423	856,141	852,872
18	806,677	824,565	842,850	861,541	866,913	872,318	877,756	883,229	888,736
19	778,462	798,969	820,016	841,618	852,423	863,366	874,450	885,677	897,047
20	779,465	787,149	794,908	802,744	814,779	826,994	839,392	851,976	864,749
21	743,288	756,528	770,003	783,719	793,494	803,391	813,412	823,557	833,829
22	688,986	713,283	738,438	764,479	779,578	794,976	810,678	826,690	843,018
23	610,123	654,280	701,633	752,413	768,269	784,459	800,990	817,870	835,105
24	540,594	598,194	661,931	732,460	749,134	766,188	783,630	801,469	819,714
25	508,479	558,818	614,141	674,941	695,535	716,757	738,627	761,163	784,388
26	484,361	523,032	564,791	609,884	639,236	670,001	702,247	736,044	771,468
27	512,924	522,984	533,242	543,701	580,969	620,791	663,344	708,812	757,398
28	445,542	465,267	485,866	507,376	547,063	589,854	635,992	685,740	739,378
29	459,607	468,240	477,035	485,996	526,143	569,606	616,660	667,601	722,750
30	470,024	485,422	501,325	517,749	545,524	574,790	605,626	638,115	672,348
31	482,991	467,373	452,260	437,635	466,947	498,222	531,592	567,196	605,186
32	470,148	465,469	460,836	456,249	471,360	486,972	503,102	519,765	536,980
33	486,143	479,329	472,610	465,986	473,268	480,663	488,174	495,802	503,550
34	471,381	475,098	478,845	482,621	481,930	481,240	480,550	479,862	479,175
35	466,790	469,138	471,497	473,869	481,020	488,280	495,649	503,129	510,722
36	472,637	477,954	483,331	488,768	476,654	464,840	453,319	442,084	431,127
37	469,089	470,831	472,580	474,335	468,943	463,612	458,342	453,131	447,980
38	466,941	470,197	473,475	476,776	472,834	468,925	465,049	461,204	457,391
39	454,102	456,837	459,589	462,357	464,324	466,300	468,284	470,277	472,278
40	456,157	457,066	457,977	458,889	460,104	461,321	462,542	463,767	464,994
41	409,642	425,435	441,836	458,870	462,562	466,285	470,037	473,819	477,632
42	415,118	425,241	435,611	446,234	449,734	453,262	456,817	460,401	464,012
43	405,748	418,323	431,288	444,655	448,593	452,566	456,573	460,617	464,696
44	423,943	412,421	401,212	390,307	402,184	414,422	427,032	440,026	453,416
45	422,027	416,258	410,568	404,955	413,637	422,504	431,562	440,814	450,264
46	415,649	408,301	401,082	393,991	403,771	413,794	424,065	434,591	445,379
47	392,223	398,827	405,543	412,372	416,183	420,028	423,910	427,827	431,780
48	365,972	380,043	394,656	409,830	413,921	418,053	422,226	426,440	430,697
49	368,340	377,878	387,662	397,700	393,553	389,450	385,390	381,371	377,395
50	344,634	353,679	362,961	372,487	375,835	379,214	382,623	386,063	389,533
51	333,510	337,732	342,008	346,338	352,784	359,349	366,037	372,850	379,789
52	329,871	337,433	345,168	353,080	360,990	369,076	377,344	385,797	394,440
53	305,111	313,287	321,682	330,302	341,164	352,384	363,973	375,943	388,306
54	286,598	296,415	306,567	317,068	328,271	339,869	351,877	364,309	377,181
55	286,283	293,212	300,309	307,578	316,277	325,222	334,421	343,879	353,605
56	251,255	263,163	275,635	288,699	295,678	302,826	310,147	317,644	325,323
57	263,202	265,812	268,447	271,109	281,630	292,559	303,912	315,706	327,958

58	268,968	270,010	271,056	272,106	278,983	286,034	293,263	300,675	308,274
59	247,231	244,514	241,827	239,169	249,001	259,238	269,896	280,991	292,543
60	231,169	236,803	242,573	248,485	254,747	261,167	267,749	274,496	281,414
61	195,657	211,290	228,171	246,402	249,323	252,279	255,270	258,297	261,359
62	197,791	207,577	217,846	228,624	231,399	234,208	237,051	239,929	242,841
63	191,450	197,141	203,001	209,036	214,111	219,309	224,634	230,088	235,674
64	180,468	179,311	178,162	177,020	182,382	187,907	193,599	199,463	205,505

1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
886,634	867,128	848,052	829,395	811,149	866,273	925,143	988,014	1,055,158	1,126,864
830,573	866,499	903,980	943,081	983,874	1,030,272	1,078,859	1,129,736	1,183,013	1,238,803
871,667	890,875	910,507	930,572	951,079	1,000,182	1,051,819	1,106,123	1,163,230	1,223,286
905,943	923,483	941,363	959,589	978,168	1,011,780	1,046,548	1,082,509	1,119,707	1,158,183
908,062	919,213	930,500	941,927	953,493	904,194	857,445	813,112	771,072	731,205
864,622	864,495	864,367	864,240	864,113	844,883	826,081	807,697	789,[[723	772,148
817,384	801,264	785,462	769,971	754,786	787,980	822,635	858,813	896,583	936,013
835,946	828,933	821,979	815,084	808,246	827,968	848,171	868,867	890,068	911,787
836,532	837,962	839,394	840,829	842,266	861,514	881,201	901,339	921,937	943,005
826,818	833,984	841,211	848,502	855,855	870,820	886,047	901,540	917,304	933,344
793,817	803,359	813,016	822,789	832,680	837,685	842,719	847,784	852,880	858,006
778,158	784,907	791,714	798,580	805,505	795,111	784,851	774,723	764,726	754,858
770,359	783,542	796,950	810,588	824,459	823,069	821,681	820,295	818,912	817,531
755,172	771,304	787,780	804,608	821,795	828,240	834,735	841,282	847,880	854,529
739,453	756,543	774,027	791,915	810,217	822,233	834,427	846,801	859,360	872,104
692,338	712,921	734,117	755,943	778,418	791,224	804,241	817,472	830,920	844,590
634,493	665,219	697,433	731,207	766,617	776,882	787,285	797,827	808,510	819,336
574,608	614,872	657,958	704,063	753,399	769,212	785,358	801,842	818,672	835,855
542,613	584,706	630,065	678,942	731,611	750,489	769,854	789,718	810,095	830,998
519,375	562,948	610,177	661,368	716,853	735,754	755,153	775,064	795,500	816,475
538,738	568,291	599,465	632,349	667,037	688,927	711,535	734,884	759,001	783,908
460,241	491,322	524,502	559,922	597,734	628,943	661,782	696,336	732,694	770,950
463,273	479,087	495,442	512,355	529,845	568,452	609,872	654,311	701,987	753,137
464,930	472,593	480,382	488,300	496,348	536,120	579,078	625,479	675,598	729,733
472,271	472,264	472,258	472,251	472,244	512,340	555,840	603,033	654,234	709,781
472,430	479,984	487,660	495,458	503,381	531,640	561,486	593,007	626,298	661,458
466,122	454,890	443,928	433,230	422,790	452,279	483,826	517,572	553,673	592,291
458,848	453,741	448,690	443,696	438,758	454,719	471,261	488,404	506,171	524,584
461,286	457,901	454,541	451,206	447,895	456,179	464,617	473,210	481,963	490,877
455,025	456,640	458,261	459,888	461,520	461,307	461,094	460,881	460,669	460,456
450,967	451,671	452,377	453,083	453,791	461,435	469,209	477,113	485,150	493,323
448,992	452,634	456,305	460,007	463,738	453,473	443,435	433,620	424,022	414,636
435,611	439,476	443,375	447,308	451,277	446,858	442,482	438,149	433,859	429,610
434,569	438,476	442,418	446,396	450,409	447,696	444,999	442,319	439,654	437,006
388,732	400,409	412,438	424,827	437,589	440,047	442,519	445,005	447,505	450,019
397,872	406,390	415,091	423,977	433,054	434,605	436,162	437,725	439,293	440,867
389,113	398,666	408,454	418,482	428,756	432,794	436,870	440,985	445,138	449,330
397,941	401,472	405,035	408,630	412,256	416,498	420,783	425,112	429,486	433,905
392,494	396,728	401,007	405,332	409,704	413,944	418,227	422,555	426,927	431,345
373,035	368,936	364,881	360,870	356,904	368,267	379,993	392,091	404,575	417,456
356,131	358,676	361,239	363,820	366,419	375,163	384,116	393,283	402,668	412,277
331,200	337,183	343,274	349,475	355,788	364,797	374,035	383,506	393,218	403,175
335,493	343,202	351,088	359,155	367,407	371,937	376,523	381,166	385,866	390,624
318,622	329,317	340,372	351,797	363,606	368,970	374,412	379,935	385,540	391,227

303,045	313,924	325,194	336,869	348,962	345,744	342,556	339,397	336,267	333,166
289,376	297,564	305,984	314,641	323,544	326,498	329,479	332,486	335,522	338,585
267,744	274,284	280,984	287,848	294,880	300,693	306,621	312,666	318,830	325,115
252,230	261,982	272,110	282,631	293,558	301,042	308,717	316,588	324,660	332,937
242,259	249,029	255,987	263,140	270,493	280,151	290,154	300,514	311,244	322,357
214,585	224,067	233,967	244,305	255,099	264,569	274,390	284,575	295,139	306,095

1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1,067,132	1,010,567	957,000	906,272	858,233	848,878	839,625	830,472	821,420	812,466
1,150,410	1,068,324	992,095	921,306	855,567	850,334	845,133	839,964	834,826	829,720
1,151,495	1,083,918	1,020,306	960,427	904,063	883,278	862,970	843,130	823,746	804,807
1,113,258	1,070,076	1,028,569	988,672	950,322	913,183	877,495	843,201	810,248	778,583
778,967	829,848	884,054	941,799	1,003,317	962,449	923,246	885,640	849,565	814,960
826,444	884,557	946,757	1,013,331	1,084,586	1,033,319	984,476	937,941	893,606	851,366
981,824	1,029,877	1,080,282	1,133,154	1,188,614	1,109,702	1,036,030	967,248	903,033	843,081
961,360	1,013,628	1,068,738	1,126,844	1,188,109	1,123,653	1,062,694	1,005,042	950,518	898,952
978,138	1,014,580	1,052,379	1,091,587	1,132,255	1,093,554	1,056,175	1,020,074	985,207	951,532
885,994	841,046	798,378	757,875	719,427	771,240	826,785	886,330	950,164	1,018,595
839,244	820,893	802,943	785,386	768,212	825,902	887,924	954,604	1,026,291	1,103,362
788,283	823,189	859,639	897,704	937,455	987,206	1,039,597	1,094,769	1,152,868	1,214,051
836,699	856,316	876,393	896,941	917,970	970,734	1,026,532	1,085,536	1,147,932	1,213,915
873,313	892,509	912,128	932,178	952,668	991,492	1,031,899	1,073,952	1,117,719	1,163,269
885,457	899,014	912,778	926,754	940,943	894,780	850,882	809,137	769,441	731,692
849,372	854,180	859,016	863,879	868,770	852,348	836,237	820,430	804,922	789,707
807,415	795,668	784,092	772,684	761,442	798,186	836,704	877,080	919,404	963,771
833,348	830,849	828,358	825,874	823,397	845,624	868,451	891,894	915,969	940,695
836,138	841,309	846,513	851,749	857,017	879,092	901,735	924,962	948,786	973,225
827,111	837,886	848,802	859,859	871,061	887,644	904,542	921,763	939,311	957,193
795,610	807,486	819,539	831,773	844,189	850,955	857,775	864,650	871,580	878,565
779,729	788,609	797,589	806,672	815,858	806,457	797,165	787,980	778,901	769,926
768,078	783,316	798,855	814,704	830,866	830,452	830,039	829,626	829,213	828,800
747,490	765,680	784,312	803,398	822,948	830,342	837,803	845,330	852,926	860,589
728,368	747,442	767,015	787,101	807,713	820,684	833,864	847,255	860,861	874,686
682,444	704,096	726,434	749,481	773,260	788,174	803,376	818,871	834,665	850,764
620,882	650,853	682,271	715,205	749,729	762,877	776,256	789,870	803,722	817,817
560,679	599,258	640,492	684,563	731,666	750,494	769,807	789,616	809,936	830,778
528,718	569,476	613,377	660,661	711,591	732,264	753,538	775,430	797,958	821,141
500,631	544,310	591,801	643,436	699,575	719,415	739,817	760,799	782,375	804,563
521,150	550,547	581,601	614,408	649,065	671,732	695,190	719,468	744,593	770,596
443,667	474,730	507,968	543,533	581,588	612,666	645,406	679,894	716,226	754,499
445,533	462,046	479,171	496,930	515,348	553,115	593,650	637,155	683,849	733,964
445,269	453,689	462,267	471,008	479,914	518,715	560,653	605,981	654,975	707,929
450,567	451,116	451,666	452,216	452,767	492,502	535,725	582,741	633,883	689,513
448,853	456,984	465,263	473,691	482,272	510,349	540,061	571,502	604,774	639,983
440,171	431,199	422,410	413,800	405,365	433,626	463,857	496,196	530,789	567,794
430,209	426,544	422,910	419,307	415,735	431,514	447,892	464,891	482,536	500,850
429,465	427,594	425,731	423,876	422,029	430,625	439,397	448,347	457,480	466,798
420,265	423,092	425,939	428,805	431,690	433,604	435,527	437,458	439,398	441,346
412,481	412,685	412,889	413,093	413,297	423,371	433,691	444,262	455,090	466,183
406,449	409,749	413,076	416,431	419,812	413,277	406,843	400,510	394,275	388,137
393,635	396,669	399,727	402,808	405,913	404,855	403,800	402,748	401,699	400,652
394,841	398,488	402,168	405,883	409,632	408,650	407,671	406,694	405,719	404,747
344,426	356,066	368,100	380,540	393,401	397,237	401,110	405,021	408,970	412,957

347,282	356,203	365,352	374,737	384,363	387,777	391,221	394,696	398,201	401,738
334,108	343,349	352,846	362,606	372,636	378,781	385,028	391,377	397,831	404,392
337,063	341,240	345,469	349,751	354,085	360,581	367,196	373,932	380,792	387,778
327,055	331,822	336,659	341,566	346,544	352,948	359,470	366,113	372,878	379,769
304,411	302,737	301,072	299,416	297,769	309,657	322,019	334,874	348,243	362,146

1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
832,728	853,496	874,781	896,598	918,958	932,570	946,384	960,402	974,628	989,065
835,891	842,109	848,372	854,682	861,039	882,362	904,213	926,605	949,552	973,067
811,108	817,457	823,857	830,307	836,807	858,099	879,932	902,321	925,280	948,823
784,776	791,017	797,309	803,650	810,042	836,367	863,547	891,610	920,586	950,503
811,303	807,663	804,039	800,431	796,839	784,913	773,166	761,595	750,197	738,969
840,640	830,049	819,591	809,266	799,070	820,736	842,990	865,847	889,324	913,438
836,645	830,258	823,920	817,630	811,388	818,766	826,210	833,723	841,303	848,953
875,132	851,944	829,370	807,394	786,000	793,590	801,253	808,990	816,802	824,689
910,133	870,535	832,660	796,433	761,782	768,313	774,900	781,543	788,243	795,001
971,008	925,644	882,399	841,174	801,876	798,251	794,642	791,050	787,474	783,914
1,044,416	988,618	935,802	885,808	838,484	828,336	818,310	808,406	798,622	788,956
1,127,322	1,046,789	972,009	902,571	838,094	831,069	824,104	817,196	810,347	803,555
1,142,743	1,075,745	1,012,674	953,301	897,409	873,573	850,370	827,784	805,798	784,395
1,117,699	1,073,915	1,031,845	991,424	952,586	911,674	872,519	835,046	799,182	764,859
781,787	835,312	892,502	953,607	1,018,895	972,370	927,969	885,595	845,157	806,565
844,230	902,518	964,831	1,031,445	1,102,659	1,045,496	991,296	939,907	891,181	844,981
1,009,480	1,057,356	1,107,503	1,160,029	1,215,045	1,129,336	1,049,673	975,630	906,809	842,843
989,831	1,041,533	1,095,935	1,153,180	1,213,414	1,142,971	1,076,617	1,014,116	955,242	899,787
1,008,423	1,044,894	1,082,684	1,121,841	1,162,414	1,117,034	1,073,425	1,031,518	991,248	952,550
906,207	857,937	812,238	768,973	728,013	778,520	832,531	890,289	952,054	1,018,104
858,662	839,210	820,199	801,618	783,458	838,338	897,062	959,900	1,027,140	1,099,089
804,604	840,844	878,716	918,294	959,654	1,005,207	1,052,922	1,102,902	1,155,254	1,210,092
849,007	869,707	890,911	912,633	934,884	984,035	1,035,770	1,090,224	1,147,542	1,207,873
880,972	901,839	923,199	945,066	967,450	1,002,783	1,039,406	1,077,367	1,116,714	1,157,498
889,119	903,789	918,702	933,861	949,270	899,127	851,632	806,646	764,037	723,678
854,251	857,752	861,268	864,798	868,342	849,787	831,628	813,857	796,466	779,447
806,110	794,571	783,197	771,986	760,935	795,669	831,989	869,966	909,677	951,201
828,225	825,680	823,142	820,613	818,091	838,554	859,530	881,029	903,067	925,656
826,652	832,199	837,784	843,407	849,067	869,701	890,837	912,486	934,661	957,375
815,841	827,277	838,873	850,631	862,555	877,179	892,051	907,176	922,556	938,198
783,060	795,725	808,596	821,674	834,964	839,354	843,766	848,202	852,661	857,144
763,654	772,921	782,300	791,792	801,400	790,852	780,443	770,171	760,034	750,030
748,981	764,306	779,944	795,902	812,186	810,757	809,331	807,908	806,487	805,068
725,671	743,857	762,499	781,608	801,196	807,724	814,305	820,939	827,628	834,371
707,344	725,636	744,401	763,652	783,400	795,445	807,676	820,095	832,704	845,508
660,668	682,021	704,065	726,821	750,312	763,481	776,880	790,515	804,389	818,507
597,430	628,613	661,424	695,948	732,273	741,829	751,510	761,316	771,251	781,316
537,389	576,594	618,658	663,792	712,218	727,114	742,321	757,847	773,697	789,879
504,509	545,267	589,317	636,926	688,381	705,422	722,884	740,779	759,117	777,909
478,881	519,609	563,801	611,751	663,779	681,781	700,270	719,262	738,768	758,803
492,968	521,292	551,243	582,915	616,407	636,457	657,159	678,534	700,605	723,393
415,634	445,079	476,609	510,374	546,530	575,351	605,691	637,632	671,257	706,655
415,547	430,995	447,018	463,637	480,873	516,142	553,999	594,631	638,244	685,056
412,940	421,298	429,826	438,526	447,403	483,495	522,498	564,648	610,198	659,422
414,389	415,826	417,267	418,714	420,166	456,321	495,588	538,233	584,548	634,848
409,609	417,635	425,817	434,160	442,667	468,562	495,971	524,984	555,694	588,200

396,551	388,862	381,323	373,929	366,679	393,172	421,578	452,038	484,697	519,717
385,427	383,090	380,767	378,459	376,164	390,813	406,033	421,846	438,275	455,343
379,419	379,069	378,720	378,371	378,022	386,418	395,000	403,773	412,740	421,907
366,109	370,115	374,165	378,259	382,398	384,834	387,286	389,753	392,236	394,735

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
988,399	987,732	987,067	986,402	985,737	950,306	916,148	883,218	851,471	820,866
986,483	1,000,085	1,013,873	1,027,852	1,042,024	998,907	957,574	917,951	879,968	843,556
969,145	989,903	1,011,105	1,032,761	1,054,881	1,016,273	979,078	943,245	908,723	875,464
966,662	983,096	999,810	1,016,807	1,034,094	1,005,527	977,748	950,738	924,473	898,934
785,915	835,843	888,944	945,418	1,005,479	993,492	981,647	969,944	958,381	946,955
925,232	937,178	949,278	961,534	973,949	975,424	976,901	978,380	979,861	981,345
867,192	885,822	904,853	924,293	944,150	960,314	976,754	993,476	1,010,485	1,027,784
842,894	861,502	880,520	899,958	919,825	942,000	964,709	987,966	1,011,784	1,036,176
818,002	841,668	866,019	891,074	916,854	935,130	953,771	972,783	992,174	1,011,951
769,279	754,917	740,824	726,993	713,421	760,805	811,336	865,223	922,689	983,972
807,070	825,600	844,555	863,945	883,781	897,656	911,749	926,064	940,603	955,370
808,168	812,807	817,473	822,166	826,886	847,943	869,536	891,680	914,387	937,672
789,239	794,112	799,016	803,950	808,914	830,026	851,690	873,919	896,728	920,132
768,693	772,545	776,417	780,309	784,220	809,696	836,000	863,159	891,199	920,151
800,082	793,652	787,273	780,945	774,668	763,157	751,818	740,647	729,642	718,800
831,982	819,182	806,579	794,171	781,953	802,701	824,000	845,864	868,308	891,348
833,895	825,042	816,284	807,618	799,044	806,025	813,068	820,172	827,337	834,566
874,378	849,687	825,693	802,376	779,718	786,921	794,190	801,526	808,930	816,403
910,754	870,791	832,583	796,050	761,121	766,971	772,866	778,807	784,793	790,825
971,030	926,133	883,312	842,470	803,517	798,902	794,314	789,752	785,217	780,707
1,041,074	986,120	934,068	884,763	838,061	827,948	817,957	808,087	798,336	788,702
1,124,288	1,044,567	970,500	901,684	837,748	830,777	823,865	817,010	810,212	803,470
1,137,045	1,070,370	1,007,605	948,520	892,900	869,657	847,018	824,969	803,494	782,578
1,111,875	1,068,050	1,025,953	985,515	946,671	907,089	869,162	832,821	798,000	764,634
773,487	826,725	883,627	944,445	1,009,449	965,118	922,733	882,210	843,467	806,425
833,404	891,096	952,782	1,018,738	1,089,260	1,033,650	980,879	930,802	883,282	838,188
996,650	1,044,270	1,094,166	1,146,445	1,201,223	1,118,062	1,040,658	968,613	901,556	839,141
974,493	1,025,906	1,080,031	1,137,013	1,197,000	1,129,261	1,065,356	1,005,067	948,190	894,531
992,349	1,028,600	1,066,176	1,105,124	1,145,495	1,102,717	1,061,536	1,021,893	983,730	946,993
889,079	842,531	798,421	756,620	717,007	767,633	821,834	879,862	941,987	1,008,499
838,743	820,737	803,117	785,876	769,005	824,308	883,588	947,132	1,015,245	1,088,256
784,306	820,149	857,629	896,823	937,807	985,338	1,035,279	1,087,750	1,142,881	1,200,806
825,307	846,054	867,323	889,127	911,479	961,331	1,013,909	1,069,363	1,127,849	1,189,535
855,276	876,704	898,669	921,184	944,264	980,177	1,017,455	1,056,151	1,096,319	1,138,015
859,859	874,455	889,297	904,392	919,743	873,767	830,088	788,594	749,173	711,723
822,608	826,731	830,873	835,037	839,221	822,580	806,269	790,281	774,611	759,251
771,433	761,674	752,040	742,527	733,134	768,421	805,407	844,173	884,805	927,393
789,352	788,825	788,299	787,773	787,247	808,698	830,734	853,371	876,624	900,511
785,181	792,522	799,931	807,409	814,957	836,548	858,712	881,462	904,816	928,788
771,170	783,739	796,513	809,495	822,689	838,686	854,993	871,618	888,566	905,844
736,166	749,165	762,393	775,855	789,554	796,561	803,629	810,761	817,955	825,214
716,154	725,781	735,537	745,424	755,444	748,205	741,035	733,934	726,902	719,936
699,753	714,764	730,098	745,761	761,760	763,317	764,877	766,441	768,007	769,577
676,613	694,253	712,352	730,923	749,978	758,545	767,210	775,973	784,837	793,802
652,227	670,081	688,424	707,270	726,631	740,392	754,414	768,701	783,259	798,092
607,461	627,352	647,895	669,111	691,021	704,825	718,905	733,267	747,915	762,856
547,344	576,439	607,081	639,352	673,338	683,419	693,652	704,037	714,578	725,277

489,087	525,331	564,261	606,076	650,990	665,479	680,290	695,430	710,908	726,730
456,327	493,556	533,822	577,372	624,476	640,880	657,715	674,992	692,722	710,919
428,745	465,686	505,809	549,389	596,724	613,627	631,009	648,884	667,265	686,166

Sources: Nihon Tokei Kyokai (Japan Statistical Association), Nihon Chokitokei Soran

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Table C-2: Estimated Female Population by Age

Age	1947	1948	1949	1950	1951	1952	1953	1954	1955
15	856,647	860,038	863,442	866,860	870,957	875,074	879,210	883,366	887,541
16	844,888	844,779	844,669	844,560	831,834	819,301	806,956	794,797	782,821
17	815,334	828,397	841,669	855,154	852,789	850,430	848,078	845,733	843,394
18	808,991	821,937	835,090	848,454	854,425	860,437	866,492	872,590	878,730
19	793,425	807,072	820,953	835,073	846,096	857,265	868,581	880,047	891,664
20	777,400	784,883	792,438	800,066	812,371	824,866	837,553	850,435	863,515
21	771,206	777,446	783,737	790,078	798,921	807,863	816,906	826,049	835,295
22	754,115	760,826	767,597	774,428	788,759	803,355	818,221	833,363	848,784
23	705,445	724,984	745,063	765,699	779,329	793,201	807,321	821,691	836,318
24	691,282	713,298	736,015	759,456	771,744	784,231	796,919	809,813	822,916
25	671,789	689,812	708,318	727,321	739,093	751,055	763,210	775,563	788,115
26	641,299	656,013	671,065	686,462	704,242	722,483	741,197	760,395	780,090
27	664,592	667,449	670,319	673,201	690,366	707,968	726,019	744,531	763,514
28	545,282	578,528	613,801	651,224	669,754	688,812	708,412	728,570	749,301
29	557,759	579,332	601,740	625,014	647,864	671,548	696,099	721,547	747,926
30	557,950	588,090	619,858	653,342	666,017	678,938	692,110	705,537	719,225
31	562,947	552,556	542,356	532,345	558,709	586,379	615,418	645,897	677,884
32	551,175	549,637	548,103	546,574	568,052	590,374	613,573	637,683	662,741
33	560,080	556,929	553,795	550,679	568,059	585,988	604,482	623,561	643,241
34	534,760	542,739	550,838	559,057	570,119	581,401	592,905	604,638	616,602
35	533,357	536,067	538,791	541,528	560,686	580,521	601,058	622,322	644,338
36	529,332	537,067	544,915	552,877	547,074	541,332	535,650	530,028	524,465
37	509,506	516,604	523,801	531,098	532,351	533,607	534,867	536,129	537,394
38	500,683	512,183	523,947	535,982	537,035	538,090	539,147	540,206	541,267
39	479,346	489,508	499,886	510,483	517,806	525,234	532,769	540,412	548,164
40	460,245	470,589	481,165	491,979	499,532	507,202	514,989	522,895	530,923
41	396,238	425,583	457,101	490,953	500,611	510,460	520,502	530,742	541,183
42	413,444	430,012	447,245	465,168	475,742	486,556	497,615	508,927	520,495
43	396,635	414,860	433,923	453,861	467,321	481,180	495,450	510,143	525,272
44	414,828	403,606	392,687	382,064	403,619	426,391	450,447	475,860	502,707
45	409,998	409,180	408,364	407,549	421,984	436,931	452,406	468,430	485,022
46	399,021	394,439	389,909	385,431	402,424	420,166	438,690	458,031	478,224
47	380,110	388,308	396,683	405,239	414,040	423,033	432,221	441,608	451,199
48	350,746	366,881	383,758	401,411	409,357	417,460	425,724	434,151	442,745
49	354,759	364,903	375,338	386,071	383,722	381,387	379,067	376,760	374,468
50	325,100	337,654	350,693	364,235	370,363	376,594	382,930	389,373	395,924
51	319,116	323,277	327,491	331,761	339,929	348,298	356,874	365,660	374,663
52	313,280	323,044	333,113	343,496	352,715	362,182	371,903	381,885	392,135
53	295,745	303,033	310,500	318,152	330,740	343,827	357,431	371,574	386,276

54	279,014	289,525	300,431	311,749	322,831	334,308	346,192	358,499	371,243
55	279,999	286,880	293,931	301,155	310,424	319,978	329,826	339,977	350,441
56	249,248	260,150	271,529	283,405	289,954	296,653	303,508	310,521	317,696
57	267,723	267,522	267,320	267,119	278,123	289,581	301,510	313,931	326,864
58	272,907	273,245	273,584	273,923	280,162	286,543	293,069	299,744	306,571
59	257,643	253,277	248,985	244,766	254,290	264,185	274,464	285,144	296,239
60	243,002	248,839	254,817	260,938	265,568	270,280	275,076	279,957	284,924
61	213,161	227,860	243,573	260,369	261,511	262,657	263,809	264,965	266,127
62	219,496	226,400	233,521	240,866	242,787	244,723	246,675	248,642	250,625
63	222,125	224,931	227,773	230,650	234,173	237,750	241,382	245,069	248,812
64	215,026	210,421	205,915	201,505	204,947	208,447	212,008	215,629	219,312

1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
868,179	849,239	830,712	812,590	794,863	847,767	904,192	964,372	1,028,558	1,097,016
817,262	853,218	890,756	929,945	970,859	1,015,207	1,061,580	1,110,072	1,160,779	1,213,802
861,939	880,892	900,262	920,058	940,289	987,274	1,036,607	1,088,405	1,142,792	1,199,896
896,449	914,525	932,966	951,778	970,970	1,002,154	1,034,340	1,067,559	1,101,846	1,137,233
903,757	916,015	928,439	941,031	953,794	903,032	854,972	809,469	766,388	725,600
865,308	867,105	868,906	870,711	872,519	853,429	834,756	816,492	798,628	781,154
821,028	807,004	793,220	779,671	766,354	800,603	836,383	873,762	912,811	953,606
844,411	840,060	835,732	831,426	827,142	846,609	866,535	886,929	907,803	929,169
840,691	845,088	849,507	853,949	858,415	877,945	897,920	918,350	939,244	960,613
831,886	840,954	850,120	859,387	868,754	884,027	899,568	915,382	931,475	947,850
798,666	809,359	820,194	831,175	842,303	848,190	854,117	860,086	866,097	872,150
786,773	793,514	800,313	807,170	814,085	804,638	795,301	786,072	776,950	767,934
776,599	789,908	803,445	817,215	831,220	831,511	831,801	832,092	832,383	832,674
762,766	776,473	790,426	804,630	819,089	827,579	836,157	844,824	853,581	862,429
759,574	771,403	783,416	795,617	808,007	820,346	832,873	845,591	858,504	871,614
729,991	740,918	752,008	763,265	774,690	787,229	799,972	812,921	826,079	839,450
694,838	712,216	730,029	748,287	767,002	776,528	786,173	795,938	805,823	815,832
679,891	697,485	715,535	734,051	753,047	768,102	783,457	799,119	815,095	831,390
661,331	679,930	699,052	718,712	738,925	754,041	769,465	785,206	801,268	817,659
639,037	662,289	686,386	711,360	737,243	750,461	763,916	777,612	791,553	805,745
657,229	670,379	683,791	697,472	711,426	723,447	735,671	748,101	760,742	773,596
550,517	577,862	606,566	636,696	668,322	686,703	705,589	724,995	744,935	765,423
558,759	580,973	604,071	628,086	653,057	671,192	689,830	708,986	728,674	748,908
558,596	576,480	594,937	613,985	633,642	652,550	672,023	692,077	712,729	733,997
559,710	571,498	583,535	595,826	608,375	630,805	654,062	678,177	703,180	729,106
550,210	570,198	590,912	612,378	634,624	647,676	660,996	674,590	688,464	702,623
535,831	530,532	525,286	520,091	514,948	541,575	569,579	599,030	630,005	662,581
521,701	522,909	524,120	525,334	526,551	548,619	571,612	595,569	620,530	646,537
526,382	527,495	528,610	529,727	530,847	548,719	567,193	586,289	606,028	626,432
509,540	516,467	523,487	530,603	537,816	548,530	559,457	570,602	581,969	593,563
491,881	498,837	505,891	513,046	520,301	539,513	559,434	580,090	601,510	623,720
487,900	497,773	507,845	518,120	528,604	524,174	519,782	515,426	511,107	506,824
462,384	473,847	485,594	497,632	509,968	511,588	513,213	514,843	516,478	518,119
455,871	469,387	483,303	497,631	512,385	514,010	515,640	517,275	518,915	520,561
394,915	416,479	439,221	463,204	488,497	496,152	503,928	511,825	519,846	527,993
409,918	424,407	439,407	454,938	471,018	478,554	486,210	493,989	501,892	509,922
391,374	408,831	427,066	446,115	466,013	475,683	485,553	495,628	505,912	516,409
400,649	409,348	418,236	427,317	436,595	447,846	459,387	471,226	483,369	495,826
394,016	401,911	409,964	418,178	426,557	439,261	452,343	465,814	479,687	493,973
369,076	366,921	364,779	362,650	360,533	380,000	400,519	422,146	444,940	468,965

355,997	361,641	367,375	373,199	379,116	393,049	407,495	422,471	437,998	454,095
325,516	333,528	341,738	350,149	358,768	374,129	390,147	406,851	424,270	442,435
335,880	345,144	354,664	364,446	374,498	382,688	391,058	399,610	408,349	417,280
318,612	331,126	344,132	357,648	371,695	379,681	387,838	396,171	404,682	413,377
307,147	318,457	330,184	342,342	354,948	352,803	350,671	348,553	346,446	344,353
294,043	303,454	313,166	323,189	333,533	338,697	343,941	349,266	354,674	360,165
272,691	279,418	286,310	293,372	300,609	307,717	314,992	322,440	330,064	337,868
260,719	271,220	282,144	293,508	305,329	314,222	323,374	332,793	342,486	352,462
255,112	261,572	268,195	274,986	281,949	293,154	304,804	316,917	329,512	342,607
229,067	239,256	249,898	261,013	272,623	282,595	292,932	303,647	314,755	326,268

1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1,037,280	980,797	927,389	876,890	829,140	818,709	808,410	798,240	788,199	778,283
1,125,849	1,044,270	968,601	898,416	833,316	825,981	818,711	811,505	804,362	797,282
1,130,018	1,064,209	1,002,233	943,866	888,898	865,400	842,522	820,250	798,566	777,456
1,094,836	1,054,020	1,014,726	976,896	940,477	900,655	862,519	825,998	791,024	757,530
773,715	825,020	879,727	938,062	1,000,265	956,008	913,710	873,282	834,644	797,715
834,406	891,287	952,047	1,016,948	1,086,274	1,029,704	976,080	925,248	877,064	831,389
998,088	1,044,646	1,093,375	1,144,377	1,197,758	1,112,878	1,034,013	960,736	892,653	829,394
977,834	1,029,048	1,082,944	1,139,663	1,199,352	1,130,080	1,064,808	1,003,307	945,358	890,756
994,062	1,028,676	1,064,495	1,101,562	1,139,919	1,098,029	1,057,679	1,018,812	981,372	945,309
898,136	851,030	806,395	764,100	724,024	774,041	827,514	884,681	945,797	1,011,135
852,421	833,138	814,292	795,872	777,868	832,919	891,866	954,986	1,022,572	1,094,941
802,155	837,901	875,240	914,243	954,984	1,000,384	1,047,941	1,097,760	1,149,947	1,204,615
851,777	871,319	891,309	911,758	932,676	981,021	1,031,872	1,085,359	1,141,618	1,200,794
881,241	900,463	920,104	940,174	960,682	995,093	1,030,736	1,067,656	1,105,898	1,145,510
885,944	900,509	915,314	930,362	945,658	896,080	849,102	804,586	762,404	722,434
846,115	852,833	859,605	866,430	873,309	855,846	838,733	821,961	805,525	789,418
805,283	794,870	784,592	774,447	764,433	800,968	839,249	879,359	921,387	965,423
831,046	830,702	830,358	830,015	829,671	850,863	872,597	894,885	917,743	941,185
825,536	833,488	841,517	849,624	857,808	879,188	901,101	923,560	946,579	970,172
817,285	828,989	840,862	852,904	865,119	882,392	900,010	917,979	936,308	955,002
786,254	799,120	812,196	825,486	838,994	846,940	854,961	863,057	871,231	879,482
774,349	783,380	792,516	801,758	811,108	802,591	794,164	785,825	777,574	769,409
763,801	778,989	794,480	810,279	826,392	827,601	828,813	830,026	831,240	832,457
748,761	763,822	779,186	794,860	810,848	820,416	830,098	839,894	849,805	859,833
742,391	755,918	769,692	783,716	797,996	811,637	825,511	839,623	853,975	868,573
714,588	726,756	739,131	751,717	764,518	780,323	796,456	812,921	829,727	846,881
678,232	694,254	710,653	727,440	744,624	757,959	771,533	785,350	799,414	813,730
661,738	677,296	693,219	709,518	726,199	745,388	765,085	785,302	806,053	827,352
643,491	661,014	679,015	697,506	716,500	734,576	753,108	772,108	791,587	811,558
617,327	642,042	667,747	694,482	722,286	737,105	752,229	767,662	783,413	799,486
637,253	651,080	665,207	679,640	694,387	708,438	722,773	737,399	752,320	767,543
533,406	561,381	590,824	621,812	654,424	673,799	693,747	714,286	735,433	757,206
540,717	564,300	588,913	614,598	641,404	659,679	678,476	697,807	717,690	738,139
538,866	557,814	577,429	597,734	618,752	638,256	658,374	679,127	700,533	722,615
539,844	551,960	564,349	577,016	589,967	613,843	638,684	664,531	691,425	719,406
529,451	549,727	570,781	592,640	615,337	629,818	644,640	659,810	675,338	691,231
513,145	509,901	506,678	503,475	500,293	526,593	554,276	583,413	614,083	646,365
498,305	500,796	503,300	505,816	508,345	530,849	554,349	578,890	604,517	631,278
497,058	500,163	503,287	506,430	509,593	528,396	547,892	568,108	589,070	610,805
477,792	486,785	495,947	505,282	514,792	528,171	541,897	555,981	570,430	585,255
459,769	465,514	471,331	477,221	483,184	505,712	529,290	553,968	579,796	606,829

451,397	460,541	469,871	479,389	489,100	489,171	489,242	489,313	489,384	489,455
427,811	438,607	449,676	461,024	472,658	478,051	483,506	489,023	494,603	500,247
426,230	439,482	453,146	467,236	481,763	485,272	488,806	492,367	495,953	499,565
364,245	385,286	407,542	431,084	455,986	465,370	474,947	484,721	494,696	504,877
374,688	389,797	405,515	421,867	438,878	447,765	456,833	466,083	475,522	485,151
353,767	370,414	387,844	406,095	425,204	437,226	449,587	462,298	475,369	488,809
360,684	369,098	377,709	386,520	395,537	409,270	423,480	438,183	453,397	469,139
350,837	359,264	367,894	376,731	385,780	400,353	415,476	431,171	447,458	464,361
326,031	325,795	325,558	325,322	325,086	345,444	367,078	390,066	414,494	440,451

1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
796,913	815,989	835,521	855,521	876,000	887,681	899,518	911,513	923,668	935,985
801,986	806,718	811,478	816,266	821,082	840,426	860,226	880,492	901,236	922,468
782,172	786,917	791,690	796,492	801,324	820,537	840,210	860,355	880,983	902,105
761,928	766,352	770,802	775,278	779,779	803,965	828,901	854,611	881,118	908,447
792,170	786,664	781,197	775,767	770,375	758,013	745,848	733,880	722,103	710,515
819,930	808,630	797,485	786,494	775,654	795,463	815,778	836,611	857,977	879,888
821,509	813,700	805,964	798,302	790,713	796,379	802,085	807,833	813,621	819,451
865,614	841,183	817,440	794,368	771,947	777,040	782,167	787,327	792,522	797,751
902,652	861,919	823,025	785,885	750,422	755,022	759,650	764,306	768,991	773,704
962,967	917,094	873,406	831,799	792,174	786,409	780,686	775,004	769,364	763,765
1,034,568	977,523	923,624	872,697	824,578	813,659	802,884	792,252	781,761	771,409
1,117,674	1,037,009	962,165	892,722	828,292	820,097	811,984	803,950	795,996	788,121
1,131,002	1,065,267	1,003,352	945,036	890,109	864,901	840,406	816,605	793,479	771,007
1,102,322	1,060,762	1,020,769	982,283	945,249	902,779	862,216	823,477	786,478	751,141
772,149	825,286	882,079	942,780	1,007,659	960,613	915,764	873,009	832,250	793,394
842,009	898,104	957,936	1,021,754	1,089,823	1,031,204	975,738	923,256	873,596	826,608
1,008,404	1,053,298	1,100,191	1,149,172	1,200,333	1,114,647	1,035,078	961,189	892,574	828,858
987,662	1,036,434	1,087,614	1,141,321	1,197,681	1,128,588	1,063,481	1,002,130	944,318	889,841
1,002,401	1,035,701	1,070,106	1,105,655	1,142,385	1,099,486	1,058,198	1,018,460	980,215	943,406
902,538	852,956	806,099	761,815	719,964	769,973	823,457	880,655	941,826	1,007,246
859,862	840,680	821,925	803,589	785,662	838,589	895,081	955,379	1,019,739	1,088,435
804,887	842,002	880,827	921,443	963,932	1,006,806	1,051,587	1,098,360	1,147,214	1,198,240
852,831	873,703	895,086	916,992	939,435	985,854	1,034,567	1,085,686	1,139,332	1,195,628
880,402	901,464	923,029	945,111	967,720	999,854	1,033,054	1,067,358	1,102,800	1,139,419
884,302	900,315	916,618	933,217	950,116	898,374	849,450	803,191	759,450	718,092
851,894	856,937	862,009	867,112	872,245	853,874	835,891	818,285	801,051	784,180
803,524	793,445	783,493	773,666	763,962	799,483	836,655	875,556	916,265	958,867
827,010	826,669	826,327	825,986	825,645	846,171	867,206	888,765	910,860	933,504
819,748	828,021	836,377	844,817	853,343	874,056	895,271	917,002	939,260	962,058
811,863	824,431	837,194	850,154	863,315	878,968	894,904	911,129	927,649	944,468
781,303	795,310	809,568	824,081	838,855	844,244	849,667	855,126	860,619	866,148
766,791	776,498	786,328	796,282	806,362	796,583	786,922	777,378	767,950	758,637
753,647	769,480	785,647	802,152	819,005	818,912	818,819	818,725	818,632	818,539
738,048	753,811	769,910	786,353	803,147	811,578	820,097	828,705	837,404	846,194
732,977	746,805	760,893	775,247	789,872	802,483	815,296	828,313	841,539	854,975
704,160	717,330	730,747	744,415	758,338	772,416	786,756	801,362	816,239	831,392
665,094	684,366	704,197	724,602	745,598	755,486	765,505	775,657	785,944	796,367
649,709	668,679	688,202	708,296	728,976	744,070	759,476	775,201	791,252	807,635
631,105	652,079	673,751	696,143	719,279	733,443	747,886	762,613	777,631	792,944
606,741	629,016	652,108	676,049	700,868	715,701	730,849	746,317	762,112	778,242
620,584	634,651	649,037	663,749	678,795	691,706	704,863	718,271	731,933	745,855
515,420	542,762	571,555	601,875	633,804	652,810	672,387	692,550	713,318	734,709

521,956	544,607	568,241	592,901	618,631	637,045	656,007	675,534	695,642	716,348
518,040	537,199	557,066	577,667	599,031	618,778	639,176	660,246	682,011	704,493
517,615	530,675	544,064	557,792	571,865	593,573	616,106	639,493	663,769	688,966
504,936	525,528	546,960	569,266	592,481	606,429	620,705	635,318	650,274	665,583
486,013	483,232	480,468	477,719	474,986	500,790	527,997	556,681	586,923	618,809
472,199	475,278	478,378	481,498	484,638	506,383	529,103	552,843	577,648	603,566
467,913	471,492	475,099	478,733	482,395	500,997	520,317	540,382	561,221	582,863
448,987	457,688	466,558	475,600	484,817	498,072	511,689	525,678	540,050	554,815

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
936,326	936,668	937,009	937,351	937,693	903,660	870,862	839,254	808,794	779,439
935,313	948,337	961,542	974,931	988,506	947,273	907,760	869,895	833,610	798,838
922,080	942,498	963,368	984,700	1,006,504	969,096	933,079	898,400	865,010	832,861
923,645	939,096	954,807	970,780	987,020	959,614	932,969	907,064	881,878	857,391
755,401	803,122	853,859	907,800	965,149	952,524	940,064	927,767	915,631	903,654
890,162	900,556	911,072	921,710	932,473	933,482	934,492	935,503	936,516	937,529
837,356	855,653	874,350	893,455	912,977	926,382	939,983	953,785	967,788	981,998
816,047	834,762	853,906	873,489	893,522	913,811	934,561	955,782	977,485	999,681
796,396	819,754	843,797	868,545	894,019	910,185	926,643	943,398	960,457	977,824
750,334	737,139	724,177	711,442	698,931	744,229	792,462	843,821	898,509	956,741
789,256	807,516	826,198	845,312	864,869	877,081	889,466	902,026	914,763	927,680
792,340	796,581	800,845	805,131	809,441	829,439	849,931	870,929	892,446	914,494
775,081	779,177	783,295	787,434	791,595	811,406	831,712	852,526	873,862	895,731
754,452	757,778	761,118	764,473	767,843	791,914	816,740	842,344	868,751	895,985
786,288	779,246	772,267	765,351	758,496	746,871	735,424	724,153	713,054	702,126
814,404	802,380	790,534	778,863	767,364	786,640	806,401	826,658	847,424	868,712
819,945	811,127	802,405	793,776	785,240	790,789	796,378	802,006	807,673	813,381
864,099	839,101	814,827	791,255	768,365	773,793	779,259	784,764	790,308	795,891
900,904	860,317	821,559	784,547	749,202	753,761	758,348	762,962	767,605	772,276
960,000	914,970	872,052	831,147	792,161	786,106	780,098	774,135	768,218	762,346
1,029,266	973,314	920,404	870,369	823,055	812,537	802,153	791,902	781,783	771,792
1,112,548	1,032,984	959,110	890,519	826,834	818,902	811,047	803,267	795,562	787,930
1,126,312	1,061,015	999,503	941,557	886,971	862,259	838,236	814,881	792,178	770,107
1,096,503	1,055,204	1,015,460	977,212	940,406	899,318	860,025	822,449	786,515	752,151
767,521	820,353	876,821	937,176	1,001,685	956,305	912,980	871,619	832,131	794,432
836,350	891,992	951,334	1,014,625	1,082,127	1,024,704	970,327	918,836	870,078	823,907
1,001,545	1,046,122	1,092,683	1,141,316	1,192,114	1,108,222	1,030,234	957,734	890,336	827,681
979,639	1,028,055	1,078,863	1,132,183	1,188,137	1,120,577	1,056,860	996,765	940,087	886,632
993,910	1,026,817	1,060,813	1,095,935	1,132,220	1,090,879	1,051,048	1,012,671	975,696	940,070
893,005	844,346	798,338	754,837	713,707	763,578	816,933	874,017	935,090	1,000,430
847,518	829,288	811,451	793,997	776,919	829,890	886,473	946,914	1,011,475	1,080,439
793,398	829,753	867,773	907,535	949,119	993,092	1,039,102	1,087,244	1,137,616	1,190,322
838,647	859,248	880,356	901,982	924,139	970,736	1,019,683	1,071,098	1,125,105	1,181,836
866,638	887,575	909,019	930,980	953,472	985,898	1,019,426	1,054,095	1,089,942	1,127,009
869,865	885,015	900,428	916,110	932,065	882,797	836,132	791,935	750,074	710,425
835,929	840,491	845,077	849,689	854,326	836,773	819,581	802,742	786,249	770,095
786,303	776,366	766,555	756,868	747,303	782,848	820,084	859,091	899,954	942,760
807,968	808,302	808,635	808,969	809,303	829,762	850,738	872,245	894,295	916,903
801,370	809,885	818,490	827,188	835,977	856,833	878,209	900,118	922,574	945,590
791,013	803,994	817,188	830,599	844,229	859,758	875,572	891,678	908,080	924,783
759,230	772,845	786,704	800,811	815,172	821,511	827,900	834,338	840,826	847,365
744,592	754,607	764,758	775,045	785,470	776,279	767,195	758,217	749,345	740,576
731,482	746,935	762,714	778,828	795,281	796,222	797,164	798,108	799,052	799,998

719,322	734,462	749,922	765,707	781,824	790,307	798,881	807,549	816,310	825,167
703,317	717,967	732,922	748,189	763,774	777,283	791,032	805,023	819,262	833,753
678,158	690,970	704,025	717,326	730,878	744,898	759,186	773,749	788,590	803,717
637,602	656,965	676,917	697,474	718,656	728,713	738,911	749,252	759,738	770,370
621,740	640,461	659,746	679,612	700,076	715,140	730,529	746,249	762,307	778,710
602,264	622,310	643,024	664,427	686,543	701,441	716,663	732,215	748,105	764,339
576,544	599,125	622,590	646,973	672,312	686,448	700,880	715,617	730,663	746,025

Sources: Nihon Tokei Kyokai (Japan Statistical Association), Nihon Chokitokei Soran (Historical Statistics of Japan), Vol. 1, pp. 72-77.

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Table C-3: Male Probability of Survival (1 - Mortality Rate) from Aged 15 to Aged 64

Age	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
15	0.99739	0.99773	0.99808	0.99842	0.99877	0.99885	0.99893	0.99902	0.99910	0.99911
16	0.99671	0.99714	0.99758	0.99801	0.99845	0.99856	0.99866	0.99877	0.99888	0.99889
17	0.99572	0.99630	0.99689	0.99747	0.99806	0.99818	0.99830	0.99843	0.99855	0.99857
18	0.99449	0.99527	0.99605	0.99683	0.99761	0.99775	0.99790	0.99804	0.99819	0.99824
19	0.99326	0.99424	0.99522	0.99620	0.99718	0.99735	0.99752	0.99770	0.99787	0.99794
20	0.99231	0.99345	0.99458	0.99572	0.99686	0.99704	0.99723	0.99741	0.99760	0.99770
21	0.99167	0.99290	0.99414	0.99537	0.99661	0.99680	0.99699	0.99719	0.99738	0.99749
22	0.99118	0.99246	0.99375	0.99504	0.99633	0.99655	0.99677	0.99699	0.99721	0.99733
23	0.99076	0.99208	0.99340	0.99472	0.99604	0.99631	0.99658	0.99686	0.99713	0.99725
24	0.99045	0.99181	0.99317	0.99453	0.99589	0.99619	0.99649	0.99679	0.99709	0.99721
25	0.99040	0.99175	0.99310	0.99445	0.99581	0.99612	0.99643	0.99675	0.99706	0.99718
26	0.99070	0.99196	0.99322	0.99448	0.99574	0.99607	0.99641	0.99674	0.99708	0.99720
27	0.99104	0.99221	0.99339	0.99456	0.99574	0.99609	0.99643	0.99678	0.99713	0.99724
28	0.99128	0.99238	0.99347	0.99457	0.99567	0.99604	0.99641	0.99678	0.99715	0.99726
29	0.99146	0.99249	0.99351	0.99454	0.99557	0.99596	0.99635	0.99675	0.99714	0.99726
30	0.99156	0.99258	0.99359	0.99461	0.99563	0.99600	0.99637	0.99674	0.99711	0.99724
31	0.99155	0.99260	0.99365	0.99471	0.99576	0.99609	0.99642	0.99676	0.99709	0.99722
32	0.99147	0.99254	0.99361	0.99468	0.99575	0.99607	0.99639	0.99671	0.99703	0.99715
33	0.99138	0.99245	0.99352	0.99460	0.99567	0.99598	0.99629	0.99660	0.99691	0.99703
34	0.99145	0.99249	0.99353	0.99457	0.99561	0.99591	0.99620	0.99650	0.99680	0.99692
35	0.99147	0.99248	0.99349	0.99450	0.99551	0.99581	0.99612	0.99642	0.99673	0.99684
36	0.99137	0.99235	0.99333	0.99432	0.99530	0.99564	0.99598	0.99633	0.99667	0.99677
37	0.99126	0.99223	0.99320	0.99417	0.99514	0.99549	0.99584	0.99619	0.99654	0.99664
38	0.99116	0.99212	0.99307	0.99403	0.99499	0.99533	0.99567	0.99601	0.99635	0.99645
39	0.99105	0.99197	0.99290	0.99382	0.99475	0.99510	0.99544	0.99579	0.99614	0.99623
40	0.99090	0.99177	0.99264	0.99352	0.99439	0.99478	0.99516	0.99555	0.99594	0.99603
41	0.99063	0.99149	0.99236	0.99322	0.99409	0.99449	0.99490	0.99530	0.99571	0.99580
42	0.99022	0.99111	0.99200	0.99290	0.99379	0.99419	0.99458	0.99498	0.99538	0.99549
43	0.98972	0.99064	0.99156	0.99248	0.99340	0.99378	0.99417	0.99455	0.99494	0.99508
44	0.98929	0.99019	0.99109	0.99200	0.99290	0.99329	0.99368	0.99408	0.99447	0.99462
45	0.98892	0.98982	0.99071	0.99161	0.99251	0.99288	0.99324	0.99361	0.99398	0.99414
46	0.98847	0.98936	0.99024	0.99113	0.99202	0.99236	0.99269	0.99303	0.99337	0.99356
47	0.98773	0.98861	0.98950	0.99038	0.99127	0.99163	0.99198	0.99234	0.99270	0.99290

48	0.98690	0.98781	0.98872	0.98964	0.99055	0.99093	0.99130	0.99168	0.99206	0.99226
49	0.98606	0.98703	0.98800	0.98898	0.98995	0.99032	0.99069	0.99107	0.99144	0.99162
50	0.98518	0.98620	0.98722	0.98825	0.98927	0.98964	0.99002	0.99039	0.99077	0.99092
51	0.98411	0.98520	0.98628	0.98737	0.98846	0.98884	0.98923	0.98961	0.99000	0.99013
52	0.98271	0.98389	0.98507	0.98626	0.98744	0.98784	0.98824	0.98865	0.98905	0.98918
53	0.98132	0.98258	0.98383	0.98509	0.98635	0.98675	0.98715	0.98755	0.98795	0.98810
54	0.98019	0.98144	0.98269	0.98394	0.98519	0.98560	0.98602	0.98643	0.98685	0.98699
55	0.97878	0.98006	0.98134	0.98262	0.98390	0.98439	0.98487	0.98536	0.98585	0.98593
56	0.97661	0.97805	0.97949	0.98093	0.98238	0.98299	0.98359	0.98420	0.98481	0.98482
57	0.97420	0.97575	0.97731	0.97886	0.98042	0.98116	0.98189	0.98263	0.98337	0.98335
58	0.97192	0.97355	0.97519	0.97683	0.97847	0.97918	0.97990	0.98061	0.98133	0.98138
59	0.96965	0.97148	0.97332	0.97516	0.97701	0.97753	0.97805	0.97858	0.97910	0.97924
60	0.96675	0.96886	0.97098	0.97310	0.97523	0.97568	0.97613	0.97658	0.97703	0.97722
61	0.96335	0.96568	0.96802	0.97036	0.97271	0.97328	0.97384	0.97441	0.97498	0.97517
62	0.95993	0.96215	0.96437	0.96660	0.96884	0.96981	0.97077	0.97174	0.97271	0.97287
63	0.95652	0.95886	0.96121	0.96357	0.96593	0.96698	0.96802	0.96907	0.97012	0.97026
64	0.95284	0.95532	0.95780	0.96029	0.96279	0.96393	0.96507	0.96622	0.96736	0.96745

1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99913	0.99914	0.99916	0.99917	0.99920	0.99923	0.99926	0.99929	0.99932	0.99932	0.99932
0.99890	0.99892	0.99893	0.99894	0.99898	0.99903	0.99907	0.99912	0.99916	0.99914	0.99912
0.99860	0.99862	0.99865	0.99867	0.99874	0.99881	0.99888	0.99895	0.99902	0.99899	0.99896
0.99829	0.99833	0.99838	0.99843	0.99852	0.99861	0.99871	0.99880	0.99889	0.99886	0.99883
0.99801	0.99809	0.99816	0.99823	0.99834	0.99845	0.99856	0.99867	0.99878	0.99876	0.99874
0.99779	0.99789	0.99798	0.99808	0.99820	0.99832	0.99843	0.99855	0.99867	0.99867	0.99867
0.99760	0.99772	0.99783	0.99794	0.99807	0.99819	0.99832	0.99844	0.99857	0.99859	0.99861
0.99745	0.99758	0.99770	0.99782	0.99795	0.99808	0.99822	0.99835	0.99848	0.99852	0.99856
0.99737	0.99749	0.99761	0.99773	0.99787	0.99801	0.99815	0.99829	0.99843	0.99848	0.99854
0.99733	0.99744	0.99756	0.99768	0.99782	0.99797	0.99811	0.99826	0.99840	0.99846	0.99852
0.99730	0.99743	0.99755	0.99767	0.99782	0.99796	0.99811	0.99825	0.99840	0.99845	0.99850
0.99732	0.99744	0.99756	0.99768	0.99782	0.99797	0.99811	0.99826	0.99840	0.99844	0.99848
0.99735	0.99747	0.99758	0.99769	0.99783	0.99797	0.99811	0.99825	0.99839	0.99842	0.99845
0.99738	0.99749	0.99761	0.99772	0.99784	0.99797	0.99809	0.99822	0.99834	0.99837	0.99841
0.99738	0.99750	0.99762	0.99774	0.99784	0.99795	0.99805	0.99816	0.99826	0.99831	0.99835
0.99736	0.99749	0.99761	0.99774	0.99783	0.99792	0.99800	0.99809	0.99818	0.99824	0.99829
0.99734	0.99747	0.99759	0.99772	0.99780	0.99787	0.99795	0.99802	0.99810	0.99816	0.99822
0.99727	0.99740	0.99752	0.99764	0.99771	0.99778	0.99786	0.99793	0.99800	0.99807	0.99813
0.99715	0.99728	0.99740	0.99752	0.99759	0.99766	0.99774	0.99781	0.99788	0.99794	0.99801
0.99704	0.99715	0.99727	0.99739	0.99746	0.99754	0.99761	0.99769	0.99776	0.99781	0.99787
0.99695	0.99706	0.99717	0.99728	0.99735	0.99743	0.99750	0.99758	0.99765	0.99769	0.99773
0.99687	0.99697	0.99707	0.99717	0.99724	0.99731	0.99739	0.99746	0.99753	0.99756	0.99759
0.99674	0.99684	0.99694	0.99704	0.99711	0.99718	0.99724	0.99731	0.99738	0.99740	0.99742
0.99655	0.99664	0.99674	0.99684	0.99691	0.99698	0.99704	0.99711	0.99718	0.99720	0.99722
0.99633	0.99642	0.99652	0.99661	0.99668	0.99676	0.99683	0.99691	0.99698	0.99700	0.99702
0.99612	0.99620	0.99629	0.99638	0.99646	0.99654	0.99663	0.99671	0.99679	0.99681	0.99683
0.99589	0.99597	0.99606	0.99615	0.99624	0.99633	0.99641	0.99650	0.99659	0.99661	0.99663
0.99560	0.99570	0.99581	0.99592	0.99600	0.99609	0.99617	0.99626	0.99634	0.99636	0.99639
0.99521	0.99535	0.99548	0.99562	0.99570	0.99578	0.99586	0.99594	0.99602	0.99606	0.99610
0.99477	0.99493	0.99508	0.99523	0.99532	0.99540	0.99549	0.99557	0.99566	0.99571	0.99577
0.99430	0.99447	0.99463	0.99479	0.99489	0.99499	0.99508	0.99518	0.99528	0.99535	0.99542
0.99374	0.99393	0.99411	0.99430	0.99440	0.99451	0.99461	0.99472	0.99482	0.99492	0.99501
0.99311	0.99331	0.99352	0.99372	0.99384	0.99395	0.99407	0.99418	0.99430	0.99443	0.99456
0.99246	0.99265	0.99285	0.99305	0.99319	0.99332	0.99346	0.99359	0.99373	0.99388	0.99403

0.99180	0.99197	0.99215	0.99233	0.99250	0.99267	0.99283	0.99300	0.99317	0.99332	0.99347
0.99107	0.99123	0.99138	0.99153	0.99175	0.99196	0.99218	0.99239	0.99261	0.99276	0.99290
0.99026	0.99040	0.99053	0.99066	0.99092	0.99118	0.99145	0.99171	0.99197	0.99212	0.99227
0.98932	0.98945	0.98959	0.98972	0.99001	0.99030	0.99060	0.99089	0.99118	0.99136	0.99153
0.98825	0.98839	0.98854	0.98869	0.98899	0.98929	0.98960	0.98990	0.99020	0.99042	0.99064
0.98713	0.98727	0.98741	0.98755	0.98787	0.98819	0.98851	0.98883	0.98915	0.98940	0.98965
0.98601	0.98610	0.98618	0.98626	0.98661	0.98696	0.98731	0.98766	0.98801	0.98827	0.98854
0.98483	0.98484	0.98485	0.98486	0.98523	0.98561	0.98598	0.98636	0.98673	0.98701	0.98729
0.98333	0.98331	0.98329	0.98327	0.98368	0.98409	0.98450	0.98491	0.98532	0.98563	0.98595
0.98143	0.98148	0.98153	0.98158	0.98201	0.98244	0.98287	0.98330	0.98373	0.98409	0.98446
0.97938	0.97953	0.97967	0.97981	0.98023	0.98065	0.98108	0.98150	0.98192	0.98235	0.98278
0.97740	0.97759	0.97777	0.97796	0.97837	0.97879	0.97920	0.97962	0.98003	0.98049	0.98095
0.97536	0.97555	0.97574	0.97593	0.97634	0.97674	0.97715	0.97755	0.97796	0.97843	0.97890
0.97303	0.97319	0.97335	0.97351	0.97391	0.97430	0.97470	0.97509	0.97549	0.97600	0.97651
0.97040	0.97054	0.97068	0.97082	0.97120	0.97157	0.97195	0.97232	0.97270	0.97327	0.97385
0.96754	0.96763	0.96772	0.96781	0.96821	0.96861	0.96900	0.96940	0.96980	0.97042	0.97103

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99931	0.99931	0.99931	0.99934	0.99936	0.99939	0.99941	0.99944	0.99946	0.99948	0.99950
0.99911	0.99909	0.99907	0.99911	0.99914	0.99918	0.99921	0.99925	0.99927	0.99930	0.99932
0.99892	0.99889	0.99886	0.99890	0.99895	0.99899	0.99904	0.99908	0.99911	0.99914	0.99917
0.99879	0.99876	0.99873	0.99878	0.99883	0.99888	0.99893	0.99898	0.99901	0.99905	0.99908
0.99873	0.99871	0.99869	0.99874	0.99879	0.99885	0.99890	0.99895	0.99898	0.99902	0.99905
0.99868	0.99868	0.99868	0.99873	0.99879	0.99884	0.99890	0.99895	0.99898	0.99901	0.99905
0.99863	0.99865	0.99867	0.99872	0.99878	0.99883	0.99889	0.99894	0.99898	0.99901	0.99905
0.99860	0.99864	0.99868	0.99873	0.99878	0.99883	0.99888	0.99893	0.99897	0.99901	0.99905
0.99859	0.99865	0.99870	0.99875	0.99879	0.99884	0.99888	0.99893	0.99897	0.99902	0.99906
0.99858	0.99864	0.99870	0.99875	0.99880	0.99884	0.99889	0.99894	0.99898	0.99902	0.99907
0.99856	0.99861	0.99866	0.99872	0.99878	0.99883	0.99889	0.99895	0.99899	0.99903	0.99907
0.99853	0.99857	0.99861	0.99868	0.99875	0.99882	0.99889	0.99896	0.99900	0.99903	0.99907
0.99849	0.99852	0.99855	0.99863	0.99871	0.99880	0.99888	0.99896	0.99899	0.99902	0.99905
0.99844	0.99848	0.99851	0.99860	0.99868	0.99877	0.99885	0.99894	0.99897	0.99900	0.99903
0.99840	0.99844	0.99849	0.99857	0.99865	0.99874	0.99882	0.99890	0.99893	0.99897	0.99900
0.99835	0.99840	0.99846	0.99854	0.99861	0.99869	0.99876	0.99884	0.99888	0.99892	0.99896
0.99829	0.99835	0.99841	0.99848	0.99856	0.99863	0.99871	0.99878	0.99882	0.99887	0.99891
0.99820	0.99826	0.99833	0.99840	0.99847	0.99855	0.99862	0.99869	0.99874	0.99879	0.99885
0.99807	0.99814	0.99820	0.99828	0.99836	0.99845	0.99853	0.99861	0.99866	0.99872	0.99877
0.99792	0.99798	0.99803	0.99813	0.99823	0.99833	0.99843	0.99853	0.99858	0.99863	0.99869
0.99778	0.99782	0.99786	0.99797	0.99808	0.99819	0.99830	0.99841	0.99846	0.99852	0.99857
0.99762	0.99765	0.99768	0.99780	0.99791	0.99803	0.99814	0.99826	0.99832	0.99838	0.99843
0.99745	0.99747	0.99749	0.99761	0.99773	0.99784	0.99796	0.99808	0.99815	0.99821	0.99828
0.99725	0.99727	0.99729	0.99741	0.99753	0.99764	0.99776	0.99788	0.99796	0.99804	0.99812
0.99704	0.99706	0.99708	0.99720	0.99731	0.99743	0.99754	0.99766	0.99775	0.99785	0.99794
0.99684	0.99686	0.99688	0.99699	0.99709	0.99720	0.99730	0.99741	0.99752	0.99763	0.99773
0.99664	0.99666	0.99668	0.99677	0.99686	0.99695	0.99704	0.99713	0.99725	0.99738	0.99750
0.99641	0.99644	0.99646	0.99653	0.99660	0.99668	0.99675	0.99682	0.99696	0.99710	0.99723
0.99613	0.99617	0.99621	0.99627	0.99633	0.99639	0.99645	0.99651	0.99665	0.99680	0.99694
0.99582	0.99588	0.99593	0.99599	0.99605	0.99610	0.99616	0.99622	0.99635	0.99649	0.99662
0.99548	0.99555	0.99562	0.99569	0.99576	0.99582	0.99589	0.99596	0.99606	0.99616	0.99627
0.99511	0.99520	0.99530	0.99538	0.99546	0.99553	0.99561	0.99569	0.99575	0.99582	0.99588
0.99468	0.99481	0.99494	0.99503	0.99512	0.99522	0.99531	0.99540	0.99543	0.99546	0.99550
0.99418	0.99433	0.99448	0.99460	0.99472	0.99485	0.99497	0.99509	0.99510	0.99512	0.99513
0.99363	0.99378	0.99393	0.99409	0.99424	0.99440	0.99455	0.99471	0.99473	0.99475	0.99478

0.99305	0.99319	0.99334	0.99353	0.99371	0.99390	0.99408	0.99427	0.99431	0.99436	0.99440
0.99242	0.99257	0.99272	0.99294	0.99316	0.99338	0.99360	0.99382	0.99388	0.99394	0.99399
0.99171	0.99188	0.99206	0.99231	0.99257	0.99282	0.99308	0.99333	0.99339	0.99346	0.99352
0.99086	0.99108	0.99130	0.99159	0.99189	0.99218	0.99248	0.99277	0.99284	0.99292	0.99299
0.98990	0.99015	0.99040	0.99074	0.99108	0.99142	0.99176	0.99210	0.99220	0.99230	0.99241
0.98880	0.98907	0.98933	0.98972	0.99011	0.99050	0.99089	0.99128	0.99143	0.99158	0.99174
0.98758	0.98786	0.98814	0.98857	0.98900	0.98943	0.98986	0.99029	0.99052	0.99074	0.99097
0.98626	0.98658	0.98689	0.98736	0.98784	0.98831	0.98879	0.98926	0.98954	0.98982	0.99010
0.98482	0.98519	0.98555	0.98609	0.98663	0.98718	0.98772	0.98826	0.98855	0.98884	0.98913
0.98321	0.98364	0.98407	0.98471	0.98534	0.98598	0.98661	0.98725	0.98753	0.98781	0.98809
0.98141	0.98187	0.98233	0.98308	0.98382	0.98457	0.98532	0.98607	0.98637	0.98666	0.98696
0.97936	0.97983	0.98030	0.98117	0.98204	0.98291	0.98379	0.98466	0.98500	0.98535	0.98569
0.97703	0.97754	0.97805	0.97904	0.98002	0.98101	0.98200	0.98299	0.98340	0.98380	0.98421
0.97442	0.97500	0.97557	0.97668	0.97778	0.97889	0.98000	0.98111	0.98158	0.98205	0.98252
0.97165	0.97227	0.97289	0.97411	0.97534	0.97656	0.97779	0.97902	0.97957	0.98011	0.98066

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99952	0.99954	0.99955	0.99956	0.99956	0.99957	0.99958	0.99960	0.99961	0.99963	0.99964
0.99935	0.99937	0.99938	0.99938	0.99939	0.99939	0.99940	0.99942	0.99944	0.99946	0.99948
0.99920	0.99923	0.99923	0.99923	0.99923	0.99923	0.99923	0.99925	0.99927	0.99930	0.99932
0.99912	0.99915	0.99914	0.99914	0.99913	0.99913	0.99912	0.99914	0.99916	0.99918	0.99920
0.99909	0.99912	0.99911	0.99911	0.99910	0.99910	0.99909	0.99910	0.99912	0.99913	0.99915
0.99908	0.99911	0.99911	0.99911	0.99910	0.99910	0.99910	0.99911	0.99913	0.99914	0.99916
0.99908	0.99912	0.99912	0.99913	0.99913	0.99914	0.99914	0.99915	0.99916	0.99917	0.99918
0.99909	0.99913	0.99914	0.99915	0.99916	0.99917	0.99918	0.99919	0.99920	0.99920	0.99921
0.99911	0.99915	0.99916	0.99917	0.99919	0.99920	0.99921	0.99922	0.99922	0.99923	0.99923
0.99911	0.99915	0.99916	0.99918	0.99919	0.99921	0.99922	0.99923	0.99923	0.99924	0.99924
0.99911	0.99915	0.99916	0.99917	0.99919	0.99920	0.99921	0.99922	0.99923	0.99925	0.99926
0.99910	0.99914	0.99915	0.99916	0.99918	0.99919	0.99920	0.99922	0.99924	0.99925	0.99927
0.99908	0.99911	0.99913	0.99914	0.99916	0.99917	0.99919	0.99921	0.99923	0.99925	0.99927
0.99906	0.99909	0.99911	0.99913	0.99915	0.99917	0.99919	0.99921	0.99922	0.99924	0.99925
0.99904	0.99907	0.99910	0.99912	0.99915	0.99917	0.99920	0.99921	0.99922	0.99923	0.99924
0.99900	0.99904	0.99907	0.99910	0.99914	0.99917	0.99920	0.99920	0.99921	0.99921	0.99922
0.99896	0.99900	0.99903	0.99907	0.99910	0.99914	0.99917	0.99918	0.99918	0.99919	0.99919
0.99890	0.99895	0.99898	0.99901	0.99904	0.99907	0.99910	0.99911	0.99913	0.99914	0.99916
0.99883	0.99888	0.99891	0.99893	0.99896	0.99898	0.99901	0.99903	0.99906	0.99908	0.99911
0.99874	0.99879	0.99882	0.99884	0.99887	0.99889	0.99892	0.99895	0.99898	0.99902	0.99905
0.99863	0.99868	0.99871	0.99874	0.99877	0.99880	0.99883	0.99887	0.99890	0.99894	0.99897
0.99849	0.99855	0.99859	0.99863	0.99866	0.99870	0.99874	0.99878	0.99882	0.99885	0.99889
0.99834	0.99841	0.99845	0.99850	0.99854	0.99859	0.99863	0.99867	0.99871	0.99875	0.99879
0.99820	0.99828	0.99832	0.99836	0.99841	0.99845	0.99849	0.99853	0.99858	0.99862	0.99867
0.99804	0.99813	0.99817	0.99821	0.99826	0.99830	0.99834	0.99839	0.99844	0.99850	0.99855
0.99784	0.99795	0.99799	0.99804	0.99808	0.99813	0.99817	0.99823	0.99828	0.99834	0.99839
0.99763	0.99775	0.99780	0.99784	0.99789	0.99793	0.99798	0.99804	0.99810	0.99816	0.99822
0.99737	0.99751	0.99756	0.99762	0.99767	0.99773	0.99778	0.99785	0.99792	0.99798	0.99805
0.99709	0.99723	0.99730	0.99737	0.99744	0.99751	0.99758	0.99765	0.99772	0.99780	0.99787
0.99676	0.99689	0.99698	0.99707	0.99716	0.99725	0.99734	0.99742	0.99749	0.99757	0.99764
0.99637	0.99647	0.99659	0.99670	0.99682	0.99693	0.99705	0.99713	0.99721	0.99730	0.99738
0.99595	0.99601	0.99615	0.99629	0.99643	0.99657	0.99671	0.99680	0.99689	0.99698	0.99707
0.99553	0.99556	0.99572	0.99587	0.99603	0.99618	0.99634	0.99644	0.99654	0.99665	0.99675
0.99515	0.99516	0.99531	0.99546	0.99562	0.99577	0.99592	0.99605	0.99618	0.99630	0.99643
0.99480	0.99482	0.99494	0.99507	0.99519	0.99532	0.99544	0.99561	0.99578	0.99594	0.99611
0.99445	0.99449	0.99457	0.99465	0.99474	0.99482	0.99490	0.99511	0.99532	0.99553	0.99574

0.99405	0.99411	0.99415	0.99419	0.99422	0.99426	0.99430	0.99455	0.99480	0.99504	0.99529
0.99359	0.99365	0.99366	0.99367	0.99369	0.99370	0.99371	0.99398	0.99425	0.99451	0.99478
0.99307	0.99314	0.99314	0.99314	0.99314	0.99314	0.99314	0.99340	0.99366	0.99391	0.99417
0.99251	0.99261	0.99260	0.99259	0.99259	0.99258	0.99257	0.99280	0.99302	0.99325	0.99347
0.99189	0.99204	0.99204	0.99203	0.99203	0.99202	0.99202	0.99220	0.99237	0.99255	0.99272
0.99119	0.99142	0.99143	0.99144	0.99144	0.99145	0.99146	0.99159	0.99171	0.99184	0.99196
0.99038	0.99066	0.99071	0.99076	0.99080	0.99085	0.99090	0.99097	0.99105	0.99112	0.99120
0.98942	0.98971	0.98982	0.98992	0.99003	0.99013	0.99024	0.99028	0.99033	0.99037	0.99042
0.98837	0.98865	0.98881	0.98897	0.98914	0.98930	0.98946	0.98949	0.98952	0.98954	0.98957
0.98725	0.98755	0.98775	0.98795	0.98816	0.98836	0.98856	0.98858	0.98861	0.98863	0.98866
0.98604	0.98638	0.98663	0.98688	0.98713	0.98738	0.98763	0.98765	0.98767	0.98768	0.98770
0.98461	0.98502	0.98534	0.98566	0.98599	0.98631	0.98663	0.98666	0.98669	0.98671	0.98674
0.98299	0.98346	0.98386	0.98426	0.98465	0.98505	0.98545	0.98551	0.98557	0.98564	0.98570
0.98120	0.98175	0.98222	0.98268	0.98315	0.98361	0.98408	0.98419	0.98430	0.98442	0.98453

1990	1991	1992	1993	1994	1995
0.99966	0.99966	0.99966	0.99967	0.99967	0.99967
0.99950	0.99951	0.99952	0.99954	0.99955	0.99956
0.99934	0.99936	0.99938	0.99941	0.99943	0.99945
0.99922	0.99925	0.99927	0.99930	0.99932	0.99935
0.99916	0.99918	0.99921	0.99923	0.99926	0.99928
0.99917	0.99919	0.99920	0.99922	0.99923	0.99925
0.99919	0.99920	0.99921	0.99923	0.99924	0.99925
0.99922	0.99923	0.99924	0.99924	0.99925	0.99926
0.99924	0.99925	0.99925	0.99926	0.99926	0.99927
0.99925	0.99926	0.99926	0.99927	0.99927	0.99928
0.99927	0.99927	0.99928	0.99928	0.99929	0.99929
0.99929	0.99929	0.99929	0.99929	0.99929	0.99929
0.99929	0.99929	0.99929	0.99928	0.99928	0.99928
0.99927	0.99927	0.99926	0.99926	0.99925	0.99925
0.99925	0.99925	0.99924	0.99924	0.99923	0.99923
0.99922	0.99922	0.99922	0.99921	0.99921	0.99921
0.99920	0.99920	0.99920	0.99921	0.99921	0.99921
0.99917	0.99917	0.99918	0.99918	0.99919	0.99919
0.99913	0.99913	0.99914	0.99914	0.99915	0.99915
0.99908	0.99908	0.99908	0.99909	0.99909	0.99909
0.99901	0.99901	0.99901	0.99902	0.99902	0.99902
0.99893	0.99893	0.99893	0.99894	0.99894	0.99894
0.99883	0.99884	0.99885	0.99885	0.99886	0.99887
0.99871	0.99873	0.99874	0.99876	0.99877	0.99879
0.99860	0.99862	0.99864	0.99865	0.99867	0.99869
0.99845	0.99847	0.99849	0.99852	0.99854	0.99856
0.99828	0.99831	0.99833	0.99836	0.99838	0.99841
0.99812	0.99814	0.99817	0.99819	0.99822	0.99824
0.99794	0.99796	0.99798	0.99800	0.99802	0.99804
0.99772	0.99774	0.99776	0.99778	0.99780	0.99782
0.99746	0.99747	0.99749	0.99750	0.99752	0.99753
0.99716	0.99717	0.99718	0.99720	0.99721	0.99722
0.99685	0.99687	0.99689	0.99691	0.99693	0.99695
0.99656	0.99658	0.99660	0.99662	0.99664	0.99666
0.99628	0.99629	0.99630	0.99632	0.99633	0.99634
0.99595	0.99595	0.99595	0.99594	0.99594	0.99594
0.99554	0.99553	0.99552	0.99552	0.99551	0.99550

0.99505	0.99505	0.99505	0.99505	0.99505	0.99505
0.99443	0.99447	0.99451	0.99454	0.99458	0.99462
0.99370	0.99380	0.99385	0.99399	0.99408	0.99418
0.99290	0.99305	0.99320	0.99336	0.99351	0.99366
0.99209	0.99228	0.99247	0.99266	0.99285	0.99304
0.99127	0.99148	0.99169	0.99190	0.99211	0.99232
0.99046	0.99066	0.99086	0.99106	0.99126	0.99146
0.98960	0.98977	0.98994	0.99012	0.99029	0.99046
0.98868	0.98881	0.98894	0.98908	0.98921	0.98934
0.98772	0.98794	0.98816	0.98838	0.98860	0.98882
0.98677	0.98679	0.98682	0.98684	0.98687	0.98689
0.98576	0.98573	0.98571	0.98568	0.98566	0.98563
0.98464	0.98457	0.98450	0.98444	0.98437	0.98430

Source: Kosesho Daijinkanbo Tokei Johobu (Statistics and Information Department,
Minister's Secretariat, Ministry of Health and Welfare),
Dai Juhatikai Semehyo (*The 18th Life Tables*), 1998, pp. 60-117.

Table C-4: Female Probability of Survival (1 - Mortality Rate) from Aged 15 to Aged 64

Age	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
15	0.99695	0.99739	0.99783	0.99827	0.99871	0.99885	0.99899	0.99914	0.99928	0.99933
16	0.99628	0.99683	0.99738	0.99794	0.99849	0.99866	0.99882	0.99899	0.99916	0.99921
17	0.99554	0.99620	0.99686	0.99753	0.99819	0.99838	0.99858	0.99877	0.99897	0.99902
18	0.99466	0.99545	0.99624	0.99704	0.99783	0.99805	0.99828	0.99850	0.99873	0.99879
19	0.99373	0.99466	0.99560	0.99653	0.99747	0.99773	0.99799	0.99825	0.99851	0.99859
20	0.99306	0.99410	0.99514	0.99619	0.99723	0.99750	0.99777	0.99805	0.99832	0.99841
21	0.99269	0.99378	0.99486	0.99595	0.99704	0.99732	0.99760	0.99789	0.99817	0.99827
22	0.99249	0.99355	0.99462	0.99568	0.99675	0.99707	0.99739	0.99772	0.99804	0.99815
23	0.99232	0.99335	0.99438	0.99542	0.99645	0.99682	0.99719	0.99757	0.99794	0.99806
24	0.99222	0.99324	0.99425	0.99527	0.99629	0.99669	0.99709	0.99749	0.99789	0.99802
25	0.99235	0.99332	0.99429	0.99526	0.99623	0.99663	0.99703	0.99744	0.99784	0.99797
26	0.99264	0.99352	0.99440	0.99528	0.99616	0.99657	0.99697	0.99738	0.99779	0.99792
27	0.99280	0.99361	0.99442	0.99524	0.99605	0.99647	0.99688	0.99730	0.99772	0.99786
28	0.99279	0.99360	0.99442	0.99523	0.99605	0.99645	0.99685	0.99725	0.99765	0.99780
29	0.99272	0.99355	0.99437	0.99520	0.99603	0.99642	0.99681	0.99721	0.99760	0.99776
30	0.99274	0.99356	0.99437	0.99519	0.99601	0.99639	0.99677	0.99716	0.99754	0.99770
31	0.99285	0.99364	0.99442	0.99521	0.99600	0.99637	0.99673	0.99710	0.99747	0.99763
32	0.99292	0.99368	0.99444	0.99521	0.99597	0.99633	0.99670	0.99706	0.99743	0.99758
33	0.99296	0.99370	0.99444	0.99518	0.99592	0.99628	0.99664	0.99701	0.99737	0.99752
34	0.99300	0.99371	0.99443	0.99514	0.99586	0.99621	0.99657	0.99692	0.99728	0.99743
35	0.99300	0.99369	0.99439	0.99508	0.99578	0.99612	0.99646	0.99681	0.99715	0.99731
36	0.99298	0.99366	0.99433	0.99501	0.99569	0.99602	0.99635	0.99669	0.99702	0.99719
37	0.99290	0.99357	0.99424	0.99492	0.99559	0.99592	0.99625	0.99659	0.99692	0.99708
38	0.99282	0.99346	0.99411	0.99475	0.99540	0.99576	0.99611	0.99647	0.99683	0.99698
39	0.99271	0.99334	0.99397	0.99460	0.99523	0.99560	0.99596	0.99633	0.99670	0.99684
40	0.99249	0.99313	0.99377	0.99441	0.99505	0.99543	0.99582	0.99620	0.99659	0.99673
41	0.99218	0.99286	0.99354	0.99423	0.99491	0.99529	0.99568	0.99606	0.99645	0.99660
42	0.99198	0.99268	0.99337	0.99407	0.99477	0.99514	0.99550	0.99587	0.99624	0.99640
43	0.99193	0.99261	0.99328	0.99396	0.99464	0.99498	0.99531	0.99565	0.99599	0.99616
44	0.99195	0.99257	0.99318	0.99380	0.99442	0.99475	0.99507	0.99540	0.99573	0.99589
45	0.99180	0.99237	0.99295	0.99352	0.99410	0.99445	0.99480	0.99515	0.99550	0.99564
46	0.99148	0.99204	0.99259	0.99315	0.99371	0.99407	0.99444	0.99480	0.99517	0.99531
47	0.99103	0.99159	0.99215	0.99271	0.99327	0.99362	0.99396	0.99431	0.99466	0.99483

48	0.99038	0.99097	0.99157	0.99216	0.99276	0.99310	0.99343	0.99377	0.99411	0.99431
49	0.98961	0.99029	0.99096	0.99164	0.99232	0.99265	0.99298	0.99332	0.99365	0.99387
50	0.98889	0.98966	0.99042	0.99119	0.99196	0.99229	0.99262	0.99296	0.99329	0.99350
51	0.98829	0.98905	0.98981	0.99057	0.99133	0.99172	0.99212	0.99251	0.99291	0.99309
52	0.98769	0.98840	0.98911	0.98983	0.99054	0.99099	0.99144	0.99190	0.99235	0.99253
53	0.98710	0.98779	0.98849	0.98918	0.98988	0.99033	0.99078	0.99124	0.99169	0.99188
54	0.98645	0.98716	0.98788	0.98859	0.98931	0.98975	0.99019	0.99064	0.99108	0.99129
55	0.98561	0.98634	0.98707	0.98781	0.98854	0.98904	0.98953	0.99003	0.99053	0.99074
56	0.98436	0.98515	0.98595	0.98674	0.98754	0.98812	0.98870	0.98928	0.98986	0.99007
57	0.98303	0.98380	0.98457	0.98534	0.98611	0.98680	0.98750	0.98819	0.98889	0.98912
58	0.98166	0.98247	0.98328	0.98409	0.98490	0.98559	0.98628	0.98697	0.98766	0.98793
59	0.98007	0.98108	0.98209	0.98311	0.98412	0.98471	0.98531	0.98590	0.98650	0.98678
60	0.97793	0.97922	0.98051	0.98180	0.98310	0.98369	0.98428	0.98487	0.98546	0.98573
61	0.97553	0.97700	0.97848	0.97995	0.98143	0.98211	0.98278	0.98346	0.98414	0.98444
62	0.97326	0.97487	0.97648	0.97810	0.97972	0.98039	0.98105	0.98172	0.98239	0.98276
63	0.97173	0.97335	0.97496	0.97659	0.97821	0.97879	0.97937	0.97995	0.98053	0.98094
64	0.96921	0.97064	0.97208	0.97351	0.97495	0.97592	0.97690	0.97787	0.97885	0.97921

	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
0.99937	0.99942	0.99946	0.99951	0.99954	0.99956	0.99959	0.99961	0.99964	0.99965	0.99966	
0.99925	0.99930	0.99934	0.99939	0.99943	0.99947	0.99952	0.99956	0.99960	0.99961	0.99961	
0.99907	0.99912	0.99917	0.99922	0.99928	0.99935	0.99941	0.99948	0.99954	0.99955	0.99955	
0.99886	0.99892	0.99899	0.99905	0.99914	0.99922	0.99931	0.99939	0.99948	0.99948	0.99949	
0.99867	0.99875	0.99883	0.99891	0.99901	0.99911	0.99921	0.99931	0.99941	0.99942	0.99942	
0.99851	0.99860	0.99870	0.99879	0.99890	0.99901	0.99911	0.99922	0.99933	0.99934	0.99935	
0.99838	0.99848	0.99859	0.99869	0.99880	0.99891	0.99903	0.99914	0.99925	0.99927	0.99929	
0.99827	0.99838	0.99850	0.99861	0.99872	0.99884	0.99895	0.99907	0.99918	0.99921	0.99923	
0.99818	0.99831	0.99843	0.99855	0.99866	0.99878	0.99889	0.99901	0.99912	0.99915	0.99918	
0.99814	0.99827	0.99839	0.99852	0.99863	0.99874	0.99885	0.99896	0.99907	0.99911	0.99914	
0.99810	0.99823	0.99836	0.99849	0.99860	0.99871	0.99881	0.99892	0.99903	0.99907	0.99911	
0.99806	0.99819	0.99833	0.99846	0.99856	0.99866	0.99877	0.99887	0.99897	0.99901	0.99906	
0.99800	0.99815	0.99829	0.99843	0.99853	0.99863	0.99874	0.99884	0.99894	0.99898	0.99903	
0.99795	0.99811	0.99826	0.99841	0.99851	0.99861	0.99872	0.99882	0.99892	0.99896	0.99900	
0.99792	0.99807	0.99823	0.99839	0.99849	0.99859	0.99869	0.99879	0.99889	0.99894	0.99898	
0.99786	0.99803	0.99819	0.99835	0.99845	0.99855	0.99865	0.99875	0.99885	0.99890	0.99895	
0.99779	0.99796	0.99812	0.99828	0.99838	0.99849	0.99859	0.99870	0.99880	0.99885	0.99890	
0.99774	0.99789	0.99805	0.99820	0.99831	0.99841	0.99852	0.99862	0.99873	0.99878	0.99883	
0.99767	0.99781	0.99796	0.99811	0.99822	0.99832	0.99843	0.99853	0.99864	0.99869	0.99874	
0.99758	0.99774	0.99789	0.99804	0.99814	0.99825	0.99835	0.99846	0.99856	0.99861	0.99866	
0.99747	0.99764	0.99780	0.99796	0.99807	0.99817	0.99828	0.99838	0.99849	0.99854	0.99859	
0.99736	0.99753	0.99770	0.99787	0.99798	0.99808	0.99819	0.99829	0.99840	0.99845	0.99851	
0.99725	0.99741	0.99758	0.99774	0.99785	0.99797	0.99808	0.99820	0.99831	0.99836	0.99842	
0.99713	0.99728	0.99743	0.99758	0.99771	0.99783	0.99796	0.99808	0.99821	0.99826	0.99832	
0.99699	0.99713	0.99728	0.99742	0.99755	0.99769	0.99782	0.99796	0.99809	0.99814	0.99820	
0.99687	0.99701	0.99715	0.99729	0.99743	0.99756	0.99770	0.99783	0.99797	0.99802	0.99807	
0.99675	0.99689	0.99704	0.99719	0.99732	0.99744	0.99757	0.99769	0.99782	0.99787	0.99792	
0.99657	0.99673	0.99690	0.99706	0.99718	0.99729	0.99741	0.99752	0.99764	0.99769	0.99774	
0.99633	0.99651	0.99668	0.99685	0.99696	0.99708	0.99719	0.99731	0.99742	0.99748	0.99755	
0.99606	0.99622	0.99639	0.99655	0.99667	0.99679	0.99692	0.99704	0.99716	0.99724	0.99733	
0.99578	0.99593	0.99607	0.99621	0.99635	0.99648	0.99662	0.99675	0.99689	0.99699	0.99709	
0.99544	0.99558	0.99571	0.99585	0.99600	0.99614	0.99629	0.99643	0.99658	0.99670	0.99682	
0.99499	0.99516	0.99532	0.99549	0.99564	0.99580	0.99595	0.99611	0.99626	0.99639	0.99652	
0.99451	0.99471	0.99491	0.99511	0.99527	0.99543	0.99559	0.99575	0.99591	0.99604	0.99617	

0.99409	0.99430	0.99452	0.99474	0.99491	0.99508	0.99524	0.99541	0.99558	0.99570	0.99583
0.99371	0.99391	0.99412	0.99433	0.99452	0.99471	0.99489	0.99508	0.99527	0.99539	0.99551
0.99328	0.99346	0.99365	0.99383	0.99405	0.99427	0.99448	0.99470	0.99492	0.99505	0.99518
0.99272	0.99290	0.99309	0.99327	0.99351	0.99375	0.99400	0.99424	0.99448	0.99463	0.99477
0.99208	0.99227	0.99247	0.99266	0.99292	0.99318	0.99344	0.99370	0.99396	0.99412	0.99428
0.99150	0.99170	0.99191	0.99212	0.99238	0.99264	0.99289	0.99315	0.99341	0.99357	0.99373
0.99095	0.99116	0.99137	0.99158	0.99183	0.99208	0.99233	0.99258	0.99283	0.99300	0.99316
0.99028	0.99049	0.99070	0.99091	0.99116	0.99141	0.99167	0.99192	0.99217	0.99236	0.99254
0.98935	0.98957	0.98980	0.99003	0.99031	0.99059	0.99088	0.99116	0.99144	0.99167	0.99189
0.98820	0.98847	0.98874	0.98901	0.98933	0.98966	0.98998	0.99031	0.99063	0.99089	0.99116
0.98706	0.98734	0.98762	0.98790	0.98828	0.98865	0.98903	0.98940	0.98978	0.99005	0.99032
0.98601	0.98628	0.98656	0.98683	0.98723	0.98763	0.98802	0.98842	0.98882	0.98906	0.98930
0.98474	0.98505	0.98535	0.98565	0.98605	0.98645	0.98686	0.98726	0.98766	0.98788	0.98811
0.98314	0.98351	0.98389	0.98426	0.98466	0.98507	0.98547	0.98588	0.98628	0.98652	0.98677
0.98135	0.98176	0.98217	0.98258	0.98302	0.98345	0.98389	0.98432	0.98476	0.98506	0.98536
0.97957	0.97993	0.98029	0.98065	0.98112	0.98159	0.98207	0.98254	0.98301	0.98341	0.98381

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
0.99966	0.99967	0.99968	0.99969	0.99971	0.99972	0.99974	0.99975	0.99976	0.99977	0.99978
0.99962	0.99962	0.99963	0.99965	0.99967	0.99968	0.99970	0.99972	0.99973	0.99974	0.99974
0.99956	0.99956	0.99957	0.99959	0.99961	0.99963	0.99965	0.99967	0.99968	0.99969	0.99970
0.99949	0.99950	0.99950	0.99952	0.99955	0.99957	0.99960	0.99962	0.99963	0.99965	0.99966
0.99943	0.99943	0.99944	0.99946	0.99949	0.99951	0.99954	0.99956	0.99958	0.99960	0.99962
0.99937	0.99938	0.99939	0.99941	0.99944	0.99946	0.99949	0.99951	0.99954	0.99957	0.99959
0.99930	0.99932	0.99934	0.99937	0.99940	0.99942	0.99945	0.99948	0.99951	0.99954	0.99958
0.99926	0.99928	0.99931	0.99934	0.99937	0.99939	0.99942	0.99945	0.99949	0.99952	0.99956
0.99922	0.99925	0.99928	0.99931	0.99934	0.99937	0.99940	0.99943	0.99947	0.99951	0.99955
0.99918	0.99921	0.99925	0.99928	0.99931	0.99935	0.99938	0.99941	0.99945	0.99949	0.99953
0.99914	0.99918	0.99922	0.99926	0.99929	0.99933	0.99936	0.99940	0.99943	0.99947	0.99950
0.99910	0.99915	0.99919	0.99923	0.99927	0.99932	0.99936	0.99940	0.99943	0.99946	0.99948
0.99907	0.99912	0.99916	0.99921	0.99925	0.99930	0.99934	0.99939	0.99941	0.99944	0.99946
0.99905	0.99909	0.99913	0.99918	0.99922	0.99927	0.99931	0.99936	0.99939	0.99942	0.99944
0.99903	0.99907	0.99912	0.99916	0.99920	0.99924	0.99928	0.99932	0.99935	0.99938	0.99942
0.99899	0.99904	0.99909	0.99913	0.99917	0.99920	0.99924	0.99928	0.99932	0.99935	0.99939
0.99894	0.99899	0.99904	0.99908	0.99912	0.99917	0.99921	0.99925	0.99929	0.99932	0.99936
0.99888	0.99893	0.99898	0.99903	0.99907	0.99912	0.99916	0.99921	0.99924	0.99928	0.99931
0.99880	0.99885	0.99890	0.99895	0.99900	0.99906	0.99911	0.99916	0.99919	0.99923	0.99926
0.99872	0.99877	0.99882	0.99888	0.99894	0.99899	0.99905	0.99911	0.99914	0.99918	0.99921
0.99865	0.99870	0.99875	0.99881	0.99887	0.99893	0.99899	0.99905	0.99909	0.99912	0.99916
0.99856	0.99862	0.99867	0.99873	0.99879	0.99886	0.99892	0.99898	0.99902	0.99906	0.99910
0.99847	0.99853	0.99858	0.99864	0.99871	0.99877	0.99884	0.99890	0.99894	0.99898	0.99903
0.99837	0.99843	0.99848	0.99854	0.99861	0.99867	0.99874	0.99880	0.99885	0.99889	0.99894
0.99825	0.99831	0.99836	0.99843	0.99850	0.99856	0.99863	0.99870	0.99875	0.99880	0.99886
0.99813	0.99818	0.99823	0.99830	0.99837	0.99845	0.99852	0.99859	0.99865	0.99871	0.99876
0.99797	0.99802	0.99807	0.99815	0.99823	0.99830	0.99838	0.99846	0.99852	0.99859	0.99865
0.99780	0.99785	0.99790	0.99798	0.99807	0.99815	0.99824	0.99832	0.99839	0.99846	0.99853
0.99761	0.99768	0.99774	0.99783	0.99792	0.99801	0.99810	0.99819	0.99826	0.99833	0.99840
0.99741	0.99750	0.99758	0.99768	0.99777	0.99787	0.99796	0.99806	0.99813	0.99820	0.99826
0.99720	0.99730	0.99740	0.99750	0.99760	0.99770	0.99780	0.99790	0.99797	0.99804	0.99811
0.99695	0.99707	0.99719	0.99729	0.99739	0.99750	0.99760	0.99770	0.99778	0.99785	0.99793
0.99664	0.99677	0.99690	0.99701	0.99713	0.99724	0.99736	0.99747	0.99755	0.99764	0.99772
0.99629	0.99642	0.99655	0.99669	0.99682	0.99696	0.99709	0.99723	0.99732	0.99741	0.99750
0.99595	0.99608	0.99620	0.99636	0.99651	0.99667	0.99682	0.99698	0.99707	0.99717	0.99726

0.99564	0.99576	0.99588	0.99604	0.99621	0.99637	0.99654	0.99670	0.99680	0.99690	0.99701
0.99531	0.99544	0.99557	0.99573	0.99589	0.99606	0.99622	0.99638	0.99650	0.99661	0.99673
0.99492	0.99506	0.99521	0.99538	0.99554	0.99571	0.99587	0.99604	0.99618	0.99632	0.99646
0.99443	0.99459	0.99475	0.99494	0.99513	0.99532	0.99551	0.99570	0.99586	0.99603	0.99619
0.99390	0.99406	0.99422	0.99445	0.99468	0.99490	0.99513	0.99536	0.99554	0.99571	0.99589
0.99333	0.99349	0.99366	0.99393	0.99420	0.99446	0.99473	0.99500	0.99518	0.99536	0.99554
0.99273	0.99291	0.99310	0.99339	0.99368	0.99398	0.99427	0.99456	0.99475	0.99494	0.99514
0.99212	0.99234	0.99257	0.99287	0.99317	0.99346	0.99376	0.99406	0.99427	0.99449	0.99470
0.99142	0.99169	0.99195	0.99226	0.99258	0.99289	0.99321	0.99352	0.99376	0.99400	0.99423
0.99058	0.99085	0.99112	0.99148	0.99184	0.99220	0.99256	0.99292	0.99317	0.99342	0.99368
0.98954	0.98978	0.99002	0.99047	0.99092	0.99138	0.99183	0.99228	0.99254	0.99279	0.99305
0.98833	0.98856	0.98878	0.98933	0.98988	0.99043	0.99098	0.99153	0.99179	0.99205	0.99232
0.98701	0.98726	0.98750	0.98813	0.98875	0.98938	0.99001	0.99064	0.99093	0.99123	0.99152
0.98565	0.98595	0.98625	0.98692	0.98758	0.98825	0.98892	0.98959	0.98993	0.99027	0.99062
0.98421	0.98461	0.98501	0.98568	0.98636	0.98703	0.98771	0.98838	0.98878	0.98918	0.98958

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
0.99979	0.99980	0.99980	0.99981	0.99981	0.99982	0.99982	0.99982	0.99982	0.99983	0.99983
0.99975	0.99976	0.99977	0.99977	0.99978	0.99978	0.99979	0.99979	0.99979	0.99980	0.99980
0.99971	0.99972	0.99973	0.99973	0.99974	0.99974	0.99975	0.99975	0.99975	0.99976	0.99976
0.99968	0.99969	0.99970	0.99970	0.99971	0.99971	0.99972	0.99972	0.99972	0.99973	0.99973
0.99964	0.99966	0.99967	0.99968	0.99968	0.99969	0.99970	0.99970	0.99970	0.99971	0.99971
0.99962	0.99965	0.99966	0.99967	0.99967	0.99968	0.99969	0.99969	0.99969	0.99970	0.99970
0.99961	0.99964	0.99965	0.99966	0.99967	0.99968	0.99969	0.99969	0.99969	0.99969	0.99969
0.99959	0.99963	0.99964	0.99965	0.99966	0.99967	0.99968	0.99968	0.99968	0.99968	0.99968
0.99959	0.99963	0.99964	0.99965	0.99965	0.99966	0.99967	0.99967	0.99967	0.99967	0.99967
0.99957	0.99961	0.99962	0.99963	0.99963	0.99964	0.99965	0.99965	0.99966	0.99966	0.99967
0.99954	0.99957	0.99958	0.99959	0.99961	0.99962	0.99963	0.99964	0.99965	0.99965	0.99966
0.99951	0.99954	0.99956	0.99957	0.99959	0.99960	0.99962	0.99963	0.99964	0.99966	0.99967
0.99949	0.99951	0.99953	0.99955	0.99956	0.99958	0.99960	0.99961	0.99962	0.99964	0.99965
0.99947	0.99950	0.99951	0.99953	0.99954	0.99956	0.99957	0.99958	0.99960	0.99961	0.99963
0.99945	0.99948	0.99949	0.99950	0.99952	0.99953	0.99954	0.99955	0.99957	0.99958	0.99960
0.99942	0.99946	0.99947	0.99948	0.99950	0.99951	0.99952	0.99953	0.99954	0.99956	0.99957
0.99939	0.99943	0.99944	0.99945	0.99947	0.99948	0.99949	0.99950	0.99952	0.99953	0.99955
0.99935	0.99938	0.99940	0.99941	0.99943	0.99944	0.99946	0.99948	0.99950	0.99951	0.99953
0.99930	0.99933	0.99935	0.99937	0.99938	0.99940	0.99942	0.99944	0.99946	0.99947	0.99949
0.99925	0.99928	0.99930	0.99932	0.99934	0.99936	0.99938	0.99940	0.99942	0.99943	0.99945
0.99919	0.99923	0.99925	0.99927	0.99929	0.99931	0.99933	0.99935	0.99937	0.99938	0.99940
0.99914	0.99918	0.99920	0.99922	0.99924	0.99926	0.99928	0.99930	0.99932	0.99933	0.99935
0.99907	0.99911	0.99913	0.99915	0.99917	0.99919	0.99921	0.99923	0.99925	0.99928	0.99930
0.99898	0.99903	0.99905	0.99907	0.99910	0.99912	0.99914	0.99917	0.99919	0.99922	0.99924
0.99891	0.99896	0.99898	0.99900	0.99902	0.99904	0.99906	0.99909	0.99912	0.99915	0.99918
0.99882	0.99888	0.99890	0.99892	0.99894	0.99896	0.99898	0.99901	0.99903	0.99906	0.99908
0.99872	0.99878	0.99880	0.99882	0.99884	0.99886	0.99888	0.99891	0.99893	0.99896	0.99898
0.99860	0.99867	0.99869	0.99871	0.99873	0.99875	0.99877	0.99880	0.99883	0.99885	0.99888
0.99847	0.99854	0.99856	0.99859	0.99861	0.99864	0.99866	0.99869	0.99873	0.99876	0.99880
0.99833	0.99840	0.99843	0.99846	0.99850	0.99853	0.99856	0.99860	0.99864	0.99867	0.99871
0.99818	0.99825	0.99829	0.99833	0.99836	0.99840	0.99844	0.99848	0.99853	0.99857	0.99862
0.99800	0.99808	0.99813	0.99818	0.99822	0.99827	0.99832	0.99836	0.99840	0.99845	0.99849
0.99781	0.99789	0.99795	0.99800	0.99806	0.99811	0.99817	0.99821	0.99825	0.99829	0.99833
0.99759	0.99768	0.99774	0.99780	0.99787	0.99793	0.99799	0.99803	0.99807	0.99812	0.99816
0.99736	0.99745	0.99751	0.99758	0.99764	0.99771	0.99777	0.99782	0.99787	0.99792	0.99797
0.99711	0.99721	0.99728	0.99734	0.99741	0.99747	0.99754	0.99760	0.99766	0.99771	0.99777

0.99684	0.99696	0.99703	0.99710	0.99717	0.99724	0.99731	0.99738	0.99745	0.99752	0.99759
0.99660	0.99674	0.99681	0.99688	0.99696	0.99703	0.99710	0.99718	0.99727	0.99735	0.99744
0.99636	0.99652	0.99660	0.99667	0.99675	0.99682	0.99690	0.99699	0.99708	0.99718	0.99727
0.99606	0.99624	0.99633	0.99642	0.99652	0.99661	0.99670	0.99679	0.99688	0.99697	0.99706
0.99572	0.99590	0.99602	0.99613	0.99625	0.99636	0.99648	0.99657	0.99665	0.99674	0.99682
0.99533	0.99552	0.99566	0.99580	0.99593	0.99607	0.99621	0.99629	0.99637	0.99646	0.99654
0.99492	0.99513	0.99528	0.99543	0.99557	0.99572	0.99587	0.99596	0.99605	0.99613	0.99622
0.99447	0.99471	0.99487	0.99502	0.99518	0.99533	0.99549	0.99559	0.99568	0.99578	0.99587
0.99393	0.99418	0.99436	0.99453	0.99471	0.99488	0.99506	0.99517	0.99527	0.99538	0.99548
0.99330	0.99356	0.99376	0.99397	0.99417	0.99438	0.99458	0.99470	0.99482	0.99495	0.99507
0.99258	0.99284	0.99308	0.99332	0.99355	0.99379	0.99403	0.99418	0.99433	0.99448	0.99463
0.99182	0.99211	0.99236	0.99261	0.99287	0.99312	0.99337	0.99356	0.99375	0.99395	0.99414
0.99096	0.99130	0.99156	0.99183	0.99209	0.99236	0.99262	0.99286	0.99310	0.99333	0.99357
0.98998	0.99038	0.99066	0.99094	0.99123	0.99151	0.99179	0.99207	0.99235	0.99263	0.99291

1990	1991	1992	1993	1994	1995
0.99983	0.99983	0.99983	0.99982	0.99982	0.99982
0.99980	0.99980	0.99980	0.99980	0.99980	0.99980
0.99976	0.99976	0.99976	0.99977	0.99977	0.99977
0.99973	0.99974	0.99974	0.99975	0.99975	0.99976
0.99971	0.99971	0.99972	0.99972	0.99973	0.99973
0.99970	0.99970	0.99970	0.99971	0.99971	0.99971
0.99969	0.99969	0.99969	0.99969	0.99969	0.99969
0.99968	0.99968	0.99968	0.99969	0.99969	0.99969
0.99967	0.99968	0.99968	0.99969	0.99969	0.99970
0.99967	0.99968	0.99969	0.99969	0.99970	0.99971
0.99967	0.99968	0.99968	0.99969	0.99969	0.99970
0.99968	0.99968	0.99968	0.99969	0.99969	0.99969
0.99966	0.99966	0.99966	0.99966	0.99966	0.99966
0.99964	0.99964	0.99964	0.99964	0.99964	0.99964
0.99961	0.99961	0.99961	0.99962	0.99962	0.99962
0.99958	0.99958	0.99959	0.99959	0.99960	0.99960
0.99956	0.99956	0.99956	0.99957	0.99957	0.99957
0.99955	0.99955	0.99954	0.99954	0.99953	0.99953
0.99951	0.99951	0.99951	0.99950	0.99950	0.99950
0.99947	0.99947	0.99947	0.99948	0.99948	0.99948
0.99942	0.99943	0.99944	0.99944	0.99945	0.99946
0.99937	0.99938	0.99939	0.99941	0.99942	0.99943
0.99932	0.99933	0.99934	0.99936	0.99937	0.99938
0.99927	0.99928	0.99929	0.99929	0.99930	0.99931
0.99921	0.99922	0.99922	0.99923	0.99923	0.99924
0.99911	0.99912	0.99913	0.99915	0.99916	0.99917
0.99901	0.99903	0.99905	0.99906	0.99908	0.99910
0.99891	0.99893	0.99895	0.99897	0.99899	0.99901
0.99883	0.99884	0.99886	0.99887	0.99889	0.99890
0.99875	0.99875	0.99876	0.99876	0.99877	0.99877
0.99866	0.99865	0.99865	0.99864	0.99864	0.99863
0.99853	0.99852	0.99851	0.99850	0.99849	0.99848
0.99837	0.99836	0.99835	0.99835	0.99834	0.99833
0.99820	0.99820	0.99820	0.99819	0.99819	0.99819
0.99802	0.99803	0.99803	0.99804	0.99804	0.99805
0.99783	0.99784	0.99785	0.99787	0.99788	0.99789
0.99766	0.99767	0.99769	0.99770	0.99772	0.99773

0.99752	0.99753	0.99753	0.99754	0.99754	0.99755
0.99736	0.99736	0.99736	0.99737	0.99737	0.99737
0.99715	0.99716	0.99716	0.99717	0.99717	0.99718
0.99691	0.99692	0.99694	0.99695	0.99697	0.99698
0.99662	0.99665	0.99668	0.99670	0.99673	0.99676
0.99631	0.99635	0.99640	0.99644	0.99649	0.99653
0.99597	0.99603	0.99608	0.99614	0.99619	0.99625
0.99559	0.99565	0.99570	0.99576	0.99581	0.99587
0.99519	0.99524	0.99529	0.99533	0.99538	0.99543
0.99478	0.99482	0.99485	0.99489	0.99492	0.99496
0.99433	0.99437	0.99440	0.99444	0.99447	0.99451
0.99381	0.99385	0.99389	0.99394	0.99398	0.99402
0.99319	0.99325	0.99330	0.99336	0.99341	0.99347

Source: Kosesho Daijinkanbo Tokai Johobu (Statistics and Information Department, Minister's Secretariat, Ministry of Health and Welfare), Dai Juhataikai Semehyo (*The 18th Life Tables*), 1998, pp. 60-117.

Table C-5: Estimated Male Probability of Future Survival, Aged 15, 30, 45, and 60

Aged 15	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
15	0.99739	0.99773	0.99808	0.99842	0.99877	0.99885	0.99893	0.99902	0.99910	0.99911	0.99913
16	0.99411	0.99489	0.99566	0.99644	0.99722	0.99741	0.99760	0.99779	0.99798	0.99801	0.99803
17	0.98985	0.99121	0.99257	0.99393	0.99529	0.99560	0.99591	0.99622	0.99653	0.99658	0.99663
18	0.98440	0.98652	0.98864	0.99077	0.99291	0.99336	0.99382	0.99427	0.99473	0.99483	0.99493
19	0.97776	0.98084	0.98392	0.98701	0.99011	0.99073	0.99136	0.99199	0.99261	0.99278	0.99295
20	0.97025	0.97441	0.97859	0.98278	0.98700	0.98781	0.98861	0.98942	0.99023	0.99049	0.99076
21	0.96216	0.96749	0.97285	0.97824	0.98365	0.98465	0.98564	0.98664	0.98763	0.98801	0.98838
22	0.95368	0.96020	0.96677	0.97338	0.98004	0.98125	0.98246	0.98367	0.98488	0.98537	0.98587
23	0.94487	0.95259	0.96039	0.96824	0.97616	0.97763	0.97910	0.98058	0.98205	0.98266	0.98327
24	0.93584	0.94479	0.95382	0.96294	0.97215	0.97391	0.97567	0.97743	0.97919	0.97992	0.98064
25	0.92686	0.93700	0.94724	0.95760	0.96808	0.97013	0.97219	0.97425	0.97632	0.97716	0.97800
26	0.91824	0.92946	0.94082	0.95232	0.96395	0.96632	0.96870	0.97108	0.97347	0.97442	0.97538
27	0.91001	0.92222	0.93460	0.94714	0.95985	0.96254	0.96524	0.96795	0.97067	0.97173	0.97280
28	0.90208	0.91519	0.92850	0.94200	0.95569	0.95873	0.96178	0.96484	0.96790	0.96908	0.97025
29	0.89437	0.90831	0.92247	0.93685	0.95146	0.95486	0.95827	0.96170	0.96514	0.96642	0.96771
30	0.88682	0.90157	0.91656	0.93180	0.94730	0.95104	0.95479	0.95856	0.96235	0.96375	0.96515
31	0.87933	0.89490	0.91074	0.92687	0.94328	0.94732	0.95138	0.95545	0.95955	0.96107	0.96259
32	0.87183	0.88822	0.90492	0.92194	0.93927	0.94360	0.94795	0.95231	0.95670	0.95833	0.95996
33	0.86431	0.88152	0.89906	0.91696	0.93521	0.93981	0.94443	0.94907	0.95374	0.95548	0.95723
34	0.85692	0.87489	0.89324	0.91198	0.93110	0.93596	0.94084	0.94575	0.95069	0.95254	0.95439
35	0.84961	0.86831	0.88743	0.90696	0.92692	0.93204	0.93719	0.94237	0.94758	0.94953	0.95148
36	0.84228	0.86167	0.88151	0.90180	0.92256	0.92798	0.93343	0.93891	0.94442	0.94646	0.94851
37	0.83492	0.85498	0.87551	0.89654	0.91808	0.92380	0.92955	0.93533	0.94116	0.94328	0.94541
38	0.82754	0.84824	0.86945	0.89119	0.91348	0.91948	0.92552	0.93160	0.93772	0.93993	0.94215
39	0.82013	0.84143	0.86327	0.88569	0.90868	0.91497	0.92131	0.92768	0.93410	0.93639	0.93869
40	0.81267	0.83450	0.85692	0.87995	0.90359	0.91020	0.91685	0.92356	0.93031	0.93267	0.93504
41	0.80506	0.82741	0.85038	0.87398	0.89825	0.90518	0.91217	0.91922	0.92632	0.92875	0.93120
42	0.79718	0.82005	0.84358	0.86778	0.89267	0.89992	0.90724	0.91461	0.92204	0.92456	0.92709
43	0.78899	0.81237	0.83645	0.86125	0.88678	0.89433	0.90195	0.90963	0.91737	0.92001	0.92266
44	0.78054	0.80441	0.82900	0.85436	0.88048	0.88833	0.89625	0.90424	0.91230	0.91506	0.91783
45	0.77189	0.79621	0.82131	0.84719	0.87389	0.88200	0.89020	0.89846	0.90681	0.90970	0.91261
46	0.76299	0.78774	0.81329	0.83967	0.86691	0.87526	0.88369	0.89220	0.90080	0.90384	0.90689
47	0.75363	0.77877	0.80475	0.83160	0.85934	0.86793	0.87661	0.88537	0.89422	0.89743	0.90064

48	0.74375	0.76928	0.79568	0.82298	0.85122	0.86006	0.86899	0.87801	0.88712	0.89048	0.89385
49	0.73339	0.75930	0.78613	0.81391	0.84267	0.85174	0.86090	0.87016	0.87953	0.88301	0.88652
50	0.72252	0.74882	0.77609	0.80434	0.83363	0.84292	0.85231	0.86181	0.87141	0.87500	0.87860
51	0.71104	0.73774	0.76544	0.79418	0.82401	0.83351	0.84313	0.85286	0.86269	0.86636	0.87005
52	0.69874	0.72585	0.75401	0.78327	0.81366	0.82338	0.83322	0.84317	0.85325	0.85699	0.86075
53	0.68569	0.71320	0.74182	0.77159	0.80255	0.81247	0.82251	0.83268	0.84297	0.84679	0.85064
54	0.67211	0.69997	0.72898	0.75920	0.79067	0.80077	0.81101	0.82138	0.83188	0.83578	0.83969
55	0.65784	0.68601	0.71537	0.74600	0.77794	0.78827	0.79874	0.80936	0.82011	0.82402	0.82795
56	0.64246	0.67095	0.70070	0.73178	0.76423	0.77486	0.78564	0.79657	0.80765	0.81151	0.81539
57	0.62588	0.65468	0.68480	0.71631	0.74926	0.76026	0.77142	0.78274	0.79422	0.79800	0.80179
58	0.60831	0.63736	0.66781	0.69971	0.73313	0.74443	0.75591	0.76756	0.77939	0.78314	0.78690
59	0.58985	0.61919	0.65000	0.68233	0.71628	0.72771	0.73932	0.75112	0.76310	0.76688	0.77068
60	0.57023	0.59991	0.63113	0.66398	0.69854	0.71001	0.72167	0.73353	0.74558	0.74941	0.75327
61	0.54933	0.57932	0.61095	0.64430	0.67947	0.69104	0.70280	0.71476	0.72692	0.73080	0.73470
62	0.52732	0.55740	0.58918	0.62278	0.65830	0.67017	0.68226	0.69456	0.70708	0.71098	0.71489
63	0.50439	0.53447	0.56633	0.60010	0.63587	0.64804	0.66044	0.67308	0.68596	0.68983	0.69373
64	0.48061	0.51058	0.54243	0.57627	0.61221	0.62467	0.63737	0.65034	0.66357	0.66738	0.67121

1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
0.99914	0.99916	0.99917	0.99920	0.99923	0.99926	0.99929	0.99932	0.99932	0.99932	0.99931	0.99931
0.99806	0.99808	0.99811	0.99818	0.99826	0.99833	0.99841	0.99848	0.99846	0.99844	0.99842	0.99840
0.99668	0.99673	0.99678	0.99693	0.99707	0.99721	0.99736	0.99750	0.99745	0.99740	0.99735	0.99729
0.99502	0.99512	0.99522	0.99545	0.99569	0.99592	0.99616	0.99639	0.99631	0.99623	0.99614	0.99606
0.99312	0.99329	0.99346	0.99380	0.99415	0.99449	0.99483	0.99518	0.99508	0.99498	0.99487	0.99477
0.99102	0.99129	0.99155	0.99201	0.99247	0.99293	0.99339	0.99386	0.99376	0.99366	0.99356	0.99346
0.98876	0.98913	0.98951	0.99009	0.99068	0.99126	0.99185	0.99243	0.99235	0.99228	0.99220	0.99212
0.98636	0.98686	0.98735	0.98806	0.98878	0.98949	0.99021	0.99093	0.99089	0.99085	0.99081	0.99077
0.98389	0.98450	0.98511	0.98596	0.98681	0.98766	0.98852	0.98937	0.98938	0.98940	0.98941	0.98943
0.98137	0.98210	0.98282	0.98381	0.98481	0.98580	0.98679	0.98779	0.98786	0.98793	0.98801	0.98808
0.97884	0.97969	0.98053	0.98167	0.98280	0.98393	0.98507	0.98621	0.98633	0.98646	0.98658	0.98670
0.97634	0.97730	0.97826	0.97953	0.98080	0.98208	0.98335	0.98463	0.98479	0.98496	0.98513	0.98529
0.97386	0.97493	0.97600	0.97740	0.97881	0.98022	0.98163	0.98304	0.98324	0.98344	0.98363	0.98383
0.97142	0.97260	0.97377	0.97530	0.97682	0.97835	0.97988	0.98141	0.98164	0.98187	0.98210	0.98233
0.96899	0.97028	0.97157	0.97319	0.97482	0.97644	0.97807	0.97970	0.97998	0.98025	0.98053	0.98080
0.96656	0.96797	0.96938	0.97108	0.97279	0.97449	0.97621	0.97792	0.97825	0.97858	0.97891	0.97924
0.96411	0.96564	0.96717	0.96894	0.97072	0.97249	0.97428	0.97606	0.97645	0.97684	0.97723	0.97762
0.96160	0.96324	0.96488	0.96672	0.96856	0.97041	0.97226	0.97411	0.97456	0.97502	0.97547	0.97592
0.95898	0.96073	0.96249	0.96439	0.96630	0.96821	0.97013	0.97205	0.97256	0.97307	0.97359	0.97410
0.95625	0.95811	0.95998	0.96195	0.96392	0.96590	0.96788	0.96987	0.97043	0.97100	0.97157	0.97213
0.95344	0.95540	0.95737	0.95940	0.96144	0.96349	0.96554	0.96759	0.96819	0.96880	0.96941	0.97001
0.95055	0.95260	0.95466	0.95676	0.95886	0.96097	0.96308	0.96520	0.96583	0.96646	0.96710	0.96773
0.94755	0.94969	0.95183	0.95399	0.95615	0.95832	0.96049	0.96267	0.96332	0.96398	0.96463	0.96528
0.94437	0.94659	0.94882	0.95104	0.95326	0.95549	0.95772	0.95996	0.96063	0.96130	0.96197	0.96264
0.94099	0.94330	0.94561	0.94789	0.95017	0.95246	0.95476	0.95706	0.95775	0.95843	0.95912	0.95981
0.93742	0.93980	0.94219	0.94453	0.94689	0.94925	0.95161	0.95398	0.95469	0.95539	0.95610	0.95680
0.93364	0.93610	0.93856	0.94098	0.94341	0.94584	0.94828	0.95073	0.95145	0.95217	0.95289	0.95361
0.92963	0.93218	0.93473	0.93722	0.93972	0.94222	0.94473	0.94725	0.94799	0.94873	0.94947	0.95021
0.92531	0.92797	0.93063	0.93319	0.93575	0.93832	0.94090	0.94348	0.94425	0.94503	0.94580	0.94657
0.92061	0.92340	0.92620	0.92882	0.93145	0.93409	0.93673	0.93939	0.94021	0.94103	0.94185	0.94267
0.91552	0.91844	0.92137	0.92407	0.92678	0.92950	0.93222	0.93495	0.93583	0.93671	0.93759	0.93848
0.90996	0.91303	0.91612	0.91890	0.92169	0.92449	0.92729	0.93011	0.93107	0.93204	0.93301	0.93398
0.90387	0.90711	0.91036	0.91324	0.91611	0.91900	0.92190	0.92481	0.92589	0.92697	0.92805	0.92913
0.89723	0.90063	0.90404	0.90701	0.91000	0.91299	0.91600	0.91901	0.92022	0.92143	0.92265	0.92386

0.89003	0.89356	0.89710	0.90021	0.90332	0.90645	0.90959	0.91273	0.91407	0.91542	0.91677	0.91811
0.88222	0.88586	0.88951	0.89278	0.89606	0.89936	0.90267	0.90599	0.90745	0.90892	0.91039	0.91186
0.87375	0.87747	0.88120	0.88467	0.88816	0.89167	0.89518	0.89871	0.90030	0.90190	0.90349	0.90509
0.86453	0.86833	0.87214	0.87584	0.87955	0.88328	0.88702	0.89079	0.89252	0.89426	0.89600	0.89774
0.85450	0.85838	0.86227	0.86620	0.87013	0.87409	0.87806	0.88206	0.88397	0.88589	0.88781	0.88974
0.84362	0.84757	0.85154	0.85569	0.85986	0.86405	0.86826	0.87249	0.87460	0.87672	0.87884	0.88097
0.83189	0.83586	0.83984	0.84423	0.84864	0.85308	0.85754	0.86202	0.86434	0.86667	0.86900	0.87134
0.81928	0.82319	0.82712	0.83176	0.83643	0.84112	0.84584	0.85059	0.85312	0.85566	0.85820	0.86076
0.80561	0.80944	0.81329	0.81819	0.82312	0.82808	0.83308	0.83810	0.84086	0.84363	0.84641	0.84920
0.79069	0.79449	0.79831	0.80347	0.80867	0.81390	0.81916	0.82446	0.82749	0.83052	0.83357	0.83662
0.77450	0.77833	0.78219	0.78759	0.79302	0.79850	0.80401	0.80956	0.81288	0.81622	0.81957	0.82294
0.75714	0.76103	0.76495	0.77055	0.77620	0.78189	0.78762	0.79339	0.79702	0.80067	0.80433	0.80802
0.73863	0.74257	0.74654	0.75232	0.75815	0.76402	0.76994	0.77590	0.77983	0.78377	0.78774	0.79172
0.71882	0.72278	0.72676	0.73269	0.73866	0.74469	0.75076	0.75689	0.76111	0.76536	0.76964	0.77394
0.69765	0.70159	0.70555	0.71158	0.71767	0.72380	0.72998	0.73622	0.74077	0.74535	0.74995	0.75458
0.67507	0.67894	0.68284	0.68896	0.69513	0.70136	0.70765	0.71399	0.71886	0.72376	0.72869	0.73366

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
0.99931	0.99934	0.99936	0.99939	0.99941	0.99944	0.99946	0.99948	0.99950	0.99952	0.99954	0.99955
0.99838	0.99844	0.99850	0.99857	0.99863	0.99869	0.99873	0.99878	0.99882	0.99887	0.99891	0.99892
0.99724	0.99735	0.99745	0.99756	0.99767	0.99777	0.99785	0.99792	0.99799	0.99807	0.99814	0.99816
0.99598	0.99613	0.99629	0.99644	0.99660	0.99675	0.99686	0.99697	0.99708	0.99718	0.99729	0.99730
0.99467	0.99488	0.99509	0.99529	0.99550	0.99571	0.99585	0.99599	0.99613	0.99627	0.99642	0.99642
0.99336	0.99362	0.99388	0.99414	0.99440	0.99466	0.99484	0.99501	0.99518	0.99535	0.99553	0.99553
0.99204	0.99235	0.99266	0.99298	0.99329	0.99361	0.99382	0.99403	0.99423	0.99444	0.99465	0.99466
0.99073	0.99109	0.99145	0.99182	0.99218	0.99254	0.99279	0.99304	0.99329	0.99354	0.99379	0.99380
0.98944	0.98985	0.99026	0.99066	0.99107	0.99148	0.99177	0.99207	0.99236	0.99265	0.99294	0.99297
0.98815	0.98861	0.98906	0.98952	0.98998	0.99043	0.99076	0.99110	0.99143	0.99176	0.99210	0.99214
0.98683	0.98734	0.98785	0.98837	0.98888	0.98939	0.98976	0.99014	0.99051	0.99088	0.99125	0.99131
0.98546	0.98604	0.98662	0.98720	0.98778	0.98836	0.98877	0.98918	0.98959	0.98999	0.99040	0.99047
0.98403	0.98469	0.98535	0.98601	0.98667	0.98733	0.98777	0.98821	0.98865	0.98908	0.98952	0.98960
0.98256	0.98331	0.98405	0.98480	0.98554	0.98629	0.98675	0.98722	0.98769	0.98815	0.98862	0.98872
0.98108	0.98190	0.98273	0.98355	0.98438	0.98520	0.98570	0.98620	0.98670	0.98720	0.98770	0.98783
0.97957	0.98046	0.98136	0.98226	0.98316	0.98406	0.98460	0.98514	0.98567	0.98621	0.98675	0.98691
0.97801	0.97898	0.97995	0.98092	0.98189	0.98286	0.98344	0.98402	0.98460	0.98518	0.98577	0.98596
0.97638	0.97741	0.97845	0.97949	0.98053	0.98157	0.98220	0.98283	0.98347	0.98410	0.98473	0.98495
0.97462	0.97573	0.97685	0.97797	0.97909	0.98021	0.98089	0.98157	0.98226	0.98294	0.98363	0.98387
0.97270	0.97391	0.97512	0.97634	0.97755	0.97877	0.97950	0.98023	0.98097	0.98170	0.98244	0.98271
0.97062	0.97193	0.97325	0.97457	0.97589	0.97721	0.97800	0.97878	0.97957	0.98035	0.98114	0.98144
0.96837	0.96979	0.97122	0.97265	0.97408	0.97551	0.97635	0.97719	0.97803	0.97888	0.97972	0.98005
0.96594	0.96747	0.96901	0.97055	0.97209	0.97364	0.97454	0.97544	0.97635	0.97725	0.97816	0.97854
0.96332	0.96496	0.96661	0.96826	0.96992	0.97157	0.97255	0.97353	0.97451	0.97550	0.97648	0.97690
0.96051	0.96226	0.96401	0.96577	0.96753	0.96930	0.97037	0.97144	0.97251	0.97358	0.97465	0.97511
0.95751	0.95936	0.96121	0.96307	0.96493	0.96679	0.96796	0.96913	0.97030	0.97148	0.97265	0.97315
0.95433	0.95626	0.95819	0.96013	0.96207	0.96401	0.96530	0.96659	0.96788	0.96917	0.97047	0.97101
0.95095	0.95294	0.95494	0.95694	0.95894	0.96095	0.96236	0.96378	0.96520	0.96663	0.96805	0.96864
0.94735	0.94939	0.95143	0.95348	0.95554	0.95760	0.95914	0.96070	0.96225	0.96381	0.96537	0.96603
0.94349	0.94558	0.94767	0.94977	0.95187	0.95398	0.95565	0.95732	0.95900	0.96068	0.96237	0.96311
0.93936	0.94150	0.94365	0.94580	0.94796	0.95012	0.95188	0.95365	0.95542	0.95719	0.95897	0.95982
0.93494	0.93715	0.93936	0.94158	0.94380	0.94603	0.94784	0.94966	0.95149	0.95331	0.95514	0.95613
0.93021	0.93249	0.93478	0.93707	0.93937	0.94167	0.94351	0.94535	0.94720	0.94905	0.95090	0.95203
0.92508	0.92746	0.92985	0.93224	0.93464	0.93705	0.93889	0.94074	0.94259	0.94444	0.94630	0.94757
0.91946	0.92198	0.92449	0.92702	0.92955	0.93209	0.93395	0.93580	0.93766	0.93953	0.94140	0.94278

0.91334	0.91601	0.91868	0.92136	0.92405	0.92675	0.92864	0.93052	0.93242	0.93431	0.93621	0.93766
0.90669	0.90954	0.91240	0.91526	0.91814	0.92103	0.92295	0.92488	0.92682	0.92875	0.93070	0.93217
0.89949	0.90255	0.90562	0.90869	0.91178	0.91488	0.91685	0.91883	0.92081	0.92280	0.92479	0.92627
0.89167	0.89496	0.89827	0.90159	0.90492	0.90827	0.91029	0.91232	0.91436	0.91640	0.91844	0.91991
0.88311	0.88667	0.89026	0.89385	0.89747	0.90109	0.90320	0.90530	0.90741	0.90953	0.91165	0.91311
0.87368	0.87756	0.88145	0.88536	0.88929	0.89324	0.89546	0.89768	0.89992	0.90215	0.90440	0.90583
0.86332	0.86753	0.87176	0.87600	0.88027	0.88456	0.88696	0.88937	0.89179	0.89421	0.89664	0.89807
0.85200	0.85657	0.86115	0.86576	0.87040	0.87506	0.87769	0.88032	0.88296	0.88561	0.88826	0.88972
0.83969	0.84465	0.84964	0.85466	0.85971	0.86479	0.86764	0.87049	0.87336	0.87624	0.87912	0.88066
0.82632	0.83173	0.83719	0.84268	0.84820	0.85376	0.85682	0.85988	0.86296	0.86605	0.86915	0.87081
0.81171	0.81766	0.82364	0.82968	0.83575	0.84187	0.84513	0.84841	0.85170	0.85501	0.85832	0.86014
0.79572	0.80226	0.80885	0.81550	0.82220	0.82896	0.83246	0.83598	0.83952	0.84307	0.84663	0.84864
0.77826	0.78544	0.79269	0.80001	0.80740	0.81485	0.81864	0.82244	0.82626	0.83010	0.83395	0.83620
0.75924	0.76712	0.77508	0.78313	0.79125	0.79946	0.80356	0.80768	0.81182	0.81598	0.82016	0.82271
0.73866	0.74726	0.75597	0.76477	0.77368	0.78269	0.78714	0.79161	0.79611	0.80064	0.80519	0.80808

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0.99956	0.99956	0.99957	0.99958	0.99960	0.99961	0.99963	0.99964	0.99966	0.99966	0.99966	0.99967
0.99894	0.99895	0.99897	0.99898	0.99902	0.99905	0.99909	0.99912	0.99916	0.99917	0.99919	0.99920
0.99817	0.99818	0.99820	0.99821	0.99827	0.99833	0.99838	0.99844	0.99850	0.99854	0.99857	0.99861
0.99731	0.99732	0.99732	0.99733	0.99741	0.99749	0.99757	0.99764	0.99772	0.99778	0.99785	0.99791
0.99642	0.99642	0.99642	0.99643	0.99652	0.99661	0.99670	0.99679	0.99688	0.99697	0.99706	0.99714
0.99553	0.99553	0.99553	0.99553	0.99563	0.99574	0.99585	0.99595	0.99606	0.99616	0.99626	0.99636
0.99466	0.99466	0.99467	0.99467	0.99479	0.99490	0.99502	0.99513	0.99525	0.99536	0.99548	0.99559
0.99381	0.99383	0.99384	0.99386	0.99398	0.99410	0.99423	0.99435	0.99447	0.99459	0.99472	0.99484
0.99299	0.99302	0.99305	0.99307	0.99320	0.99333	0.99346	0.99359	0.99372	0.99384	0.99397	0.99410
0.99218	0.99222	0.99226	0.99230	0.99243	0.99257	0.99270	0.99284	0.99297	0.99311	0.99324	0.99337
0.99136	0.99141	0.99146	0.99151	0.99166	0.99181	0.99195	0.99210	0.99225	0.99238	0.99252	0.99266
0.99053	0.99059	0.99066	0.99072	0.99088	0.99105	0.99121	0.99138	0.99154	0.99168	0.99182	0.99195
0.98968	0.98976	0.98984	0.98992	0.99010	0.99029	0.99047	0.99065	0.99084	0.99097	0.99111	0.99124
0.98882	0.98892	0.98902	0.98912	0.98932	0.98952	0.98972	0.98992	0.99012	0.99025	0.99038	0.99051
0.98795	0.98807	0.98820	0.98832	0.98853	0.98874	0.98895	0.98916	0.98937	0.98950	0.98963	0.98975
0.98706	0.98722	0.98738	0.98753	0.98775	0.98796	0.98817	0.98839	0.98860	0.98873	0.98885	0.98898
0.98615	0.98633	0.98652	0.98671	0.98693	0.98715	0.98737	0.98759	0.98781	0.98794	0.98806	0.98819
0.98517	0.98539	0.98561	0.98583	0.98606	0.98629	0.98652	0.98676	0.98699	0.98712	0.98725	0.98738
0.98412	0.98436	0.98461	0.98485	0.98511	0.98536	0.98562	0.98588	0.98613	0.98627	0.98640	0.98653
0.98298	0.98325	0.98352	0.98379	0.98407	0.98436	0.98465	0.98494	0.98522	0.98536	0.98550	0.98563
0.98174	0.98204	0.98234	0.98264	0.98296	0.98328	0.98360	0.98393	0.98425	0.98439	0.98453	0.98466
0.98039	0.98073	0.98106	0.98140	0.98176	0.98212	0.98248	0.98284	0.98320	0.98334	0.98348	0.98362
0.97892	0.97930	0.97967	0.98005	0.98045	0.98085	0.98125	0.98165	0.98205	0.98219	0.98234	0.98249
0.97732	0.97773	0.97815	0.97857	0.97901	0.97945	0.97990	0.98034	0.98078	0.98094	0.98110	0.98127
0.97557	0.97603	0.97649	0.97695	0.97744	0.97793	0.97842	0.97891	0.97941	0.97959	0.97977	0.97995
0.97366	0.97416	0.97466	0.97516	0.97571	0.97625	0.97680	0.97734	0.97789	0.97809	0.97829	0.97849
0.97155	0.97210	0.97264	0.97319	0.97379	0.97440	0.97500	0.97560	0.97621	0.97643	0.97666	0.97689
0.96924	0.96984	0.97043	0.97103	0.97170	0.97236	0.97303	0.97370	0.97437	0.97462	0.97487	0.97512
0.96669	0.96735	0.96802	0.96868	0.96942	0.97015	0.97089	0.97163	0.97236	0.97263	0.97290	0.97317
0.96386	0.96461	0.96535	0.96610	0.96691	0.96772	0.96853	0.96934	0.97015	0.97043	0.97072	0.97101
0.96068	0.96154	0.96239	0.96325	0.96414	0.96502	0.96591	0.96679	0.96768	0.96798	0.96828	0.96858
0.95712	0.95810	0.95909	0.96008	0.96105	0.96202	0.96299	0.96396	0.96493	0.96525	0.96556	0.96587
0.95316	0.95430	0.95543	0.95657	0.95763	0.95870	0.95976	0.96083	0.96189	0.96222	0.96255	0.96288
0.94884	0.95011	0.95139	0.95267	0.95385	0.95503	0.95621	0.95740	0.95859	0.95893	0.95928	0.95963
0.94416	0.94555	0.94693	0.94832	0.94966	0.95100	0.95234	0.95368	0.95502	0.95538	0.95574	0.95609
0.93911	0.94057	0.94203	0.94349	0.94501	0.94655	0.94808	0.94961	0.95115	0.95151	0.95186	0.95222

0.93365	0.93514	0.93662	0.93811	0.93986	0.94162	0.94338	0.94514	0.94691	0.94725	0.94760	0.94795
0.92775	0.92923	0.93072	0.93221	0.93420	0.93620	0.93820	0.94021	0.94222	0.94257	0.94291	0.94325
0.92138	0.92286	0.92433	0.92581	0.92803	0.93026	0.93249	0.93473	0.93697	0.93735	0.93773	0.93811
0.91456	0.91602	0.91747	0.91893	0.92135	0.92377	0.92620	0.92863	0.93107	0.93154	0.93200	0.93247
0.90727	0.90871	0.91016	0.91160	0.91416	0.91672	0.91930	0.92187	0.92446	0.92506	0.92567	0.92627
0.89950	0.90094	0.90238	0.90382	0.90647	0.90913	0.91179	0.91447	0.91715	0.91792	0.91870	0.91947
0.89119	0.89265	0.89412	0.89559	0.89829	0.90099	0.90370	0.90642	0.90914	0.91010	0.91106	0.91202
0.88221	0.88375	0.88530	0.88685	0.88956	0.89227	0.89500	0.89773	0.90047	0.90160	0.90274	0.90387
0.87248	0.87415	0.87583	0.87750	0.88021	0.88292	0.88564	0.88837	0.89110	0.89238	0.89366	0.89494
0.86197	0.86380	0.86563	0.86746	0.87016	0.87286	0.87557	0.87829	0.88102	0.88240	0.88378	0.88516
0.85066	0.85268	0.85470	0.85673	0.85941	0.86209	0.86479	0.86749	0.87020	0.87175	0.87331	0.87488
0.83846	0.84073	0.84300	0.84528	0.84794	0.85062	0.85330	0.85599	0.85868	0.86024	0.86180	0.86336
0.82526	0.82783	0.83040	0.83298	0.83566	0.83835	0.84104	0.84374	0.84646	0.84797	0.84948	0.85100
0.81097	0.81388	0.81679	0.81972	0.82245	0.82519	0.82793	0.83069	0.83346	0.83489	0.83632	0.83776

1994	1995
0.99967	0.99967
0.99922	0.99923
0.99864	0.99868
0.99797	0.99803
0.99723	0.99731
0.99646	0.99656
0.99570	0.99582
0.99496	0.99508
0.99423	0.99435
0.99350	0.99364
0.99280	0.99293
0.99209	0.99223
0.99138	0.99151
0.99064	0.99077
0.98988	0.99001
0.98910	0.98922
0.98832	0.98844
0.98751	0.98764
0.98667	0.98680
0.98577	0.98591
0.98480	0.98494
0.98376	0.98389
0.98264	0.98278
0.98143	0.98159
0.98013	0.98031
0.97869	0.97890
0.97711	0.97734
0.97537	0.97562
0.97344	0.97371
0.97130	0.97158
0.96888	0.96919
0.96618	0.96649
0.96321	0.96354
0.95998	0.96032
0.95645	0.95681
0.95257	0.95293
0.94829	0.94864

0.94360	0.94394
0.93848	0.93886
0.93293	0.93340
0.92688	0.92748
0.92025	0.92103
0.91299	0.91395
0.90501	0.90615
0.89622	0.89750
0.88655	0.88794
0.87644	0.87801
0.86493	0.86650
0.85252	0.85405
0.83920	0.84064

Aged30	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
30	0.99156	0.99258	0.99359	0.99461	0.99563	0.99600	0.99637	0.99674	0.99711	0.99724	0.99736
31	0.98318	0.98523	0.98729	0.98935	0.99141	0.99211	0.99281	0.99351	0.99421	0.99446	0.99471
32	0.97479	0.97788	0.98098	0.98408	0.98720	0.98821	0.98922	0.99024	0.99126	0.99163	0.99200
33	0.96639	0.97050	0.97462	0.97876	0.98292	0.98424	0.98555	0.98687	0.98819	0.98868	0.98918
34	0.95813	0.96321	0.96831	0.97345	0.97861	0.98021	0.98181	0.98342	0.98503	0.98564	0.98624
35	0.94996	0.95596	0.96201	0.96809	0.97421	0.97611	0.97800	0.97990	0.98181	0.98252	0.98324
36	0.94176	0.94865	0.95559	0.96259	0.96963	0.97185	0.97408	0.97631	0.97854	0.97935	0.98016
37	0.93353	0.94128	0.94909	0.95697	0.96492	0.96747	0.97002	0.97259	0.97515	0.97606	0.97696
38	0.92528	0.93386	0.94252	0.95126	0.96009	0.96295	0.96582	0.96870	0.97159	0.97259	0.97359
39	0.91699	0.92636	0.93583	0.94539	0.95505	0.95823	0.96142	0.96463	0.96784	0.96893	0.97001
40	0.90865	0.91874	0.92894	0.93926	0.94969	0.95322	0.95677	0.96034	0.96392	0.96508	0.96625
41	0.90014	0.91092	0.92184	0.93289	0.94408	0.94798	0.95190	0.95583	0.95978	0.96102	0.96227
42	0.89133	0.90283	0.91447	0.92627	0.93821	0.94247	0.94674	0.95103	0.95535	0.95669	0.95803
43	0.88217	0.89438	0.90675	0.91930	0.93202	0.93661	0.94122	0.94585	0.95051	0.95198	0.95345
44	0.87272	0.88560	0.89868	0.91194	0.92540	0.93033	0.93528	0.94025	0.94526	0.94686	0.94846
45	0.86305	0.87658	0.89033	0.90429	0.91847	0.92370	0.92896	0.93425	0.93956	0.94131	0.94306
46	0.85310	0.86725	0.88164	0.89627	0.91114	0.91664	0.92217	0.92774	0.93334	0.93525	0.93716
47	0.84263	0.85738	0.87239	0.88765	0.90319	0.90897	0.91478	0.92063	0.92652	0.92861	0.93070
48	0.83159	0.84693	0.86255	0.87845	0.89465	0.90072	0.90683	0.91298	0.91917	0.92142	0.92368
49	0.82000	0.83595	0.85220	0.86877	0.88566	0.89200	0.89839	0.90482	0.91130	0.91370	0.91610
50	0.80785	0.82441	0.84131	0.85856	0.87616	0.88277	0.88942	0.89613	0.90289	0.90540	0.90792
51	0.79501	0.81221	0.82977	0.84771	0.86605	0.87292	0.87984	0.88682	0.89386	0.89647	0.89908
52	0.78127	0.79912	0.81738	0.83606	0.85517	0.86231	0.86950	0.87675	0.88407	0.88677	0.88948
53	0.76667	0.78520	0.80417	0.82360	0.84350	0.85088	0.85833	0.86584	0.87342	0.87622	0.87902
54	0.75148	0.77062	0.79025	0.81037	0.83100	0.83863	0.84633	0.85409	0.86193	0.86482	0.86771
55	0.73554	0.75525	0.77550	0.79628	0.81763	0.82554	0.83353	0.84159	0.84973	0.85265	0.85558
56	0.71833	0.73868	0.75959	0.78110	0.80322	0.81149	0.81985	0.82830	0.83683	0.83971	0.84260
57	0.69980	0.72076	0.74235	0.76459	0.78749	0.79620	0.80501	0.81391	0.82291	0.82573	0.82855
58	0.68015	0.70170	0.72393	0.74687	0.77054	0.77963	0.78883	0.79813	0.80755	0.81035	0.81316
59	0.65951	0.68169	0.70462	0.72832	0.75282	0.76211	0.77151	0.78103	0.79067	0.79353	0.79640
60	0.63758	0.66047	0.68417	0.70873	0.73418	0.74358	0.75310	0.76274	0.77251	0.77545	0.77840
61	0.61421	0.63780	0.66229	0.68773	0.71414	0.72371	0.73340	0.74322	0.75318	0.75620	0.75922
62	0.58960	0.61366	0.63870	0.66476	0.69189	0.70185	0.71196	0.72222	0.73263	0.73568	0.73875
63	0.56396	0.58842	0.61393	0.64054	0.66831	0.67868	0.68920	0.69988	0.71073	0.71380	0.71688
64	0.53737	0.56212	0.58802	0.61511	0.64345	0.65420	0.66513	0.67624	0.68754	0.69057	0.69361

1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
0.99749	0.99761	0.99774	0.99783	0.99792	0.99800	0.99809	0.99818	0.99824	0.99829	0.99835	0.99840
0.99496	0.99521	0.99547	0.99563	0.99579	0.99596	0.99612	0.99628	0.99640	0.99652	0.99664	0.99675
0.99237	0.99274	0.99312	0.99335	0.99359	0.99382	0.99406	0.99429	0.99447	0.99466	0.99484	0.99502
0.98967	0.99016	0.99065	0.99096	0.99126	0.99157	0.99188	0.99218	0.99243	0.99268	0.99292	0.99317
0.98685	0.98746	0.98807	0.98845	0.98882	0.98920	0.98958	0.98996	0.99026	0.99056	0.99086	0.99116
0.98395	0.98466	0.98538	0.98583	0.98628	0.98673	0.98718	0.98763	0.98797	0.98832	0.98866	0.98900
0.98097	0.98178	0.98259	0.98311	0.98363	0.98415	0.98467	0.98519	0.98556	0.98593	0.98630	0.98667
0.97787	0.97878	0.97968	0.98027	0.98085	0.98144	0.98203	0.98261	0.98300	0.98339	0.98378	0.98417
0.97459	0.97559	0.97659	0.97724	0.97789	0.97854	0.97919	0.97984	0.98025	0.98066	0.98107	0.98149
0.97110	0.97219	0.97328	0.97400	0.97472	0.97544	0.97616	0.97688	0.97731	0.97774	0.97817	0.97860
0.96741	0.96858	0.96975	0.97055	0.97135	0.97215	0.97295	0.97375	0.97419	0.97464	0.97508	0.97553
0.96352	0.96477	0.96602	0.96690	0.96778	0.96866	0.96954	0.97043	0.97089	0.97135	0.97181	0.97227
0.95938	0.96073	0.96208	0.96304	0.96399	0.96495	0.96591	0.96688	0.96736	0.96784	0.96832	0.96881
0.95492	0.95639	0.95786	0.95889	0.95993	0.96096	0.96199	0.96303	0.96354	0.96406	0.96458	0.96510
0.95007	0.95168	0.95330	0.95440	0.95551	0.95662	0.95773	0.95885	0.95941	0.95998	0.96055	0.96112
0.94481	0.94657	0.94833	0.94952	0.95072	0.95192	0.95312	0.95432	0.95495	0.95558	0.95621	0.95684
0.93908	0.94100	0.94292	0.94421	0.94550	0.94679	0.94808	0.94938	0.95010	0.95082	0.95153	0.95225
0.93280	0.93490	0.93700	0.93839	0.93978	0.94117	0.94257	0.94397	0.94480	0.94564	0.94648	0.94731
0.92594	0.92821	0.93049	0.93200	0.93351	0.93502	0.93653	0.93805	0.93902	0.93999	0.94097	0.94194
0.91851	0.92093	0.92335	0.92500	0.92666	0.92832	0.92998	0.93164	0.93275	0.93386	0.93497	0.93608
0.91045	0.91299	0.91553	0.91737	0.91921	0.92106	0.92290	0.92476	0.92599	0.92723	0.92847	0.92971
0.90171	0.90434	0.90698	0.90904	0.91111	0.91318	0.91525	0.91733	0.91870	0.92006	0.92143	0.92280
0.89220	0.89492	0.89766	0.89996	0.90227	0.90459	0.90691	0.90924	0.91075	0.91227	0.91379	0.91531
0.88184	0.88467	0.88750	0.89005	0.89261	0.89518	0.89775	0.90033	0.90203	0.90373	0.90544	0.90715
0.87062	0.87353	0.87645	0.87926	0.88207	0.88489	0.88772	0.89056	0.89247	0.89438	0.89629	0.89821
0.85851	0.86146	0.86441	0.86748	0.87057	0.87366	0.87677	0.87988	0.88200	0.88413	0.88626	0.88839
0.84550	0.84841	0.85133	0.85468	0.85804	0.86141	0.86480	0.86821	0.87055	0.87289	0.87525	0.87761
0.83138	0.83423	0.83708	0.84073	0.84439	0.84806	0.85175	0.85546	0.85804	0.86063	0.86322	0.86582
0.81599	0.81882	0.82166	0.82560	0.82956	0.83353	0.83753	0.84154	0.84439	0.84725	0.85012	0.85300
0.79928	0.80217	0.80507	0.80928	0.81351	0.81776	0.82203	0.82633	0.82949	0.83266	0.83585	0.83904
0.78137	0.78434	0.78733	0.79178	0.79625	0.80075	0.80528	0.80983	0.81330	0.81680	0.82031	0.82383
0.76226	0.76531	0.76838	0.77304	0.77773	0.78245	0.78720	0.79198	0.79576	0.79956	0.80338	0.80721
0.74183	0.74492	0.74802	0.75287	0.75775	0.76265	0.76759	0.77257	0.77666	0.78078	0.78492	0.78908
0.71997	0.72308	0.72620	0.73118	0.73621	0.74126	0.74635	0.75148	0.75591	0.76036	0.76484	0.76935
0.69667	0.69974	0.70282	0.70794	0.71309	0.71828	0.72351	0.72878	0.73354	0.73834	0.74316	0.74802

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
0.99846	0.99854	0.99861	0.99869	0.99876	0.99884	0.99888	0.99892	0.99896	0.99900	0.99904	0.99907
0.99687	0.99702	0.99717	0.99732	0.99747	0.99762	0.99771	0.99779	0.99787	0.99796	0.99804	0.99811
0.99521	0.99543	0.99565	0.99587	0.99609	0.99631	0.99645	0.99659	0.99672	0.99686	0.99699	0.99709
0.99342	0.99372	0.99402	0.99432	0.99463	0.99493	0.99512	0.99531	0.99550	0.99569	0.99588	0.99600
0.99146	0.99186	0.99226	0.99266	0.99307	0.99347	0.99371	0.99395	0.99419	0.99443	0.99467	0.99482
0.98934	0.98985	0.99036	0.99087	0.99138	0.99189	0.99218	0.99248	0.99277	0.99306	0.99336	0.99354
0.98704	0.98767	0.98829	0.98891	0.98954	0.99016	0.99051	0.99086	0.99122	0.99157	0.99192	0.99213
0.98456	0.98530	0.98604	0.98678	0.98752	0.98826	0.98868	0.98909	0.98951	0.98992	0.99034	0.99060
0.98190	0.98275	0.98360	0.98446	0.98531	0.98617	0.98666	0.98715	0.98765	0.98814	0.98864	0.98894
0.97903	0.97999	0.98096	0.98192	0.98289	0.98386	0.98444	0.98503	0.98562	0.98620	0.98679	0.98713
0.97597	0.97704	0.97811	0.97917	0.98024	0.98131	0.98200	0.98269	0.98338	0.98407	0.98477	0.98515
0.97273	0.97388	0.97503	0.97619	0.97734	0.97849	0.97930	0.98011	0.98093	0.98174	0.98255	0.98298
0.96929	0.97051	0.97172	0.97294	0.97416	0.97538	0.97632	0.97727	0.97821	0.97916	0.98010	0.98058
0.96562	0.96689	0.96816	0.96943	0.97070	0.97198	0.97306	0.97414	0.97522	0.97630	0.97739	0.97794
0.96169	0.96301	0.96433	0.96565	0.96698	0.96830	0.96951	0.97072	0.97193	0.97314	0.97435	0.97498

0.95748	0.95885	0.96024	0.96162	0.96300	0.96439	0.96569	0.96699	0.96830	0.96960	0.97091	0.97165
0.95298	0.95442	0.95587	0.95732	0.95878	0.96023	0.96159	0.96295	0.96431	0.96567	0.96704	0.96791
0.94815	0.94968	0.95121	0.95274	0.95428	0.95582	0.95720	0.95858	0.95997	0.96135	0.96274	0.96377
0.94292	0.94455	0.94619	0.94783	0.94948	0.95112	0.95251	0.95390	0.95529	0.95669	0.95808	0.95925
0.93720	0.93897	0.94074	0.94252	0.94431	0.94609	0.94749	0.94890	0.95030	0.95171	0.95312	0.95440
0.93095	0.93289	0.93483	0.93677	0.93872	0.94067	0.94211	0.94354	0.94498	0.94642	0.94787	0.94922
0.92418	0.92630	0.92843	0.93057	0.93271	0.93486	0.93634	0.93782	0.93931	0.94079	0.94228	0.94366
0.91684	0.91918	0.92153	0.92389	0.92625	0.92862	0.93015	0.93169	0.93322	0.93476	0.93630	0.93768
0.90886	0.91146	0.91406	0.91667	0.91929	0.92191	0.92350	0.92509	0.92668	0.92828	0.92988	0.93125
0.90014	0.90302	0.90591	0.90880	0.91171	0.91463	0.91630	0.91797	0.91965	0.92132	0.92301	0.92436
0.89053	0.89373	0.89695	0.90017	0.90340	0.90665	0.90845	0.91024	0.91205	0.91385	0.91566	0.91700
0.87997	0.88352	0.88708	0.89065	0.89424	0.89785	0.89983	0.90182	0.90381	0.90580	0.90780	0.90914
0.86843	0.87235	0.87629	0.88024	0.88421	0.88820	0.89042	0.89264	0.89486	0.89709	0.89932	0.90069
0.85589	0.86022	0.86458	0.86895	0.87335	0.87778	0.88022	0.88267	0.88513	0.88760	0.89007	0.89152
0.84225	0.84706	0.85190	0.85677	0.86166	0.86659	0.86925	0.87191	0.87459	0.87727	0.87997	0.88154
0.82737	0.83273	0.83812	0.84355	0.84901	0.85451	0.85739	0.86028	0.86318	0.86609	0.86901	0.87075
0.81107	0.81705	0.82307	0.82914	0.83525	0.84141	0.84454	0.84768	0.85083	0.85400	0.85718	0.85910
0.79327	0.79992	0.80663	0.81339	0.82021	0.82709	0.83051	0.83395	0.83740	0.84086	0.84434	0.84651
0.77389	0.78126	0.78871	0.79622	0.80381	0.81147	0.81521	0.81898	0.82276	0.82656	0.83037	0.83285
0.75291	0.76104	0.76925	0.77756	0.78596	0.79444	0.79856	0.80269	0.80684	0.81102	0.81522	0.81803

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0.99910	0.99914	0.99917	0.99920	0.99920	0.99921	0.99921	0.99922	0.99922	0.99922	0.99922	0.99921
0.99817	0.99824	0.99830	0.99837	0.99838	0.99839	0.99840	0.99841	0.99842	0.99842	0.99842	0.99842
0.99718	0.99728	0.99738	0.99747	0.99750	0.99752	0.99754	0.99757	0.99759	0.99760	0.99760	0.99760
0.99612	0.99624	0.99636	0.99648	0.99653	0.99658	0.99663	0.99668	0.99672	0.99673	0.99674	0.99675
0.99497	0.99511	0.99526	0.99541	0.99549	0.99557	0.99565	0.99573	0.99581	0.99582	0.99583	0.99584
0.99371	0.99389	0.99407	0.99424	0.99436	0.99447	0.99459	0.99471	0.99482	0.99483	0.99485	0.99486
0.99235	0.99256	0.99278	0.99299	0.99314	0.99330	0.99345	0.99360	0.99376	0.99377	0.99378	0.99380
0.99086	0.99111	0.99137	0.99163	0.99182	0.99202	0.99221	0.99240	0.99259	0.99262	0.99264	0.99266
0.98924	0.98953	0.98983	0.99013	0.99037	0.99061	0.99084	0.99108	0.99131	0.99135	0.99139	0.99143
0.98747	0.98781	0.98815	0.98849	0.98878	0.98906	0.98935	0.98964	0.98993	0.98998	0.99004	0.99009
0.98553	0.98591	0.98630	0.98668	0.98702	0.98736	0.98771	0.98805	0.98839	0.98847	0.98855	0.98862
0.98340	0.98383	0.98426	0.98469	0.98509	0.98549	0.98589	0.98629	0.98669	0.98679	0.98690	0.98700
0.98106	0.98154	0.98202	0.98250	0.98297	0.98343	0.98390	0.98437	0.98484	0.98496	0.98509	0.98522
0.97848	0.97903	0.97958	0.98012	0.98066	0.98120	0.98173	0.98227	0.98281	0.98295	0.98310	0.98324
0.97561	0.97625	0.97688	0.97752	0.97813	0.97874	0.97935	0.97996	0.98057	0.98073	0.98090	0.98106
0.97240	0.97314	0.97389	0.97463	0.97532	0.97601	0.97670	0.97739	0.97808	0.97825	0.97843	0.97861
0.96879	0.96967	0.97055	0.97143	0.97220	0.97297	0.97375	0.97452	0.97530	0.97549	0.97568	0.97587
0.96479	0.96582	0.96684	0.96787	0.96874	0.96961	0.97048	0.97135	0.97223	0.97243	0.97264	0.97285
0.96041	0.96158	0.96275	0.96392	0.96491	0.96590	0.96689	0.96789	0.96888	0.96911	0.96934	0.96956
0.95568	0.95696	0.95824	0.95953	0.96067	0.96182	0.96297	0.96412	0.96528	0.96552	0.96575	0.96599
0.95057	0.95192	0.95328	0.95463	0.95598	0.95732	0.95867	0.96002	0.96137	0.96160	0.96184	0.96207
0.94504	0.94642	0.94781	0.94919	0.95076	0.95234	0.95392	0.95550	0.95708	0.95731	0.95753	0.95776
0.93906	0.94045	0.94183	0.94322	0.94504	0.94686	0.94868	0.95051	0.95234	0.95257	0.95279	0.95302
0.93262	0.93400	0.93537	0.93675	0.93880	0.94085	0.94291	0.94497	0.94704	0.94730	0.94756	0.94782
0.92571	0.92707	0.92843	0.92979	0.93204	0.93429	0.93654	0.93880	0.94107	0.94142	0.94177	0.94212
0.91834	0.91968	0.92102	0.92237	0.92476	0.92716	0.92956	0.93197	0.93439	0.93488	0.93537	0.93586
0.91047	0.91181	0.91315	0.91449	0.91698	0.91948	0.92198	0.92448	0.92700	0.92766	0.92833	0.92899
0.90206	0.90343	0.90480	0.90617	0.90870	0.91124	0.91379	0.91635	0.91891	0.91976	0.92061	0.92147
0.89297	0.89442	0.89587	0.89733	0.89988	0.90243	0.90499	0.90756	0.91014	0.91117	0.91220	0.91323
0.88312	0.88470	0.88628	0.88787	0.89042	0.89297	0.89553	0.89810	0.90067	0.90185	0.90303	0.90420
0.87248	0.87422	0.87597	0.87771	0.88025	0.88280	0.88535	0.88791	0.89048	0.89176	0.89304	0.89432

0.86103	0.86297	0.86491	0.86686	0.86938	0.87191	0.87445	0.87699	0.87954	0.88100	0.88247	0.88393
0.84869	0.85088	0.85307	0.85527	0.85778	0.86030	0.86283	0.86536	0.86791	0.86937	0.87083	0.87230
0.83533	0.83782	0.84032	0.84282	0.84535	0.84789	0.85043	0.85299	0.85555	0.85697	0.85839	0.85981
0.82086	0.82370	0.82655	0.82940	0.83199	0.83458	0.83718	0.83979	0.84241	0.84375	0.84509	0.84643

1994	1995
0.99921	0.99921
0.99842	0.99842
0.99761	0.99761
0.99676	0.99676
0.99585	0.99586
0.99487	0.99488
0.99381	0.99383
0.99268	0.99270
0.99146	0.99150
0.99015	0.99020
0.98870	0.98878
0.98710	0.98721
0.98534	0.98547
0.98339	0.98354
0.98123	0.98139
0.97879	0.97897
0.97606	0.97625
0.97306	0.97327
0.96979	0.97002
0.96623	0.96647
0.96231	0.96254
0.95799	0.95821
0.95324	0.95347
0.94808	0.94834
0.94247	0.94282
0.93635	0.93684
0.92966	0.93032
0.92232	0.92318
0.91426	0.91529
0.90538	0.90656
0.89561	0.89690
0.88540	0.88687
0.87377	0.87524
0.86124	0.86267
0.84778	0.84912

Aged 45	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
45	0.98892	0.98982	0.99071	0.99161	0.99251	0.99288	0.99324	0.99361	0.99398	0.99414	0.99430
46	0.97752	0.97928	0.98105	0.98282	0.98459	0.98529	0.98599	0.98669	0.98739	0.98774	0.98808
47	0.96552	0.96813	0.97074	0.97337	0.97599	0.97704	0.97809	0.97913	0.98018	0.98073	0.98127
48	0.95288	0.95633	0.95980	0.96328	0.96677	0.96818	0.96958	0.97099	0.97240	0.97313	0.97387
49	0.93959	0.94393	0.94828	0.95266	0.95706	0.95881	0.96056	0.96232	0.96408	0.96498	0.96588
50	0.92567	0.93090	0.93617	0.94146	0.94679	0.94888	0.95097	0.95307	0.95518	0.95622	0.95726
51	0.91096	0.91712	0.92333	0.92957	0.93586	0.93829	0.94073	0.94317	0.94563	0.94678	0.94794
52	0.89521	0.90235	0.90954	0.91679	0.92411	0.92688	0.92967	0.93247	0.93527	0.93654	0.93781
53	0.87849	0.88662	0.89484	0.90313	0.91149	0.91460	0.91772	0.92086	0.92400	0.92539	0.92679
54	0.86108	0.87017	0.87934	0.88862	0.89799	0.90144	0.90489	0.90837	0.91185	0.91335	0.91486

55	0.84281	0.85281	0.86293	0.87317	0.88353	0.88736	0.89121	0.89507	0.89895	0.90051	0.90207
56	0.82310	0.83409	0.84523	0.85653	0.86797	0.87227	0.87659	0.88093	0.88529	0.88684	0.88838
57	0.80186	0.81387	0.82605	0.83842	0.85097	0.85583	0.86072	0.86563	0.87057	0.87207	0.87357
58	0.77935	0.79234	0.80556	0.81899	0.83265	0.83802	0.84341	0.84885	0.85432	0.85583	0.85735
59	0.75569	0.76975	0.78407	0.79865	0.81351	0.81919	0.82490	0.83066	0.83646	0.83807	0.83967
60	0.73057	0.74578	0.76131	0.77717	0.79336	0.79926	0.80521	0.81121	0.81725	0.81897	0.82070
61	0.70379	0.72019	0.73697	0.75414	0.77171	0.77790	0.78415	0.79045	0.79680	0.79864	0.80048
62	0.67559	0.69293	0.71071	0.72895	0.74766	0.75442	0.76123	0.76811	0.77506	0.77697	0.77889
63	0.64621	0.66442	0.68315	0.70240	0.72219	0.72950	0.73689	0.74436	0.75190	0.75386	0.75583
64	0.61574	0.63474	0.65432	0.67451	0.69531	0.70319	0.71115	0.71921	0.72735	0.72932	0.73130

1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
0.99447	0.99463	0.99479	0.99489	0.99499	0.99508	0.99518	0.99528	0.99535	0.99542	0.99548	0.99555
0.98843	0.98877	0.98912	0.98932	0.98952	0.98972	0.98992	0.99012	0.99029	0.99045	0.99061	0.99078
0.98182	0.98236	0.98291	0.98322	0.98354	0.98385	0.98417	0.98448	0.98477	0.98506	0.98535	0.98564
0.97460	0.97534	0.97608	0.97652	0.97697	0.97741	0.97786	0.97831	0.97874	0.97918	0.97961	0.98005
0.96678	0.96769	0.96859	0.96920	0.96980	0.97041	0.97102	0.97163	0.97221	0.97279	0.97337	0.97395
0.95830	0.95934	0.96039	0.96120	0.96201	0.96282	0.96363	0.96445	0.96516	0.96588	0.96660	0.96732
0.94910	0.95026	0.95142	0.95247	0.95353	0.95458	0.95564	0.95670	0.95756	0.95842	0.95928	0.96013
0.93908	0.94036	0.94164	0.94296	0.94428	0.94561	0.94693	0.94826	0.94928	0.95030	0.95132	0.95234
0.92819	0.92958	0.93099	0.93258	0.93417	0.93577	0.93737	0.93897	0.94019	0.94141	0.94263	0.94385
0.91637	0.91788	0.91940	0.92126	0.92314	0.92502	0.92690	0.92878	0.93022	0.93166	0.93310	0.93455
0.90363	0.90519	0.90676	0.90893	0.91110	0.91328	0.91546	0.91765	0.91931	0.92098	0.92266	0.92433
0.88993	0.89148	0.89303	0.89551	0.89799	0.90047	0.90297	0.90547	0.90737	0.90928	0.91119	0.91311
0.87508	0.87658	0.87809	0.88089	0.88370	0.88652	0.88934	0.89218	0.89434	0.89650	0.89867	0.90085
0.85887	0.86039	0.86192	0.86504	0.86818	0.87133	0.87449	0.87766	0.88011	0.88257	0.88503	0.88751
0.84129	0.84290	0.84452	0.84794	0.85139	0.85484	0.85831	0.86179	0.86458	0.86737	0.87017	0.87299
0.82243	0.82417	0.82590	0.82961	0.83333	0.83706	0.84081	0.84458	0.84771	0.85085	0.85400	0.85716
0.80232	0.80417	0.80602	0.80997	0.81394	0.81793	0.82194	0.82597	0.82942	0.83289	0.83637	0.83987
0.78081	0.78274	0.78467	0.78884	0.79303	0.79724	0.80147	0.80572	0.80952	0.81333	0.81716	0.82100
0.75781	0.75979	0.76178	0.76612	0.77048	0.77487	0.77929	0.78373	0.78788	0.79206	0.79626	0.80048
0.73328	0.73526	0.73725	0.74176	0.74629	0.75085	0.75544	0.76006	0.76457	0.76912	0.77368	0.77828

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
0.99562	0.99569	0.99576	0.99582	0.99589	0.99596	0.99606	0.99616	0.99627	0.99637	0.99647	0.99659
0.99094	0.99109	0.99123	0.99138	0.99152	0.99167	0.99183	0.99200	0.99216	0.99233	0.99249	0.99275
0.98593	0.98616	0.98640	0.98663	0.98687	0.98711	0.98730	0.98750	0.98769	0.98789	0.98809	0.98850
0.98048	0.98084	0.98119	0.98155	0.98190	0.98226	0.98247	0.98268	0.98289	0.98310	0.98331	0.98386
0.97453	0.97504	0.97554	0.97605	0.97656	0.97706	0.97729	0.97752	0.97775	0.97798	0.97821	0.97889
0.96804	0.96873	0.96941	0.97009	0.97078	0.97146	0.97174	0.97201	0.97228	0.97255	0.97282	0.97357
0.96099	0.96189	0.96278	0.96367	0.96457	0.96546	0.96579	0.96611	0.96644	0.96677	0.96709	0.96788
0.95336	0.95449	0.95562	0.95675	0.95789	0.95902	0.95941	0.95979	0.96018	0.96056	0.96095	0.96174
0.94507	0.94647	0.94787	0.94927	0.95068	0.95209	0.95254	0.95300	0.95345	0.95390	0.95436	0.95514
0.93600	0.93771	0.93942	0.94113	0.94285	0.94457	0.94511	0.94566	0.94621	0.94676	0.94731	0.94808
0.92601	0.92807	0.93012	0.93219	0.93426	0.93633	0.93702	0.93770	0.93839	0.93908	0.93977	0.94053
0.91503	0.91746	0.91989	0.92233	0.92478	0.92724	0.92813	0.92902	0.92991	0.93081	0.93170	0.93247
0.90303	0.90586	0.90870	0.91155	0.91441	0.91728	0.91842	0.91956	0.92071	0.92185	0.92300	0.92380
0.88998	0.89326	0.89656	0.89986	0.90318	0.90651	0.90790	0.90930	0.91070	0.91210	0.91350	0.91439
0.87581	0.87960	0.88341	0.88724	0.89109	0.89495	0.89658	0.89822	0.89985	0.90149	0.90313	0.90416
0.86033	0.86472	0.86912	0.87356	0.87801	0.88249	0.88436	0.88624	0.88812	0.89000	0.89189	0.89309
0.84338	0.84843	0.85352	0.85863	0.86377	0.86895	0.87110	0.87325	0.87541	0.87757	0.87974	0.88115
0.82487	0.83065	0.83647	0.84233	0.84823	0.85417	0.85663	0.85910	0.86158	0.86407	0.86656	0.86823
0.80472	0.81127	0.81788	0.82454	0.83126	0.83803	0.84085	0.84368	0.84652	0.84937	0.85223	0.85422

0.78290	0.79027	0.79771	0.80522	0.81280	0.82045	0.82367	0.82690	0.83015	0.83341	0.83668	0.83903
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1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0.99670	0.99682	0.99693	0.99705	0.99713	0.99721	0.99730	0.99738	0.99746	0.99747	0.99749	0.99750
0.99300	0.99326	0.99351	0.99377	0.99394	0.99411	0.99428	0.99446	0.99463	0.99465	0.99468	0.99471
0.98890	0.98931	0.98972	0.99013	0.99040	0.99068	0.99095	0.99122	0.99149	0.99154	0.99159	0.99163
0.98442	0.98498	0.98553	0.98609	0.98649	0.98689	0.98729	0.98768	0.98808	0.98815	0.98821	0.98828
0.97956	0.98024	0.98092	0.98160	0.98216	0.98272	0.98328	0.98384	0.98441	0.98448	0.98456	0.98464
0.97433	0.97508	0.97584	0.97659	0.97736	0.97812	0.97889	0.97965	0.98042	0.98050	0.98057	0.98065
0.96866	0.96945	0.97024	0.97102	0.97203	0.97303	0.97404	0.97504	0.97605	0.97611	0.97618	0.97625
0.96253	0.96333	0.96412	0.96492	0.96617	0.96743	0.96869	0.96995	0.97122	0.97128	0.97135	0.97142
0.95593	0.95672	0.95751	0.95830	0.95979	0.96129	0.96280	0.96430	0.96581	0.96591	0.96601	0.96612
0.94885	0.94963	0.95040	0.95118	0.95288	0.95459	0.95629	0.95801	0.95972	0.95992	0.96011	0.96031
0.94129	0.94206	0.94282	0.94359	0.94544	0.94730	0.94917	0.95104	0.95291	0.95325	0.95359	0.95393
0.93323	0.93400	0.93476	0.93553	0.93749	0.93945	0.94142	0.94339	0.94537	0.94589	0.94641	0.94692
0.92460	0.92541	0.92621	0.92701	0.92903	0.93104	0.93306	0.93509	0.93712	0.93783	0.93854	0.93925
0.91529	0.91618	0.91707	0.91797	0.92000	0.92204	0.92408	0.92613	0.92818	0.92907	0.92996	0.93086
0.90519	0.90622	0.90726	0.90829	0.91033	0.91237	0.91442	0.91647	0.91852	0.91957	0.92061	0.92166
0.89429	0.89549	0.89670	0.89790	0.89994	0.90198	0.90402	0.90607	0.90813	0.90928	0.91043	0.91159
0.88256	0.88397	0.88538	0.88679	0.88882	0.89085	0.89289	0.89493	0.89698	0.89831	0.89965	0.90100
0.86990	0.87158	0.87326	0.87494	0.87696	0.87899	0.88103	0.88306	0.88511	0.88645	0.88779	0.88914
0.85621	0.85820	0.86020	0.86221	0.86426	0.86631	0.86837	0.87043	0.87250	0.87380	0.87511	0.87641
0.84138	0.84374	0.84611	0.84848	0.85059	0.85271	0.85484	0.85697	0.85910	0.86032	0.86155	0.86277

1994	1995
0.99752	0.99753
0.99473	0.99476
0.99168	0.99172
0.98835	0.98841
0.98472	0.98479
0.98072	0.98079
0.97631	0.97638
0.97148	0.97155
0.96622	0.96632
0.96050	0.96070
0.95427	0.95461
0.94744	0.94796
0.93997	0.94068
0.93175	0.93265
0.92270	0.92375
0.91275	0.91390
0.90234	0.90369
0.89049	0.89184
0.87772	0.87902
0.86400	0.86522

Aged 60	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
60	0.96675	0.96886	0.97098	0.97310	0.97523	0.97568	0.97613	0.97658	0.97703	0.97722	0.97740
61	0.93132	0.93561	0.93993	0.94426	0.94862	0.94961	0.95060	0.95159	0.95258	0.95295	0.95332
62	0.89400	0.90020	0.90644	0.91273	0.91906	0.92093	0.92282	0.92470	0.92659	0.92710	0.92761
63	0.85513	0.86317	0.87128	0.87948	0.88774	0.89052	0.89331	0.89610	0.89890	0.89953	0.90015
64	0.81480	0.82460	0.83452	0.84455	0.85471	0.85840	0.86210	0.86583	0.86956	0.87025	0.87093

1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
0.97759	0.97777	0.97796	0.97837	0.97879	0.97920	0.97962	0.98003	0.98049	0.98095	0.98141	0.98187
0.95369	0.95405	0.95442	0.95522	0.95602	0.95682	0.95763	0.95843	0.95934	0.96025	0.96116	0.96207
0.92812	0.92863	0.92914	0.93030	0.93145	0.93261	0.93378	0.93494	0.93632	0.93769	0.93907	0.94046
0.90077	0.90140	0.90203	0.90350	0.90497	0.90645	0.90793	0.90942	0.91129	0.91317	0.91505	0.91694
0.87162	0.87230	0.87299	0.87477	0.87656	0.87836	0.88015	0.88195	0.88433	0.88672	0.88911	0.89151

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
0.98233	0.98308	0.98382	0.98457	0.98532	0.98607	0.98637	0.98666	0.98696	0.98725	0.98755	0.98775
0.96298	0.96457	0.96616	0.96775	0.96935	0.97094	0.97157	0.97220	0.97284	0.97347	0.97410	0.97455
0.94184	0.94434	0.94686	0.94937	0.95190	0.95443	0.95544	0.95646	0.95747	0.95849	0.95951	0.96026
0.91883	0.92232	0.92582	0.92933	0.93286	0.93640	0.93784	0.93929	0.94074	0.94219	0.94364	0.94476
0.89392	0.89844	0.90299	0.90755	0.91214	0.91675	0.91868	0.92061	0.92254	0.92448	0.92642	0.92796

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0.98795	0.98816	0.98836	0.98856	0.98858	0.98861	0.98863	0.98866	0.98868	0.98881	0.98894	0.98908
0.97499	0.97544	0.97588	0.97633	0.97637	0.97641	0.97646	0.97650	0.97654	0.97689	0.97723	0.97758
0.96101	0.96177	0.96252	0.96328	0.96335	0.96341	0.96348	0.96355	0.96362	0.96399	0.96435	0.96472
0.94588	0.94701	0.94813	0.94926	0.94939	0.94952	0.94964	0.94977	0.94990	0.95023	0.95057	0.95091
0.92950	0.93105	0.93260	0.93415	0.93438	0.93461	0.93484	0.93508	0.93531	0.93557	0.93584	0.93611

1994	1995
0.98921	0.98934
0.97793	0.97828
0.96509	0.96545
0.95124	0.95158
0.93637	0.93664

Table C-6: Estimated Female Probability of Future Survival, Aged 15, 30, 45, and 60

Aged 15	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
15	0.99695	0.99739	0.99783	0.99827	0.99871	0.99885	0.99899	0.99914	0.99928	0.99933	0.99937
16	0.99324	0.99423	0.99522	0.99621	0.99720	0.99751	0.99782	0.99813	0.99844	0.99853	0.99862
17	0.98881	0.99045	0.99210	0.99375	0.99540	0.99590	0.99640	0.99691	0.99741	0.99755	0.99770
18	0.98353	0.98595	0.98837	0.99080	0.99324	0.99396	0.99469	0.99542	0.99615	0.99635	0.99656
19	0.97736	0.98069	0.98402	0.98737	0.99072	0.99171	0.99269	0.99368	0.99466	0.99495	0.99523
20	0.97058	0.97490	0.97924	0.98360	0.98798	0.98923	0.99048	0.99174	0.99299	0.99337	0.99375
21	0.96349	0.96883	0.97421	0.97962	0.98506	0.98658	0.98811	0.98964	0.99117	0.99165	0.99213
22	0.95625	0.96259	0.96897	0.97539	0.98185	0.98369	0.98554	0.98738	0.98923	0.98982	0.99042
23	0.94891	0.95619	0.96353	0.97092	0.97837	0.98057	0.98277	0.98498	0.98719	0.98790	0.98862
24	0.94152	0.94972	0.95799	0.96633	0.97474	0.97732	0.97991	0.98251	0.98511	0.98594	0.98678
25	0.93432	0.94337	0.95252	0.96175	0.97106	0.97403	0.97700	0.97999	0.98298	0.98394	0.98491
26	0.92745	0.93726	0.94718	0.95720	0.96733	0.97069	0.97405	0.97742	0.98081	0.98190	0.98299
27	0.92077	0.93127	0.94190	0.95264	0.96351	0.96726	0.97101	0.97479	0.97857	0.97980	0.98103
28	0.91413	0.92532	0.93664	0.94810	0.95971	0.96382	0.96796	0.97211	0.97627	0.97765	0.97902
29	0.90747	0.91934	0.93137	0.94356	0.95590	0.96037	0.96487	0.96939	0.97393	0.97546	0.97698
30	0.90089	0.91342	0.92613	0.93902	0.95208	0.95691	0.96176	0.96663	0.97153	0.97321	0.97490
31	0.89444	0.90761	0.92097	0.93452	0.94828	0.95343	0.95862	0.96383	0.96908	0.97091	0.97275
32	0.88811	0.90187	0.91585	0.93004	0.94445	0.94994	0.95546	0.96100	0.96659	0.96856	0.97054
33	0.88186	0.89619	0.91076	0.92556	0.94060	0.94641	0.95225	0.95813	0.96404	0.96616	0.96828
34	0.87569	0.89056	0.90568	0.92106	0.93671	0.94283	0.94898	0.95518	0.96142	0.96368	0.96594
35	0.86956	0.88494	0.90060	0.91654	0.93275	0.93917	0.94563	0.95213	0.95868	0.96109	0.96350
36	0.86345	0.87933	0.89550	0.91196	0.92873	0.93543	0.94218	0.94898	0.95582	0.95839	0.96096

37	0.85732	0.87368	0.89034	0.90733	0.92464	0.93162	0.93865	0.94574	0.95288	0.95559	0.95831
38	0.85117	0.86797	0.88510	0.90257	0.92038	0.92767	0.93501	0.94240	0.94986	0.95271	0.95556
39	0.84496	0.86219	0.87976	0.89769	0.91599	0.92358	0.93123	0.93895	0.94673	0.94970	0.95268
40	0.83862	0.85626	0.87428	0.89268	0.91146	0.91937	0.92734	0.93538	0.94350	0.94659	0.94970
41	0.83206	0.85015	0.86864	0.88752	0.90682	0.91504	0.92333	0.93170	0.94015	0.94337	0.94661
42	0.82538	0.84392	0.86288	0.88226	0.90208	0.91059	0.91918	0.92786	0.93661	0.93998	0.94336
43	0.81872	0.83768	0.85708	0.87693	0.89724	0.90602	0.91488	0.92382	0.93286	0.93637	0.93990
44	0.81213	0.83146	0.85124	0.87150	0.89224	0.90126	0.91037	0.91958	0.92887	0.93253	0.93620
45	0.80547	0.82512	0.84524	0.86586	0.88697	0.89626	0.90564	0.91512	0.92469	0.92846	0.93225
46	0.79861	0.81855	0.83898	0.85993	0.88139	0.89095	0.90060	0.91036	0.92023	0.92411	0.92800
47	0.79145	0.81166	0.83239	0.85366	0.87546	0.88526	0.89517	0.90518	0.91531	0.91933	0.92335
48	0.78383	0.80434	0.82538	0.84697	0.86912	0.87915	0.88929	0.89955	0.90992	0.91409	0.91828
49	0.77569	0.79652	0.81792	0.83989	0.86245	0.87269	0.88305	0.89354	0.90414	0.90849	0.91285
50	0.76707	0.78829	0.81009	0.83249	0.85551	0.86596	0.87654	0.88724	0.89808	0.90258	0.90711
51	0.75809	0.77965	0.80183	0.82464	0.84810	0.85880	0.86963	0.88060	0.89171	0.89635	0.90101
52	0.74876	0.77061	0.79310	0.81625	0.84007	0.85106	0.86219	0.87347	0.88489	0.88966	0.89445
53	0.73910	0.76120	0.78397	0.80742	0.83157	0.84283	0.85424	0.86581	0.87754	0.88244	0.88736
54	0.72908	0.75143	0.77447	0.79821	0.82268	0.83420	0.84587	0.85771	0.86971	0.87475	0.87982
55	0.71859	0.74117	0.76446	0.78848	0.81325	0.82505	0.83702	0.84916	0.86147	0.86665	0.87185
56	0.70735	0.73017	0.75372	0.77803	0.80312	0.81525	0.82756	0.84005	0.85274	0.85804	0.86338
57	0.69535	0.71834	0.74209	0.76662	0.79197	0.80449	0.81721	0.83013	0.84326	0.84870	0.85418
58	0.68260	0.70574	0.72968	0.75442	0.78001	0.79290	0.80600	0.81932	0.83286	0.83846	0.84410
59	0.66899	0.69239	0.71661	0.74168	0.76762	0.78078	0.79416	0.80777	0.82161	0.82738	0.83318
60	0.65423	0.67800	0.70265	0.72818	0.75465	0.76804	0.78167	0.79555	0.80967	0.81557	0.82152
61	0.63822	0.66241	0.68752	0.71358	0.74063	0.75430	0.76822	0.78239	0.79683	0.80288	0.80899
62	0.62115	0.64577	0.67135	0.69796	0.72561	0.73951	0.75366	0.76809	0.78279	0.78904	0.79535
63	0.60359	0.62855	0.65455	0.68162	0.70980	0.72382	0.73811	0.75269	0.76755	0.77401	0.78051
64	0.58501	0.61010	0.63627	0.66356	0.69202	0.70639	0.72106	0.73603	0.75132	0.75791	0.76457

1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
0.99942	0.99946	0.99951	0.99954	0.99956	0.99959	0.99961	0.99964	0.99965	0.99966	0.99966	0.99967
0.99872	0.99881	0.99890	0.99897	0.99904	0.99910	0.99917	0.99924	0.99925	0.99927	0.99928	0.99930
0.99784	0.99798	0.99812	0.99825	0.99838	0.99852	0.99865	0.99878	0.99880	0.99882	0.99884	0.99886
0.99676	0.99697	0.99717	0.99739	0.99761	0.99783	0.99804	0.99826	0.99829	0.99831	0.99833	0.99836
0.99552	0.99580	0.99609	0.99640	0.99672	0.99704	0.99735	0.99767	0.99770	0.99773	0.99776	0.99779
0.99412	0.99450	0.99488	0.99530	0.99573	0.99615	0.99658	0.99700	0.99705	0.99709	0.99713	0.99717
0.99261	0.99310	0.99358	0.99411	0.99465	0.99518	0.99572	0.99626	0.99632	0.99638	0.99644	0.99650
0.99101	0.99160	0.99220	0.99284	0.99349	0.99414	0.99479	0.99544	0.99552	0.99561	0.99570	0.99578
0.98933	0.99004	0.99076	0.99152	0.99228	0.99304	0.99380	0.99456	0.99468	0.99480	0.99492	0.99503
0.98762	0.98845	0.98929	0.99016	0.99103	0.99190	0.99277	0.99364	0.99379	0.99394	0.99410	0.99425
0.98587	0.98683	0.98780	0.98877	0.98975	0.99072	0.99170	0.99267	0.99287	0.99306	0.99325	0.99344
0.98409	0.98518	0.98628	0.98735	0.98842	0.98950	0.99057	0.99165	0.99189	0.99212	0.99235	0.99259
0.98226	0.98349	0.98473	0.98590	0.98707	0.98825	0.98942	0.99060	0.99088	0.99116	0.99143	0.99171
0.98040	0.98178	0.98316	0.98443	0.98570	0.98698	0.98825	0.98953	0.98985	0.99017	0.99049	0.99081
0.97851	0.98004	0.98158	0.98295	0.98431	0.98569	0.98706	0.98843	0.98880	0.98916	0.98953	0.98989
0.97658	0.97827	0.97996	0.98142	0.98289	0.98435	0.98582	0.98730	0.98771	0.98812	0.98853	0.98894
0.97458	0.97643	0.97827	0.97984	0.98140	0.98297	0.98454	0.98611	0.98657	0.98703	0.98749	0.98794
0.97253	0.97452	0.97651	0.97818	0.97984	0.98151	0.98318	0.98486	0.98537	0.98587	0.98638	0.98689
0.97040	0.97253	0.97467	0.97643	0.97820	0.97997	0.98174	0.98352	0.98408	0.98463	0.98519	0.98575
0.96821	0.97048	0.97276	0.97462	0.97648	0.97835	0.98023	0.98210	0.98271	0.98332	0.98393	0.98454
0.96592	0.96834	0.97077	0.97273	0.97470	0.97667	0.97864	0.98062	0.98128	0.98194	0.98259	0.98325
0.96353	0.96612	0.96871	0.97077	0.97283	0.97490	0.97697	0.97905	0.97976	0.98047	0.98118	0.98189
0.96104	0.96377	0.96652	0.96868	0.97085	0.97303	0.97521	0.97740	0.97816	0.97892	0.97968	0.98045

0.95842	0.96130	0.96418	0.96646	0.96875	0.97104	0.97334	0.97565	0.97646	0.97727	0.97809	0.97890
0.95568	0.95868	0.96169	0.96410	0.96651	0.96893	0.97135	0.97378	0.97465	0.97551	0.97638	0.97724
0.95282	0.95595	0.95908	0.96161	0.96415	0.96670	0.96925	0.97181	0.97272	0.97363	0.97455	0.97546
0.94986	0.95312	0.95639	0.95903	0.96169	0.96435	0.96701	0.96969	0.97065	0.97161	0.97257	0.97353
0.94675	0.95016	0.95358	0.95633	0.95908	0.96185	0.96462	0.96740	0.96841	0.96942	0.97043	0.97144
0.94345	0.94700	0.95057	0.95342	0.95628	0.95915	0.96202	0.96490	0.96597	0.96704	0.96811	0.96918
0.93988	0.94358	0.94729	0.95025	0.95321	0.95619	0.95917	0.96216	0.96331	0.96446	0.96560	0.96675
0.93605	0.93987	0.94370	0.94678	0.94986	0.95295	0.95606	0.95917	0.96041	0.96165	0.96290	0.96414
0.93191	0.93584	0.93979	0.94299	0.94620	0.94942	0.95265	0.95589	0.95724	0.95860	0.95996	0.96131
0.92740	0.93147	0.93555	0.93888	0.94222	0.94557	0.94894	0.95232	0.95379	0.95526	0.95673	0.95821
0.92250	0.92672	0.93097	0.93444	0.93791	0.94140	0.94491	0.94842	0.95001	0.95160	0.95319	0.95478
0.91724	0.92165	0.92608	0.92968	0.93329	0.93693	0.94057	0.94423	0.94593	0.94763	0.94933	0.95104
0.91166	0.91623	0.92083	0.92458	0.92835	0.93214	0.93594	0.93976	0.94157	0.94337	0.94519	0.94700
0.90570	0.91041	0.91514	0.91908	0.92303	0.92700	0.93099	0.93499	0.93691	0.93883	0.94075	0.94268
0.89927	0.90411	0.90899	0.91312	0.91727	0.92143	0.92562	0.92983	0.93187	0.93392	0.93597	0.93803
0.89232	0.89730	0.90231	0.90665	0.91101	0.91539	0.91979	0.92421	0.92639	0.92857	0.93076	0.93296
0.88492	0.89004	0.89520	0.89974	0.90430	0.90888	0.91349	0.91812	0.92044	0.92276	0.92508	0.92741
0.87709	0.88236	0.88767	0.89239	0.89714	0.90191	0.90671	0.91154	0.91399	0.91645	0.91891	0.92138
0.86875	0.87416	0.87960	0.88450	0.88944	0.89440	0.89938	0.90440	0.90700	0.90961	0.91223	0.91485
0.85969	0.86524	0.87083	0.87593	0.88107	0.88624	0.89143	0.89666	0.89944	0.90224	0.90504	0.90785
0.84978	0.85550	0.86126	0.86659	0.87196	0.87736	0.88279	0.88826	0.89125	0.89426	0.89727	0.90030
0.83902	0.84491	0.85084	0.85643	0.86206	0.86773	0.87344	0.87918	0.88238	0.88560	0.88882	0.89206
0.82751	0.83355	0.83963	0.84549	0.85139	0.85734	0.86332	0.86935	0.87273	0.87612	0.87953	0.88295
0.81514	0.82134	0.82758	0.83370	0.83986	0.84607	0.85232	0.85862	0.86215	0.86570	0.86926	0.87284
0.80170	0.80810	0.81455	0.82091	0.82732	0.83378	0.84028	0.84684	0.85054	0.85425	0.85797	0.86172
0.78708	0.79369	0.80037	0.80697	0.81363	0.82034	0.82711	0.83394	0.83783	0.84174	0.84567	0.84961
0.77128	0.77805	0.78488	0.79174	0.79865	0.80563	0.81267	0.81977	0.82393	0.82811	0.83231	0.83654

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
0.99968	0.99969	0.99971	0.99972	0.99974	0.99975	0.99976	0.99977	0.99978	0.99979	0.99980	0.99980
0.99931	0.99934	0.99937	0.99941	0.99944	0.99947	0.99949	0.99951	0.99952	0.99954	0.99956	0.99957
0.99888	0.99893	0.99898	0.99904	0.99909	0.99914	0.99917	0.99920	0.99922	0.99925	0.99928	0.99930
0.99838	0.99846	0.99853	0.99861	0.99868	0.99876	0.99880	0.99884	0.99889	0.99893	0.99897	0.99899
0.99782	0.99792	0.99802	0.99812	0.99822	0.99832	0.99838	0.99844	0.99851	0.99857	0.99863	0.99866
0.99721	0.99734	0.99746	0.99758	0.99771	0.99783	0.99792	0.99801	0.99810	0.99819	0.99828	0.99832
0.99656	0.99671	0.99686	0.99701	0.99716	0.99731	0.99743	0.99756	0.99768	0.99780	0.99792	0.99797
0.99587	0.99605	0.99623	0.99641	0.99659	0.99676	0.99692	0.99708	0.99724	0.99739	0.99755	0.99761
0.99515	0.99536	0.99557	0.99578	0.99599	0.99620	0.99639	0.99659	0.99679	0.99699	0.99718	0.99725
0.99440	0.99464	0.99489	0.99513	0.99537	0.99561	0.99585	0.99608	0.99632	0.99656	0.99679	0.99687
0.99363	0.99390	0.99418	0.99446	0.99473	0.99501	0.99528	0.99555	0.99582	0.99609	0.99637	0.99645
0.99282	0.99314	0.99346	0.99378	0.99410	0.99441	0.99471	0.99501	0.99531	0.99561	0.99591	0.99601
0.99199	0.99235	0.99272	0.99308	0.99344	0.99381	0.99413	0.99445	0.99477	0.99510	0.99542	0.99554
0.99113	0.99154	0.99194	0.99235	0.99276	0.99317	0.99352	0.99387	0.99422	0.99457	0.99492	0.99506
0.99025	0.99070	0.99115	0.99160	0.99205	0.99250	0.99288	0.99326	0.99364	0.99402	0.99440	0.99455
0.98935	0.98984	0.99032	0.99081	0.99130	0.99178	0.99220	0.99262	0.99303	0.99345	0.99387	0.99402
0.98840	0.98893	0.98946	0.98998	0.99051	0.99104	0.99149	0.99194	0.99240	0.99285	0.99330	0.99347
0.98740	0.98797	0.98854	0.98911	0.98968	0.99025	0.99074	0.99123	0.99171	0.99220	0.99269	0.99287
0.98631	0.98693	0.98755	0.98818	0.98880	0.98942	0.98994	0.99046	0.99098	0.99150	0.99202	0.99222
0.98515	0.98582	0.98650	0.98718	0.98786	0.98854	0.98909	0.98965	0.99020	0.99075	0.99131	0.99153
0.98391	0.98465	0.98539	0.98613	0.98686	0.98760	0.98819	0.98878	0.98937	0.98995	0.99054	0.99078
0.98261	0.98340	0.98420	0.98500	0.98580	0.98660	0.98722	0.98785	0.98848	0.98910	0.98973	0.98999
0.98121	0.98207	0.98293	0.98379	0.98465	0.98551	0.98618	0.98684	0.98751	0.98818	0.98885	0.98913
0.97972	0.98064	0.98156	0.98248	0.98340	0.98433	0.98504	0.98575	0.98646	0.98718	0.98789	0.98819

0.97811	0.97910	0.98008	0.98107	0.98206	0.98305	0.98381	0.98457	0.98534	0.98610	0.98686	0.98718
0.97638	0.97743	0.97849	0.97955	0.98060	0.98166	0.98248	0.98330	0.98412	0.98494	0.98576	0.98610
0.97450	0.97562	0.97675	0.97788	0.97902	0.98015	0.98103	0.98191	0.98279	0.98367	0.98456	0.98492
0.97245	0.97366	0.97487	0.97608	0.97729	0.97850	0.97945	0.98040	0.98135	0.98230	0.98325	0.98363
0.97025	0.97154	0.97284	0.97414	0.97543	0.97673	0.97775	0.97876	0.97978	0.98079	0.98181	0.98221
0.96790	0.96929	0.97067	0.97206	0.97345	0.97484	0.97592	0.97699	0.97808	0.97916	0.98024	0.98067
0.96539	0.96686	0.96834	0.96982	0.97131	0.97279	0.97393	0.97508	0.97623	0.97737	0.97852	0.97899
0.96267	0.96425	0.96582	0.96739	0.96897	0.97055	0.97177	0.97299	0.97420	0.97542	0.97664	0.97716
0.95969	0.96137	0.96304	0.96473	0.96641	0.96810	0.96939	0.97069	0.97198	0.97328	0.97458	0.97515
0.95638	0.95818	0.95998	0.96179	0.96360	0.96542	0.96679	0.96817	0.96955	0.97094	0.97232	0.97295
0.95275	0.95469	0.95664	0.95859	0.96054	0.96250	0.96396	0.96543	0.96690	0.96837	0.96984	0.97053
0.94882	0.95091	0.95301	0.95511	0.95721	0.95932	0.96088	0.96244	0.96400	0.96557	0.96714	0.96789
0.94462	0.94685	0.94909	0.95134	0.95359	0.95585	0.95752	0.95918	0.96085	0.96252	0.96420	0.96502
0.94009	0.94247	0.94486	0.94726	0.94966	0.95207	0.95386	0.95565	0.95745	0.95925	0.96105	0.96194
0.93516	0.93771	0.94026	0.94283	0.94540	0.94797	0.94991	0.95186	0.95380	0.95575	0.95771	0.95866
0.92975	0.93250	0.93526	0.93802	0.94079	0.94357	0.94567	0.94777	0.94988	0.95199	0.95411	0.95515
0.92386	0.92684	0.92983	0.93283	0.93584	0.93886	0.94111	0.94338	0.94564	0.94792	0.95020	0.95134
0.91748	0.92071	0.92395	0.92721	0.93047	0.93375	0.93617	0.93861	0.94104	0.94349	0.94594	0.94721
0.91067	0.91415	0.91764	0.92115	0.92467	0.92820	0.93081	0.93343	0.93606	0.93869	0.94133	0.94274
0.90333	0.90707	0.91083	0.91460	0.91839	0.92219	0.92500	0.92783	0.93066	0.93350	0.93635	0.93790
0.89531	0.89935	0.90340	0.90747	0.91155	0.91566	0.91869	0.92173	0.92478	0.92784	0.93090	0.93261
0.88638	0.89078	0.89520	0.89964	0.90410	0.90859	0.91183	0.91508	0.91835	0.92162	0.92491	0.92679
0.87643	0.88127	0.88614	0.89103	0.89595	0.90089	0.90435	0.90781	0.91129	0.91478	0.91829	0.92037
0.86548	0.87081	0.87617	0.88157	0.88700	0.89246	0.89615	0.89985	0.90356	0.90729	0.91104	0.91334
0.85358	0.85942	0.86529	0.87121	0.87717	0.88317	0.88712	0.89110	0.89508	0.89909	0.90312	0.90564
0.84078	0.84711	0.85349	0.85991	0.86639	0.87291	0.87717	0.88145	0.88576	0.89008	0.89443	0.89718

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0.99981	0.99981	0.99982	0.99982	0.99982	0.99982	0.99983	0.99983	0.99983	0.99983	0.99983	0.99982
0.99958	0.99959	0.99960	0.99961	0.99961	0.99962	0.99962	0.99963	0.99963	0.99963	0.99963	0.99962
0.99931	0.99933	0.99934	0.99936	0.99937	0.99937	0.99938	0.99938	0.99939	0.99939	0.99939	0.99939
0.99901	0.99904	0.99906	0.99908	0.99909	0.99910	0.99910	0.99911	0.99912	0.99913	0.99913	0.99914
0.99869	0.99872	0.99875	0.99878	0.99879	0.99880	0.99881	0.99882	0.99883	0.99884	0.99885	0.99886
0.99836	0.99840	0.99843	0.99847	0.99848	0.99849	0.99851	0.99852	0.99853	0.99854	0.99855	0.99857
0.99802	0.99807	0.99811	0.99816	0.99817	0.99819	0.99820	0.99821	0.99822	0.99823	0.99825	0.99826
0.99767	0.99773	0.99778	0.99784	0.99785	0.99787	0.99788	0.99789	0.99790	0.99792	0.99793	0.99794
0.99732	0.99738	0.99745	0.99751	0.99752	0.99754	0.99755	0.99756	0.99757	0.99759	0.99761	0.99763
0.99694	0.99702	0.99709	0.99716	0.99718	0.99720	0.99721	0.99723	0.99724	0.99727	0.99730	0.99733
0.99654	0.99662	0.99671	0.99679	0.99682	0.99684	0.99687	0.99689	0.99691	0.99695	0.99698	0.99702
0.99611	0.99621	0.99631	0.99642	0.99645	0.99649	0.99652	0.99656	0.99660	0.99663	0.99667	0.99670
0.99566	0.99578	0.99590	0.99602	0.99607	0.99611	0.99616	0.99621	0.99626	0.99629	0.99633	0.99636
0.99519	0.99532	0.99546	0.99559	0.99565	0.99571	0.99577	0.99584	0.99590	0.99593	0.99597	0.99601
0.99470	0.99484	0.99499	0.99513	0.99521	0.99528	0.99536	0.99543	0.99551	0.99555	0.99559	0.99562
0.99418	0.99434	0.99450	0.99465	0.99474	0.99483	0.99492	0.99500	0.99509	0.99513	0.99517	0.99522
0.99364	0.99381	0.99398	0.99415	0.99425	0.99435	0.99445	0.99455	0.99465	0.99470	0.99474	0.99478
0.99305	0.99324	0.99342	0.99361	0.99373	0.99385	0.99397	0.99409	0.99421	0.99425	0.99429	0.99433
0.99243	0.99263	0.99283	0.99303	0.99317	0.99331	0.99344	0.99358	0.99372	0.99376	0.99379	0.99383
0.99175	0.99197	0.99219	0.99242	0.99257	0.99273	0.99288	0.99304	0.99319	0.99323	0.99327	0.99331
0.99103	0.99127	0.99151	0.99175	0.99193	0.99210	0.99227	0.99244	0.99262	0.99266	0.99271	0.99276
0.99025	0.99051	0.99078	0.99104	0.99123	0.99142	0.99161	0.99180	0.99199	0.99205	0.99211	0.99217
0.98941	0.98969	0.98997	0.99026	0.99047	0.99068	0.99089	0.99110	0.99132	0.99139	0.99146	0.99153
0.98850	0.98880	0.98910	0.98940	0.98964	0.98988	0.99012	0.99035	0.99059	0.99067	0.99075	0.99083
0.98751	0.98783	0.98815	0.98847	0.98874	0.98901	0.98928	0.98954	0.98981	0.98990	0.98998	0.99007

0.98644	0.98678	0.98712	0.98747	0.98776	0.98805	0.98834	0.98864	0.98893	0.98903	0.98912	0.98922
0.98528	0.98564	0.98600	0.98636	0.98668	0.98700	0.98731	0.98763	0.98795	0.98806	0.98818	0.98829
0.98401	0.98439	0.98477	0.98515	0.98549	0.98584	0.98618	0.98653	0.98687	0.98701	0.98714	0.98728
0.98262	0.98302	0.98342	0.98383	0.98420	0.98458	0.98496	0.98534	0.98572	0.98587	0.98601	0.98616
0.98111	0.98154	0.98198	0.98241	0.98282	0.98324	0.98366	0.98407	0.98449	0.98464	0.98479	0.98494
0.97946	0.97993	0.98041	0.98088	0.98133	0.98179	0.98225	0.98271	0.98317	0.98331	0.98346	0.98360
0.97768	0.97819	0.97871	0.97923	0.97973	0.98023	0.98072	0.98122	0.98172	0.98186	0.98199	0.98213
0.97572	0.97629	0.97687	0.97744	0.97797	0.97851	0.97905	0.97958	0.98012	0.98025	0.98038	0.98050
0.97358	0.97421	0.97484	0.97547	0.97605	0.97663	0.97720	0.97778	0.97836	0.97848	0.97861	0.97873
0.97122	0.97191	0.97261	0.97330	0.97392	0.97455	0.97517	0.97579	0.97642	0.97655	0.97668	0.97681
0.96864	0.96940	0.97015	0.97090	0.97158	0.97226	0.97294	0.97362	0.97430	0.97444	0.97459	0.97473
0.96583	0.96665	0.96747	0.96829	0.96904	0.96978	0.97053	0.97127	0.97202	0.97218	0.97233	0.97249
0.96282	0.96371	0.96460	0.96548	0.96631	0.96713	0.96796	0.96878	0.96961	0.96977	0.96993	0.97009
0.95962	0.96058	0.96153	0.96249	0.96340	0.96431	0.96522	0.96614	0.96705	0.96721	0.96738	0.96754
0.95619	0.95723	0.95827	0.95931	0.96031	0.96130	0.96230	0.96330	0.96430	0.96446	0.96463	0.96480
0.95249	0.95364	0.95479	0.95594	0.95701	0.95808	0.95916	0.96024	0.96132	0.96150	0.96168	0.96186
0.94848	0.94976	0.95104	0.95231	0.95346	0.95461	0.95576	0.95691	0.95807	0.95827	0.95848	0.95869
0.94415	0.94556	0.94697	0.94838	0.94961	0.95084	0.95207	0.95330	0.95453	0.95478	0.95503	0.95528
0.93945	0.94100	0.94255	0.94410	0.94542	0.94673	0.94805	0.94936	0.95068	0.95099	0.95129	0.95159
0.93431	0.93602	0.93773	0.93944	0.94085	0.94225	0.94366	0.94508	0.94649	0.94684	0.94720	0.94755
0.92867	0.93056	0.93245	0.93435	0.93586	0.93738	0.93890	0.94042	0.94194	0.94234	0.94273	0.94313
0.92247	0.92456	0.92666	0.92877	0.93041	0.93206	0.93371	0.93537	0.93702	0.93745	0.93788	0.93831
0.91565	0.91797	0.92029	0.92261	0.92442	0.92624	0.92806	0.92988	0.93171	0.93217	0.93263	0.93309
0.90817	0.91071	0.91325	0.91580	0.91782	0.91985	0.92187	0.92391	0.92594	0.92644	0.92693	0.92743
0.89994	0.90272	0.90550	0.90828	0.91054	0.91281	0.91508	0.91735	0.91964	0.92018	0.92073	0.92127

1994	1995
0.99982	0.99982
0.99962	0.99962
0.99939	0.99939
0.99914	0.99915
0.99887	0.99888
0.99858	0.99859
0.99827	0.99828
0.99796	0.99797
0.99765	0.99767
0.99736	0.99738
0.99705	0.99708
0.99674	0.99677
0.99640	0.99644
0.99604	0.99608
0.99566	0.99570
0.99526	0.99530
0.99483	0.99487
0.99437	0.99440
0.99387	0.99391
0.99335	0.99339
0.99281	0.99285
0.99223	0.99229
0.99160	0.99167
0.99091	0.99099
0.99015	0.99024
0.98932	0.98941

0.98841	0.98852
0.98741	0.98754
0.98631	0.98646
0.98509	0.98525
0.98375	0.98390
0.98226	0.98240
0.98063	0.98076
0.97886	0.97898
0.97694	0.97708
0.97487	0.97501
0.97264	0.97280
0.97026	0.97042
0.96770	0.96786
0.96497	0.96514
0.96204	0.96222
0.95890	0.95910
0.95553	0.95577
0.95189	0.95219
0.94790	0.94826
0.94353	0.94392
0.93874	0.93917
0.93355	0.93401
0.92793	0.92843
0.92182	0.92236

Aged 30	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
30	0.99274	0.99356	0.99437	0.99519	0.99601	0.99639	0.99677	0.99716	0.99754	0.99770	0.99786
31	0.98564	0.98723	0.98883	0.99043	0.99203	0.99277	0.99352	0.99427	0.99502	0.99534	0.99566
32	0.97866	0.98100	0.98333	0.98568	0.98803	0.98913	0.99024	0.99135	0.99246	0.99293	0.99341
33	0.97177	0.97482	0.97787	0.98093	0.98400	0.98546	0.98692	0.98838	0.98985	0.99047	0.99109
34	0.96497	0.96869	0.97242	0.97616	0.97992	0.98173	0.98353	0.98534	0.98716	0.98793	0.98870
35	0.95822	0.96258	0.96696	0.97137	0.97579	0.97792	0.98006	0.98220	0.98434	0.98527	0.98620
36	0.95149	0.95647	0.96148	0.96652	0.97158	0.97403	0.97648	0.97894	0.98141	0.98250	0.98360
37	0.94473	0.95033	0.95595	0.96161	0.96730	0.97006	0.97283	0.97560	0.97839	0.97964	0.98089
38	0.93795	0.94411	0.95032	0.95656	0.96285	0.96594	0.96905	0.97216	0.97529	0.97668	0.97807
39	0.93111	0.93783	0.94459	0.95140	0.95826	0.96169	0.96514	0.96860	0.97207	0.97360	0.97513
40	0.92412	0.93138	0.93870	0.94608	0.95351	0.95730	0.96110	0.96492	0.96875	0.97041	0.97208
41	0.91689	0.92473	0.93264	0.94062	0.94866	0.95280	0.95695	0.96112	0.96531	0.96711	0.96891
42	0.90954	0.91796	0.92646	0.93504	0.94370	0.94816	0.95265	0.95716	0.96168	0.96363	0.96559
43	0.90220	0.91118	0.92024	0.92939	0.93864	0.94340	0.94818	0.95299	0.95783	0.95993	0.96205
44	0.89494	0.90440	0.91397	0.92363	0.93340	0.93844	0.94351	0.94861	0.95374	0.95599	0.95825
45	0.88760	0.89751	0.90752	0.91765	0.92789	0.93324	0.93861	0.94401	0.94945	0.95183	0.95421
46	0.88004	0.89036	0.90080	0.91137	0.92206	0.92771	0.93339	0.93911	0.94486	0.94736	0.94987
47	0.87214	0.88287	0.89373	0.90472	0.91585	0.92178	0.92776	0.93377	0.93981	0.94246	0.94511
48	0.86375	0.87490	0.88620	0.89763	0.90922	0.91542	0.92166	0.92795	0.93428	0.93709	0.93992
49	0.85478	0.86640	0.87819	0.89013	0.90224	0.90870	0.91520	0.92175	0.92835	0.93135	0.93436
50	0.84528	0.85744	0.86978	0.88229	0.89498	0.90169	0.90845	0.91526	0.92212	0.92529	0.92848
51	0.83538	0.84805	0.86091	0.87397	0.88723	0.89423	0.90129	0.90841	0.91558	0.91890	0.92224
52	0.82510	0.83822	0.85154	0.86508	0.87883	0.88618	0.89358	0.90105	0.90857	0.91204	0.91552
53	0.81446	0.82799	0.84174	0.85572	0.86994	0.87761	0.88534	0.89315	0.90102	0.90464	0.90827
54	0.80342	0.81736	0.83154	0.84596	0.86064	0.86861	0.87666	0.88479	0.89299	0.89676	0.90055
55	0.79186	0.80619	0.82079	0.83565	0.85078	0.85909	0.86749	0.87597	0.88453	0.88845	0.89240
56	0.77947	0.79423	0.80926	0.82457	0.84017	0.84889	0.85769	0.86658	0.87556	0.87963	0.88372

57	0.76625	0.78136	0.79677	0.81248	0.82850	0.83768	0.84696	0.85635	0.86583	0.87006	0.87431
58	0.75219	0.76766	0.78345	0.79955	0.81599	0.82561	0.83534	0.84519	0.85515	0.85956	0.86399
59	0.73720	0.75314	0.76942	0.78605	0.80304	0.81299	0.82307	0.83327	0.84361	0.84819	0.85281
60	0.72093	0.73749	0.75442	0.77174	0.78947	0.79973	0.81013	0.82067	0.83134	0.83609	0.84088
61	0.70329	0.72053	0.73818	0.75627	0.77480	0.78542	0.79618	0.80709	0.81815	0.82309	0.82805
62	0.68449	0.70242	0.72082	0.73971	0.75909	0.77002	0.78110	0.79234	0.80375	0.80890	0.81408
63	0.66514	0.68370	0.70278	0.72239	0.74255	0.75368	0.76499	0.77646	0.78810	0.79348	0.79890
64	0.64466	0.66363	0.68315	0.70326	0.72395	0.73554	0.74731	0.75928	0.77143	0.77698	0.78258

1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
0.99803	0.99819	0.99835	0.99845	0.99855	0.99865	0.99875	0.99885	0.99890	0.99895	0.99899	0.99904
0.99599	0.99631	0.99663	0.99684	0.99704	0.99724	0.99745	0.99765	0.99775	0.99784	0.99794	0.99803
0.99389	0.99436	0.99484	0.99515	0.99546	0.99577	0.99608	0.99638	0.99653	0.99668	0.99682	0.99697
0.99171	0.99234	0.99296	0.99337	0.99379	0.99420	0.99461	0.99503	0.99523	0.99542	0.99562	0.99582
0.98947	0.99024	0.99101	0.99153	0.99205	0.99256	0.99308	0.99360	0.99385	0.99409	0.99434	0.99459
0.98713	0.98806	0.98899	0.98961	0.99023	0.99085	0.99147	0.99210	0.99240	0.99270	0.99300	0.99330
0.98469	0.98579	0.98688	0.98761	0.98833	0.98906	0.98978	0.99051	0.99086	0.99122	0.99157	0.99192
0.98214	0.98340	0.98465	0.98549	0.98632	0.98716	0.98800	0.98883	0.98924	0.98965	0.99005	0.99046
0.97947	0.98087	0.98227	0.98323	0.98419	0.98514	0.98610	0.98706	0.98752	0.98798	0.98844	0.98890
0.97666	0.97820	0.97974	0.98082	0.98191	0.98300	0.98409	0.98518	0.98569	0.98620	0.98671	0.98723
0.97374	0.97541	0.97708	0.97830	0.97952	0.98074	0.98196	0.98318	0.98374	0.98430	0.98486	0.98543
0.97072	0.97252	0.97434	0.97567	0.97701	0.97835	0.97969	0.98104	0.98165	0.98226	0.98287	0.98348
0.96754	0.96951	0.97147	0.97292	0.97436	0.97581	0.97727	0.97872	0.97938	0.98004	0.98070	0.98136
0.96416	0.96629	0.96841	0.96996	0.97152	0.97307	0.97463	0.97620	0.97692	0.97764	0.97836	0.97908
0.96052	0.96279	0.96507	0.96674	0.96840	0.97007	0.97175	0.97342	0.97422	0.97502	0.97583	0.97663
0.95661	0.95901	0.96141	0.96320	0.96500	0.96679	0.96859	0.97040	0.97129	0.97219	0.97309	0.97399
0.95238	0.95490	0.95742	0.95935	0.96127	0.96320	0.96514	0.96708	0.96809	0.96910	0.97012	0.97113
0.94777	0.95043	0.95310	0.95517	0.95723	0.95930	0.96138	0.96346	0.96459	0.96573	0.96686	0.96800
0.94275	0.94559	0.94844	0.95065	0.95286	0.95507	0.95729	0.95952	0.96077	0.96202	0.96328	0.96453
0.93738	0.94041	0.94346	0.94581	0.94817	0.95053	0.95290	0.95528	0.95664	0.95801	0.95938	0.96075
0.93168	0.93489	0.93811	0.94062	0.94315	0.94568	0.94822	0.95076	0.95224	0.95371	0.95519	0.95667
0.92559	0.92895	0.93232	0.93502	0.93774	0.94046	0.94319	0.94593	0.94752	0.94912	0.95071	0.95231
0.91902	0.92252	0.92604	0.92896	0.93188	0.93482	0.93776	0.94071	0.94243	0.94415	0.94588	0.94761
0.91191	0.91557	0.91925	0.92238	0.92553	0.92868	0.93185	0.93503	0.93689	0.93875	0.94062	0.94249
0.90435	0.90817	0.91200	0.91535	0.91871	0.92208	0.92547	0.92887	0.93086	0.93287	0.93487	0.93689
0.89635	0.90033	0.90432	0.90787	0.91143	0.91501	0.91860	0.92221	0.92434	0.92649	0.92864	0.93079
0.88783	0.89196	0.89610	0.89985	0.90361	0.90738	0.91118	0.91498	0.91728	0.91958	0.92188	0.92419
0.87857	0.88286	0.88717	0.89113	0.89511	0.89911	0.90312	0.90715	0.90963	0.91212	0.91462	0.91712
0.86844	0.87292	0.87742	0.88163	0.88585	0.89010	0.89436	0.89865	0.90135	0.90406	0.90677	0.90949
0.85745	0.86211	0.86680	0.87129	0.87580	0.88033	0.88489	0.88947	0.89238	0.89530	0.89823	0.90117
0.84569	0.85052	0.85539	0.86016	0.86496	0.86979	0.87464	0.87952	0.88262	0.88572	0.88884	0.89196
0.83304	0.83806	0.84311	0.84816	0.85324	0.85836	0.86350	0.86867	0.87192	0.87519	0.87847	0.88176
0.81930	0.82456	0.82984	0.83515	0.84050	0.84588	0.85130	0.85675	0.86017	0.86361	0.86706	0.87052
0.80436	0.80985	0.81539	0.82097	0.82659	0.83226	0.83796	0.84370	0.84732	0.85096	0.85462	0.85829
0.78821	0.79389	0.79961	0.80547	0.81138	0.81733	0.82332	0.82936	0.83326	0.83718	0.84112	0.84508

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
0.99909	0.99913	0.99917	0.99920	0.99924	0.99928	0.99932	0.99935	0.99939	0.99942	0.99946	0.99947
0.99813	0.99821	0.99829	0.99837	0.99845	0.99853	0.99860	0.99867	0.99875	0.99882	0.99889	0.99891
0.99711	0.99724	0.99736	0.99749	0.99762	0.99774	0.99785	0.99795	0.99806	0.99817	0.99827	0.99831
0.99602	0.99619	0.99637	0.99655	0.99673	0.99690	0.99704	0.99718	0.99732	0.99746	0.99760	0.99766
0.99484	0.99508	0.99531	0.99555	0.99578	0.99602	0.99619	0.99636	0.99654	0.99671	0.99688	0.99696
0.99360	0.99389	0.99419	0.99448	0.99478	0.99507	0.99528	0.99549	0.99570	0.99591	0.99612	0.99621

0.99228	0.99263	0.99299	0.99334	0.99370	0.99406	0.99430	0.99455	0.99480	0.99505	0.99530	0.99542
0.99087	0.99129	0.99170	0.99212	0.99254	0.99296	0.99325	0.99354	0.99383	0.99412	0.99441	0.99455
0.98936	0.98984	0.99032	0.99081	0.99129	0.99177	0.99211	0.99244	0.99278	0.99311	0.99345	0.99361
0.98774	0.98829	0.98883	0.98938	0.98993	0.99048	0.99087	0.99125	0.99164	0.99203	0.99242	0.99259
0.98599	0.98661	0.98723	0.98785	0.98846	0.98908	0.98953	0.98997	0.99042	0.99086	0.99130	0.99150
0.98409	0.98478	0.98547	0.98617	0.98687	0.98756	0.98807	0.98857	0.98908	0.98959	0.99009	0.99031
0.98202	0.98280	0.98357	0.98435	0.98512	0.98590	0.98648	0.98705	0.98763	0.98820	0.98878	0.98902
0.97980	0.98066	0.98153	0.98239	0.98325	0.98412	0.98476	0.98540	0.98605	0.98669	0.98733	0.98760
0.97743	0.97838	0.97934	0.98029	0.98125	0.98221	0.98292	0.98363	0.98433	0.98504	0.98575	0.98605
0.97489	0.97594	0.97699	0.97804	0.97909	0.98015	0.98092	0.98170	0.98247	0.98325	0.98403	0.98436
0.97215	0.97329	0.97444	0.97559	0.97674	0.97789	0.97874	0.97959	0.98044	0.98129	0.98214	0.98252
0.96914	0.97039	0.97164	0.97290	0.97416	0.97542	0.97635	0.97727	0.97821	0.97914	0.98007	0.98050
0.96579	0.96717	0.96856	0.96994	0.97133	0.97272	0.97373	0.97474	0.97576	0.97678	0.97779	0.97828
0.96212	0.96365	0.96518	0.96671	0.96824	0.96978	0.97088	0.97198	0.97309	0.97419	0.97530	0.97585
0.95816	0.95984	0.96152	0.96320	0.96489	0.96658	0.96778	0.96897	0.97017	0.97138	0.97258	0.97319
0.95391	0.95574	0.95757	0.95940	0.96124	0.96308	0.96438	0.96569	0.96700	0.96831	0.96962	0.97030
0.94934	0.95132	0.95330	0.95528	0.95727	0.95926	0.96070	0.96214	0.96358	0.96502	0.96646	0.96721
0.94436	0.94651	0.94866	0.95081	0.95297	0.95514	0.95673	0.95832	0.95991	0.96150	0.96310	0.96392
0.93890	0.94125	0.94361	0.94597	0.94833	0.95071	0.95246	0.95421	0.95596	0.95772	0.95948	0.96038
0.93295	0.93554	0.93813	0.94073	0.94334	0.94595	0.94786	0.94978	0.95170	0.95362	0.95554	0.95656
0.92651	0.92935	0.93220	0.93506	0.93793	0.94081	0.94289	0.94498	0.94707	0.94916	0.95126	0.95240
0.91963	0.92273	0.92583	0.92895	0.93208	0.93522	0.93749	0.93977	0.94205	0.94434	0.94663	0.94791
0.91222	0.91559	0.91896	0.92235	0.92575	0.92916	0.93164	0.93413	0.93662	0.93912	0.94162	0.94304
0.90412	0.90779	0.91146	0.91515	0.91886	0.92258	0.92528	0.92798	0.93069	0.93341	0.93614	0.93772
0.89510	0.89914	0.90319	0.90726	0.91135	0.91546	0.91837	0.92129	0.92422	0.92716	0.93011	0.93187
0.88506	0.88954	0.89405	0.89858	0.90313	0.90771	0.91083	0.91397	0.91712	0.92028	0.92345	0.92542
0.87399	0.87898	0.88399	0.88904	0.89411	0.89921	0.90258	0.90595	0.90935	0.91275	0.91617	0.91835
0.86198	0.86748	0.87302	0.87859	0.88420	0.88985	0.89349	0.89714	0.90081	0.90450	0.90820	0.91060
0.84906	0.85506	0.86111	0.86720	0.87333	0.87951	0.88346	0.88744	0.89143	0.89543	0.89946	0.90210

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0.99948	0.99950	0.99951	0.99952	0.99953	0.99954	0.99956	0.99957	0.99958	0.99958	0.99959	0.99959
0.99894	0.99896	0.99899	0.99901	0.99904	0.99906	0.99909	0.99911	0.99914	0.99915	0.99915	0.99916
0.99835	0.99839	0.99843	0.99847	0.99851	0.99856	0.99860	0.99865	0.99869	0.99869	0.99869	0.99870
0.99772	0.99778	0.99783	0.99789	0.99795	0.99802	0.99808	0.99814	0.99820	0.99820	0.99820	0.99820
0.99704	0.99712	0.99720	0.99727	0.99735	0.99743	0.99751	0.99759	0.99767	0.99767	0.99768	0.99768
0.99631	0.99641	0.99651	0.99660	0.99670	0.99680	0.99690	0.99700	0.99709	0.99710	0.99711	0.99712
0.99553	0.99565	0.99577	0.99589	0.99600	0.99612	0.99623	0.99635	0.99647	0.99649	0.99651	0.99653
0.99469	0.99483	0.99496	0.99510	0.99524	0.99538	0.99551	0.99565	0.99579	0.99582	0.99586	0.99589
0.99377	0.99393	0.99409	0.99424	0.99441	0.99457	0.99473	0.99490	0.99506	0.99510	0.99514	0.99519
0.99277	0.99295	0.99313	0.99331	0.99350	0.99370	0.99389	0.99408	0.99427	0.99432	0.99437	0.99442
0.99170	0.99190	0.99210	0.99230	0.99252	0.99273	0.99295	0.99317	0.99339	0.99345	0.99351	0.99357
0.99053	0.99075	0.99097	0.99119	0.99143	0.99167	0.99192	0.99216	0.99241	0.99248	0.99256	0.99264
0.98925	0.98949	0.98973	0.98997	0.99024	0.99051	0.99078	0.99105	0.99132	0.99142	0.99152	0.99162
0.98786	0.98812	0.98838	0.98864	0.98894	0.98925	0.98955	0.98986	0.99016	0.99028	0.99039	0.99050
0.98634	0.98663	0.98692	0.98722	0.98756	0.98790	0.98824	0.98858	0.98893	0.98904	0.98916	0.98927
0.98469	0.98502	0.98535	0.98568	0.98606	0.98645	0.98683	0.98722	0.98760	0.98771	0.98782	0.98793
0.98289	0.98327	0.98364	0.98402	0.98445	0.98487	0.98530	0.98572	0.98615	0.98625	0.98635	0.98645
0.98093	0.98136	0.98179	0.98222	0.98268	0.98315	0.98361	0.98408	0.98454	0.98463	0.98472	0.98481
0.97877	0.97926	0.97975	0.98025	0.98075	0.98125	0.98176	0.98226	0.98277	0.98286	0.98295	0.98304
0.97640	0.97695	0.97751	0.97806	0.97861	0.97916	0.97972	0.98027	0.98082	0.98092	0.98101	0.98111
0.97381	0.97442	0.97504	0.97565	0.97626	0.97687	0.97748	0.97809	0.97870	0.97880	0.97891	0.97901
0.97098	0.97167	0.97235	0.97303	0.97370	0.97438	0.97505	0.97573	0.97641	0.97653	0.97664	0.97676

0.96796	0.96871	0.96946	0.97021	0.97096	0.97172	0.97247	0.97323	0.97398	0.97411	0.97423	0.97436
0.96474	0.96556	0.96638	0.96720	0.96804	0.96888	0.96973	0.97057	0.97141	0.97154	0.97167	0.97179
0.96129	0.96219	0.96310	0.96401	0.96493	0.96586	0.96679	0.96772	0.96864	0.96878	0.96891	0.96904
0.95757	0.95858	0.95960	0.96061	0.96162	0.96263	0.96363	0.96464	0.96565	0.96580	0.96594	0.96609
0.95354	0.95469	0.95583	0.95697	0.95805	0.95914	0.96022	0.96130	0.96239	0.96256	0.96273	0.96290
0.94918	0.95046	0.95174	0.95302	0.95418	0.95534	0.95651	0.95767	0.95884	0.95905	0.95926	0.95948
0.94446	0.94588	0.94730	0.94872	0.94997	0.95122	0.95247	0.95372	0.95497	0.95524	0.95550	0.95577
0.93929	0.94087	0.94245	0.94404	0.94538	0.94672	0.94807	0.94941	0.95076	0.95108	0.95140	0.95172
0.93363	0.93539	0.93715	0.93892	0.94037	0.94182	0.94327	0.94473	0.94619	0.94655	0.94691	0.94728
0.92739	0.92936	0.93133	0.93331	0.93490	0.93648	0.93807	0.93966	0.94125	0.94164	0.94204	0.94243
0.92054	0.92273	0.92492	0.92713	0.92888	0.93063	0.93239	0.93415	0.93591	0.93634	0.93676	0.93719
0.91301	0.91543	0.91785	0.92028	0.92224	0.92421	0.92617	0.92814	0.93012	0.93058	0.93105	0.93151
0.90474	0.90740	0.91006	0.91273	0.91493	0.91714	0.91935	0.92156	0.92378	0.92430	0.92481	0.92532

1994	1995
0.99960	0.99960
0.99916	0.99917
0.99870	0.99870
0.99820	0.99820
0.99768	0.99768
0.99713	0.99714
0.99655	0.99658
0.99592	0.99596
0.99523	0.99527
0.99447	0.99451
0.99363	0.99369
0.99272	0.99279
0.99171	0.99181
0.99061	0.99072
0.98939	0.98950
0.98804	0.98815
0.98654	0.98664
0.98491	0.98500
0.98312	0.98321
0.98120	0.98130
0.97912	0.97923
0.97688	0.97700
0.97448	0.97461
0.97192	0.97205
0.96917	0.96930
0.96623	0.96638
0.96307	0.96325
0.95969	0.95990
0.95604	0.95630
0.95204	0.95235
0.94764	0.94800
0.94283	0.94322
0.93762	0.93805
0.93197	0.93244
0.92583	0.92635

Aged 45	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
45	0.99180	0.99237	0.99295	0.99352	0.99410	0.99445	0.99480	0.99515	0.99550	0.99564	0.99578
46	0.98335	0.98447	0.98560	0.98672	0.98785	0.98856	0.98927	0.98998	0.99069	0.99097	0.99125
47	0.97453	0.97619	0.97786	0.97953	0.98120	0.98225	0.98330	0.98435	0.98540	0.98584	0.98628
48	0.96515	0.96738	0.96961	0.97185	0.97410	0.97547	0.97684	0.97822	0.97960	0.98023	0.98087
49	0.95513	0.95799	0.96085	0.96373	0.96661	0.96830	0.96999	0.97168	0.97338	0.97422	0.97507
50	0.94451	0.94808	0.95165	0.95524	0.95884	0.96084	0.96284	0.96484	0.96685	0.96789	0.96893
51	0.93345	0.93769	0.94195	0.94623	0.95053	0.95289	0.95525	0.95762	0.95999	0.96120	0.96241
52	0.92196	0.92682	0.93170	0.93661	0.94154	0.94430	0.94708	0.94986	0.95265	0.95403	0.95541
53	0.91007	0.91551	0.92097	0.92648	0.93201	0.93517	0.93835	0.94153	0.94473	0.94628	0.94784
54	0.89774	0.90375	0.90981	0.91591	0.92205	0.92559	0.92915	0.93272	0.93630	0.93804	0.93978
55	0.88482	0.89141	0.89805	0.90474	0.91148	0.91544	0.91942	0.92342	0.92744	0.92935	0.93127
56	0.87098	0.87818	0.88543	0.89275	0.90012	0.90457	0.90903	0.91352	0.91803	0.92012	0.92222
57	0.85620	0.86395	0.87177	0.87966	0.88762	0.89263	0.89767	0.90274	0.90783	0.91011	0.91239
58	0.84050	0.84880	0.85719	0.86566	0.87422	0.87977	0.88535	0.89097	0.89663	0.89913	0.90163
59	0.82375	0.83275	0.84184	0.85104	0.86033	0.86632	0.87235	0.87841	0.88453	0.88724	0.88996
60	0.80557	0.81544	0.82544	0.83555	0.84579	0.85219	0.85863	0.86512	0.87166	0.87458	0.87751
61	0.78586	0.79669	0.80767	0.81880	0.83009	0.83694	0.84385	0.85082	0.85784	0.86097	0.86412
62	0.76484	0.77667	0.78868	0.80087	0.81325	0.82053	0.82786	0.83526	0.84273	0.84613	0.84955
63	0.74322	0.75597	0.76893	0.78212	0.79553	0.80312	0.81078	0.81852	0.82633	0.83001	0.83370
64	0.72034	0.73377	0.74746	0.76140	0.77560	0.78379	0.79205	0.80041	0.80885	0.81275	0.81667

1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
0.99593	0.99607	0.99621	0.99635	0.99648	0.99662	0.99675	0.99689	0.99699	0.99709	0.99720	0.99730
0.99152	0.99180	0.99208	0.99236	0.99264	0.99292	0.99320	0.99348	0.99370	0.99393	0.99415	0.99437
0.98672	0.98716	0.98760	0.98803	0.98847	0.98890	0.98933	0.98977	0.99011	0.99046	0.99081	0.99116
0.98150	0.98214	0.98277	0.98336	0.98395	0.98454	0.98513	0.98572	0.98619	0.98667	0.98714	0.98762
0.97591	0.97676	0.97760	0.97835	0.97910	0.97986	0.98061	0.98136	0.98196	0.98255	0.98315	0.98374
0.96997	0.97101	0.97206	0.97299	0.97392	0.97485	0.97578	0.97672	0.97743	0.97814	0.97886	0.97957
0.96363	0.96484	0.96606	0.96720	0.96834	0.96947	0.97061	0.97176	0.97259	0.97343	0.97426	0.97510
0.95679	0.95817	0.95956	0.96092	0.96229	0.96365	0.96502	0.96639	0.96737	0.96834	0.96931	0.97029
0.94939	0.95095	0.95252	0.95412	0.95572	0.95733	0.95894	0.96056	0.96167	0.96280	0.96392	0.96504
0.94152	0.94326	0.94501	0.94685	0.94869	0.95053	0.95238	0.95423	0.95549	0.95676	0.95803	0.95931
0.93320	0.93512	0.93705	0.93911	0.94117	0.94324	0.94531	0.94738	0.94880	0.95022	0.95164	0.95307
0.92432	0.92643	0.92854	0.93081	0.93309	0.93538	0.93767	0.93997	0.94155	0.94313	0.94472	0.94631
0.91468	0.91698	0.91928	0.92179	0.92431	0.92684	0.92938	0.93192	0.93370	0.93549	0.93728	0.93907
0.90414	0.90665	0.90918	0.91196	0.91475	0.91756	0.92037	0.92319	0.92520	0.92721	0.92924	0.93126
0.89269	0.89543	0.89818	0.90127	0.90437	0.90749	0.91062	0.91375	0.91599	0.91824	0.92049	0.92274
0.88044	0.88339	0.88635	0.88976	0.89318	0.89662	0.90007	0.90354	0.90597	0.90841	0.91086	0.91331
0.86728	0.87045	0.87363	0.87735	0.88108	0.88484	0.88860	0.89239	0.89499	0.89761	0.90023	0.90286
0.85298	0.85642	0.85988	0.86389	0.86793	0.87198	0.87605	0.88014	0.88293	0.88573	0.88854	0.89135
0.83742	0.84115	0.84490	0.84922	0.85356	0.85793	0.86232	0.86673	0.86974	0.87276	0.87579	0.87883
0.82061	0.82457	0.82855	0.83319	0.83785	0.84254	0.84726	0.85200	0.85531	0.85863	0.86196	0.86530

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
0.99740	0.99750	0.99760	0.99770	0.99780	0.99790	0.99797	0.99804	0.99811	0.99818	0.99825	0.99829
0.99460	0.99480	0.99500	0.99520	0.99540	0.99560	0.99575	0.99590	0.99604	0.99619	0.99633	0.99642
0.99151	0.99183	0.99214	0.99246	0.99277	0.99309	0.99331	0.99354	0.99377	0.99400	0.99423	0.99437
0.98809	0.98854	0.98899	0.98944	0.98989	0.99034	0.99065	0.99097	0.99129	0.99161	0.99192	0.99213
0.98434	0.98494	0.98554	0.98614	0.98674	0.98734	0.98775	0.98816	0.98857	0.98898	0.98940	0.98966
0.98028	0.98104	0.98180	0.98256	0.98332	0.98409	0.98460	0.98510	0.98561	0.98612	0.98663	0.98696
0.97594	0.97686	0.97777	0.97869	0.97961	0.98052	0.98115	0.98177	0.98239	0.98301	0.98364	0.98403
0.97127	0.97234	0.97341	0.97449	0.97556	0.97664	0.97740	0.97815	0.97891	0.97967	0.98043	0.98090

0.96617	0.96742	0.96867	0.96993	0.97118	0.97244	0.97335	0.97427	0.97518	0.97610	0.97702	0.97756
0.96058	0.96205	0.96351	0.96498	0.96646	0.96793	0.96901	0.97009	0.97117	0.97226	0.97334	0.97397
0.95449	0.95621	0.95792	0.95964	0.96136	0.96309	0.96434	0.96559	0.96684	0.96810	0.96935	0.97009
0.94791	0.94989	0.95187	0.95386	0.95585	0.95785	0.95928	0.96071	0.96214	0.96357	0.96501	0.96588
0.94086	0.94311	0.94537	0.94763	0.94989	0.95216	0.95378	0.95541	0.95704	0.95867	0.96031	0.96132
0.93329	0.93582	0.93835	0.94089	0.94344	0.94599	0.94783	0.94968	0.95152	0.95338	0.95523	0.95638
0.92500	0.92784	0.93069	0.93355	0.93642	0.93929	0.94136	0.94343	0.94551	0.94759	0.94967	0.95099
0.91577	0.91900	0.92224	0.92550	0.92876	0.93204	0.93433	0.93663	0.93893	0.94124	0.94355	0.94505
0.90550	0.90920	0.91291	0.91664	0.92039	0.92415	0.92666	0.92919	0.93172	0.93425	0.93680	0.93851
0.89418	0.89840	0.90264	0.90691	0.91119	0.91550	0.91826	0.92104	0.92382	0.92661	0.92941	0.93134
0.88188	0.88665	0.89144	0.89625	0.90110	0.90597	0.90902	0.91208	0.91515	0.91823	0.92132	0.92349
0.86866	0.87395	0.87928	0.88463	0.89002	0.89544	0.89882	0.90221	0.90561	0.90903	0.91246	0.91486

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0.99833	0.99836	0.99840	0.99844	0.99848	0.99853	0.99857	0.99862	0.99866	0.99865	0.99865	0.99864
0.99651	0.99659	0.99668	0.99676	0.99685	0.99693	0.99702	0.99711	0.99719	0.99718	0.99716	0.99714
0.99451	0.99466	0.99480	0.99494	0.99506	0.99519	0.99532	0.99544	0.99557	0.99554	0.99552	0.99549
0.99233	0.99253	0.99274	0.99294	0.99311	0.99327	0.99344	0.99361	0.99377	0.99375	0.99372	0.99370
0.98993	0.99019	0.99046	0.99072	0.99094	0.99116	0.99137	0.99159	0.99181	0.99179	0.99177	0.99175
0.98730	0.98763	0.98796	0.98829	0.98856	0.98883	0.98911	0.98938	0.98965	0.98965	0.98964	0.98963
0.98443	0.98483	0.98523	0.98563	0.98597	0.98631	0.98665	0.98700	0.98734	0.98734	0.98735	0.98736
0.98136	0.98183	0.98230	0.98277	0.98319	0.98362	0.98404	0.98447	0.98489	0.98490	0.98491	0.98493
0.97810	0.97864	0.97918	0.97972	0.98024	0.98075	0.98126	0.98178	0.98229	0.98230	0.98232	0.98233
0.97460	0.97523	0.97586	0.97649	0.97709	0.97769	0.97829	0.97889	0.97949	0.97951	0.97953	0.97955
0.97083	0.97157	0.97231	0.97305	0.97373	0.97442	0.97510	0.97578	0.97646	0.97650	0.97653	0.97656
0.96675	0.96762	0.96849	0.96937	0.97012	0.97088	0.97164	0.97240	0.97316	0.97322	0.97328	0.97335
0.96233	0.96334	0.96435	0.96536	0.96620	0.96704	0.96789	0.96873	0.96957	0.96968	0.96978	0.96988
0.95754	0.95869	0.95985	0.96101	0.96194	0.96287	0.96380	0.96473	0.96567	0.96582	0.96598	0.96614
0.95230	0.95362	0.95494	0.95626	0.95729	0.95832	0.95935	0.96038	0.96141	0.96162	0.96183	0.96204
0.94656	0.94806	0.94957	0.95108	0.95222	0.95336	0.95450	0.95564	0.95678	0.95704	0.95729	0.95755
0.94023	0.94195	0.94367	0.94540	0.94667	0.94795	0.94923	0.95051	0.95179	0.95208	0.95237	0.95265
0.93329	0.93523	0.93718	0.93913	0.94058	0.94203	0.94348	0.94493	0.94639	0.94671	0.94703	0.94736
0.92566	0.92783	0.93002	0.93220	0.93386	0.93553	0.93719	0.93886	0.94053	0.94089	0.94125	0.94161
0.91728	0.91969	0.92212	0.92455	0.92646	0.92837	0.93028	0.93220	0.93413	0.93454	0.93495	0.93536

1994	1995
0.99864	0.99863
0.99713	0.99711
0.99547	0.99545
0.99367	0.99365
0.99173	0.99171
0.98962	0.98962
0.98736	0.98737
0.98494	0.98495
0.98235	0.98236
0.97957	0.97959
0.97660	0.97663
0.97341	0.97347
0.96999	0.97009
0.96629	0.96645
0.96225	0.96246
0.95780	0.95806
0.95294	0.95323

0.94768	0.94800
0.94197	0.94233
0.93577	0.93618

Aged 60	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
60	0.97793	0.97922	0.98051	0.98180	0.98310	0.98369	0.98428	0.98487	0.98546	0.98573	0.98601
61	0.95400	0.95670	0.95941	0.96212	0.96484	0.96609	0.96733	0.96858	0.96983	0.97040	0.97096
62	0.92849	0.93266	0.93685	0.94105	0.94528	0.94714	0.94901	0.95088	0.95275	0.95367	0.95459
63	0.90224	0.90780	0.91339	0.91902	0.92468	0.92705	0.92943	0.93181	0.93420	0.93549	0.93679
64	0.87446	0.88115	0.88789	0.89467	0.90152	0.90473	0.90796	0.91119	0.91444	0.91605	0.91765

1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
0.98628	0.98656	0.98683	0.98723	0.98763	0.98802	0.98842	0.98882	0.98906	0.98930	0.98954	0.98978
0.97153	0.97210	0.97267	0.97346	0.97425	0.97504	0.97583	0.97662	0.97708	0.97753	0.97799	0.97845
0.95551	0.95644	0.95736	0.95853	0.95970	0.96087	0.96204	0.96322	0.96391	0.96460	0.96529	0.96598
0.93808	0.93938	0.94068	0.94225	0.94382	0.94539	0.94696	0.94854	0.94951	0.95047	0.95144	0.95241
0.91926	0.92087	0.92248	0.92446	0.92644	0.92843	0.93043	0.93242	0.93375	0.93509	0.93642	0.93775

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
0.99002	0.99047	0.99092	0.99138	0.99183	0.99228	0.99254	0.99279	0.99305	0.99330	0.99356	0.99376
0.97891	0.97990	0.98089	0.98189	0.98288	0.98388	0.98439	0.98490	0.98542	0.98593	0.98645	0.98688
0.96668	0.96827	0.96986	0.97146	0.97306	0.97467	0.97546	0.97626	0.97706	0.97786	0.97866	0.97935
0.95338	0.95560	0.95782	0.96005	0.96228	0.96452	0.96564	0.96677	0.96789	0.96902	0.97015	0.97109
0.93909	0.94192	0.94475	0.94760	0.95045	0.95331	0.95481	0.95631	0.95781	0.95931	0.96082	0.96202

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0.99397	0.99417	0.99438	0.99458	0.99470	0.99482	0.99495	0.99507	0.99519	0.99524	0.99529	0.99533
0.98732	0.98776	0.98820	0.98864	0.98891	0.98918	0.98945	0.98972	0.99000	0.99008	0.99016	0.99025
0.98003	0.98072	0.98140	0.98209	0.98255	0.98300	0.98346	0.98392	0.98438	0.98450	0.98462	0.98474
0.97202	0.97296	0.97390	0.97484	0.97553	0.97622	0.97691	0.97760	0.97829	0.97845	0.97861	0.97877
0.96322	0.96442	0.96563	0.96684	0.96779	0.96875	0.96971	0.97067	0.97163	0.97184	0.97205	0.97227

1994	1995
0.99538	0.99543
0.99033	0.99041
0.98486	0.98498
0.97893	0.97909
0.97248	0.97269

Table C-7: Male Labour Force by Age Groups (ten thousand)

Year	14~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1948	203	999	*	*	*	821	*	*	*	*	2,023
1949	201	1,017	*	*	*	842	*	*	*	*	2,060
1950	279	1,015	*	*	*	806	*	*	*	*	2,100
1951	261	1,038	*	*	*	817	*	*	*	*	2,116
1952	262	1,056	*	*	*	850	*	*	*	*	2,168
1953	281	1,086	*	*	*	868	*	*	*	*	2,235
1954	260	1,088	*	*	*	892	*	*	*	*	2,240
1955	278	1,130	*	*	*	888	*	*	*	*	2,296

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1955	258	1,149	*	*	*	902	*	*	*	*	2,309
1956	251	1,196	*	*	*	914	*	*	*	*	2,361
1957	243	1,242	*	*	*	943	*	*	*	*	2,428
1958	245	1,272	*	*	*	932	*	*	*	*	2,449
1959	247	336	363	350	260	226	229	195	171	120	2,497
1960	234	325	360	368	275	239	234	205	177	127	2,544
1961	215	329	384	369	297	230	233	204	172	127	2,560
1962	216	377	395	373	315	225	217	202	165	128	2,613
1963	208	384	393	382	334	232	214	204	165	131	2,647
1964	194	400	392	380	355	245	210	206	168	134	2,684
1965	201	400	395	386	363	259	212	210	171	135	2,732
1966	222	383	401	388	376	280	215	209	179	132	2,785
1967	209	372	413	409	380	307	219	209	315	*	2,833
1968	198	391	423	411	392	325	230	209	184	137	2,900
1969	169	405	439	403	395	345	243	205	187	141	2,932
1970	148	434	435	403	400	357	257	206	186	145	2,971
1971	137	465	419	406	405	363	281	208	189	149	3,022
1972	116	446	427	421	412	369	306	209	188	147	3,041
1973	105	413	465	439	417	391	324	220	188	154	3,116
1974	97	378	489	458	412	396	341	234	187	154	3,146
1975	83	351	521	454	412	401	351	250	190	154	3,167
1976	77	329	554	433	418	407	362	272	190	156	3,198
1977	74	305	540	444	427	411	373	292	192	153	3,211
1978	74	293	502	469	437	412	382	310	200	152	3,231
1979	74	284	467	492	456	408	387	328	215	148	3,259
1980	73	279	440	521	450	407	391	340	228	151	3,280
1981	73	281	419	551	429	411	399	349	247	150	3,309
1982	77	280	402	541	441	423	401	357	265	152	3,339
1983	84	286	390	510	469	431	402	365	284	155	3,376
1984	82	289	384	474	492	450	397	369	297	163	3,397
1985	79	293	378	444	522	445	397	374	307	171	3,410
1986	86	296	377	420	551	425	402	381	316	185	3,439
1987	86	301	378	406	539	434	414	384	325	198	3,465
1988	87	309	382	394	509	463	423	387	334	209	3,497
1989	87	319	385	389	475	487	444	383	340	222	3,531
1990	94	327	396	384	448	518	439	385	348	234	3,573
1991	97	348	398	382	427	550	420	392	359	245	3,618
1992	96	363	399	385	410	541	432	406	364	255	3,651
1993	91	375	411	388	398	510	460	415	367	263	3,678
1994	84	381	421	389	392	473	483	432	363	264	3,682
1995	79	379	430	397	385	445	512	429	364	268	3,688

Note: Table shows the monthly average of the year.

Sources: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), (1987), Nihon Chokitokei Soran (Historical Statistics of Japan), Nihon Tokei Kyokai (Japan Statistical Association), Vol. 1, pp. 376-377.

Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.

Table C-8: Males Not in the Labour Force by Age Groups (ten thousand)

Year	14~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	65~	Total
1948	220	47	*	*	*	50	*	*	*	*	90	407
1949	236	57	*	*	*	52	*	*	*	*	84	429
1950	236	51	*	*	*	69	*	*	*	*	87	443
1951	242	52	*	*	*	68	*	*	*	*	86	448
1952	248	61	*	*	*	62	*	*	*	*	86	457
1953	227	64	*	*	*	61	*	*	*	*	78	430
1954	240	67	*	*	*	64	*	*	*	*	84	455
1955	242	70	*	*	*	68	*	*	*	*	87	467

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	65~	Total
1955	174	71	*	*	*	69	*	*	*	*	88	402
1956	188	72	*	*	*	64	*	*	*	*	92	416
1957	192	74	*	*	*	61	*	*	*	*	91	418
1958	211	85	*	*	*	71	*	*	*	*	91	458
1959	214	49	18	13	9	8	10	12	20	20	104	477
1960	209	44	16	13	11	8	10	11	22	29	108	481
1961	206	49	17	12	10	9	9	12	21	28	112	485
1962	247	56	16	11	9	7	8	11	18	25	105	513
1963	283	61	16	12	11	8	8	11	19	28	111	568
1964	326	66	13	11	10	8	8	11	18	28	116	615
1965	352	65	13	11	11	8	8	11	19	28	119	645
1966	363	64	13	11	11	8	8	10	19	28	125	660
1967	357	72	14	10	10	9	7	11	49	*	133	672
1968	337	84	10	8	8	8	6	8	18	30	145	662
1969	331	98	11	8	9	8	7	8	17	30	152	679
1970	323	104	11	8	9	9	7	8	17	33	162	691
1971	309	106	9	7	8	8	8	8	15	34	170	682
1972	307	102	12	7	8	8	8	9	16	36	180	693
1973	311	104	12	6	7	7	9	9	16	35	189	705
1974	313	107	15	6	7	8	9	10	16	36	200	727
1975	322	108	16	7	8	8	10	10	16	37	212	754
1976	325	109	16	7	8	9	11	10	17	38	223	773
1977	330	115	18	7	8	9	11	12	18	42	233	803
1978	334	115	17	8	8	8	11	13	19	42	246	821
1979	337	120	15	8	7	7	10	13	18	43	257	835
1980	347	120	14	9	8	8	12	13	21	43	264	859
1981	345	116	13	10	8	9	12	14	23	45	272	867
1982	349	117	13	10	7	8	10	14	25	47	289	889
1983	354	115	11	9	7	8	10	14	26	51	295	900
1984	367	115	12	9	8	8	10	14	29	57	307	936
1985	377	123	13	9	10	9	11	16	31	63	318	980
1986	391	119	12	9	11	8	11	16	32	69	329	1,007
1987	407	118	12	9	11	9	10	15	31	76	344	1,042
1988	417	123	13	8	10	9	10	14	31	84	352	1,071
1989	424	126	12	8	9	9	9	13	29	87	365	1,091
1990	419	125	13	8	8	10	10	13	28	87	376	1,097
1991	410	126	13	8	8	10	8	12	25	84	386	1,090
1992	400	122	12	7	7	9	8	11	25	84	404	1,089
1993	388	124	14	7	7	9	9	11	23	85	425	1,102
1994	375	127	16	9	7	10	11	12	22	87	446	1,122
1995	363	132	16	9	8	10	12	12	22	90	467	1,139

Note: Table shows the monthly average of the year.
 Source: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency),
 Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.

Table C-9: Unemployed Males by Age Groups (ten thousand)

Year	14~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1948	2	6	*	*	*	7	*	*	*	*	15
1949	2	12	*	*	*	8	*	*	*	*	22
1950	5	13	*	*	*	10	*	*	*	*	28
1951	4	12	*	*	*	8	*	*	*	*	24
1952	5	14	*	*	*	11	*	*	*	*	30
1953	5	12	*	*	*	9	*	*	*	*	26
1954	4	17	*	*	*	11	*	*	*	*	32
1955	6	19	*	*	*	13	*	*	*	*	38

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1955	5	20	*	*	*	13	*	*	*	*	38
1956	6	17	*	*	*	11	*	*	*	*	34
1957	4	13	*	*	*	9	*	*	*	*	26
1958	4	17	*	*	*	11	*	*	*	*	32
1959	5	17	*	*	*	10	*	*	*	*	32
1960	4	12	*	*	*	7	*	*	*	*	23
1961	3	11	*	*	*	6	*	*	*	*	20
1962	3	9	*	*	*	6	*	*	*	*	18
1963	3	11	*	*	*	6	*	*	*	*	20
1964	3	9	*	*	*	6	*	*	*	*	18
1965	3	10	*	*	*	5	*	*	*	*	18
1966	3	11	*	*	*	7	*	*	*	*	21
1967	6	18	*	*	*	12	*	*	*	*	36
1968	5	18	*	*	*	12	*	*	*	*	35
1969	4	20	*	*	*	12	*	*	*	*	36
1970	4	20	*	*	*	12	*	*	*	*	36
1971	4	22	*	*	*	14	*	*	*	*	40
1972	4	26	*	*	*	17	*	*	*	*	47
1973	4	23	*	*	*	14	*	*	*	*	41
1974	4	25	*	*	*	16	*	*	*	*	45
1975	4	33	*	*	*	26	*	*	*	*	63
1976	14	*	26	*	*	17	*	*	17	*	74
1977	15	*	25	*	*	16	*	*	17	*	73
1978	16	*	27	*	*	19	*	*	19	*	81
1979	13	*	25	*	*	16	*	*	20	*	74
1980	14	*	24	*	*	15	*	*	19	*	72
1981	15	*	26	*	*	18	*	*	22	*	81
1982	5	10	10	11	6	19	*	*	19	*	80
1983	6	11	10	11	9	22	*	*	22	*	91
1984	7	11	9	10	9	21	*	*	24	*	91
1985	7	11	9	9	10	19	*	*	24	*	89
1986	7	13	9	9	11	21	*	*	26	*	96
1987	8	13	10	9	11	23	*	*	28	*	102
1988	7	13	9	7	9	19	*	*	24	*	88
1989	7	12	8	6	7	17	*	*	22	*	79
1990	7	12	8	6	6	16	*	*	20	*	75
1991	7	14	8	6	5	15	*	*	18	*	73

1992	7	14	9	6	6	16	*	*	20	*	78
1993	7	16	11	7	7	20	*	*	24	*	92
1994	7	19	13	8	7	25	*	*	29	*	108
1995	7	21	16	9	7	27	*	*	29	*	116

Note: Table shows the monthly average of the year.

Source: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.

Table C-10: Rate of Male Unemployment by Age Groups

Year	14~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1948	0.010	0.006	0.006	0.006	0.006	0.009	0.009	0.009	0.009	0.009	0.007
1949	0.010	0.012	0.012	0.012	0.012	0.010	0.010	0.010	0.010	0.010	0.011
1950	0.018	0.013	0.013	0.013	0.013	0.012	0.012	0.012	0.012	0.012	0.013
1951	0.015	0.012	0.012	0.012	0.012	0.010	0.010	0.010	0.010	0.010	0.011
1952	0.019	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.014
1953	0.018	0.011	0.011	0.011	0.011	0.010	0.010	0.010	0.010	0.010	0.012
1954	0.015	0.016	0.016	0.016	0.016	0.012	0.012	0.012	0.012	0.012	0.014
1955	0.022	0.017	0.017	0.017	0.017	0.015	0.015	0.015	0.015	0.015	0.017

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1955	0.019	0.017	0.017	0.017	0.017	0.014	0.014	0.014	0.014	0.014	0.016
1956	0.024	0.014	0.014	0.014	0.014	0.012	0.012	0.012	0.012	0.012	0.014
1957	0.016	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.011
1958	0.016	0.013	0.013	0.013	0.013	0.012	0.012	0.012	0.012	0.012	0.013
1959	0.020	0.051	0.051	0.051	0.051	0.044	0.044	0.044	0.044	0.044	0.013
1960	0.017	0.037	0.037	0.037	0.037	0.029	0.029	0.029	0.029	0.029	0.009
1961	0.014	0.033	0.033	0.033	0.033	0.026	0.026	0.026	0.026	0.026	0.008
1962	0.014	0.024	0.024	0.024	0.024	0.027	0.027	0.027	0.027	0.027	0.007
1963	0.014	0.029	0.029	0.029	0.029	0.026	0.026	0.026	0.026	0.026	0.008
1964	0.015	0.023	0.023	0.023	0.023	0.024	0.024	0.024	0.024	0.024	0.007
1965	0.015	0.025	0.025	0.025	0.025	0.019	0.019	0.019	0.019	0.019	0.007
1966	0.014	0.029	0.029	0.029	0.029	0.025	0.025	0.025	0.025	0.025	0.008
1967	0.029	0.048	0.048	0.048	0.048	0.039	0.039	0.039	0.039	0.039	0.013
1968	0.025	0.046	0.046	0.046	0.046	0.037	0.037	0.037	0.037	0.037	0.012
1969	0.024	0.049	0.049	0.049	0.049	0.035	0.035	0.035	0.035	0.035	0.012
1970	0.027	0.046	0.046	0.046	0.046	0.034	0.034	0.034	0.034	0.034	0.012
1971	0.029	0.047	0.047	0.047	0.047	0.039	0.039	0.039	0.039	0.039	0.013
1972	0.034	0.058	0.058	0.058	0.058	0.046	0.046	0.046	0.046	0.046	0.015
1973	0.038	0.056	0.056	0.056	0.056	0.036	0.036	0.036	0.036	0.036	0.013
1974	0.041	0.066	0.066	0.066	0.066	0.040	0.040	0.040	0.040	0.040	0.014
1975	0.048	0.094	0.094	0.094	0.094	0.065	0.065	0.065	0.065	0.065	0.020
1976	0.034	0.034	0.047	0.047	0.047	0.042	0.042	0.042	0.089	0.089	0.023
1977	0.040	0.040	0.046	0.046	0.046	0.039	0.039	0.039	0.089	0.089	0.023
1978	0.044	0.044	0.054	0.054	0.054	0.046	0.046	0.046	0.095	0.095	0.025
1979	0.036	0.036	0.054	0.054	0.054	0.039	0.039	0.039	0.093	0.093	0.023
1980	0.040	0.040	0.055	0.055	0.055	0.037	0.037	0.037	0.083	0.083	0.022
1981	0.042	0.042	0.062	0.062	0.062	0.044	0.044	0.044	0.089	0.089	0.024
1982	0.065	0.036	0.025	0.020	0.014	0.045	0.045	0.045	0.072	0.072	0.024
1983	0.071	0.038	0.026	0.022	0.019	0.051	0.051	0.051	0.077	0.077	0.027
1984	0.085	0.038	0.023	0.021	0.018	0.047	0.047	0.047	0.081	0.081	0.027
1985	0.089	0.038	0.024	0.020	0.019	0.043	0.043	0.043	0.078	0.078	0.026
1986	0.081	0.044	0.024	0.021	0.020	0.049	0.049	0.049	0.082	0.082	0.028
1987	0.093	0.043	0.026	0.022	0.020	0.053	0.053	0.053	0.086	0.086	0.029

1988	0.080	0.042	0.024	0.018	0.018	0.041	0.041	0.041	0.072	0.072	0.025
1989	0.080	0.038	0.021	0.015	0.015	0.035	0.035	0.035	0.065	0.065	0.022
1990	0.074	0.037	0.020	0.016	0.013	0.031	0.031	0.031	0.057	0.057	0.021
1991	0.072	0.040	0.020	0.016	0.012	0.027	0.027	0.027	0.050	0.050	0.020
1992	0.073	0.039	0.023	0.016	0.015	0.030	0.030	0.030	0.055	0.055	0.021
1993	0.077	0.043	0.027	0.018	0.018	0.039	0.039	0.039	0.065	0.065	0.025
1994	0.083	0.050	0.031	0.021	0.018	0.053	0.053	0.053	0.080	0.080	0.029
1995	0.089	0.055	0.037	0.023	0.018	0.061	0.061	0.061	0.080	0.080	0.031

Note: Table shows the monthly average of the year.

Source: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency),
Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.

Table C-11: Female Labour Force by Age Groups (ten thousand)

Year	14~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1948	172	686	*	*	*	434	*	*	*	*	1,292
1949	174	726	*	*	*	486	*	*	*	*	1,386
1950	242	680	*	*	*	446	*	*	*	*	1,368
1951	239	700	*	*	*	450	*	*	*	*	1,389
1952	237	730	*	*	*	479	*	*	*	*	1,446
1953	240	788	*	*	*	523	*	*	*	*	1,551
1954	234	802	*	*	*	546	*	*	*	*	1,582
1955	242	854	*	*	*	574	*	*	*	*	1,670

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1955	221	844	*	*	*	567	*	*	*	*	1,632
1956	216	870	*	*	*	576	*	*	*	*	1,662
1957	221	883	*	*	*	593	*	*	*	*	1,697
1958	222	890	*	*	*	594	*	*	*	*	1,706
1959	223	276	217	207	193	166	156	121	91	65	1,715
1960	219	277	217	216	200	171	162	124	94	68	1,748
1961	210	290	214	210	206	178	163	123	94	71	1,759
1962	210	317	218	208	209	179	159	132	91	65	1,788
1963	200	320	212	208	214	186	157	135	94	66	1,792
1964	188	328	205	207	220	192	159	138	99	69	1,805
1965	191	325	204	205	226	204	162	140	104	68	1,829
1966	214	310	206	206	228	214	170	146	110	69	1,873
1967	214	313	214	215	225	219	176	149	185	*	1,910
1968	199	332	212	209	232	227	187	148	113	71	1,930
1969	170	350	216	204	231	233	195	146	116	74	1,935
1970	153	374	208	201	234	235	199	153	116	77	1,950
1971	137	388	188	195	231	234	205	155	122	80	1,935
1972	117	367	191	199	231	240	211	158	120	80	1,914
1973	113	350	212	210	238	245	222	172	125	86	1,973
1974	95	319	217	210	229	243	226	176	122	87	1,924
1975	85	301	226	204	227	245	227	182	126	89	1,912
1976	74	287	249	196	232	251	231	190	132	89	1,931
1977	77	279	253	208	243	261	239	197	137	92	1,986
1978	79	273	242	227	255	265	251	204	146	93	2,035
1979	73	276	233	237	271	266	255	211	152	94	2,068
1980	74	273	223	255	268	268	261	216	156	97	2,091
1981	72	272	215	274	258	274	267	218	160	99	2,109
1982	70	275	210	272	268	286	274	225	166	103	2,149
1983	78	281	210	261	287	300	279	235	175	110	2,216

1984	79	284	212	244	297	316	277	239	178	111	2,237
1985	72	289	210	229	317	313	282	244	182	116	2,254
1986	78	295	210	215	341	302	286	251	182	120	2,280
1987	78	299	219	208	336	305	295	254	189	124	2,307
1988	79	308	226	203	317	322	305	261	194	128	2,343
1989	84	318	232	201	300	341	325	262	201	134	2,398
1990	87	326	245	200	283	366	327	268	212	138	2,452
1991	86	343	252	203	267	392	313	276	222	145	2,499
1992	83	353	258	203	257	385	319	288	225	148	2,519
1993	79	356	267	204	246	362	338	291	229	150	2,522
1994	74	360	278	208	242	335	351	306	226	149	2,529
1995	67	361	287	213	234	314	373	302	229	153	2,533

Note: Table shows the monthly average of the year.

Sources: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), (1987), Nihon Chokitokei Soran (Historical Statistics of Japan), Nihon Tokei Kyokai (Japan Statistical Association), Vol. 1, p. 377.

Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.

Table C-12: Females Not in the Labour Force by Age Groups (ten thousand)

Year	14~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	65~	Total
1948	249	573	*	*	*	467	*	*	*	*	208	1,497
1949	242	536	*	*	*	430	*	*	*	*	203	1,411
1950	265	568	*	*	*	436	*	*	*	*	194	1,463
1951	277	587	*	*	*	458	*	*	*	*	196	1,518
1952	282	568	*	*	*	464	*	*	*	*	200	1,514
1953	261	542	*	*	*	437	*	*	*	*	193	1,433
1954	274	538	*	*	*	445	*	*	*	*	196	1,453
1955	277	527	*	*	*	427	*	*	*	*	205	1,436

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	65~	Total
1955	197	520	*	*	*	422	*	*	*	*	202	1,341
1956	201	538	*	*	*	440	*	*	*	*	203	1,382
1957	211	550	*	*	*	445	*	*	*	*	209	1,415
1958	222	571	*	*	*	469	*	*	*	*	212	1,474
1959	226	118	176	170	133	107	101	99	96	85	223	1,534
1960	228	114	181	166	138	109	105	101	95	90	232	1,559
1961	216	118	194	173	136	107	105	106	96	89	235	1,575
1962	239	120	198	177	141	109	103	102	97	95	246	1,627
1963	278	125	206	185	146	112	105	107	100	98	257	1,719
1964	315	136	209	190	149	119	103	110	101	101	262	1,795
1965	342	138	212	195	154	119	103	111	105	103	271	1,853
1966	349	132	216	201	158	121	104	108	109	102	282	1,882
1967	338	133	220	204	163	128	102	107	217	*	291	1,903
1968	322	141	229	212	165	126	108	107	115	110	311	1,946
1969	315	148	243	212	170	132	115	106	118	115	322	1,996
1970	302	156	248	216	173	138	116	108	122	120	334	2,033
1971	295	173	245	227	182	141	125	113	121	127	349	2,098
1972	293	176	252	235	185	146	127	117	124	133	369	2,157
1973	291	170	264	237	184	148	131	121	123	139	382	2,190
1974	301	165	282	256	188	156	134	131	126	143	402	2,284
1975	304	155	302	258	191	161	139	133	132	145	422	2,342
1976	310	143	312	245	193	164	143	137	131	149	439	2,366

1977	308	130	298	241	194	158	142	139	135	150	457	2,352
1978	312	126	274	248	190	155	142	141	140	148	475	2,351
1979	319	118	248	260	193	150	142	145	147	147	495	2,364
1980	327	116	228	272	192	148	143	147	152	152	515	2,392
1981	327	113	213	283	180	149	143	152	159	158	533	2,410
1982	336	111	200	274	179	148	141	153	164	163	551	2,420
1983	339	108	186	254	187	142	137	151	164	168	569	2,405
1984	349	106	179	236	198	145	134	151	172	179	587	2,436
1985	361	109	175	221	209	144	129	153	174	183	613	2,471
1986	374	103	172	211	216	133	132	153	181	191	639	2,505
1987	390	105	164	200	210	138	134	155	182	197	666	2,541
1988	400	106	159	193	197	148	132	148	185	203	691	2,562
1989	401	107	155	190	179	151	132	143	183	207	716	2,564
1990	400	105	151	185	167	157	127	139	180	210	741	2,562
1991	397	109	144	178	160	162	120	137	176	211	767	2,561
1992	388	113	144	180	153	160	123	137	179	216	798	2,591
1993	375	121	147	182	152	152	132	143	176	223	835	2,638
1994	361	124	147	181	150	144	141	148	175	228	867	2,669
1995	352	125	145	184	152	137	149	148	173	232	900	2,698

Note: Table shows the monthly average of the year.

Source: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency),
Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.

Table C-13: Unemployed Females by Age Groups (ten thousand)

Year	14~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1948	1	4	*	*	*	3	*	*	*	*	8
1949	3	8	*	*	*	4	*	*	*	*	15
1950	4	8	*	*	*	3	*	*	*	*	15
1951	4	7	*	*	*	3	*	*	*	*	14
1952	4	9	*	*	*	4	*	*	*	*	17
1953	5	10	*	*	*	5	*	*	*	*	20
1954	5	13	*	*	*	6	*	*	*	*	24
1955	6	15	*	*	*	7	*	*	*	*	28

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1955	5	15	*	*	*	7	*	*	*	*	27
1956	5	15	*	*	*	6	*	*	*	*	26
1957	4	14	*	*	*	6	*	*	*	*	24
1958	4	14	*	*	*	5	*	*	*	*	23
1959	5	15	*	*	*	5	*	*	*	*	25
1960	4	11	*	*	*	6	*	*	*	*	21
1961	3	11	*	*	*	5	*	*	*	*	19
1962	3	12	*	*	*	6	*	*	*	*	21
1963	3	13	*	*	*	6	*	*	*	*	22
1964	3	12	*	*	*	5	*	*	*	*	20
1965	4	13	*	*	*	6	*	*	*	*	23
1966	3	14	*	*	*	6	*	*	*	*	23
1967	4	18	*	*	*	5	*	*	*	*	27
1968	4	15	*	*	*	4	*	*	*	*	23
1969	3	15	*	*	*	5	*	*	*	*	23
1970	2	15	*	*	*	3	*	*	*	*	20
1971	2	15	*	*	*	5	*	*	*	*	22
1972	2	17	*	*	*	6	*	*	*	*	25

1973	2	16	*	*	*	6	*	*	*	*	24
1974	2	17	*	*	*	6	*	*	*	*	25
1975	2	22	*	*	*	11	*	*	*	*	35
1976	10	*	14	*	*	8	*	*	2	*	34
1977	11	*	17	*	*	8	*	*	3	*	39
1978	11	*	19	*	*	10	*	*	3	*	43
1979	11	*	19	*	*	10	*	*	3	*	43
1980	11	*	19	*	*	10	*	*	3	*	43
1981	13	*	20	*	*	10	*	*	5	*	48
1982	3	12	7	7	5	12	*	*	4	*	50
1983	4	12	8	8	7	15	*	*	5	*	59
1984	4	14	9	7	8	16	*	*	6	*	64
1985	4	13	10	7	7	16	*	*	6	*	63
1986	5	14	10	7	8	17	*	*	6	*	67
1987	6	13	10	6	8	17	*	*	7	*	67
1988	5	13	10	6	7	16	*	*	7	*	64
1989	5	12	9	6	6	14	*	*	6	*	58
1990	5	12	9	5	6	14	*	*	5	*	56
1991	5	13	10	5	6	15	*	*	6	*	60
1992	5	13	9	6	5	15	*	*	5	*	58
1993	5	18	12	7	6	17	*	*	6	*	71
1994	5	18	15	8	6	19	*	*	7	*	78
1995	5	21	15	10	7	21	*	*	8	*	87

Note: Table shows the monthly average of the year.

Source: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.

Table C-14: Rate of Female Unemployment by Age Groups

Year	14~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1948	0.006	0.006	0.006	0.006	0.006	0.007	0.007	0.007	0.007	0.007	0.006
1949	0.017	0.011	0.011	0.011	0.011	0.008	0.008	0.008	0.008	0.008	0.011
1950	0.017	0.012	0.012	0.012	0.012	0.007	0.007	0.007	0.007	0.007	0.011
1951	0.017	0.010	0.010	0.010	0.010	0.007	0.007	0.007	0.007	0.007	0.010
1952	0.017	0.012	0.012	0.012	0.012	0.008	0.008	0.008	0.008	0.008	0.012
1953	0.021	0.013	0.013	0.013	0.013	0.010	0.010	0.010	0.010	0.010	0.013
1954	0.021	0.016	0.016	0.016	0.016	0.011	0.011	0.011	0.011	0.011	0.015
1955	0.025	0.018	0.018	0.018	0.018	0.012	0.012	0.012	0.012	0.012	0.017

Year	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	Total
1955	0.023	0.018	0.018	0.018	0.018	0.012	0.012	0.012	0.012	0.012	0.017
1956	0.023	0.017	0.017	0.017	0.017	0.010	0.010	0.010	0.010	0.010	0.016
1957	0.018	0.016	0.016	0.016	0.016	0.010	0.010	0.010	0.010	0.010	0.014
1958	0.018	0.016	0.016	0.016	0.016	0.008	0.008	0.008	0.008	0.008	0.013
1959	0.022	0.054	0.054	0.054	0.054	0.030	0.030	0.030	0.030	0.030	0.015
1960	0.018	0.040	0.040	0.040	0.040	0.035	0.035	0.035	0.035	0.035	0.012
1961	0.014	0.038	0.038	0.038	0.038	0.028	0.028	0.028	0.028	0.028	0.011
1962	0.014	0.038	0.038	0.038	0.038	0.034	0.034	0.034	0.034	0.034	0.012
1963	0.015	0.041	0.041	0.041	0.041	0.032	0.032	0.032	0.032	0.032	0.012
1964	0.016	0.037	0.037	0.037	0.037	0.026	0.026	0.026	0.026	0.026	0.011
1965	0.021	0.040	0.040	0.040	0.040	0.029	0.029	0.029	0.029	0.029	0.013
1966	0.014	0.045	0.045	0.045	0.045	0.028	0.028	0.028	0.028	0.028	0.012
1967	0.019	0.058	0.058	0.058	0.058	0.023	0.023	0.023	0.023	0.023	0.014
1968	0.020	0.045	0.045	0.045	0.045	0.018	0.018	0.018	0.018	0.018	0.012

1969	0.018	0.043	0.043	0.043	0.043	0.021	0.021	0.021	0.021	0.021	0.012
1970	0.013	0.040	0.040	0.040	0.040	0.013	0.013	0.013	0.013	0.013	0.010
1971	0.015	0.039	0.039	0.039	0.039	0.021	0.021	0.021	0.021	0.021	0.011
1972	0.017	0.046	0.046	0.046	0.046	0.025	0.025	0.025	0.025	0.025	0.013
1973	0.018	0.046	0.046	0.046	0.046	0.024	0.024	0.024	0.024	0.024	0.012
1974	0.021	0.053	0.053	0.053	0.053	0.025	0.025	0.025	0.025	0.025	0.013
1975	0.024	0.073	0.073	0.073	0.073	0.045	0.045	0.045	0.045	0.045	0.018
1976	0.028	0.028	0.056	0.056	0.056	0.032	0.032	0.032	0.015	0.015	0.018
1977	0.031	0.031	0.067	0.067	0.067	0.031	0.031	0.031	0.022	0.022	0.020
1978	0.031	0.031	0.079	0.079	0.079	0.038	0.038	0.038	0.021	0.021	0.021
1979	0.032	0.032	0.082	0.082	0.082	0.038	0.038	0.038	0.020	0.020	0.021
1980	0.032	0.032	0.085	0.085	0.085	0.037	0.037	0.037	0.019	0.019	0.021
1981	0.038	0.038	0.093	0.093	0.093	0.036	0.036	0.036	0.031	0.031	0.023
1982	0.043	0.044	0.033	0.026	0.019	0.042	0.042	0.042	0.024	0.024	0.023
1983	0.051	0.043	0.038	0.031	0.024	0.050	0.050	0.050	0.029	0.029	0.027
1984	0.051	0.049	0.042	0.029	0.027	0.051	0.051	0.051	0.034	0.034	0.029
1985	0.056	0.045	0.048	0.031	0.022	0.051	0.051	0.051	0.033	0.033	0.028
1986	0.064	0.047	0.048	0.033	0.023	0.056	0.056	0.056	0.033	0.033	0.029
1987	0.077	0.043	0.046	0.029	0.024	0.056	0.056	0.056	0.037	0.037	0.029
1988	0.063	0.042	0.044	0.030	0.022	0.050	0.050	0.050	0.036	0.036	0.027
1989	0.060	0.038	0.039	0.030	0.020	0.041	0.041	0.041	0.030	0.030	0.024
1990	0.057	0.037	0.037	0.025	0.021	0.038	0.038	0.038	0.024	0.024	0.023
1991	0.058	0.038	0.040	0.025	0.022	0.038	0.038	0.038	0.027	0.027	0.024
1992	0.060	0.037	0.035	0.030	0.019	0.039	0.039	0.039	0.022	0.022	0.023
1993	0.063	0.051	0.045	0.034	0.024	0.047	0.047	0.047	0.026	0.026	0.028
1994	0.068	0.050	0.054	0.038	0.025	0.057	0.057	0.057	0.031	0.031	0.031
1995	0.075	0.058	0.052	0.047	0.030	0.067	0.067	0.067	0.035	0.035	0.034

Note: Table shows the monthly average of the year.

Source: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency),
Rodoryoku Chosa Nenpo (Annual Report on the Labour Force Survey), Various Years.

Table C-15: Estimated Rate of Male Unemployment by Age

Year	15	16	17	18	19	20	21	22	23	24	25	26
1947	0.012	0.011	0.010	0.009	0.008	0.007	0.007	0.006	0.006	0.006	0.006	0.006
1948	0.012	0.011	0.010	0.009	0.008	0.007	0.007	0.006	0.006	0.006	0.006	0.006
1949	0.009	0.010	0.010	0.010	0.011	0.011	0.011	0.012	0.012	0.012	0.012	0.012
1950	0.020	0.019	0.018	0.017	0.016	0.015	0.014	0.013	0.013	0.013	0.013	0.013
1951	0.017	0.016	0.015	0.014	0.014	0.013	0.012	0.012	0.012	0.012	0.012	0.012
1952	0.022	0.021	0.019	0.018	0.016	0.015	0.014	0.013	0.013	0.013	0.013	0.013
1953	0.022	0.020	0.018	0.016	0.015	0.013	0.012	0.011	0.011	0.011	0.011	0.011
1954	0.015	0.015	0.015	0.015	0.015	0.016	0.016	0.016	0.016	0.016	0.016	0.016
1955	0.020	0.020	0.019	0.019	0.019	0.018	0.018	0.017	0.017	0.017	0.017	0.017
1956	0.029	0.027	0.024	0.022	0.019	0.017	0.016	0.014	0.014	0.014	0.014	0.014
1957	0.020	0.018	0.016	0.015	0.014	0.013	0.011	0.010	0.010	0.010	0.010	0.010
1958	0.018	0.017	0.016	0.016	0.015	0.014	0.014	0.013	0.013	0.013	0.013	0.013
1959	0.014	0.017	0.020	0.024	0.029	0.035	0.042	0.051	0.051	0.051	0.051	0.051
1960	0.013	0.015	0.017	0.020	0.023	0.027	0.032	0.037	0.037	0.037	0.037	0.037
1961	0.010	0.012	0.014	0.017	0.020	0.024	0.028	0.033	0.033	0.033	0.033	0.033
1962	0.011	0.012	0.014	0.015	0.017	0.019	0.021	0.024	0.024	0.024	0.024	0.024
1963	0.011	0.013	0.014	0.017	0.019	0.022	0.025	0.029	0.029	0.029	0.029	0.029
1964	0.013	0.014	0.015	0.017	0.018	0.019	0.021	0.023	0.023	0.023	0.023	0.023
1965	0.012	0.013	0.015	0.017	0.018	0.020	0.023	0.025	0.025	0.025	0.025	0.025

0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046
0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065
0.049	0.057	0.066	0.077	0.089	0.089	0.089	0.089	0.089	0.089	0.089	0.089
0.046	0.054	0.064	0.075	0.089	0.089	0.089	0.089	0.089	0.089	0.089	0.089
0.053	0.062	0.071	0.082	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
0.047	0.055	0.066	0.078	0.093	0.093	0.093	0.093	0.093	0.093	0.093	0.093
0.043	0.051	0.060	0.071	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083
0.050	0.058	0.067	0.077	0.089	0.089	0.089	0.089	0.089	0.089	0.089	0.089
0.049	0.054	0.059	0.065	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072
0.055	0.060	0.066	0.071	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
0.052	0.058	0.065	0.072	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081
0.048	0.054	0.061	0.069	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078
0.055	0.061	0.067	0.074	0.082	0.082	0.082	0.082	0.082	0.082	0.082	0.082
0.058	0.064	0.071	0.078	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086
0.046	0.051	0.057	0.064	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072
0.039	0.045	0.051	0.057	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065
0.035	0.040	0.045	0.051	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057
0.031	0.035	0.039	0.044	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
0.033	0.038	0.043	0.049	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055
0.043	0.048	0.053	0.059	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065
0.057	0.062	0.068	0.074	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
0.064	0.068	0.071	0.075	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080

Table C-16: Estimated Rate of Female Unemployment by Age

Year	15	16	17	18	19	20	21	22	23	24	25	26
1947	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
1948	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
1949	0.021	0.019	0.017	0.016	0.014	0.013	0.012	0.011	0.011	0.011	0.011	0.011
1950	0.019	0.018	0.017	0.015	0.014	0.013	0.013	0.012	0.012	0.012	0.012	0.012
1951	0.021	0.019	0.017	0.015	0.014	0.012	0.011	0.010	0.010	0.010	0.010	0.010
1952	0.019	0.018	0.017	0.016	0.015	0.014	0.013	0.012	0.012	0.012	0.012	0.012
1953	0.025	0.023	0.021	0.019	0.017	0.015	0.014	0.013	0.013	0.013	0.013	0.013
1954	0.024	0.023	0.021	0.020	0.019	0.018	0.017	0.016	0.016	0.016	0.016	0.016
1955	0.025	0.024	0.023	0.022	0.021	0.020	0.019	0.018	0.018	0.018	0.018	0.018
1956	0.026	0.025	0.023	0.022	0.021	0.019	0.018	0.017	0.017	0.017	0.017	0.017
1957	0.019	0.019	0.018	0.018	0.017	0.017	0.016	0.016	0.016	0.016	0.016	0.016
1958	0.019	0.019	0.018	0.018	0.017	0.017	0.016	0.016	0.016	0.016	0.016	0.016
1959	0.016	0.019	0.022	0.027	0.032	0.038	0.046	0.054	0.054	0.054	0.054	0.054
1960	0.013	0.016	0.018	0.021	0.025	0.029	0.034	0.040	0.040	0.040	0.040	0.040
1961	0.010	0.012	0.014	0.017	0.021	0.026	0.031	0.038	0.038	0.038	0.038	0.038
1962	0.010	0.012	0.014	0.017	0.021	0.026	0.031	0.038	0.038	0.038	0.038	0.038
1963	0.010	0.012	0.015	0.018	0.022	0.027	0.033	0.041	0.041	0.041	0.041	0.041
1964	0.011	0.014	0.016	0.019	0.022	0.026	0.031	0.037	0.037	0.037	0.037	0.037
1965	0.016	0.018	0.021	0.024	0.027	0.031	0.035	0.040	0.040	0.040	0.040	0.040
1966	0.009	0.011	0.014	0.018	0.022	0.028	0.036	0.045	0.045	0.045	0.045	0.045
1967	0.012	0.015	0.019	0.023	0.029	0.037	0.046	0.058	0.058	0.058	0.058	0.058
1968	0.015	0.017	0.020	0.024	0.028	0.033	0.038	0.045	0.045	0.045	0.045	0.045
1969	0.012	0.015	0.018	0.021	0.025	0.030	0.036	0.043	0.043	0.043	0.043	0.043
1970	0.008	0.010	0.013	0.016	0.020	0.026	0.032	0.040	0.040	0.040	0.040	0.040
1971	0.010	0.012	0.015	0.018	0.022	0.026	0.032	0.039	0.039	0.039	0.039	0.039
1972	0.011	0.014	0.017	0.021	0.025	0.031	0.038	0.046	0.046	0.046	0.046	0.046

0.033	0.029	0.026	0.022	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
0.033	0.029	0.025	0.022	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019
0.035	0.034	0.033	0.032	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
0.038	0.034	0.030	0.027	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
0.045	0.040	0.036	0.032	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029
0.047	0.043	0.040	0.037	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
0.047	0.043	0.039	0.036	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033
0.051	0.045	0.041	0.037	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033
0.051	0.047	0.044	0.040	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037
0.047	0.044	0.041	0.038	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
0.039	0.036	0.034	0.032	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
0.035	0.032	0.029	0.026	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
0.036	0.033	0.031	0.029	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027
0.035	0.031	0.028	0.025	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022
0.042	0.037	0.033	0.029	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026
0.050	0.045	0.039	0.035	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
0.059	0.052	0.045	0.040	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035

**Table C-17: Average Monthly Contractual Earnings of Male Workers
by Age Groups (¥)**

Year	All ages	~17	18~19	20~24	25~29	30~34	35~39	40~44	45~49
1954	16,937	5,002	8,019	11,427	15,397	18,890	21,254	23,349	*
1958	19,649	5,652	8,871	12,338	17,526	22,178	25,704	28,631	*
1959	20,522	6,128	9,322	13,025	18,276	23,123	26,854	29,967	*
1960	22,003	6,737	10,302	14,134	19,493	24,701	28,706	32,101	*
1961	23,861	7,944	11,974	15,863	21,361	26,669	30,956	34,633	*
1962	27,174	9,264	14,046	18,370	24,541	30,165	34,460	38,701	*
1963	29,703	10,364	15,526	20,401	26,930	32,863	37,085	41,790	*
1964	32,100	12,200	17,400	23,100	30,000	35,700	39,500	44,000	*
1965	35,500	14,200	18,900	25,300	32,800	39,100	43,400	48,400	*
1966	38,900	16,000	20,600	27,900	35,600	42,500	47,400	52,200	*
1967	42,800	16,700	22,700	30,300	39,300	46,900	52,000	57,200	*
1968	51,200	20,900	27,800	35,700	46,800	55,800	61,400	67,500	*
1969	58,000	24,200	32,300	40,500	53,300	63,600	69,000	75,100	*
1970	68,400	29,300	38,400	47,900	62,600	74,300	80,800	87,200	*
1971	77,000	33,700	43,800	54,800	70,000	83,000	90,300	96,700	*
1972	88,300	38,500	50,600	63,000	79,200	94,400	102,800	109,700	*
1973	107,500	47,000	61,100	75,700	93,800	113,600	122,900	130,100	134,800
1974	133,400	59,500	75,400	92,900	114,700	139,800	154,600	159,900	164,600
1975	150,200	66,000	83,600	102,400	127,500	154,700	171,300	179,500	185,500
1976	166,100	72,100	91,100	112,700	142,300	172,800	190,800	199,300	202,500
1977	182,800	77,400	97,300	121,600	154,400	186,700	208,900	219,500	222,800
1978	194,900	80,200	103,800	126,700	162,000	195,500	220,900	234,000	237,300
1979	206,600	86,000	109,500	134,400	171,100	205,700	234,000	247,900	251,000
1980	198,600	88,700	102,200	124,300	158,300	193,800	224,400	240,600	245,600
1981	234,600	94,800	121,800	148,100	188,300	229,700	264,900	281,500	287,400
1982	222,000	97,100	113,400	136,800	173,100	214,600	249,100	270,400	277,300
1983	229,300	98,500	116,200	140,500	177,400	219,100	253,900	279,300	286,900
1984	237,500	102,300	120,000	143,900	180,300	223,500	259,100	289,700	300,000
1985	244,600	103,200	123,100	147,800	184,600	227,600	265,000	296,900	308,900
1986	252,400	106,300	125,800	151,900	188,600	232,600	271,800	305,800	320,000
1987	257,700	109,800	129,100	154,200	191,300	235,000	275,000	309,800	327,500

1988	264,400	110,900	132,000	159,400	197,400	241,700	281,200	315,500	337,500
1989	276,100	119,300	137,200	166,200	205,000	250,700	291,000	327,100	352,500
1990	290,500	125,600	144,900	175,400	216,200	262,600	305,600	342,700	369,700
1991	303,800	131,200	154,900	185,600	226,900	274,800	317,300	356,200	386,400
1992	313,500	140,100	160,400	193,000	236,800	284,800	328,200	369,000	398,400
1993	349,400	145,000	183,400	222,300	274,700	326,700	366,900	402,000	433,000
1994	357,100	152,000	187,600	226,300	278,300	331,500	374,100	408,300	438,400
1995	361,300	145,300	189,300	227,700	280,700	334,100	378,000	410,600	441,500

50~54	55~59	60~64
21,801	*	15,119
26,185	*	*
27,252	*	*
28,896	*	*
33,034	*	23,668
30,915	*	25,931
39,602	*	28,606
41,900	*	30,300
46,800	*	33,100
50,700	*	36,400
54,800	*	38,100
64,600	*	44,500
71,800	*	48,700
83,600	*	56,700
92,900	*	63,100
104,100	*	70,800
137,100	111,600	92,000
166,600	139,700	114,400
187,400	160,300	125,300
203,300	171,400	135,800
222,900	188,500	147,700
236,300	202,700	163,000
248,500	213,000	169,900
241,100	210,600	171,900
282,200	243,200	192,400
270,400	234,600	189,400
280,000	256,900	208,100
292,000	281,300	218,900
302,000	263,900	214,000
311,800	272,400	226,900
321,400	281,100	229,900
333,000	289,100	237,700
347,300	302,200	241,500
367,900	249,600	227,000
386,000	341,200	261,300
399,500	356,200	272,400
440,000	392,600	295,300
449,300	405,200	306,500
453,900	413,900	315,300

Sources: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), (1987), Nihon Chokitokei Soran (Historical Statistics of Japan), Nihon Tokei Kyokai (Japan Statistical Association), Vol. 4, pp. 290-291. Rododaijin Kanboseisaku Chosabu (Policy Planning and Research Department, Minister's Secretariat, Ministry of Labour), Rodotokei Nenpo (Year Book of Labour Statistics), Various Years.

**Table C-18: Estimated Annual Special Earnings of Male Regular Workers
by Age Groups (¥)**

Year	All ages	~17	18~19	20~24	25~29	30~34	35~39	40~44
1954	40,628	6,191	10,784	23,893	38,441	49,791	56,821	64,263
1958	47,133	6,996	11,930	25,798	43,757	58,458	68,718	78,800
1959	49,227	7,585	12,536	27,234	45,629	60,949	71,792	82,477
1960	52,780	8,338	13,854	29,553	48,668	65,108	76,743	88,351
1961	57,237	9,832	16,103	33,168	53,331	70,296	82,758	95,319
1962	65,184	11,466	18,889	38,410	61,271	79,511	92,126	106,516
1963	71,250	12,828	20,880	42,657	67,235	86,622	99,144	115,017
1964	77,000	15,100	23,400	48,300	74,900	94,100	105,600	121,100
1965	102,500	17,200	27,500	59,500	88,000	112,300	135,800	165,300
1966	108,700	20,400	27,900	64,300	91,500	117,900	145,100	171,500
1967	119,200	20,500	30,200	70,600	102,300	129,500	157,500	186,400
1968	143,200	22,700	33,800	81,200	124,700	155,900	184,800	221,000
1969	165,600	28,700	40,700	92,600	145,300	185,000	211,000	248,900
1970	206,400	38,700	51,600	114,000	180,700	226,800	257,800	303,000
1971	249,800	43,700	62,900	142,900	220,400	274,000	307,700	357,000
1972	288,700	52,400	74,900	168,300	253,100	311,100	353,600	401,100
1973	339,200	61,400	84,400	188,300	279,500	355,500	404,900	447,000
1974	445,900	75,800	105,100	243,400	362,500	469,400	541,800	581,000
1975	568,400	97,500	134,000	307,500	451,000	587,500	680,300	733,300
1976	560,500	86,600	120,300	303,600	457,500	597,500	682,900	732,200
1977	616,900	86,700	111,500	320,700	493,300	640,200	746,500	807,000
1978	662,300	80,400	114,600	329,800	522,300	675,800	793,800	859,800
1979	673,800	73,300	105,500	319,100	526,100	680,800	814,800	884,200
1980	748,400	70,500	105,100	338,700	569,200	741,400	897,600	983,900
1981	809,800	72,500	116,300	344,200	602,100	790,900	979,500	1,070,500
1982	842,000	83,300	116,700	354,200	613,700	816,300	1,004,900	1,121,800
1983	870,500	84,200	120,100	373,000	625,000	831,400	1,012,200	1,159,700
1984	895,600	76,100	120,300	378,300	643,900	841,500	1,018,900	1,187,300
1985	940,100	79,800	130,000	396,800	660,300	874,600	1,057,400	1,243,300
1986	978,000	82,100	133,100	406,800	680,700	899,900	1,091,500	1,297,900
1987	992,600	87,600	138,100	415,900	685,400	907,400	1,100,800	1,293,500
1988	997,800	72,900	130,300	407,500	696,200	911,000	1,106,000	1,291,700
1989	1,075,300	81,400	130,600	424,800	741,700	967,700	1,173,500	1,377,000
1990	1,154,200	101,600	149,700	456,900	803,600	1,035,500	1,255,500	1,459,700
1991	1,248,900	124,200	174,900	496,700	862,300	1,118,700	1,349,300	1,572,000
1992	1,294,200	136,900	186,100	529,700	906,500	1,162,500	1,400,400	1,648,800
1993	1,298,800	134,700	194,800	537,500	903,900	1,176,200	1,403,900	1,616,600
1994	1,287,600	111,500	194,400	538,200	886,200	1,156,000	1,383,800	1,590,700
1995	1,264,200	101,800	179,000	523,600	869,600	1,130,200	1,352,000	1,549,400

45~49	50~54	55~59	60~64
64,263	56,818	56,818	44,758
78,800	68,243	68,243	68,243
82,477	71,024	71,024	71,024
88,351	75,309	75,309	75,309
95,319	86,093	86,093	70,067
106,516	80,571	80,571	76,766
115,017	103,211	103,211	84,685
121,100	109,200	109,200	89,700

165,300	154,100	154,100	79,400
171,500	161,600	161,600	81,000
186,400	170,300	170,300	82,700
221,000	202,000	202,000	96,400
248,900	228,700	228,700	105,200
303,000	281,300	281,300	133,300
357,000	333,800	333,800	152,400
401,100	369,000	369,000	174,800
494,500	496,900	350,100	255,000
618,500	635,300	463,800	333,600
779,800	800,800	604,500	389,900
752,800	765,600	550,600	356,900
827,600	835,000	607,100	387,200
882,300	874,600	659,700	440,700
900,300	875,900	652,800	432,600
1,004,700	973,100	732,100	487,400
1,101,500	1,056,400	783,700	509,700
1,149,700	1,114,500	842,500	536,300
1,195,600	1,149,200	886,300	578,300
1,241,800	1,185,400	923,600	588,500
1,301,500	1,244,600	975,600	593,400
1,370,400	1,291,000	998,100	628,600
1,389,500	1,321,100	1,026,000	631,700
1,405,900	1,353,800	1,033,000	657,700
1,525,000	1,464,300	1,138,100	691,600
1,635,300	1,597,300	1,242,000	731,500
1,774,900	1,748,800	1,383,500	797,500
1,847,100	1,828,200	1,451,900	830,800
1,825,600	1,845,200	1,485,100	847,900
1,774,600	1,823,000	1,498,800	842,500
1,729,500	1,774,100	1,497,200	865,300

Source: Rododaijin Kanboseisaku Chosabu (Policy Planning and Research Department, Minister's Secretariat, Ministry of Labour), Rodotokei Nenpo (Year Book of Labour Statistics), Various Years.

**Table C-19: Average Monthly Contractual Earnings of Female Workers
by Age Groups (¥)**

Year	All ages	~17	18~19	20~24	25~29	30~34	35~39	40~44	45~49
1954	7,637	5,107	6,554	8,112	9,409	8,891	8,612	8,640	*
1958	8,803	5,684	7,028	8,690	11,277	11,031	*	10,223	*
1959	9,199	5,904	7,365	9,034	11,613	11,683	*	10,879	*
1960	9,891	6,707	8,144	9,702	11,973	12,517	*	11,626	*
1961	10,982	7,612	9,169	10,742	12,852	14,048	13,140	12,809	*
1962	13,083	9,374	10,976	12,731	14,770	16,230	15,428	15,350	*
1963	14,637	10,165	12,368	14,369	16,255	17,931	17,645	16,993	*
1964	16,000	11,600	13,900	15,900	17,600	18,600	17,900	17,500	*
1965	18,200	13,700	15,700	18,100	20,000	20,900	20,800	20,100	*
1966	19,900	14,800	17,200	19,900	21,500	22,200	22,800	22,200	*
1967	21,700	16,100	18,700	21,800	23,700	23,500	24,100	23,700	*
1968	25,800	19,300	22,100	25,700	28,400	27,700	28,300	28,300	*
1969	29,200	22,300	25,500	29,200	32,200	30,400	31,000	31,500	*
1970	35,200	26,700	30,800	34,700	38,100	36,400	37,300	38,600	*
1971	40,600	30,600	35,800	40,400	44,100	42,100	41,800	43,900	*
1972	46,900	36,300	41,600	46,800	50,200	47,900	47,000	49,800	*

1973	58,900	44,500	50,200	56,200	61,100	60,800	60,600	65,200	65,900
1974	75,200	56,000	64,500	71,800	77,600	78,300	76,800	80,200	84,700
1975	88,500	61,000	72,900	83,000	91,200	93,800	91,700	93,400	100,500
1976	93,500	65,900	79,800	91,000	98,500	98,100	94,000	95,100	100,100
1977	102,800	70,000	85,800	99,200	108,000	108,700	104,000	103,600	109,400
1978	109,700	74,300	90,300	104,600	115,100	115,900	113,200	110,300	116,900
1979	115,900	77,900	94,700	109,600	121,800	122,900	119,800	117,700	122,400
1980	116,900	79,100	94,300	108,400	122,600	125,400	123,100	119,100	122,200
1981	131,600	86,900	104,700	121,700	137,700	141,400	137,900	136,600	136,500
1982	130,100	88,000	104,200	119,800	136,100	139,800	137,500	134,100	134,600
1983	134,700	91,800	107,200	123,200	140,300	144,600	144,200	140,900	139,100
1984	139,200	96,000	110,500	126,600	144,600	148,700	148,700	146,600	144,700
1985	145,800	97,000	113,400	130,300	149,500	157,100	156,200	155,100	154,100
1986	150,700	99,700	115,600	133,600	153,500	162,200	163,200	161,200	160,200
1987	155,900	102,400	117,700	136,600	157,000	166,300	169,200	170,800	166,900
1988	160,000	103,700	121,200	140,600	160,900	170,500	172,600	174,700	173,100
1989	166,300	107,300	125,300	145,600	168,200	178,500	178,500	182,200	180,400
1990	175,000	110,300	132,800	153,100	176,700	188,900	190,200	190,900	191,100
1991	184,400	117,700	141,200	162,200	186,700	198,700	198,700	200,500	202,500
1992	192,800	122,500	147,900	170,100	195,400	209,200	211,200	209,100	211,800
1993	207,500	131,100	157,200	185,200	213,200	229,000	225,800	224,000	223,100
1994	213,700	132,700	159,900	188,500	218,500	235,600	233,500	230,500	230,000
1995	217,500	131,800	160,100	190,100	220,300	238,400	240,100	236,600	233,100

50~54	55~59	60~64
7,840	*	6,128
*	*	*
*	*	*
*	*	*
12,965	*	10,547
15,691	*	12,370
17,466	*	14,493
17,400	*	15,200
20,200	*	17,400
22,800	*	19,200
24,200	*	20,800
28,500	*	25,100
32,000	*	29,000
38,500	*	34,300
43,100	*	37,700
49,400	*	44,400
64,800	62,700	56,300
81,600	76,400	71,200
97,600	91,400	81,700
99,500	95,800	87,500
111,100	106,100	101,500
120,800	114,200	108,700
126,700	120,200	115,000
129,700	125,700	118,300
145,200	143,500	132,500
142,000	142,000	132,700
144,600	148,000	138,900
149,400	153,600	143,700

156,900	164,300	152,700
161,400	170,000	160,300
167,600	175,300	171,600
171,900	177,200	174,700
177,700	179,600	179,900
186,900	186,000	189,000
197,400	193,400	194,900
206,600	199,100	190,800
219,100	211,300	200,300
225,900	218,900	206,300
229,600	220,400	204,400

Sources: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), (1987), Nihon Chokitokei Soran (Historical Statistics of Japan), Nihon Tokei Kyokai (Japan Statistical Association), Vol. 4, pp. 290-291. Rododaijin Kanboseisaku Chosabu (Policy Planning and Research Department, Minister's Secretariat, Ministry of Labour), Rodotokei Nenpo (Year Book of Labour Statistics), Various Years.

Table C-20: Estimated Annual Special Earnings of Female Regular Workers by Age Groups (¥)

Year	All ages	~17	18-19	20-24	25-29	30-34	35-39	40-44
1954	15,035	6,252	9,525	19,744	21,705	17,591	15,733	16,342
1958	17,331	6,958	10,213	21,151	26,014	21,825	21,825	19,336
1959	18,111	7,227	10,703	21,988	26,789	23,115	23,115	20,577
1960	19,473	8,210	11,835	23,614	27,620	24,765	24,765	21,990
1961	21,621	9,318	13,325	26,146	29,647	27,794	24,004	24,227
1962	25,757	11,475	15,951	30,987	34,072	32,111	28,184	29,033
1963	28,817	12,443	17,974	34,974	37,497	35,476	32,234	32,141
1964	31,500	14,200	20,200	38,700	40,600	36,800	32,700	33,100
1965	41,600	18,300	23,400	48,600	50,500	52,400	50,800	45,000
1966	45,300	20,600	25,300	55,400	55,200	53,600	55,500	48,400
1967	49,700	22,300	27,600	62,100	60,800	54,700	57,500	51,900
1968	58,700	23,900	30,400	69,900	76,300	63,400	66,900	64,200
1969	68,500	30,200	36,600	79,700	90,500	71,300	73,300	72,700
1970	90,100	39,800	46,900	100,500	117,500	96,600	97,700	98,600
1971	111,000	52,300	57,800	124,500	144,200	117,500	111,700	120,200
1972	129,700	61,300	68,700	146,300	165,100	134,700	123,000	137,600
1973	165,000	66,400	76,800	164,500	196,200	182,900	173,500	193,300
1974	221,600	96,000	102,700	219,100	256,500	251,400	230,700	247,900
1975	289,500	103,900	122,300	283,700	333,200	330,400	303,400	311,300
1976	267,500	97,600	116,100	300,000	332,400	292,700	249,200	246,500
1977	300,100	93,900	113,200	325,600	376,100	343,800	291,500	281,600
1978	326,000	98,300	119,800	348,900	415,600	368,600	327,000	300,900
1979	333,500	101,200	115,200	347,500	429,100	387,700	339,700	312,200
1980	364,800	109,200	120,900	369,300	472,200	430,400	383,100	348,000
1981	389,600	103,900	123,400	378,400	506,100	475,800	411,200	391,600
1982	405,300	117,400	127,100	397,000	522,200	488,700	434,100	402,600
1983	415,800	114,300	124,400	403,200	538,300	504,700	456,500	421,900
1984	428,700	106,800	124,000	409,400	551,900	521,700	473,800	437,700
1985	465,700	106,300	135,400	422,000	574,900	575,700	521,200	489,300
1986	478,700	114,500	131,100	429,100	591,200	596,700	548,600	504,800
1987	499,700	126,400	132,900	438,100	610,800	611,600	573,700	551,600
1988	503,700	111,100	129,000	430,700	609,600	619,000	576,200	553,800
1989	532,700	112,200	130,500	441,600	644,800	655,900	612,400	599,900
1990	567,100	123,100	139,900	455,000	680,000	696,800	675,200	647,600

1991	611,900	145,100	154,300	490,300	728,900	757,800	722,800	695,300
1992	649,800	138,500	169,300	516,300	765,000	806,000	790,500	743,800
1993	665,300	150,500	178,500	534,900	768,800	825,900	797,800	765,800
1994	680,000	144,700	186,000	547,300	777,500	824,000	812,000	772,300
1995	684,200	127,200	166,800	542,400	768,900	822,600	821,000	794,500

45-49	50-54	55-59	60-64
16,342	14,373	14,373	10,926
19,336	19,336	19,336	19,336
20,577	20,577	20,577	20,577
21,990	21,990	21,990	21,990
24,227	23,769	23,769	18,804
29,033	28,767	28,767	22,054
32,141	32,021	32,021	25,839
33,100	31,900	31,900	27,100
45,000	46,500	46,500	32,100
48,400	49,800	49,800	35,100
51,900	53,200	53,200	39,300
64,200	64,000	64,000	47,400
72,700	72,600	72,600	56,500
98,600	95,100	95,100	75,100
120,200	111,900	111,900	85,500
137,600	127,300	127,300	107,400
195,200	184,500	169,800	140,800
266,400	244,400	216,000	188,500
348,400	327,000	277,800	224,400
272,400	275,200	248,100	205,600
308,000	317,700	278,800	252,400
329,900	350,400	314,100	286,900
337,300	355,300	316,500	286,400
360,600	400,600	362,800	307,500
384,400	425,100	398,500	350,600
399,800	437,600	405,600	341,200
409,300	431,500	425,000	350,900
426,500	448,800	440,700	363,600
481,000	487,800	505,200	411,400
495,500	497,800	513,200	422,400
526,600	514,500	527,100	460,000
539,900	533,400	536,700	464,300
582,500	561,500	550,400	469,100
638,100	605,200	567,800	524,600
689,000	674,500	620,300	546,800
749,200	708,900	640,700	519,800
749,800	723,400	660,700	537,300
756,400	730,000	673,700	537,200
746,800	726,800	665,300	514,100

Source: Rododajin Kanboseisaku Chosabu (Policy Planning and Research Department, Minister's Secretariat, Ministry of Labour), Rodotokei Nenpo (Year Book of Labour Statistics), Various Years.

Table C-21: Estimated Yearly Earnings of Male Workers by Age (¥)

Year	15	16	17	18	19	20	21	22
1947	45,003	53,469	63,528	75,480	89,679	104,228	121,138	140,791
1948	46,481	55,128	65,383	77,546	91,972	106,677	123,733	143,517

1949	48,007	56,837	67,292	79,669	94,323	109,183	126,384	146,295
1950	49,583	58,600	69,256	81,850	96,734	111,748	129,092	149,128
1951	51,212	60,417	71,278	84,091	99,207	114,373	131,858	152,015
1952	52,893	62,291	73,359	86,393	101,744	117,060	134,683	154,958
1953	54,630	64,223	75,501	88,759	104,345	119,810	137,568	157,959
1954	56,424	66,215	77,705	91,189	107,012	122,625	140,516	161,017
1955	58,277	68,269	79,973	93,685	109,748	125,506	143,526	164,134
1956	60,190	70,386	82,308	96,250	112,554	128,454	146,601	167,312
1957	62,167	72,569	84,711	98,885	115,431	131,472	149,742	170,552
1958	64,208	74,820	87,184	101,593	118,382	134,561	152,951	173,854
1959	70,345	81,121	93,547	107,876	124,400	141,619	161,220	183,534
1960	77,202	89,182	103,022	119,010	137,478	155,558	176,014	199,161
1961	91,471	105,160	120,898	138,991	159,791	178,708	199,864	223,524
1962	106,462	122,634	141,263	162,722	187,441	208,734	232,445	258,850
1963	119,581	137,196	157,405	180,591	207,192	231,089	257,742	287,469
1964	143,090	161,500	182,279	205,731	232,200	259,871	290,840	325,500
1965	169,510	187,600	207,621	229,778	254,300	286,356	322,453	363,100
1966	194,854	212,400	231,526	252,374	275,100	311,426	352,548	399,100
1967	198,901	220,900	245,332	272,465	302,600	341,305	384,961	434,200
1968	247,873	273,500	301,776	332,975	367,400	409,735	456,947	509,600
1969	289,281	319,100	351,993	388,276	428,300	473,469	523,402	578,600
1970	356,447	390,300	427,368	467,957	512,400	565,506	624,116	688,800
1971	409,183	448,100	490,718	537,390	588,500	652,056	722,475	800,500
1972	468,222	514,400	565,132	620,868	682,100	754,808	835,266	924,300
1973	571,957	625,400	683,836	747,733	817,600	901,689	994,425	1,096,700
1974	727,663	789,800	857,244	930,446	1,009,900	1,114,740	1,230,463	1,358,200
1975	819,563	889,500	965,405	1,047,788	1,137,200	1,257,139	1,389,727	1,536,300
1976	877,771	951,800	1,032,073	1,119,116	1,213,500	1,346,005	1,492,978	1,656,000
1977	940,311	1,015,500	1,096,701	1,184,394	1,279,100	1,428,022	1,594,282	1,779,900
1978	954,407	1,042,800	1,139,379	1,244,903	1,360,200	1,507,098	1,669,860	1,850,200
1979	1,016,861	1,105,300	1,201,430	1,305,921	1,419,500	1,573,084	1,743,284	1,931,900
1980	1,076,043	1,134,900	1,196,976	1,262,447	1,331,500	1,480,477	1,646,122	1,830,300
1981	1,107,648	1,210,100	1,322,028	1,444,309	1,577,900	1,741,515	1,922,095	2,121,400
1982	1,180,345	1,248,500	1,320,591	1,396,844	1,477,500	1,633,268	1,805,457	1,995,800
1983	1,192,834	1,266,200	1,344,078	1,426,747	1,514,500	1,677,767	1,858,634	2,059,000
1984	1,227,913	1,303,700	1,384,165	1,469,596	1,560,300	1,724,102	1,905,100	2,105,100
1985	1,233,915	1,318,200	1,408,243	1,504,436	1,607,200	1,776,478	1,963,586	2,170,400
1986	1,274,145	1,357,700	1,446,734	1,541,606	1,642,700	1,818,784	2,013,743	2,229,600
1987	1,322,067	1,405,200	1,493,561	1,587,478	1,687,300	1,861,661	2,054,041	2,266,300
1988	1,313,218	1,403,700	1,500,416	1,603,797	1,714,300	1,896,295	2,097,611	2,320,300
1989	1,434,023	1,513,000	1,596,327	1,684,242	1,777,000	1,969,468	2,182,782	2,419,200
1990	1,525,096	1,608,800	1,697,098	1,790,243	1,888,500	2,090,519	2,314,148	2,561,700
1991	1,599,653	1,698,600	1,803,667	1,915,233	2,033,700	2,241,756	2,471,097	2,723,900
1992	1,729,821	1,818,100	1,910,884	2,008,404	2,110,900	2,331,890	2,576,016	2,845,700
1993	1,727,578	1,874,700	2,034,351	2,207,599	2,395,600	2,639,713	2,908,702	3,205,100
1994	1,790,314	1,935,500	2,092,460	2,262,150	2,445,600	2,689,804	2,958,392	3,253,800
1995	1,678,920	1,845,400	2,028,389	2,229,522	2,450,600	2,694,075	2,961,741	3,256,000

23	24	25	26	27	28	29	30	31
147,541	154,616	162,029	169,798	177,940	183,720	189,688	195,850	202,212
150,796	158,444	166,480	174,923	183,795	190,060	196,538	203,237	210,164
154,122	162,367	171,053	180,203	189,844	196,618	203,635	210,902	218,428
157,521	166,387	175,751	185,643	196,091	203,403	210,988	218,856	227,017

160,995	170,506	180,579	191,246	202,544	210,422	218,607	227,110	235,944
164,546	174,728	185,539	197,019	209,209	217,684	226,501	235,676	245,222
168,176	179,054	190,635	202,966	216,094	225,195	234,680	244,565	254,865
171,885	183,487	195,871	209,092	223,205	232,966	243,155	253,788	264,887
175,676	188,030	201,252	215,403	230,550	241,006	251,935	263,360	275,303
179,551	192,685	206,780	221,905	238,137	249,322	261,033	273,293	286,129
183,511	197,455	212,459	228,603	245,974	257,926	270,459	283,600	297,380
187,559	202,344	218,295	235,504	254,069	266,826	280,225	294,296	309,074
197,516	212,564	228,758	246,186	264,941	278,235	292,196	306,858	322,255
213,596	229,077	245,680	263,486	282,584	296,855	311,847	327,596	344,140
238,582	254,654	271,809	290,119	309,663	324,337	339,706	355,804	372,664
275,848	293,963	313,268	333,840	355,763	371,460	387,851	404,965	422,833
305,614	324,905	345,413	367,216	390,395	407,032	424,378	442,463	461,319
344,920	365,499	387,306	410,414	434,900	451,158	468,024	485,520	503,671
384,201	406,528	430,152	455,150	481,600	500,103	519,316	539,268	559,986
420,580	443,216	467,071	492,209	518,700	538,904	559,894	581,702	604,360
459,112	485,454	513,308	542,759	573,900	595,838	618,614	642,260	666,811
540,862	574,041	609,256	646,632	686,300	712,122	738,916	766,718	795,566
614,987	653,661	694,768	738,460	784,900	815,139	846,542	879,156	913,025
731,726	777,327	825,770	877,231	931,900	966,529	1,002,445	1,039,695	1,078,330
846,804	895,787	947,603	1,002,416	1,060,400	1,099,351	1,139,734	1,181,599	1,225,002
974,405	1,027,226	1,082,911	1,141,614	1,203,500	1,248,143	1,294,442	1,342,458	1,392,255
1,152,422	1,210,976	1,272,505	1,337,160	1,405,100	1,462,870	1,523,016	1,585,634	1,650,827
1,427,006	1,499,298	1,575,253	1,655,055	1,738,900	1,813,786	1,891,897	1,973,372	2,058,356
1,616,433	1,700,746	1,789,456	1,882,794	1,981,000	2,065,971	2,154,587	2,247,004	2,343,385
1,747,205	1,843,433	1,944,961	2,052,081	2,165,100	2,257,982	2,354,848	2,455,869	2,561,225
1,880,987	1,987,815	2,100,710	2,220,017	2,346,100	2,444,409	2,546,837	2,653,557	2,764,749
1,959,675	2,075,628	2,198,442	2,328,523	2,466,300	2,568,561	2,675,062	2,785,979	2,901,495
2,046,860	2,168,660	2,297,709	2,434,436	2,579,300	2,684,365	2,793,709	2,907,508	3,025,942
1,943,189	2,063,040	2,190,284	2,325,376	2,468,800	2,578,288	2,692,632	2,812,047	2,936,758
2,252,283	2,391,240	2,538,771	2,695,404	2,861,700	2,987,300	3,118,413	3,255,280	3,398,155
2,118,718	2,249,206	2,387,731	2,534,787	2,690,900	2,818,360	2,951,857	3,091,677	3,238,120
2,182,285	2,312,953	2,451,444	2,598,228	2,753,800	2,882,546	3,017,310	3,158,376	3,306,036
2,229,883	2,362,063	2,502,079	2,650,394	2,807,500	2,937,992	3,074,550	3,217,455	3,367,002
2,296,014	2,428,898	2,569,472	2,718,183	2,875,500	3,008,646	3,147,956	3,293,717	3,446,228
2,357,036	2,491,755	2,634,175	2,784,735	2,943,900	3,080,134	3,222,672	3,371,807	3,527,843
2,394,012	2,528,921	2,671,432	2,821,974	2,981,000	3,117,244	3,259,715	3,408,697	3,564,488
2,453,135	2,593,574	2,742,054	2,899,033	3,065,000	3,201,557	3,344,199	3,493,196	3,648,831
2,558,666	2,706,172	2,862,181	3,027,184	3,201,700	3,343,459	3,491,494	3,646,084	3,807,518
2,710,612	2,868,179	3,034,907	3,211,326	3,398,000	3,542,852	3,693,880	3,851,345	4,015,523
2,877,751	3,040,291	3,212,013	3,393,433	3,585,100	3,737,771	3,896,944	4,062,895	4,235,914
3,006,862	3,177,152	3,357,085	3,547,209	3,748,100	3,901,431	4,061,035	4,227,167	4,400,097
3,383,213	3,571,224	3,769,683	3,979,171	4,200,300	4,365,966	4,538,166	4,717,158	4,903,210
3,428,424	3,612,419	3,806,289	4,010,563	4,225,800	4,393,578	4,568,017	4,749,382	4,937,948
3,432,256	3,618,054	3,813,909	4,020,366	4,238,000	4,404,648	4,577,850	4,757,862	4,944,953

32	33	34	35	36	37	38	39	40
208,781	211,666	214,591	217,556	220,563	223,610	226,997	230,435	233,925
217,327	220,657	224,038	227,470	230,956	234,494	238,210	241,985	245,820
226,223	230,030	233,900	237,836	241,838	245,908	249,977	254,115	258,321
235,483	239,800	244,197	248,674	253,234	257,877	262,326	266,852	271,456
245,122	249,986	254,947	260,006	265,166	270,428	275,284	280,228	285,260
255,155	260,605	266,170	271,855	277,661	283,591	288,883	294,274	299,766

265,600	271,674	277,888	284,243	290,744	297,394	303,154	309,025	315,010
276,471	283,214	290,121	297,196	304,444	311,869	318,129	324,514	331,028
287,788	295,244	302,892	310,739	318,790	327,048	333,844	340,781	347,861
299,568	307,784	316,226	324,900	333,811	342,967	350,335	357,862	365,551
311,830	320,858	330,147	339,705	349,540	359,660	367,641	375,800	384,139
324,594	334,487	344,681	355,186	366,011	377,166	385,802	394,637	403,673
338,425	348,881	359,661	370,774	382,230	394,040	403,211	412,596	422,199
361,520	372,741	384,310	396,237	408,535	421,215	431,200	441,421	451,885
390,324	402,342	414,730	427,499	440,662	454,230	465,040	476,108	487,439
441,491	453,635	466,113	478,935	492,109	505,646	518,076	530,812	543,860
480,978	492,999	505,321	517,950	530,895	544,164	557,917	572,019	586,476
522,500	533,451	544,632	556,047	567,701	579,600	592,878	606,459	620,352
581,500	595,799	610,450	625,461	640,842	656,600	673,597	691,034	708,922
627,900	644,228	660,981	678,170	695,806	713,900	729,961	746,383	763,175
692,300	709,286	726,688	744,518	762,785	781,500	798,962	816,814	835,065
825,500	843,883	862,675	881,886	901,524	921,600	942,509	963,893	985,762
948,200	965,702	983,527	1,001,681	1,020,170	1,039,000	1,060,326	1,082,090	1,104,301
1,118,400	1,139,397	1,160,788	1,182,580	1,204,782	1,227,400	1,250,884	1,274,817	1,299,209
1,270,000	1,293,383	1,317,196	1,341,448	1,366,147	1,391,300	1,415,652	1,440,431	1,465,644
1,443,900	1,471,486	1,499,598	1,528,248	1,557,445	1,587,200	1,612,444	1,638,090	1,664,143
1,718,700	1,749,757	1,781,375	1,813,565	1,846,336	1,879,700	1,904,725	1,930,083	1,955,778
2,147,000	2,194,822	2,243,709	2,293,684	2,344,773	2,397,000	2,417,216	2,437,603	2,458,161
2,443,900	2,499,694	2,556,761	2,615,131	2,674,834	2,735,900	2,765,531	2,795,483	2,825,760
2,671,100	2,728,830	2,787,808	2,848,060	2,909,615	2,972,500	3,002,162	3,032,120	3,062,377
2,880,600	2,951,557	3,024,262	3,098,758	3,175,089	3,253,300	3,290,002	3,327,119	3,364,654
3,021,800	3,101,990	3,184,307	3,268,809	3,355,554	3,444,600	3,488,126	3,532,202	3,576,835
3,149,200	3,238,688	3,330,718	3,425,364	3,522,699	3,622,800	3,668,854	3,715,494	3,762,726
3,067,000	3,165,189	3,266,521	3,371,097	3,479,021	3,590,400	3,644,862	3,700,151	3,756,278
3,547,300	3,661,858	3,780,116	3,902,192	4,028,211	4,158,300	4,214,784	4,272,036	4,330,066
3,391,500	3,504,267	3,620,784	3,741,176	3,865,570	3,994,100	4,065,967	4,139,127	4,213,603
3,460,600	3,572,769	3,688,574	3,808,132	3,931,566	4,059,000	4,145,678	4,234,207	4,324,627
3,523,500	3,636,884	3,753,917	3,874,716	3,999,402	4,128,100	4,230,058	4,334,534	4,441,590
3,605,800	3,724,099	3,846,279	3,972,467	4,102,796	4,237,400	4,345,484	4,456,324	4,569,992
3,691,100	3,814,911	3,942,874	4,075,130	4,211,823	4,353,100	4,469,578	4,589,172	4,711,966
3,727,400	3,853,285	3,983,421	4,117,953	4,257,028	4,400,800	4,516,603	4,635,453	4,757,431
3,811,400	3,936,688	4,066,094	4,199,754	4,337,808	4,480,400	4,593,956	4,710,390	4,829,775
3,976,100	4,105,305	4,238,710	4,376,449	4,518,664	4,665,500	4,786,409	4,910,451	5,037,707
4,186,700	4,324,522	4,466,882	4,613,927	4,765,814	4,922,700	5,046,223	5,172,846	5,302,647
4,416,300	4,555,380	4,698,840	4,846,817	4,999,455	5,156,900	5,287,966	5,422,364	5,560,177
4,580,100	4,722,682	4,869,703	5,021,300	5,177,617	5,338,800	5,478,856	5,622,587	5,770,088
5,096,600	5,231,308	5,369,577	5,511,501	5,657,175	5,806,700	5,928,281	6,052,408	6,179,133
5,134,000	5,273,958	5,417,732	5,565,425	5,717,145	5,873,000	5,991,574	6,112,543	6,235,953
5,139,400	5,281,089	5,426,684	5,576,294	5,730,028	5,888,000	6,001,277	6,116,733	6,234,410

41	42	43	44	45	46	47	48	49
237,468	241,064	241,064	241,064	241,064	241,064	241,064	239,033	237,018
249,716	253,673	253,673	253,673	253,673	253,673	253,673	251,275	248,900
262,596	266,942	266,942	266,942	266,942	266,942	266,942	264,145	261,377
276,140	280,905	280,905	280,905	280,905	280,905	280,905	277,674	274,480
290,383	295,598	295,598	295,598	295,598	295,598	295,598	291,895	288,239
305,361	311,059	311,059	311,059	311,059	311,059	311,059	306,845	302,689
321,111	327,330	327,330	327,330	327,330	327,330	327,330	322,561	317,862
337,673	344,451	344,451	344,451	344,451	344,451	344,451	339,082	333,797

379,349	372,278	365,339	365,339	365,339	365,339	365,339	365,339	365,339	359,144
397,953	390,132	382,463	382,463	382,463	382,463	382,463	382,463	382,463	382,463
415,109	406,489	398,048	398,048	398,048	398,048	398,048	398,048	398,048	398,048
441,953	431,892	422,061	422,061	422,061	422,061	422,061	422,061	422,061	422,061
493,672	488,055	482,501	482,501	482,501	482,501	482,501	482,501	482,501	453,544
495,971	473,240	451,551	451,551	451,551	451,551	451,551	451,551	451,551	438,044
593,370	585,855	578,435	578,435	578,435	578,435	578,435	578,435	578,435	544,608
626,579	619,246	612,000	612,000	612,000	612,000	612,000	612,000	612,000	576,339
727,708	721,679	715,700	715,700	715,700	715,700	715,700	715,700	715,700	659,805
781,041	775,501	770,000	770,000	770,000	770,000	770,000	770,000	770,000	711,254
845,576	836,691	827,900	827,900	827,900	827,900	827,900	827,900	827,900	760,055
998,375	987,731	977,200	977,200	977,200	977,200	977,200	977,200	977,200	895,179
1,113,838	1,102,006	1,090,300	1,090,300	1,090,300	1,090,300	1,090,300	1,090,300	1,090,300	994,847
1,310,077	1,297,225	1,284,500	1,284,500	1,284,500	1,284,500	1,284,500	1,284,500	1,284,500	1,172,412
1,475,738	1,462,106	1,448,600	1,448,600	1,448,600	1,448,600	1,448,600	1,448,600	1,448,600	1,319,863
1,657,212	1,637,590	1,618,200	1,618,200	1,618,200	1,618,200	1,618,200	1,618,200	1,618,200	1,476,793
2,130,049	2,136,066	2,142,100	2,042,740	1,947,989	1,857,633	1,771,468	1,689,300	1,617,370	1,617,370
2,618,104	2,626,289	2,634,500	2,527,257	2,424,380	2,325,690	2,231,018	2,140,200	2,045,407	2,045,407
3,032,004	3,040,789	3,049,600	2,937,333	2,829,199	2,725,045	2,624,726	2,528,100	2,386,099	2,386,099
3,196,221	3,200,707	3,205,200	3,075,570	2,951,183	2,831,827	2,717,297	2,607,400	2,469,357	2,469,357
3,506,357	3,508,078	3,509,800	3,371,126	3,237,932	3,110,000	2,987,122	2,869,100	2,710,636	2,710,636
3,718,067	3,714,132	3,710,200	3,577,409	3,449,370	3,325,914	3,206,877	3,092,100	2,938,499	2,938,499
3,879,569	3,868,719	3,857,900	3,718,342	3,583,832	3,454,188	3,329,234	3,208,800	3,045,529	3,045,529
3,900,315	3,883,270	3,866,300	3,736,468	3,610,996	3,489,738	3,372,551	3,259,300	3,103,233	3,103,233
4,485,492	4,464,095	4,442,800	4,283,660	4,130,221	3,982,278	3,839,634	3,702,100	3,505,598	3,505,598
4,406,122	4,382,649	4,359,300	4,208,962	4,063,809	3,923,662	3,788,348	3,657,700	3,469,604	3,469,604
4,560,442	4,534,749	4,509,200	4,395,598	4,284,859	4,176,909	4,071,679	3,969,100	3,771,697	3,771,697
4,749,776	4,719,491	4,689,400	4,608,625	4,529,241	4,451,225	4,374,552	4,299,200	4,056,527	4,056,527
4,924,006	4,896,225	4,868,600	4,713,827	4,563,975	4,418,887	4,278,410	4,142,400	3,924,438	3,924,438
5,102,980	5,067,668	5,032,600	4,869,187	4,711,080	4,558,106	4,410,100	4,266,900	4,065,699	4,065,699
5,234,082	5,205,915	5,177,900	5,011,845	4,851,116	4,695,542	4,544,956	4,399,200	4,175,916	4,175,916
5,391,990	5,370,854	5,349,800	5,168,387	4,993,125	4,823,807	4,660,230	4,502,200	4,283,549	4,283,549
5,680,821	5,656,308	5,631,900	5,446,624	5,267,444	5,094,158	4,926,572	4,764,500	4,502,182	4,502,182
6,035,869	6,023,973	6,012,100	5,605,789	5,226,937	4,873,689	4,544,315	4,237,200	4,067,854	4,067,854
6,393,142	6,386,968	6,380,800	6,189,035	6,003,033	5,822,621	5,647,631	5,477,900	5,126,704	5,126,704
6,624,479	6,623,340	6,622,200	6,432,453	6,248,144	6,069,115	5,895,216	5,726,300	5,356,086	5,356,086
7,083,578	7,104,358	7,125,200	6,928,897	6,738,003	6,552,368	6,371,847	6,196,300	5,784,003	5,784,003
7,142,379	7,178,399	7,214,600	7,035,219	6,860,298	6,689,726	6,523,395	6,361,200	5,941,123	5,941,123
7,142,909	7,181,799	7,220,900	7,062,742	6,908,048	6,756,742	6,608,750	6,464,000	6,051,613	6,051,613

59	60	61	62	63	64
158,618	131,417	108,881	90,209	74,739	61,922
171,831	144,820	122,055	102,868	86,698	73,069
186,145	159,589	136,823	117,304	100,569	86,222
201,651	175,865	153,377	133,765	116,660	101,743
218,448	193,801	171,935	152,536	135,326	120,058
236,645	213,566	192,739	173,942	156,978	141,669
256,357	235,347	216,059	198,351	182,095	167,171
277,712	259,349	242,201	226,186	211,230	197,264
300,846	285,799	271,506	257,927	245,028	232,773
325,906	314,947	304,357	294,122	284,232	274,675
353,054	347,067	341,182	335,397	329,710	324,119
382,463	382,463	382,463	382,463	382,463	382,463

398,048	398,048	398,048	398,048	398,048	398,048
422,061	422,061	422,061	422,061	422,061	422,061
426,325	400,740	376,689	354,083	332,833	312,858
424,941	412,230	399,900	387,938	376,334	365,077
512,758	482,772	454,539	427,957	402,930	379,366
542,757	511,131	481,348	453,300	426,887	402,012
608,275	560,770	516,975	476,600	439,378	405,064
656,991	606,867	560,567	517,800	478,296	441,805
697,770	640,589	588,093	539,900	495,656	455,038
820,043	751,213	688,160	630,400	577,488	529,017
907,751	828,279	755,765	689,600	629,227	574,140
1,070,105	976,725	891,494	813,700	742,695	677,886
1,202,567	1,095,695	998,321	909,600	828,764	755,112
1,347,743	1,229,970	1,122,489	1,024,400	934,883	853,188
1,548,502	1,482,567	1,419,440	1,359,000	1,301,134	1,245,732
1,954,812	1,868,230	1,785,482	1,706,400	1,630,820	1,558,588
2,252,074	2,125,577	2,006,186	1,893,500	1,787,144	1,686,762
2,338,622	2,214,809	2,097,550	1,986,500	1,881,329	1,781,726
2,560,924	2,419,481	2,285,850	2,159,600	2,040,323	1,927,633
2,792,528	2,653,809	2,521,980	2,396,700	2,277,643	2,164,501
2,890,565	2,743,487	2,603,892	2,471,400	2,345,650	2,226,298
2,954,638	2,813,159	2,678,454	2,550,200	2,428,087	2,311,821
3,319,526	3,143,331	2,976,487	2,818,500	2,668,898	2,527,237
3,291,181	3,121,933	2,961,388	2,809,100	2,664,643	2,527,615
3,584,112	3,405,856	3,236,466	3,075,500	2,922,540	2,777,188
3,827,553	3,611,503	3,407,648	3,215,300	3,033,809	2,862,563
3,717,945	3,522,317	3,336,983	3,161,400	2,995,056	2,837,464
3,873,985	3,691,312	3,517,252	3,351,400	3,193,368	3,042,789
3,963,964	3,762,771	3,571,789	3,390,500	3,218,413	3,055,060
4,075,517	3,877,588	3,689,271	3,510,100	3,339,631	3,177,440
4,254,307	4,020,079	3,798,746	3,589,600	3,391,968	3,205,218
3,905,276	3,749,196	3,599,354	3,455,500	3,317,396	3,184,811
4,798,024	4,490,417	4,202,530	3,933,100	3,680,944	3,444,953
5,009,808	4,685,916	4,382,965	4,099,600	3,834,555	3,586,645
5,399,140	5,039,886	4,704,536	4,391,500	4,099,293	3,826,530
5,548,787	5,182,359	4,840,130	4,520,500	4,221,978	3,943,169
5,665,535	5,304,087	4,965,699	4,648,900	4,352,312	4,074,645

Table C-22: Estimated Yearly Earnings of Female Workers by Age (¥)

Year	15	16	17	18	19	20	21	22
1947	50,136	55,999	62,547	69,861	78,030	85,818	94,382	103,801
1948	51,656	57,518	64,045	71,312	79,405	87,322	96,028	105,603
1949	53,222	59,078	65,578	72,793	80,803	88,852	97,703	107,436
1950	54,835	60,680	67,148	74,305	82,226	90,409	99,407	109,300
1951	56,497	62,326	68,756	75,849	83,674	91,994	101,141	111,197
1952	58,210	64,016	70,402	77,424	85,147	93,606	102,905	113,127
1953	59,974	65,752	72,087	79,032	86,647	95,246	104,699	115,091
1954	61,792	67,536	73,813	80,674	88,173	96,916	106,525	117,088
1955	63,665	69,367	75,580	82,350	89,725	98,614	108,383	119,120
1956	65,595	71,249	77,390	84,060	91,305	100,342	110,274	121,188
1957	67,583	73,181	79,243	85,806	92,913	102,101	112,197	123,291
1958	69,632	75,166	81,140	87,588	94,549	103,890	114,154	125,431
1959	72,114	78,075	84,530	91,518	99,083	108,581	118,990	130,396

1960	82,662	88,694	95,167	102,112	109,563	118,903	129,039	140,038
1961	94,067	100,662	107,719	115,271	123,353	133,124	143,669	155,050
1962	116,941	123,963	131,407	139,298	147,663	158,829	170,840	183,759
1963	125,196	134,423	144,331	154,968	166,390	179,069	192,716	207,402
1964	143,600	153,400	163,869	175,053	187,000	200,211	214,356	229,500
1965	173,917	182,700	191,926	201,618	211,800	228,456	246,422	265,800
1966	188,147	198,200	208,791	219,947	231,700	250,899	271,688	294,200
1967	204,548	215,500	227,038	239,194	252,000	273,935	297,780	323,700
1968	243,381	255,500	268,223	281,579	295,600	320,934	348,438	378,300
1969	284,209	297,800	312,041	326,964	342,600	369,585	398,696	430,100
1970	343,178	360,200	378,066	396,818	416,500	447,588	480,997	516,900
1971	399,038	419,500	441,011	463,626	487,400	525,050	565,609	609,300
1972	475,264	496,900	519,521	543,172	567,900	611,184	657,767	707,900
1973	576,220	600,400	625,595	651,847	679,200	728,733	781,879	838,900
1974	734,849	768,000	802,647	838,857	876,700	940,017	1,007,907	1,080,700
1975	788,181	835,900	886,508	940,179	997,100	1,083,582	1,177,565	1,279,700
1976	834,034	888,400	946,310	1,007,994	1,073,700	1,170,761	1,276,597	1,392,000
1977	873,126	933,900	998,904	1,068,432	1,142,800	1,255,683	1,379,716	1,516,000
1978	927,510	989,900	1,056,487	1,127,553	1,203,400	1,324,394	1,457,553	1,604,100
1979	972,727	1,036,000	1,103,388	1,175,160	1,251,600	1,375,884	1,512,508	1,662,700
1980	1,000,631	1,058,400	1,119,504	1,184,136	1,252,500	1,378,582	1,517,356	1,670,100
1981	1,078,105	1,146,700	1,219,659	1,297,261	1,379,800	1,518,410	1,670,943	1,838,800
1982	1,112,323	1,173,400	1,237,831	1,305,799	1,377,500	1,515,566	1,667,470	1,834,600
1983	1,157,112	1,215,900	1,277,675	1,342,588	1,410,800	1,552,933	1,709,386	1,881,600
1984	1,200,843	1,258,800	1,319,554	1,383,240	1,450,000	1,594,628	1,753,682	1,928,600
1985	1,202,851	1,270,300	1,341,531	1,416,756	1,496,200	1,644,209	1,806,860	1,985,600
1986	1,248,265	1,310,900	1,376,678	1,445,756	1,518,300	1,673,276	1,844,071	2,032,300
1987	1,297,180	1,355,200	1,415,815	1,479,141	1,545,300	1,705,460	1,882,220	2,077,300
1988	1,287,071	1,355,500	1,427,567	1,503,466	1,583,400	1,744,599	1,922,209	2,117,900
1989	1,329,419	1,399,800	1,473,907	1,551,938	1,634,100	1,801,307	1,985,624	2,188,800
1990	1,362,061	1,446,700	1,536,598	1,632,082	1,733,500	1,902,684	2,088,380	2,292,200
1991	1,471,009	1,557,500	1,649,077	1,746,038	1,848,700	2,026,959	2,222,407	2,436,700
1992	1,510,040	1,608,500	1,713,380	1,825,098	1,944,100	2,130,186	2,334,085	2,557,500
1993	1,622,990	1,723,700	1,830,659	1,944,255	2,064,900	2,273,844	2,503,931	2,757,300
1994	1,629,407	1,737,100	1,851,911	1,974,311	2,104,800	2,317,430	2,551,540	2,809,300
1995	1,598,373	1,708,800	1,826,856	1,953,068	2,088,000	2,308,986	2,553,361	2,823,600

23	24	25	26	27	28	29	30	31
102,625	101,461	100,311	99,174	98,050	95,336	92,698	90,132	87,637
104,994	104,388	103,786	103,187	102,591	99,925	97,327	94,797	92,332
107,417	107,399	107,380	107,362	107,343	104,733	102,187	99,703	97,279
109,897	110,496	111,099	111,705	112,315	109,774	107,290	104,863	102,491
112,433	113,683	114,947	116,225	117,517	115,057	112,648	110,290	107,982
115,029	116,962	118,928	120,927	122,959	120,594	118,274	115,998	113,767
117,684	120,336	123,047	125,819	128,654	126,397	124,180	122,002	119,862
120,400	123,806	127,308	130,910	134,613	132,480	130,382	128,316	126,283
123,180	127,377	131,718	136,206	140,847	138,856	136,893	134,957	133,049
126,023	131,051	136,280	141,717	147,371	145,539	143,729	141,942	140,177
128,932	134,831	140,999	147,450	154,196	152,543	150,907	149,288	147,687
131,908	138,720	145,883	153,416	161,338	159,884	158,443	157,015	155,599
136,871	143,666	150,799	158,286	166,145	165,574	165,005	164,439	163,874
145,796	151,791	158,032	164,530	171,296	172,024	172,756	173,490	174,228
160,428	165,992	171,750	177,707	183,871	186,306	188,772	191,272	193,804

188,966	194,320	199,827	205,489	211,312	214,336	217,403	220,514	223,670
212,205	217,120	222,148	227,293	232,557	236,068	239,632	243,249	246,921
233,796	238,173	242,631	247,173	251,800	253,419	255,049	256,688	258,339
270,566	275,417	280,356	285,383	290,500	292,997	295,515	298,055	300,616
297,905	301,658	305,457	309,304	313,200	314,548	315,902	317,262	318,628
327,890	332,134	336,434	340,789	345,200	343,483	341,775	340,075	338,383
385,760	393,367	401,124	409,034	417,100	412,750	408,446	404,186	399,971
439,077	448,242	457,598	467,149	476,900	468,446	460,141	451,984	443,971
527,975	539,288	550,842	562,645	574,700	566,192	557,810	549,551	541,415
621,612	634,173	646,988	660,062	673,400	662,940	652,643	642,505	632,525
719,438	731,163	743,080	755,191	767,500	755,533	743,752	732,155	720,738
856,266	873,991	892,084	910,551	929,400	925,995	922,603	919,223	915,855
1,101,300	1,122,292	1,143,684	1,165,484	1,187,700	1,188,359	1,189,019	1,189,679	1,190,339
1,308,000	1,336,926	1,366,492	1,396,712	1,427,600	1,433,235	1,438,893	1,444,573	1,450,275
1,415,662	1,439,726	1,464,199	1,489,088	1,514,400	1,505,394	1,496,441	1,487,541	1,478,694
1,546,008	1,576,611	1,607,819	1,639,644	1,672,100	1,667,292	1,662,499	1,657,719	1,652,953
1,640,911	1,678,567	1,717,087	1,756,492	1,796,800	1,789,257	1,781,746	1,774,266	1,766,817
1,705,987	1,750,400	1,795,970	1,842,726	1,890,700	1,885,026	1,879,369	1,873,729	1,868,106
1,721,498	1,774,477	1,829,087	1,885,377	1,943,400	1,941,757	1,940,116	1,938,476	1,936,837
1,898,707	1,960,566	2,024,441	2,090,396	2,158,500	2,161,313	2,164,129	2,166,949	2,169,773
1,894,692	1,956,753	2,020,846	2,087,039	2,155,400	2,157,576	2,159,753	2,161,933	2,164,116
1,945,211	2,010,973	2,078,958	2,149,241	2,221,900	2,225,488	2,229,083	2,232,683	2,236,288
1,995,496	2,064,711	2,136,328	2,210,429	2,287,100	2,290,887	2,294,681	2,298,481	2,302,287
2,056,945	2,130,854	2,207,419	2,286,734	2,368,900	2,387,021	2,405,280	2,423,679	2,442,219
2,106,812	2,184,056	2,264,132	2,347,144	2,433,200	2,454,793	2,476,578	2,498,557	2,520,730
2,154,798	2,235,187	2,318,575	2,405,074	2,494,800	2,516,885	2,539,167	2,561,645	2,584,322
2,196,366	2,277,740	2,362,128	2,449,643	2,540,400	2,564,845	2,589,525	2,614,443	2,639,600
2,276,385	2,367,474	2,462,208	2,560,733	2,663,200	2,689,611	2,716,284	2,743,221	2,770,426
2,385,866	2,483,359	2,584,836	2,690,460	2,800,400	2,832,305	2,864,573	2,897,209	2,930,216
2,534,968	2,637,199	2,743,552	2,854,195	2,969,300	3,003,102	3,037,288	3,071,864	3,106,833
2,659,494	2,765,555	2,875,847	2,990,536	3,109,800	3,150,064	3,190,849	3,232,162	3,274,010
2,862,879	2,972,501	3,086,320	3,204,497	3,327,200	3,375,139	3,423,768	3,473,098	3,523,138
2,918,512	3,031,970	3,149,838	3,272,289	3,399,500	3,448,412	3,498,028	3,548,358	3,599,412
2,932,629	3,045,867	3,163,478	3,285,631	3,412,500	3,465,037	3,518,383	3,572,551	3,627,552

32	33	34	35	36	37	38	39	40
85,212	83,229	81,293	79,402	77,555	75,751	78,305	80,946	83,675
89,932	88,028	86,165	84,341	82,555	80,808	83,156	85,573	88,060
94,914	93,104	91,328	89,586	87,878	86,202	88,308	90,465	92,675
100,172	98,472	96,801	95,158	93,543	91,955	93,778	95,637	97,532
105,721	104,150	102,601	101,076	99,574	98,093	99,587	101,104	102,644
111,578	110,155	108,750	107,362	105,993	104,641	105,756	106,884	108,023
117,759	116,506	115,266	114,040	112,826	111,626	112,308	112,994	113,685
124,283	123,224	122,174	121,132	120,100	119,077	119,265	119,454	119,643
131,168	130,328	129,495	128,666	127,843	127,025	126,653	126,283	125,913
138,434	137,843	137,254	136,668	136,085	135,504	134,499	133,502	132,512
146,103	145,791	145,479	145,168	144,858	144,548	142,831	141,134	139,457
154,197	154,197	154,197	154,197	154,197	154,197	151,679	149,202	146,766
163,311	163,311	163,311	163,311	163,311	163,311	160,797	158,323	155,886
174,969	174,969	174,969	174,969	174,969	174,969	172,188	169,452	166,760
196,370	193,341	190,358	187,422	184,531	181,684	180,928	180,175	179,426
226,871	224,094	221,350	218,641	215,964	213,320	213,303	213,285	213,268
250,648	249,299	247,957	246,622	245,295	243,974	242,370	240,776	239,193

260,000	257,450	254,926	252,426	249,951	247,500	246,614	245,731	244,851
303,200	302,638	302,077	301,517	300,958	300,400	297,505	294,637	291,798
320,000	321,800	323,609	325,429	327,260	329,100	326,189	323,304	320,444
336,700	338,677	340,665	342,665	344,677	346,700	344,595	342,502	340,422
395,800	397,917	400,046	402,186	404,337	406,500	405,959	405,418	404,878
436,100	437,925	439,757	441,597	443,445	445,300	446,375	447,452	448,532
533,400	535,759	538,129	540,508	542,899	545,300	548,561	551,841	555,141
622,700	620,809	618,923	617,043	615,169	613,300	619,897	626,564	633,303
709,500	704,942	700,413	695,913	691,442	687,000	696,380	705,889	715,527
912,500	910,128	907,762	905,402	903,048	900,700	915,224	929,982	944,978
1,191,000	1,183,157	1,175,366	1,167,627	1,159,938	1,152,300	1,163,673	1,175,159	1,186,758
1,456,000	1,445,407	1,434,891	1,424,452	1,414,088	1,403,800	1,409,415	1,415,052	1,420,712
1,469,900	1,450,874	1,432,094	1,413,557	1,395,260	1,377,200	1,379,294	1,381,390	1,383,490
1,648,200	1,625,863	1,603,828	1,582,092	1,560,651	1,539,500	1,536,549	1,533,603	1,530,663
1,759,400	1,744,345	1,729,418	1,714,619	1,699,947	1,685,400	1,673,040	1,660,771	1,648,591
1,862,500	1,845,139	1,827,941	1,810,902	1,794,022	1,777,300	1,766,633	1,756,029	1,745,490
1,935,200	1,919,983	1,904,885	1,889,906	1,875,044	1,860,300	1,843,375	1,826,604	1,809,985
2,172,600	2,150,849	2,129,315	2,107,998	2,086,893	2,066,000	2,058,912	2,051,847	2,044,807
2,166,300	2,149,605	2,133,038	2,116,599	2,100,287	2,084,100	2,069,435	2,054,873	2,040,414
2,239,900	2,229,198	2,218,548	2,207,948	2,197,399	2,186,900	2,171,854	2,156,912	2,142,073
2,306,100	2,296,439	2,286,819	2,277,239	2,267,700	2,258,200	2,245,805	2,233,477	2,221,218
2,460,900	2,447,699	2,434,569	2,421,509	2,408,520	2,395,600	2,386,511	2,377,457	2,368,437
2,543,100	2,535,839	2,528,598	2,521,378	2,514,179	2,507,000	2,493,291	2,479,657	2,466,097
2,607,200	2,606,580	2,605,960	2,605,340	2,604,720	2,604,100	2,603,520	2,602,940	2,602,360
2,665,000	2,661,471	2,657,946	2,654,426	2,650,911	2,647,400	2,647,960	2,648,520	2,649,080
2,797,900	2,789,145	2,780,418	2,771,718	2,763,046	2,754,400	2,760,751	2,767,116	2,773,496
2,963,600	2,962,399	2,961,199	2,959,999	2,958,799	2,957,600	2,953,750	2,949,905	2,946,065
3,142,200	3,135,169	3,128,153	3,121,153	3,114,169	3,107,200	3,106,019	3,104,839	3,103,659
3,316,400	3,318,098	3,319,797	3,321,497	3,323,198	3,324,900	3,310,394	3,295,951	3,281,572
3,573,900	3,560,500	3,547,150	3,533,850	3,520,600	3,507,400	3,496,614	3,485,861	3,475,141
3,651,200	3,643,729	3,636,274	3,628,834	3,621,410	3,614,000	3,598,732	3,583,528	3,568,388
3,683,400	3,687,152	3,690,909	3,694,669	3,698,432	3,702,200	3,688,397	3,674,646	3,660,947

41	42	43	44	45	46	47	48	49
86,496	89,412	89,412	89,412	89,412	89,412	89,412	84,564	79,979
90,619	93,253	93,253	93,253	93,253	93,253	93,253	88,645	84,265
94,939	97,259	97,259	97,259	97,259	97,259	97,259	92,923	88,780
99,465	101,437	101,437	101,437	101,437	101,437	101,437	97,407	93,537
104,207	105,794	105,794	105,794	105,794	105,794	105,794	102,107	98,548
109,175	110,339	110,339	110,339	110,339	110,339	110,339	107,034	103,829
114,380	115,079	115,079	115,079	115,079	115,079	115,079	112,199	109,392
119,832	120,022	120,022	120,022	120,022	120,022	120,022	117,613	115,253
125,545	125,178	125,178	125,178	125,178	125,178	125,178	123,289	121,429
131,530	130,555	130,555	130,555	130,555	130,555	130,555	129,238	127,935
137,800	136,163	136,163	136,163	136,163	136,163	136,163	135,475	134,790
144,369	142,012	142,012	142,012	142,012	142,012	142,012	142,012	142,012
153,487	151,125	151,125	151,125	151,125	151,125	151,125	151,125	151,125
164,110	161,502	161,502	161,502	161,502	161,502	161,502	161,502	161,502
178,679	177,935	177,935	177,935	177,935	177,935	177,935	178,217	178,500
213,251	213,233	213,233	213,233	213,233	213,233	213,233	213,993	214,755
237,620	236,057	236,057	236,057	236,057	236,057	236,057	237,158	238,264
243,974	243,100	243,100	243,100	243,100	243,100	243,100	242,618	242,137
288,985	286,200	286,200	286,200	286,200	286,200	286,200	286,738	287,277

405,119	405,559	406,000	406,000	406,000	406,000	406,000	406,000	393,810
454,231	455,414	456,600	456,600	456,600	456,600	456,600	456,600	445,669
558,975	558,037	557,100	557,100	557,100	557,100	557,100	557,100	542,249
636,200	632,640	629,100	629,100	629,100	629,100	629,100	629,100	609,700
726,102	723,095	720,100	720,100	720,100	720,100	720,100	720,100	703,360
971,590	966,833	962,100	953,984	945,937	937,957	930,045	922,200	899,996
1,246,945	1,235,217	1,223,600	1,204,876	1,186,438	1,168,282	1,150,404	1,132,800	1,114,220
1,520,432	1,509,275	1,498,200	1,472,621	1,447,479	1,422,767	1,398,476	1,374,600	1,338,826
1,470,958	1,470,079	1,469,200	1,454,613	1,440,171	1,425,873	1,411,716	1,397,700	1,368,048
1,638,793	1,644,836	1,650,900	1,630,628	1,610,605	1,590,828	1,571,294	1,552,000	1,535,326
1,772,772	1,786,334	1,800,000	1,776,283	1,752,879	1,729,783	1,706,991	1,684,500	1,665,433
1,847,544	1,861,569	1,875,700	1,851,735	1,828,077	1,804,721	1,781,663	1,758,900	1,739,998
1,903,925	1,930,280	1,957,000	1,939,531	1,922,218	1,905,059	1,888,054	1,871,200	1,841,449
2,108,251	2,137,670	2,167,500	2,158,017	2,148,576	2,139,176	2,129,818	2,120,500	2,083,233
2,090,032	2,115,659	2,141,600	2,135,161	2,128,742	2,122,342	2,115,962	2,109,600	2,073,163
2,130,980	2,148,766	2,166,700	2,173,517	2,180,355	2,187,215	2,194,097	2,201,000	2,163,054
2,209,782	2,225,634	2,241,600	2,249,997	2,258,425	2,266,885	2,275,377	2,283,900	2,243,302
2,354,357	2,362,464	2,370,600	2,391,469	2,412,522	2,433,761	2,455,186	2,476,800	2,428,340
2,427,906	2,431,251	2,434,600	2,457,871	2,481,364	2,505,082	2,529,027	2,553,200	2,510,345
2,527,179	2,526,440	2,525,700	2,546,359	2,567,187	2,588,186	2,609,356	2,630,700	2,608,012
2,604,540	2,600,367	2,596,200	2,609,444	2,622,756	2,636,136	2,649,583	2,663,100	2,642,298
2,715,134	2,704,496	2,693,900	2,696,236	2,698,574	2,700,914	2,703,256	2,705,600	2,689,878
2,881,032	2,864,468	2,848,000	2,838,294	2,828,621	2,818,981	2,809,374	2,799,800	2,798,359
3,073,357	3,058,292	3,043,300	3,022,580	3,002,001	2,981,562	2,961,262	2,941,100	2,929,915
3,228,790	3,208,380	3,188,100	3,155,813	3,123,852	3,092,215	3,060,899	3,029,900	2,984,457
3,382,164	3,367,350	3,352,600	3,320,740	3,289,183	3,257,926	3,226,966	3,196,300	3,143,504
3,470,843	3,455,789	3,440,800	3,412,271	3,383,978	3,355,920	3,328,095	3,300,500	3,240,842
3,506,669	3,494,313	3,482,000	3,446,920	3,412,194	3,377,817	3,343,787	3,310,100	3,238,422

59	60	61	62	63	64
51,393	44,790	39,036	34,021	29,650	25,841
56,368	49,744	43,899	38,740	34,188	30,170
61,825	55,246	49,367	44,114	39,420	35,225
67,810	61,356	55,517	50,233	45,453	41,127
74,374	68,143	62,433	57,202	52,409	48,018
81,574	75,679	70,210	65,137	60,430	56,063
89,471	84,049	78,957	74,172	69,678	65,456
98,132	93,345	88,792	84,462	80,342	76,423
107,631	103,669	99,853	96,178	92,638	89,228
118,050	115,135	112,292	109,520	106,815	104,178
129,478	127,870	126,281	124,712	123,163	121,633
142,012	142,012	142,012	142,012	142,012	142,012
151,125	151,125	151,125	151,125	151,125	151,125
161,502	161,502	161,502	161,502	161,502	161,502
164,895	158,111	151,606	145,368	139,387	133,653
197,075	187,783	178,930	170,494	162,456	154,797
223,909	215,550	207,502	199,755	192,298	185,119
227,698	221,463	215,398	209,500	203,763	198,183
268,648	259,060	249,815	240,900	232,303	224,013
298,861	287,299	276,185	265,500	255,229	245,355
320,576	309,649	299,095	288,900	279,053	269,541
381,985	370,516	359,391	348,600	338,133	327,980
435,000	424,586	414,421	404,500	394,816	385,364

527,794	513,724	500,030	486,700	473,726	461,097
590,898	572,676	555,016	537,900	521,312	505,236
687,008	671,037	655,437	640,200	625,317	610,780
878,327	857,180	836,541	816,400	796,744	777,560
1,095,946	1,077,971	1,060,290	1,042,900	1,025,795	1,008,970
1,303,983	1,270,046	1,236,993	1,204,800	1,173,445	1,142,906
1,339,026	1,310,619	1,282,814	1,255,600	1,228,963	1,202,891
1,518,830	1,502,512	1,486,369	1,470,400	1,454,602	1,438,974
1,646,582	1,627,945	1,609,518	1,591,300	1,573,288	1,555,480
1,721,299	1,702,801	1,684,502	1,666,400	1,648,492	1,630,777
1,812,171	1,783,358	1,755,004	1,727,100	1,699,640	1,672,617
2,046,621	2,010,652	1,975,316	1,940,600	1,906,495	1,872,989
2,037,355	2,002,166	1,967,584	1,933,600	1,900,203	1,867,382
2,125,762	2,089,113	2,053,096	2,017,700	1,982,914	1,948,728
2,203,426	2,164,258	2,125,787	2,088,000	2,050,884	2,014,429
2,380,829	2,334,247	2,288,577	2,243,800	2,199,899	2,156,857
2,468,210	2,426,782	2,386,049	2,346,000	2,306,623	2,267,907
2,585,520	2,563,221	2,541,115	2,519,200	2,497,474	2,475,935
2,621,658	2,601,179	2,580,860	2,560,700	2,540,697	2,520,851
2,674,248	2,658,709	2,643,259	2,627,900	2,612,630	2,597,448
2,796,918	2,795,478	2,794,039	2,792,600	2,791,162	2,789,725
2,918,773	2,907,673	2,896,616	2,885,600	2,874,626	2,863,694
2,939,696	2,895,606	2,852,177	2,809,400	2,767,264	2,725,760
3,091,581	3,040,515	2,990,293	2,940,900	2,892,323	2,844,549
3,182,262	3,124,741	3,068,260	3,012,800	2,958,342	2,904,869
3,168,297	3,099,689	3,032,568	2,966,900	2,902,654	2,839,799

Table C-23: Gross Domestic Product, 1947 to 1996 (₹ thousand million)

Year	GNE	Year	GDP
1947	1,309.0	1970	73,344.9
1948	2,666.0	1971	80,701.3
1949	3,375.0	1972	92,394.4
1950	3,947.0	1973	112,498.1
1951	5,444.0	1974	134,243.8
1952	6,261.0	1975	148,327.1
1953	7,059.0	1976	166,573.3
1954	7,829.0	1977	185,622.0
1955	8,399.1	1978	204,404.1
1956	9,446.7	1979	221,546.6
1957	10,874.3	1980	240,175.9
1958	11,545.4	1981	257,962.9
1959	13,188.6	1982	270,600.7
1960	15,998.0	1983	281,767.1
1961	19,306.4	1984	300,543.0
1962	21,900.8	1985	320,418.7
1963	25,054.7	1986	335,457.2
1964	29,446.0	1987	349,759.6
1965	32,772.8	1988	373,973.2
1966	38,073.2	1989	399,998.3
1967	44,626.1	1990	430,039.8
1968	52,825.1	1991	458,299.1
1969	62,065.7	1992	471,020.7

1970	73,188.5	1993	475,381.1
		1994	479,260.1
		1995	483,220.2
		1996	499,861.0

Note: From 1946 to 1951, figures are estimates for the financial year (1st April~31st March).

Sources: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), (1987), Nihon Chokitokei Soran (Historical Statistics of Japan), Nihon Tokei Kyokai (Japan Statistical Association), Vol. 3, pp. 350, 352, and 353.

Keizai Kikaku Cho (the Economic Planning Agency), (1988), Kokumin Keizai Keisan Chokisokyu Keka Hokoku (Long-Term Retroactive Report on National Accounts), pp. 190-193.

Keizai Kikaku Cho (the Economic Planning Agency), (Kokumin Keizai Keisan Nenpo (Annual Report on National Accounts), Various Years.

Table C-24: Official Interest Rate (in per cent per annum)

End of year	Discount rate on economical bills (Bank of Japan)
1947	3.65
1948	5.11
1949	5.11
1950	5.11
1951	5.84
1952	5.84
1953	5.84
1954	5.84
1955	7.30
1956	7.30
1957	8.40
1958	7.30
1959	7.30
1960	6.94
1961	7.30
1962	6.57
1963	5.84
1964	6.57
1965	5.48
1966	5.48
1967	5.84
1968	5.84
1969	6.25
1970	6.00
1971	4.75
1972	4.25
1973	9.00
1974	9.00
1975	6.50
1976	6.50
1977	4.25
1978	3.50
1979	6.25
1980	7.25
1981	5.50
1982	5.50

1983	5.00
1984	5.00
1985	5.00
1986	3.00
1987	2.50
1988	2.50
1989	4.25
1990	6.00
1991	4.50
1992	3.25
1993	1.75
1994	1.75
1995	0.50

Sources: Somucho Tokei Kyoku (the Statistics Bureau, Management and Coordination Agency), (1987), Nihon Chokitokei Soran (Historical Statistics of Japan), Nihon Tokei Kyokai (Japan Statistical Association), Vol. 3, p. 161.
Nihonginko Tokei Kyoku (Research and Statistics Department, The Bank of Japan), Keizaitokei Nenpo (Economic Statistics Annual), Various Years.

Table C-25: Value of Male Human Capital by Age Group (¥ million)

Year	15	16	17	18	19	20	21
1947	1,956,370	2,010,937	2,001,673	2,023,751	2,016,838	2,078,489	2,032,632
1948	2,077,365	2,124,627	2,151,995	2,186,751	2,188,282	2,219,031	2,187,359
1949	2,198,665	2,237,158	2,305,517	2,354,376	2,365,547	2,360,184	2,344,936
1950	2,331,843	2,361,212	2,476,512	2,542,171	2,565,086	2,518,469	2,522,223
1951	2,485,610	2,465,961	2,617,198	2,713,876	2,756,354	2,711,997	2,709,388
1952	2,603,948	2,531,311	2,718,903	2,848,570	2,913,159	2,873,646	2,865,409
1953	2,741,476	2,611,266	2,838,513	3,004,687	3,094,030	3,059,894	3,045,303
1954	2,872,207	2,680,111	2,947,876	3,152,297	3,268,028	3,239,946	3,218,137
1955	3,012,931	2,754,817	3,066,580	3,313,295	3,458,742	3,437,880	3,408,239
1956	3,079,468	3,004,579	3,277,872	3,533,837	3,665,067	3,600,153	3,501,361
1957	3,154,066	3,282,864	3,509,057	3,773,896	3,887,889	3,773,524	3,599,873
1958	3,211,503	3,565,981	3,734,738	4,006,995	4,100,578	3,932,655	3,680,116
1959	3,192,307	3,775,879	3,869,063	4,135,347	4,198,321	3,974,076	3,643,573
1960	3,405,359	4,295,962	4,311,494	4,594,674	4,630,077	4,326,170	3,886,306
1961	4,015,830	4,960,299	4,991,812	5,223,686	4,817,370	4,632,111	4,435,162
1962	4,836,193	5,853,498	5,911,125	6,078,094	5,132,581	5,080,685	5,185,752
1963	5,720,273	6,786,490	6,880,622	6,957,233	5,385,342	5,496,291	5,989,650
1964	6,722,928	7,806,644	7,935,588	7,880,590	5,585,609	5,872,272	6,824,619
1965	8,110,121	9,223,302	9,408,150	9,186,186	5,970,222	6,476,840	8,043,023
1966	8,309,046	9,252,178	9,554,309	9,517,278	6,851,576	7,466,989	9,084,661
1967	8,426,228	9,214,823	9,657,136	9,831,257	7,847,234	8,590,921	10,243,054
1968	9,532,420	10,211,180	10,836,040	11,253,970	9,947,337	10,933,055	12,769,516
1969	10,256,166	10,765,689	11,571,352	12,261,654	12,001,371	13,239,929	15,143,946
1970	11,549,362	11,878,560	12,932,875	13,986,733	15,166,973	16,807,244	18,835,826
1971	12,989,774	13,421,713	14,361,292	15,271,417	16,526,279	18,182,220	19,956,813
1972	14,520,139	15,071,698	15,847,305	16,566,279	17,886,093	19,530,001	20,990,846
1973	17,230,200	17,964,322	18,562,428	19,080,925	20,563,374	22,300,531	23,489,684
1974	21,107,246	22,096,830	22,432,268	22,670,991	24,387,550	26,272,211	27,123,819
1975	23,252,421	24,453,914	24,398,001	24,247,227	26,035,743	27,857,287	28,186,880
1976	26,666,929	27,597,002	27,574,315	27,434,662	29,120,172	30,925,291	31,458,178

1977	29,618,073	30,140,703	30,145,004	30,018,249	31,498,407	33,216,387	33,994,578
1978	31,805,978	31,843,876	31,882,204	31,764,292	32,921,031	34,422,846	35,403,569
1979	34,302,898	33,739,063	33,777,644	33,645,407	34,432,854	35,708,011	36,907,328
1980	34,524,356	33,311,677	33,321,272	33,180,121	33,552,468	34,561,415	35,955,956
1981	39,991,978	39,076,181	39,193,615	39,342,413	37,962,771	40,738,247	41,607,013
1982	39,858,287	39,287,664	39,412,826	39,840,690	36,709,423	41,149,020	41,359,962
1983	41,433,508	41,265,669	41,445,521	42,200,849	37,107,890	43,380,855	42,842,888
1984	43,220,646	43,498,312	43,740,367	44,861,900	37,645,253	45,897,808	44,541,972
1985	44,950,793	45,714,006	46,022,040	47,542,397	38,066,038	48,390,465	46,131,940
1986	46,165,288	47,594,638	48,253,117	49,618,694	41,543,543	50,304,139	48,370,769
1987	46,789,116	48,937,899	49,984,685	51,168,710	44,791,462	51,642,568	50,065,463
1988	48,116,545	51,066,834	52,566,091	53,593,215	49,072,288	53,895,959	52,703,576
1989	50,569,855	54,402,240	56,385,506	57,216,915	54,782,836	57,319,915	56,538,487
1990	53,226,014	58,055,686	60,593,302	61,190,588	61,239,127	60,998,289	60,649,992
1991	54,768,689	59,415,339	62,330,853	63,534,014	64,605,118	65,209,699	65,841,458
1992	54,961,631	59,233,950	62,403,683	64,165,721	66,280,765	67,808,465	69,524,286
1993	57,591,664	61,858,274	65,596,460	68,130,784	71,506,700	74,069,634	77,041,508
1994	55,840,679	59,603,234	63,485,299	66,519,806	70,914,168	74,430,764	78,601,233
1995	53,488,410	56,857,471	60,938,202	64,503,643	69,910,146	74,376,895	79,772,877

22	23	24	25	26	27	28	29
1,923,169	1,728,165	1,551,852	1,477,091	1,421,071	1,516,082	1,323,021	1,368,363
2,105,577	1,960,929	1,817,790	1,719,004	1,625,442	1,637,914	1,464,389	1,478,172
2,296,523	2,216,657	2,121,368	1,993,192	1,852,508	1,763,309	1,615,321	1,591,513
2,513,070	2,513,664	2,483,112	2,317,733	2,117,003	1,903,120	1,786,010	1,717,257
2,719,444	2,724,772	2,697,076	2,537,215	2,357,649	2,161,347	2,047,361	1,977,302
2,898,903	2,911,138	2,888,856	2,740,450	2,592,014	2,424,177	2,318,581	2,249,676
3,105,397	3,125,566	3,109,549	2,974,635	2,863,871	2,732,595	2,638,996	2,572,615
3,307,644	3,336,713	3,328,141	3,210,623	3,146,498	3,063,106	2,987,116	2,925,842
3,530,830	3,569,761	3,569,516	3,472,328	3,463,770	3,440,065	3,387,291	3,333,348
3,671,861	3,753,398	3,782,399	3,694,680	3,676,262	3,684,415	3,645,649	3,596,250
3,821,272	3,949,244	4,010,717	3,933,896	3,904,345	3,948,661	3,926,203	3,882,316
3,954,240	4,131,832	4,228,867	4,165,112	4,123,449	4,208,409	4,205,104	4,168,309
3,957,965	4,176,328	4,302,841	4,251,173	4,194,216	4,316,409	4,331,585	4,301,651
4,267,888	4,546,561	4,714,503	4,671,571	4,592,478	4,765,191	4,802,109	4,777,233
4,771,720	5,068,793	5,221,796	5,109,816	4,923,510	5,161,756	5,247,105	5,252,350
5,465,031	5,785,321	5,916,620	5,712,122	5,388,041	5,699,067	5,833,383	5,864,109
6,193,366	6,545,806	6,659,213	6,357,209	5,885,157	6,298,046	6,511,683	6,596,090
6,913,606	7,281,425	7,353,733	6,926,695	6,278,528	6,780,766	7,062,159	7,188,216
8,000,121	8,417,225	8,461,341	7,885,861	7,019,698	7,675,415	8,080,309	8,292,532
9,078,230	9,389,272	8,632,050	8,285,058	7,870,710	8,432,435	8,864,494	9,037,600
10,290,056	10,473,244	8,813,468	8,716,782	8,839,915	9,279,345	9,736,327	9,857,064
12,893,392	12,914,844	9,948,555	10,139,431	10,977,144	11,289,931	11,823,303	11,885,950
15,363,011	15,137,440	10,669,649	11,202,088	12,943,240	13,040,678	13,629,622	13,603,481
19,201,590	18,605,758	11,997,170	12,973,604	15,997,275	15,789,649	16,472,294	16,327,195
20,592,849	20,355,925	14,555,187	15,771,743	19,035,372	18,855,891	19,351,620	17,518,045
21,926,229	22,119,528	17,545,823	19,058,701	22,524,279	22,401,515	22,626,619	18,714,575
24,859,923	25,618,441	22,566,054	24,598,074	28,499,777	28,494,374	28,364,375	21,463,215
29,087,738	30,623,200	29,953,498	32,759,928	37,197,701	37,367,204	36,630,696	25,340,552
30,630,286	32,950,310	35,793,716	39,280,910	43,710,599	44,114,676	42,579,844	26,927,236
33,527,519	35,402,619	38,287,626	41,673,356	45,432,104	46,419,672	45,661,379	32,057,744
35,575,483	36,937,849	39,843,209	43,090,725	46,111,439	47,788,689	47,999,851	37,494,129
36,353,033	37,105,965	39,911,000	42,881,854	45,036,212	47,339,767	48,552,920	42,196,087

37,173,424	37,276,237	39,956,027	42,626,149	43,915,915	46,802,486	49,002,523	47,368,586
35,582,556	35,114,951	37,575,719	39,872,919	40,368,283	43,693,447	46,778,926	50,376,709
41,174,191	40,575,046	42,839,572	45,096,661	45,813,840	48,663,682	51,209,128	54,976,012
41,020,625	40,445,588	42,211,792	44,157,649	45,083,470	47,058,028	48,724,199	52,192,808
42,515,811	41,870,922	43,129,492	44,773,245	45,885,943	47,022,394	47,875,991	51,150,150
44,236,545	43,531,100	44,270,968	45,623,513	46,951,305	47,252,399	47,323,298	50,444,567
45,833,854	45,044,921	45,208,136	46,228,893	47,750,582	47,175,863	46,454,461	49,381,247
48,096,303	47,596,367	45,568,124	48,582,549	49,345,279	48,780,231	47,986,777	50,357,851
49,799,183	49,603,748	45,288,126	50,329,810	50,259,689	49,708,440	48,849,048	50,604,076
52,465,272	52,620,934	45,828,069	53,097,265	52,135,160	51,587,432	50,636,370	51,775,972
56,324,598	56,876,262	47,247,783	57,071,310	55,100,901	54,552,619	53,492,322	53,995,270
60,431,136	61,408,847	48,632,285	61,206,190	58,066,590	57,477,836	56,255,903	56,009,916
66,059,907	66,874,033	55,392,221	66,423,833	63,651,596	63,079,940	62,164,333	59,097,268
70,219,250	70,771,652	61,273,655	69,961,632	67,666,893	67,081,302	66,499,124	60,302,691
78,255,801	78,455,548	70,933,066	77,037,194	75,122,292	74,408,673	74,105,666	64,013,172
80,369,072	80,229,889	75,830,235	78,428,120	77,206,524	76,517,156	76,681,427	63,200,146
82,134,482	81,667,519	80,716,866	79,521,624	79,045,340	78,397,410	79,063,557	62,180,525

30	31	32	33	34	35	36	37
1,400,060	1,436,148	1,392,193	1,429,955	1,375,299	1,348,488	1,349,374	1,320,948
1,533,817	1,474,789	1,463,229	1,497,194	1,472,302	1,439,805	1,449,915	1,408,972
1,675,011	1,509,872	1,533,473	1,563,382	1,572,236	1,533,848	1,554,846	1,500,308
1,832,786	1,548,472	1,609,483	1,634,487	1,680,510	1,635,029	1,667,803	1,597,366
2,054,763	1,758,733	1,770,690	1,768,349	1,788,127	1,769,016	1,734,044	1,684,059
2,276,500	1,974,243	1,925,656	1,891,560	1,881,541	1,893,128	1,783,542	1,756,514
2,535,149	2,227,698	2,105,227	2,034,180	1,990,595	2,037,152	1,844,794	1,842,637
2,807,942	2,500,299	2,289,465	2,176,273	2,095,326	2,181,304	1,898,969	1,923,959
3,115,239	2,810,657	2,493,493	2,331,477	2,208,335	2,338,300	1,956,686	2,010,580
3,384,980	3,111,513	2,819,188	2,656,136	2,532,086	2,610,715	2,212,041	2,202,930
3,680,353	3,446,678	3,189,352	3,027,818	2,905,025	2,916,588	2,502,189	2,415,093
3,979,929	3,797,607	3,589,156	3,433,650	3,315,949	3,242,060	2,816,612	2,635,133
4,134,471	4,017,395	3,876,052	3,734,997	3,628,982	3,453,900	3,037,481	2,753,615
4,621,346	4,571,999	4,502,153	4,368,618	4,269,376	3,954,393	3,519,295	3,090,495
5,086,028	5,014,205	4,972,992	4,847,398	4,739,061	4,416,235	4,003,438	3,584,035
5,672,088	5,559,655	5,539,374	5,408,752	5,274,547	4,930,460	4,538,580	4,128,691
6,395,995	6,257,132	6,289,269	6,179,501	6,040,752	5,694,817	5,354,735	4,982,240
6,967,480	6,783,083	6,857,238	6,758,665	6,600,888	6,253,613	5,983,441	5,670,625
8,062,114	7,836,938	7,994,938	7,930,871	7,762,864	7,412,381	7,236,156	7,002,258
8,702,272	8,288,162	8,552,867	8,560,543	8,433,363	8,064,117	7,840,457	7,644,936
9,396,599	8,765,246	9,146,568	9,234,325	9,154,701	8,766,726	8,491,015	8,346,341
11,217,242	10,247,750	10,812,827	11,010,678	10,984,563	10,534,792	10,165,384	10,074,676
12,706,236	11,364,367	12,118,633	12,438,642	12,479,779	11,979,977	11,510,872	11,497,159
15,100,076	13,229,828	14,269,438	14,778,014	14,923,990	14,349,123	13,734,805	13,828,107
16,707,571	15,632,910	16,511,321	17,070,564	17,117,027	16,270,178	15,262,254	15,526,973
18,413,935	18,407,760	19,046,095	19,665,255	19,586,090	18,410,906	16,929,821	17,408,018
21,814,008	23,324,593	23,666,534	24,426,329	24,191,529	22,518,603	20,331,431	21,169,910
26,585,239	30,386,288	30,218,692	31,161,794	30,662,681	28,227,721	24,978,989	26,276,048
29,161,825	35,635,157	34,744,368	35,814,308	35,038,999	31,935,100	27,737,039	29,531,029
34,673,700	41,430,428	40,489,765	40,997,207	36,550,887	34,293,165	31,751,593	33,028,377
40,600,730	47,566,433	46,740,464	46,651,478	38,037,348	36,871,984	36,529,251	37,267,407
45,743,100	52,541,521	51,904,504	51,057,714	38,067,412	38,123,345	40,413,738	40,441,673
51,392,957	57,857,848	57,443,295	55,671,947	37,941,957	39,240,840	44,492,073	43,650,285
54,784,745	60,536,425	60,483,909	57,822,509	36,065,922	38,568,212	46,829,792	45,100,778

59,382,531	64,304,065	65,091,990	63,465,102	44,036,542	47,102,991	55,960,309	54,127,827
56,036,552	59,499,013	61,038,779	60,700,932	46,851,475	50,114,961	58,233,320	56,538,347
54,576,609	56,825,190	59,103,210	59,992,812	51,564,374	55,239,364	62,902,104	61,450,861
53,509,672	54,655,742	57,659,228	59,767,093	57,228,483	61,420,349	68,557,547	67,404,485
52,045,840	52,115,239	55,721,051	58,928,068	62,795,247	67,441,201	73,692,768	72,808,175
52,694,686	53,035,520	55,713,072	57,992,535	61,666,949	65,795,666	70,540,156	70,633,171
52,568,844	53,175,578	54,877,662	56,217,944	59,647,507	63,220,035	66,499,185	67,484,175
53,392,042	54,277,191	55,027,555	55,478,631	58,738,451	61,857,318	63,858,166	65,707,885
55,280,007	56,483,264	56,261,252	55,829,004	58,986,402	61,718,667	62,526,745	65,224,128
56,881,890	58,366,964	57,070,413	55,691,646	58,659,490	60,910,003	60,474,165	63,850,967
62,588,755	63,164,355	61,850,928	60,327,513	62,771,775	64,856,303	64,740,946	67,260,653
66,532,429	65,966,199	64,615,382	62,919,321	64,591,633	66,311,444	66,447,938	67,809,270
73,465,461	71,445,038	69,878,750	67,796,810	68,532,878	69,776,572	70,059,286	70,100,670
75,576,641	72,217,916	70,660,682	68,438,079	68,240,502	69,010,702	69,518,009	68,272,746
77,485,949	72,760,958	71,227,873	68,880,673	67,762,680	68,084,509	68,834,085	66,379,042

38	39	40	41	42	43	44	45
1,294,113	1,235,511	1,214,961	1,064,723	1,049,264	993,554	1,002,902	961,355
1,384,914	1,321,026	1,293,939	1,175,438	1,142,688	1,089,059	1,037,349	1,008,315
1,480,052	1,410,929	1,376,890	1,296,812	1,243,759	1,193,142	1,072,480	1,057,126
1,580,858	1,505,583	1,463,418	1,428,744	1,351,783	1,305,305	1,107,264	1,106,817
1,672,206	1,612,988	1,565,608	1,537,098	1,454,328	1,405,976	1,218,403	1,207,621
1,750,038	1,709,821	1,657,376	1,636,343	1,548,269	1,498,668	1,326,912	1,304,164
1,842,290	1,823,372	1,765,262	1,752,804	1,658,611	1,607,551	1,454,269	1,417,449
1,930,667	1,935,978	1,872,188	1,869,763	1,769,567	1,717,384	1,587,492	1,534,513
2,024,677	2,056,693	1,986,528	1,995,370	1,888,739	1,835,575	1,733,815	1,662,199
2,181,440	2,180,946	2,141,259	2,066,945	1,983,514	1,936,093	1,849,868	1,771,065
2,351,714	2,314,071	2,309,437	2,142,431	2,084,426	2,043,567	1,975,195	1,888,614
2,523,618	2,444,341	2,479,962	2,211,197	2,181,282	2,148,065	2,100,389	2,005,855
2,592,777	2,471,066	2,547,507	2,181,857	2,180,757	2,155,271	2,129,919	2,029,322
2,860,176	2,681,405	2,808,145	2,309,660	2,338,443	2,318,982	2,315,652	2,200,605
3,338,836	3,143,403	3,204,006	2,668,541	2,616,751	2,549,365	2,497,416	2,413,431
3,858,405	3,634,398	3,590,783	3,014,792	2,848,762	2,711,030	2,588,473	2,524,763
4,704,856	4,469,057	4,317,043	3,688,812	3,394,846	3,193,922	3,013,113	3,013,091
5,386,623	5,135,764	4,827,093	4,176,549	3,723,626	3,443,699	3,189,246	3,245,549
6,705,302	6,428,358	5,886,892	5,162,230	4,460,098	4,053,327	3,683,666	3,813,249
7,346,453	7,050,820	6,488,641	5,779,814	5,091,829	4,665,191	4,281,622	4,308,608
8,054,505	7,742,247	7,160,590	6,477,224	5,814,023	5,363,438	4,963,902	4,847,872
9,765,908	9,404,764	8,745,485	8,037,886	7,356,216	6,838,446	6,388,386	6,061,596
11,190,341	10,792,738	10,087,614	9,418,042	8,786,870	8,231,187	7,761,354	7,154,626
13,512,861	13,052,293	12,263,064	11,632,019	11,066,097	10,449,331	9,948,632	8,913,468
15,306,092	14,879,347	14,017,764	13,269,755	12,724,525	12,055,562	11,471,809	10,345,464
17,313,995	16,940,277	16,001,655	15,114,119	14,602,918	13,873,978	13,187,060	11,961,823
21,291,599	21,018,723	19,961,677	18,871,268	18,436,550	17,637,438	16,806,612	15,383,047
26,643,531	26,455,305	25,178,629	23,742,310	23,368,078	22,420,600	21,348,358	19,668,282
30,259,200	30,283,330	28,935,187	27,253,539	27,050,453	26,041,726	24,782,850	22,980,199
33,699,213	33,375,008	31,396,579	28,937,062	28,958,522	28,065,883	26,820,491	24,846,440
38,012,829	37,392,597	34,751,355	31,441,152	31,817,386	31,127,440	29,949,927	27,792,933
41,246,491	40,309,660	37,022,029	32,893,594	33,676,368	33,275,414	32,255,849	30,004,553
44,490,892	43,170,902	39,156,153	34,137,286	35,326,684	35,219,897	34,358,715	31,999,482
46,000,276	44,376,760	39,802,600	34,097,338	35,716,675	35,981,247	35,377,099	33,036,234
54,331,239	47,867,922	44,336,003	40,562,245	41,632,593	41,896,743	40,878,837	37,712,651
55,806,451	44,872,750	42,897,410	41,904,565	42,154,871	42,420,048	41,119,864	37,524,623

59,826,795	44,028,373	43,554,572	45,526,389	44,955,297	45,259,987	43,613,295	39,396,265
64,732,806	43,603,238	44,633,803	49,917,382	48,375,412	48,714,320	46,644,605	41,681,206
68,855,871	42,378,748	44,811,291	53,527,094	50,818,737	51,091,380	48,514,051	42,793,016
68,180,158	46,702,354	49,412,663	57,854,106	55,204,770	54,668,094	47,475,298	43,253,140
66,489,288	50,694,803	53,682,109	61,630,311	59,134,900	57,717,483	45,869,167	43,189,044
66,121,164	56,150,879	59,545,352	67,065,968	64,730,260	62,273,466	45,292,478	44,077,413
67,017,888	63,365,810	67,262,800	74,282,582	72,075,997	68,305,163	45,436,210	45,669,048
66,867,220	70,256,920	74,499,541	80,497,600	78,338,869	72,948,757	44,258,733	45,806,671
69,446,253	72,977,107	77,003,403	81,839,239	80,977,182	77,209,917	52,296,735	54,423,909
68,891,321	72,245,555	75,670,147	78,884,930	79,110,761	76,958,183	57,968,391	60,402,309
69,958,329	73,111,354	75,935,166	77,604,377	78,881,240	78,346,554	65,676,943	68,572,301
66,975,738	69,787,834	71,896,066	72,036,172	74,203,686	75,226,191	70,163,668	73,390,905
64,043,867	66,571,667	68,064,114	66,895,359	69,866,470	72,323,867	75,078,802	78,695,308

46	47	48	49	50	51	52	53
908,203	818,428	725,710	690,930	608,171	550,030	504,428	428,517
948,880	885,381	802,069	754,848	665,216	594,349	551,470	471,254
991,016	957,518	886,253	824,547	727,560	642,254	602,974	518,375
1,033,696	1,034,271	978,154	899,727	794,973	693,414	658,783	569,832
1,131,989	1,115,928	1,056,794	953,224	859,718	758,144	724,335	634,512
1,227,099	1,191,990	1,130,418	999,938	920,673	820,964	788,926	700,084
1,338,801	1,281,552	1,217,162	1,055,961	992,639	895,108	865,282	777,908
1,455,012	1,372,604	1,305,681	1,111,067	1,066,438	972,589	945,859	861,587
1,582,323	1,471,173	1,401,756	1,170,088	1,146,854	1,057,927	1,035,173	955,501
1,698,204	1,581,383	1,508,341	1,286,873	1,252,691	1,161,404	1,121,825	1,040,667
1,824,191	1,701,488	1,624,733	1,416,927	1,369,988	1,276,709	1,217,480	1,135,161
1,951,771	1,823,612	1,743,471	1,554,355	1,492,874	1,398,550	1,316,798	1,234,137
1,986,719	1,856,770	1,774,369	1,614,085	1,536,608	1,443,502	1,338,074	1,256,364
2,167,013	2,025,168	1,933,694	1,794,227	1,692,641	1,594,180	1,454,714	1,368,374
2,284,377	2,160,585	2,069,484	1,938,580	1,818,033	1,711,897	1,550,089	1,441,127
2,277,344	2,158,192	2,049,474	1,923,235	1,787,578	1,687,185	1,530,118	1,430,851
2,637,045	2,556,979	2,467,215	2,365,186	2,208,906	2,104,098	1,908,564	1,774,929
2,732,634	2,684,271	2,601,178	2,523,914	2,353,215	2,255,149	2,047,585	1,904,297
3,087,176	3,070,393	2,986,170	2,929,592	2,722,726	2,619,523	2,373,969	2,199,577
3,535,062	3,409,602	3,260,168	3,144,761	2,973,691	2,754,225	2,527,439	2,352,455
4,023,363	3,755,188	3,521,243	3,331,778	3,198,522	2,846,314	2,640,266	2,465,231
5,094,932	4,608,210	4,244,616	3,945,566	3,850,713	3,296,245	3,093,764	2,899,782
6,090,253	5,337,793	4,829,340	4,409,752	4,374,742	3,601,664	3,419,599	3,216,550
7,687,733	6,532,731	5,809,207	5,214,088	5,261,478	4,168,913	4,006,829	3,785,019
9,084,084	7,866,305	7,045,942	6,365,567	6,249,462	5,005,505	4,667,499	4,333,324
10,684,674	9,419,863	8,489,753	7,713,602	7,363,366	5,959,960	5,392,327	4,923,032
14,014,223	12,603,065	11,441,299	10,445,789	9,664,899	7,857,354	6,830,086	6,042,016
18,247,334	16,733,001	15,317,027	14,093,808	12,706,709	10,462,380	8,844,466	7,712,708
21,701,914	20,274,779	18,687,156	17,301,732	15,172,079	12,624,952	10,352,702	8,871,912
23,300,497	21,881,877	20,199,504	18,655,273	16,400,885	13,850,311	11,522,719	9,885,598
25,949,382	24,560,174	22,765,111	21,034,156	18,603,446	16,008,938	13,578,997	11,733,975
27,913,058	26,648,839	24,827,710	22,979,255	20,478,489	17,993,584	15,600,864	13,623,939
29,622,708	28,485,942	26,631,522	24,643,972	22,079,567	19,755,758	17,451,308	15,338,602
30,476,984	29,563,511	27,776,633	25,743,431	23,235,620	21,222,823	19,157,127	17,009,433
34,128,281	33,456,878	31,710,385	29,562,122	26,701,381	24,241,602	22,011,397	19,574,203
33,359,953	33,106,801	31,716,226	29,810,913	27,020,520	24,466,060	22,439,199	20,089,531
34,433,557	34,624,234	33,561,391	31,842,045	29,001,614	26,230,845	24,345,078	21,991,631
35,786,073	36,418,680	35,664,186	34,097,751	31,146,133	28,075,398	26,296,917	23,889,477

36,005,634	36,988,064	36,488,150	35,028,571	31,947,952	28,544,731	26,799,434	24,274,142
38,897,336	39,174,865	38,638,188	36,800,604	33,173,951	29,128,157	27,693,705	25,357,180
41,536,510	41,034,919	40,486,403	38,267,627	34,093,803	29,405,783	28,285,076	26,138,210
45,338,451	43,941,289	43,374,008	40,691,613	35,837,437	30,369,970	29,563,979	27,583,870
50,203,069	47,692,055	47,052,695	43,774,331	38,078,280	31,681,831	31,192,140	29,369,357
53,631,156	49,746,924	48,837,673	44,804,608	38,225,201	30,948,122	30,466,495	28,521,238
62,760,821	58,761,647	57,141,463	48,335,637	42,921,328	37,551,897	36,698,217	34,883,389
68,286,472	64,199,046	61,472,322	47,612,161	43,641,485	40,848,614	39,142,897	37,196,457
76,057,953	71,856,768	67,805,280	48,119,125	45,551,069	45,627,878	42,873,522	40,717,550
79,855,675	75,814,034	70,506,527	45,856,178	44,848,746	48,106,364	44,364,381	42,162,476
84,012,803	80,153,859	73,457,981	43,787,468	44,258,595	50,864,608	46,081,237	43,886,459

54	55	56	57	58	59	60	61
364,636	323,878	246,447	215,964	174,549	125,049	89,149	55,625
405,037	357,647	279,849	238,411	194,147	138,824	103,775	69,042
450,071	395,123	317,961	263,346	216,007	154,114	120,766	85,649
499,843	436,341	361,142	290,791	240,170	170,924	140,363	106,092
559,643	487,267	404,018	332,682	274,618	200,871	164,304	123,879
621,084	539,496	448,193	377,412	311,221	233,869	190,534	143,367
694,231	601,678	500,850	431,283	355,164	274,109	222,372	166,951
773,558	668,981	558,013	491,331	403,933	320,085	258,504	193,601
863,150	744,905	622,633	560,536	459,895	374,061	300,660	224,570
923,318	815,296	693,091	632,104	529,862	436,642	352,036	264,603
989,281	893,842	772,831	713,950	611,243	510,180	412,477	311,922
1,056,532	976,843	859,010	803,743	702,559	593,752	481,263	366,076
1,052,291	990,671	880,584	827,945	731,280	619,447	498,382	377,636
1,121,311	1,074,907	965,784	912,478	814,368	691,418	552,178	416,785
1,188,926	1,111,072	977,552	885,715	761,881	607,820	476,277	350,304
1,214,092	1,135,781	1,012,035	918,860	808,536	642,355	522,581	395,672
1,527,641	1,406,073	1,241,131	1,096,839	948,778	722,102	587,380	441,410
1,673,833	1,528,716	1,351,297	1,179,067	1,022,359	759,705	629,393	477,924
1,965,253	1,770,482	1,555,238	1,326,085	1,136,006	812,675	676,448	512,241
2,126,125	1,904,520	1,686,872	1,439,072	1,236,309	907,084	749,964	569,611
2,249,881	1,999,509	1,780,583	1,513,895	1,297,067	970,799	793,119	601,169
2,674,685	2,360,879	2,116,745	1,797,074	1,539,705	1,178,682	953,958	723,395
2,997,363	2,626,452	2,369,442	2,006,935	1,717,392	1,343,068	1,075,598	815,079
3,566,572	3,106,059	2,823,732	2,391,079	2,049,650	1,642,184	1,304,950	990,836
4,018,104	3,567,130	3,114,517	2,669,788	2,286,316	1,851,913	1,468,581	1,122,100
4,495,321	4,071,868	3,418,563	2,971,363	2,548,076	2,091,363	1,658,699	1,278,045
5,376,788	4,946,157	4,005,468	3,580,543	3,170,919	2,717,214	2,218,728	1,772,905
6,772,089	6,364,678	4,958,526	4,491,487	3,973,928	3,442,833	2,805,510	2,255,927
7,659,574	7,325,861	5,465,519	4,988,925	4,379,381	3,810,055	3,078,179	2,475,018
8,519,994	7,903,199	5,949,922	5,253,076	4,545,761	3,897,910	3,206,309	2,484,382
10,150,368	9,171,656	6,986,761	5,967,459	5,071,290	4,270,172	3,563,466	2,651,588
11,871,623	10,490,500	8,121,501	6,743,085	5,657,972	4,702,855	4,001,732	2,873,677
13,406,252	11,533,831	9,032,637	7,256,002	5,983,602	4,887,457	4,222,126	2,913,666
14,968,152	12,585,698	10,008,161	7,805,782	6,344,312	5,106,581	4,490,674	2,985,891
17,226,283	14,526,732	11,748,103	9,315,617	7,596,881	6,124,422	5,231,665	3,512,355
17,774,189	15,112,310	12,494,852	10,124,123	8,322,661	6,750,658	5,626,355	3,830,322
19,595,385	16,819,906	14,229,445	11,786,078	9,767,043	7,970,928	6,481,924	4,474,756
21,360,939	18,437,538	15,889,931	13,387,536	11,119,590	9,079,692	7,165,165	4,989,633
21,630,517	18,684,442	16,371,298	14,055,218	11,785,803	9,696,823	7,476,623	5,286,797
22,777,516	19,732,175	17,253,480	14,970,753	12,656,399	10,463,727	8,138,470	5,888,463

23,618,225	20,463,731	17,792,956	15,531,718	13,157,224	10,865,573	8,475,601	6,239,647
25,090,952	21,769,296	18,856,262	16,603,136	14,148,664	11,715,797	9,199,396	6,915,732
26,865,345	23,299,470	20,050,690	17,737,037	15,115,423	12,478,110	9,808,058	7,488,646
25,933,520	22,314,529	19,036,849	17,001,182	14,701,668	12,272,407	9,790,298	7,694,148
31,896,258	27,378,591	22,979,124	20,645,227	17,723,505	14,666,259	11,529,991	8,881,400
33,788,767	28,707,118	23,652,839	21,494,879	18,616,421	15,512,017	12,201,635	9,348,670
36,733,551	30,879,221	24,964,932	22,933,506	20,019,233	16,781,037	13,195,272	10,047,369
37,825,568	31,503,695	25,027,163	23,275,646	20,513,069	17,326,690	13,641,326	10,338,586
39,209,503	32,401,444	25,328,848	23,880,531	21,274,425	18,128,998	14,307,294	10,804,806

62	63	64	Total
39,181	23,692	10,557	53,201,495
47,754	28,610	12,410	57,686,351
58,161	34,518	14,573	62,451,728
70,715	41,569	17,081	67,762,072
83,405	50,079	20,875	73,620,846
97,579	59,867	25,328	79,021,061
114,850	71,989	30,910	85,346,230
134,588	86,176	37,549	91,792,530
157,734	103,154	45,608	98,945,454
190,273	124,311	56,336	106,477,229
229,596	149,835	69,596	114,781,803
275,772	179,747	85,565	123,219,123
288,400	186,020	89,942	126,895,194
322,685	205,966	101,150	140,527,359
263,298	164,033	78,050	154,767,358
304,501	194,936	94,441	171,652,944
335,746	213,469	101,906	197,897,050
365,561	234,727	112,202	217,853,587
389,057	249,242	117,922	254,181,762
426,637	274,161	127,249	276,130,588
441,904	283,540	128,538	299,384,082
523,098	335,885	149,043	360,389,646
579,187	371,794	161,326	411,691,084
693,650	446,230	189,780	495,243,976
785,959	505,000	218,988	563,141,337
897,481	577,073	255,621	638,403,384
1,282,312	846,791	392,800	783,714,906
1,632,546	1,076,762	509,271	984,774,969
1,781,070	1,166,357	559,263	1,119,279,786
1,815,509	1,197,165	581,804	1,229,604,587
1,961,130	1,297,963	637,343	1,351,986,864
2,161,343	1,442,353	718,764	1,437,248,740
2,219,389	1,487,506	749,424	1,519,887,038
2,309,268	1,558,251	795,577	1,535,495,206
2,623,729	1,736,515	870,186	1,752,848,677
2,775,039	1,808,655	892,986	1,743,747,348
3,144,300	2,018,111	981,740	1,815,016,636
3,383,290	2,127,979	1,015,157	1,900,876,395
3,481,379	2,159,039	1,016,049	1,955,954,081
3,967,753	2,485,702	1,178,316	2,017,362,748
4,278,821	2,693,657	1,279,720	2,053,565,264
4,843,198	3,074,122	1,468,445	2,135,140,813

5,327,907	3,392,535	1,621,488	2,259,830,252
5,633,635	3,643,837	1,763,718	2,345,788,756
6,453,438	4,131,786	1,976,949	2,559,500,201
6,837,883	4,393,489	2,105,711	2,652,538,794
7,391,331	4,762,139	2,284,481	2,845,869,382
7,660,802	4,956,382	2,383,092	2,859,439,690
8,073,100	5,250,392	2,532,736	2,873,225,275

Table C-26: Value of Female Human Capital by Age Group (¥ million)

Year	15	16	17	18	19	20	21
1947	1,068,501	1,074,218	1,053,235	1,057,783	1,045,585	1,027,308	1,016,537
1948	1,126,434	1,128,211	1,124,527	1,130,030	1,119,198	1,092,594	1,080,807
1949	1,181,072	1,178,929	1,194,972	1,201,858	1,192,974	1,157,382	1,144,703
1950	1,246,743	1,239,748	1,277,406	1,285,437	1,278,370	1,232,192	1,218,219
1951	1,319,317	1,286,646	1,342,991	1,365,594	1,367,471	1,322,202	1,303,240
1952	1,382,752	1,322,291	1,398,056	1,436,504	1,448,607	1,405,387	1,381,531
1953	1,450,574	1,360,612	1,457,577	1,513,703	1,537,449	1,496,769	1,467,497
1954	1,520,671	1,398,617	1,517,665	1,592,625	1,628,962	1,591,156	1,555,791
1955	1,596,635	1,440,131	1,583,107	1,678,859	1,729,310	1,694,847	1,652,647
1956	1,631,184	1,571,027	1,691,666	1,792,243	1,836,032	1,781,309	1,706,197
1957	1,669,425	1,716,447	1,810,055	1,915,445	1,951,208	1,873,689	1,762,665
1958	1,706,845	1,873,828	1,935,539	2,046,184	2,072,938	1,970,418	1,820,727
1959	1,703,414	1,994,514	2,015,319	2,125,143	2,137,400	2,007,233	1,818,627
1960	1,809,701	2,256,831	2,227,941	2,340,881	2,335,193	2,164,770	1,921,211
1961	2,127,172	2,597,219	2,570,834	2,651,336	2,422,545	2,316,513	2,192,666
1962	2,687,015	3,210,310	3,185,201	3,224,235	2,699,086	2,663,942	2,690,827
1963	3,190,829	3,743,396	3,733,612	3,717,616	2,855,205	2,910,001	3,137,815
1964	3,666,995	4,207,357	4,202,969	4,103,230	2,883,186	3,027,579	3,477,039
1965	4,565,964	5,129,195	5,140,938	4,933,211	3,181,990	3,457,449	4,246,761
1966	4,702,800	5,182,124	5,272,819	5,170,909	3,692,733	4,017,387	4,831,907
1967	4,771,664	5,155,633	5,323,966	5,334,895	4,217,971	4,594,917	5,411,970
1968	5,391,469	5,716,038	5,995,917	6,145,748	5,386,166	5,883,306	6,796,531
1969	5,785,433	6,008,772	6,390,827	6,686,871	6,481,682	7,081,860	8,005,714
1970	6,689,249	6,817,686	7,364,644	7,879,175	8,460,671	9,261,156	10,261,705
1971	7,656,826	7,833,070	8,309,610	8,742,681	9,365,831	10,162,929	11,029,861
1972	8,661,077	8,879,299	9,237,516	9,546,786	10,194,520	10,960,563	11,648,013
1973	10,662,610	10,987,105	11,244,178	11,451,437	12,229,907	13,073,168	13,657,247
1974	13,432,518	13,895,833	13,967,967	13,991,343	14,909,098	15,800,497	16,173,764
1975	15,399,827	16,046,082	15,890,564	15,698,876	16,733,397	17,621,468	17,707,908
1976	16,622,626	17,021,304	16,859,945	16,646,302	17,502,729	18,276,150	18,399,921
1977	18,550,924	18,693,226	18,550,588	18,341,600	19,072,203	19,810,112	20,059,632
1978	20,198,257	19,995,512	19,848,933	19,625,002	20,155,181	20,801,311	21,164,779
1979	21,662,135	21,065,902	20,915,614	20,676,851	20,970,815	21,501,493	21,981,715
1980	22,711,383	21,693,251	21,543,822	21,300,467	21,344,542	21,757,958	22,366,784
1981	25,375,440	24,509,871	24,375,028	24,285,822	23,240,870	24,704,226	24,954,534
1982	26,382,895	25,739,391	25,615,832	25,714,643	23,510,233	26,087,031	25,925,291
1983	27,489,588	27,091,256	26,975,530	27,271,306	23,802,286	27,538,267	26,886,304
1984	28,679,651	28,535,971	28,416,127	28,919,674	24,087,908	29,050,394	27,861,884
1985	30,377,125	30,589,145	30,524,948	31,324,648	24,929,019	31,362,092	29,567,013
1986	31,218,618	31,865,529	32,063,987	32,742,976	27,264,407	32,665,573	31,128,740
1987	32,211,128	33,346,871	33,848,955	34,406,228	29,980,434	34,208,720	32,951,582
1988	32,974,691	34,608,028	35,418,943	35,811,989	32,625,900	35,411,223	34,445,164
1989	34,488,693	36,699,005	37,875,610	38,106,163	36,315,195	37,521,315	36,880,523

1990	36,467,543	39,368,565	40,990,511	41,041,760	40,907,985	40,214,718	39,928,182
1991	37,257,246	39,970,262	41,791,452	42,232,187	42,713,693	42,580,064	42,839,271
1992	37,652,533	40,202,773	42,263,245	43,146,743	44,308,917	44,804,031	45,689,109
1993	38,390,210	40,732,265	43,002,088	44,316,806	46,193,970	47,386,834	48,980,913
1994	37,606,312	39,703,030	42,137,034	43,866,300	46,425,386	48,309,821	50,614,077
1995	36,210,124	38,045,719	40,602,855	42,715,854	45,926,017	48,511,945	51,550,440

22	23	24	25	26	27	28	29
984,914	905,484	871,744	831,946	779,358	791,818	636,338	637,962
1,049,607	984,878	953,656	906,994	847,427	846,036	718,687	705,706
1,114,312	1,067,173	1,039,326	985,119	918,061	900,733	808,883	778,043
1,188,508	1,161,594	1,137,726	1,074,638	998,845	963,018	914,200	861,331
1,282,348	1,254,580	1,228,690	1,162,023	1,091,507	1,052,779	1,002,810	952,649
1,371,608	1,343,768	1,316,341	1,246,880	1,183,964	1,142,666	1,092,309	1,046,483
1,470,035	1,442,074	1,412,863	1,340,330	1,286,482	1,242,323	1,191,757	1,151,407
1,572,396	1,544,492	1,513,465	1,437,983	1,395,232	1,348,214	1,298,017	1,264,798
1,685,117	1,657,217	1,624,074	1,545,346	1,515,625	1,465,416	1,415,887	1,391,383
1,763,729	1,755,973	1,733,581	1,656,186	1,618,791	1,580,214	1,529,304	1,500,406
1,847,046	1,861,497	1,851,199	1,775,539	1,729,407	1,704,312	1,651,997	1,618,049
1,934,082	1,973,142	1,976,607	1,903,372	1,847,556	1,838,256	1,784,787	1,745,334
1,955,570	2,017,599	2,034,679	1,966,644	1,902,872	1,913,016	1,863,172	1,821,445
2,088,455	2,175,007	2,204,402	2,135,508	2,057,048	2,087,434	2,037,917	1,989,865
2,332,301	2,424,537	2,442,950	2,340,842	2,212,914	2,273,392	2,243,357	2,201,499
2,802,046	2,908,651	2,914,834	2,763,868	2,565,530	2,669,719	2,664,384	2,631,018
3,199,511	3,316,606	3,305,594	3,101,464	2,826,355	2,978,416	3,005,146	2,984,936
3,463,491	3,576,464	3,535,694	3,272,809	2,918,530	3,103,320	3,152,959	3,138,467
4,149,054	4,284,260	4,217,580	3,867,138	3,388,641	3,651,460	3,752,494	3,758,796
4,742,848	4,811,642	4,334,717	4,098,371	3,838,115	4,051,564	4,162,086	4,151,636
5,337,105	5,318,931	4,382,814	4,269,114	4,267,125	4,404,675	4,512,453	4,472,441
6,745,754	6,616,330	4,994,618	5,018,760	5,359,537	5,413,439	5,532,345	5,448,717
7,980,411	7,689,979	5,310,056	5,497,060	6,265,084	6,187,113	6,304,291	6,167,345
10,291,619	9,761,398	6,178,433	6,604,651	8,054,290	7,799,141	7,948,715	7,744,598
11,206,963	10,851,955	7,612,725	8,138,971	9,695,402	9,411,879	9,430,638	8,391,212
11,989,934	11,857,428	9,224,437	9,871,393	11,498,936	11,205,992	11,057,724	9,001,100
14,305,152	14,520,626	12,588,592	13,548,993	15,506,167	15,239,263	14,875,079	11,120,714
17,175,131	17,818,901	17,143,080	18,479,383	20,691,065	20,421,586	19,635,560	13,429,286
19,093,641	20,271,385	21,664,853	23,409,152	25,659,416	25,442,667	24,100,095	15,081,247
19,392,863	20,121,604	21,335,005	22,754,794	24,374,348	24,424,853	23,542,983	16,303,961
20,767,800	21,193,023	22,431,794	23,756,723	25,010,621	25,465,056	25,102,182	19,323,935
21,507,769	21,575,823	22,784,759	23,947,173	24,762,818	25,601,508	25,793,010	22,064,057
21,928,297	21,630,988	22,797,058	23,783,408	24,159,601	25,363,301	26,111,539	24,811,483
21,919,072	21,276,186	22,392,802	23,203,903	23,168,740	24,712,016	26,010,441	27,467,309
24,457,252	23,747,229	24,679,555	25,439,374	25,506,248	26,718,379	27,660,534	29,173,539
25,446,635	24,755,848	25,435,890	26,099,555	26,275,938	27,005,166	27,435,968	28,831,181
26,381,969	25,658,324	26,017,445	26,542,569	26,820,242	27,060,093	27,031,232	28,363,311
27,335,405	26,589,709	26,618,561	27,008,256	27,398,468	27,143,118	26,663,729	27,937,862
29,020,462	28,246,084	27,934,240	28,212,263	28,762,436	28,014,235	27,104,235	28,396,761
30,605,697	29,991,428	28,323,167	29,805,406	29,872,328	29,105,754	28,146,843	29,107,898
32,453,061	32,017,632	28,875,009	31,664,866	31,204,708	30,423,261	29,417,871	30,041,509
33,957,664	33,715,063	29,023,689	33,152,045	32,107,921	31,307,912	30,253,955	30,491,594
36,414,092	36,398,617	29,917,348	35,598,027	33,880,481	33,030,704	31,881,010	31,695,721
39,476,763	39,729,719	31,184,877	38,666,152	36,181,085	35,290,473	34,050,780	33,417,043
42,678,981	42,748,078	35,086,611	41,425,272	39,161,665	38,205,667	37,088,942	34,747,215

45,878,402	45,745,580	39,269,967	44,156,011	42,176,836	41,157,199	40,196,723	35,953,077
49,567,066	49,184,369	44,146,021	47,261,392	45,601,133	44,500,861	43,719,986	37,318,177
51,623,893	50,990,653	47,868,521	48,811,748	47,597,864	46,478,244	45,964,350	37,473,037
53,024,269	52,158,648	51,230,111	49,766,280	49,044,629	47,910,979	47,673,636	37,111,514

30	31	32	33	34	35	36	37
625,982	619,972	596,257	595,629	559,350	549,002	536,518	508,868
702,909	648,423	633,638	631,159	604,855	587,706	579,480	548,844
786,773	676,125	671,438	667,022	652,451	627,729	624,633	590,935
884,228	707,843	714,314	707,680	706,506	673,026	675,824	638,596
962,055	793,037	792,541	779,303	768,980	743,471	713,100	682,069
1,039,864	882,887	874,033	853,233	832,388	817,014	748,737	725,152
1,125,727	984,414	965,330	935,518	902,275	899,034	787,166	771,901
1,216,842	1,096,100	1,064,838	1,024,616	977,121	988,549	827,114	821,392
1,317,181	1,222,105	1,176,121	1,123,580	1,059,412	1,088,173	869,982	874,887
1,420,477	1,331,745	1,283,340	1,229,181	1,168,613	1,181,517	972,038	968,059
1,531,838	1,451,077	1,400,084	1,344,352	1,288,613	1,282,286	1,085,458	1,070,430
1,652,501	1,581,835	1,528,350	1,471,390	1,422,194	1,393,122	1,213,622	1,185,346
1,726,650	1,671,722	1,618,565	1,563,099	1,524,530	1,471,403	1,320,698	1,279,441
1,886,466	1,844,843	1,787,009	1,727,843	1,696,935	1,610,030	1,485,233	1,423,210
2,088,066	2,032,113	1,979,313	1,909,272	1,867,031	1,768,248	1,648,849	1,583,066
2,501,338	2,428,988	2,387,390	2,307,865	2,254,776	2,136,426	2,015,606	1,937,968
2,843,375	2,753,947	2,730,198	2,643,701	2,578,551	2,441,548	2,327,086	2,236,383
2,985,328	2,875,138	2,867,364	2,775,018	2,697,933	2,550,836	2,456,246	2,361,570
3,583,706	3,443,454	3,464,571	3,359,030	3,260,400	3,080,459	2,996,296	2,878,817
3,930,897	3,705,857	3,784,830	3,717,191	3,634,264	3,448,471	3,345,178	3,245,101
4,196,827	3,874,746	4,010,235	3,983,713	3,918,811	3,732,014	3,609,838	3,537,080
5,066,378	4,578,775	4,798,646	4,816,315	4,761,625	4,545,802	4,378,947	4,328,221
5,680,716	5,024,720	5,332,192	5,407,757	5,373,919	5,143,959	4,936,091	4,923,202
7,081,524	6,139,848	6,603,416	6,768,604	6,762,015	6,490,302	6,203,925	6,243,070
7,921,295	7,329,533	7,700,797	7,873,022	7,814,572	7,414,200	6,941,254	7,067,161
8,788,304	8,694,814	8,941,840	9,136,953	9,028,066	8,482,253	7,790,798	8,037,482
11,267,549	11,952,083	12,056,386	12,329,802	12,139,413	11,300,516	10,183,211	10,640,119
14,068,588	15,946,479	15,729,728	16,056,188	15,714,460	14,464,815	12,767,868	13,495,726
16,339,501	19,796,512	19,102,822	19,471,809	18,949,570	17,248,628	14,911,074	15,937,686
17,570,933	20,789,024	20,107,085	20,143,473	17,903,358	16,838,349	15,561,060	16,279,372
20,796,664	24,107,639	23,432,639	23,116,142	18,795,615	18,291,918	18,092,470	18,542,523
23,711,047	26,936,371	26,327,487	25,599,100	19,053,345	19,191,858	20,313,705	20,383,728
26,609,274	29,600,473	29,061,380	27,815,053	18,932,137	19,724,574	22,335,464	21,946,724
29,411,032	32,050,784	31,620,908	29,801,710	18,553,697	19,995,568	24,221,511	23,299,540
31,020,874	33,189,346	33,236,106	31,997,665	22,142,407	23,827,741	28,263,554	27,340,105
30,366,118	31,810,809	32,241,446	31,611,003	24,223,503	25,912,123	29,938,507	28,944,348
29,660,783	30,503,854	31,382,421	31,435,285	26,770,034	28,577,245	32,299,318	31,356,283
29,008,415	29,286,417	30,581,117	31,292,300	29,617,397	31,562,902	34,919,460	34,072,056
29,307,335	29,069,650	30,824,596	32,225,225	33,901,658	36,068,449	39,060,464	38,305,156
29,876,241	29,764,917	30,991,739	31,870,734	33,466,861	35,324,019	37,548,851	37,339,595
30,679,620	30,717,327	31,426,110	31,814,048	33,376,365	34,987,265	36,550,429	36,909,238
30,964,406	31,136,378	31,277,112	31,144,592	32,619,781	33,938,527	34,826,504	35,699,653
31,991,878	32,295,173	31,840,987	31,176,506	32,588,969	33,643,496	33,903,361	35,270,643
33,542,800	34,006,338	32,915,707	31,693,166	33,061,176	33,856,713	33,487,670	35,328,402
36,303,895	36,148,340	34,978,009	33,633,668	34,598,289	35,243,736	34,973,591	36,222,965
39,106,910	38,254,810	37,018,054	35,562,795	36,073,198	36,531,968	36,330,547	36,879,433
42,231,120	40,546,719	39,189,991	37,558,024	37,529,756	37,770,419	37,652,061	37,494,052

44,163,804	41,668,649	40,285,679	38,580,543	38,028,326	38,069,557	38,060,208	37,180,808
45,543,586	42,226,347	40,840,994	39,093,885	38,017,964	37,861,211	37,961,542	36,376,215

38	39	40	41	42	43	44	45
493,135	463,818	435,620	365,079	368,759	340,178	340,637	320,693
536,101	503,034	472,910	416,381	407,519	378,526	353,106	341,620
581,966	544,912	512,886	474,502	450,029	420,905	365,787	363,677
634,040	592,378	558,197	542,624	498,708	469,674	380,265	388,536
676,281	639,261	602,845	588,652	543,015	515,544	428,919	430,352
718,256	687,082	648,574	636,236	589,178	563,986	482,245	475,187
763,724	739,310	698,545	688,434	639,991	617,696	542,844	525,326
811,993	795,591	752,567	745,205	695,513	676,857	611,375	581,067
864,059	856,851	811,404	807,290	756,457	742,298	689,145	643,283
948,560	930,569	894,616	850,949	808,096	794,102	747,046	699,158
1,040,486	1,009,733	985,446	896,128	862,465	848,759	809,104	759,235
1,143,239	1,097,673	1,087,676	945,701	922,499	909,181	878,272	826,327
1,226,615	1,166,594	1,174,279	976,036	964,098	949,960	928,143	873,696
1,352,171	1,270,826	1,297,187	1,029,527	1,029,175	1,013,848	1,001,874	943,585
1,511,763	1,433,806	1,442,592	1,180,421	1,168,357	1,139,882	1,109,306	1,059,894
1,856,282	1,774,129	1,758,208	1,483,398	1,455,091	1,408,595	1,352,803	1,314,327
2,143,526	2,060,472	2,008,463	1,745,723	1,696,752	1,630,700	1,546,521	1,528,947
2,269,339	2,196,972	2,107,935	1,887,633	1,816,605	1,730,554	1,617,816	1,624,310
2,767,295	2,693,661	2,541,315	2,343,777	2,234,309	2,112,502	1,949,525	1,991,009
3,123,474	3,037,680	2,865,031	2,661,557	2,538,761	2,410,588	2,253,886	2,262,949
3,412,408	3,317,823	3,129,225	2,928,081	2,793,795	2,662,487	2,520,514	2,486,057
4,179,590	4,058,564	3,824,929	3,602,926	3,437,000	3,285,966	3,147,988	3,048,479
4,760,537	4,619,303	4,352,979	4,130,977	3,943,644	3,786,554	3,675,434	3,499,259
6,043,390	5,855,990	5,512,511	5,264,013	5,021,731	4,834,450	4,745,791	4,433,025
6,913,056	6,734,805	6,362,205	6,057,601	5,823,882	5,594,579	5,460,638	5,092,940
7,955,462	7,801,679	7,405,160	7,039,132	6,830,372	6,558,508	6,377,164	5,951,420
10,645,328	10,497,854	10,001,400	9,481,584	9,275,791	8,892,617	8,601,447	8,017,580
13,638,716	13,520,689	12,931,444	12,235,790	12,086,067	11,595,562	11,178,908	10,423,306
16,258,215	16,193,725	15,541,067	14,670,270	14,624,059	14,033,303	13,481,915	12,577,583
16,594,824	16,435,983	15,589,552	14,454,654	14,599,743	14,175,751	13,716,829	12,859,653
18,899,424	18,619,737	17,457,411	15,898,616	16,267,734	15,977,187	15,559,536	14,640,298
20,752,088	20,321,612	18,823,706	16,832,790	17,446,469	17,333,649	16,990,174	16,044,837
22,330,140	21,737,476	19,885,426	17,444,685	18,287,197	18,340,104	18,056,400	17,081,102
23,682,303	22,913,469	20,704,117	17,826,852	18,917,956	19,176,795	18,991,970	18,026,998
27,390,287	24,265,627	22,699,803	20,881,378	21,674,884	21,917,653	21,542,760	20,189,006
28,379,734	22,901,804	22,105,156	21,690,814	22,030,724	22,276,709	21,775,183	20,181,138
30,244,055	22,315,372	22,278,741	23,346,341	23,197,252	23,416,248	22,730,086	20,808,106
32,369,080	21,863,795	22,603,724	25,323,834	24,640,472	24,852,883	23,973,233	21,686,587
35,841,545	22,161,581	23,726,348	28,421,542	27,088,078	27,312,334	26,191,273	23,421,207
35,662,641	24,473,917	26,129,941	30,640,962	29,333,010	29,114,738	25,550,951	23,644,067
36,040,699	27,482,891	29,280,740	33,613,849	32,301,991	31,518,025	25,282,828	24,186,174
35,633,041	30,196,910	32,120,647	36,130,874	34,898,947	33,533,045	24,620,209	24,369,052
35,979,458	33,872,938	35,953,463	39,596,738	38,403,380	36,289,627	24,357,838	24,919,999
36,789,826	38,449,156	40,709,498	43,903,698	42,784,395	39,812,432	24,459,230	25,894,202
37,121,771	38,744,333	40,700,752	43,101,845	42,619,451	40,516,272	27,637,736	29,206,013
37,106,530	38,594,236	40,149,750	41,684,532	41,771,585	40,536,408	30,675,962	32,328,191
37,099,409	38,506,880	39,714,182	40,455,023	41,099,945	40,711,950	34,191,559	35,966,570
36,161,697	37,444,806	38,284,530	38,273,091	39,445,526	39,927,644	37,246,730	39,130,710
34,767,156	35,900,578	36,364,785	35,645,319	37,222,708	38,438,740	39,771,112	41,677,365

46	47	48	49	50	51	52	53
295,565	264,838	228,029	214,945	183,338	167,241	152,272	133,007
312,561	290,226	256,726	238,717	206,178	183,893	170,792	148,504
330,323	317,844	288,842	264,934	231,702	202,065	191,440	165,708
350,342	349,332	326,124	295,067	261,302	222,816	215,349	185,576
392,189	383,726	358,731	317,308	288,283	248,324	241,056	210,715
437,681	420,193	393,348	340,144	317,076	275,970	269,124	238,661
489,044	460,682	431,816	365,050	349,153	307,056	300,825	270,656
546,734	505,347	474,291	391,977	384,666	341,819	336,442	307,122
611,766	554,827	521,385	421,239	424,141	380,834	376,600	348,820
670,497	612,486	580,113	481,481	477,295	433,559	420,412	389,673
734,244	675,561	644,887	549,845	536,626	493,144	468,916	434,957
805,863	746,804	718,485	629,298	604,660	562,156	524,185	486,610
857,175	797,910	771,277	691,874	652,597	612,111	558,237	517,354
931,302	870,791	845,698	776,979	719,435	680,793	607,246	561,832
997,954	941,377	911,367	844,547	778,705	736,270	655,567	603,955
1,183,673	1,129,815	1,094,049	1,026,527	946,654	898,864	803,644	742,362
1,318,106	1,274,217	1,235,441	1,175,217	1,085,686	1,037,300	933,540	867,335
1,337,466	1,306,143	1,264,336	1,216,281	1,123,306	1,078,325	976,080	912,134
1,568,675	1,550,782	1,502,227	1,463,755	1,352,374	1,303,766	1,184,796	1,109,636
1,838,105	1,803,534	1,734,714	1,670,901	1,568,601	1,447,638	1,330,382	1,246,777
2,080,095	2,023,800	1,930,757	1,837,046	1,751,724	1,547,805	1,439,535	1,351,934
2,625,726	2,531,306	2,393,304	2,247,703	2,175,696	1,839,677	1,731,015	1,628,959
3,107,414	2,973,408	2,791,599	2,592,419	2,551,136	2,066,796	1,969,158	1,857,549
4,049,255	3,835,786	3,565,379	3,264,762	3,257,761	2,522,763	2,428,730	2,292,643
4,688,106	4,429,021	4,121,294	3,800,015	3,724,337	2,961,868	2,825,868	2,646,598
5,534,231	5,228,711	4,886,078	4,550,208	4,392,827	3,597,532	3,410,184	3,176,133
7,514,669	7,080,648	6,622,338	6,206,178	5,878,615	4,936,296	4,626,723	4,262,106
9,856,723	9,265,813	8,670,237	8,176,687	7,602,256	6,551,412	6,081,104	5,553,721
12,009,030	11,277,872	10,579,646	10,056,620	9,187,787	8,129,832	7,471,165	6,756,387
12,254,698	11,652,063	10,992,488	10,479,471	9,624,695	8,650,047	7,996,198	7,302,265
13,898,421	13,344,502	12,615,469	12,016,050	11,048,897	10,040,766	9,290,429	8,519,847
15,173,308	14,710,175	13,933,579	13,258,108	12,204,080	11,213,447	10,384,773	9,563,530
16,062,507	15,697,979	14,876,640	14,123,506	13,001,478	12,069,718	11,183,575	10,343,235
16,888,298	16,673,545	15,847,083	15,042,947	13,873,870	13,031,402	12,092,340	11,235,343
18,550,713	18,531,982	17,804,805	16,997,485	15,721,456	14,695,080	13,741,850	12,761,335
18,208,721	18,417,447	17,886,921	17,175,891	15,938,026	14,834,597	13,993,305	13,006,006
18,418,487	18,850,864	18,502,345	17,869,956	16,638,569	15,427,722	14,690,559	13,681,308
18,834,915	19,502,586	19,334,824	18,765,681	17,509,299	16,144,098	15,480,414	14,398,896
19,964,441	20,918,305	20,949,638	20,440,597	19,125,544	17,554,527	16,977,217	15,805,314
21,539,623	22,108,305	22,130,808	21,453,181	19,843,507	17,896,283	17,552,396	16,529,053
23,529,590	23,645,911	23,653,520	22,774,264	20,817,054	18,438,762	18,329,381	17,446,747
25,326,100	24,912,954	24,880,192	23,767,177	21,440,685	18,623,306	18,729,677	17,981,050
27,643,802	26,601,050	26,512,409	25,119,055	22,357,884	19,039,893	19,370,515	18,755,685
30,691,101	28,916,294	28,783,007	27,068,551	23,792,026	19,883,278	20,484,117	20,027,120
33,894,687	32,040,130	31,367,362	26,992,053	24,501,946	21,865,076	22,002,938	21,453,033
36,699,508	34,768,452	33,437,998	26,298,865	24,628,732	23,445,824	23,025,943	22,371,955
39,997,766	38,059,280	36,064,356	26,003,586	25,201,961	25,676,341	24,692,786	23,992,582
42,640,798	40,747,422	38,022,333	25,122,527	25,190,340	27,463,533	25,865,298	25,141,795
44,456,091	42,630,716	39,154,476	23,692,508	24,559,001	28,623,541	26,367,023	25,598,891

54	55	56	57	58	59	60	61
114,704	103,591	81,298	74,852	62,743	47,895	35,657	23,816
129,999	116,282	93,360	82,791	70,186	53,081	74,804	29,178
147,257	130,467	107,164	91,530	78,464	58,782	87,617	35,707
167,420	146,928	123,473	101,570	88,029	65,315	102,554	43,832
189,841	166,378	139,380	117,380	100,811	76,628	120,618	50,494
214,749	187,970	156,981	135,332	115,124	89,602	140,573	57,963
243,243	212,652	177,046	156,235	131,617	104,873	164,742	66,583
275,693	240,738	199,812	180,481	150,539	122,779	192,402	76,484
312,774	272,804	225,730	208,685	172,308	143,823	224,801	87,882
341,512	305,438	256,048	238,775	200,951	168,600	264,666	103,300
372,603	341,722	290,220	272,981	234,118	197,413	311,693	121,248
407,467	383,211	329,719	312,792	273,323	231,587	365,740	142,545
422,204	405,714	352,074	334,953	296,003	250,189	380,471	152,162
446,854	438,747	384,004	366,374	327,437	276,079	421,084	165,909
486,825	464,528	402,821	369,386	321,633	257,317	360,408	151,679
611,547	572,942	498,595	446,698	387,232	300,252	406,458	180,865
732,953	677,361	595,063	524,912	457,815	347,587	453,596	218,207
790,749	720,874	639,314	555,245	487,179	362,142	484,663	236,898
982,578	878,899	781,581	662,511	577,959	415,841	524,222	277,278
1,116,989	992,026	887,938	755,219	661,261	487,102	586,055	320,262
1,227,647	1,084,974	980,232	839,624	741,534	561,943	625,443	367,710
1,499,098	1,318,188	1,201,839	1,036,446	922,934	719,253	757,434	468,070
1,733,292	1,517,318	1,397,090	1,214,164	1,091,482	875,800	861,503	568,157
2,164,562	1,881,544	1,743,962	1,521,015	1,372,698	1,127,930	1,055,476	721,830
2,470,045	2,187,578	1,934,534	1,702,774	1,526,370	1,267,444	1,187,977	813,043
2,938,426	2,660,620	2,254,570	2,013,958	1,806,536	1,526,989	1,358,753	995,725
3,887,852	3,579,969	2,891,580	2,607,588	2,328,213	1,992,868	1,845,524	1,307,844
5,008,261	4,704,048	3,634,454	3,322,792	2,968,631	2,586,493	2,340,137	1,725,346
6,010,189	5,738,491	4,219,509	3,882,169	3,433,631	3,013,457	2,595,313	2,002,353
6,552,752	6,201,929	4,716,194	4,315,413	3,804,536	3,310,569	2,746,179	2,145,088
7,678,675	7,182,356	5,640,497	5,136,136	4,528,758	3,920,175	3,097,416	2,492,872
8,649,335	7,980,473	6,452,521	5,820,133	5,098,273	4,361,327	3,491,978	2,687,432
9,388,985	8,548,131	7,118,931	6,364,232	5,542,199	4,688,559	3,713,133	2,803,172
10,235,849	9,190,568	7,874,046	6,961,910	6,006,395	5,008,022	3,980,499	2,886,193
11,648,040	10,439,800	9,040,978	7,988,868	6,906,578	5,780,488	4,602,407	3,377,019
11,907,300	10,663,492	9,343,091	8,258,971	7,163,389	6,025,337	4,896,683	3,576,440
12,576,985	11,264,741	9,993,041	8,840,265	7,691,322	6,500,621	5,538,947	3,919,125
13,253,071	11,843,162	10,617,036	9,387,796	8,190,163	6,953,292	6,041,485	4,255,055
14,591,643	13,027,308	11,811,858	10,441,130	9,127,173	7,777,717	6,398,519	4,824,100
15,366,693	13,757,551	12,435,877	11,092,374	9,712,114	8,288,079	6,937,531	5,205,256
16,329,415	14,664,934	13,229,040	11,929,757	10,495,657	8,997,791	7,262,102	5,756,928
16,902,927	15,186,682	13,630,090	12,382,097	10,897,935	9,344,967	7,804,340	6,040,292
17,708,509	15,919,228	14,218,289	13,017,192	11,469,431	9,844,185	8,266,424	6,436,688
19,014,560	17,124,342	15,241,676	14,085,393	12,447,857	10,713,942	8,452,078	7,112,405
20,191,395	17,954,844	15,638,877	14,611,318	13,012,268	11,254,054	9,612,973	7,416,310
20,847,121	18,270,532	15,533,633	14,621,686	13,060,026	11,297,608	10,090,758	7,324,377
22,219,083	19,270,365	16,063,651	15,309,819	13,793,803	12,001,923	10,870,469	7,738,803
23,146,369	19,870,634	16,243,350	15,676,259	14,246,622	12,467,851	11,260,429	7,995,238
23,391,901	19,847,147	15,886,837	15,504,216	14,194,964	12,479,523	11,722,995	7,940,222

62	63	64	Total
17,602	11,428	5,348	23,720,395
20,960	13,449	6,119	25,658,809
24,928	15,807	6,993	27,652,883
29,737	18,633	8,013	29,951,825
34,619	21,990	9,531	32,462,276
40,167	25,874	11,310	34,961,043
46,632	30,460	13,427	37,730,475
54,131	35,853	15,937	40,700,073
62,848	42,206	18,918	43,990,217
75,521	50,321	23,124	47,469,679
90,610	59,900	28,218	51,262,382
108,880	71,406	34,484	55,427,757
117,985	76,252	37,503	57,996,221
130,592	83,173	41,662	63,307,917
117,247	73,740	36,016	69,783,394
140,032	88,658	43,018	84,155,742
170,810	109,858	53,422	96,190,822
187,482	122,487	59,694	102,411,485
219,521	144,201	69,733	122,995,392
247,355	162,309	76,461	135,961,003
278,295	183,199	84,421	146,827,045
347,014	229,097	103,239	178,080,829
413,079	273,805	120,789	202,409,700
512,087	339,127	145,764	252,923,811
578,912	383,516	168,356	289,359,749
716,397	477,881	215,616	331,395,500
946,231	632,597	292,035	431,732,791
1,261,313	849,069	402,871	553,380,715
1,464,748	983,450	475,206	658,245,175
1,592,681	1,073,277	525,931	673,135,508
1,884,491	1,278,466	637,209	748,876,408
2,055,759	1,395,644	703,403	805,025,137
2,171,198	1,475,969	752,671	848,473,627
2,256,397	1,531,180	787,668	883,467,445
2,613,745	1,761,176	895,291	984,266,192
2,743,461	1,837,528	924,049	1,003,451,273
2,979,129	1,983,153	986,404	1,037,604,688
3,204,206	2,119,265	1,042,295	1,076,777,926
3,596,187	2,361,608	1,147,706	1,154,131,673
3,885,262	2,563,032	1,254,416	1,194,192,876
4,315,203	2,867,842	1,417,525	1,249,120,858
4,528,342	3,019,899	1,501,676	1,285,315,847
4,829,416	3,233,862	1,618,757	1,350,749,234
5,350,183	3,603,489	1,818,859	1,442,220,842
5,610,156	3,772,659	1,899,729	1,517,369,082
5,547,563	3,708,902	1,855,466	1,578,041,004
5,899,892	3,941,873	1,969,105	1,656,787,193
6,135,218	4,096,321	2,043,193	1,690,798,109
6,125,856	4,082,778	2,031,199	1,697,482,410

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