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Early childhood research and Indonesia's young children

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CHAPTER 1

Early Childhood Research and Indonesia's Young Children

This chapter assesses what global evidence tells us about the importance of early childhood education and development (ECED) and documents some of the policies and programs Indonesia has implemented to promote ECED. Despite economic progress and reductions in poverty, inequalities remain for Indonesia's children and families. Poverty challenges the holistic development and school readiness of many of the country's children. Research on early childhood development suggests ways to address these inequalities and change the trajectory of poor children's development.

In the years from birth to age 6, children develop essential competencies and skills in every area of development, and one of the largest influences on child development is poverty. Poor children are significantly more likely to experience negative outcomes, starting early in life and continuing into adulthood. ECED services can improve outcomes for all children, particularly for those living in poverty. Research has demonstrated the benefits of ECED services for a child's short- and long-term health and development, as well as the social and private economic benefits from investing in ECED. This evidence has prompted an international focus on establishing and expanding ECED services, especially for the poorest children.

Since the economic crisis of 1997, Indonesia's government has made major advances in its policies and investments in ECED. Illustrating these advances and real-world challenges, this book reports on how a sample of rural children in Indonesia is developing. It describes the rationale, implementation, and effects of a community-driven government project supported by the World Bank to increase access to ECED services in poor villages and offers recommendations for future early childhood policies and practices in Indonesia and beyond.

The Indonesian Environment for Children's Development

Indonesia is the world's fourth most populous country, with more than 238 million people living in an archipelago of over 17,000 islands. Recovering from the global financial crisis, Indonesia has experienced economic growth, reduced

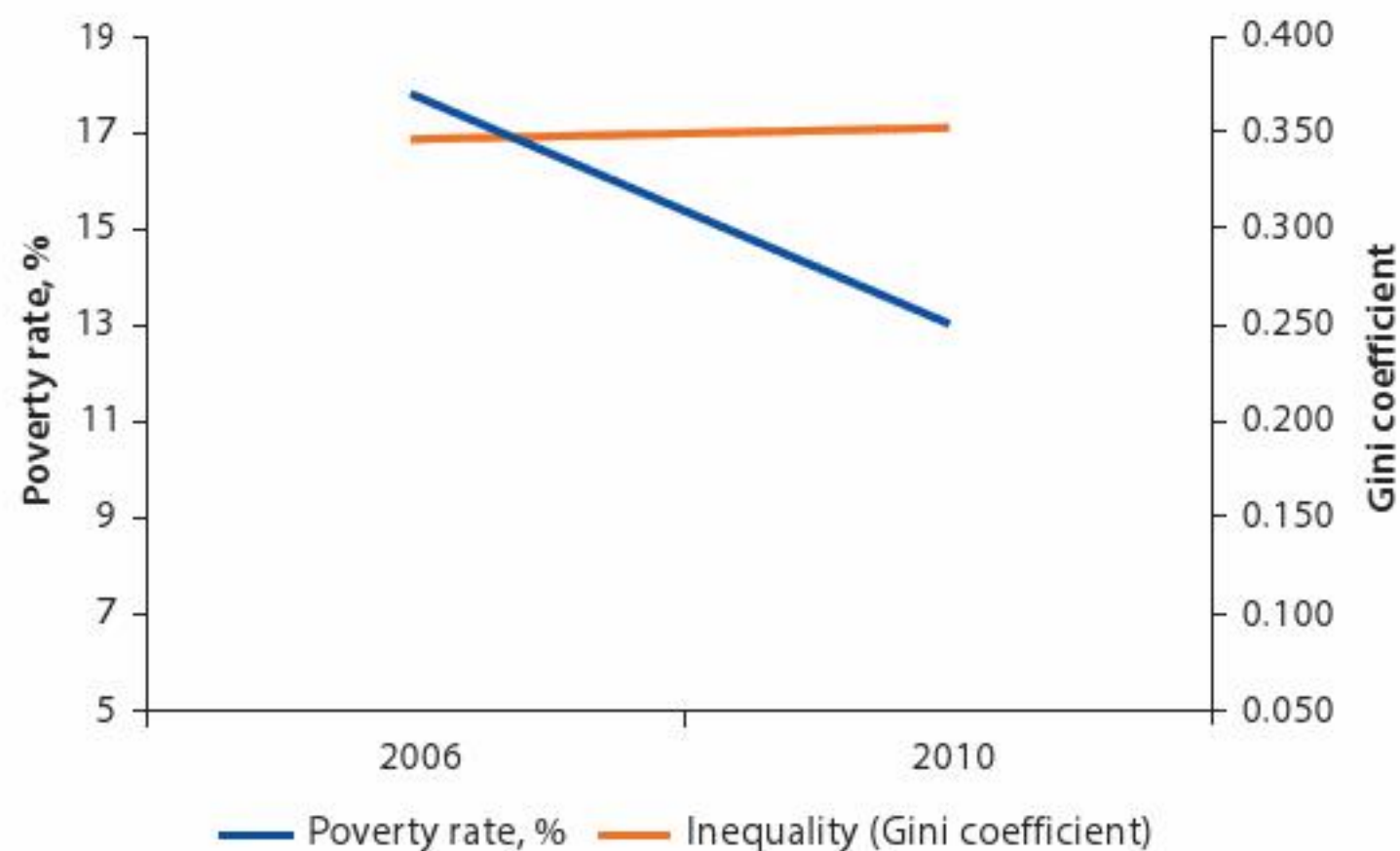
poverty, and made continued progress toward many of the Millennium Development Goals (MDGs). For example, Indonesia has already met and surpassed projected reductions in the number of underweight children under 5 years of age to below 18 percent and is on track to meeting its targets for reducing overall child mortality and the targets for achieving universal basic education.

Figure 1.1 shows that although clear progress has been made on reducing poverty rates, inequality has persisted, with the result that many children and families have not shared in these gains. More than 30 million Indonesians live below the poverty line (US\$2 per day), and half of all households are clustered around the poverty line. Of the poor, 65 percent currently live in rural areas. For these families, national economic improvements have brought only modest gains in health and education, putting children's development at risk and threatening national progress.

Unequal experiences for Indonesia's richer and poorer children and their parents begin early in their lives and are compounded as they get older. The improvement in skilled birth attendance has been impressive, but the poor continue to lag behind in the prevention of maternal deaths and infant mortality. Disparities also exist across provinces, economic quintiles, and education levels (World Bank 2008).

Maternal mortality has fallen from 340 to 220 deaths per 100,000 live births (between 2000 and 2010) in Indonesia, but it remains far above the 2010 average rate of 83 per 100,000 for all developing countries in the East Asia and Pacific (EAP) region. Likewise, between 2000 and 2010 the mortality rates for children under 5 years of age have fallen from 54 to 35, and the infant mortality from 38 to 27, per 1,000 births, but the rates remain far

Figure 1.1 Progress in Poverty Reduction Has Not Been Accompanied by Progress in Inequality Reduction



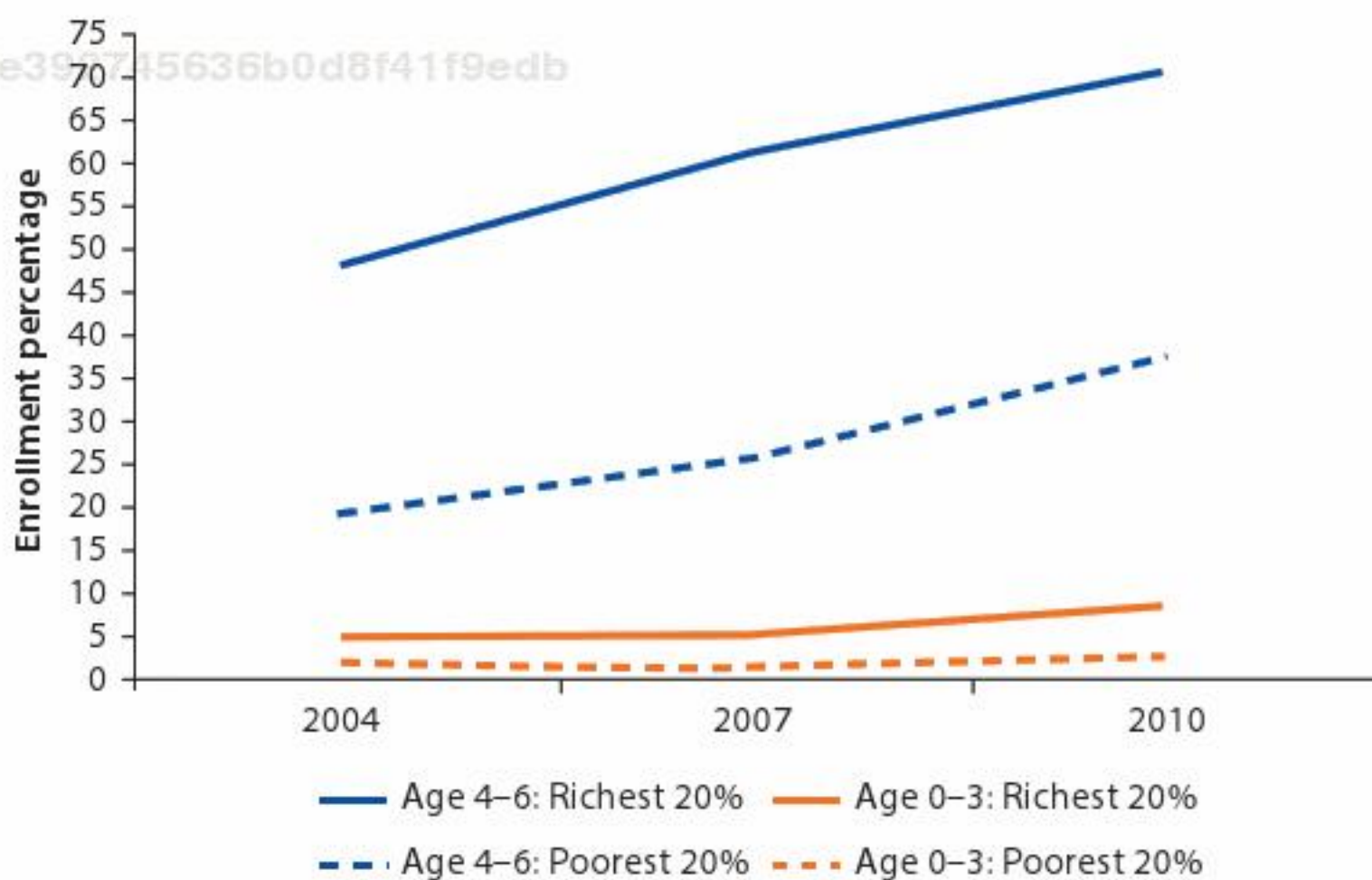
Source: Calculations using SUSENAS 2006, 2010 databases.

above the average for all developing countries in the EAP region in 2010, which stood at 24 and 20, respectively. Births attended by skilled health staff, rates of immunization, and rates of access to improved sanitation facilities also remain behind the region's developing country average. Furthermore, an estimated 42 percent of rural households have children whose growth is stunted, putting these children at risk for long-term cognitive deficits, emotional and behavioral problems, and low school achievement.

Another area of continuing disparity is education. For example, enrollment rates in early childhood programs such as playgroups and kindergartens have been rising in Indonesia, but disparities persist between the rich and the poor (figure 1.2).

A notable achievement for Indonesia is that primary school enrollment is now near 100 percent for boys and girls of all income levels. As children move through the primary years, however, the enrollment disparities seen in ECED services re-emerge. Educational attainment profiles reveal that almost all children from all segments of society start primary schooling, but children from poorer households and children from rural areas have more difficulty progressing from lower levels of education to higher levels. Only 55 percent of rural children make it to junior secondary school, and less than a quarter enroll in senior secondary. In contrast, 80 percent of urban children make it to junior secondary school, and almost two-thirds enroll in senior secondary. When these data are disaggregated further, and we explore how the richest and poorest quintiles in urban and rural areas compare to each other, the differences are even more stark (figure 1.3).

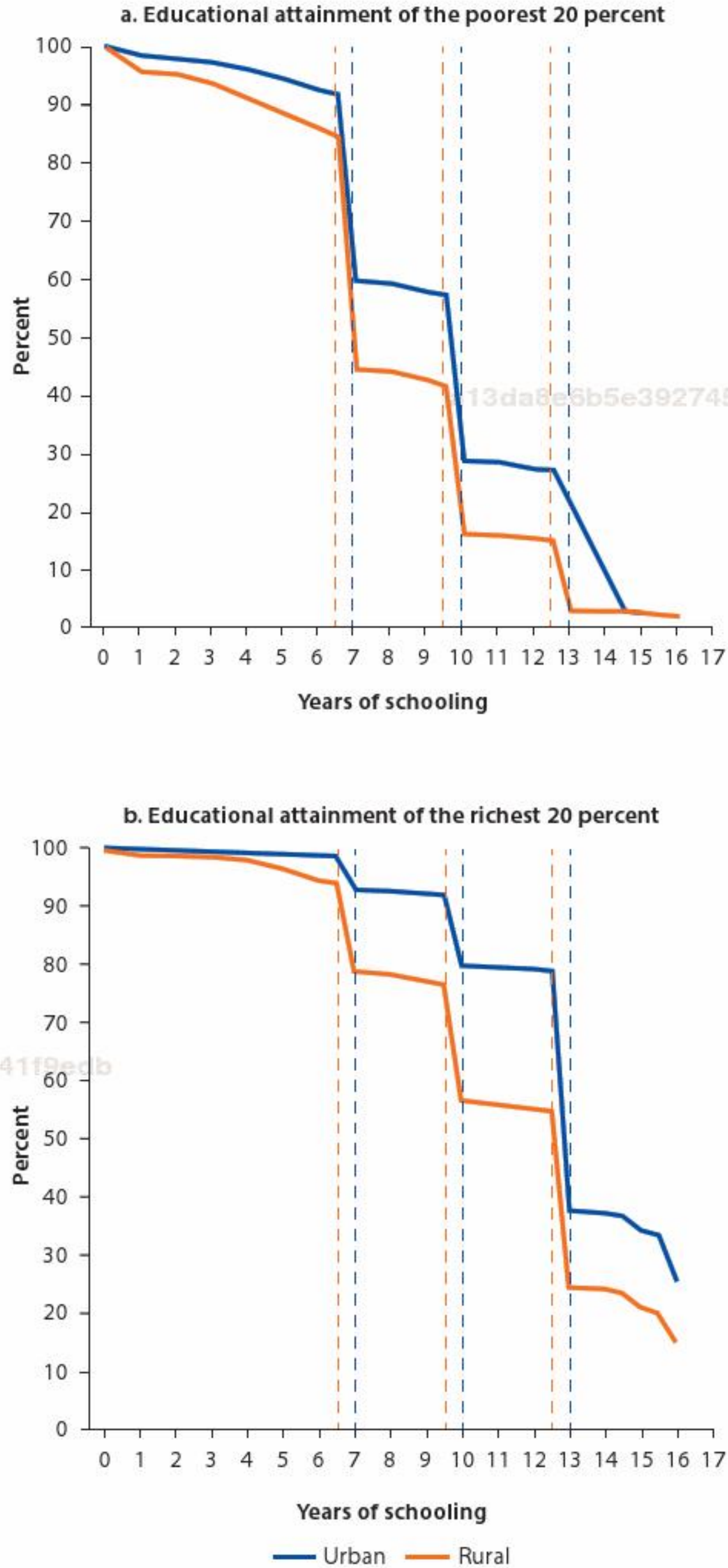
Figure 1.2 Enrollment Rates in ECED Are Rising for All Socioeconomic Groups, but Disparities Persist



Source: Calculated using BPS 2005, 2008, 2011, SUSENAS 2004, 2007, 2010 databases.

Note: ECED = early childhood education and development. Enrollment of 0-2 year-olds was assumed to be zero in 2004 as the enrollment question was only asked of 3-6 year-olds. In 2007 and 2010, the question was asked of all children 0-6 years old.

Figure 1.3 Virtually All Children Enroll in Primary School, but Children from Poorer Households and Rural Households Have Difficulties Progressing from Lower to Higher Levels

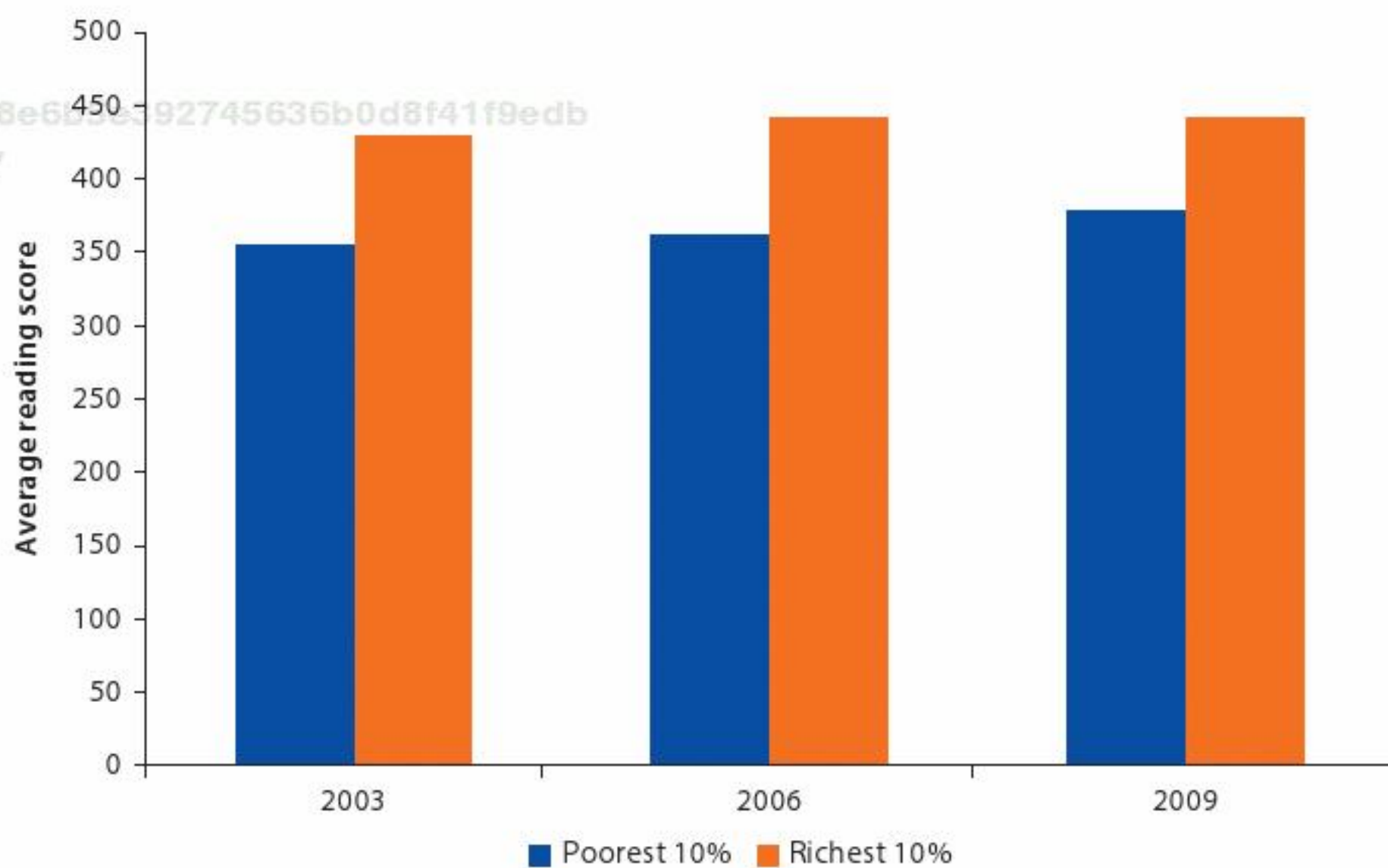


Source: Calculations using BPS 2011, SUSENAS 2010 database.

Finally, results from the 2009 Programme for International Student Assessment (PISA) find Indonesia near the bottom of 65 countries: 57th in reading, 63rd in math, and 62nd in science (OECD 2009, 2010). PISA tests 15- and 16-year-old students. Disaggregating the data for Indonesia by wealth reveals that even among the subset of children that manage to stay in school until age 15 or 16, poorer children perform worse than richer children (figure 1.4). In 2009, the Organisation for Economic Co-operation and Development (OECD) average score on reading was 493 points with a standard deviation of 93 points. Research has shown that, controlling for differences in socioeconomic background, Indonesian students who had attended preprimary school for more than a year scored an average of 30 points higher than those who had not (OECD 2011). The difference amounts to roughly half of the gap between the richest and poorest 10 percent in 2009 shown in figure 1.4, suggesting that a greater focus on the early years may help to narrow Indonesia's achievement gaps.

These data show a picture of Indonesia as a country where many children are not sharing in the benefits of progress that, on average, has greatly improved the environment for children's development. For Indonesia, as for other developing countries, research indicates that an emphasis on the early childhood years, and on early childhood services, will help reduce disparities related to poverty and other risks to positive development. We turn now to international evidence about the importance of development from birth to age 6 and the value of services that support that development.

Figure 1.4 Learning Levels Are Lower for Indonesian Children from Poorer Socioeconomic Backgrounds



Source: Calculations using OECD (PISA) 2003, 2006, 2009 data.

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Early Childhood Development: Dramatic Changes, Lifelong Impact

In Indonesia and many other countries, early childhood is considered to extend from the prenatal period through 6 years of age. During this period the central nervous system, brain cells, and neural pathways are established, laying the foundations for a child's future trajectory or pathway through life (Irwin, Siddiqi, and Hertzman 2007). Although children's later experiences can still change that pathway, development in early childhood may affect health, behavior, and learning outcomes for years to come (Grantham-McGregor et al. 2007; Irwin, Siddiqi, and Hertzman 2007; Mustard 2007). Compelling evidence from the health sector indicates that chronic life-threatening conditions such as diabetes and heart disease are influenced by adverse environmental influences beginning in the prenatal period (Barker 1990; Halfon and Hochstein 2002). If children's early learning and holistic development are promoted, then their later years are likely to be far more healthy, engaged, productive, and successful. A key message for policy makers and practitioners in Indonesia and elsewhere is "skill begets skill" and "motivation begets motivation" (Heckman 2008, p. 290).

The Components of Child Development

Young children's development is influenced by multiple factors or "circles of influence," encompassing their immediate families' circumstances, the availability of resources in their communities, and broad policies that promote or, at times, restrict their developmental opportunities. We begin with a close look at the components or key domains of children's development. In effect, these components define the outcomes that Indonesia and other countries aim for in ECED. Each is important for children's overall well-being and school readiness (box 1.1), and each depends on an intersection of positive or negative influences.

In the early years, with supportive environments children typically become more competent in the following areas.

- Physical well-being and motor development. Development of the brain and central nervous system; growth of the body; learning to stand, walk, run, using hands and fingers in skilled ways (Forget-Dubois et al. 2007; Mustard 2002; Shonkoff and Phillips 2000).

Box 1.1 What Is School Readiness?

School readiness involves more than just children. School readiness, in the broadest sense, is about children, families, early environments, schools, and communities. Children are not innately "ready" or "not ready" for school. Their skills and development are strongly influenced by their families and through their interactions with other people and environments before coming to school.

Source: Maxwell and Clifford 2004, 42.

- Language and literacy development. Speaking, listening, understanding (Hoff and Shatz 2007); beginning to connect letters, sounds, and words; beginning to write (Neuman and Dickinson 2002).
- Cognitive development. Reasoning, thinking, problem-solving (Goswami 2010).
- General knowledge. Understanding of everyday places, people, and events, including basic knowledge of math and science (NEGP 1995).
- Social and emotional development. Learning to cooperate, make friends, and be a friend (Dunn 2004; Zins et al. 2004); developing secure relationships; understanding others' feelings; understanding and expressing one's own feelings (Hyson 2004; Raver 2002).
- Executive function skills. Self-regulation: planning and carrying out plans; controlling how one moves, feels, and thinks; remembering details; handling tasks in persistent, flexible ways (Shonkoff and Phillips 2000; Zelazo, Carlson, and Kesek 2008).

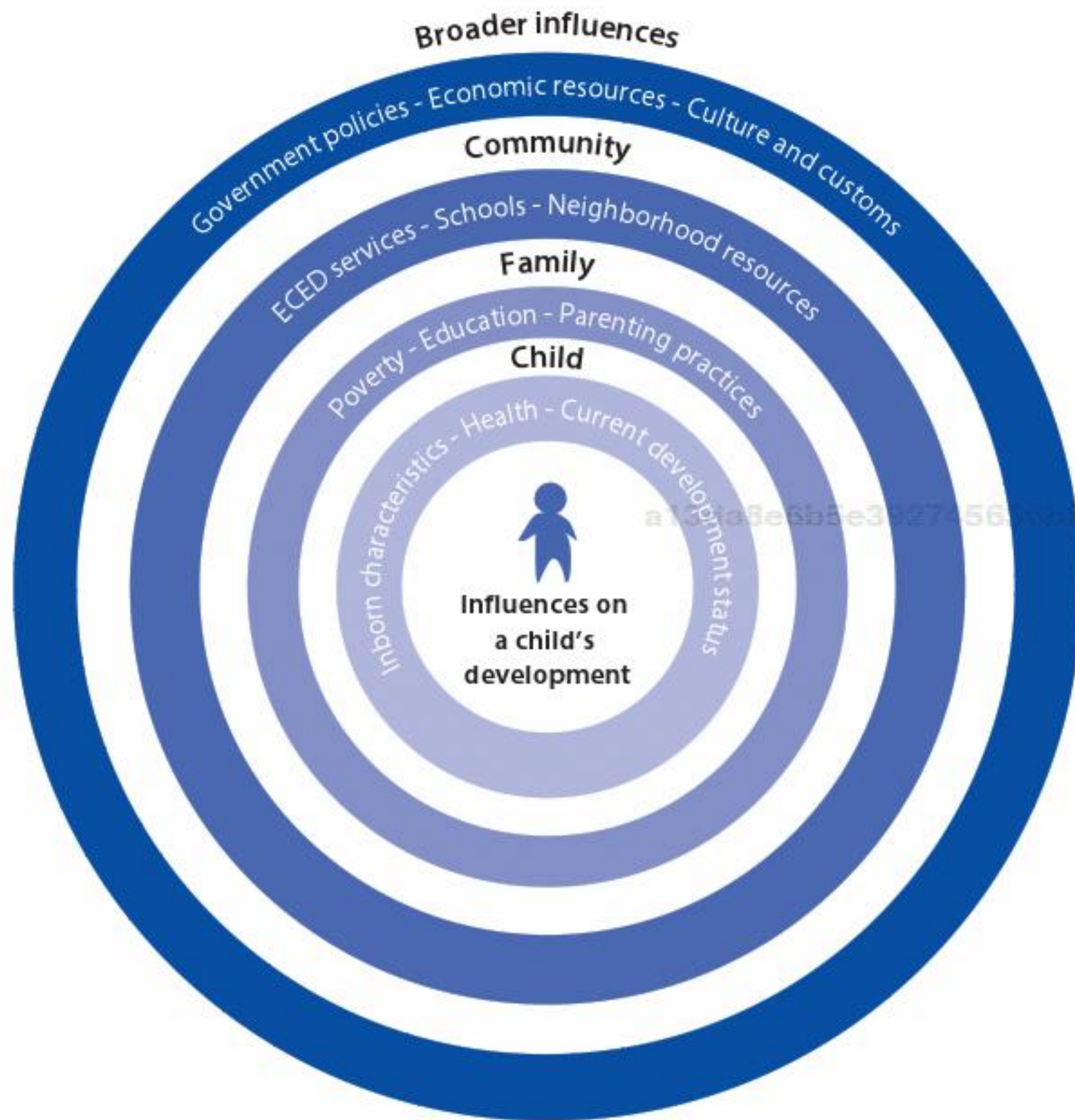
Progress in all of these components is necessary to help children develop well and be ready to make the most of the opportunities provided by formal schooling. Later in this book we describe how a sample of Indonesian children was assessed in each of these areas and how services were implemented to improve their holistic development.

A Closer Look at Influences on Child Development

Even among children of exactly the same age, we often see great differences in development, with some children far ahead of what we might expect and others far behind. Almost all children become more skilled as they get older (especially in their physical development), and children are also born with some characteristics that are influenced by their heredity. However, how children develop is strongly influenced by factors in their environments—the experiences and opportunities available to them (Shonkoff and Phillips 2000). Urie Bronfenbrenner's ecological systems theory of human development, an adapted version of which is illustrated in figure 1.5, elaborates on these “circles of influence” (Bronfenbrenner 1979). Examples include:

1. An individual child's current characteristics, innate temperament, and health problems, such as the presence of stunting or the presence of disabilities or developmental delays. These characteristics do not determine development, but can affect the impact of other influences.
2. Family influences, such as parenting practices or parents' income and education.
3. Community influences, including the presence and characteristics of services such as ECED programs or health monitoring and the social networks that may exist in a community.

Figure 1.5 Circles of Influence on a Child's Development



Source: Adapted from Bronfenbrenner 1979.
Note: ECED = early childhood education and development.

4. Broader influences from government policies, economic resources, and cultural traditions, which may create conditions that support or hinder children's development.

Subsequent chapters describe how Indonesia has attempted to increase the potential of these influences to change the trajectory of development for poor children.

Family and Community Influences: Environments and Experiences That Support Early Development

Research has identified a relatively small number of developmental essentials—environments and experiences that should be part of each child's daily life within their family and community. Each of these essentials can have a powerful influence on children's health, development, and learning, yet each can be difficult to find in the environments of children who live in poor communities.

An Environment That Provides the Foundation for Good Health and Nutrition

From the prenatal period onward, children who are healthy and well-nourished develop better in all respects (Grantham-McGregor et al. 2007). Good prenatal care, breastfeeding, community monitoring of children's health and nutrition status, and other healthy practices prevent malnutrition and stunting—serious conditions that can affect brain development in ways that have long-term consequences for learning and behavior.

Warm, Responsive Relationships with Caring Adults

In every culture, babies and young children usually develop close affectionate relationships with parents or other caregivers. The security gained from such relationships at home and in their communities encourages children to explore their environment and develop into confident learners. Yet some children do not have the benefit of those relationships either because of harsh, neglectful, or abusive parenting or a lack of community support for parents who live in highly stressful conditions. The cumulative effects of these factors can create for young children what Jack Shonkoff and colleagues call “toxic stress,” which can have lasting detrimental effects on brain development and physical and mental health (Shonkoff and Garner 2012).

Opportunities to Have Stimulating, Interesting, Challenging Experiences, to Learn about the World through Play and Exploration

Play, especially make-believe play supported and guided by adults, is young children's way of making sense of their experiences. It is important that children are able to use all of their senses in the early years (UNESCO 2007), looking, touching, and hearing the wonders of the world around them. Children do not need expensive toys, but language, cognitive, and social development are harmed if young children are not able to explore and play (Bodrova and Leong 2010; Singer, Golinkoff, and Hirsh-Pasek 2006).

An Environment with Many Opportunities to Hear and Use Language and to Explore Books, Stories, and Other Literacy Materials

An environment rich in language sets the foundation for later development (UNESCO 2007). Even if families do not know how to read and write, it is possible for them to give children an environment rich in the foundations of language and literacy. Talking, singing, and telling stories with children are activities that support their vocabulary development and encourage more complex language use (Hart and Risley 1995). Young children who look at books together with their families, teachers, or other adults are more likely to be ready to read when they enter school than children who miss out on such experiences (Neuman and Dickinson 2002).

Opportunities to Practice Self-Regulation and Build Executive Function Skills

From infancy onward, children's family and community environments must offer opportunities for children to gradually gain physical, emotional, and cognitive self-control and to practice the planning skills that are a core part of the brain's executive functions (box 1.2). All children can develop executive function skills, but children who have not had the opportunity to gain these competencies are at risk for many later academic, social, and emotional difficulties (Bronson 2000; Zelazo et al. 2003).

Broader Influences: Poverty and Child Development

To develop well, children need to be provided with developmental essentials at home and within their communities. For many children, however, poverty stands in the way of positive development (Alderman 2011; UNICEF 2012; Yoshikawa, Aber, and Beardslee 2012). More than 200 million children under age 5, most of them living in developing countries, fail to reach their developmental potential because of poverty and its associated risks, including malnutrition, iodine and iron deficiency, malaria, diarrhea, HIV/AIDS, inadequate cognitive and language stimulation, violence, and their mothers' depression (Engle et al. 2007; Engle et al. 2011; Walker et al. 2007).

Unfortunately, evidence of the harmful effects of poverty on children's development is abundant. Low-income young children's health status is often low, and they are likely to have poorer cognitive development (Naudeau et al. 2011). As they get older, poor children in every country are the most at risk of not being ready to begin school and not being successful in school, and as a result are at risk of long-term negative outcomes such as dropping out of school and unemployment.

Box 1.2 What Are Executive Function Skills?

Executive function skills are a group of cognitive abilities that help people control and regulate other aspects of their behavior. Executive function skills help children as well as adults to do the following:

- Plan
- Keep track of things
- Organize themselves
- Wait to speak or act
- Manage their emotions and behavior
- Pay attention

As children get older, their brains gradually develop these executive functions, but early experiences also help children gain these skills. Without them, children's later cognitive and socio-emotional development may be hampered.

Across each circle of influence, poverty impacts children's development. Even before children are born, inadequate nutrition can create the likelihood of stunting, with long-term irreversible effects. Although poor families have many strengths and, often, remarkable resilience in the face of challenges (Orthner, Jones-Sanpei, and Williamson 2004; Valladares and Moore 2009), they lack essential material resources. Low levels of education and limited community support may also restrict parents' knowledge about some important aspects of child development and parenting (Schady, Galiani, and Portela Souza 2006). In Indonesia and elsewhere, poor communities are the least likely to have ECED services that are accessible and affordable. And many countries' governments—including Indonesia's until recently—have yet to create policies and programs targeted at the poor.

The adverse results of growing up in poverty can affect more than the lives of individual poor children and their families. These outcomes also diminish a country's ability to produce better-educated, more capable citizens and thereby to improve the long-term economic outlook for all.

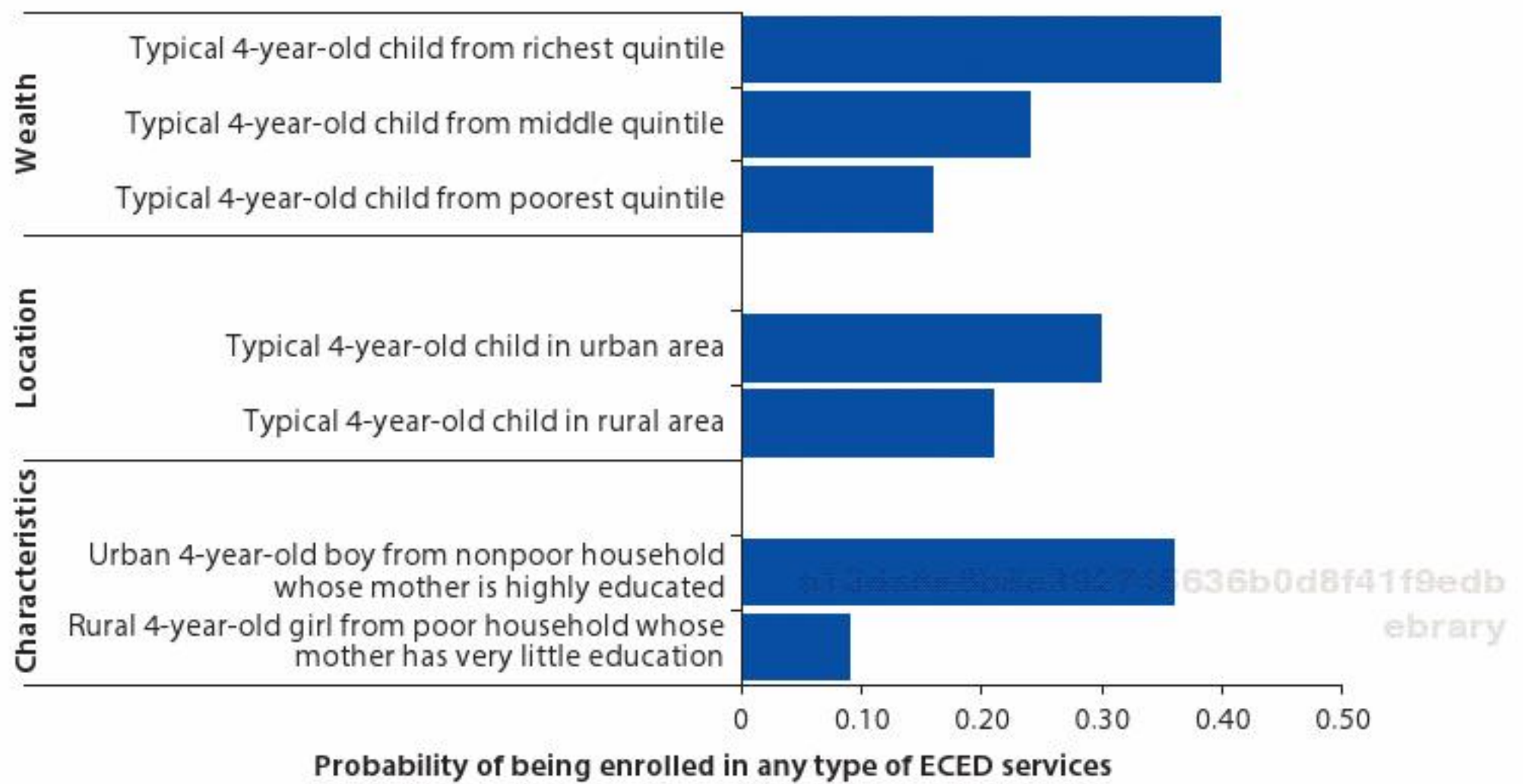
Creating More Positive Influences on Poor Children's Development through ECED Services

ECED Services—Many Types

ECED services have become an important way to change the pathway of development for young children.¹ Provided under many auspices and settings, these services can promote all aspects of young children's development and learning. Preferably, services for young children should be integrated, holistic programs that "nurture all aspects of children's development—physical, social, emotional, language, and cognitive" (Irwin, Siddiqi, and Hertzman 2007, 28). More often, however, the programs specialize, with some primarily focused on health and nutrition, while others are primarily education-focused—often because of government agencies' defined mandates, separating what might be integrated service delivery into specialized and sometimes disconnected components. Whatever their focus, ECED services may be delivered in many settings: group or center-based programs (such as preschools, kindergartens, child care centers), home-based child care programs, home visiting or parent education and support programs, and maternal-child health posts. Many other service options and delivery systems are also possible under the large ECED umbrella (UNESCO 2007).

Such services are especially valuable for young children and families who live in poverty. We have already seen that poor children's development is seriously at risk, in Indonesia as elsewhere. ECED services can create additional opportunities for those children and their families, using community support to strengthen and supplement the resources available for low-income children's positive development.

Figure 1.6 Access to ECED Services Is Difficult for Poor Children and Their Families



Source: Calculations using BPS 2011, SUSENAS 2010 database.
Note: ECED = early childhood education and development.

ECED Services—Unequal Access

In developed and developing countries around the world, the access to ECED services is not always equal. Better-off families know about and can afford to pay for kindergarten or other programs, while poor children, especially in rural communities, are the least likely to receive these services (UNESCO 2007). Figure 1.6 shows that Indonesia is no exception. If a child's family is wealthier, better-educated, and urban, the child is far more likely to have ECED experiences than if the opposite is the case. As a result of these accumulated disparities, by the time they begin school, poor children are already far behind in essential areas of development and school readiness. Yet it is these children—the most vulnerable, disadvantaged children in society—who stand to benefit the most from ECED services (Irwin, Siddiqi, and Hertzman 2007; Vargas-Barón 2005).

Positive Effects of ECED Services

Indonesia has taken seriously the research message that providing ECED services to young children and their families—especially those who live in poverty—can have positive, long-term benefits. The benefits include (1) short-term benefits to young children's health and development; (2) more positive academic, behavioral, and employment outcomes as children move into adolescence and adulthood; and (3) economic benefits to society.

Short-Term Health and Development Benefits

Research in developed and developing countries has identified many immediate benefits for the health, school readiness, and overall well-being of children who

receive ECED services. As summarized in reports from the World Bank, such as Alderman (2011); Alderman and King (2006); Naudeau et al. (2010); and Save the Children Foundation (2012), and a recent meta-analysis of data from 37 countries (Nores and Barnett 2010), the short-term benefits for children typically include:

- Reduced prevalence of stunting
- Improved nutritional status
- Improved cognitive development and other school readiness skills
- Improved socio-emotional development and reduced behavior problems

Longer-Term Outcomes as Children Grow into Adulthood

Only a few studies have been able to track longer-term outcomes, comparing poor children who participated in ECED services with those who did not. The comparisons included either those receiving no services or, more frequently, those who received whatever other services may have been available in their communities. These longitudinal studies—some following former ECED program participants up to age 40—show fairly consistent results: Children who were enrolled in these programs have better outcomes. A report by the Ounce of Prevention Fund (2012) explored and summarized many studies of the long-term effects of early intervention programs for children living in poverty in the United States. The report concluded that early childhood interventions make a huge difference. Without high-quality ECED services, as compared to better-off children, poor children were, on average:

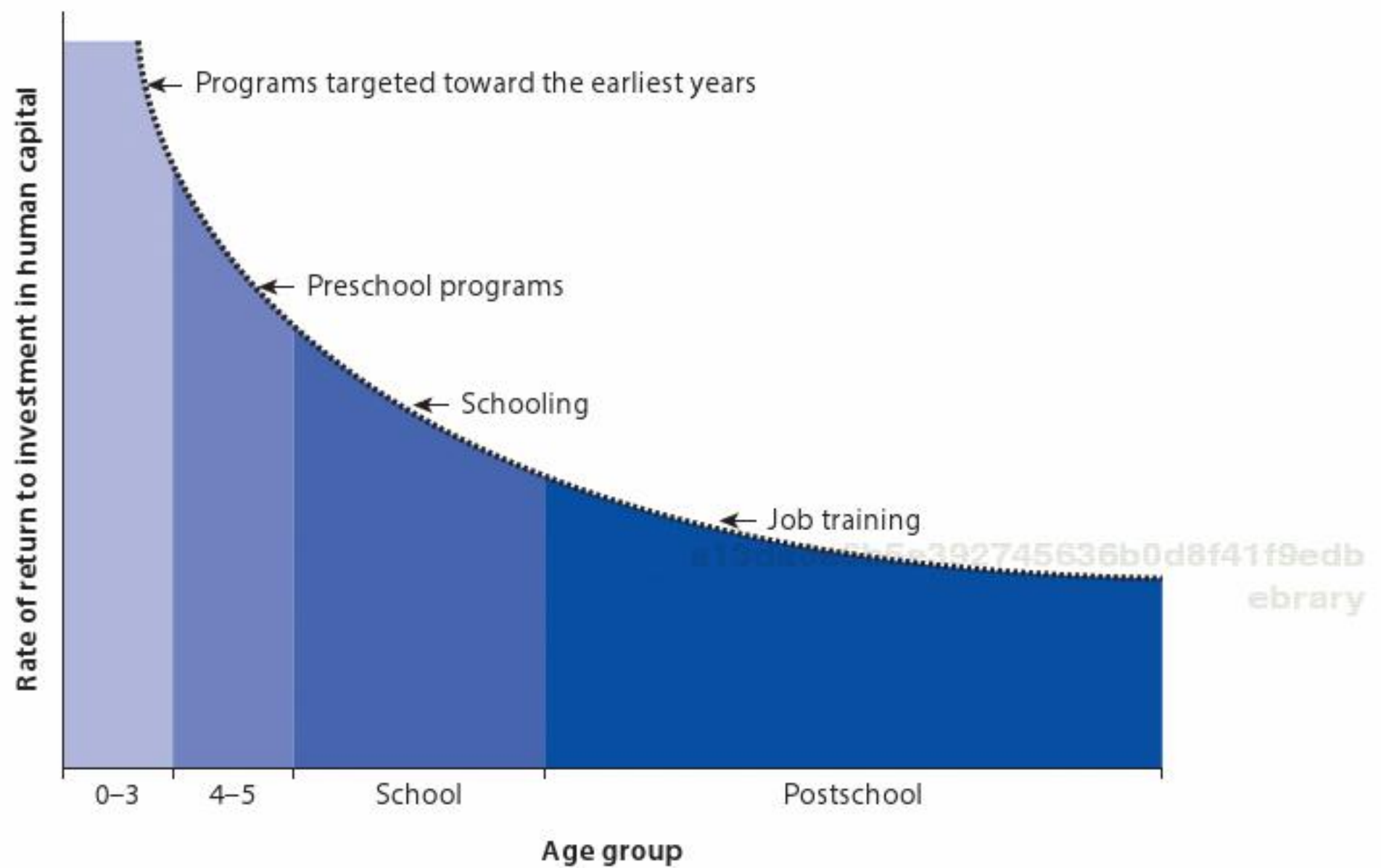
- 25 percent more likely to drop out of school
- 40 percent more likely to become a teen parent
- 50 percent more likely to be placed in special education
- 60 percent more likely to never attend college
- 70 percent more likely to be arrested for a violent crime

In reviewing international research, Naudeau et al. (2010) and GTZ (2009) have identified similar patterns of benefits as those summarized in the Ounce of Prevention Fund report, again drawing primarily on studies in developed countries. Although they are much needed, similar long-term, well-controlled studies have not yet been conducted in settings within developing countries.

Economic Benefits to Society

For policy makers, including those in Indonesia, a pressing question is whether resources should be invested in the early years or in other alternatives. Persuasive evidence exists that the greatest return on any investment in human capital comes when governments or others make investments in the early years, rather than waiting to intervene until children are older (Heckman 2006). Figure 1.7 shows economist James Heckman's depiction of probable returns

Figure 1.7 Early Investments Have the Highest Returns



Source: Heckman 2008.

to investments directed towards various age groups. This depiction reinforces the belief that returns on early investment are higher in part because during the first few years of life the brain is developing rapidly and therefore investments at this stage have higher returns. The returns on these early investments are likely to be greatest if services are targeted to the poorest, most at-risk children and if the investments begin as early as possible. Cost-benefit analyses of a number of early childhood intervention projects, such as Belfield et al. (2006) and Reynolds et al. (2001), have found similar long-term patterns: early investments prevent later, more costly expenses to society. If a child has to spend extra years in school because she has failed a grade, or if a child's future earning potential is reduced because he did not complete his education, society ultimately pays the cost.

Features of Effective Early Childhood Interventions

As countries like Indonesia plan and implement ECED services in light of this evidence, they will need to keep some caveats in mind. The reality is that not every ECED program can produce significant benefits for children, families, and society. The ECED interventions upon which most of the longitudinal data and cost-benefit analyses have been based were implemented in developed countries with extensive resources. All were of very high quality, with high levels of teachers' qualifications, intensive training and supervision, and well-designed and well-implemented curricula. Although all ECED services do not have to reach this high standard to produce good results, they must have certain key features.

Patrice Engle and colleagues' 2007 review of ECED interventions in developing countries shows that effective interventions need to succeed at several tasks. First, they should make it a priority to provide services for the youngest children, including birth to age 3, often through parent-focused interventions. (Approximately half of the countries of the world lack an official ECED program for the youngest children [UNESCO 2007; Vargas-Barón 2005], and even when such programs are available, the enrollment rate is less than 20 percent [Britto, Yoshikawa, and Boller 2011].) Second, they should target the most disadvantaged children, as research repeatedly shows the greatest impact for such children, and yet these children have the least access to services. Third, the programs should last long enough and be of high enough intensity to make a difference. Fourth, the programs should integrate a holistic range of services: education, health, nutrition, and family support.

International Efforts on ECED

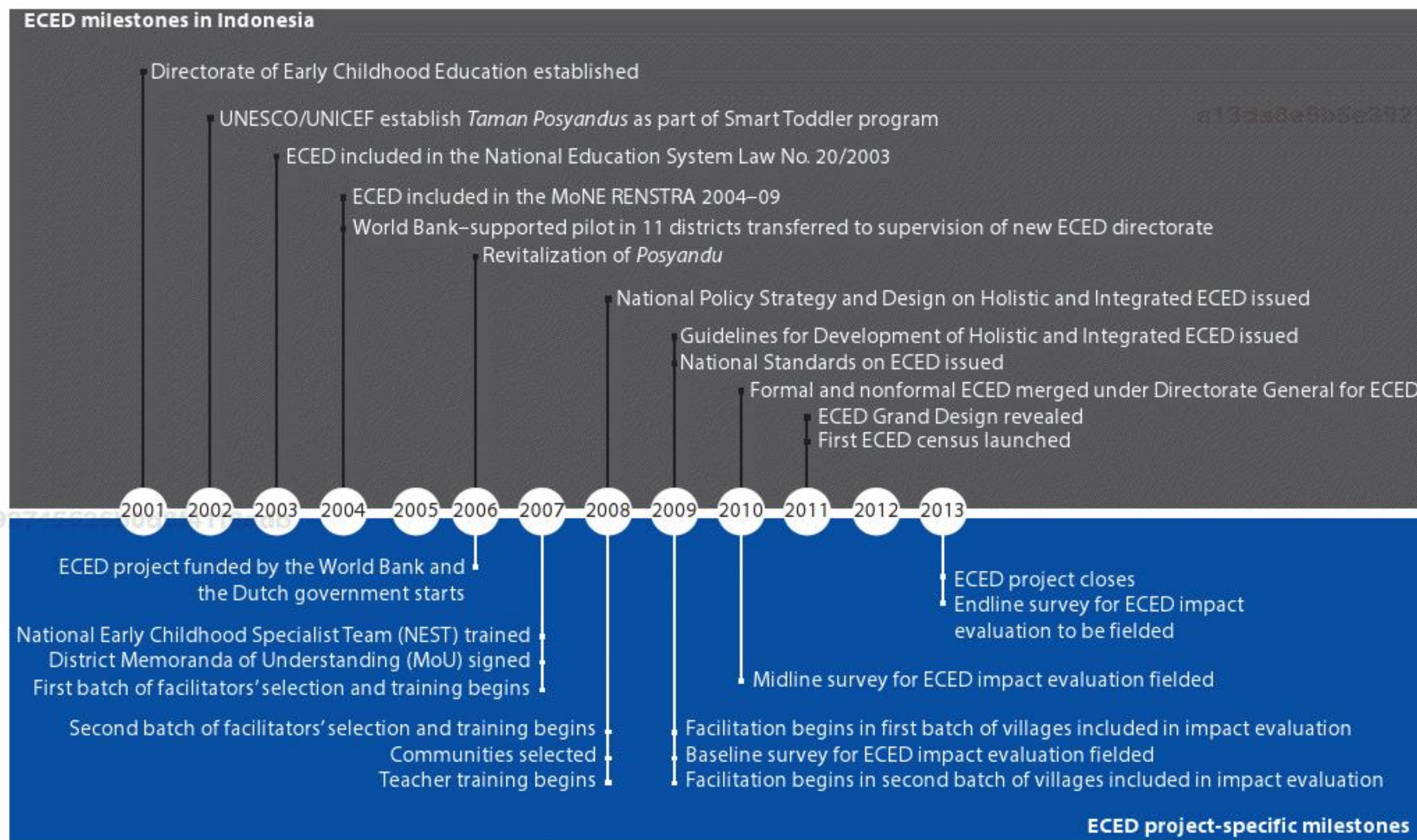
The evidence concerning the importance of the early years and the benefits of early childhood services has prompted extensive international efforts to develop ECED policies and expand access to ECED services, especially for children living in poverty. ECED is recognized as a right for every child and has been ratified as part of the United Nations (UN) Convention on the Rights of the Child by some 193 states worldwide, including developed and developing countries (United Nations 2010). The early childhood period and ECED services are also emphasized in the UN's MDGs, particularly as a tool for reducing poverty throughout the world and achieving improved child health and primary school completion (UNESCO 2007). The Dakar Framework for Action (UNESCO 2000) includes early childhood care and education as a goal of Education for All (EFA), emphasizing the need to expand and improve comprehensive services in the early years, especially for vulnerable children (UNESCO 2007).

Indonesia and ECED: Milestones of Progress

Influenced by the condition of poor children within its own country and by the pattern of international evidence about the value of ECED, for more than a decade the government of Indonesia has implemented policies and programs that prioritize the early years. The upper half of figure 1.8 highlights some of these milestones.

The first critical step was taken in 2001, when a new directorate dedicated to early childhood was established within the Ministry of Education and Culture. Its early advocacy within and beyond the government influenced policy development, put additional resources into community ECED services, and created strategies to raise Indonesian awareness about the importance of the early years. The United Nations Children's Fund (UNICEF) initiated integrated health service clinics for mothers and children (*Taman Posyandus*) as part of their Smart

Figure 1.8 ECED Milestones in Indonesia Generally and Under the Current ECED Project



Note: ECED = early childhood education and development; MoNE = Ministry of National Education; UNESCO/UNICEF = United Nations Educational, Scientific, and Cultural Organization/United Nations Children's Fund.

Toddler program (*Balita Cerdas*), one component of the government's initiatives to support early childhood.

The second critical step was taken when early childhood education was included in a succession of key policy documents: the National Education System Law No. 20 in 2003 and the Ministry of Education and Culture's Strategic Plan (*Rencana Strategis* or RENSTRA) in 2004.

In the context of these institutional and policy changes, a pilot project covering 12 districts (box 1.3), which had begun under the purview of the Directorate of Community Education, was transferred to the supervision of the newly formed Directorate of Early Childhood Education. The pilot project established new ECED services in poor villages. It previewed and provided key lessons that were subsequently incorporated into a larger-scale project initiated in 2006 and described in this book. The bottom half of figure 1.8 highlights project-specific milestones.

More recently, the need to consider ECED services holistically, across sectors and developmental domains, was recognized through the government's issuance of an ambitious policy strategy and accompanying guidelines in 2008. The development of national standards for ECED by the National Education Standards Board (BSNP) in 2009 situated early childhood education as the first level of the country's education system.

A lingering barrier to coordinated ECED service provision was removed when the "formal" and "nonformal" directorates were merged into one unit in 2010 with responsibility for all ECED activities. Finally, the initiation of the first-ever ECED census in 2011 has begun to provide researchers and policy makers with essential data and will continue to inform ECED decisions in the future.

Box 1.3 Highlights of the ECED Pilot Project, 1997–2005

What was provided?

- Six hundred newly constructed Early Childhood Education and Development (ECED) centers in 12 districts in four provinces
- Services for children ages 4–6
- Teachers with minimum 2 years of postsecondary education and ECED specialization

What were the effects?

- Evaluation followed progress of 235 children who attended the centers, compared with randomly selected children from the same communities, who did not attend (statistically accounting for selection bias: the possibility that families of those who attended were more motivated).
- Children who attended the new ECED centers for 2 years had higher school readiness scores than those who did not attend.
- Greater impact on the most disadvantaged children living in poorer districts was observed.
- Greater impact on children whose parents had less education was observed.

Source: World Bank 2006.

What This Book Provides

This book tells the story of Indonesia's efforts to change the trajectory of development for poor children. Many countries have similar aims, but several aspects of what is reported here are especially valuable and perhaps unique.

Indonesia has characteristics that make its story of special interest. Indonesia is an example of a country that has begun to emerge into middle-income status, yet with persistent poverty and stark inequalities affecting young children's development. Most studies of ECED interventions have been conducted at one of two demographic extremes: either in rich countries such as the United States or in countries with much higher levels of poverty than exist in Indonesia. Indonesia's story thus makes a new contribution with considerable relevance for similarly situated countries.

An unusually rich set of data was collected for this study. The study offers data on all aspects of health and development in a sample of young rural children, collected with internationally validated measures (often including multiple measures of the same construct), as well as household information, information about parenting practices including feeding patterns, parent questionnaires, and data on the prevalence and distribution of ECED services.

The key components of the ECED project combined direct service delivery with broad policy and systems goals. From the start, the ECED project aimed not only to support service provision, but also to support the development of national standards, build national and district capacity, and encourage the establishment of a system of ECED quality assurance—efforts that are still in process. The book focuses primarily on the services themselves and their association with child outcomes, but the project's broad scope is relatively rare and is highlighted in the last chapter.

The use of a community-driven development approach to ECED services was a key ingredient for success. The ECED project empowered village members to identify their own needs, find local teachers, and guide the implementation of services with district commitment and support. This kind of approach seems to have promise for creating sustainable services responsive to local needs.

A large sample of rural children and families was studied at two points in time, 1 year apart. The data reported here are based on a sample of more than 6,000 Indonesian children living in 310 poor villages, including two age cohorts (1-year-olds and 4-year-olds when data were first collected on their development in 2009).

The impact evaluation used a randomized design to judge the effect of the project. Few such analyses have been done with such a large sample, with multiple measures, and with more than one data point. These design features allow a high level of confidence in the reported results.

That this is not yet the project's final evaluation provides an opportunity to use the lessons learned in further research, policies, and practices. The final word has not yet been said about the children, families, and interventions that are being studied: data for the ECED project's endline evaluation will be collected

in early 2013. However, what is being learned from the project's baseline data and from this midline evaluation will help to inform the project's further implementation and the government's broader ECED initiatives.

Note

1. Services for young children and their families are referred to by many names. ECED—early childhood education and development—is the term used in Indonesia by the World Bank and government, so that acronym is used throughout this report. The equivalent term in Bahasa Indonesia is PAUD (*Pendidikan Anak Usia Dini*, Early Childhood Directorate). Other names commonly used include Early Childhood Development (ECD), Early Childhood Care and Education (ECCE), Early Childhood Care and Development (ECCD), and Early Childhood Education and Care (ECEC).

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