EXPERIMENTATION AND ECONOMIC THEORY

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

by

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EXPERIMENTATION AND ECONOMIC THEORY

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SUMMARY

The main aim of this thesis has been to examine the relationship of experimental method to economic theory and the potential of experimentation for theoretical development. In the process four experimental studies were developed and examined. The major results from these studies were:-

Experiment 1 (Chapter 5)

Time pressures on decision making lead to market inefficiencies which are related to the institutional environment in which trading takes place. The information-rich double-auction market is not necessarily superior in terms of efficient price adjustment to the information-poor private negotiation market when decision times are short.

Experiment 2 (Chapter 6)

At a progressive auction for multiple units of a homogeneous commodity the number of traders taking part determines the nature of the price adjustment process. Specifically, with aggregate demand constant the greater the number of buyers the lower the average price during the adjustment period because of the adoption of information-seeking delaying strategies. This reversal of the normally accepted relationship between market size and price is the outcome of examining disequilibrium rather than equilibrium dynamics.

Experiment 3 (Chapter 7)

Under certain, common, institutional arrangements quantity and quality may be of equal or greater importance to traders than price. A misplaced emphasis on price in modelling progressive auctions such as the Australian wool market is shown to lead to model mis-specification.

Experiment 4 (Chapter 8)

Buyers at progressive auctions,who tend not to self-discriminate when faced with homogeneous commodities, do so when faced with a commodity in which there are quality differences

and

Selling commodities in which there are quality differences simultaneously by progressive oral auction leads to greater benefits for both buyers and sellers than selling them sequentially but the difference is greatest when there is a wide variation in buyer estimates of the commodity values.

All of these studies testify to the importance of the institutional framework when examining the process of market price adjustment. This is not the view that has been traditionally adopted. In fact institutional economics has generally had a very low status ranking with economic theorists, being regarded as more descriptive than analytic. Chapter 2 considers why this has been true in the past and outlines the path that economic theory has taken so far. It emphasizes the difficulty of obtaining reliable and relevant data and the consequent construction of mathematical models that avoid, as far as possible, any recourse to empirical or institutional data whatsoever. Chapter 10 uses the experimental framework developed in Chapter 3 and the results of the experimental studies conducted to show why this situtation has now changed and why micro economic price theory cannot be developed fully in its present institutional vacuum. Furthermore, it shows, following on from the detailed study of methodology in Chapter 9, how the techniques of experimentation can lead to developments in economic theory by posing new questions and opening up new lines of enquiry and how it is uniquely able to explore some of the problems of disequilibrium dynamics. Finally it considers where experimentation now stands and where it may go in the future.

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