INDUSTRIAL ECONOMICS: ISSUES AND PERSPECTIVES

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Industrial Economics: Issues and Perspectives

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Preface

The industrial economics courses taught at the University of Lancaster have always been rather heretical. Philip Andrews and Elizabeth Brunner had an enduring belief in the strength of competition and were sceptical about the relevance of the 'structure–conduct–performance' (SCP) approach which dominated the subject. Harry Townsend, following the eclectic tradition of the London School of Economics, had a similar distaste for this paradigm, believing it to be too constraining. As long ago as 1972, he introduced transaction costs as a key element of the undergraduate industrial economics course, but even today this topic is ignored (or given scant attention) in many such courses elsewhere. Hence, as both a student and a lecturer at Lancaster, I have been made aware of alternative interpretations and approaches to the study of industrial economics which are only now beginning to receive wider recognition.

The Lancaster tradition of non-conformity is continued in this book, which differs in scope from other texts in the field of industrial economics. It covers the mainstream analysis, but challenges this approach – and the resulting policy conclusions – by introducing many of the less well-known developments in the area.

Without the help of many friends and colleagues, this book would have taken much longer to write. Andrea Pezzoli made many valuable comments while Harry Townsend gave enthusiastic support and help. Ron Bowen's lack of knowledge of economics, but careful attention to detail, removed much of the jargon. The boundless energy and enthusiasm of Professor Balasubramanyam led me to discover that I could work twice as hard as I had previously thought possible. My greatest debts are to Gerry Steele, who amazed me for his capacity meticulously to examine every draft I produced (and, furthermore, by his claim to enjoy such an onerous task) and to my wife, Glenys. As the book slowly advanced, she decided that the fastest way to rediscover leisure would be to help me. She finished up spending as long on the book as I did, and, in this sense, it is as much her effort as mine. Nevertheless, any remaining errors are my own responsibility.

This is the point where authors traditionally thank their secretary for her miraculous ability to decipher almost illegible handwriting; in this case thanks must go to my wordprocessor. Furthermore, I believe that I could

have dispensed with the technical skills of the publisher and typeset the book myself. In fact, I could have performed all the publisher's tasks equally well, given the assumption that information is perfect, and in the absence of uncertainty and transaction costs. But if that were the case, there would also have been no need for me to write this book, and I would be doing a different job.

PAUL R. FERGUSON

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1 Introduction

> The main concern of economics is thus with human beings who are impelled, for good and evil, to change and progress. Fragmentary statical hypotheses are used as temporary auxiliaries to dynamic – or rather biological – conceptions: but the central idea of economics, even when its Foundations alone are under discussion, must be that of living force and movement. A. Marshall (1920, p. xiii).

Industrial economics is at an important stage in its development. Increasing refinements to the techniques first developed in the late nineteenth century (marginal analysis) led many economists to believe that they had an analytical framework capable of providing answers to most of the problems of industrial economics. In recent years, doubts have crept in. Controversies now surround many of the central areas of investigation, and the 'traditional' approach increasingly faces re-examination and re-evaluation.

Many economists are searching for an alternative way forward: for theoretical frameworks that better explain the issues of industrial economics. Developments are taking many directions, and it may be that no one approach will provide all the answers. This book will introduce students to the debate. More recent developments will be set against a critical exposition of the traditional approach.

INDUSTRIAL ECONOMICS – A SEPARATE DISCIPLINE?

Industrial economics is best defined as the application of microeconomic theory to the analysis of firms, markets and industries. Stigler (1968) argues that industrial economics does not really exist as a separate discipline, that it is simply differentiated microeconomics. This misses the point. The distinction arises from the overriding emphasis, in industrial economics, on empirical work and on implications for policy. Although the main focus has been on the secondary (or industrial) sector of the economy, there is no reason why study of the primary (agricultural) or tertiary (service) sectors of the economy should not also be included.

The terms 'industrial economics' and 'industrial organisation' are often

used interchangeably, but it is more useful to follow Carlsson (1985) in distinguishing between them. He reasons that the main concern of industrial organisation has become the structure of industries at a particular point of time. Such investigation stems from the work of Chamberlin on monopolistic competition. It was developed by Mason and Bain into the structure–conduct–performance (SCP) paradigm, which is based on the neoclassical theory of the firm (essentially the models of perfect competition, monopoly, monopolistic competition together with the various models of oligopoly) and has dominated the field since the Second World War. By contrast, the term 'industrial economics' can be used to encompass both industrial organisation and what Carlsson terms 'industrial dynamics', which is:

> primarily concerned with the evolution of industry as a *process* in time at both the macro level, the sector or industry level, and the firm level (1985, p. 6).

Industrial dynamics has its basis both in the work of Alfred Marshall and in that of the Austrian School. It widens the area of investigation by permitting analysis of topics where *change* is central (such as innovation). Moreover, it offers a different perspective on many of the issues of industrial organisation. For instance, where industrial organisation would be concerned with the extent to which the presence of monopoly in the economy reduces society's welfare, industrial dynamics addresses itself to the reasons for the development of monopoly, and the question of how long it might persist.

Most industrial economics texts deal largely with industrial organisation. Few dwell on industrial dynamics, from which the most pertinent critique of the traditional approach (that of the Austrian School) stems. This book, therefore, introduces developments in both aspects of industrial economics.

THE WELFARE OBJECTIVE

The aim of the industrial economist is essentially the same as that of economists working in other fields. It is to describe, explain and to draw inferences about the effectiveness with which scarce resources are used; and to comment on policies which might improve the situation. This requires the establishment of criteria against which changes can be judged.

The yardstick invariably chosen is the impact of each change on the economic welfare of society as a whole. This book is no exception. Adopting the potential Pareto improvement (PPI) criterion, overall welfare is enhanced by change as long as those who benefit are (theoretically)

capable of compensating the losers while, themselves, remaining better off. In most traditional texts, the concern is with the allocation of resources in a framework in which tastes, techniques and resources are constant and known. This approach glosses over the change and uncertainty that characterise the real world of industrial economics: the future cannot be predicted with confidence; unforeseen developments may occur. In all such circumstances, the static approach to welfare is inappropriate, and, if applied, may give rise to misleading conclusions.

Applying the PPI criterion in the context of an uncertain and ever-changing environment complicates the evaluation of economic welfare. Uncertainty rules out any precise measurement of the magnitude and direction of changes in welfare. However, analysis can still give important guidelines to policy-makers. By showing the ways in which changes will affect the operation of industry, it is usually possible to deduce whether such changes will be beneficial.

AN INTRODUCTION TO DEVELOPMENTS IN INDUSTRIAL ECONOMICS

In the 1970s and 1980s, there has been increasing recognition that the traditional SCP approach fails to give adequate insights into many issues within the field of industrial economics. In seeking to establish a more appropriate theoretical basis, economists have followed several different paths. A résumé of the main developments is given here; more detailed analysis will be introduced at appropriate junctures throughout the book.

One development is the New Industrial Economics, which tries to sharpen the SCP approach by relating it more rigorously to its neoclassical antecedents. Of particular note is the accommodation of recent advances in oligopoly and game theory. Work in this area includes that of Spence, Dixit and Stiglitz in the USA, and Cowling, Clarke and Waterson in the UK. Their refinements are gaining widespread recognition and are beginning to find their way into industrial economics texts (for instance, Waterson, 1984 and Clarke, 1985).

Baumol's concept of 'contestability' has also received wide attention, but other significant developments have been relatively neglected. For instance, the contribution of the Chicago School to industrial economics has attracted much less attention. Like contestability, the contributions of such 'Chicago' economists as Stigler, Demsetz, Peltzman and Brozen can by no means be described as radical. Baumol and the Chicago School still adhere firmly to the neoclassical framework, but see the world as one in which competitive forces generally hold sway. Unlike the approach of SCP and the New Industrial Economics, which highlight monopolistic 'excesses' in various degrees, the Chicago School (and, to a lesser extent, Baumol) offer

alternative theoretical explanations for alleged symptoms of uncompetitive practices.

In quite a different area, the Public Choice Theorists introduce an extra element into the policy debate. Traditionally, economists have appealed for intervention where the level of welfare generated by the market is lower than that believed to be attainable through benevolent action by government. Analysis by Public Choice Theorists suggests that the motivations and objectives of politicians and bureaucrats are not always altruistic, so government intervention cannot be guaranteed to improve economic welfare. Prominent in this field are Tullock and the Nobel Laureate, Buchanan.

The other developments are more radical in that they substantially modify (or even reject) the traditional approach to industrial economics. For instance, whereas traditional theory concentrates on the costs of production, more recent work has sought to add greater realism by stressing the importance of transaction costs, defined by Arrow (1969, p. 48) as the 'costs of running the economic system'. Such costs contain two main elements. There are the costs involved in acquiring information, and those involved in effecting transactions. Consider the case of a house purchase. Transaction costs include those incurred in locating suitable accommodation, and in arranging a structural survey to check on its 'quality', obtaining the finance, engaging a solicitor to deal with the legal aspects and hiring a removal firm. The work of Coase (and, more recently, Williamson and Kay) shows that explicit consideration of such costs offers important new insights. Coase (1937) showed that, without explicit transaction costs, firms have no reason to exist. All the activities undertaken by firms can be explained only if transaction costs are recognised. Faced with limited information and an uncertain environment, economic agents seek the most cost-effective way of attaining their objectives. For instance, a firm must decide whether to employ its own marketing specialists or to contract out to a marketing agency. Its decision to internalise the activity or to use the market depends on the anticipated relative costs, including the transaction costs of acquiring information and arranging, contracting and monitoring the activity. Recognition of the role of transaction costs provides new perspectives on many issues of industrial economics.

The most comprehensive critique of traditional analysis comes from the work of the Austrian School, where the theoretical approach is very much at variance with that of the neoclassical mainstream. Austrians see competition as a process rather than as the static market structure of perfect competition. They thus focus on the processes by which individual economic agents seek to enhance their welfare through time in a changing and uncertain world and, like the Chicago School, they contend that markets are generally competitive. These ideas originate from Menger (1840–1921) and proponents include Mises, Schumpeter and Hayek. In the mid-1980s,

Reekie and Littlechild are foremost in applying the Austrian approach to problems of industrial economics. Such treatment can often lead to analytical conclusions and policy prescriptions which differ markedly from those of traditional analysis.

ISSUES DISCUSSED IN THE BOOK

This book considers major issues within the field of industrial economics. By presenting recent theoretical developments in industrial economics, as well as the traditional approach, the book highlights many new and unfamiliar conclusions. It is presumed that readers will already have a grounding in neoclassical microeconomics, particularly with regard to the theory of the firm.

Chapter 2 introduces 'traditional' industrial economics, the contribution of the Chicago School, contestability, developments made by the New Industrial Economics, and the work of the Austrian School – several of the main theoretical approaches which recur throughout the book. Following an exposition of the established SCP paradigm, the chapter focuses on the limitations of this technique, most of which can be traced back to its foundation in neoclassical theory. This leads to a consideration of the alternative theoretical approach of Austrian economics.

Market concentration plays a central part in the SCP approach. Chapter 3 critically appraises the most widely used of the measures of market concentration, and considers the extent to which market concentration levels are altered by incorporating the effects of international competition. The widespread reliance on these measures is questioned from the perspectives of the Chicago and Austrian Schools.

It has traditionally been accepted that advertising and monopoly reduce economic welfare. Chapters 4 and 5 reconsider this viewpoint and argue that it is crucially dependent on the theoretical approach adopted. In particular, Austrian theory can present both phenomena as welfare enhancing – advertising performing a worthwhile role by reducing transaction costs, whilst monopoly may be simply the result of beneficial product or process innovation.

Chapter 6 concentrates on the role and effects of innovation. Because of the element of uncertainty, innovation is difficult to incorporate within a neoclassical framework. In contrast, analysis of change under conditions of uncertainty is central to Austrian economics and the chapter discusses their important contributions in this area.

The book then moves to a more explicit consideration of policy. Chapter 7 considers the theoretical case for industry policy, and shows that it is critically dependent on the recognition of transaction costs. Chapter 8 considers the types of industry policy adopted in the UK, USA and

European Community (EC) in the areas of competition policy, regional development, innovation and trade. In identifying and evaluating the various stances on industry policy, these chapters draw on the theoretical work of earlier chapters. The contributions of the Public Choice Theorists are also included here.

Chapters 9 and 10 focus on issues that are particularly topical in the 1980s. Traditional arguments for state control of certain sectors of industry are re-examined in Chapter 9 in the light of mainstream and other theoretical developments. The economic rationale for the reduction of state control (privatisation) is considered in detail. Chapter 10 confronts the issue of deindustrialisation. This subject has typically been analysed at a macroeconomic level and largely ignoring developments in the service sector, but consideration of the decline in the manufacturing base from the viewpoint of industrial economics introduces additional insights. This is another area where the relevance of neoclassical analysis is questioned and where the Austrian view is more illuminating because of its ability to incorporate change.

2 The Structure–Conduct–Performance Paradigm

> Economics, like every other science, started with the investigation of 'local' relations between two or more economic quantities . . . It was but slowly that the fact began to dawn upon analysts that there is a pervading interdependence between all economic phenomena, that they all hang together somehow. J. Schumpeter (1954, p. 242).

INTRODUCTION

The structure–conduct–performance (SCP) approach – based exclusively upon neoclassical theory – has long been central to the study of industrial economics. SCP postulates causal relationships between the structure of a market, the conduct of firms in that market and their economic performance. It has frequently been used to provide the theoretical justification for industry policy. A typical area is competition policy. Here SCP has provided the rationale for measures intended to modify (or to prevent) the development of market structures likely to promote behaviour and performance detrimental to the public interest.

In recent years, the SCP approach has been subject to widespread criticism. Some suggest that the relationships between structure, conduct and performance are more complex than originally envisaged. It has been argued that the technique is too loosely derived from its theoretical underpinnings, and this has led to various developments, including attempts to link SCP more rigorously (if more narrowly) back to neoclassical theory. Others have disputed the relevance of neoclassical microeconomics to the study of industry. They consider that the SCP approach gives too limited a perspective on the operations of markets, and that it provides a poor (and even misleading) basis for policy formulation.

WHAT IS 'STRUCTURE'?

'Structure' describes the characteristics and composition of markets and