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CASE STUDIES IN ECONOMICS

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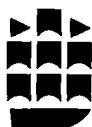
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Cedric Sandford   Malcolm Bradbury

Editors' preface

Case Studies in Economics: Principles of Economics was originally
published by Macmillan as one of a series of three, the other two
being *Economic Policy* and *Role Playing and Projects in Economics*. The
latter two are still available from Macmillan. This volume is a
completely new edition of the first-named volume. Whilst it follows
the format of the earlier edition, the summary of economic analysis
has been updated and, in most chapters, completely re-written.
Moreover, with only one exception, the case studies are completely
new; the exception is the German inflation of 1923. The editors
debated long about whether to reproduce this case and, indeed,
alternative cases on South American inflations were prepared. But
the German case is such a well-documented classic one of runaway
inflation that, in the end, the editors decided that it had to be
included. To have replaced it would have meant elevating
difference above quality.

When the Case Studies series was first published, they were
something of a pioneer work. Since then, the use of case studies in
economics has become much more common. We welcome this
development and can, perhaps, claim some small credit for it. We
still consider that, as we wrote in the original preface to the series:
'The main advantage of the case study approach is its realism, for a
case study is taken to be a detailed examination of an actual or
closely simulated economic situation, phenomenon or development
from which understanding can be gained.'

The usual statement of contents by chapters has been
supplemented by a list of cases. This was felt to be of more value
than an index for a book of this kind in which the chapters are
self-contained entities.

A book of case studies inevitably draws heavily on other authors.
Our indebtedness to them is acknowledged by way of references.

C. T. Sandford
M. S. Bradbury

ACKNOWLEDGEMENTS

Introduction

This case study book is designed as a study and workbook which can be used to complement and supplement any good textbook. The case studies which illustrate the topics in the volume, consist of detailed examinations of situations, events or developments by means of which economic principles or concepts can be learnt, or significant contemporary happenings in the economy made more meaningful. We believe that the study of economics can gain in reality and vividness by the consideration of actual economic phenomena in some detail. The approach also serves to bring together in convenient form much material not otherwise readily accessible to students; and many of the cases and exercises help to familiarise the student with statistical sources and give needed practice in handling elementary statistics.

If these are the very real merits of case studies, the users must also be aware of the limitations and pitfalls. Because many of the case studies contain a considerable degree of detail, the coverage of any one topic must necessarily be limited. Consequently, there exists a very real danger that the unwary student may generalise too hastily from the one or two examples presented to him. Reality in depth may be obtained at the expense of reality in breadth. The authors hope they have sufficiently guarded against this danger by the introductory material to the studies of each chapter, which tries to put the cases in perspective and endeavours to indicate how far they can be regarded as representative. Moreover, the volume is not a 'do-it-yourself kit'. It is assumed that the user will have the assistance of a textbook and, still more important, a teacher.

The layout of each chapter has been standardised to facilitate use. Each begins with a *summary of economic analysis* relevant to the cases. Because it is assumed that students will have a good text, the background is primarily intended as a revision exercise to bring to the student's mind what he has already met – to provide, that is to say, a comprehensible but essentially concise summary.

After the summary of economic analysis, come the *cases* themselves followed by the *exercises*.

The *exercises* have a designed pattern: they are arranged in order of difficulty, the simplest first. Also, in general, the earlier questions can be answered briefly, by means of a paragraph, a list or a simple calculation; the later ones are more complex and suitable for an extended essay or a class discussion. A distinction is drawn between the questions after each case and the *supplementary exercises* at the end of each chapter. The former are capable of being answered from the material in the case (plus a certain minimum of general economic knowledge and understanding); the supplementary questions span more than one case and/or draw on material not wholly contained within the volume.

A list of *sources and references* for more extended reading concludes each chapter, but these do not include references to standard textbooks; the teacher can best supply his own according to which text he uses. Answers to numerical questions are listed at the end of the book.

The book, so arranged, can be used in several ways. It can provide material for private study and class work in parallel with a course in the principles of economics. The background summaries and different method of approach make it useful as a form of pre-examination revision. Or it has particular value for students such as third-year sixth-formers who already have a grounding in economics and who, whilst having access to a teacher, are spending much of their time in private study, broadening and deepening their grasp of the subject.

The level of the book is roughly that of the good 'A'-level/first-year university student. Because this is not a textbook and the chapters and cases can be used individually, the editors have not felt it necessary to impose a rigorously uniform level. Whilst the majority of the cases are appropriate to the average sixth-former, there are some which all but the best sixth-formers will find difficult; similarly with the questions.

These divergencies in level of both cases and questions enable the volume to be used in courses of slightly differing levels and purposes and provide an opportunity for teachers to give to students on the same course assignments which vary according to individual student capacity. Besides 'A'-level and first-year degree courses, we hope that students preparing for the final of professional examinations and for diplomas in business studies will find the book useful. Not least, we hope that, as the series embodies a relatively

new approach to the teaching and learning of economics in this country, it may prove acceptable to teachers and students of economics in the growing number of colleges of education which are introducing economic studies.

The subjects chosen for inclusion in this volume are some of the more important topics which might be expected to figure in a course on economic theory or economic principles. The selection is to some extent governed by the suitability of the topic for case-study treatment. It is also conditioned by the need to avoid duplicating material in the companion volume, *Case Studies in Economics: Economic Policy*.

Doubtless, reviewers will not be slow to tell us how far we have fallen short of our objectives. The gap between aims and achievements, like the gap between teaching and learning, is often very wide and we are concerned to reduce both. We therefore invite and welcome comments from teachers who use the series.

C. T. Sandford
M. S. Bradbury

CONTENTS

List of cases

SUPPLY AND DEMAND

Malcolm Bradbury

Summary of economic analysis

The central problems of an economy

Mankind's material wants are met by the consumption of goods[1] which are obtained by production. If we assume that the quantity of goods which can be made is restricted by the limited quantities of resources, and that human wants are unlimited, the problem of *scarcity* emerges, i.e. goods are scarce not simply in the sense that there is only a limited quantity available, but relative to the demand for them. Also, given that all of society's wants cannot be met because of scarcity, there is a problem of *choice*, i.e. society has to choose how to allocate resources between competing uses. Three aspects of this problem are usually distinguished in elementary economics:

1. What goods are to be produced and in what quantities?
2. How is each good to be produced, given that it can usually be made by using alternative combinations of resources?
3. How are the goods to be distributed, i.e. what share of production does each person receive and what combination of goods does the share consist of?

Command, market and mixed economies

In a *command* or *centrally planned* economy, resource allocation decisions are made by a central authority, whereas in a *market economy* they are made by means of the *price mechanism*. The price of a good (the rate at which it can be exchanged for other goods) in a market economy is the outcome of bargaining between producers and consumers operating through markets (defined as any form of contact between buyers and sellers). Under specific conditions, e.g. the absence of monopoly, externality[2] and income

distribution problems, market prices reflect the forces of supply and demand and indicate the relative scarcity of goods. In response to price changes, profit-maximizing producers will tend to divert resources away from the making of goods where profit is inadequate at the going price and into the production of goods where greater profits can be made. In a perfectly competitive market economy, resource allocation is the outcome of millions of decisions made through markets by consumers and producers.

Actual economies do not correspond exactly with either of these simplified models. Instead, some resources may be allocated by a central authority and others by the price mechanism, the precise balance varying from one economy to another. Economies which have both a substantial public and a substantial market sector are termed *mixed*. The United Kingdom is a mixed economy.

Positive economics enables us to predict some of the consequences of a particular economic system, but does not enable us to say that one system is 'better' than another. This is because in the last resort such a choice involves value judgements about the kind of society we wish to live in.

The elementary theory of price determination in a market economy

Constructing an elementary theory of price determination in a market economy involves the following stages:

1. The formulation of hypotheses about the determination of the quantities of a good which will be demanded by consumers (individuals or households) and supplied by producers (firms) in a competitive market, i.e. a market in which there are so many buyers and sellers that no one of them can influence the price of the good by his own actions.
2. The determination of an equilibrium price.
3. The comparison of one equilibrium position with another so as to predict the impact on the price and quantity traded of the good, of given changes in the quantities demanded and supplied at each price. (Sometimes called comparative static equilibrium analysis or comparative statics.)
4. An examination of the responsiveness or elasticity of the quantity supplied or demanded to changes in such variables as the price of the good, prices of other goods, or income of consumers.

Demand

By demand, economists mean effective demand, i.e. a want backed by the ability to pay – not just desire. The quantity of a good demanded per time period by a consumer depends on:

1. The price of the good.
2. The price of other goods.
3. Income.
4. Taste.
5. Any other variable which, though it does not influence the demand for all goods, may influence the demand for a particular good, e.g. the demand for household coal is influenced by temperature.

To isolate the impact on demand of a change in any one of the above variables, we assume that all other relationships remain constant (the *ceteris paribus* assumption). Variations in the quantity demanded are then attributed to the variable which has not been held constant.

Our main interest is in the relationship between the price of the good and quantity demanded (not because we regard it as more important than other relationships, but because of our interest in price determination). Other things being equal, the lower the price the larger the quantity demanded. Hence if price is plotted on the vertical, and quantity per time period on the horizontal axis, the consumer's bargaining schedule, or demand curve, can be graphed as a curve sloping downwards from left to right. Whilst attempts have been made to derive this relationship from basic assumptions about human behaviour, e.g. utility, indifference and revealed preference analysis, in the last resort the downward-sloping demand curve is a fact of observation.

The market demand curve is the horizontal sum of all individual consumers' demand curves (hence it is also a function of population and income distribution). A change in any of the variables which we have assumed to be constant may cause a shift in the demand curve, i.e. consumers may move to a new bargaining schedule in which different quantities are demanded at each price.

Supply

By supply, economists mean the quantity of a good which firms

are able and willing to offer for sale at a price. Major determinants of supply include:

1. The objectives pursued by firms (assumed in elementary economics to be profit maximization).
2. The state of technology.
3. The prices of the factors of production.
4. The price of the good.
5. The price of other goods.

Our main interest is in the relationship between the price of the good and the quantity supplied per time period. In elementary economics it is usual to suggest that as price rises, more tends to be supplied, i.e. that if price per unit is plotted on the vertical and quantity per time period on the horizontal axis, both the individual producer's and the market supply curves will slope upwards from left to right.[3] A change in any of the determinants of supply (other than (4) above) may result in a shift in the supply curve.

The determination of equilibrium price in a competitive market

When at a particular price the quantity of a good demanded in a competitive market just equals the quantity supplied, the market is said to be in *equilibrium*. The equilibrium price and quantity traded are denoted by the intersection of the demand and supply curves. At equilibrium there is neither excess supply (producers unable to sell all their output at the market price) nor excess demand (consumers unable to buy the quantities they are willing to buy at the going price). Conversely, if at the market price there is excess demand or supply, the market is in *disequilibrium*.

Changes in equilibrium

Assume that a market is in equilibrium. If consumers' preferences then change, such that they demand larger quantities of the good at each price (owing perhaps to an increase in income), the demand curve will shift to the right. Other things being equal, a new equilibrium will be achieved where the new demand curve cuts the existing supply curve. By comparing the old equilibrium position with the new, it will be found that a larger quantity of the good is traded at a higher price. Conversely, if the demand

curve shifts to the left, other things being equal, a smaller quantity will be traded at a lower price.

Similarly, if the supply curve shifts to the right (owing perhaps to an improvement in technology or a fall in factor prices), other things being equal, a larger quantity will be traded at a lower price. Conversely, if the supply curve shifts to the left, a smaller quantity will be traded at a higher price.

Such analysis is called *comparative static equilibrium analysis* because one static equilibrium is compared with another, i.e. the difference between two equilibrium positions is attributed to the one variable which has been allowed to change. It can be used to predict the impact on price and quantity traded of a change in one of the determinants of demand or supply, when sufficient time has elapsed for the market to settle down. Even if equilibrium is never achieved, qualitative predictions can be made if price and quantity move in the direction of their equilibrium values. However, such analysis cannot be used to predict the path followed by the market when moving from one equilibrium to another, nor to determine whether a given equilibrium position will ever be attained. In these situations *dynamic analysis* is needed.

Elasticity

1. Price elasticity of demand measures the responsiveness of demand to a change in a good's price, on the assumption that all other things such as incomes and the price of other goods remain constant. It is defined as the percentage change in quantity demanded divided by the percentage change in price.[4] Price elasticity is of great practical importance because it enables predictions to be made of the impact on total revenue (price x quantity sold) of a change in the price of the good. If elasticity exceeds one, demand is said to be *elastic* and revenue changes in the opposite direction to the change in price. Conversely, if elasticity is less than one, demand is said to be inelastic. There are three limiting cases. Demand is *perfectly or infinitely elastic* if a change in price causes an infinite change in the quantity demanded. If total revenue is unaltered as price is changed, demand is of *unit elasticity*, i.e. elasticity is one. Demand is *perfectly inelastic* if the quantity demanded does not vary in response to a price change, i.e. elasticity is zero.

Major determinants of price elasticity of demand include the closeness of substitutes (the closer the substitutes, the more elastic is demand) and the time period considered (the longer the time period, the more elastic is the demand).

2. Income elasticity of demand measures the responsiveness of demand to a change in income, on the assumption that all other things remain constant.

For many goods, growth in income causes demand to increase and hence income elasticity will be positive. If a rise in income leads consumers to demand less of a good, income elasticity will be negative. Such goods are often called *inferior goods*.

The income elasticity of a particular good often varies as income changes. Consider, for example, the demand for air travel for leisure purposes. At very low levels of income, air travel will have a low priority in spending decisions and nothing may be spent thereon. As income rises and more urgent priorities are satisfied, spending on air travel becomes possible and is likely to increase as income rises further, i.e. income elasticity is positive. At very high income levels, a saturation point is likely to be reached where further growth of income no longer increases the demand for travel by air, i.e. income elasticity is zero. This process has important implications for resource allocation. After allowing for inflation, personal incomes were until recently rising at historically rapid rates in most developed countries. Consequently, the demand for goods with strong positive income elasticities has expanded relative to that for goods with weak positive, zero or negative income elasticities. Examples of these trends include the increased demand for many consumer durable goods and the comparatively stagnant demand for many foodstuffs and items of clothing.

3. Cross-elasticity of demand measures the responsiveness of demand to a change in the price of other goods, on the assumption that all other things remain constant. It is defined as the percentage change in the quantity demanded of good X divided by the percentage change in the price of good Y. In practice, cross-elasticity of demand is important in two situations: close substitutes, e.g. butter and margarine (elasticity positive), and close complements, e.g. bread and butter (elasticity negative). Where changes in the price of one good have no significant

impact on the demand for another good, cross-elasticity of demand will tend to zero.

4. Price elasticity of supply measures the responsiveness of supply to a change in a good's price, on the assumption that all other things such as factor prices and the choice of production technology remain constant. It is defined as the percentage change in the quantity supplied, divided by the percentage change in price. In general, the greater the substitutability of the factors of production used to produce a good, the more elastic is supply. Given the relationship between factor substitution and time (see Ch. 3), it follows that supply is likely to be more elastic the longer the time period considered.

Illustration by case studies

Case 1.1 describes the derivation from the theory of demand of a model for predicting attendances at Football League matches. The model provided a plausible explanation of falling attendances between the 1948–49 and 1979–80 seasons, but failed to predict the more rapid decline which started during the 1980–81 season.

Case 1.2 both updates Case 1.1 and puts it into context by making comparisons with other popular leisure activities where demand has declined.

The *summary of economic analysis* in this chapter has not discussed the problems which arise when quantifying demand and supply relationships, as they are mostly beyond the level of the courses for which this book is intended.[5] There are, however, two conceptual problems of which you should be aware:

Everything varies at once. As mentioned earlier, both supply and demand curves are drawn on the assumption that all other things except the variable under consideration remain constant. Such ideal circumstances rarely happen in practice. What is more likely to happen, for example, is that in a particular year, the price of tea might rise by 5 per cent, the price of coffee fall by 10 per cent and household incomes rise by 3 per cent. How, in such circumstances, can a given change in the quantity demanded be allocated between price, cross and income elasticities of demand? The answer cannot be demonstrated here because of the considerable knowledge of statistical theory required. However,