

An introduction to the

# economics of education

Mark Blaug



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The international range of authorship will, it is hoped, bring out the richness and diversity in economic analysis and thinking.

*To Rachel*

# Editorial Foreword

Professor Blaug has written a very important book. It is a textbook in as much as it brings together on a systematic basis all the many different economic considerations which bear (or should bear) upon educational policy. It will be used as a textbook both by educationists and by economists. Not only students of the economics of education but students of development economics, labour economics and agricultural economics will find in it fresh analytical insights and a discussion of numerous policy considerations which bear upon economic growth and upon the efficient allocation and use of manpower. All students of 'welfare economics' will find their understanding of both issues and methodology deepened by this work.

In calling this book a textbook, however, Professor Blaug may run the risk that only those engaged on a course of formal education will read it. This would be a great misfortune, especially for educational policy. Some educationalists have reacted strongly to the suggestion that their activities should be assessed according to economists' criteria, but most now recognize that such assessment is proper. Indeed many educationalists have rested their case for the expansion of education, or for a particular system and structure of educational provision, on the relationship between education and economic factors such as growth rates and adaptability to technological change. Professor Blaug's concern is with such relationships, and especially with the problems of economic planning. The tenets of the 'conventional wisdom' of educational policy makers are examined critically and some are shown to be unsubstantiated, insecure or plain wrong.

One of Professor Blaug's strengths is that his focus on the economic does not blind him to the importance of the history, sociology and psychology of education, nor to the extent to which personal and social value judgements must influence decisions. Whereas most of the

inputs of the educational system which can be influenced by the policy makers and administrators are capable of economic analysis, and a substantial part of the output of the educational system is also economic in character, educational policy has to be concerned with more than the balance struck between these economic inputs and outputs. While Professor Blaug helps us to consider this balance of input and output from several fresh angles, he does not overlook the wider issues.

Of particular interest is the discussion of the relationship between the structure of educational provision and the responsiveness of labour supply to changes in the pattern of demand for labour. The comparison drawn between U.S.A. and U.K. education and economies is illuminating and the discussion of these related problems has a very direct bearing upon certain major issues of educational policy currently under discussion. This is merely one illustration of the wealth of practical example that is used to illuminate the analysis which is the core of the book. With detailed discussion of the educational problems of India, Africa, U.S.A. and U.K. and much pointed criticism of policies being applied or recommended, the reader is not only given information on the economics of education but a valuable treatment of comparative educational policies.

Professor Blaug modestly distinguishes his textbook from research. To refute that view would require a brief exploration of alternative definitions of research for which this is not the place. In case any reader is misled, however, let it be stated quite clearly that this is a book of real scholarship and much originality. Throughout the treatment is lively, fresh and stimulating. It has been written to influence educational policy and it is quite certain that the ideas of its readers will be clarified, changed and enlarged.

K. J. W. ALEXANDER

# Preface

Shaw's maxim: 'He who can, does. He who cannot, teaches' was long ago altered to 'He who can, does. He who cannot, teaches. He who cannot teach, takes up research.' It seems that it must now be revised once again to 'He who can, does. He who cannot, teaches. He who cannot teach, takes up research. And he who fails at all of these, writes textbooks.' Writing this textbook on the economics of education, 'that repulsive hybrid' as Tawney once called it, has given me a certain masochistic pleasure and the most that I can hope for is that it will do as much for the reader, whoever he is.

It is only fair to say, however, that I had a particular reader in mind. This book assumes no prior knowledge of economics except that of elementary economics: anything beyond that is explained as we go along. Occasionally, statistical concepts are invoked but little is lost if these are passed over. In short, the book is addressed to undergraduates, and even sixth formers who are well advanced in A-level economics will find nothing here that they cannot grasp. Postgraduates too may find some of it useful, but only if their education in economics has been neglected – which of course it frequently has. Indeed, the surprising thing about the economics of education is the extent to which the subject invariably draws upon the most basic concepts of economics – substitution at the margin, opportunity costs, the distinction between stocks and flows, discounting, maximization subject to constraints, etc. We do not need to know a great deal of economics to apply it to education, but the little we do know we must have in our bones.

A number of articles and excerpts from books to which reference is made in the text are reproduced in inexpensive paperback form in *Economics of Education* (two volumes), edited by myself, in the Penguin Modern Economics Readings series. These sources are picked out in the text by an asterisk \*, and cross-reference to the Penguin series is made in the list of references on page 333.



I want to thank Richard Layard and Maureen Woodhall, both of whom read through the entire manuscript and gave me many valuable suggestions. I also want to express my gratitude to my wife, Ruth, who thought that she could improve this book – which turned out to be true. Finally, I wish to thank Christine Buchta for her efficient typing of the manuscript.

# Introduction

The economics of education is a branch of economics. This is worth saying because the subject is sometimes thought to be confined to such problems as the costing and financing of school places. These indeed constitute aspects of the subject. But there is more to the economics of education: it deals fundamentally with the impact of education on such phenomena as the occupational structure of the labour force, the recruitment and promotion practices of employers, the migration of labour between regions within a country and between different countries, the patterns of international trade, the size distribution of personal income, the propensity to save out of current income and, most general of all, the prospects of economic growth. Frequently, its main purpose is to describe and explain. Sometimes, however, it seeks to prescribe and recommend: educational systems are almost everywhere largely owned and operated by the State and the question naturally arises whether economists can provide something like investment criteria for education, in the same way that they pronounce on the appropriate scale and composition of the rest of the public sector. This is the area of educational planning, a field of activity where economists have been almost as thick on the ground in the last ten years as they have been in general economic planning.

Definitions of new subjects go out of date as soon as they are written. 'Economics is what economists do' and I will make no attempt here to define the economics of education as a separate field of inquiry. It is easy to see that at various points it shades off imperceptibly into labour economics, public sector economics, welfare economics, growth theory and development economics, only coming into its own whenever education in one form or the other appears as a significant variable in an argument otherwise like ordinary economic analysis. What draws it all together is the basic idea that the acquisition of education in a modern economy provides opportunities for individuals

to invest in themselves; unlike defence expenditure, public educational expenditure is to some extent the outcome of individual choices registered at times other than election times and these private decisions are profoundly influenced by expected economic returns. This opens the door both to an economic analysis of the private demand for education and the formulation of economic criteria for the collective provision of educational facilities. It is this insight that has inspired the subject from the outset and that still continues to motivate present research in the area. What one writer has called 'the human investment revolution in economic thought', a phenomenon of the late 1950s, constitutes to this day the *raison d'être* of the economics of education.

Education is, of course, only one type of investment in human beings. People can invest in themselves by spending on medical care, by migrating to more prosperous regions, by purchasing information about job opportunities and career prospects and by choosing jobs with relatively high training content. To that extent, the economics of education partakes of a much wider subject that has come to be labelled, somewhat grandiosely, 'the economics of human resources'. Inevitably, this book touches on these wider issues. Still, it was thought better in an introduction like this to restrict the range of topics to the smaller but better defined area of education. The scope of our discussion, however, does extend beyond formal education provided in schools: out-of-school education in the form of labour training, adult education and agricultural extension are too important to be left out of account entirely.

Quite apart from the investment aspects of education, however, the peculiarities of the educational system considered as an industry (is it really possible to call it an 'industry'?) would in itself justify special economic treatment. First of all, it pursues multiple objectives, none of which include maximization of profits or any proxy for profits. Secondly, it is burdened with an unusually long production cycle, which renders it necessary to build most of its facilities ahead of demand. Thirdly, it operates with a fairly rigid handicraft technology, in large part self-imposed by custom and tradition. And, fourthly, it purchases most of its inputs at administered rather than market-determined prices and feeds back an extraordinarily large part of its own output as subsequent inputs. All of these features reduce to (a) an inflexible production structure impervious, at least to some extent, to relative factor scarcities and (b) sharp discontinuities in the flow of

output. This is a combination almost guaranteed to produce a state of chronic disequilibrium in the relevant factor and product markets, as witnessed by the repeated concern in most countries with so-called 'manpower shortages' and 'manpower surpluses'. Clearly, here is a fertile field for systematic forward planning, operations research, cost-effectiveness analysis and all the other tools that have been developed in the last decade or two to improve the management of non-marketable activities. Here too are troublesome problems perfectly designed to upset the economist's apple cart: if the industry producing skilled manpower for the rest of the economy is almost certainly conducted inefficiently, what becomes of the optimizing effects of competitive pricing systems much lauded in textbooks of economics?

The economics of education is an 'infant industry' and many of the questions raised in the preceding paragraphs have even now only begun to be tackled. The precise content and even the substantive core of the subject still remain in dispute. This is to say that no two experts in the field would wholly agree on the relative significance of the various findings to date, or even on the appropriate sequence of ideas in an introductory treatment such as this. The focus of this book is on the problems of educational planning and not everyone will concur that the policy aspects constitute the be all and end all of the economics of education. Nevertheless, there is wide agreement among educational policy makers these days that educational decisions should take account of the economic value of education and the contribution of education to economic growth. The question is: take account how? This is what the book is all about.

To investigate the economic value of education is not, however, to claim priority for economic ends or to approve the vocational aims of education; rather it is to accept things as they are. For better or for worse, students and parents take a keen interest in the employment opportunities opened up by successive educational qualifications, and educational authorities the world over are persuaded that economic growth can be accelerated by encouraging education. Not that the purely educational, social and political objectives of education stand in danger of being neglected. On the contrary, the real danger is that economic arguments will only receive a hearing when they are in harmony with all the other good reasons for educating more and better. The refusal on the part of both students and teachers in current debates on 'student power' to pay the slightest attention to the sources

and patterns of finance for higher education is a sufficient reminder that economists frequently speak too softly rather than too loudly on the theme of education.

No country has ever operated an educational system merely to secure economic objectives, and I know of no economist who has ever advocated the pursuit of such a single-minded policy. But even if there was such an economist, his recommendations would have no more weight than those of any other citizen. Economists do, alas, make value judgements, but they have no right to them – to evaluate educational systems in terms of the effectiveness with which they secure vocational or other aims, yes; to express a preference for vocational aims, no. The discourses of ‘is’ and ‘ought’ are like East and West that never meet. Values or norms cannot be logically derived from facts; they may be vindicated by rational arguments but they are not susceptible to interpersonal demonstration in the way that statements of facts are. Some philosophers of science argue that all normative disputes, when reduced to their ultimate components, resolve into disputes about positive effects, and even that all empirical assertions of descriptive facts are only validated in terms of particular standards of scientific rigour, which in turn are nothing but value judgements. Be that as it may, value-free economics is possible at least in principle, although in practice economists still err by commission as much as by omission. And in saying that value-free economics is possible, I mean only that economists can distinguish their own value judgements from those of the economic agents they study or the decision makers they advise. The following pages will provide ample evidence that an argument can be appraised in the light of any declared value judgement, whether one personally agrees with it or not.

The economics of education is only part of the story of any educational issue. For the rest of it, we must draw on the psychology and sociology of education. Even the history of education is extremely relevant. It is not a question of one discipline being right and the others wrong, nor even of some being more important than others. The fundamental methodological rule of ‘live and let live’ among the different social sciences is nowhere better exemplified than in a field like education. And one cannot go far in the economics of education without in fact learning a good deal about those neighbouring disciplines that have been concerned in their own way with the multiple consequences of schooling.

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# Chapter 1

## The Formation of Human Capital

### Human Capital: Metaphor or Analogy?

In all economies of which we have knowledge, people with more education earn on average higher incomes than people with less education, at least if the people being compared are of the same age. In other words, additional education pays off in the form of higher lifetime incomes. We will verify this fact in the next chapter, but for the time being we may accept it as established. Thus, in this very simple sense, the costs incurred by individuals in acquiring more education constitute an investment in their own future earning capacity.

But surely this is not the principal reason that students stay on in school after the legal school leaving age? Were any of us aware of lifetime earnings prospects when we decided to acquire O-levels or A-levels?<sup>1</sup> Probably not. What we did was to take the advice of our parents that 'it would be a good thing', or simply imitated our friends who were no doubt being advised by their parents along similar lines. And why did our parents consider it 'a good thing'? Because everyone knows that 'you need more education nowadays to get a good job'. And translated into the language of economists: 'because education nowadays is a profitable private investment'. We do not have to assume fully conscious motivation or perfect knowledge of the distribution of earnings by age and educational qualifications. Nor do we need to ignore all other motives for staying on in school. All that is required is the idea that the higher earnings of educated people is a significant element in the demand for education.

Even if additional education did not raise lifetime earnings, education might still be an investment from the social point of view. If a growing economy requires an increasing supply of highly educated

1. Readers who are mystified by British educational terms should consult the glossary on p. 327.