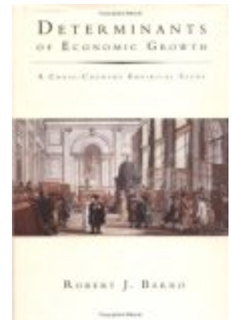
Robert J. Barro. *Determinants of Economic Growth: A Cross-Country Empirical Study.* Cambridge, Mass.: MIT Press, 1997. xii + 145 pp. $45.00, cloth, ISBN 978-0-262-02421-1.



Reviewed by John W. Dawson

Published on EH.Net (June, 1998)

Robert Barro and his associates have been leaders in assembling a vast empirical growth literature during the past decade. This book summarizes many of Barro's own findings in this area and provides a general overview of the empirical research on growth to date.

The text of the book is divided into three chapters which are based on Barro's Lionel Robbins Memorial Lectures, delivered at the London School of Economics in February 1996. The first chapter briefly reviews the history of growth theory and, in particular, describes the convergence hypothesis associated with neoclassical growth theory. The discussion quickly turns to the regression framework to be used throughout the rest of the book, which is based on the neoclassical framework.

In Chapter One, the regression framework is applied to a panel of data covering roughly a hundred countries over the years 1965-1990 in an effort to determine what factors are important in explaining long-run growth. In using panel data instead of a pure cross section, the approach differs from Barro's early work in this area (e.g., see Barro 1991), but is not unlike the analysis in his more recent studies (see Barro and Sala-i-Martin 1995). The findings highlighted in this chapter are that the growth rate of real per capita GDP is enhanced by better maintenance of the rule of law, smaller government consumption, longer life expectancy, more male secondary schooling and higher levels of schooling, lower fertility rates, and improvements in the terms of trade. The data also support the notion of conditional convergence; that is, for given values of these variables, countries with a lower initial level of real per capita GDP grow faster. The analysis also looks at democracy and inflation as potential factors determining growth rates, but their roles are the topics of Chapters Two and Three. Finally, Chapter One concludes with projections of growth rates through the end of the century based on the empirical framework developed earlier in the chapter.

Chapter Two looks at the role of political freedom in determining growth rates--that is, whether or not a more democratic form of government promotes long-run growth. The findings suggest that increases in political rights initially increase growth but tend to retard growth once a moderate level of democracy has been attained, but Barro states that "one cannot conclude from this evidence that more or less democracy is a critical element for economic growth" (p. 61). With this, the analysis turns to developing a framework for determining the level of democracy over time and across countries. While this has largely been a topic of interest to political scientists, the main finding is that levels of democracy are a function of economic factors. In particular, "the positive relation between democracy and prior measures of prosperity--the Lipset [1959] hypothesis--is well established as an empirical regularity" (p. 86). The chapter closes with long-run forecasts of the level of democracy across countries based on the empirical model developed in the chapter.

The third chapter considers the effects of inflation on long-run economic performance. Inflation has received relatively little attention as a potential determinant of long-run growth, but the issue is particularly timely given many central banks' apparent preoccupation with price stability as a policy goal. The major result is that inflation is estimated to have a negative effect on growth, but "the clear evidence for adverse effects of inflation comes from the experiences of high inflation [annual rates in excess of 20 percent]" (p. 117). Barro devotes a large part of this chapter to dealing with endogeneity issues; that is, ensuring that causation is running from inflation to growth and not in the other direction.

Barro's approach to studying the determinants of growth is very much data-driven. However, economic historians will be interested in various aspects of the analysis that look at the role of institutions in the growth process. The analysis in Chapter One includes a "rule of law" index which is intended to "gauge the attractiveness of a country's investment climate by considering the effectiveness of law enforcement, the sanctity of contracts, and the state of other influences on the security of property rights" (p. 27). The rule of law index is found to be statistically significant in explaining growth. Chapter One also introduces a democracy index into the empirical framework, but a detailed discussion of this relationship is postponed until Chapter Two. In that discussion, the role of other institutional and cultural issues such as ethnolinguistic fractionalization, colonial heritage, and religious affiliation are considered in the growth-democracy relationship.

There is no indication of the intended audience for this book, but it appears to be rather versatile. It provides a very general but useful overview of modern growth theory with particular emphasis on the convergence hypothesis, and it provides a fairly complete statement of current methodology and conclusions in the empirical growth literature. All of this could be useful to students of growth at the graduate level and to economists who are not current in the growth literature. More importantly, in my opinion, is the book's potential for use in the undergraduate classroom and among laymen. With very few exceptions, most of the terminology used in the text is accessible to undergraduates. Most of the exceptions fall in the area of econometrics, but the use of graphs throughout the book to illustrate key estimated relationships largely eliminates this potential problem. I have also found that a lecture or two on basic regression analysis makes even the large tables of regression results accessible to advanced undergraduates. The exposition keeps mathematical notational to an absolute minimum and uses everyday terminology in many cases to describe the more difficult concepts. Only in the discussion of the debate over cross-section versus panel estimation in Chapter One and the choice of instruments in Chapter Three does the text become sufficiently thick to hinder the interested undergraduate reader.

In several instances the author's emphasis of the results may need to be qualified. For example, Chapter Two states that "one cannot conclude from this evidence that more or less democracy is a critical element for economic growth" (p. 61). In the concluding observations following Chapter Three, however, the results concerning democracy are reported as a main result of the analysis: "Increases in political rights initially increase growth but tend to retard growth once a moderate level of democracy has been attained" (p. 119). In addition, the reader may well leave Chapter Two questioning the direction of causation between democracy and growth, given that empirical models of both are considered in that chapter. Similarly, the results concerning inflation may not be appropriately portrayed, in the end, as being perhaps entirely driven by experiences of inflation in excess of 20 percent annually. Despite these minor shortcomings, I am confident in saying that the book succeeds in its overall goal of providing a useful summary of the empirical evidence on the determinants of recent economic growth.

References

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Citation: John W. Dawson. Review of Barro, Robert J. *Determinants of Economic Growth: A Cross-Country Empirical Study.* EH.Net, H-Net Reviews. June, 1998.

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