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Volume Title: The Comparative Study Of Economic Growth And Structure

Volume Author/Editor: Raymond W. Goldsmith

Volume Publisher: NBER

Volume URL: <http://www.nber.org/books/unkn59-1>

Publication Date: 1959

Chapter Title: Supplementary Memoranda - Research on Comparative Economic Growth

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Chapter URL: <http://www.nber.org/chapters/c4415>

Chapter pages in book: (p. 106 - 109)

## RESEARCH ON COMPARATIVE ECONOMIC GROWTH

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It is difficult to make comparative studies of economic growth and structure without adopting a quantitative approach. Often, however, the necessary statistics are not available or are available on different bases and are therefore not strictly comparable. The adoption of a quantitative approach, moreover, necessarily introduces a bias to the analysis of economic growth, since it concentrates attention on what can be and has been measured, while other changes that may be of more fundamental importance are slurred over, and the causal interconnections that such research aims to establish may not emerge at all.

On the other hand, a qualitative approach is almost unavoidably rather impressionistic. It tends to be confined to a limited group of countries which have been studied in detail and which were selected originally for reasons that may lose their force as the study proceeds.

It would seem best to proceed from a review of the theoretical problems where we are still largely in the dark and where research would be helpful, rather than from a catalog of particular countries or institutions or statistical series. I have therefore set out below some of the areas where I should judge economists would most welcome additional material and where a comparative approach might be practicable.

### **Finance**

The problems of financial structure calling for research have been very adequately reviewed by Raymond Goldsmith.<sup>1</sup> I should be inclined to lay emphasis on:

1. The spread of interest rates and earnings yields as economic development proceeds. The fan of yields seems much wider in underdeveloped than in industrialized countries. Does it close as the capital market takes

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<sup>1</sup>E.g. "Financial Structure and Economic Growth in Advanced Countries: An Experiment in Comparative Financial Morphology" in *Capital Formation and Economic Growth*, Princeton for National Bureau of Economic Research, 1955.

shape and improves in efficiency? What happens to the structure of interest rates on debts of different maturities, to variations in rates between different parts of the same country, and to rates on loans to different sectors of the economy and to different types of borrower?

2. The role of different financial intermediaries: in particular, the commercial banks, which appear to play a less important part at the later stages of development.

3. Trends in self-financing during the change-over to corporate forms of business organization and thereafter.

### **Wages**

We know very little about the relative development of the labor market as economic development proceeds: changes in hours of work, the proportion of women in employment, the extension of working life, and the degree of mobility between industries and areas. We are always told that wage rates (and profit margins) become progressively more inflexible, but this fact does not seem to be particularly well documented. We have very little idea about the degree of concealed unemployment in different economies and at different stages over the historical record. There is also no thorough study with which I am familiar of changes in wage differentials through time, and particularly the differential between skilled and unskilled labor. The similar problem of urban wages compared with peasant incomes has been studied but not, I think, on an international scale. There is also a large gap in our knowledge about the growth of a scientific and managerial class and its interconnections with economic growth; and the growth of skill generally and of particular types of skill has not been measured on a comparative footing. (This would lead, perhaps, to a study of the influence of different educational systems.)

### **Trade**

Some studies have been made of the role of foreign trade in economic development, but I feel that there is a good deal more to be done. In which cases does an expansion in exports provide a principal agency of growth, and in which is it possible for growth to occur in advance of an expansion in foreign trade? Does a change in the terms of trade in favor of a country provide an important source of development, as one might judge from the past fifteen years? Did the movement in the terms of trade against England and Japan at their early stages of development introduce an important damping element? Or did costs fall so rapidly as to make the change in the factor terms of trade negligible, or even favorable? Does the influence of an expansion in the foreign trade of underdeveloped countries stop short at a limited sector of their economy, as some economists claim?

Can one compare the income elasticity of demand for imports in differ-

ent underdeveloped countries and the degree of damping exercised on development by balance of payments difficulties?

### **Manufactures**

Is there a recipe for the sequence that ought to be followed in the development of manufacturing industries in underdeveloped countries? Is there any truth in the suggestion sometimes put forward (e.g. by Gerschenkron) and much favored in communist countries that heavy industry should be developed first in order to ensure the growth of manufacturing capacity later without a consequent expansion in imports and pressure on the balance of payments? Or is it more realistic to look on industries supplying important consumer goods like textiles as the normal vehicle through which experience of manufacturing percolates? Can one study the relative growth of the textile industries in different countries through time and the relative share of the domestic market in textiles supplied from home sources?

The priority of textiles in economic development is presumably due not only to the width of the market but also to the low cost of assembly of materials and the small size of the technical optimum. This last point, if valid, is suggestive. Is there a change in the average size of factory as the market expands, so that countries with a limited home market start with small units and countries with a large home market have larger manufacturing units? Is it true that the technical optimum always expands through time, or are there cases where it has contracted? It is obviously important from the point of view of the underdeveloped countries to make use of manufacturing techniques that are adaptable to small-scale production. Can one point to instances where technical progress has reduced the customary scale of production in the way in which, say, the introduction of the fractional horsepower motor, based on experience with large electric motors, dispersed economic activity from factories to households? The motor vehicle may provide another example. On the other hand, just as consumer durables are coupled with large-scale production in their manufacture, as distinct from their use, so motor vehicles require a road system conceived on a large scale.

### **Technical Progress**

It seems to be almost impossible to analyze technical progress statistically and to make international comparisons. A rough judgment can be made, however, of the rate of technical progress (including progress in organization) by analyzing increments in industrial production so as to eliminate what is due to increased employment and increased capital investment. The residue can be identified with changes due to "progress" in a very broad sense. This technique begs a lot of questions but is nevertheless illuminating. It has been used by Reddaway in an unpublished study of

changes in industrial output in Britain between 1948 and 1954 and suggests that about half of the increase is due to "progress," although the proportion varies from industry to industry. Could some comparative studies be made along these lines?

### **Cumulative and Noncumulative Factors**

Some factors in economic growth operate cumulatively and others do not. I know of no satisfactory analysis distinguishing the two. While the point is of general significance, it is most readily observed on a geographical basis. There is, for example, a strong tendency toward a cumulative lack of balance within countries between established centers and other areas. Those who argue for the existence of a dollar shortage have in mind a similar cumulative process operating in favor of the country with the most advanced techniques and the highest standard of living. (On occasion, however, a particular area or country ceases to outstrip other areas and countries and falls behind; the *lag* may then become cumulative.) Can one take a number of examples where the center of gravity *within* a country has changed and study how this came about?

To put the point in international terms, why have Sweden and Switzerland succeeded in developing rapidly while Eire has not? In national terms, why has the pendulum swung so strongly away from Scotland, Wales, and the north of England and toward London and the Midlands after a century or two of the opposite trend?

The same kind of problem is presented by an analysis of the radiation of knowledge, capital, and labor from a central source in conditions that make that source increasingly attractive to those producing knowledge, financing capital, and offering their labor. Can one make any study of the factors that have improved the transmission of knowledge, capital, and labor to other centers of activity?