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Chapter Author: Raymond W. Goldsmith

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FINANCIAL STRUCTURE AND DEVELOPMENT AS A SUBJECT FOR INTERNATIONAL COMPARATIVE STUDY

RAYMOND W. GOLDSMITH

National Bureau of Economic Research

It is the purpose of this memorandum:[1] first, to argue that comparative financial morphology and dynamics are essential parts of any comparative study of economic growth and structure; secondly, to outline the conceptual framework of such a financial morphology and dynamics on an international comparative basis; and thirdly, to list a few hypotheses that could form starting points in the systematic international comparisons of financial structure and growth.[2]

The Role of Financial Morphology and Dynamics in the Comparative Study of Economic Growth and Structure

Academic studies of economic development, so numerous during the last decade, have almost uniformly ignored financial aspects or have treated them as secondary. This is rather astonishing since one would assume, until the contrary was demonstrated by factual investigation, that differences in a country's financial organization and its financial habits and attitudes influence the direction of its economic development and even affect the speed of its economic growth.

The effect of financial factors on economic growth and structure is probably seen more easily for money than for other intangible assets. The influence of money on economic growth and structure — even if

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[1] As submitted to the Princeton meeting, this paper contained a fourth section briefly indicating, for selected countries, the scope of existing and missing factual information needed for the study of comparative financial morphology and dynamics. That section is omitted here.

[2] By "finance" I shall understand all stocks and flows of intangible assets, claims as well as equities. The term "financial" seems preferable to the more commonly used adjective "monetary" which we want to reserve to designate one of the main types of intangible assets, viz. ultimate means of payment (coin, bank notes, and checking deposits).

limited to the quantity of money in circulation and the ways in which money is introduced into, withdrawn from, and used by the economy— is exercised in two basic ways.

First, the extent of the division of labor depends on the spread of the money economy,[3] and ever since Adam Smith the national and international division of labor has been the favorite tool of economists in explaining intensive[4] economic growth.

Secondly, movements of the price level and hence of different types of income depend on monetary developments, in the crudest formulation on the quantity of transactions money. Even the most hard-boiled reistic economist is not likely to deny that these matters have a substantial influence on the level and structure of real output. One may even doubt whether such an economist would assert that the influence of changes in the price level and in relative incomes is bound to be temporary, as his nineteenth century predecessor might have done.

The influence of events in the realm of intangibles on real input and output may be less evident for financial assets other than money. However, that influence is actually at least as important and pervasive as that of changes in the purely monetary sphere. If, as has often been said, the saving ratio is the most important single factor in economic growth—it is the only economic independent variable in Harrod's fundamental equation since the capital output ratio is primarily technological in nature—the influence of intangibles other than money is correspondingly great, since a large part of saving is the accumulation of financial assets. Indeed, the saving process can probably best be described as the financing of capital formation.

The level of the saving ratio, and even more definitely the distribution of saving by form, is affected by a country's financial organization at a given period. The availability of intangible assets fitting the requirements of different saver groups and the existence of financial institutions that are easily accessible and enjoy public confidence are important characteristics of financial organization and are extremely relevant for the level of the saving ratio and the distribution of saving by forms.

Since there is a relation between the level and distribution of capital formation and the amount and character of the funds available for its financing, once self-financing by small economic units is no longer the prevalent mode of securing funds, financial organization exercises its influence on economic growth also through the amount of saving (or credit creation) that is made available to prospective borrowers and the form which the supply of funds takes.

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[3] This statement is not true for a centrally directed slave economy. There apparently was a good deal of division of labor in building the pyramids.

[4] A distinction is made here between intensive economic growth, defined as an increase in real income per head, and extensive (amoebic) growth, which represents simply the multiplication of economic units without increase in real income per head and without the operation of external economies.

One of the most important influences of finance on economic development, though not easily measurable, is the position of finance, financiers, and financial considerations in the scale of values of a society. Many observers believe that attitudes—ultimately traceable to religious or philosophical influences—rather than insufficient resource endowment or similar real factors are responsible for the low economic state of most so-called underdeveloped countries. A country's financial structure and the changes occurring in it probably are as good a mirror of these attitudes as we have.

The Conceptual Framework of Comparative Financial Morphology and Dynamics

The system of national accounts, as developed during the past decade,[5] probably will be found to constitute the most appropriate basic framework for comparative studies of economic growth and structure. Whether or not this surmise proves correct, there is little doubt that, for comparative financial morphology and dynamics, national accounts provide a ready-made framework of concepts and measurement. In this field, the basic assumptions of the national accounting approach — particularly the assumptions of universal standardized accounting and the applicability of economic calculus to participants' decisions—are realistic enough to be accepted even by theoretical worriers and methodological doubters who hesitate to proceed on the basis of the same assumptions in other fields.

The two main—and related—tools of comparative financial morphology and dynamics are sectoral balance sheets for stocks and sources-and-uses-of-funds statements for each sector for flows. The details of sectoring and of classification of assets and liabilities or of sources and uses of funds will vary from country to country, and for the same country will change as that nation goes through different stages of financial development. Three points, however, are essential for effective comparative analysis:

1. Sectoring and classification must be such that the information for different countries and different periods is fully comparable, while still maintaining as much flexibility as necessary to adapt the scheme to specific situations. This calls for a detailed standard classification, the elements of which can be combined in different ways.

2. Sectoring and classification should be arranged with the ultimate aim of providing square holding and flow matrices—formally similar to those of input-output analysis—permitting full sectoral from-whom-to-whom identification of creditor-debtor relations and to some extent even of flows.

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[5]For a recent description and discussion of this system see, for instance, *The National Economic Accounts of the United States,* Hearings before the Sub-Committee on Economic Statistics of the Joint Economic Committee, 1957.

3. Valuation must be uniform among sectors and transactions and among countries and periods. This again does not mean an attempt to impose inflexible rigidity, but the development of a system of accounts where different bases of valuation, if unavoidable because of the nature of the basic data, are clearly related to each other and bridges are provided between them. This applies in particular to the reconciliation of current values, deflated values, and original cost, and the corresponding entries for realized and unrealized valuation changes.

Since the primary purpose of comparative financial morphology and dynamics is the analysis of long-term changes and of systematic differences, there is in general no need for data at annual or shorter intervals. In most cases balance sheets for approximately every fifth or tenth year and uses-and-sources-of-funds statements for decadal or semi-decadal periods will suffice. If possible, the benchmarks should be so selected that they fall on cyclical turning points (either both peaks or troughs or one of them) rather than on uniformly spaced but arbitrary calendar dates.

It is obviously too early to select with confidence at this point the economic and statistical concepts that will in the end prove most fruitful in the study of comparative financial structure and development. A few concepts that have been used in the rare studies in this field and seem to hold promise for wider application may, however, be listed. The listing does not imply any ranking by importance. Most of these concepts can be statistically implemented rather easily from sectoral and national balance sheets or from uses-and-sources-of-funds statements. Unless specifically mentioned, the concepts and the statistical measures corresponding to them are applicable to the nation as a whole, to sectors, and to smaller groups of economic units. These statistical measures obviously are not all there is to comparative financial morphology and dynamics. Besides these easily quantifiable concepts, there are many more complicated ones, often going beyond the boundaries of economics into the preserves of technology, political history, cultural anthropology, and individual and mass psychology, that must be taken into account in an adequate study of financial structure and development.

1. The financial interrelations ratio. This is probably the broadest quantifiable concept that can be used to characterize financial structure and development on a national scale. It is defined as the ratio of the aggregate value of intangible to tangible assets in a combined national balance sheet, and measures the density of the financial overlay of an economy. Movements of the financial interrelations ratio also reflect the relative rate of growth of financial assets and of tangible wealth. The financial interrelations ratio is supplemented among flows by the ratio of monetary to nonmonetary (barter and imputed) income.

2. The ratio of intangible to tangible assets in sectoral balance sheets, a parallel to the national financial interrelations ratio.

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3. The ratio of owner-operated to tenant- and manager-operated tangible assets, an important measure of the degree of separation of ownership, control, and management in the economy or sectors of it. This ratio is related to finance, in the sense of the economics of intangible assets, by the fact that tenant and manager operation create financial relations between the owner, on the one hand, and the tenant or manager, on the other (actual flows and virtual creditor-debtor relations), that do not exist in the case of owner operation and that may affect (increase) the financial interrelations ratio.

4. The gross and net debt-asset ratios. These are significant for sectors or subsectors rather than for the nation as a whole where a relationship of this character is relevant primarily in the form of the foreign (gross or net) debt to national wealth ratio. The net debt ratio, in particular, indicates the extent to which a given sector is a net debtor or creditor in relation to other sectors and can be subdivided by type or maturity of the claims involved. If holdings or issuance of equity securities are included and if valuation changes are eliminated, the ratio comes close to measuring the extent to which a sector has been supplying or absorbing outside funds. (There is, of course, a parallel flow ratio, the ratio between total funds supplied to or absorbed from outside during a given period.)

5. The share of internal and external financing, further separating internal financing in the form of earned capital consumption allowances and of retained net earnings, and classifying external financing by forms and sources.

6. The income and transaction velocity of money. These two measures need no introduction or justification. They should, of course, be calculated separately for each component of the money supply.

7. The transaction velocity of different types of assets, particularly intangible assets, and of liabilities. These velocities are very important as indicators of the near-money quality of different intangibles, as measures of investors' attitudes, and as characteristics of the markets for different types of intangibles.

8. The relation between price-sensitive assets (tangible assets and equities) and fixed face value assets. This ratio is important in evaluating the effects of price movements, particularly pronounced inflations or deflations, on the financial position of different groups. Their effect on net worth can be measured more precisely by a leverage ratio, which indicates the percentage change in net worth associated with a 1 per cent change in the price level of price-sensitive assets.

9. The share of financial intermediaries in national assets (in the aggregate and for the main groups of financial institutions) in total intangible assets and their main types, such as government securities, corporate

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securities, mortgages, receivables, etc. This seems to be one of the more promising approaches to the analysis of the role of financial institutions in an economy.

10. The degree of concentration of financial institutions—nationally, regionally, and in individual financial centers. Measurement may be based not only on total assets or similar financial criteria but also on number of offices and employees.

11. The degree of specialization among financial institutions, specifically the degree of prevalence of the department store or specialty store principle in finance.

12. Distribution of wealth, particularly holdings of intangibles, by size of wealth and income, occupation, age, and other characteristics of individual and nonindividual wealth owners.

13. Distribution of ownership in large enterprises and their relation to control.

14. Saving—in the aggregate, distributed by sectors and by forms of saving. Of particular importance is the distinction of saving for self-use (in saver's own household or business); direct saving immediately transmitted to ultimate users (e.g. sale of new corporate securities to individuals); and indirect saving through financial intermediaries.

15. The ratio of property income, in the aggregate and by types, to total income, and the distribution of property income among recipients.

16. Asset price movements and relations—relations among assets and between asset prices and the prices of current outputs and inputs.

17. Yield (interest rate) movements and differentials. They constitute, together with (16), the capstone of an analysis of financial structure and development.

18. The share of foreign countries in supplying funds and in ownership of assets; and the obverse, the size of capital exports relative to domestic saving and of foreign investment relative to domestic wealth.

Working Hypotheses on Comparative Financial Structure and Growth

To provide a starting point for the discussion, there are listed below half a dozen hypotheses on financial growth which, originally developed from American experience, have been checked against developments in a limited number of countries, but are presumed to be applicable to all countries, at least those with a free-enterprise economy. Closer study may, of course, lead to the rejection or modification of some—or all—of these hypotheses.

The six hypotheses selected are all regarded as important, but it is not claimed that there are no other hypotheses of similar significance in this field. It is, of course, one of the main tasks of comparative financial morphology and dynamics to generate such hypotheses and to test them.

1. A country's financial development goes through a number of fairly well-defined stages that have shown considerable similarity throughout the non-communist world.

2. The financial interrelations ratio increases in the course of financial development, but after a certain stage of development is reached—when the ratio is around or slightly above unity—changes become small except for radical breaks in continuity due to wars and currency reforms.

3. The share of the assets of financial institutions in total national assets shows an increasing trend which continues after the rise in the financial interrelations ratio has slowed down or ceased.

4. The share of the banking system in total intangible assets increases considerably during the earlier phases of financial development, but later decreases.

5. The ratio of currency (coin and bank notes) to national wealth first increases and then decreases or stabilizes. The ratio of bank money (checking deposits) follows a similar course, but with a lag of one to several generations.

6. In the course of financial development, indirect saving and financing (through financial institutions) increases at the expense of direct financing (sale of business and government securities to ultimate investors) and—to a lesser extent—of internal financing.

Data Problems

It is of little use to draw up grandiose schemes of concepts and to list far-reaching hypotheses unless the concepts can be quantified and the hypotheses tested. We must, therefore, review briefly the outlook for the derivation of national and sectoral balance sheets and of uses-and-sources-of-funds statements that will constitute the essential quantitative framework of comparative financial morphology and dynamics.

In considering the possibilities of implementing the conceptual skeleton given in the second section, it is not necessary to collect information for all countries and all periods. It is precisely one of the main tasks of a theory of finance to develop ideal types of financial structure and paradigmata of financial development—not, of course, in space empty of information on reality but on the basis of our preliminary knowledge of it—that make it unnecessary to accumulate information on anything and everything in the field. It will suffice if we can cover a limited number of carefully selected countries that are likely to represent the main structural

and growth types and to cover them for periods of different lengths. Since this is not primarily a study in economic history, we may moreover limit the investigation in principle to the period beginning with the industrial revolution (including the transition to it). On the other hand, global coverage not limited to the Western world or free-enterprise economies is essential for an effective comparative economic morphology and dynamics.

A rapid review of data problems is best arranged by countries and starts with the United States, partly because we are better informed about the status of the material and partly because in this field we really seem to "lead all the rest," at least as far as availability of data is concerned.

U.S.A. We now have at our disposal, published or available in the near future, national and sectoral balance sheets for selected benchmark years since 1900 and annually since 1945; flow-of-funds-statements in varying detail on an annual basis since 1935; uses-and-sources-of-funds statements for various sectors of the economy and various periods, mostly from the 1930's on; statistics of saving, in considerable sectoral and item detail, for every year since 1897; and a great deal of collateral material both of aggregative and cross-section type. While all this material can be considerably improved in sector and asset detail, as well as in accuracy and consistency, the main task before us now—in collection rather than analysis of basic data—would seem to be the preparation of comparable basic material for the nineteenth century, particularly the second half. This material is needed to obtain a better historical perspective and, what may be more important, to enable us to compare the early stages of the financial development of the United States with similar phases in other countries, which phases may well have occurred at later or, more rarely, earlier time periods. Even the material now at hand, however, is sufficient for many years of analysis.

Foreign countries. No other country possesses as complete, detailed, and time-extensive body of organized material on financial structure and growth as the United States. In particular, national and sectoral balance sheets and uses-and-sources-of-funds statements seem to have been prepared for only very few countries (Netherlands, Norway) and even then only for very few recent benchmark dates and periods. However, the raw material for building up national and sectoral balance sheets and uses-and-sources-of-funds statements, at least for the postwar decade, apparently exists in a substantial number of countries, including some that will be most important for international comparison. The working up of these materials into even rough systems of accounts that can serve the purposes of a study of financial growth and structure is obviously a considerable problem, varying in difficulty from country to country. The experience we have gained in similar projects in the United States should reduce somewhat the waste motion and experimentation usually associated with such projects. Considerable help, in particular, can now be derived from the set of national wealth statements for about a dozen countries prepared for the 1957 meeting of the International Association for Research in

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Income and Wealth, which are available in mimeographed form and will be published in 1959 in *Income and Wealth Series VII*.

The chances for building up national and sectoral balance sheets and sources-and-uses-of-funds statements for a substantial period before World War II are probably best for Great Britain, France, and Germany, and a few other European countries. In the case of Great Britain, it should even be possible to cover most of the nineteenth century if sufficient effort is made. Fortunately, these are the countries that are crucial for analysis of financial growth in advanced countries.

The main problem from the point of view of a global study thus may be the development of data, even in more rudimentary form, for three other types of countries: new (European) settlements in America and Oceania; old oriental civilizations; and areas of recent tribalism, primarily in Africa, south of the Sahara. The task should not be impossible for at least three countries of the first type, i.e. Canada, Australia and Argentina, for which figures probably reach back to the late nineteenth century. I feel less confident—and also know much less about the data—for the two leading countries of the second type, Japan and India, which are essential for global coverage; but I should rate the chances of success as fair, particularly for Japan. China, the third leading country of this type, is apparently a hopeless case. For the really underdeveloped countries, particularly those in tropical Africa and Asia, the Near East, and most of Latin America between Mexico and the ABC states, rudimentary statements for very recent periods are probably all that can be obtained. The inability to go back beyond World War II—to say nothing of going back beyond World War I—in most of these countries is less serious because their financial structure is in most cases still so simple that a long historical perspective is less important. It would, however, be very helpful if an economic historian could provide relevant material—even if not in systematic accounting form—through the nineteenth and possibly back into the eighteenth century in at leat one or two sample cases.

The U.S.S.R. presents a special problem. The country is particularly interesting as the leading representative of the third of the world living under a planned economy; and one of the main functions of a comparative financial morphology and dynamics certainly is to bring out clearly the differences between the financial structure of free-enterprise and planned-economy countries that are otherwise comparable, and particularly to elucidate the interrelations between financial and real growth in the two types of economies. The data problems, however, are formidable and are aggravated by the impossibility of going back to primary sources and reworking them to fit the needs of a comparative financial morphology and dynamics, as we may do for other countries when the data now available are unsatisfactory. Nevertheless, I have the impression, on the basis of admittedly limited familiarity with the sources, that it would not be impossible to work up national and a few sectoral balance sheets for the U.S.S.R. for one or two benchmark dates each in the middle twenties

(Strumilin actually made rough national wealth estimates for this period), the late thirties, and the middle fifties, balance sheets that would permit us to make at least the more basic comparisons with some free-enterprise countries — particularly the United States, the United Kingdom, and Germany—and possibly, with Tsarist Russia in the decade before World War I.