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Capital in the American Economy—Its Formation and Financing.

By Simon Kuznets, assisted by Elizabeth Jenks. Princeton University Press. 664 pages. 1961. \$12.

TWELVE YEARS AGO the National Bureau of Economic Research undertook a major study of capital formation and financing in the United States. The guiding thought was this: Human welfare takes more material output, and more output takes more capital goods to produce it. Additions to the capital stock take corresponding savings out of current income. Such investment of saving is necessary if the individual quest for future security through financial savings is to be realized-i.e., if financial savings for retirement, etc., is to be later converted into goods and services without depriving others. Financial institutions channel savings into investment. Changes in such institutions over the long term are adaptations to changing needs. In this setting, the National Bureau has taken as its task to describe the changes in capital formation and financing and assign reasons.

Professor Kuznets' monumental effort is the seventh and last volume in the project. Separate volumes by different authors covering residential real estate; agriculture; transportation; communications, and public utilities; manufacturing and milling; governments; and financial intermediaries were published from 1956 through 1961. The present work draws on major findings of these works and brings them into a framework of consistent countrywise estimates, and interprets the meaning.

The book is divided into 10 chapters covering total capital formation, 1869–1955; trends in the structure of capital formation; trends in financing of capital formation; and 20-year swings in the long-term trends. A separate chapter summarizes the major findings and another interprets the findings, in a provisional way, for the future. The statistical appendixes cover 172 pages.

Only a few major points rather than a summary can be given.

1. From almost any angle the growth in total stock of capital (defined as construction, producers durables, business inventories, and net changes in foreign claims) has been impressive. The 1955 net capital stock was 15 to 16 times its 1869 level. The per capita increase was about fourfold. Since 1869 growth in capital formation held to about 20 percent of gross national product in current prices. In constant prices a slight downward trend occurred. Net capital formation in current prices declined from about 13 percent of net national product in 1869–88 to 9 percent in 1946–55. In constant prices the decline was from 15 to 7 percent.

This retardation reflects mainly the slowdown of the growth of gross capital formation attending the slowdown of population growth, and the increased importance of depreciable capital and, particularly, short-lived capital.

Kuznets emphasizes that capital consumption, the difference between gross and net capital formation, reflects economic obsolescence more than physical wear. Hence, zero net capital formation would not signify failure to add to productive capacity. Gross capital formation is the most inclusive measure of additions to productive capacity.

2. What accounts for the impressive growth of capital? The growth of population and labor force can only account for a minor part. (However, *retardation* of population growth could have caused, indirectly, *retardation* in capital growth by retarding increased specialization of production, increased productivity, and capital formation. This aside is typical of many stimulating comments Kuznets inserts throughout.) The main determinant of capital growth is the growth of product: While the product of one period depends on capital formation in the previous period, the latter depends on the product of a still earlier period out of which the required savings took place.

With this, the author examines growth of capital and the growth of output. The increase in real net national product per capita tripled over six decades—an unparalleled achievement—and reveals no clear evidence of any retardation in the the rate of increase. On the other hand, the growth rate of capital per person turned sharply downward after the 1920's. The comparative growth rates is expressed as a decline in the net capital-output ratio.

3. How explain this decline in the relative importance of capital since the 1920's? While it is not a firm inference from the record, Kuznets says that

"... the explanation of the levels of and trends in capital formation in this country is to be sought in the saving process—in the factors that govern the supply of savings rather than the demand for capital funds. It is in the economic and social constraints on the savings contribution of governments and of private corporations, and in the factors that govern the consumption and savings patterns of individuals—the main source of savings—that we may find the basis for a theory that would cogently account for the levels of and trends in at least the *proportion* of capital formation to national product." (pp. 110–111)

This is a bold thought and it divides Professor Kuznets from others who hold that the principal limitations on capital formation is in the demand for capital. It is a welcome intellectual thrust and should stimulate thinking about the entire issue, including Kuznets' cogent ideas on determinants of the level of savings.

4. Extended analysis is given to financing capital formation since 1900. However, the shortness of the period covered, in the light of major instabilities, and the complexity of financial transactions are handicaps to analysis. Yet definite trends in external and internal financing are discerned and rationalized. The increasing importance of financial intermediaries in the scheme of things is described following Goldsmith's detailed volume on the subject.

The student of finance will find the many statistical findings useful and still be sympathetic with the author's dissatisfaction with what can be shown with existing data. This reviewer would like to see the time that empirical analyses of financing investment could be cast into a framework wherein the whole complex of financial claims that allocate equity and define enterprise positions (and not just corporate shares) are considered. Equity claims and not debt claims are the chief determinants of production and capital formation.

A final point deserves mention. Some of the restraint on capital formation and savings in recent decades, discovered by the author, probably arises out of a classification procedure. There has been a marked shift in the locus of capital from producer sectors to household sectors—e.g., from buses to autos, from laundries to home washers and dryers, from theaters to television, etc. The author's warrant for excluding these in national capital formation and savings, is that they effect consumer activity. Consistent with this view, estimates of household production of services are not included in national income (except for the services of dwellings).

The capital-output ratio for the household as a producer undoubtedly is much higher than the capital-output ratio of commercial producers of the corresponding services—since the household is a very "inefficient" plant for such purposes. But this so-called inefficiency also reflects the fact that people do more savings in the form of durable articles than in financial claims (if one could anticipate his retirement needs correctly, he might do even more of his savings for retirement in durable articles). To interpret the welfare implications of these shifts requires a fuller understanding than we have of the economics of the household in the context of uncounted social costs of living, commuting, and working in congested urban centers.

Professor Kuznets probably is quite aware of such gaps and limitations. Caution abounds throughout his admirable book and his own assessment of it is summarized at one point as follows:

"... while we hope that it advances our knowledge a notch, its contribution can be tested only when its results have been absorbed and revised in a more extensive framework in which they will find their proper niche as well as eventual oblivion in the loss of their identity." (p. 14) *Allen B. Paul*