THE INCOME OF NATIONS*

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A whimsical cartoon of a few years back shows an Indian smoke signal-man gazing from a distance at the mushroom cloud of an atomic explosion rising above the desert flats. It is captioned, "I wish I had said that." While the analogy may appear exaggerated, the sentiment expressed might well be applied to Professor Studenski's scholarly treatise on the history and present state of development in the aggregate measurement of "economic activity."

The product of nearly half a working lifetime, this 554 page, double column volume (set in rather small type) has brought together in well organized form information and interpretation formerly available only in disparate and often inaccessible sources. While, as the author informs us, the twenty-five years in process included many interruptions and delays, the finished product bears testimony to long periods of patient research and careful sifting.

The project, of which this volume is the end product, had support at different times from several sources, including the Federal Government, New York University, the Rockefeller Foundation and the National Bureau of Economic Research. This reviewer cannot forego the wish that some additional subsidy might have been found for part of the publication costs, thereby permitting the book to be sold for something less than twenty-five dollars. As a library reference volume, the book will no doubt have intensive use by future generations of graduate students, and may find its way to some professors' desks. At the present price its distribution is unlikely to be as wide as it deserves.

While the book is notable for its delineation of other people's work, particularly in the historical section, it also bears the imprint of Professor Studenski's breadth of interest and mature judgment. Interlaced with the methods and actual income estimates of the early English, French, German, Russian and American estimators are brief biographical and ideological references which hold the interest and provide insight into forces influencing the development of science. The style throughout is simple and straightforward, objective and scholarly, yet seldom dull or pedantic. To the reader who works his way straight through the entire book, the author's technique of presenting an overall view of materials to be covered, followed by a more detailed treatment, the repetition may become monotonous. The historical development of concepts and procedures, covered country by country, is partially repeated when estimates for the individual countries are presented in the third and fourth parts of the book. For the beginner, such repetition can be an aid to learning. As a reference work, the repetition and cross references can have their advantages.


-322-
In its general format, the book comprises an introduction, four separate parts, and a statistical appendix. Comprehensive bibliographical and other notes are appended at the end of the book, ahead of the abbreviated twin indexes of authors and of countries and regions. An analytical table of contents provides a helpful guide for ready reference.

The introduction consists of a brief statement of the importance of national income estimates, and the logic of the book's over-all organization. Each of the four major parts will now be treated separately and in order.

**Part One. History**

Professor Studenski begins his historical section by tracing briefly, in sequence, the main current of ideas in the development of a concept (or concepts) of national income for the major countries for which estimates were made. This is followed by a more detailed treatment, country by country, chronologically from the time of the first estimates.

Sir William Petty (1623-1687) in England and Pierre le Pesant de Boisguillebert (1646-1714) in France are credited with the first formulation of the concept and the first attempt at giving it empirical content, with principal credit going to Petty.

Contrary to widely held views that the material production concept of national income antedates a more comprehensive one, Professor Studenski points out that both of the above writers "conceived of production and national income as embracing both goods and services." The contrary impression stems from the fact that the "later restricted material production concept of Adam Smith," crowded the more comprehensive concept off the scene, thereby doing a disservice to the discipline of economics. The unwarranted success of the "material" concept influenced classical economic thought for many years, and remains today to plague the student of comparative income statistics because of its retention by those nations dominated by the Marxian ideology.

Although Petty's concept of national income lacked adequate treatment of "the sources of increase of the national wealth" this fault was corrected by his immediate successor, Gregory King. The latter, "more a statistician than an economist, was the first truly scientific estimator of national income." His *Natural and Political Observations and Conclusions upon the State and Conditions of England*, dated 1696, contained the terms, "annual income of the nation," "annual expense of the nation," and the "yearly increase in the nation's wealth."

King prepared separate estimates of per capita income, expenditure and savings for each social and economic class in England, totaling these to obtain a single national income aggregate. "In this way he obtained an estimate of the distribution of national income as well as estimates for each of the items surveyed. His computations were, in effect, a national balance sheet foreshadowing the social accounts of today."

The pioneering work of Petty and King was followed by a succession of sporadic estimates of national income in England and elsewhere. The initial efforts in France represented attempts to do for that country what had been done in England.
Professor Studenski's observations on the circumstances which led to the development of the national income concept should be of particular interest to the student of the history of science. These were, he points out, as much a product of the times as of the man (or men). The scientific outlook was permeating the intellectual atmosphere of England and of western Europe. Perceived problems were approached more and more in the light of inquiry rather than according to the tenets of received dogma. England was in the throes of a continuing struggle with France and Holland. The mounting costs of this struggle, met by means of a highly inequitable tax system, had produced increasing concern over England's capacity to meet and outdistance her rivals without destroying the productive base on which the country's strength rested. A measure of that strength was needed, both as a means for estimating the nation's potential and for discovering where the most fruitful sources of revenue for the government might be found. Petty had been a tax administrator. He was also a physician and sought to apply the scientific method to the body politic. He was intent on proving that England had not been ruined by the civil war, and that adequate revenues could be raised for both war and peacetime needs.

Although King's work remained unpublished for more than a century, it was publicized by Charles Davenant (1656-1714) "influential writer and political figure" who exerted pressures for the improvement of official records and statistics. Such improvement was slow in coming, and for the most part had to await the emergence of a whole new set of problems attending the industrial revolution.

Following a 70 year period of relative neglect, Arthur Young (1741-1820) signaled a renewed interest in national income measures and improved statistics. As might be expected, his interest in agriculture inclined him toward a product approach to income, and his own estimates in 1770 were built up from production data collected in the course of his travels.

Income estimates developed later in France than in England, and those who developed them had even poorer materials with which to work. More than this, affairs of France were in the hands of a tyrannical authority, precariously balanced on a pyramid of privilege, which had little taste for the illumination of the existing state of affairs. Boisguillebert, who attempted to do for France what Petty and King had done for England, was motivated by a deep conviction of the need for tax reform, and for a general liberalization of governmental policy toward economic life. Described as "a good theorist but one of the world's poorest statisticians," Boisguillebert tried to prove too much (specifically the extent of the decline in France's income) with the result that his estimates were quite unreliable. Although many of his proposals were to be adopted a half century later, the publication of his and Vauban's works resulted in their banishment from court, and in the case of the former, from Paris.

Not until the rise of Physiocracy, as exemplified by Quesnay, Lavoisier, Du Pont and others, was there further interest in France in estimates of national income. Among these, François Quesnay (1694-1774) "is generally acknowledged to have invented the money-product flow of modern economic analysis." The concern with agriculture which characterized the work of this school, however, fastened upon French tradition, a dogma which was to limit the scope of its income estimates far into the nineteenth century.
ECONOMIC DEVELOPMENT AND CULTURAL CHANGE

Interestingly enough, the only other example of income estimates to make an appearance in the eighteenth century was in Russia. "Connected by a multitude of threads with the national income estimates in Britain and France, but firmly rooted in Russian soil were the national income estimates made in Russia toward the end of the eighteenth century." These, Studenski believes, were intimately connected with the rapid development and change then occurring, particularly during the reign of Catherine.

In the early part of her reign, particularly, her interest in liberal ideas allowed a degree of free inquiry not hitherto known in Russia. Her court became a center for expatriates and for the curious.

Out of this came what Studenski calls the "three lost Russian estimates" of national income. Although incidental to other statistical and descriptive data concerning the then little known country, these estimates by B. F. J. Hermann (1755-1815), an Austrian, A. N. Radeschev (1749-1802) and one anonymous became the principal basis for comparisons with the outside. But there, once again, the lot of the income estimators proved to be not without perils. Radeschev, for example, was exiled to Siberia by Catherine who, near the end of her reign, old and afraid, no longer wanted the illumination of ideas and fact.

In all, Studenski has accounted for 13 estimates of national income in England from Petty to the end of the eighteenth century, and 12 in the nineteenth century up to 1885. During about the same period, 25 estimates appeared in France.

First attempts to estimate national income in other parts of the world appeared somewhat later than in England and France. The first estimate of income and wealth in the United States was made in 1843 by George Tucker, professor of moral philosophy at the University of Virginia. Using the six decennial censuses from 1790 to 1840, he sought to derive measures of the growth of income and wealth in the new Republic. He further extended his estimate on the basis of the 1850 census. Although the quality of American statistics continued to improve, no further income estimate was attempted until 1893, when Charles B. Spahr, a liberal editor, published his estimate of income and wealth, as a means of demonstrating certain convictions regarding the inequality of its distribution.

By the closing decade of the nineteenth century, estimates in other countries were appearing. Austria's first estimate was for 1859. Germany, where economists of the historical-descriptive school (and theirs was the predominant view) were highly skeptical of all generalization, was a latecomer. Near the end of the century, members of this school were still characterizing national income estimates as worthless.

To Australia goes credit for preparation in 1886-87 of the first official estimate issued under government auspices. International comparisons of national income also began to appear during the last quarter of the century.

A characteristic feature of all early estimates was that they were sporadic, prepared by solitary workers intermittently, usually to buttress some thesis they had come to hold. They relied chiefly on census data, which through the years were being improved, and were not therefore readily
comparable one with the other. The concept of income itself had to develop through use and testing, while statistical techniques (crude improvisations, at first) had to be developed and generalized.

Interestingly enough, the contribution of economists, particularly the professionals, was small. One notable exception was Say, who, while he was little interested in actual estimates, contributed to clarification of the concept. Originally "inclined toward accepting the Smithian material production concept," he eventually discarded it for the more comprehensive one. He also pointed out the limitations of the Physiocratic concept. But, as Studenski indicates, "He believed that economics and statistics were wholly unrelated disciplines and he criticized those writers who intermixed them." His own estimate of French income was largely undocumented. Physicians and engineers come off rather better as early contributors to what has become an area of primary concern to modern economists.

Part Two. Theory and Methodology

The second part of the treatise links easily and smoothly with the concluding chapter of the first where Studenski introduces the men and the forces contributing to a universalization of the income concept. Some of the men introduced there, and who influenced estimating techniques, are: Bowley and Stamp in England; Colson in France; King in the United States; May and Helfferich in Germany; von Fellner in Austria; Bonger in Holland. The forces credited with contributing to universalization include: advance of economic theory; wars, revolutions and economic crises; fiscal reforms; technological changes; international and class conflicts; improved statistics; introduction of the income tax; government fiscal and economic planning; and finally, the influence of international organization.

Oddly enough, with the increasing assumption by governments of the task of preparing income estimates on a sustained basis, there has come greater objectivity--less injection of political or economic ideology. (Studenski observes that "W. I. King's estimate for the United States in 1915 was one of the last national income estimates in any country to combine the estimating task with economic politics." Presumably this observation exempts Soviet statistics published for world consumption.)

With the new climate has come the new generation of scholars to replace the old: Clark and Stone in England; de Bernonville in France; Kuznets and Gilbert in the United States; Coats in Canada; and numerous others in countries large and small.

Only limited attention will be paid here to Studenski's lucid presentation of the basic concepts used in income estimates, their uses and limitations, since these have become generally familiar. Suffice it to say that he has performed a useful service in the systematic development of the essential social nature of national income, in showing how it is linked with the "economic organism of society."

His discussion of the synthesized, three phase treatment of national income--production, distribution, disposition--leaves small room for improvement.
Almost any intelligent reader could follow his exposition. A simple overview is used to introduce the topic under discussion, followed by a more detailed treatment of each dimension. Woven into the fabric of his main narrative are references to men and their contributions in resolving conceptual or methodological difficulties. His treatment of the government sector, in national income accounts, is particularly well presented. The discussion of netness and grossness will provide an assist to many a struggling student. His chapter on intertemporal and international comparisons illuminates as well as can be done an involved and underdeveloped area. Following his delineation of the basic concepts and relationships is a useful summary of estimating methods.

Part Three. Estimates for Selected Countries

Here Studenski reviews the income estimates of 12 countries selected for purposes of illuminating the types of problems encountered under highly variable conditions of institutions, development, and theoretical sophistication. Stated variables include: "the nature of the economy and its problems of the moment; the degree of appreciation of the importance of national income estimates by official and unofficial bodies in the country; the state of development of its statistics; and the imagination and competence of the individuals charged with preparation of national income estimates."

Most extended treatment is reserved for the Soviet Union because of its different concept of production, and the importance of the country. Defined as "that part of material product, evaluated in monetary terms which is created each year by the labor of society...available for consumption and accumulation," their measure excludes incomes from governmental and personal services. Material production consists of six branches: (1) agriculture, (2) industry, (3) construction, (4) freight transportation, (5) retail trade and (6) miscellaneous. After tracing procedures and quoting published estimates, Studenski points out the essential uselessness of the figures. This is not to deny the competence of many of the Soviet statisticians, or to doubt that data useful for domestic purposes do not exist. However, these figures the world does not see.

Canadian estimates are included because they are among the most advanced in the world, and are prepared by all three estimating methods. Netherlands estimates appear here both because prior to the war they were one of the best examples of the income distributed approach, and have since been extended by the other approaches. Swedish estimates are included because in their prewar form they constituted a unique example of net output estimates. Germany is included because of features which stem from the historical development of the estimates, and because since the war the figures are for a divided country. French estimates are almost wholly new, and represent a complete break with the past. Irish estimates, also, are new, but they have been developed de novo according to U. S., British, and Canadian standards. The other five countries included are underdeveloped areas. Yugoslavia and Turkey illustrate the application of sophisticated methods to inadequate data. (Yugoslavia also uses the material concept of production.) Political importance of the country and use of advanced techniques applied to faulty data are given as reasons for the extended treatment of Indian data. Brazil is included as one of the few examples of an underdeveloped country using the income distributed technique.
Discussion of the estimates of these countries takes the reader over a wide range of problems, helping to reinforce points covered under the earlier discussion of concepts and methods.

Part Four. Development in Sixty-Six Other Countries

In this part, the much larger group of countries are treated in more abbreviated form. For the United States, the United Kingdom and other Commonwealth nations, all with extended experience in the field, only recent developments are covered. For underdeveloped areas in Latin America, Africa, the Middle East, Asia, and European countries which are comparative newcomers, the material consists chiefly of progress reports. In each case bibliographies for the individual countries are included.

Statistical Appendix

The statistical appendix consists of a summary table of the principal national income aggregates for 87 countries in 1955 or the nearest year. Also included are population figures and the dollar exchange rates for the national currencies.