

mano José Testa  
1962

STUDENSKI, PAUL

"THE AREA OF PRODUCTION"

(Capítulo 12 de "THE INCOME OF NATIONS")

Páginas 175 a 188

(New York University Press 1958)

CURSO: DESARROLLO ECONOMICO

PROFESOR: JORGE AHUMADA

SOLO PARA DISTRIBUCION INTERNA

1000

1000

(1000)

1000

(1000)

1000

1000

1000

1000

1000

1000

1000

## 12. THE AREA OF PRODUCTION

In Chapter 1, we traced the emergence, after a long period of evolutionary development, of two main concepts of national income: the comprehensive production concept, which defines national income or product as an aggregate of both commodities and services produced over the year; and the material production concept, which defines it as an aggregate of -- material goods only. A third but comparatively unimportant concept exists in addition, the market production concept, according to which national income or product consists of both material goods and services, but only to the extent that these are produced for and are distributed through the market. The main differences between the composition of -- these three production concepts are shown in Table 12-1.

Table 12-1. Composition of the National Income According to Three Production Concepts.

	Compre- hensive	Restricted Market	Restricted Material
Market goods	x	x	x
Certain goods produced within the household for own or family consumption	x	0	0
Market services	x	x	0
Services of dwellings	x	x <sup>c</sup>	0
Civil government and military services	x	0 <sup>a</sup>	0
Profits of government enterprises	x	x	x
Direct taxes	x	0 <sup>a</sup>	x
Indirect taxes	0	x	x <sup>b</sup>

x: Item included.

0: Item excluded.

<sup>a</sup> In the only estimates based on this concept, the Kalecki and Landau estimates for Poland, the cost of public education is included. On the other hand, individual incomes are deemed to exclude personal taxes.

<sup>b</sup> Certain professional services are excluded in the Matolcsy-Varga estimates for Hungary.

<sup>c</sup> Only rented dwellings.

In this Chapter, each of these three concepts will be analyzed and the various issues arising out of their application will be critically -- reviewed.

1. The Comprehensive Production Concept

The comprehensive production concept recognizes the distinction between material goods and immaterial ones (services) as being significant in certain types of economic analysis, but considers it completely irrelevant to the central issue of what constitutes production and national income and what does not. Production is deemed to be a process concerned with the creation of utilities having economic value, i.e., . . . things capable of satisfying human wants and having a determinable economic price or cost. These may be either material or immaterial in nature. Services--which may be either those of persons or of durable capital goods are declared to be just as capable of satisfying human wants as directly consumable material goods and, therefore, are included in production and national income. This conclusion is further supported by reference to the fact that services and material goods continually interchange in the market; that the creation of both requires the investment of capital and labor; and that the satisfaction of many wants often requires the combined use of both, e.g., medical care, where the services of the surgeon are used in conjunction with such specialized material goods as instruments. Many material goods have no clearly identifiable use value without some accompanying services, and in order to account for their contribution to economic welfare, it is necessary to include the services they implement in the national income total. The labor engaged in the production of services is deemed to be just as productive as the labor engaged in the production of material goods. Briefly, then, production is viewed as the creation of consumable things and of things facilitating their production, whether they are material or not.

National income, therefore, includes all freshly produced material goods and services that (a) are created by human labor and capital, (b) are capable of satisfying human wants directly or, as production goods, indirectly; (c) are comparatively scarce and, therefore, need to be "economized" and have economic value; and (d) either have definite monetary price or cost or can be given one by imputation. National income by this definition includes (a) all goods and

services produced for the market by private and governmental enterprise, including services of certain durable consumer goods, such as dwellings; (b) all services produced by government for collective use, although those of the armed forces have been generally recognized as economic production only since World War II; (c) all goods and services produced by nonprofit-making organizations, such as churches, educational foundations, etc., for the benefit of the general public or of their own members; and, finally, (d) certain goods and services produced by members of the household for their own and one another's use, outside the market mechanism. National income includes all these goods and services net of capital consumption (or depreciation) and without duplication of values.

Within this comprehensive concept of national income exist certain variants resulting from differences in opinion as to whether certain items of unpaid goods and services, particularly certain services rendered within the household and within the government sector, should be treated as production and hence as national income by imputing money values to them. These unpaid goods and services may be classified into five main groups:

1. Foods and other goods produced on the farm for the farmer's own consumption
2. Unpaid personal services of housewives and other members of the family or of broader social groups
3. Unpaid services of owner-occupied dwellings
4. Unpaid services of other consumer durable goods owned by households
5. Unpaid services of tangible wealth owned by governments and by benevolent organizations

We shall consider each of these items in turn.

a. Inclusion of Value of Foods and Other Goods Produced on the Farm for the Farmer's Own Consumption

It is now generally recognized that food and certain other items, such as firewood, which are produced by the farmer for his own and his family's consumption, represent the farmer's income in kind and should be included in national income. Nearly all contemporary estimates do include them in order to obtain comparability of farm with nonfarm -- incomes and comparability of incomes of agricultural countries with

those of nonagricultural ones. An additional argument for their inclusion rests on the fact that the farmer is often in a position to choose between selling his entire produce in the market and retaining a part of it for his own family use. If he chooses to sell everything, he must then buy the produce he needs out his money income. If, instead, he keeps some produce for his own consumption, he reduces his money income, but, on the other hand, also reduces his expenditures. The retained produce, therefore, has a definite money value to him and must be added by imputation to his money income.

In some estimates these retained goods are evaluated at the <sup>for market</sup> whole sale prices they bring in the market, while in others they are evaluated at the <sup>retailer</sup> retail prices that have to be paid for them. Of the two methods the latter is preferable because it makes farm income more comparable with nonfarm income. What is important in such comparisons is to obtain a meaningful value for those goods produced and consumed on the farm, and this is better accomplished by evaluating them at retail rather than at wholesale prices.

Foods and other goods produced on the farm for the farmer's own consumption are often considerable. In Ireland in 1953 they represented 26 per cent of the total farm income;<sup>1</sup> and in Canada in 1950, approximately 18 per cent.<sup>2</sup>

b. Unpaid Services of Housewives and of Other Members of the Household.

The classic example of unpaid personal services rendered in the family circle is the activity of the housewife. Specifically defined, household work, whether accomplished by the housewife or other family members, consists of the preparation of meals (kitchen work and serving) and the formation and maintenance of "household capital"

---

<sup>1/</sup> This percentage is for goods valued at agricultural prices. When these goods are valued at retail prices, farmer's own consumption rises to 34 per cent of total farm income (Central Statistics Office, Irish Statistical Survey, 1953, Dublin, 1954, pp. 50, 57)

<sup>2/</sup> Dominion Bureau of Statistics, Reference Paper No. 25, Handbook of Agricultural Statistics, Part II, Farm Income, Ottawa, February, 1952, pp. 46. 77.

(cleaning, washing, mending, tailoring, carpentering, painting, etc.). In giving the goods produced in the market economy the final touch that makes them ready for use, household work is the very last stage of production. It is the remnant of older and more extensive domestic production that has succumbed to the market economy in the course of its development. Household work is easily replaced in the modern economy by the paid services of commercial establishments, public services, labor-saving equipment, and paid services of domestics. Some of the increases in national income over time represent no more than this substitution of such paid services for the unpaid services of housewives. Similarly, some of the differences in the size of the national income of two countries do not necessarily indicate differences in the productivity of their labor but do reflect differences in the extent to which the unpaid services of housewives satisfy the wants of households.

During periods of accelerated business activity and rising employment or of wartime labor mobilization, housewives take on jobs in industry without necessarily neglecting their domestic duties. They rely more heavily on outside help for the care of their home needs and pay for these services out of their earned incomes. When peace returns, or in time of depression, they go back to their unpaid home duties. National income, when calculated without inclusion of the unpaid services of housewives, rises in the first instance and drops in the second. The omission of unpaid services of housewives from national income computation distorts the picture of both long run and short run changes in the national economy in addition to making intertemporal and interregional comparisons of national income more difficult.

In the face of this situation, most scholars favor, in principle, the inclusion of the unpaid services of the housewives in national income. The difficulty, however, consists in finding a fair measure of the economic value of the housewife's services. In a few estimates that have attempted to impute a value to these services, the arbitrary assumption is made that all housewives do the same amount of work and that their services can be evaluated at the same average sum. The assumption is manifestly false. To include such a doubtful calculation in national income would greatly lower the reliability of the total and

the reluctance of most estimators to include this item in their computations is, therefore, understandable.

Table 12-2. Imputed Value of Unpaid Domestic Services in Certain Estimates as Related to National Income

Estimate	Per Cent Addition (with N.I. computed before addition)
1. Addition actually made:	
Hungary (Mat, Varga, 1930), including paid domestic services	10.7
Italy (Vinci, 1938)	27.5
Sweden (Inst. Econ. Res., 1930) <sup>a</sup>	20.7
2. Addition estimated, but not made:	
Finland (Lindberg, 1930)	19.0
United States (Kuznets, 1939)	26.3

For this reason only a few estimates have attempted to impute a value to the services of housewives. These few, as shown in Table 12-2, indicate that we are by no means dealing with a negligible item. The inclusion of housewives services can raise national income by 20 per cent or more.

Household work is only the most obvious of the many activities carried on in the family that have a counterpart in the market. The care and education of children; the "self-services" people perform in shaving themselves dressing their own hair, acting as their own chauffeurs; gardening and the pursuit of other "do-it-yourself" hobbies, such as carpentry, painting, etc., are all of this nature. Professor Corrado Gini proposes to include all such activities in national income inasmuch as they have a potential market value. He even completes the list, facetiously perhaps, by adding the "matrimonial" services rendered to each other by husband and wife on the ground that these

---

<sup>a</sup>/ The Swedish estimators, realizing the crudeness of their imputation, presented the national income totals both with and without the imputed services of housewives.



can be substituted for by the use of paid services of male and female prostitutes.<sup>3</sup>

Logical consistency would demand reaching out even further to include similar free services rendered outside the family, e.g., neighborly advice and co-operation versus paid professional services; the company of a friend versus that of a paid companion; volunteer care of the sick and the poor versus that by paid nurses and social workers, etc. But such a supercomprehensive concept of national income, taking all these human actions into account, would embrace the entire content of human life and would, for all practical purposes, rob the national income concept of any meaning and render it useless as an expression of economic production.

c. Inclusion of Services of Owner-Occupied Dwellings

Services of rented dwellings are traditionally included in all comprehensive national income estimates inasmuch as the renting of dwellings is considered to be no different from operating any other type of business. Depending on the phase in which national income is considered, services of rented dwellings are accounted for either by (a) including the value added in renting or the incomes paid out in renting (net rent plus mortgage interest plus wages, etc.); or (b) by including the gross or cash rent paid by the tenant as the value of the final product (services of rented dwellings).

Until a few years ago, services of owner-occupied dwellings were not as widely included in national income. In some estimates made by the income-distributed method, they were represented only by the mortgage interest paid, and in others, were completely omitted on the ground that no money payments were made in their instance. This was true, for example, of the estimates made in the United States as late as 1945, as well as in New Zealand and Japan

---

<sup>3/</sup> "The Content and Use of Estimates of the National Income", Banco Nazionale del Lavoro Quarterly Review, No. 5, April, 1948, pp. 271 ff.

prior to World War II.<sup>4</sup>

This difference in treatment between rented and owner-occupied dwellings was unsupported by logic as the two performed identical economic services and generally had very similar underlying costs. Individuals frequently can choose between owning and renting a dwelling and they make their decision on the basis of which course appears to them to be more advantageous. Those who have become owners often have a further choice of whether to occupy the dwelling themselves or to rent it out, and with the resulting proceeds to rent another dwelling for themselves.

( This interchangeability between rented and owner-occupied dwellings makes completely unwarranted any sharp differentiation between their services in national income accounting. The exclusion of the services of owner-occupied dwellings is unjustified on practical grounds as well as on theoretical ones, for information on the potential rental values of owner-occupied homes can be just as readily obtained from census data and tax records as information on rented dwellings.

The English and French economists of the seventeenth and eighteenth centuries, who treated national income primarily as a measure of consumption, were cognizant of the fact that the difference between a rented and an owner-occupied dwelling is immaterial from an economic point of view. They included the rental values of both in their estimates, but in later years their successors abandoned this point of view.

---

<sup>4/</sup> The exclusion of the services of owner-occupied dwellings was thus rationalized by the U.S. Department of Commerce in its first official estimates: "The services yielded by such items are not ordinarily paid for in the usual course of business, nor are they commonly evaluated as a result of a bargain in the market place. Usually the motive behind the acquisition of such owned durable goods for personal use is not concerned with a pecuniary return on the investment, as is the purchase of securities" (U.S. Department of Commerce, National Income in the United States 1929-35, Washington, D.C., 1936, p. 4).

The issue was finally resolved in favor of the inclusion of the services of owner-occupied dwellings as standard procedure in 1944 at a Washington conference of representatives of the official estimating agencies of the United Kingdom, United States, and Canada.<sup>5</sup> Home ownership was assumed to be a business producing housing services that are sold to the home owner in his capacity as tenant. This decision influenced most of the subsequent estimates in the world. Only the countries subscribing to the material production concept (Soviet -- Russia and her satellites and Yugoslavia) still continue to ignore this item just as they do the services of rented dwellings.

Generally, the imputed value of the services of owner-occupied dwellings is first estimated as gross rent, in line with the gross rentals earned by similar dwellings in the area. Next, in more carefully constructed net output and income-distributed estimates, the owner's expenses for maintenance, supplies, mortgage interest -- (wherever possible), indirect taxes (including real estate taxes), and depreciation are deducted from this gross rental figure. The resulting imputed net rent is deemed to constitute the imputed rental income of the owner-occupier, and is included in national income in this form. Mortgage interest paid, wherever separated, is accounted for in the income-distributed estimates under the net interest category of income. On the other hand, in the expenditure or final products estimates, the imputed gross rent on owner-occupied dwellings is included in national income at market prices as the value of the services in question.

d. Treatment of Services of Other Private Consumer Durables

There are many other consumer durable goods in addition to dwellings involving substantial initial investments whose treatment in national income involves a special problem--motor cars, paintings, - musical instruments, furniture, and household appliances, etc. Should

---

<sup>5/</sup> See Edward F. Denison, "Report on Tripartite Discussions of National Income Measurement," Conference on Research in Income and Wealth, Studies in Income and Wealth, vol. 10, National Bureau of Economic Research, 1947.

the services of these goods be treated as those of capital goods, i.e., as current services spread over the life of the goods, with a portion of their price allocated to each year of use, or should they be treated as services consumed in their totality during the year of the ac-quisition of these goods, i.e., as direct flows of consumer goods --- evaluated at their full purchase price in the year of acquisition? --

When these goods are rented, as some of them are, they are treated -- as capital goods and their services are included in national income - during the years of their use either at gross rentals or at net ren - tals but when they are used by owners, they usually are treated as goods flowing directly to consumers. Their current services in that case are generally not included in national income. In only two est-- imates both of them prepared before World War II--that for Sweden --- prepared by the Institute for Economic Research for 1930 and that for Italy prepared by Vinci for 1938 were the current services of such - consumer durables included in national income. In exceedingly round-- about method, while in the Italian one it was done by a crude addi-- tion. In both estimates the result added less than one half of one per cent to the total national income. In neither country was the ex periment repeated. The theoretical issue, however, is by no means -- settled. It is still a subject of discussion among national income scholar and practitioners.

Kuznets discussed this issue in a paper published in 1952,<sup>6</sup> and even made some computations as to what changes might occur in the national income of the United States if the current services of such commodities were included. He found that net capital formation would -- rise on the average from an 11 per cent share of the net national in- come to a 13 per cent share, while the flow of goods to consumers -- would show an average drop from 88.3 per cent to 86.7 per cent of the national income total. National income computed in constant prices, would be on the average 5 to 6 per cent smaller.

---

<sup>6</sup>/ International Association for Research in Income and Wealth, Income and Wealth Series II, Bowes & Bowes, Cambridge, England, 1952, p. 164.

Kuznets admitted that his calculations were based on exceedingly debatable assumptions as to the average life of consumer durables (which he set at ten years) and as to their average yield (which he took to be the same as that of prime grade bonds). However, he concluded against any change in the existing treatment of consumer durables on theoretical rather than practical grounds. "Individuals," he said, "do not in fact seem to treat purchases of consumer durable commodities as investment similar to that involved in purchasing a house; nor do they, at least in the United States, have as much opportunity to choose between buying and renting consumer durable commodities as they have between renting and buying residences." <sup>7</sup>

It is difficult to agree with Kuznets' first postulate. Certainly the purchases of automobiles, valuable paintings, rare books, fur coats (not even necessarily mink or sable), and the initial furnishings of a home, involving substantial outlays made but once in a number of years, are treated by the average family, whether in the United States or elsewhere, as investments. The annual flow of these goods to consumers is highly irregular and, therefore, is not a proper measure of their current contribution to the national economic welfare. The flow is often interrupted for a time, as in the case of war or depression; but the contribution to economic welfare assured by these goods is not necessarily terminated therewith, as the existing stock of these goods continues to render services; and vice versa, when the flow is resumed upon the return of peace or business prosperity, economic welfare may not rise as sharply inasmuch as the newly purchased goods may merely be replacing the existing stock which, though worn, still renders services. Oppositely, when a country's durable consumer goods have been largely destroyed by bombing as was the case with Germany in World War II, national income is reduced not merely by the stoppage of the flow of new consumer durables, but much more substantially by the disappearance of the services of the destroyed consumer durables. Consider the case of a nation, a large number of whose population has lost a roof over their heads,

<sup>7/</sup> Ibid., pp. 164 ff.

all furnishings, and most clothes. Is the drop in the income of such a nation by the mere drop in the flow of additional dwellings, furnishings and clothing, or by considerably more than that? Moreover, the replacement costs after a devastating war or other calamity may be exceptionally high because of the resulting scarcity of materials, equipment, and skilled labor. These high costs should be spread over a period of time. If assessed against the current period, they would scarcely constitute a proper measure of the contribution made by the production of these goods to current economic welfare. Finally, some countries, such as Switzerland, have a large inherited wealth in the form of valuable homes, furnishings, jewelry, etc. They do not need to acquire large amounts of additional wealth to maintain a high level of economic welfare. A computation of national income that does not take into account contributions made by the services of this inherited wealth to economic welfare considerably understates the national income of the country.

Kuznets' second observation, referring to the infrequency of choice between owning and renting these types of durable consumer goods, is correct. But it only establishes the fact that since the renting of these goods is infrequent, the failure to account for their services during the actual time they are rendered to their owners does not create as much of an inconsistency as failure to account for the services of owner-occupied dwellings.

Theoretically, the argument for including the services of consumer durables is unassailable, but the difficulties of doing so are immense. They are much greater than those faced in accounting for the services of owner-occupied dwellings. First of all, the variety of goods in question is colossal and information on their nature, quantity, original cost, age, useful life, present condition, and, hence, value, is exceedingly scant. Secondly, most of such goods have no set of readily ascertainable rental value that could be used in the evaluation of their services, as is the case with dwellings. Even if one takes one item—automobiles—on which more information is available than on any other, it would be extremely difficult to estimate their gross rental value because of the variety of their

! atención de principio!

makes, ages, and conditions, and the infrequency with which they are rented.

On the other hand, it may be possible at least to estimate the net rent of a number of these items by applying to their capital values an average interest rate or net rent rate. Any computation of the value of the services of these consumer durables would necessarily involve a great many questionable assumptions, be exceedingly crude, and reduce the reliability of the national income totals.

The conclusion must be reached, therefore, that until more information becomes available on consumer durables other than dwellings, it would be wise to exclude their services from national income. Until that time, the existing practice of including the values of these consumers' goods directly at the time of their production and acquisition appears preferable.

e. Treatment of Services of Government Properties

In the case of government properties the same issue arises. Should their services be included in national income? In the case of revenue-producing properties this is generally done, inasmuch as they are operated as business enterprises with separate operating and capital accounts, making possible the identification of the value of the services of capital invested in them. But in the case of properties whose services are furnished collectively, such as most of the public highways, parks, bridges, sewer systems, museums, schools, public hospitals, and administrative buildings, not to speak of military properties, no such clear separation of capital from operating expense is generally made; or is, at best, made only in part. Government accounts generally are not constructed to permit an accurate evaluation of the current services of these properties. There are some significant exceptions to this rule, of which the 1930 Swedish estimate is one. Public administrative buildings were operated there like enterprises, charging rent to the various governmental departments occupying them as tenants, and complete business accounts were kept.

Where the construction of government properties is financed by earmarked loans, information is available on the interests payments and sometimes on the annual amortization or redemption of the debt. These figures may be taken as indications of the capital yields of the properties and, with considerable reservations, as indications of depreciation of the properties. On the other hand, in the case of properties whose costs of construction or acquisition are financed from current revenue or from unidentified portions of general loans which is frequently the case no comparable information exists. Governments do not generally publish or maintain, in convenient form, information regarding the original costs of such properties, their age, depreciation, allocated debt interest and debt amortization costs etc. Of course, government accounts cover the outlay for maintenance and repair, but these are not necessarily separated from other accounts in published data. Military plant and matériel are seldom accounted for in a way that would clearly distinguish them as durable goods or identify the extent of their durability. Obsolescence plays an exceptionally large role in their case and is often difficult to estimate. All these and other factors make the identification of capital formation in government, and the evaluation of the annual services of capital invested therein, exceedingly difficult. It is not surprising, therefore, to find that national income estimators tend to evaluate the contributions of government to national income, unlike those of private business, in terms of labor only, without the services of capital.

In several prewar estimates, such as those of Germany, Switzerland, and the Netherlands, interest on the national debt was included in national income as a measure of the yield of capital invested in the properties of the national government. In the current Canadian estimates the values of public buildings, highways, ferries, and certain national inventories are ascertained directly, and interest on a proportional amount of the national debt is included in the national income as a reflection of their capital services. In the current Swiss and Danish estimates the same is done for public buildings.



The new international standardization of national income estimates proposes the inclusion of imputed rent on public buildings in the national income total. This is not difficult to do in countries that operate their public buildings like enterprises, charging rent to the various governmental agencies which use them.<sup>8</sup>

All these expedients cover, at best, only a part of the value of the services of public properties. Complete evaluation would be achieved only if and when government accounts are considerably improved.

f. Treatment of Services of Durable Properties of Churches and Other Benevolent Organizations

The same basic problem exists regarding the services of durable properties of churches and other benevolent organizations. These services are no better accounted for in national income estimates than those of government properties, yet, in a number of countries where these properties are substantial, the omission of their services understates national income significantly. This situation can be corrected, as the difficulties in accounting for their services are not overwhelming. For one thing, obsolescence is not as great a factor there as it is in government properties.

g. Other Issues

In addition to the question of treatment of unpaid services of dwellings, consumer durable goods, the services of government properties and of institutional properties reviewed above, many other issues have arisen in the application of the comprehensive production concept that require further clarification. Among them are the treatment of intermediate services of government, taxes, subsidies, interest on government debt, and services of financial intermediaries. These problems are discussed separately in succeeding chapters.

---

<sup>8/</sup> OEEC, National Accounts and Research Division, A Standardised System of National Accounts, Paris, 1952, p. 64

An entirely different set of issues arises under the material production concept of national income, whether of the Smithian or Marxian variety. These will be touched upon in this chapter and in that on Soviet Russia and Yugoslavia (Chaps. 25 and 28).

## 2. Adam Smith's Restricted Material Production Concept

According to Adam Smith, the first economist to France the concept of restricted material production, productive labor was limited to that labor which (a) produced a marketable material product, (b) produced a commodity whose price could command a quantity of labor equal to the labor necessary to produce it, and (c) which added the value of its own maintenance plus the entrepreneur's profit to the raw materials. All other labor was "nonproductive" and was, in fact, supported by the former. National product, therefore, consisted only of salable material goods. The labor engaged in rendering services and the services of dwellings could not, Smith felt, fulfill these requirements and were hence excluded from production and national income.

This definition of production and national income was both inconsistent and narrow too narrow to permit an adequate analysis of the economy's operations. Smith erroneously concerned himself with wealth primarily in terms of a "stock of goods," seriously neglecting its aspect as a "flow" of utilities. He did not perceive that the capacity to produce services was also "wealth" and that "income" was a flow of both material and immaterial wealth. His concept of income was affected by the then prevalent notion (and alive in some quarters even today) that wealth can only be a stock of things, e.g., only an accumulation. His distinction between material goods and services from the point of view of their relative utilities (the supposed durability of the first and perishability of the second) was both inaccurate and irrelevant. He also failed to see that the production of services as well as of commodities gives rise to the creation of profits and to the circulation of entrepreneurial capital. Even at the time he wrote there were many services being produced with hired labor and the use of capital that yielded profits -

*¿definición de principio?*

to the entrepreneurs operating them, e.g., the services of innkeepers, stage coach operators, shipowners bankers, owners of boarding schools, and the like. In accordance with the first of his own two definitions—the one relating to the production of profits—these services should have been classified as "productive," but Smith couldn't or wouldn't see the inconsistency.

By restricting the concept of production and national income to material goods alone, Adam Smith reduced the usefulness of national income estimates as measures of the economic welfare of the nation. His very admission that "unproductive labour has its value and deserves its rewards" was the best testimony of the inadequacy of his concept as a basis for measuring the economic production and prosperity of a nation.

Smith's contention that material goods are more useful than services because they are more lasting was incorrect. Durability is by no means the most important attribute of utility. Moreover, it is the durability of the effects of a thing that counts in the measurement of its usefulness and not the durability of the thing itself. Some services have more lasting beneficial effects than many material goods. The effects of education may last a lifetime or may even be transmitted to succeeding generations, whereas the effects of the consumption of many material goods are only fleeting.

Adam Smith also overlooked the reciprocity between services and goods, where one imparts utility to the other. He stood ready to include those services in national product that helped to complete the utility of material goods, such as trade and transportation, but he was not ready to include those services that constituted final utilities in themselves and in whose production material goods were used. He included only the auxiliary material goods, accounting for them without any indication of their use leaving them, so to speak, suspended in air. According to this notion, classroom furniture and equipment would all be part of national income, but the instruction, through which these goods alone acquire utility, would not be included. Stage scenery, costumes, the curtains that separate audience from players, would be part of national income, but the performance of the

No. Lo improductivo de AS se refiere a bienes materiales, pero puede posibilitar el uso o consumo de los mismos.

(muy importante!)

actors and the work of the director and producer, which along give meaning to these articles, would not be part of it. This exclusion of services under the Smithain concept made any meaningful analysis of many material goods in terms of their role in consumption well-nigh impossible. Such an analysis could be completed only by tracing the expenditures of the producers for the services of the nonproducers, i. e., by analyzing the so-called "derivative incomes" and reintroducing the excluded services by the back door. But as soon as these excluded services are brought back into the analysis, and the derivative incomes are set up in parallel alignment to the so-called national income proper, the problem arises of how to combine these two categories of income in a meaningful total and how to break down the total into categories of expenditure. Smith never acknowledge this problem, nor did any of the statisticians who adopted his concept as a basis for their estimates.<sup>9</sup>

---

9/ One of Adam Smith's followers among the national income estimators, Colquhoun, got himself involved in this problem of derivative income. He first calculated national income, or the "new property created every year" as the aggregate of the products of agriculture, mining, manufacturing, trade, shipping, fisheries, and fine arts. Next he proceeded to calculate the derivative incomes, of unproductive labourers, whose exertions do not create any new property, namely of the royalty, nobility, gentry, government officials, army and navy personnel, pensioners, the clergy, legal and medical practitioners, school and university employees, and paupers. He concluded that "more than one fifth part of the whole community are unproductive labourers, and that these labourers receive from the aggregate labour of the productive about one third part of the new property created annually." Having thus presented the two categories of income, Colquhoun was unable, however, to reconcile them in some single total and limited himself to the observation that "it does not follow.....that a very great proportion of these unproductive labourers are not highly useful in their different stations in society. On the contrary, with a few exceptions, in addition to the benefits derived from personal exertions, they eminently tend to promote, invigorate, and render more productive the labour of the creating classes" (P. Colquhoun, Treatise on the wealth, Power and Resources of the British Empire, London, 1815, p. 109)

National income restricted to material production may be an adequate measure of the economic production and economic welfare of and extremely primitive society which is almost wholly concerned - with the production of material goods for the satisfaction of the most elementary physical needs of its members. But it is not an adequate measure of the economic production and economic welfare of and advanced society, which is generally concerned with both the creation of services and the creation of material goods, and where both of these cater to a wide range of human needs, beginning with the most rudimentary ones and ending with those of a most sophisticated character.

National income conceived in these narrow terms is a poor -- tool for comparing the volumes of production and levels of economic welfare of two societies that differ widely in the degree of their economic development, or of the same society during different periods of its development. Inasmuch as services come to play an everincreasing role in a developing society, national income restricted to material production may tend to understate, by an everwidening margin, the degree of advance in economic production and economic welfare achieved by a country over a period of time.<sup>10</sup>

---

<sup>10</sup>/Josiah Stamp recognized this as he wrote in 1934: "As civilization advances, it may well do so by the very fact that merely material production in wealth tends to render a less and less proportion of total human enjoyment" ("Methods Used in Different -- Countries for Estimating National Income," Journal of the Royal Statistical Society, vol. XCVII, 1934, p. 426). Colin Clark in his Conditions of Economic Progress postulated as a general proposition that with the advance of civilization, the proportion of services, i.e., of tertiary production, in the total national income is increasing. Thus he wrote: "From Sir William Petty's day to the present time the transfer of working population from primary production to secondary and tertiary has been continuing, and perhaps will continue for as many centuries more" (London, 1940, p. 341). Motoscsy and Varga in their Hungarian estimates confirmed -- this proposition, saying: "The importance of the latter (immaterial production) is increasing with the advances of civilization to such an extent that the proportion of the value of the production of material goods, although still the bulk of the national income, is constantly diminishing" (The National Income of Hungary, 1924/25-1936/37, London, 1938, p. 7).

This general proposition, however, requires some qualification, as shown in Chapter 16, Section 5b, below.

### 3. The Marxian Restricted Material Production Concept

In this historical section (Chapter 1, Section 8), the Marxian restricted material production concept was shown to be largely a replica of Smith's earlier notions, differing from them only in part - of its underlying rationale and in a more precise and elaborate application.

#### a. Emphasis on the Sole Productiveness of Hired Labor

According to Smith, both the hired worker and his master are - productive agents and receive due rewards for their contributions to production. On the other hand, Marx attributes a productive role only [to the hired worker. He postulates that labor alone is productive, -- denying any productive function to the entrepreneurial class. All va-- lues, he maintains, are but congealed labor time. Labor reproduces the value of its own maintenance and, in addition, creates, "surplus value for the exploiting capitalist who appropriates it to himself in the - form of profits and net rent. Marx does not believe that the worker - receives his due reward; and does believe that the master receives his income without warrant. The material product, he declares, is created solely by the exertions of hired labor. The proprietor has nothing -- whatever to do with it. Through his control of the means of produc--- tion, he merely appropriates to himself the value created by the hired worker which, in all justice, belongs to the latter. The profits ---- (which in Marx's conception always include interest) and net rent obtained by the entrepreneur or proprietor are nothing but the "surplus value" created by labor over and above the value of the wages paid to [it. Marx's definition of hired workers includes mental workers, such as engineers, as well as manual workers, but does not include the - entrepreneur who manages the enterprise. The self-employed farmer and craftsman working without hired help is neither productive nor unproductive, since his work is altogether unrelated to the capitalistic process of production. Here Marx makes the qualification, however, - that as far as the self-employed person uses capital, he may be ---

creating surplus value by exploiting himself. In fact, the self-employed person is functionally split, being part capitalist and part worker, and his wage income is reduced by an imputed profit.<sup>11</sup>

The values of all commodities, according to Marx, can be split into two major parts: (a) the part embodying three distinct items: the cost to the entrepreneur of the wages paid to his workers, the cost to him of the raw materials and other auxiliary supplies employed by him in production, and the cost to him of the portion of his fixed capital consumed in the course of production (i.e., depreciation); and (b) the part embodying the surplus value created by the worker for the capitalist and providing for him income for personal consumption or for addition to his existing capital.

In thus redefining the roles of workers and masters in material production, the bases of the product shares each receives, and the elements making up the values of the commodities, Marx, in fact, redefined the substance of national income. In his hands, the material production concept of national income became a tool for the destructive analysis of the ethical foundations of capitalist society. It also became a convenient vehicle for the enunciation of Marx's political program, one calling for the laboring class's expropriation of the capitalist's ownership of the means of production in order to end the exploitation of the worker by the capitalist.

We are not concerned here with Marx's political program, and are mentioning it only to provide the necessary background for understanding the reasons that prompted him to carry on his analysis of economic production in capitalist society in strictly material terms. It must be clearly understood that, for Marx, economics was but a handmaiden of politics, and his economics was dominated by his political beliefs and objectives.

<sup>11/</sup> Said Marx: "In the capitalist mode of production, the independent peasant or artisan is divided into two persons. In the role of possessor of the means of production he is a capitalist; in the role of worker, he is his own hireling. As capitalist he pays himself his wages and himself gains the profit of his capital, exploits himself as a wage worker and pays himself, out of the surplus value, the tribute which labor owes to capital. Perhaps he even pays himself a third part, the rent...." (Theorienüber den Mehrwert, edited by Karl Kautsky, Stuttgart, 1905, pp. 422-23; also its English translation, A History of Economic Theories, Langland Press, New York, 1952, pp 324-25).

These looked to the creation of a society in which the workers, acting through a party representing their interests, would control the means of production and receive all the fruits thereof.

b. Clearer Distinction Between the Various Elements of Gross and Net National Income

Marx improved on Smith's distinction between gross and net national income, and the elements making them up. He broke down the value of national output more clearly than Smith had done into its three main elements: (a) the costs of raw materials, auxiliary supplies, and other operating capital resulting from past production and advanced by the entrepreneur (i.e., the costs of repairs, maintenance, and replacement of used-up inventories) and reproduced in the new cycle of production; (b) the costs of the used-up portion of fixed capital (provision for depreciation) similarly resulting from past production and reproduced in the new cycle of production; and (c) the newly created product or value, available for consumption and for new investment, which alone constitutes the year's net national income.<sup>12</sup>

In developing this analysis Marx uses his own terminology. Thus, he refers to what we now call "gross value of the output" simply as the "gross product," while calling what is now generally termed "net value of the output" or "value added in production," "gross income." He refrains from using the term "net national income" on the ground that in capitalist society, the term "net income" is used generally

---

<sup>12/</sup> In Zur Kritik der Sozial Demokratischen Programme von Gotha (Berlin, 1920, pp. 14-15) Marx defined the "social product" as consisting of: (a) the costs of the means of production; (b) additions to capital, reserves, and insurance; and (c) the rest, which is for consumption and from which must be deducted the costs of government, schools, health care, poor relief, etc.



by the entrepreneurs to designate their share of income from production.<sup>13</sup> In the several volume of his work Marx uses the term "national income" only once, when he writes: "Viewing the income of the whole society the national income consists of wages plus profits, plus rent, that is of the gross income."<sup>14</sup>

c. Specific Definitions of the Area of Production

Marx does not add much to Adam Smith's definition of the area of material production. In some respects he is more specific than Smith, in others, less so. Thus, like Smith's, his concept of material production includes agriculture, mining, and manufacturing,<sup>15</sup> but he is not as positive as Smith was about including trade in this category. On one hand, he maintains that trade does not create any use value by itself but merely helps to realize the use value produced in industry; on the other hand, he observes that trade "is immediately productive for the capitalists," is often paid by a share in their profits, and forms a part of the selling or exchange values of the commodities.<sup>16</sup> He recognizes that transportation of commodities

---

<sup>13/</sup> Marx does not use the term "net national income" in reference to the sum of wages, profits (including interest), and rent. He prefers to call this aggregate "gross income." On the other hand, he uses the term "gross product" not in the modern sense of factor income plus depreciation, but in the sense of total receipts from sales including the value of raw materials and unfinished products and services of other enterprises or branches of production consumed in the production of a good. This concept of "gross product" was similar, therefore, to the modern concept of business turnover (what the French call "chiffres d'affaires"), inclusive of the value of sales at all stage of production, from the raw material stage, through manufacturing, wholesaling, and retailing. All these terms were first used by the physiocrats and next by Adam Smith, but Marx gave them a different meaning.

---

<sup>14/</sup> Marx, *Das Kapital*, C. H. Kerr & Co., Chicago, 1909, vol. III. p. 979; also *Ibid.*, p. 971, where Marx says: "The value of the annual product, in which the new labor added during the year is incorporated, is equal to the wages, or the value of the variable capital, plus the surplus value, which in its turn is divided into profit and rent."

<sup>15/</sup> *Ibid.*, p. 328.

<sup>16/</sup> *Ibid.*, pp. 330-56.

is material production because it changes the location and, hence, the use value of commodities and increases their exchange value, but he is not as clear as to whether the transportation of persons is properly a part of material production. In fact, his argument on this lends itself to either type of interpretation.<sup>17</sup>

Marx excludes government services from the field of production just as Adam Smith did, but his reasons are somewhat different. He excludes them not only because these services are not marketable -- and not governed by the principles of capitalistic production generally, but also because he questions their utility. He regards government as a repressive agent helping the exploiting classes to oppress the -- workers.

Finally, Marx adds nothing to Adam Smith's distinction between "primary" and "secondary" incomes; between the original distribution -- of the national income and its subsequent redistribution. He accepts Smith's distinctions without modification.

#### d. Application of the Marxian Concept in Soviet Russia's Estimates

The marxian concept of national income receives its fullest expression in the national income estimates of Soviet Russia. The basic works on Soviet Russia's national income, prepared and published in 1939 and 1940, under the auspices of the Soviet Academy of Sciences, -- defined national income as "that part of the social product, evaluated in money terms, which is newly created each year by the labor of the -- society and becomes available annually for consumption and accumula--- tion," adding that this social product consists of material goods --- [only.<sup>18</sup>

---

<sup>17</sup>/A History of Economic Theories, op. Cit., pp.328-29. Marx says: "In addition to mining, agriculture, and heavy industry, there exists a fourth sphere of material production. This industry is transporta--- tion, whether of men or goods. The relationship of the productive or wage workers to the capitalists is absolutely the same in this as in other spheres of material production." But in the succeeding passage he says that "the transportation of mankind, one might say, is simply a service rendered by an entrepreneur," thus indicating that it belongs in immaterial production.

<sup>18</sup>/ D. I. Chernomodik et al., Narodny Dokhod, U.S.S.R., Akademia Nauk, Institut Ekonomiki, Moscow, 1939; M.B. Kolganoff et al., Narodny Dockhod U.S.S.R., Akademia Nauk, Institut Ekonomiki, Moscow, 1940.

A more recent official publication of the Ministry of Finance defines the national income of Soviet Russia even more succinctly as "that part of the social product which is created by newly applied labor of the workers engaged in material production and is devoted to the purpose of capital accumulation and consumption." <sup>19</sup> National income is calculated as the sum of the net outputs of agriculture, mining, manufacturing, construction, services of freight transportation, trade (including restaurants), and, apparently, some branches of communications. The last three items are included on the ground that -- without them, material production cannot achieve its purposes; in -- other words, that goods have no value unless they are delivered to -- their ultimate users.

The net output of these branches of production is computed as -- the sum of (a) the wages and other forms of income paid to their work-ers and members of co-operative organizations; (b) social security and housing contributions and costs of various facilities furnished to -- producers in these branches in connection with their work, such as -- services of factory clinics, nurseries, and restaurants as well as -- technical instruction and training; (c) net interest of short-term lo-ans of the enterprises and the cost of their insurance; (d) profits -- that supply new capital to the enterprises and the means to promote -- the welfare of the workers as well as revenue to the government; and (e) the turnover and other taxes paid by enterprises that are treated as the collective profits of the national society.

On the other hand, national income does not include the (a) ci-vil and military services of government; (b) the services and benefit payment of the social insurance institutions; (c) the services of pas-senger transportation; (d) the services of independent physicians, -- dentists, teachers, artists, barbers, laundrymen, and other workers -- performing strictly personal services; (e) services of domestics;

---

<sup>19/</sup> Finansovy Institut, Ministerstvo Finansov, Finansy i Kredit SSSR, Gosisdats, Moscow, 1953, p. 36

and (f) services of dwellings.

The omission of government services and of other services items from the Soviet estimates tends to understate Soviet national income. This understatement, however, is not as great as may be expected because of the peculiar nature of the Soviet economy in which a wide array of services is provided within the organization of the factories engaged in material production, e.g., factory restaurants, factory housing, nurseries for children of working parents, etc. These services are treated as part of material production and their costs are embodied in the price of the product and included in the net output of the branch of material production involved. Moreover, under the Soviet concept, indirect taxes (generally excluded from national income in capitalist countries) are included along with direct taxes and may more than offset the effect of the exclusion of services.

Soviet economists, however, place far too much emphasis on the effects of the conceptual difference existing between their estimates and those of capitalist countries. Those scholars who have critically examined the Soviet estimates generally recognize that they greatly overstate the size of Soviet national income and the rate of its growth. This is largely due to the use of imperfect price indexes, overemphasizing new products, and the evaluation of them in the higher prices of former years. The overestimation of Soviet national income on this account is far greater than any underestimation resulting from the employment of the material production concept.

As if to further compound the error, the Soviet estimators assume, in rather highhanded fashion, that their estimates are understated by 25 or 30 per cent in comparison with capitalist estimates. This figure is obtained by estimating the supposed overstatement of national income in countries employing the comprehensive production concept. The "overstatement" is computed as the proportion that income from services contributes to total national income. This proportion, amounting in some countries to 25 or 30 per cent, is then declared to measure the degree of overstatement. These national income totals are then reduced by that proportion, and the Soviet estimators

present the result as a corrected total comparable with Soviet estimates.<sup>20</sup>

This adjustment is incorrect. It overlooks the fact that services play a much more important role in other countries and that their elimination from national income affects the estimates in their case quite differently from Soviet Russia's. It also ignores the offsetting overvaluation effects of certain Soviet procedures discussed above, tending to overstate Soviet Russia's relative economic strength,

Dr. Ivo Vinski, the estimator of Yugoslavian national income, places the understatement of his estimate, because of the employment of the material production concept, at the much more moderate figure of 11 per cent (see Chapter 28, Section II).

It is impossible here to establish a percentage understatement - that would apply to all situations, or even to set up a standard procedure that would make the estimates derived under the two divergent concepts comparable. One thing is clear: the gap between the figures cannot be closed by simply adding the value of the excluded services to the national income totals based on the material production concept. It would be necessary, on the other hand, to exclude from the same total a proportion of the included indirect taxes that would make the treatment of taxes comparable to the estimates employing the comprehensive concept. Even then the differences due to the employment of the different concepts may not be completely eliminated, necessitating either additional adjustments or the employment of some other reconciliation methods.

---

<sup>20/</sup> The Kolganoff study reduces the 1929 estimate for the United States from \$81.0 to \$55.9 billion and the 1928 estimate for Germany from 75.4 to 55.5 billion Reichsmarks to adjust them to the U.S.S.R. concept of national income (Op. cit., pp. 67-71 and 80-81). On the other hand, a later work by Prof. A. I. Petrov. *Natsionalny Dokhod*, Moscow, 1949, p. 13, places the so-called "overstatement" of the national income estimates in non-Communist countries due to their inclusion of services at approximately 15 per cent.

e. Conceptual Differences Among the Marxists

Professor Strumilin, member of the Soviet Academy and noted scholar, and some other prominent Soviet economists departed from a literal interpretation of Marx's view and took the position that -- governmental, personal, and other services are just as productive as material production and should be included in national income on an equal footing.<sup>21</sup>

Professor Chernomordik, in the above quoted study published by the Soviet Academy of Sciences in 1939 (see note 18, p. 531), though not going quite so far, argued in favor of including the services of passenger transportation in national production and national income.<sup>22</sup> Marx, he said, never intended to exclude all services from national production. He intended to exclude only services of a strictly personal nature, such as exist between a master and a domestic servant, -- and which are not subject to the rules of capitalist production, and deemed the distinction between a physical good and a service to be -- economically unimportant. The only important distinction according to Marx, wrote Chernomordik, was between production organized under the prevailing rules of the society and flowing through its channels and that not so conducted, thus making the former a part of national production and national income, and the latter not a part of it.

-----

21/ Strumilin maintained that "it is incorrect in estimating national income to consider only the net value of the output created by the -- economic enterprises of the nation. The computation should embrace -- the incomes of the entire population. The latter is comprised, however, not only of the net value of the material production, but also of the services furnished without charge to the citizens by the socialist -- State and the social organizations. Doctors, teachers, and other workers not participating directly in the material production receive a part of the social product created thereby and furnish in exchange for it the results of their own labor in the form of services. The reproduction fo the material product implies also the reproduction of seryices. In our socialist practice, the teaching trades are already being treated in all the accounting of the economic enterprises on an equal footing with the work of laboratories, repair shops, etc." (quoted by Chernomordik, op. cit., pp. 75-76, Problemy Planirovania, Moscow, 1932, p.397). In June, 1957, at a national conference of statisticians held in Moscow, Strumilin again raised some of these issues, but with no greater success than before (Voprosy Ekonomiki, Moscow, September, 1957, pp. 99- 119).

22/ Op. cit., pp. 198 and 203.

Since passenger transportation utilizes the institution of society, be it capitalist or socialist, concluded Chernomordik, it must, according to Marx, be treated as a part of national product.

Chernomordik maintained that neither theoretical nor practical considerations justified excluding, for example, the services of so useful an undertaking as the Moscow subway. At least one half of passenger transportation provides services to production, in that passengers are traveling to or from work or on specific business assignments. The other half, though serving consumption, is just as productive as consumer goods. Passenger service in 1935 engaged 600,000 workers, or one fifth of the three million workers then engaged in the transportation industry as a whole. As the value of their services must have amounted to at least 2 billion rubles at current prices, its exclusion would undervalue national income almost 1 per cent.

Whether or not this broader concept of national production and national income, as expounded by these several eminent Marxian authors, will in time gain acceptance in Soviet social accounting, is impossible to say.

If their reasoning should prevail in application to the services of passenger transportation, it would have to be extended to many other fields of services, including even the services of government. It certainly appears anomalous that the services of government employees who plan and direct the nation's "productive" effort, and who collect the taxes that provide the capital or operating subsidies required by the "productive" enterprises, should be treated as "unproductive" labor.

#### f. Critique of the Marxian Concept

Every one of the criticisms advanced against the Smithian restricted material production concept of national income applies with equal force to the Marxian concept, both as originally formulated and as now applied in Soviet Russia and other Communist countries. The estimates developed under this concept measure only a portion of the true national income of the country and fail to give a full picture of the operations of its national economy. They also fail to provide

a true measure of the changes occurring over a period of time in the volume of production and in the level of economic welfare.

#### 4. The Restricted Market Production Concept

The restricted market production concept of national income is a compromise between the comprehensive production concept and the material production concept. In common with the first, it includes marketable services in national income, but it refuses to include the services of government and other collectives that are not controlled by market forces.

This concept uses marketability as the main criterion for the inclusion of products in national income on the ground that only those products have an objective economic value that pass through the market and whose value is determined by the free interplay of the forces of supply and demand. The services of government and other collectives are said to have no objective value, because both the supply of and the demand for them are determined by political forces or other pressures that may have nothing to do with the economic interests of the members of the society. The cost and utility of government services to society are not equated as neatly in the political or other collective processes as are the cost and utility of products in the market. There is no assurance that government services are worth the money expended upon them, and their inclusion in national income may give a wholly distorted picture of the true national product or income of the society.

This concept was employed, with some modifications, by Landau and Kalecki in their estimate of the national income of Poland for 1929; and by Matolcsy and Varga in their estimates for Hungary for 1924/25-1936/37.<sup>23</sup>

---

<sup>23</sup>/ Michael Kalecki and Judwig Landau, *Szacunek Dochodu Społecznego w.r. 1929*, Instytut Badania Konjunktur Gospodarczych, Warsaw, 1931; and Matolcsy and Varga, *op cit.*, pp. 4-7 (see also below Chapter 14, Section 1e and Chapter 34, Section II-12).



Under this concept, national income included all goods and services sold in the market as well as farmers' incomes in kind. The latter were included because they could be evaluated in the prices of identical goods and services sold in the market, and also because failure to include them would have resulted in an understatement of the incomes of the rural populations compared with those of urban groups. The services of government enterprises were included because they were sold in the market. In addition, the Polish estimators included two other items that did not fully square up with their adopted criteria: (1) public education, on the ground that education was also provided privately and, consequently, its value could be measured in terms of the market value of private education, and (2) the value of government investments, without any other explanation than that they "increase national wealth just as much as do private investments."

The restricted market production concept of national income has had limited acceptance. Except for Kalecki and Landau in Poland, and Matolcsy and Varga in Hungary, its only recent champion has been the German scholar, Otto Kraus.<sup>24</sup> The contention that political evaluation of services are not as objective as market evaluations is contradicted by innumerable examples. Government decisions in a free society may be as rational and objective as the private decisions of producers and consumers, and sometimes may be more so. They take into account the long-range interests of the members of society often much more closely than do the private decisions of consumers and producers meeting in the market. The services of government are frequently more useful economically and are worth more to society than alternative outlays for privately produced goods and services; e.g., public education, hygiene and sanitation, as against private expenditures for conspicuous consumption, not to speak of the expenditures for narcotics or vice. The one field of government activity,

<sup>24/</sup> Otto Kraus, Sozialprodukt und Volkseinkommen," Volkswirtschaftliche Schriften, Heft 3, Berlin, 1952, pp. 39 ff.

however, that defies rational evaluation is war. But even this activity, wasteful though it may seem in the long run, must be included in national income, if the concept of national income is to have any reality. The exclusion of government services, from whatever -- viewpoint, makes no sense.

#### 5. Conclusion

It is seen from the foregoing analysis that of the three production concepts of national income, the comprehensive production concept is by far the most rational, but that a number of unsolved problems regarding the exact scope of production to be included in national income are still to be dealt with.