THE TREATMENT OF INTEREST AND NET RENTS IN THE NATIONAL ACCOUNTS FRAMEWORK[1]

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The contention in this paper is that the present method of treating interest and net rents as transfers rather than as payments for services provided creates problems in the measurement of production by industry and that the difficulties encountered in explaining the treatment of interest items in the different tables of the National Accounts are even more apparent when one views the National Accounts framework as an integrated reflection of economic reality.

It is argued that the lending of money arises from the stretching out of the production and consumption process, and the interest charges constitute a charge for the administrative services and risk involved. This is somewhat analagous to the charges for hiring out real goods and services. A similar case is made for the treatment of rents with the exception of imputed net rent where it is contended that economic risk is incurred only when production is undertaken for sale and that there should be no entrepreneurial return where the production is for the use of the owner-producer.

It is suggested that an alternative treatment of interest and rents as payments for services is more realistic. Its adoption in the National Accounts would eliminate the need for imputations now made to account for the production of financial intermediaries, as well as the unconvincing explanations put forward for the present treatment of interest on consumer and public debt. Finally, it would serve to integrate the production accounts with the financial flows and the related financial structure.

The present method of classifying interest and net rents as transfers without a *quid pro quo* from the paying to the receiving industry in the national accounts measurement of industrial production runs counter to reality and causes many problems in the statistical measurement of economic activity. Although this problem permeates through many areas, the classic case occurs in the banking[2] industry where more interest is received than is paid out to depositors. Here, the conventional treatment of including interest paid as a factor of production and deducting interest received as a transfer leads to negative production being measured in this industry and conflicts with results in the real world where the intermediary functions performed by banks obviously do add to production. National accounts statisticians recognize this dilemma and attempt to solve it

1. The views expressed here are the responsibility of the writer only and should not be interpreted in any way as representing the official Canadian position.

2. See also, "Financial Intermediaries and Interest Paid by Business Firms to Banks", by C. Warburton, pp. 509–514, *A Critique of the U.S. Income and Product Accounts*, Studies in Income and Wealth, Volume 22 (Princeton, 1958).

by imputing production to the banking industry for "free services" provided to depositors, but this treatment raises further questions as to why "free services" are not recorded for other industries as well. It is contended in this paper that the "banking dilemma" of negative income originating arises from the present treatment of interest and would disappear with the acceptance of interest as a payment for an intermediate service.

There would be other implications as well. The amount of production created by specific industries would be different from what is now the case, even though total production would be relatively unchanged, apart from the removal of imputations. This would have an important bearing for productivity studies and for input-output relationships. There would also be important consequences for the relationship between production accounts and financial flow accounts, since it is impossible to integrate these two accounts at the present time with production accounts defining output inclusive of payments for capital employed regardless of ownership, while financial accounts trace flows on the basis of returns to capital provided. Obviously the two should match so that investment income coincides with investment, and payment with loan liability; at present neither is true.

All of these points will be elaborated below, but the most crucial issue, that interest and rents constitute payments for services provided by other industries or sectors and that they are not mere transfers without a *quid pro quo*, has to be discussed first. For if interest and rents can be shown to be payments for services rendered, then the associated production must originate in the industries supplying rather than the industries using the capital.

In what follows, it is argued that lending money is, in reality, the hiring out of claims on available resources. In a credit-oriented economy, the lack of *owned* resources need not frustrate consumption or production. This can be circumvented at a price, although it lengthens the process, so that money claims must first be borrowed before they can be used to acquire goods and services. The acquisition of money claims for a specified period through borrowing is a hired right to command real goods and services; the payment for this service is interest, and constitutes production. The hiring of money is analogous to the hiring of machines, the rental of property, or the purchase of other services.

As an economic system becomes more complex there is a growing need for organizing the division of labour and resources by the use of money. With the development of financial institutions and capital markets to facilitate the flow of credit from savings into investment or consumption, the lack of self-financing in initiating production becomes less of a hindrance. Financial intermediaries perform this function by funneling savings from many sources into a pool from which borrowers can obtain funds tailored to their particular requirements for the acquisition of capital or for consumption. The charge for obtaining and lending funds is interest, and the differential between the two rates covers the administrative costs and entrepreneurial risk undertaken by the financial intermediaries. Where the money is lent directly by the saver to the borrower, the administrative costs may be negligible so that the whole charge can be said to reflect a return on risk.

Rents can also be analysed in a similar manner. However, it should be noted that rental of machines has generally been accepted as a purchase of a service, and the reference here is to land or "space" rent. That the payment of gross rent is a package of many items is fairly obvious and needs little elaboration. Among others it implicitly includes property taxes, repairs, depreciation, fire insurance premiums, mortgage interest payments, hired management expenses, and janitorial and other facility services provided and paid for by the landlord. It also includes a residual difference between revenues and expenses called net rents. This net rent is an entrepreneurial return or profit in bringing all these elements together, for risk and for quasi-rent, much the same as profits in other service industries.

Suggested Treatment

The solution proposed in this paper of measuring value added in an industry by the addition of salaries and wages paid plus entrepreneurial income or profits and depreciation *without* any further adjustment would eliminate many problems existing in the present framework. In addition to the necessity of imputing bank interest noted earlier, these problems include the unsatisfactory explanations given for the deduction of interest on the public debt as unproductive and the widening rift between the production and the financial flows accounts. This proposal would enable a more realistic measurement to be made of output by industry, especially of the financial intermediaries, and would affect input-output relationships. It would also establish a closer link between the ownership of capital assets and the return from their use. The implications for these various areas are discussed below.

Interest flows within and between the business, personal and government sectors require special discussion. Within the business sector, interest and rental payments are intermediate costs of the firm (or industry) using these services and revenues of firms (or industries) supplying them. With the proposed treatment no special procedure is required for measuring value added of the financial intermediaries vis-à-vis the non-financial service industries. Thus banks, for example, record interest receipts as revenue, and interest payments as costs, to arrive at net profits in the same way as other service agencies record revenue and deduct costs. In both cases the value added is equal to labour costs, depreciation charged, and profit earned.

In contrast to the business sector, by convention, there are no accounts for netting cost against income in the government and personal sectors of the national accounts. Therefore, it is sometimes argued that if interest receipts were to be added to the income of persons and governments and if interest costs were to be treated as final expenditures in the same manner as other final outlays on services, changes in the amount of interest paid by the non-business sector vis-à-vis the business sector would alter the level of the gross national product, whereas this would not be true in the business sector where changes in either interest paid or received are taken care of by offsetting changes in profits.

This problem is peculiar to the personal and government sectors because by convention all expenditures of these sectors are defined as final, except for the statistician's unwillingness to accept interest payments on consumer debt and on public debt as final consumption. These latter items are rationalized as being economically unproductive,[3] the former on the grounds that it is for consumption and the latter, that much of it is used to service war debt for which the corresponding assets have been destroyed or are defined as current outlays rather than capital. It should be noted, however, that a large part of the public debt originates at the provincial, local and school district level of government for which this explanation simply does not hold.

An alternative way of looking at this problem would be to recognize that the basic question is not whether government and consumer debt interest is productive or unproductive but whether all of it is to be classified as intermediate expense or some part of it should be regarded as final consumption. In the government sector for example, at the present time, administrative expenses connected with paying interest are included with goods and services as final expenditure although the interest payment as such is treated as unproductive and deducted from gross national product. Similarly, a portion of consumer debt interest equivalent to administrative expenses is treated as final consumption and included with consumer expenditure, while the balance is deducted from gross national product, again as unproductive. It is suggested that the "unproductive" portions are really being treated as intermediate costs.

Turning now to the industrial classification of gross domestic product, the present practice is to classify the net rental income of persons to a "dummy industry" as a sub-group of the finance, insurance and real estate industry. A similar fictitious category is created for net imputed rent on owned buildings occupied by the government.

As explained further, under the proposed treatment, there would be no need to impute net rents on buildings owner-occupied by persons or governments. Net rents received by persons and governments from outside their respective sector, however, would be treated as business income from real estate operations. Similarly, interest received from outside the sector would be classified as investment income. If desired, these activities of persons and governments could be identified as separate sub-groups within the finance industry.

It should be noted that under the proposed treatment all intra-sector flows of interest with the exception of the portion regarded as final consumption would cancel out and only net flows between sectors would remain. As a matter of fact, much the same thing happens now in the national income accounts by the use of separate entries but without the benefit of rational explanation. The present practice is to show investment income of persons and governments explicitly as components of national income and make separate deductions for interest paid on the grounds that it is unproductive. On the product side the administrative expenses associated with servicing interest charges are regarded as final consumption and included while the interest payments are disregarded.

3. Only the "pure interest" portion of consumer debt interest is regarded as unproductive.

Effect on the Social Accounts

Changing the treatment of interest would have many side effects on the national accounts and related systems. These are explained in separate sections below.

1. *In the national product tables*

In the measurement of national income at factor cost, interest and rental costs of business are deducted before arriving at profits and net income so there is no problem here. Interest flows to individuals are now shown on a gross basis and this would not need to be changed, except perhaps for refinements in areas such as life insurance, where management and investment expenses are significant and should be deducted. The net interest and net rental income of business including banks are reflected in their profits, so that an imputation would not be necessary for the financial intermediaries. This will become evident further on in the discussion of the output of the financial intermediaries by the value added method. The payment of public debt interest to non-residents can in this context be also seen as a legitimate charge against national production for services provided by non-residents. It seems therefore that accepting this concept of interest will have a small effect on the level of gross national product from that shown at present in that only the imputation of banking services would be dropped.

There is, however, an associated problem connected with net rents on owner-occupied property which should probably be discussed here. At the present time, an amount of net rental income is imputed to owner-occupants on the grounds of maintaining certain types of comparability. First it is argued that it is desirable to maintain comparability through time of changes from tenant to owner occupancy or vice versa. Secondly, it is desirable to be able to compare spatially, i.e., between regions in a country or between countries, the consumption expenditures for shelter. Finally, it is desirable to compare market and non-market consumption, whether this comparison is between developed and under-developed economies or through time in developed economies, as the production of services changes from the private to the public sector or vice versa.

The argument for invariance to institutional changes seems particularly weak. Institutional changes are occurring constantly in a progressive economy. As an economy expands and becomes more specialized and affluent, habits of living and working change. People may eat out more often, purchase rather than make clothes, buy cars rather than ride buses and cabs (or vice versa), and a myriad of other changes which cannot be held constant in reality and should not be held constant statistically. The national accounts should reflect what is happening or has happened, not what might have happened if the institutional structure had not changed, and probably the most objective measures of economic reality are the transactions through the market. Moreover, comparisons through time can be made validly only on a constant dollar basis and this then becomes a matter of using appropriate deflators. A separate price deflator would be required for owner-occupied housing which would reflect all ground space rental costs such as changes in the price of mortgage interest, taxes, fire insurance, etc., but excluding any allowance for net rent whereas the deflator for paid rents would reflect changes in the total rents paid for space. This latter deflator would of course implicitly include a net rent component as a measure of the service provided by the landlord for the assumption of risk and the entrepreneurial effort in providing this service.

It is primarily the risk and the entrepreneurial effort of providing the right services at the right place at the right time at an acceptable price, which have to be paid for, that makes market transactions different from those performed by oneself. By imputing some non-market transactions, the national accountant opens the door to the possible recording of numerous functions and activities which persons perform for their own well-being but which are not designed for the market, although they have market counterparts. Thus the present practice has given rise to controversy whether or not an imputation should be made for housewives' services. One could think of many other areas for which similar cases could be made.

It is suggested here that the argument for imputation is invalid in those cases where the producer and consumer are co-terminal, and that there should be no imputation of net rent, profit or interest. Otherwise firms, individuals and governments selling to themselves could show enormous and unrealistic entreprenurial income. There is no risk in selling to oneself and no net return, only costs which have to be measured. By this reasoning, comparisons between market and non-market economies and through time where there is a switch between private and public production are invalid if a non-existent risk return is built into the figures. Dropping the net rental imputation on owner-occupied housing would lead to a more realistic reflection of what is happening in the economy and also be in line with the recommendations for dropping imputed net rents on government assets.

2. *Output by industry*

At the present time, income originating or net value contributed to gross domestic product by an industry is derived by summing wages and salaries paid, interest paid less interest received, plus profits and depreciation. Since industries other than the finance industry generally pay out more interest than they receive, the non-financial industries are shown as having a larger value added and the finance industry less than if the alternative method being suggested here were adopted.

It is generally conceded that the present method distorts industry contributions, but adjustments are not made on the grounds that the necessary data for adjustment are not available. Under the suggested approach, no adjustment to available data is required since value added would be calculated as being equivalent to wages and salaries, profits, and depreciation.

Similarly it is suggested that there needs to be no imputation for "free" services provided by banks to persons and government. The reason generally given for the imputation is that interest originating in the capital using industry is not fully paid out to the providers of capital, i.e., depositors. A part of it is trapped in the financial intermediaries and used to provide free services to depositors, which must be accounted for by imputation.

The need for an imputation can be circumvented as suggested by treating interest as a non-factor service payment. Thus industry pays interest for the use of borrowed capital to the banks. This forms the revenue of the banks from which they deduct costs including payments of interest to depositors leaving a residual of profits, much the same as in any other industry.

The value added by banks is measured in the same way as value added in other industries, i.e., by summing wages and salaries paid, profits and depreciation. There is no imputation and no free services. The banks collect small amounts of capital from numerous savers wanting liquidity and safety and who are willing to accept a lower rate of return than if they invested directly. The banks gather these amounts into a pool from which large loans can be tailored to borrowers' specific requirements. The risk and management skill provided by banks is reflected in their profits and this plus their labour costs are their contribution to production.

3. *Input-Output Productivity*

It is sometimes argued that the present method of measuring industry output using interest paid less interest received is necessary for measuring the proper relative contribution of labour and capital input into an industry, since the resulting output figures do not vary with the source of capital used, whether this was supplied internally by the firm or borrowed. This enables the derivation of stable relationships, and the calculation of productivity of labour and/or capital and the ease with which one can be substituted for another. A concept that allows the measurement of labour and capital use and productivity is certainly attractive, but it can be shown that the present method only *seems* to measure these things. Correct results of labour and capital use and productivity are not being obtained now nor can they be obtained with the present methods, since these misrepresent institutional practices and industrial structure in which production takes place.

That capital (or labour) use as related to the output of particular commodities is not being correctly measured now can be illustrated by a simplified example. Let us take the case of two firms A and B in the shoemaking industry, both of which turn out identical pairs of shoes, but firms A and B are organized differently. Assume that firm A uses its own basic materials, its own capital, and its own plant and equipment and hires only labour. Assume that firm B does as little processing as possible and uses a minimum of capital, i.e., it buys all its services and rents plant and equipment and borrows money for current operations and other needs. In this illustration, therefore, it will require more direct capital and labour to operate plant A than plant B. Now assume further that total labour and capital inputs into the two pairs of shoes are also the same; therefore in the case of firm A all the inputs are concentrated in the shoemaking industry, whereas in case B, they are diffused through all the supplying industries. Clearly only if all the numerous services that are required by any undertaking are all provided by one establishment can full labour and capital input into particular commodities and the productivity with which they are used be evaluated. In a technologically complex world, this is not the case since the organization of firms varies across a whole spectrum. Therefore, the present adjustment for taking interest paid into the capital-using industry on the grounds that it reflects more correctly the use of capital in an industry is only of nominal significance as it ignores the much more important role of materials and services purchased from other industries.

It is recognized that the proposed concept of net value added derived by treating gross interest paid as an intermediate service and net interest received as an integral part of profits is not a substitute for obtaining the amount of labour and capital used for making particular commodities; this cannot be obtained by either method. What can be obtained is the amount of capital and labour used by particular industries for all of their activities. These activities include not only their manufacturing operations but also their investment activity including renting to themselves or to others. The return to capital is measured by their profits; their non-factor costs will include interest and rents paid for the use of borrowed capital and hired plant and equipment as well as other purchased services and raw materials.

The Effect on the Financial Flows Accounts

The financial flows accounts measure the changes in the structure of financial instruments and claims. A sector's asset and liability structure may reflect many objectives. In the business sector, for example, the creation of a particular production framework may be used to take advantage of available economic opportunities with given resources, while in the personal sector a particular income level may be related to a given risk and liquidity position or attempts to take advantage of particular situations such as tax laws, etc. The revenues from a particular combination of assets are reflected in the receipts of interest, rents, and profits, while interest payments are related to mortgages, bank loans, funded debt and other liabilities. Thus, changes in the sector's aggregate balance sheet can be related to changes in its investment income. The proposed treatment of interest and rents would relate the returns from value added to the structure of the balance sheet and *changes* in investment income to changes in the financial structure, apart from revaluation or other adjustments.

Thus it can be seen that production and the financial structure as well as the distribution of income are inter-related parts of the same framework. The proposed concept of interest reflects this integrated identity, whereas at the present time interest paid by an industry cannot be related to its liabilities nor can its income be related to its assets.

This is perhaps the most basic criticism of the present treatment of interest, that it divorces the production from the financing aspect. In the real world these two are integral parts of a whole and cannot be separated. Under the present conceptual framework, a firm or an industry can have excellent technological relationships and high productivity as measured by the present methods, that is deriving value added as equal to wages and salaries plus profits (or losses) and interest *paid*, but it can go bankrupt because it cannot meet its interest charges.

Finally, it is sometimes contended that interest and dividends are not unlike since they are both returns to ownership. The risk and entrepreneurial skill in investing in the right stock is not dissimilar to selecting an appropriate debt instrument. Moreover, in the case of firms whose stock is widely dispersed in small holdings, the influence exercised by an individual holder of equity is insignificant and may be considerably less than that of the lender of a large sum of money to an individual firm.

This is not to be denied, but it misses the essential difference between interest and dividends. As explained above interest is the cost of obtaining money from someone *else* and has to be met, whereas dividends are a distribution of a residual return to one's own capital. Interest *has* to be met if a firm wishes to survive; dividend disbursements are a transfer at the discretion of management, although in some cases such as preferred stock, the transfer may be contractual.

Conclusion

1. It is contended that the present treatment of including interest paid as a part of value added misrepresents economic reality. Interest paid should be classified as an intermediate cost and interest received as revenue, which in the case of business is reflected in its profits.

2. A change in the present treatment will affect measurement by industry of real and current output, productivity, and input-output. The effect on the national product and expenditure tables should be small.

3. All of the interest paid on consumer debt, with the exception of the part regarded as final consumption, would be deducted from national income as at present.

4. The interest on government debt could be treated as a payment for an intermediate service, as at present. This would entail no change from the present procedures.

5. The real estate rental sub-group of finance should be expanded to include the net interest income of persons as well as income from net rents.

6. The imputation of interest paid by banks and trust companies to persons and government can be dropped by implementing this proposal.

7. It is suggested that the imputation of net rent on owner-occupied homes should also be eliminated.

L'idée maîtresse de cet article est que la méthode actuelle de considérer intérêt et rentes nettes comme paiements de transferts et non comme paiements pour services rendus crée certaines difficultés dans l'évaluation de la production par industrie, et aussi que les difficultés encourues en définissant les postes d'intérêts dans les différents tableaux des comptes de la nation ressortent encore plus lorsqu'on considère le cadre des comptes de la nation comme une vue intégrée de la réalité économique.

Il est proposé que le prêt monétaire découle de l'élargissement du processus de production et de consommation, et que les intérêts constituent un coût défrayant les services administratifs et le risque encouru. Ceci est, en quelque sorte, analogue au coût de location des biens et services. Une proposition semblable est faite en ce qui concerne le traitement des rentes, à l'exception de la rente nette imputée, où il est prétendu qu'il y a risque économique seulement lorsque la production est réalisée en vue de la vente et non en vue d'être consommée par son propriétaire.

Il est suggéré qu'un traitement différent de l'intérêt et de la rente serait plus réaliste. Son adoption dans les comptes de la nation éliminerait le besoin d'imputer la production des intermédiaires financiers ainsi que les explications insatisfaisantes que l'on donne au traitement actuel de l'intérêt sur la dette des consommateurs et la dette publique. Enfin cela permettrait l'intégration des comptes de production, des flux financiers et de leurs structures financières.