

AN ALTERNATIVE TO THE CURRENT TREATMENT OF INTEREST AS TRANSFER IN THE UNITED NATIONS AND CANADIAN SYSTEMS OF NATIONAL ACCOUNTS

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The United Nations (SNA) and the Canadian (CSNA) Systems of National Accounts treat interest as a factor return to capital. The difficulties arising from the use of this concept cast doubt upon the basic premise. For example if the usual method of measuring value added by the summation of primary inputs is applied to industries mainly engaged in the lending of money, the results show negative production. This has led to the necessity of imputing bank interest in order to avoid negative income originating in the banking industry. Arguments are being put forward to extend this practice to certain other financial non-bank areas as well to offset the negative product emerging with increasing frequency as a result of higher levels of interest transactions.

The proposed alternative is based on the contention that interest paid and received for the borrowing and lending of money should be treated in the same manner as the purchase and sale of other services. For the production accounts, for example, this would mean that interest paid by business would be treated as an intermediate expense of the paying industry and as revenue of the receiving industry. The adoption of this approach would therefore eliminate the need for the imputation of banking services and clear up the ambiguities encountered in treating interest on the public and consumer debt, issues which are also not unrelated to the present treatment of interest.

I. INTRODUCTION

Currently the National Accounts adhere to the concept of interest as a factor return to capital. The implementation of this concept raises a number of difficulties in both the United Nations (SNA) and the Canadian (CSNA) Systems of National Accounts. These difficulties and the *ad hoc* ways in which they have been resolved cast doubt upon the basic premise of interest as a factor return. In both these systems, for example, if the usual method of measuring industry value added by the summation of primary inputs is applied to industries mainly engaged in the lending of money, the results show negative production. To circumvent such a result, in the group "Banks and similar financial intermediaries" an imputation for banking services has been devised. Other difficulties arise from the fact that some interest items, such as interest paid on public debt and part of the interest on consumer debt, are excluded from the measurement of production whereas other interest, such as that on business debt, is included.

The problems of negative production arising from the current concept of interest and the differential treatment of interest among different sectors of the accounts led to the development of an alternative approach to interest, which is examined and presented in this paper. This alternative is based on the contention

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that interest paid for the use of borrowed money¹ must be considered in the same context as purchases of other commodities². The application of this concept alleviates the need for *ad hoc* solutions such as the imputation of banking services and provides a rationale which can be consistently applied to interest transactions across all industries and across all sectors.

The paper is organized as follows: section 2 describes the current treatment of interest in the SNA and the CSNA; section 3 describes the proposed approach and the implications of applying it and section 4 is the conclusion. There is also an appendix which identifies the changes to the SNA input-output tables flowing from the proposed approach.

2. CURRENT TREATMENT OF INTEREST

2.1. *Treatment in the SNA and CSNA*

It should be noted at the outset that while the United Nations and the Canadian Systems of National Accounts³ share the same basic theoretical underpinnings and concepts, there are some differences in the emphasis on the measurement of production. While the differences do not modify or alter the proposal presented in the paper, nevertheless, it is useful to identify some of the characteristics which differentiate the two systems, inasmuch as they represent alternative but equally valid methods for the derivation of Gross National/Domestic Product.

The primary account in the SNA is Gross Domestic Product (GDP). The theoretical basis of this account is value added, derived from industry and commodity data and arranged in an input-output matrix. Hence, in the SNA, the decision as to whether interest is a primary input or a service payment must be made in the industry production accounts. The sector entries dealing with the source and disposition of production then fall logically into place.

In the SNA production accounts, operating surplus and compensation of employees form the factor income components of value added by industry. By calculating operating surplus before deducting interest payments the segment of production represented by interest paid is assigned to the industry borrowing and using the money rather than to the industry lending it. The interest paid by one industry to another on money borrowed in the course of production is treated, in effect, as a transfer, and it is disregarded as an operating revenue of the industry generating the funds.

The main CSNA accounts, on the other hand, focus on national production, using the income and expenditure approach to derive Gross National Product (GNP). It is with reference to entries in these accounts, therefore, that the

¹Economists are not in agreement on a precise definition of money. In the context of this paper, in general terms, anything that performs the function of money is money.

²For an excellent discussion of the view that in the National Accounts interest is a service payment for borrowed money as opposed to a factor return to capital see: Clark Warburton, *Financial Intermediaries and Interest Paid by Business Firms to Banks*, in *A Critique of the United States Income and Product Accounts*, *Studies in Income and Wealth*, Vol. 22, pp. 509–521, Princeton University Press, 1958.

³United Nations, Statistical Office, *A System of National Accounts*, Ser. F, No. 2, Rev. 3, New York, 1968.

Statistics Canada, *National Income and Expenditure Accounts*, Vol. 3, p. 73, (Catalogue, I3-549E Occasional), Information Canada, Ottawa 1975.

conceptual issue of interest in the CSNA is discussed, although the Canadian system does have highly developed input–output and industry-output accounts. With respect to the CSNA, therefore, the question of an appropriate treatment of interest is more complex and elusive because CSNA's core, the income and outlay accounts, provides aggregates of national product outside the framework of industries or commodities. As the interest entries appear in a more aggregated form, they are not as easily identified. This is a mechanical problem of the CSNA, however, and does not present any barrier to the general application of the proposals made in this paper.

With respect to the treatment of interest the CSNA actually goes a step further than the SNA in that it explicitly distinguishes particular interest items as productive or unproductive. Productive interest includes interest payments of the business sector (including government business enterprises), mortgage interest payments of households,⁴ that part of interest on consumer debt required to cover costs of administration, and public debt interest payments to nonresidents. Unproductive interest, on the other hand, includes the remaining interest on consumer debt (defined as the transfer portion) and all interest on public debt paid to residents.

2.2. *Conceptual Aspects of the Current Approach*

In the SNA interest paid is a component of property income, which together with entrepreneurial income forms the aggregate, operating surplus. Operating surplus is considered to be a primary input in the production accounts and factor income in the income and outlay accounts. Property income is defined in the SNA as actual and imputed transfers of income resulting from the use by one economic agent of assets owned by another economic agent. Examples given of the common types of property income are interest, dividends, net rents, royalties, and payments for the use of copyrights and similar rights. Thus interest paid is treated as a primary input (factor cost) in the derivation of value added of the industry borrowing the money and as transfer income of the lender.

While the SNA does not provide any rationale for its treatment of interest, it appears that it may be based on reasoning such as that furnished by Kuznets:

Enterprises can act not only as producing entities but also as ownership units. A corporation may receive dividends and interest from other business enterprises, and in turn pay dividends and interest to them . . . If the payment is to the enterprise as a producer, the net income to which it gives rise may be considered to originate in the receiving enterprise. But if the payment is to the enterprise purely as an owner, the net income to which it gives rise obviously originates in the paying enterprise . . . Accordingly, in establishing net income originating in a given economic unit we must subtract from its gross receipts not only the cost of goods consumed but also the part of the gross receipts that represents compensation for pure ownership.⁵

⁴The household sector is assumed to include private nonprofit organizations.

⁵Simon Kuznets, *National Income and its Composition, 1919–1938*, Vol. 1, p. 74, National Bureau of Economic Research, New York, 1941.

Admittedly, while there is some merit in Kuznet's contention that interest is a return to ownership, his analysis appears to have overlooked a serious weakness which surfaces in implementing this concept in the industry accounts. The weakness is that treating interest as a primary input of the borrowing industry and as a transfer of property income to the lending industry does not recognize that the generation and continued provision of loanable funds entail costs and risks to the lender which are met from interest revenue.

Thus, although in practice the lending industry may be operating at a profit, on a national accounts basis its net interest income is not recognized as operating revenue, and since there are expenses associated with lending this may result in an operating loss and negative value added in the lending industry. For the groups "Banks and similar financial intermediaries", the SNA remedy has been to bypass the actual market-negotiated receipts of interest, treating them as transfers, and create a synthetic revenue item for imputed banking services. Then, in order that the value of total production will not be affected by this adjustment, a synthetic intermediate expense for imputed banking charges is made to a nominal industry in finance created specifically for that purpose.

The understatement of value added associated with lending is not restricted only to financial intermediaries and banks, where interest constitutes a significant portion of revenue, but occurs in all lending transactions, even though interest earned may be marginal to the industry's primary activity as in the case of manufacturing and trade. In these latter cases, however, as interest is a small portion of total revenue and expenditure, the understatement of value added does not surface and, therefore, is not readily apparent as a statistical problem.

Another difficulty which has to be dealt with in the current approach arises from the principle that like items should be treated in a like manner. Thus, if interest paid along with profits (as part of operating surplus) and employee compensation are factor returns, then the treatment of interest paid should be consistent with that accorded to labour income. In the case of labour income, for example, expenses incurred in supplying it to market, such as food, shelter and clothing are treated as final consumption. Thus comparable treatment would suggest that expenses of the lending industries associated with the generation and provision of funds as interest should also be treated as consumption rather than as intermediate expenses. This conclusion, flowing from the current approach, is incompatible with national accounts concepts as these do not recognize operating expenses as enterprise consumption. The adoption of the proposed approach, however, would mean that in the production accounts interest paid by business would be treated as an intermediate expense of the paying industry and as operating revenue in the receiving industry, thereby alleviating the difficulties arising from the current treatment. This approach is explained in considerable detail in the sections following.

3. PROPOSED APPROACH

The proposed approach is based on the contention that interest paid for the use of borrowed money must be considered a payment for a service. A rationale

for this approach can be found by examining the role of borrowed funds in the financing of production and expenditure.

With regard to the role of money in production, production must be interpreted as being far more complex than is implied by the classical model which treats production simply as a physical process of transforming input to output. Recognition must be given to such key elements as time expended to search for, discover, and recognize new opportunities and markets, develop sources of supply, acquire production facilities, hire labour, purchase reserves of materials and spare parts and arrange distribution channels to market products. This means that the entrepreneur must have flexibility to arrange and rearrange combinations of labour, equipment and material. Operating viability also requires the provision of sufficient cash reserves to weather changing and unexpected circumstances such as cyclical downturns, and to overcome strikes, shortages and breakdowns. All these contingencies and characteristics of the production process require that the entrepreneur have at his disposal a sufficient pool of capital to meet both the challenge of the market-place and other uncertainties arising from the daily operations of a business enterprise. As all the required capital cannot usually be generated internally, the entrepreneur must resort to external sources to meet his requirements.

This generally takes the form of financing either through debt, equity or some combination thereof. If debt is employed as the preferred vehicle for raising external capital, interest charges associated with its issuance become a necessary part of operating expenses or a part of capital formation.

With respect to the final expenditure side of the National Accounts, interest charged for financing should not be interpreted as being in any way different from the price paid for other commodities. At the household level, by permitting the consumer to purchase immediately rather than waiting until requisite funds have been accumulated, the borrower is provided with a service for which an interest payment must be made. Conversely, the lender is compensated for deferring his own expenditures, for the opportunity cost of his funds and for the assumption of risk.

This section will explore further the implications of applying the proposed approach, specifically, in terms of: (1) the role of financial institutions and the imputation of a bank service charge in lieu of interest; (2) the treatment of interest on the public debt; (3) the treatment of non-business-sector interest; and (4) other issues such as the distinction between dividends and interest, the double-counting of interest, inter-governmental interest transactions, the treatment of the central bank, and the deflation of interest.

3.1. Role of Financial Institutions and the Imputation of Bank Interest

The contention that interest is paid in exchange for services generated by productive activity can best be appreciated by examining the functions of financial institutions such as banks. In any period of time, there are numerous households and others with funds in excess of those required for consumption. The owners of these funds generally entrust them to financial institutions to earn income and for reasons of convenience and safety. The funds may be deposited in chequing

or savings accounts or lodged in short- or long-term deposit vehicles. The size and length of period of deposit will vary, depending on depositors' needs. At the same time, there are many potential borrowers with different degrees of security and risk, with demands for loans which vary by amount and time required.

Financial institutions bring together available funds and pool them to provide loans tailored to borrowers' requirements. The packaging of available funds, the transforming of maturities and tailoring of loans to requirements of borrowers are some of the major functions of financial institutions. For this, financial institutions levy charges to cover the payment of interest to depositors, the cost of administering loans and the assumption of risk. Financial institutions thus are in the business of processing pools of money and transforming lending maturities, just as manufacturers are in the business of processing raw materials and intermediate inputs to finished products.

The SNA, however, has not recognized this financial activity as production, thereby giving rise to a problem which becomes most evident in banking. In the SNA, because value added is derived through the addition of interest paid and the deduction of interest received, and since banks generally receive more interest than they pay out, the calculation usually leads to negative value added in banking. This negative result is circumvented by adding an amount of imputed service charge equivalent to the difference between actual interest paid and received, in addition to the charges actually made. It is argued that the imputed interest paid represents a theoretical service charge that ought to be allocated as intermediate expenditure to the nonfinancial industries,⁶ with a part of it as final expenditure of government and households.⁷ Within the SNA, however, the imputed service charges are not made to the nonfinancial industries but to a dummy subgroup within the finance industry. Since the dummy subgroup does not have any revenue of its own, it is left with a negative operating surplus and consequently, negative value added. On consolidation, however, value added of the finance industry is left unchanged.⁸

The justification for the "banking imputation" is based on the notion that banks are "short-circuiting" the market process—i.e. banks use deposits to generate loans, undertake investments, etc.—and, therefore, the full interest on loans should accrue to depositors. Instead of crediting this full amount to depositors, it is contended that the banks withhold a portion to compensate for services

⁶The difficulties of making this allocation were apparent to the experts in the preparation of the 1968 revised SNA, as at one stage they proposed abandoning the imputation altogether. See para. 16, "In view of the practical difficulties involved in the imputation of bank service charges, abandonment of this imputation is proposed. Actual service charges would, however be recorded in the production account of banks. On practical grounds also, surcharges on hire-purchase or instalment sales to households are not to be decomposed into interest and service charge elements. The entire surcharge would be treated as a service charge." *A System of National Accounts (Proposals for the Revision of SNA, 1952)* E/CN 3/320, 9 February 1965, Statistical Commission, Thirteenth Session, p. 150.

⁷This is the current practice in the Canadian System of National Accounts. It is difficult to perceive, however, how the synthetic reallocation of the service charge is economically more meaningful than that resulting from the interplay of actual transactions in the market between lenders, borrowers and depositors.

⁸For a further discussion of the rationale underlying the imputation issue, see: *A System of National Accounts*, op. cit., p. 97.

provided free. The imputation makes up for the “true” cost of services which the banks would have to levy if they were to pass on in full the total amount of interest received.⁹

It is argued that following the SNA treatment of interest of adding an imputed amount equal to the difference between interest paid and received to the banking sector and offsetting it by an equivalent charge to a dummy subgroup of finance solves the “banking dilemma” and, therefore, it is not necessary to change the treatment of interest to a service transaction. A further refinement is suggested to get around having a “dummy” subgroup and that is to distribute the imputed service charge back to the different industries and add the interest imputations to industries receiving significant amounts of interest, both on the basis of proxy indicators reflecting amounts of funds borrowed and loaned at interest.

In rebuttal, two points have to be made. First, the creation of a dummy subgroup substitutes a statistical device, at a macro perspective, for the market-determined innumerable individual transactions of interest paid and received negotiated by direct assessments of credit worthiness, availability of funds and competitive interest rates.

Secondly, the estimates of imputed interest and service charges, calculated by use of deposits, maturities and interest rates as proxy indicators, are derived to approximate the presumed exchange of nonmonetary service and income that occurs in the transaction between the banks and their depositors and borrowers. Theoretically, these estimates should approach the figures obtained directly by treating interest paid as a service charge and interest received as service revenue. It would, therefore seem logical to obtain the interest data directly and reexamine the concept of interest as a transfer, thereby avoiding the indirect techniques. An added benefit to viewing interest as a service transaction is that this approach conforms to the business treatment of interest and yields actual transaction data.

Although it might be argued that reserve ratios and the role of the banking system in the generation of money make banks unique, it is the contention of this paper that the business operations of banks are not significantly different from those of other enterprises. As with other enterprises, the banks combine the various inputs to produce outputs, compete with each other and with other financial institutions, e.g. trust companies, credit unions, mortgage companies, etc., and offer a number of noninterest services to attract both depositors and lenders. Accordingly, banks’ practices of providing certain services without explicit charge are normal to competitive business operations and there is no justification for imputing “free” services, either as income or as a charge to depositors and borrowers.

3.2. Treatment of Interest on the Public Debt

Adoption of the proposed approach would mean that interest paid on the public debt, currently deemed to be a transfer, would be treated as productive.

⁹Dwight B. Yntema, National Income Originating in Financial Intermediaries, in *Conference on Research in Income and Wealth, Studies in Income and Wealth*, Vol. 10, pp. 35–43, National Bureau of Economic Research, New York, 1947.

Historically, a number of reasons have been developed to justify the treatment of interest on the public debt as a transfer. These reasons and counter-arguments are presented below.

3.2.1. It has been argued that much of the interest paid by government was generated by public debt incurred for the acquisition of nonproductive assets such as war equipment, for meeting deficits in periods of depressed economic conditions, or for redistributing income. With respect to war debt specifically, because military equipment was either quickly destroyed or was not suitable for peace-time production, the short life-span of war assets meant that there was virtually no continuing physical capital counterpart to that debt. Parenthetically, interest payments on state (provincial) and local debt have been excluded on the grounds that a major part of that debt was incurred in prior years and did not necessarily have any counterpart in existing public capital or current services. It was pointed out that this situation is not comparable to that in the business sector where interest payments on noncurrent debt are covered by the flow of production generated, and the size and maturity period of the debt generally bears some relationship to the physical capital purchased with money raised through long-term loans.

In response, as interest is a payment for the continued use of borrowed money, there is no need to match the physical capital to the debt incurred for its financing. The use to which government puts its borrowed funds, whether for the acquisition of physical capital, to hold as cash in reserve or to meet current expenditures, is irrelevant; the essential consideration is that the existence of the loan provides an economic service which is represented by the payment of interest. The recent statement made by the Ruggleses would appear to be relevant here. "The difference between a transfer payment and the purchase of a service rests on the question of *whether a service is performed in the current period, not on whether the service is used*" (emphasis added).¹⁰

The contention that interest paid on the public debt is a transfer raises questions as to the implications of this position. The CSNA defines a transfer payment as an unrequited transfer of income from one sector to another with no quid pro quo.^{11,12} Using this criterion, it is evident that interest paid on the public debt could not qualify as a transfer since governments raise money on the open market, in competition with other borrowers and at competitive rates, on the promise to pay interest to the lenders in exchange for giving up use of their money over the period of the loan. Interest is not like taxes, welfare payments or other government transfers where the amount of the payment is set unilaterally by legislation. The taxpayers have no choice but to pay and in the case of welfare benefits, the recipients qualify simply by meeting particular categorical requirements. In contradistinction, in the case of interest transactions both lenders and

¹⁰Richard Ruggles and Nancy D. Ruggles, *Integrated Economic Accounts for the United States, 1947-80, Survey of Current Business*, Vol. 62, no. 5, 1982, p. 16

¹¹Statistics Canada, *National Income and Expenditure Accounts*, op. cit., p. 73.

¹²The SNA (p. 24 of its reference document) has a category of required transfers but it is difficult to justify its application to interest. It could be argued that taxes, fees, permits, etc. are required transfers but these transactions are primarily based on other than market considerations.

borrowers are free to enter, continue or terminate loan transactions in light of prevailing market conditions.

3.2.2. Another set of arguments for excluding interest paid on the public debt from production emerges from the following statement in the reference document on the Canadian National Accounts.

... The National Income should not vary simply because of changes in techniques of government financing. In other words, National Income should not rise simply because the government finances its operations through borrowing rather than taxation; and it should not fall, on the other hand, if a shift occurs in the other direction, from borrowing to taxation. It may be noted that this problem does not arise in the case of a business firm, where a change in the method of financing will not affect National Income because of offsetting adjustments in profits. Any resort to borrowing by business will cause the interest content of National Income to rise, but at the same time will bring about a corresponding reduction in profits, leaving the National Income unchanged.¹³

In response to the general argument that National Income should be invariant to changes in techniques of financing it should be pointed out that although this argument may have some validity in considering aggregate production, the argument is not relevant when measuring production of individual industries. The reason is that value added is based on an industry's use of primary inputs, and that is why the use of outside resources from other industries is excluded as a cost from its gross output. It follows, therefore, that an industry using its own funds to finance production should have a different value added compared to one relying on borrowed money. In parallel to the above argument government finances expenditures by either taxation or borrowing from the public or the central bank, or by some combination thereof. In each of these cases, the effect on production, prices and expenditures is different and at the market price level the National Accounts should reflect the impact on the economy of different modes of government financing, and in certain cases it does. Changes in the level of indirect taxes, for example, do affect the recording of production at market prices, whereas changes in direct taxes do not. It is contended, therefore, that if it is acceptable to have variations in the form of tax financing affect the valuation of production, then it should be equally valid to recognize those brought about by switching between borrowing and taxation. As interest, under the proposed approach, represents a payment for service then more or less borrowing should be reflected in the level of overall output.

3.3. *Treatment of Interest Received by Non-Business*

Under the proposed approach, three options are available for treating interest paid by business to government and households. These are: (1) to treat interest received by government and households as a payment by industry for a primary input; (2) to consider interest as a primary input but route it through the finance industry; and (3) to regard this interest as production of both the household and government sectors. These approaches are explained in detail below.

¹³Op. cit., p. 73.

3.3.1. Households and Government Interest Income as Primary Input

The first option would be to treat interest received by business as a revenue from service transactions and that received by households and government like wages and salaries; that is, to consider it as primary input and, in effect, continue to have it counted in production of the industry paying it. This distinction between interest paid to business and that paid to nonbusiness sectors rests on the fundamental assumption that, as the latter are not in business, by definition, they cannot contribute other than primary services to production. This proposition, however, gives rise to serious conceptual and statistical objections inasmuch as changes in industry value added may result as debt instruments change ownership from business to the nonbusiness sector and *vice versa*, often many times a day on the basis of telephone instructions.

3.3.2. Household and Government Interest Income Activity Classified as Subgroups of the Finance Industry

One way of avoiding the objection noted in the previous section would be to treat the interest income of households and government as revenue from business activity, and route it through the subgroups of the finance industry. This procedure would be the same as the routing of rental activity of owner-occupied households through the real estate industry. While creating a separate subgroup to reflect the investment activity of households appears as an attractive and feasible solution for identifying this contribution to value added, it generates another apparent anomaly; that is, if the earning of interest by households is to be considered a business transaction, it could reasonably be argued that the earning of wages and salaries in return for labour services could also be considered as a business transaction. If this were to be the case, however, all wages and salaries would be grouped in a newly-created household labour industry and left out of value added of any other industry. This would have serious implications for the definition of production by industry, and, *reductio ad absurdum* could lead to households being viewed primarily as producers rather than as consumers. Apparently, Kuznets seemed aware of this possibility half a century ago.

What then prevents us from classifying each wage earner as a separate economic enterprise whose primary purpose is to render labour services at the highest possible price? If this were done the net value of products turned out by a factory would have to exclude wages paid to wage earners, since such payments would represent the value of consumed products of other enterprises. Instead we would have to add the net value of products of the various enterprises called wage earners. This net value would equal not the full amount of wages received (the gross value of the product of these wage-earning enterprises), but wages minus the cost of products wage-earning enterprises buy from other enterprises and consume in the process of producing labour power (food, clothing and other means of maintenance and reproduction). Consequently, this extension of the concept of enterprise would materially reduce both the net value of goods produced by the economic system and national income This extension of the concept of enterprise widens the scope

of intermediate consumption of goods for the purpose of producing other goods, at the expense of ultimate consumption, i.e. consumption for carrying on life in its broadest aspects; and reduces the net national product or national income to that exceedingly minor magnitude that may be considered as not involved in the replacement of all goods, human capacity included, consumed in the process of economic production.

No purely analytical or empirical consideration can invalidate this extension of the concept of enterprise: it is largely a terminological question. But were this extension made and national income given the narrow scope and meaning, it would no longer reflect prevailing notions of the distinction between economic activity and life in general; . . .¹⁴

Further, just as for households, it has also been suggested that the interest earning activities of general government be segregated to a separate industry subgroup of finance—the argument being that general government receives substantial amounts of interest in their extra-budgetary funds, such as superannuation, pensions, and from certain programs, e.g. student loans. In this case, were some of these activities of general government included within the business sector, the blurring of characteristics separating the sectors would make the industry production data less useful for analysis.

3.3.3. Interest Received as Non-Business Production of Households and Government

This approach explicitly recognizes the interest received by households and government as economic production. Taking this perspective, the National Accounts treatment of interest would be consistent with the prevailing view of many economists that some legitimate production, apart from the provision of labour service, does occur in the household and government sectors—notwithstanding that the operations of these sectors are not organized on a business basis, that is, the *raison d'être* of their operations is not primarily for profit nor are their exchanges always captured as market transactions.

While it might be argued that no reason is given to exclude wages and salaries and include interest received in the nonbusiness sector production accounts, there are some grounds for making such a distinction. First, as Kuznets¹⁵ has pointed out, what is included in the household sector is largely a terminological question although the term household might have been interpreted rather loosely. A more rigorous scrutiny indicates, however, that Kuznet's analysis refers principally to the provision of labour as a primary input. This is also supported by the fact that the concept of labour as a factor of production is rooted in classical economics, whereas the treatment of interest has been less certain. Second, it can be argued that labour involves management by the employing industry, whereas interest received by the nonbusiness sector is at the latter's own responsibility and risk and more akin to profits. In conclusion, it would appear that this third

¹⁴Kuznets, *op. cit.*, pp. 36–37.

¹⁵*Ibid.*, p. 73.

approach permits the most practical, and is theoretically the most consistent solution to the treatment of interest in the National Accounts and is therefore recommended. It also can easily be incorporated in the SNA input–output framework with some slight modifications (see Tables 3.1 and 3.2 in the technical appendix for details).

3.4. *Other Issues*

3.4.1. Difference between Dividends and Interest

Criticism may be directed at the SNA in particular for grouping dividends and interest in the same category of property income. This grouping implies that there is no qualitative difference between the two as dividends and interest both represent return to capital. This treatment, however, is open to question and calls for refutation.

In the case of financing through equity, as the owners and users of capital are the same, there is no transaction *per se*. In effect, the profit and its allocation through dividends must be interpreted as a nonmarket transaction, a redistribution of the shareholders' net return. In contrast, in debt financing, the owners of wealth and those who put it to use in direct production are no longer the same. The borrower must now acquire needed capital from the lender, on the basis of a promise to pay an interest charge over a specified time for the capital's use, and to repay the principal at the end of the contract period. As long as conditions under which borrowing obligations undertaken are met, the lender does not have any ownership right to the assets pledged as collateral; nor does he have any claim to the income generated by the use of the funds. Theoretically, therefore, interest cannot in any way be categorized as dividends as the lender, unlike the shareholder, has only a contingent, not a direct legal claim on the assets pledged. In the real world, however, the multiplicity of features associated with debt and equity instruments often make it difficult to distinguish clearly between one and the other and in addition, the influence of the owner is sometimes indistinguishable from that of the lender. In any event, it is the owner who always faces the residual risks and reaps the ultimate benefits. Thus, as with other contentious classification problems which arise in national income accounting, judgements will also be required with respect to the classification of specific instruments.

3.4.2. Interest as a Service Payment—Double Counting?

It is sometimes argued that including interest on loans, bonds, mortgages and other financial instruments issued to finance physical capital would, in reality, be a duplication of what already is measured in the National Accounts. The reason given is that physical capital formation and allowances for capital consumption are already included in the measurement of production. This view arises from a misconception both of the nature of financial instruments and of interest. Financial instruments are no more than legal confirmation that financial vehicles, denominated in money, have been exchanged for money. These instruments specify terms and conditions as to repayment of principal, the debt servicing of the loan and the legal actions that can be taken if these conditions are not

met. The interest payment, on the other hand, is the service charge for the continued availability of the funds turned over to the borrower as principal. The interest, therefore, is not a duplication of the service provided by the physical capital, as the latter is already accounted for by capital consumption allowances, but a charge for the use of borrowed money to finance production.

3.4.3. Inter-Governmental Interest Transactions

Under the proposed approach, transactions between different levels of government, between government and those agencies which have authority to borrow and invest independently, and special funds would be recognized as independent transactions in the same manner as transactions between one independent firm and another in the business sector. This would be a change from the current practice where, on a National Accounts basis, the transactions of agencies and special funds are consolidated within the general government sector and as a consequence, internal flows of interest between government and its agencies and special funds are netted out.

3.4.4. Treatment of the Central Bank

An interesting issue which came up in reviewing the treatment of interest paid on the public debt relates to the methods a central government uses to raise money. This has implications for the CSNA classification of the Bank of Canada as a government business enterprise. As is generally known, when government expenditure exceeds government revenue, cash requirements can be met by means of raising taxes or borrowing from the public, from abroad or from the central bank. The last involves an exchange of government securities between the government and its central bank.

Borrowing from the central bank through sale of government securities, sometimes referred to as "monetization of debt," is not a competitive diversion of resources but a *de facto* creation of new money by the government. The process entails the central bank buying up new securities of the central government and crediting the government accounts with the chartered banks. The new money ultimately finds its way into the economy through government expenditure. No new production has taken place; the central bank, through its mandate over the money supply, simply has created new money claims on existing resources and receives interest on its holdings of securities. This interest is channelled back to the government as part of profits remitted by the central bank.

Rather than treating the central bank as an enterprise in the national accounts, a case can be made to treat it as a part of general government since its *raison d'être* is to carry out monetary policy objectives. The rationale for the present practice of including the trading profits of the central bank in GNP is that these profits are the result of a government agency operating as an enterprise. In fact, most of the central bank profits arise not from business transactions but from its role as a central banker for the government carrying out monetary policy. As an arm of general government, the central banks' expenditure would be a part of government expenditure on goods and services offset by revenues from interest receipts and from other sources.

3.4.5. Deflation of Interest

As interest is a charge for the use of money under the proposed approach it follows that interest must be considered as another service commodity and, therefore, should be amenable to similar procedures to those used in the deflation of other commodity expenditures.

In general, the procedure for constructing a price deflator is as follows. The base year values of like commodities purchased are added together and the total is divided by the number of units to derive an average price weighted by the composition of the purchases. The calculated price of this base-weighted average is used for subsequent years as a deflator to abstract a volume estimate from the current market value package of similar items.

In the case of interest expense, the average price in the base year is arrived at by summing the average debt outstanding, keeping in mind size of loans, grade of securities and maturities and dividing this into the amount of interest paid on that debt. An average price for interest can be calculated by constructing a similar package for the current period, calculating the interest due or paid and dividing it by the number of units. This converted to an index could then form a price deflator for interest. The question has been raised, however, whether the resulting deflated figure of interest, valued at base year prices, represents the amount of services commensurate with those provided in the base year since the loan principal to which it applies, although unchanged in nominal value terms in the two periods, may no longer command the same amount of purchasing power currently. Therefore, a further adjustment may be required to compensate for this change.

4. CONCLUSION

While the proposed approach may appear to introduce substantial changes from current practices, it should be emphasized that it builds upon the existing National Accounts conceptual framework. Basically, the approach redefines business transactions with respect to interest and reinforces the essential role played by money in the financing of production and expenditure. In the process, it also accords proper recognition to the generation of economic activity by households and government in providing loanable funds.

The adoption of the proposed approach would mean that in the production accounts, interest paid by business would be treated as an intermediate expense of the paying industry and as revenue of the receiving industry. On the income side of the income and expenditure accounts, interest paid on the public debt and that part of consumer debt interest currently deemed to be a transfer would no longer be left out. On the expenditure side, interest paid by government on public debt, the full interest paid on consumer debt, and the interest component of financing capital formation would be counted as expenditure on final consumption while interest paid to nonresidents would continue to be deducted as a service import. Thus, the conceptual approach to interest would be fully consistent, not only across all industries but also across all sectors.

5. APPENDIX¹⁶

5.1. *Implications of the Proposed Approach for the SNA*

This appendix describes the changes to the SNA tables that would be required in switching from the current treatment of interest to the proposed approach. In Tables 3.1 and 3.2, an “×” denotes where interest appears in each treatment.

5.1.1. SNA Input–Output Table 3.1—Sources and Destinations of Commodity Supplies

The sources of supply section of this table indicates the value of output by commodity. In the current approach there is no explicit entry for interest in any of the categories for sources of supply. With the proposed approach, interest received, treated as commodity output, would appear at the intersection of the commodity services column 13 with business production through industry rows 1 to 13, with nonbusiness production through Producers of government services, Producers of private nonprofit services, and the new category, Producers of commodities—households, and with Imports, cif.

The destination of supply section of the table represents the allocation of total output to intermediate and final consumption. In the current approach, interest is not explicitly included in any of the categories for destinations of supply. With the proposed approach interest paid would be included at the intersection of the commodity services column 13 with the rows for Intermediate consumption, industries; Intermediate consumption, producers of government services; Intermediate consumption, producers of private nonprofit services; Final consumption in domestic market, households; Gross fixed capital formation; and Exports.

5.1.2. SNA Table 3.2—Industrial Outputs and Costs

The industrial outputs and costs table provides a breakdown of the inputs embodied in output. With the present approach, interest is not explicitly included in any of the categories of competitive intermediate inputs. In the primary inputs portion of the table, interest paid is implicitly included in operating surplus at the intersection of this row with industry columns 1–13. With the proposed approach, interest paid by industries will appear in the competitive intermediate inputs portion of the table, at the intersection of the commodity services row 13 with the industry columns 1–13.

¹⁶The paper presented at the Conference included a section, “Statistical Implications of the Proposed Approach on the CSNA,” which has been omitted here for the sake of brevity. Data in the omitted section tables on GNP and on GDP at factor cost by industry indicated that the proposed approach to interest would result in about a 7 percent increase in the figures of Canadian GNP for 1981 from that currently published, primarily due to the inclusion of interest on the public debt. In terms of industry contributions to GDP the largest differences would appear in utilities, finance and public administration.

SOURCES AND DESTINATIONS OF COMMODITY SUPPLIES¹

		Present approach			Proposed approach		
		Competitive commodities			Competitive commodities		
		Agriculture, forestry, fishing 1	. . .	Services 13	Agriculture, forestry, fishing 1	. . .	Services 13
400	Sources of Supply						
	Agriculture, forestry, fishing	1					×
	.	.					×
	.	.					×
	Services	13					×
	Producers of government services						×
	Producers of private non-profit services						×
	Producers of commodities, households ²						×
	Import duties						×
	Imports, c.i.f.						×
	Total						
Destinations of Supply							
	Intermediate consumption, industries						×
	Intermediate consumption, producers of government services						×
	Intermediate consumption, producers of private non-profit services						×
	Final consumption in domestic market, households						×
	Increase in Inventories						×
	Gross fixed capital formation						×
	Exports						×
	Total						

¹This table relates to Table 3.1 in *A System of National Accounts*, P. 36, United Nations, 1968.

²This new category is part of the proposed approach, which is described in section 5 of the text.

× denotes categories where interest is included.

SNA TABLE 3.2
INDUSTRIAL OUTPUTS AND COSTS¹

	Present approach				Proposed approach			
	Industries				Industries			
	Agriculture, forestry, fishing 1	. . .	Services 13		Agriculture, forestry, fishing 1	. . .	Services 13	
Gross output at basic values								
Commodity taxes, net								
Gross output at producer's prices								
Competitive intermediate inputs								
401 Agriculture, forestry, fishing	1							
..	..							
Services	13				×	×	×	×
Complementary intermediate inputs								
Agriculture, forestry, fishing	14							
..	..							
Manufacturing, nec	18							
Commodity taxes, net								
Primary inputs								
Compensation of employees								
Operating surplus		×	×	×	×			×
Consumption of fixed capital								
Indirect taxes, net								
Total Costs								

¹This table relates to Table 3.2 in *A System of National Accounts*, p. 38, United Nations 1968
× denotes categories where interest is included.

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