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Report of the Task Force on Income Statistics

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INTRODUCTION

This report summarizes the deliberations of the Task Force on Income Statistics and is offered as a catalyst for change in the approach used to collect, process and disseminate income data at Statistics Canada. The main elements of the Task Force mandate were: to examine ways of producing income estimates at lower cost and of harmonizing the Agency's income estimates; to explore ways of improving the range and quality of income estimates; to develop a conceptual framework for statistics on income distribution, covering also assets, debts and expenditures. The full mandate, as interpreted by the Task Force, in given in Appendix I.

Income data are key to the analysis of the Canadian economy and of social conditions. Income is a powerful measure of economic performance as well as a barometer of the economic well-being of individuals and families. With gradual improvements in labour market conditions, issues of income adequacy and inequality are increasingly occupying the attention of policy analysts. It is a safe prediction that income distribution, economic well-being and poverty will be high on the agenda of governments, policy formulators and academics for many years to come. For these reasons, the importance of income data in the household statistics program and the Analytical Studies Branch can only grow. The spotlight has also turned to income at an international level. The Canberra Group, of which Canada is a member, was created in 1996 to examine issues of income measurement and ultimately increase promote comparability among countries.

The Task Force undertook comparative studies on the income estimates produced from different sources and oversaw the development of a conceptual framework. These activities were very instructive in that they underscored the profound differences that exist and the difficulties users must face in trying to draw coherent messages from the array of income statistics that the Agency publishes. However, the single most difficult question addressed by the Task Force was to determine the best manner of implementing harmonization and realizing efficiencies. The Task Force *could* have made a series of general recommendations on desirable outcomes but these outcomes cannot realistically be achieved without organizational change. This report addresses the issue of organizational change directly. This is a difficult issue, because the responsibility for the production of household income statistics is currently so diffuse.

The report proposes an integrated income statistics program, to meet the evolving needs of Statistics Canada's client communities. Since most of the income data producing groups are currently in the Labour and Household Surveys Branch (LHSB), an incremental approach is proposed. As a first step, the groups within LHSB associated with the production and analysis of data on income, expenditures, assets and debts are brought together to form a new division. Then, the potential for integration with other groups, most particularly the Small Area and Administrative Data Division (SAADD), would be explored.

SPECIFIC ISSUES AND RECOMMENDATIONS

1. Differences in published income estimates

One of the problems identified with income statistics are differences in the estimates produced for similar units of analysis and for the same time period. Two working papers, *Differences in Income Estimates for Persons* and *Differences in Income Estimates for Families*[1], present a comparative analysis of several key income data sources undertaken by the Task Force. Differences in estimates for the same theoretical population are at times striking. The variations are caused by many factors, including definitions, operations, methodology and sampling and non-sampling errors. Some of these are inevitable but others reflect the different local practices of a decentralized system. Once in place, divergent practices can be hard to overcome. The desire to maintain historical continuity of particular series creates pressure to avoid changing existing practices, even when they are known to create differences with the corresponding estimates of other sources.

In addition to data sources whose primary subject matter is income, a very large number of household surveys carry income questions because household, family or personal income is a pervasive classification variable. While the question set may be much shorter than in an income survey (sometimes only one question rather than 12 to 25), users still compare the results to those of income surveys. There is room to improve the comparability across surveys using a limited question set, by conforming to standard wording and interviewer instructions. The need for flexibility can still be respected by ensuring that question wordings exist that are appropriate to various predictable circumstances.

Recommendation 1

There exists a need to harmonize income measures produced by the Agency, especially given the importance of consistency in the estimates for similar units of analysis and for similar time periods. The income definitions should be addressed by the current harmonization project now underway in Social, Institutions and Labour Statistics Field. Harmonization should also extend to question wording, while respecting the differences in the level of detail and precision required by various surveys.

2. Lack of formal conceptual framework

Up to the present, the household income program has operated without a formalized conceptual framework for income and the related spheres of expenditures and wealth. A framework suitable for a household context would be of great value in the move to harmonization. The Income Statistics Task Force looked specifically at this issue. An early draft of a conceptual framework for income, expenditures, assets and debts is currently available[2]; while not complete, it represents a good beginning.

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1 SLID working papers nos. 97-02 and 97-03, available on the LHSB Intranet site.
2 See Appendix II.

Recommendation 2

That the conceptual framework be completed over the next four to six months and, after review by the Income and Wealth Statistics Committee, be widely circulated for comment within and outside Statistics Canada. Upon its completion, this framework should become the cornerstone of the production of income data within the Agency.

3. Disharmonies in edit and imputation practices

The first step in the effort to harmonize is clearly to standardize concepts and definitions, but it is not sufficient. A working paper entitled *Comparison of Income Estimates from the Survey of Consumer Finances and the Survey of Labour and Income Dynamics*[3] provides an excellent illustration of the tremendous impact data processing operations have on income estimates. The notion that a harmonized set of definitions alone will bring data from different sources into line is very much challenged by this study. To bear fruit, harmonization efforts need to extend to the area of data processing. For example, variations between surveys in the manner in which high-income outliers are handled and the imputation strategies adopted can have a significant impact on the results even when identical concepts and definitions are used.

One of the final steps in data processing typically involves modifying microdata (or tabulated data) to avoid disclosure. "Confidentiality processing" is a complex area and different data sources have implemented different rules with respect to handling extreme values or unusual combinations. These differences in procedure can affect data consistency from one source to the next.

Recommendation 3

That as part of the conceptual framework a companion document be developed setting out data processing guidelines for all income distribution data sources, including the Census and SAADD. This document should also address confidentiality protection measures.

4. Use of taxation data

Recently information from tax records has been incorporated into household survey data sets, partially substituting income information obtained by interviewing respondents. The first real major movement in the use of tax data with respondent permission was in the longitudinal Survey of Labour and Income Dynamics (SLID). The result has been a data source which is a blend of survey and tax file data. There has been much discussion in both the analytical and methodological communities about the use of tax data for producing income measures. One of the important issues relates to the impact of the use of tax data on timeliness. Also, some innovative thinking with respect to edit and imputation strategy has been required. While much progress has been made, much

[3] SLID working paper no. 96-07, available on the LHSB Intranet site. Estimates presented in this report are preliminary. Revised data are available and an updated report is forthcoming.

work remains to be done in the use of administrative income data sources, and their blending with survey data.

One future area of investigation is the possibility of improvements to household survey data through the use of external controls, for example, post-stratification using tax-based income results. Historically, great emphasis has been placed on the use of population (age and sex) control totals, with little or no use of other external data sources. Thus, the household survey program does not take maximum advantage of the quantum improvements that have been made in raking-ratio software applications. These techniques could be implemented to strengthen our current household-based income data. This would require serious investment of analytical and methodological resources to sort out the best approaches and applications. This direction also implies a shift towards the use of models in the production of some of the Agency's income estimates. The development of a set of household and family income estimates that borrows strength from both administrative and household survey surveys would require the input of many divisions across the Agency.

Recommendation 4

That in the 1999-2000 long-term planning process, an LTP submission to fund a research and development program to assess the use of new estimation techniques be put forth. This would cover possible measures to improve the quality of estimates from household surveys through the greater use of benchmark, such as Revenue Canada Taxation data. This LTP submission should be put forth by the new division but reflect the input of Methodology Branch, Analytical Studies Branch and SAADD. A project team and steering committee should be struck with a view to developing the LTP proposal.

5. Many areas producing household income and related statistics

The current organizational structures responsible for the production of income data are as much a product of history as of current thinking on what constitutes a practical approach to program delivery. Some scope for re-aligning resources exists. Indeed, given the upcoming requirement in Social, Institutions and Labour Statistics Field for new efficiencies, this is an opportune time to review and restructure the income statistics program.

Currently, the delivery of income statistics is mainly structured along the lines of production v. analysis. It is perhaps time to rethink this split, with two objectives in mind. The first is to establish a much more integrated income statistics program and the second is to achieve a more financially efficient program through re-engineering. A number of divisions are at present involved in the production and dissemination of income statistics. While these divisions successfully meet their mandate, there is room for improved delivery of products and services.

Moreover, the existence of several income data producing divisions, operating in a decentralized manner, necessarily entails some duplication of costs. In fact, with some very basic and reasonable efficiency assumptions, the prospects for achieving program cost reductions appear good. As most of the programs in question are currently in the Labour and Household Surveys Branch, organizational change would begin there.

Income is inextricably linked with expenditures, assets and debts. Together, they make up the four facets of household or family finances. It is important that the links between them be understood at the conceptual level and that socio-demographic and explanatory variables be as consistent as possible across datasets.

Recommendation 5

That the following areas currently producing income statistics be amalgamated to form an income statistics program: the Income and Labour Dynamics Subdivision of Household Surveys Division (covering the Survey of Consumer Finances and the Survey of Labour and Income Dynamics); the proposed new Asset and Debt Survey; the Pensions Section of Labour Division; the Survey of Household Spending (formerly Family Expenditure Survey) and associated expenditure surveys; and the Census Income Statistics Section plus the Income content and analysis personnel from Labour and Household Surveys Analysis Division (LHSAD).

6. Scope for efficiency through integration

For the 1996/1997 fiscal year, approximately 121 FTEs and $7.1 million were associated with the production of income data by the programs identified above, excluding funds allocated to field activities. The following table provides a more detailed expenditure profile for these programs.

Program	1997/1998 Forecast*			
	Salary $	Non-salary $	Total $	FTEs
SLID & SCF	2,400.2	393.1	2,793.3	50.5
Survey of Hhld Spending	1,962.3	819.5	2,781.8	44.4
Assets & Debts	396.6	219.3	615.9	7.1
Pensions	492.8	14.0	506.8	11.8
LHSAD income personnel	641.4	48.0	689.4	11.9
Total	**5893.3**	**1493.9**	**7387.2**	**125.7**

* Excludes funds for field activities.
Divisional management and administration have not been factored in.

At its inception, the new income statistics division would include approximately 102 of the FTEs identified above. The remaining 19 represent consumption by Methodology Branch, OID and SDD.

Recommendation 6

That the new Income Statistics Division be established at the beginning of the 1998/1999 fiscal year. The new division would be mandated to re-engineer the integrated program starting in the 1998/1999 fiscal year, and yield efficiencies totaling approximately $500,000 over the following three fiscal years, ending with 2001/2002. This would amount to 7% of the initial budget.

7. Need for clear role definition

The fit of the new division with other programs outside Labour and Household Surveys Branch needs to be addressed. The most important issues concern the production of income statistics by the Small Area and Administrative Data Division (SAADD) and the Census. In the case of SAADD, the benefits of creating an Income Statistics Division to facilitate the development of harmonized estimates and an integrated dissemination program will be undermined unless a very close working relationship can be developed. In the case of the Census, there is an opportunity to review and possibly renegotiate the division of responsibility between the new income division and the Census organization. Other divisions which would potentially interact with the new division in a different way include Tax Data Division, Business and Labour Market Analysis Division (BLMAD) and Special Surveys Division.

The effort and time involved in arriving at a workable relationship with other divisions should not be underestimated. For example, if the new division plays a leadership role with respect to processing guidelines or the use of independent control totals for households and families, these need to be observed by SAADD. Therefore SAADD must have some input into their development. The implications of such changes on time series consistency needs to be considered and, if necessary, plans for historical revision will be required. If the data implications and costs are not clearly understood, an agreement to abide by a common set of guidelines will not be worth much.

Recommendation 7

Within six months of its creation, the new Income Statistics Division will have reviewed its mandate with other affected divisions and will have produced a program report outlining agreed-upon roles and responsibilities and describing any outstanding issues. The issue of possible further organizational change would also be considered.

8. Need to expand analytical output

The Agency now requires that all data programs include analysis in their product line. The proposed Income Statistics Division would be no different. However, in the case of new surveys, particularly longitudinal surveys, published analysis is especially important because of the powerful role that it can play in demonstrating the relevance of the survey, and in stimulating analysis in the user community. In addition, individual analytical projects which involve the use of multiple data sources which are in the proposed division's jurisdiction will lend encouragement to the harmonization of the currently disparate data sets.

There are a number of advantages to providing the division's analytical output with its own dissemination medium in the form of an analytical periodical. The alternative to an analytical periodical would be a program of individually published manuscripts issued by the Income Statistics Division or to use another division's periodical, such as *Perspectives on Labour and Income*. However, both alternatives have serious drawbacks. Experience has shown that the discipline of regular deadlines which comes only with periodicals results in much greater output than analysis "when it is ready." Experience has also shown that a strong sense of affiliation with the output medium (on the part of both analysts and supervisors) contributes to the dedication necessary to ensure that analytic priorities can compete successfully with operational priorities. In short, in-house vehicles are an effective antidote to the pervasive reluctance to publish in other divisions' periodicals.

Recommendation 8

A large staff affiliated with an integrated program of income and related statistics offers advantages for undertaking analysis, particularly analysis directed at wide audiences. These should be exploited. The feasibility of launching an analytical periodical (analogous to Labour Market Update) should seriously be considered.

APPENDIX I

TASK FORCE ON INCOME STATISTICS: MANDATE

A. Task Force priorities:

The Task Force needs to set up a hierarchy of goals which is compatible with, but more detailed than, the Task Force "Objectives" given us by the Policy Committee. The recommendations of the Task Force will attempt to meet these goals in the following order:

1. To identify ways in which we can produce the existing product line in the field of income statistics (primarily income distribution statistics) at substantially lower costs than those currently incurred. The "existing product line" is defined in terms of the estimates which can currently be produced (whether or not they are "published") with the currently achieved levels of quality.

2. To identify ways to increase the degree of harmonization in the estimates which make up the existing product line, without sacrificing the economies identified in "1."

3. To identify ways of extending the product line to include new income estimates. "New" is defined as:

   i. estimates of new variables (e.g., capital gains from all sources) which cannot be produced by the existing system, and

   ii. estimates of existing variables for smaller populations than the current system can support.

4. To develop a conceptual framework for income distribution statistics and then to identify what conceptually driven improvements could be made to the existing product line (e.g., imputation of the "income" derived from owner-occupied housing) and to identify those which could be applied at acceptable cost.

5. To identify ways of extending the product line to include related statistics such as wealth provided that they can be funded externally.

B. Assumptions:

The Task Force will need to make certain assumptions which serve to limit both the dimensions of its mandate and the information used in its deliberations. To some extent these are imbedded in the Task Force priorities listed above. The proposed assumptions include:

1. Because the achievement of lower costs is preeminent, it is further assumed that in implementing the Task Force's recommendations, mechanisms to achieve cost reduction will be put into place before implementation of any of the other objectives is attempted. Nevertheless, lower costs will be achieved through mechanisms which

do not significantly impair the new system's capacity to eventually achieve other goals.

2. External user consultation will be limited. We will not approach users with an open invitation of the form, "We're reviewing our income statistics programs and we would like to know what changes you would like us to make." Rather, the views of users will be sought only to resolve trade-offs such as the possible trade-off between enhanced data quality and time-series consistency.

3. Nevertheless, an inventory of current external users and uses will be developed based on information currently available to us.

4. This Task Force concerns statistics of income distributions across individuals, families and households. However, sources used to produce statistics of income distributions can be used to produce income aggregates (or aggregates of particular sources of income). Furthermore, aggregates produced as part of ongoing programs such as the National Accounts can be, and are, used in the evaluation of the quality of data from some of the sources used to produce income distribution statistics.

5. This Task Force will focus on recommendations for an integrated program of income **distribution** statistics taking as a constraint the requirement to continue to meet the need for aggregate income (or aggregate income source) statistics for clients internal to the Agency.

C. Information gathering activities:

Before that Task Force can begin to formulate recommendations, it will require certain basic information. It is suggested that we start with the following:

1. Take an inventory of all sources of data on incomes (both distributions and aggregates) currently active in the Agency.

2. Take an inventory of the users and uses **within the Agency** of income statistics from all sources.

3. Take an inventory, based on information already in our possession, of users and uses **external to the Agency** of income statistics from all sources. (See Assumption 2 above.)

4. Gather and synthesize currently available information on disparities in the current and relevant historical income estimates.

5. Gather the currently available conceptual framework material (such as the work done by the OECD in the 1970s) to develop international standard income definitions.

D. A conceptual framework:

It is recognized that there are three conceptually linked spheres of statistics, namely, income, wealth and expenditures. While the Task Force will address primarily income

statistics, any modifications to the existing program should be done in such a way as to not impair the Agency's capacity to produce income statistics which are in harmony with future wealth and expenditure statistics.

To ensure this, and to provide a foundation for the building of better income statistics, we will need to have an integrated conceptual framework, starting with a framework for income statistics.

APPENDIX II

CONCEPTUAL FRAMEWORK FOR INCOME, EXPENDITURE, SAVING AND WEALTH
(Draft)

An important tool for describing, analyzing, and evaluating numerous aspects of the economic situation of Canadians is a data framework as consistent, integrated, and comprehensive as possible given the constraints imposed by the method of data collection and the financial budget allocated to the program. By outlining the main elements of this framework it will be possible to identify-

i. whether the current implementation is misdirected and requires some realignment,
ii. gaps in the current program for which additional funding should be sought,
iii. reasons for the current program deviating from the conceptual framework.

The purpose of this paper is to present the components of the conceptual framework that underlies the collection of income, expenditure, and wealth at the level of the individual household based on traditional micro-economic theory. Although, in broad terms, the basic framework is relatively simple, the nature of today's complex institutional environment and the fact that some everyday transactions are not simply classified into the components of the framework complicate matters and require some explanation. Consequently, the main concepts are first outlined in a very simplified framework after which the complications are introduced. Beyond the basic framework it is necessary to have a detailed set of classifications for the income, expenditure and wealth components.

The simplified framework

In order to initially focus on the main concepts of he framework the following assumptions are made -

i. Household are unchanging during the year. The term 'household' is also generic in the sense it can be any unit of analysis such as the individual or any type of family definition. The concepts are applicable to all definitions,

ii. The accounting period annual and assumed to be the calendar year,

iii. There is no inflation,

iv. Self-employment does not exist,

v. Government does not exist,

vi. All households rent and do not purchase goods that provide benefits beyond the year,

vii. Households, if they work, work for earnings in cash and buy all goods and services in the marketplace,

viii. Households save for retirement by investing only in a savings account type mechanism that pays interest annually.

It needs to be kept in mind that in this example there is another group of actors - business firms - in addition to households. They produce the goods and services that are consumed by the households, pay the wages/salaries, and the interest income to households. These firms will also have a profit/loss which accrues to the business owners who are also households. This is being ignored for simplicity. (Perhaps it doesn't need to be).

In this simplified world in any year there would likely be predominantly two types of households - one type that works, earns income, part of which is used to purchase goods and services and part of which is saved for retirement and another type that is retired, receives interest income, purchases goods and services likely in excess of interest income and consequently is dis-saving and running down the savings account balance of the household. Note that for the retired household only interest receipts from the bank account is income. That additional part of the bank account run down by purchasing goods and services is not income although it may sometime popularly referred to as income.

For either of these typical households the following is a brief description of what happens from the start to the end of the year:

At the start of the year the household may have money in the bank, i.e., WEALTH at start.

During the year - wage/salary may be received
- interest income may be received } INCOME

- purchases of goods and services } EXPENDITURE

The difference between INCOME and EXPENDITURE which may be positive or negative is called SAVING in either case. Adding this amount to the WEALTH at the beginning of the year give WEALTH at the end of the year. The following table presents a mathematical summary of the relationships.

THE ACCOUNTING FRAMEWORK

WEALTH (start of period)		STOCK
	INCOME	
minus	EXPENDITURE	FLOWS during period
equals	SAVING	
WEALTH (end of period) = WEALTH (start of period) + SAVING (during period)		

The Chart describes the financial process any family or business goes through - at the start of the month or year you look at what you have (wealth = assets-debts), during the period you receive income (roughly receipts), you have expenditures (roughly purchases) and if that is less than income you have saving which augments your wealth at the end of the period The process starts again and repeats for as many periods as one wants to consider. Note a couple of relationships implied by the accounting framework:

Income = Expenditure + Saving .....(A)

Income = Expenditure + Change in Wealth .....(B)

These two formulations are reflected in two traditional ways of defining 'income'

i. Rights exercised in consumption plus saving .....(A)

ii. Maximum amount that one can spend while keeping wealth intact .....(B)

Similarly, it is possible to express alternative expressions for expenditure, saving, and wealth from the mathematical expressions. For example, saving is income less expenditure or, equivalently, wealth at end of year less wealth at beginning of year.

This simple example demonstrates the main elements of the accounting framework applicable to a wide range of receipts and purchases. However, the world is somewhat more complex than given by our simple example. It is necessary to lift some of the simplifying assumptions and show how the framework operates in these situations.

Gifts

In the simple framework households spend their income on goods and services to satisfy their own needs. If one interprets the purchase and giving of gifts in this way then gifts can easily be treated as expenditure on the part of the purchaser of the gift and no transaction would appear on the records of the gift receiver. However, if the gift is given in cash the receiver may have discretion as to how the money is spent. In this case the gift is like income to the receiver and a reduction in income available to the giver for purchases. If cash gifts received are treated as income how should one treat cash gifts given. In a sense it is the transfer of income to another household. In this case, if the net receipts of gifts (received less given) as part of income then income over all households is unchanged by the giving and receiving of gifts. If only gifts received are treated as income then the sum of income over all households increases. This may reduce the meaningfulness of the income concept in that aggregate income and consequently average household income increases as a result of giving gifts.

What if all gifts are given as goods and/or services purchased by the giver? One treatments, as described above, would be to treat these gifts as expenditures on the part of the giver with no impact on the receiver. Another option would be to 'cashify' the value of gifts given and received and treat the net receipts as income. Then the appropriate expenditure for each household would be the value of the gift received. This approach is roughly similar to the treatment in the cash gifts given/received situation. But it is really only fully comparable in the two situations when the receiver tells the giver what to buy. This is a realistic assumption in many situations.

For now this examination will assume that the appropriate treatment is to count the net value of gifts (cash and non-cash) as income.

Note that this presentation does not distinguish between a current and capital transfer as one sometimes sees in the literature (See SNA 1993 for example). It is not clear what the usefulness of this distinction other than identifying the source of large transfers (i.e. bequests for example).

Government

Government affects a household's ability to purchase goods and services by collecting taxes and paying cash benefits to households or providing goods and services directly. This is very similar to the situation of gifts as described in the previous section with taxes similar to gifts given except that taxes are not subject to discretion. In the cash only situation taxes paid to the government reduce a household's purchasing opportunities and cash benefits received from the government increase them with the net change given by the difference in the two. Benefits given in the form of goods and services can be 'cashified' in a way similar to that discussed for gifts and the value of the goods and services considered as expenditure on the part of the household. This cashification of a benefit to some form of cash equivalent is called an 'imputation'.

Variation to income concept

The above discussion concerning gifts and government suggest distinguishing clearly between an income concept before and after the receipt and payment of transfers associated with gifts given and received, and government taxes paid and benefits received from the government. The first income concept is called 'income before taxes and transfers' (other terms may be used - primary or market income for the former and disposable income for the later. Each concept has its usefulness.

Purchases providing benefits for more than one accounting period

In our simple example all purchases of goods and services provide benefits during the accounting period. This was emphasized by assuming households did not own their home and rented instead. The implication of this assumption is that businesses exist that sell accommodation services which households purchase by paying rent. In this case the service is paid for as it is used by the household. When the assumption about homeownership is lifted it is clear that treating that expenditure as providing benefit during the accounting period is misleading. It would also mean a substantial decline in wealth between the beginning and end of the year when in fact this is not the case. These problems arise due to confusing

the purchase of the house with use of the services provided by the house which one would want to include in the expenditure for the year. The traditional way of addressing this problem is to assume that homeowners are in the business of providing housing services to themselves which they rent by paying market equivalent rents. Then the purchase of the house becomes a business transaction involving the acquisition of an asset either by using other financial assets or by borrowing. Each year the household has receipts (rent) and expenses (interest costs, maintenance costs, depreciation) which on balance provides profit or loss to the household. The household shows the rental payments as expenditure rather than the cost of the house. With this procedure the annual account is more clear.

Note that in this approach, although it appears more income has been created for households, it is not true. This income previously was earned by business owners and would have accrued to households ultimately.

The term EXPENDITURE , although useful in the introductory description of the conceptual framework, is likely not the appropriate term to reflect the underlying concept which is not simply the purchase of a good or service but has to do with the consuming or 'using up' of the good or service in the time period. For many goods and services consumption does occur during the time period (for example, going to a movie, a haircut, a trip) but for others the purchase does not represent consumption during the period, (for example, the purchase of a house or car. These items are only consumed over a longer period of time).Consequently it is necessary to recognize that the acquisition of these durable consumer goods have an element of a capital transaction in the wealth account and how the item is consumed requires consideration of ways to estimate this consumption. There are many consumer items that are not fully consumed in the period under consideration- appliances(large and small), furniture which conceptually require this distinction.

To differentiate between expenditure and consumption we will use EXPENDITURE to reflect any outlay made by the decision making unit and CONSUMPTION to reflect the consuming or 'using-up' of a good or service during the reference period.

Other problematic 'expenditures'

There are a number of common activities by households that affect disposable income and present conceptual problems -

- gambling such as lotteries, bingo, horse races,
- term life insurance,
- home/auto insurance,
- disability/ accident and other types of insurance.

The analysis of these activities is very similar although the insurance ones have an element of protection against a possible loss which does not apply to the gambling situation.

In modern day institutional gambling, a participant's participation by purchasing a ticket or placing a bet is partly paying for a service (provided by the gambling organizer) and partly contributing to a fund that will be shared by the winners. In theory only the service part represents expenditure on the part of the household. The other part in the fund is a voluntary re-distribution between households. A few winners will have large net benefits and a large number of losers will have small losses (at least relative to the

aggregate winnings). A consistent treatment of this redistribution would be to include the gains and subtract the losses in the determination of disposable income, similar to the treatment of gifts given/received. (note : I'm not sure this makes sense beyond consistency.)

The insurance type options can be analyzed in a similar fashion with the additional complication of accounting for the loss.

Capital Gains/Losses

In the simple example households are primarily suppliers of labour for which earnings are received. Their options in terms of use of their saving is limited to a simple savings account earning annual interest. However, modern financial markets allow for the ownership of a wide range of financial instruments many of which provide no predetermined income stream to their owners but which provide an income or loss based on their value determined by the actions of buyers and sellers in the financial market. When this value goes up in relation to what was paid for the instrument (i.e., a stock or a bond for example) income has been created called a capital gain. If the value goes down a capital loss is created. It is the general consensus among economists that this capital gain/loss during the period is as much income as earnings or interest income. However its collection entails some significant challenges for data providers.

In the discussion about goods providing benefits for more than a year household are allowed to own homes as well. Since they can be bought and sold in the marketplace the potential for capital gain/loss for this type of asset exists as well. Its estimation is in some respects more difficult than that for financial assets because of the depreciation aspect.

Pension Arrangements

The provision of pension benefits in modern economies is dominated by collective, institutional arrangements between employees and employers, and between workers and the government. The former are generally called private employer sponsored pension plans and the latter social security or government sponsored pension plans.

Employer sponsored pension plans are regulated by government and have requirements in respect to funding - there must be enough of a fund accumulated in terms of employer/employee contributions and interest earnings on the fund to meet future obligations (i.e., benefit payouts). To a large degree this arrangement can be interpreted analogously to the private saving arrangement in the simple example with comparable income and benefit flows. However, at the individual household level pension plan beneficiaries have no idea how much of their benefit received breaks down between income and wealth.

Government sponsored pension plans may or may not follow the private model. If the do the analysis is similar to the above paragraph. However a lot a government pension arrangements do not follow the funding requirements of private pension plans, ranging from no funding requirements (paygo) to some funding which is basically having a small fund, relative to full funding, for contingency purposes or to smooth out fluctuations in the contribution rate. However, in either case a paygo interpretation is likely the most realistic assumption. This means the pension arrangement is a tax/transfer mechanism with the pension contributions representing the tax and pension payouts being the transfer payment.

The impact of the above implementation for paygo type pension arrangements is that no pension wealth accumulates for the household. For some analysis of pension issues pension wealth is created based on the future income stream associated with the pension arrangement.

Beyond cash wages and salaries

Cash wages and salaries are the most important mechanism by which workers receive compensation from their employer but there are other forms that should be included as well. For example, the company may have a pension plan or other types of benefit plans paid for partly or entirely by the employee. The contributions on the part of the employer should be treated as part of the employees compensation.

Employers may provide employees a variety of non-cash or in-kind benefits such as meals, housing services, free use of vehicles, products of the employer free or at reduced prices. The value of these goods and services should be considered part of employee compensation.

Self-employment

The income of households involved in self-employment activity is an unseparable mix of wages/salary, investment return, and profit. This income will be identified separately as net income from self-employment.

Value of unpaid housework

There is a developing consensus that a full understanding of the economy should account for the production and consumption activities associated with child rearing, meal preparation, household chores, etc. that take place in the household. This requires a specification of the tasks, the values associated with the tasks and imputing them to the income and consumption of each household.

The following chart is a more refined version of the accounting framework indicating more details of the main income flows and adding taxes:

THE ACCOUNTING FRAMEWORK

WEALTH (start of period)

	-Financial assets
plus	-Non-financial assets
minus	-Liabilities
	INCOME BEFORE TRANSFERS
	Cash income
	Earnings
	Investment Income
	Non-cash income
	Non-cash employee income
	Goods produced for own consumption
	Value of unpaid housework
	Value of rent on owner occupied dwellings
	Value of rent on consumer durables
	Capital gains/losses
	TRANSFERS
plus	Cash transfers received
	From governments
	From organizations
	From other households
plus	Non-cash transfers received
	From governments
	From organizations
	From other households
minus	TAX
minus	Other Transfers Outlaid
equals	DISPOSABLE INCOME
minus	CONSUMPTION
	Cash consumption
	Non-cash consumption
	value of fringe benefits
	value of service of owner occupied dwellings
	value of service of consumer durables
	value of service of unpaid housework
equals	SAVING

WEALTH (end of period) = WEALTH (start of period) + SAVING (during period)

Statistics Canada
Assistant Chief Statistician
Social, Institutions and Labour Statistics Field

Statistique Canada
Statisticien en chef adjoint
Secteur de la statistique sociale, des institutions et du travail

Memo **Note de service**

March 4, 1998

Dr. Fellegi:

You will recall that (quite) some time ago, we established a Task Force on Income Statistics, initially with John Coombs as Chair.

The Task Force, now chaired by Mike Sheridan, has produced its report (attached), which contains a number of specific recommendations. Gordon and I agree with the recommendations, but would like your reactions.

One of the recommendations (the establishment of a new Income Statistics Division) has organizational/staffing implications, which we should discuss at Policy Committee. Mike is away until the 19th, at which point I am away for a week. Could we target a discussion at Policy Committee early in April? Meanwhile, I would appreciate your comments/questions/suggestions.

Bruce Petrie

x.c. G. Brackstone
M. Sheridan
J. Morin

Canada

Statistics Canada Statistique Canada

Ottawa, Canada
K1A 0T6

MEMORANDUM

Date: March 4, 1998

To: D. Bruce Petrie
Assistant Chief Statistician
Social, Institutions & Labour Statistics Field

G. Brackstone
Assistant Chief Statistician
Informatics & Methodology Field

From: M.J. Sheridan &
The Members of the Task Force on Income Statistics

Subject: Task Force Report on Income Statistics

Please find attached for your review a copy of the Task Force Report on Income Statistics. The members of the Task Force would be pleased to discuss the report and recommendations with you.

If you have any questions or comments please give me a call.

Attachment

c.c. Members of the Task Force

Report of the Task Force on Income Statistics

John Coombs
Harry Champion
Geoff Hole
Roger Love
Ian Macredie
Mau Meere
Mike Sheridan
MP Singh
Linda Standish
Maryanne Webber

Statistics Canada
January 1998

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K1A 0T6

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