Luxembourg Income Study Working Paper Series

Working Paper No. 151

Cross-National Comparisons of Income Distribution: The Income Distribution Guideline Needs of Microdata Users as Seen from the Perspective of the Luxembourg Income Study

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December 1996

Luxembourg Income Study (LIS), asbl

CROSS-NATIONAL COMPARISONS OF INCOME DISTRIBUTION: THE INCOME DISTRIBUTION GUIDELINE NEEDS OF MICRODATA USERS AS SEEN FROM THE PERSPECTIVE OF THE LUXEMBOURG INCOME STUDY

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November 1996

Prepared for the Canberra Meeting of the
Expert Group on Household Income Statistics
December 2-5, 1996

The author assumes full responsibility for all claims and errors of commission and omission. I thank the LIS-member countries for their support of LIS and Ann Wicks for superb assistance in preparing this paper.

I. Introduction

The Luxembourg Income Study has worked for more than 13 years to improve cross-national comparability of microdata. Our lessons are sufficiently different from those experienced by national statistical offices to warrant some attention. Most of the recent very useful papers which have begun to frame the issues related to setting international standards, frameworks, and, someday, guidelines for international comparisons of income (and wealth and consumption)[1] distribution are explicitly, and almost wholly, from a top down or macro/national accounts to micro/income survey perspective (e.g., Franz, Barrieros, Ramprakash, and Walton [FBRW] 1996; Australian Bureau of Statistics [ABS] 1996). While this is a useful and necessary perspective, one cannot work on <u>comparative</u> issues related to <u>microdata</u> based on income <u>distribution</u> studies unless one starts with microdata and has wide experience with its cross-national comparability of household income survey data. I believe that the Luxembourg Income Study (LIS) is best suited to make these comparisons and to contribute to the creation of Income Distribution Guidelines (IDG). This is not to say that the macro-micro top down approach is not useful because it most certainly is. But it does say that if we are to improve cross-national comparability of household income survey data, we must <u>also</u> include the "micro-micro" perspective. The final piece of the puzzle, a bottom up micro-macro perspective rounds out the natural elements of guidelines for comparative cross-national data on income <u>and</u> its distribution (see Figure 1).

The top half of Figure 1 has been already accomplished by those pioneers who have erected a set of comparative Systems of National Income Accounts (SNAs). Efforts in this realm are now concentrated on how to expand these comparative aggregates to areas such as social accounts, time accounts, health accounts, and other "satellite" accounting issues. Also important at this level are efforts to improve cross-national conversions of national incomes into common currencies to improve measurement of real incomes—the purchasing power parity projects of OECD, World Bank, Penn World Tables, etc.

The left-hand side of the chart represents the current work on international standards for income distribution as expressed by the United Nations (1977), Blackburn (1996), and the recent papers cited above (FBRW 1996; ABS 1996). It is of the top down "framework" macro to micro variety.

The bottom half of the Figure involves cross-national comparisons of household income distributions. While such comparisons as these have been made for several decades (e.g., Sawyer 1976; van Ginneken and Park 1984) the LIS has pioneered comparisons made using household income microdata.[2] This paper is about this part of the conceptual framework of IDG and the lessons LIS can offer (see Atkinson, Rainwater, and Smeeding 1995).

The final part of the framework, the right-hand side of Figure 1, deals with microdata users' comparisons of aggregated household microdata with estimates of the same concepts derived from administrative or national accounts data. This is called the micro to macro approach. While several nations have made these comparisons, there has been no cross-national comparative study of these comparisons, though such a study would be most useful (see Atkinson, Rainwater, and Smeeding 1995, Table 3.7).

It is our position that a set of guidelines for income distribution need contain all of these elements, particularly the right, left, and bottom sides of Figure 1. Not every international agency, nation, or statistical office will weigh each of the four parts of this framework equally. The value of comparative SNAs is clear to most everyone. The value of macro-micro comparisons is important to national accountants and national Central Statistical Offices (CSOs) as a unifying framework and as an administrative device for systematizing income and economic measurement efforts (Blackburn 1996). The micro-micro and micro-macro approaches are valued most by those who are frustrated by inaccurate cross-national comparisons of household income microdata (e.g., Castles 1994). Work on this level would expand and standardize the technical documentation which underlies household survey instruments. It would carefully review the definitions and building blocks of household income (consumption, net worth) including earnings (wages and salaries, self-employment income), taxes, government transfers, private transfers such as child support, capital or property income, and pension income. It would also recommend best practice methods including how to present comparisons, measure needs-adjusted income and present data in useful ways. It would allow the users of household survey data to differentiate among levels of quality in data collection and presentation. It would delve into the demographic structure of household surveys allowing for easier identification of retirees, single parents, living arrangements, and economic support of youth, etc. Above all, micro-micro comparisons would be attuned to illuminating the income distribution from the point of view of policymakers and international organizations who make use of these data.

The LIS project has been involved in this exact type of research for the past 13 years. The purpose of this paper is to inform the reader what we have learned at LIS and how it would help round out the bottom and right-hand sides of Figure 1. The paper reviews the general lessons of LIS and the more specific issues which any micro-micro set of guidelines need develop. Micro to macro comparisons are also discussed but not to any great extent mainly due to lack of comparative work on these types of comparisons. The paper concludes with a brief template of where we think that IDG research needs to go logistically and how to get there.

II. Luxembourg Income Study

The establishment of useful and practical micro-micro international guidelines for income consumption/expenditure, and wealth/accumulation (IDG for short) is a task to which the LIS is well-suited to contribute. LIS is uniquely situated to help out here because of its experience, history, and goals. Founded in 1983, LIS is committed to the open sharing of harmonized household income survey microdata at zero user cost while still preserving the confidentiality and privacy of survey respondents (see Appendix 1). At this moment, the LIS project provides more than 73 datasets, covering 27 nations over the 1970-1995 period, including the transition economies of Central and Eastern Europe and soon the rapidly growing countries of the Pacific Rim.

The LIS *modus operandi* is to obtain existing national household income survey data and to do the best it can to harmonize and make these data comparable. Data harmonization improves comparability and therefore, the ratio of signal (true values) to noise (statistical or other differences) in datasets. The harmonized LIS data are made available to users via electronic mail access using SPSS and SAS software. Over its lifetime, LIS has continued to add to and expand the richness of its data and its usefulness. New variable definitions for the IVth wave of LIS (1994-1996 datasets) will include separate categories for new forms of public transfer income, e.g., guaranteed child support, child care subsidies, allowances for care of invalids, and greater detail among original LIS income categories (e.g., a finer breakdown of pension income sources). As shown below, the LIS income categorization scheme can be unfolded so as to enlarge the scope and definition of household income to include greater detail and breadth. We also continue to update our technical and institutional documentation so that survey quality can be ascertained and so that the numerical values which LIS contains can be put into a social, legal, and political context. As part of our technical documentation, we collect micro-macro comparisons whenever possible, though we cannot guarantee the accuracy of these comparisons.

More than anything else, it is our belief that our most recent analyses of income distribution for the OECD (Atkinson, Rainwater, and Smeeding 1995) can help lead the way to improved income distribution estimates and IDG for the OECD nations and others at a comparable stage of economics development. It is a foundation from which future efforts can push the measurement envelope outward in building block fashion.

III. General Lessons, Goals, and Principles for Micro-Micro and Micro-Macro IDG

The LIS task of harmonization of microdata can be much easily accomplished if the setting of standards produces an ex-ante acceptable set of useful guidelines that permit easier cross-national comparability of microdata across nations and continents. From our perspective, greater international comparability of income statistics (wealth, consumption) should be the foremost aim of the new IDG guidelines. That is, we would stress the importance of the micro-micro bottom half of Figure 1.

General Lessons

Our experiences over the last 13 years have taught us several general lessons:

> (1) What is ideally "most meaningful" may not always be what is most useful or most practical. In fact, reasonable "common denominators," such as cash disposable income, provide a sound and useful basis which can be used to help build better and more comprehensive measures of economic well-being. Our first priority is the implementation of such guidelines, with room for additional building blocks and "best practice" criteria to continue to update and expand them.
>
> (2) Sources and concepts of household income data vary tremendously across and even within nations presenting important issues for harmonization and comparability more generally. Times and surveys continue to change, hence, the establishment of the IDG needs to be implemented via a set of guidelines which would be regularly and periodically updated in the same way that the SNAs are periodically updated.
>
> (3) Widespread availability of household income microdata is the only safe, practical, and sensible way to ensure long-term comparability and to build towards more

> comprehensive and complete measures of economic well-being. Nations should be prepared to share their data in a way that facilitates international comparability but does not compromise the privacy or confidentiality of survey respondents.

From the LIS perspective, we would stress the practical—income distribution guidelines—over the visionary—income distribution concepts not yet ready for standardization. The latter is important in a theoretical sense, yet most difficult to implement from a practical point of view. We also stress the basic comparability of microdata sources over the linkages of macro to micro data (or micro to macro data). While the latter are important, again from a visionary and "more complete" measurement perspective, they do not do a lot to help further international microdata comparability. This is not to say that a macro to micro framework is not necessary. Rather, it is to say that such a framework is not sufficient to improve the practice of international comparability of microdata.

Goals and Principles

As the development of international guidelines begin, they must be shaped by a set of goals as determined by the ultimate users. The still "preliminary" United Nations IDG from 1977 did not really help microdata users because they were only of the macro to micro "top down" variety. They yield little in the way of practical advice for microdata producers or users. Moreover, the 1977 United Nations IDG provided an example of what happens when too much is attempted on an abstract level by too few—nothing is implemented and so not much results. In order to improve on these previous efforts, every constituency and stakeholder which seeks to promote comparability should have a chance to express the goals and principles upon which the IDG should be built. The following is a list of priorities and criteria that appeal to LIS as an international cooperative research project. They address issues related to the micro-micro perspective. Other constituencies should add their own properties and criteria as well:

(1) **Demand driven** IDG are a must. The IDG must be constructed in a bottom up way where the ultimate users of the IDG should help shape them. Thus, practical and analytic users—policymakers, central statistical offices, international organizations, etc.—need to express their needs. And consensus needs to be built by all participants, from all of the perspectives shown in Figure 1.

(2) The IDG must be **instructive**. They must say what is important to measure and how to measure it in order to be in compliance with international guidelines. They must, therefore, be of practical use and importance.

(3) In order to be constructive, the IDG must **set priorities**. That is, there must be a set of basic minimum acceptable standards which need to be met in order to judge international comparability and compliance. Datasets not meeting these standards may not be useful for all types of international comparisons. The user's **ability to choose** must be stressed by the IDG. The acceptable degree of data quality will vary by use and purpose of the comparison at hand. What will be necessary then, are a set of quality standards which allow the users to decide whether the data being analyzed meet their standards. The IDG must propose a set of microdata quality indicators which are inputs for users who publish international comparisons and who therefore determine international comparability. These should include elements of sampling and nonsampling error, purpose and characteristics of the survey, and quality of data collected relative to other microdata sources of similar construction (micro-micro comparability), and then relative to appropriate national aggregates (the micro-macro perspective).

(4) These IDG must be **flexible** in that over time, quality/quantity of measurement will also change. Widespread availability of household income microdata prepared according to a common plan will provide both a basis of comparison and facilitate data harmonization. It

will also provide the new material to move from current standards to more complete measures of incomes, built from the bottom up approach. Finally, it will provide the opportunity to expand the range of nations and economies who will find the IDG relevant and useful.

(5) Above all, the IDG must be **widely accepted and practiced** by the data producing community. The IDG are only useful if they are practiced and implemented. Thus, agreement on the components of the IDG is needed in order for them to be useful. Top down approaches, which satisfy macrodata producers, do very little at the end of the day to improve microdata comparability and satisfy microdata producers and users.

IV Specific Issues and Necessary Minimum Standards for Microdata-Based Income Distribution Guidelines.

Within a broad set of goals and principles designed by a multitude of stakeholders a set of specific needs will arise. The specific needs mentioned here are those of an international organization interested in cross-national comparability of household microdata. These needs are largely determined by LIS experiences with household income microdata, though they may also apply to consumption/expenditure data and to accumulation/wealth data as well.

Household Income Definitions

Both the ABS (1996) and FBRW (1996) papers provide a very useful overall income accounting framework for review. Neither provide guidelines for ways to achieve these measures in practice. FBRW (or at least the BR part of FBRW) (1996) further asks whether after direct tax household disposable (spendable) income is the most appropriate measure for international income comparisons. In our opinion, the most appropriate measure for comparison depends on *both* the ideal income measure or “framework” *and* what is achievable in practice. Table 1 presents this contrast by deconstructing LIS disposable income, the definition recently used by Atkinson, Rainwater, and

Smeeding (1995) to compare incomes in 19 OECD nations. Here is the LIS PPI measure is compared to a more ideal notion of LIS full income (right column), which is closer to the BR perspective. Note that almost all of the components of more ideal income *could* be estimated by LIS were appropriate data available. That is, the LIS data template provides (income "V" variables) for a wide range of income items that, *if available,* could allow the researcher to estimate a broader measure of full income. Only a few items, marked VXX, are not currently counted in the LIS template, and these are to be added to the Wave IV LIS data structure. On the other hand, LIS disposable income as defined in the left-hand column, is now available on a consistent basis for over 20 OECD and other nations. The main difference between FBRW (and LIS') "more ideal" definition and the LIS practical definition are noncash transfers (and other noncash income such as imputed rent on owned homes) and indirect taxes (VAT, sales taxes, property and wealth taxes, corporate taxes, and employer contributions for social security).[3]

So, why doesn't anyone present estimates of the ideal income definition rather than just disposable income? The differences are both practical and theoretical. On the practical side, *none* of the 27 LIS nations' surveys contain all (or even most) of the "ideal" variables! The reasons are straightforward. Estimates of indirect taxes paid or noncash benefits received are normally achieved by imputation and not from data collection. The burden of consumption-based taxes is based on household specific measures of consumption as well as income. Thus, surveys must measure both income and consumption or one of the two must be imputed in order to allocate consumption-based taxes across households. Moreover, these imputations depend on several assumptions upon which there is little or no agreement among economists or policy analysts.

For example, consider the incidence of indirect taxes on rental housing, taxes on employers, and taxes on corporations. These taxes may fall in profits, on workers, or on consumers. Thus, stockholders (who earn profits) and expenditures on taxed items must also be captured by the survey in order to simulate the incidence of such taxes. Limited experimentation with these simulations (e.g., Rosenberg and Bell 1992) indicates that they do affect the tax burden in so far as one can agree in a pattern of incidence for such taxes and on which taxes to include. Additional anomalies also arise, e.g., eight LIS nations provide data on “church taxes” or other ultimately voluntary payments made to churches or religious institutions. Should these also be counted as taxes paid?

A second category, measurement and valuation of noncash benefits, provide a similar but even less tractable set of alternatives. Estimates of noncash benefits depend on a list of benefits to include (see Table for the LIS list, but other lists may vary), a measurement concept for the market value of benefits (e.g., an insurance valuation for medical services versus benefit receipt), and a measure of the cash value that the household places on these benefits (market value, government cost, or recipients’ value). Each of these choices can have an impact on measured income inequality (e.g., see Smeeding et al., 1993). Other forms of noncash income (e.g., imputed rent for owned houses) also need to be added. Here, our experience is that each nation has its own definitions of this income component and even simple international rules (e.g., a low interest rate applied to housing net worth) may provide biased estimates of the value and distribution of imputed rent.

Experimental combined estimates of indirect taxes and noncash benefits have been performed for two nations, France and the United Kingdom, by Gardiner, Hills, et al. (1995). These estimates clearly indicate the importance and sensitivity to measurement technique for *each* of these components. Others who have worked in this area report similar findings (U. S. Bureau of the Census 1982). A new project to build a European community-wide microsimulation model, EUROMOD, (see Sutherland 1996) may someday work out a set of mutually acceptable rules for estimating the incidence of indirect taxation and noncash benefits for a range of estimates. However, this set of rules is not ready at present.

So, what do we do? Rather than halt all comparisons, something which we know we cannot accomplish in practice, we should continue to press forward on two fronts: first, bringing all nations up to the current minimally acceptable level of comparison, i.e., cash disposable income, and second, continuing to work *from the bottom up* to improve data quality, comparability, imputation, and microsimulation capabilities to deepen and broaden international comparisons. Thus, the LIS/Atkinson, Rainwater, and Smeeding (1995) could serve as a basis on which the efforts of Sutherland (1996) and others could build.

At the same time, we can continue to improve the *quality* of the data which we now use. For instance, comparisons of micro aggregates with macro estimates of income from capital indicate that household surveys do a poor job in capturing capital (property) income flows. Realized capital gains or losses are counted in only a few LIS surveys, and deferred/unrealized capital income is not at all captured. Estimates of wealth and income distribution data would allow better capture of full capital income measures as well. Other items, e.g., subtracting child support *paid* (VXX) [as well as adding child support received (V34)] and subtracting interest *paid* (VXX) [as well as recording interest received (V8)] might be a good recommendation for survey takers and for the IDG to adopt.

Microdata Availability

Within the policies and practices of survey constraints, the full availability of household income microdata should be stressed. Cross-national comparisons of inequality and income distribution vary enormously according to the definitions and choices made by the data analyst. The unit of observation, unit of weighing, time period, income definition, adjustments for differences in needs, classification of households, etc., are all open to choices made by data analysts and should be subject to sensitivity tests. This can only be achieved by the *same* set of analysts being allowed to apply the *same* set of choices (same computer program!) to the *same* datasets. Once collected, the marginal cost of additional data use is zero. Remote access systems such as LIS are being improved to the degree where privacy and flexibility can be achieved together at very low costs. These efforts should be encouraged by the IDG as well.

Moreover, the availability of microdata to researchers allow further experimentation with full income concepts by providing the basic survey material on which to build these measures in a cooperative and consistent way. It also allows data users to begin to further refine the classificatory variables: occupation, work, industry, education, ethnicity, etc. which are also important to policy relevant comparisons (see below). And finally, the availability of well-defined techniques and microdata-based inequality measures for as wide a set of nations as meet international guidelines can immediately improve the data comparability situation. These meso-data can simply be made available on a website where users can obtain a set of accurate cross-national comparisons given the definitions imposed by the creators which are completely described in the footnotes and appendices to the table. These definitions, and even the *actual software program written* to extract the data and create the comparisons, should also be included as a footnote to the data series.

Basic Standards

The availability of microdata must be balanced by a set of specific survey information which allows the users to judge the relative quality of datasets being compared. Full cross-national comparability is impossible. What is important is the ratio of signal (true economic difference) to noise (survey sampling and nonsampling differences) and we can only judge this ratio if we have proper information of which to compare datasources. The LIS technical documentation file (Table 2) provides a crude beginning toward such a set of standards. Because survey design, sampling and nonsampling errors, differences in imputations for nonreporting of incomes, survey income data editing (e.g., top and bottom coding), and other features all vary by national practice, it is important to know how each survey has been constructed. Here, more detail is preferred to less, but some *minimal* level of information *must* be made available by the dataset creators. The IDG used to determine these minimal guidelines and international organizations should then be recommended to use only those datasets which have met these minimal quality standards.

Issues such as "grossing up" survey incomes (also known as "corrections for income underreporting") to register and administrative record amounts or can only be sensibly pursued on a cross-national basis with full information on data quality. Because current practices provide widely different levels of income quality: raw survey data; edited surveys with imputed data; surveys based on tax files; surveys based on national income registers, etc. Full survey descriptors are *crucial* to those who wish to make international comparisons. If the IDG can provide a commonly agreed upon set of data quality measures (and guidelines) they would go a very long way toward improving the nature of cross-national comparisons of well-being.

Standardized Descriptors, Measures, and Presentations

Along with income measures, tabular presentation of data requires that we use standard socioeconomic descriptors and socioeconomic classifications. This is because measures of economic well-being are only important so far as they can help describe the situations of different policy relevant groups in a society. These concepts currently used in practice are in great need of standardization. Definitions of "single-parent families," the "unemployed," as well as occupation, industry, and work status are also needed. Here, availability of microdata allows flexibility to judge the sensitivity of current practices to measurement techniques and classifications. What needs to be laid down are a set of agreed upon classifiers, particularly those related to household structure, which all surveys should adopt and make available. Also needed are standard measures of inequality and standardized measurement techniques. Top and bottom coding of data, use of equivalence scales, and related measurement issues need be carefully dealt with when presenting data summaries. References to standard textbooks on income distribution are not enough. Examples from such works as Atkinson, Rainwater, and Smeeding (1995) and Jenkins (1991) are useful. What may be required is a standardized set of table notes which specify units, weights, top and bottom codes, equivalence measure, and other choices made for particular presentations.

Micro to Macro Linkages

From a micro user perspective, macrodata from the SNA or other national accountancy frameworks are necessary for microdata comparability mainly to provide a background picture of the way that the macro-factor income distribution relates to the micro-personal income distribution. An excellent example from A.B. Atkinson (1994), Figure 2, illustrates the way in which the United Kingdom factor income distribution boils down to the personal income distribution. The figure could be improved upon by indicating the proportion of gross domestic production which does <u>not</u> filter down to the household sector due to its deferred nature (e.g., pension, insurance funds, deferred capital income, etc.). Such a template also provides a sources framework in which income from one perspective (household-based microdata income by source weighted and summed) compares to income from another perspective (macro/SNA-based estimates of aggregate income, adjusted to the survey population).

The template also helps identify macro and micro income concepts which are not always synonymous. For instance, “self-employment income” may differ in definition for macroeconomists, national accountants, tax authorities, household income survey takers and respondents, Harris (1996). What is important to realize here is the actual reconciliation of one set of estimates with another. Micro-macro linkages help identify crucial definitional differences and important differences in estimates of key aggregates (e.g., wages and salaries versus total compensation).[4] Application of such a framework to several nations would produce the first comparative cross-national study of micro-macro linkages. Such a study would open a whole new realm of quality comparisons, ones which we can now only roughly attempt (e.g., Atkinson, Rainwater, and Smeeding 1995, Table 3.7).

A further step is the record by record comparison of reported household income with national income registers for the *same* persons. Such comparisons are very difficult, requiring access to confidential documents and possibly straining privacy considerations. However, when they are made (e.g., Radner 1983; Eurostat 1996), they produce valuable information on *individual* unit reporting accuracy, something macrodata comparisons cannot provide.[5]

Other Issues

A microdata-oriented set of useful IDG should also address various additional issues and national experiences with types of measurement issues in which LIS has some experience, but no particular expertise. We only mention them here, interested readers can consult Smeeding and Vleminckx (1996) for additional detail.

An "economic well-being survey" where income and net worth data are *both* collected in the same dataset would be most useful. The goal would be the ability to "back-out" consumption by adding (subtracting) change in net worth from income (the Haig-Simons definition). This dataset would provide accurate and internally consistent measures of income, wealth, and consumption *all* from the same dataset. They would overcome the issues involved in measuring true consumption (quantities) as opposed to consumer prices, the goal of most current consumer expenditure surveys. They would allow linkages of household wealth to financial sector accounts in meaningful ways, allowing us to experiment with measures of undistributed and unrealized net worth such as pension accumulation, while permitting better measurement of personal savings as well.[6] Surely a complete top down macro to micro accounting of national income would find that the least adequately measured component of survey-based household cash income is income from capital.

Real income distribution measures can only be made at present using crude approximations of real living standards across nations derived from Purchasing Power Parity (PPP) indices. To the extent that an IDG-based measure of income (e.g., LIS disposable income) differs from a SNA-based measure (e.g., personal income or aggregate consumption) current aggregate income-based PPPs are not a good tool for cross-national comparisons of "real" household income as measured by household microsurveys.

Data collection issues could also be addressed in the IDG. Practical information on sampling, weighing, questionnaire design is an important element of income, wealth and expenditure data collection. For example, new techniques such as asking for wealth amounts in brackets (between X and Y, greater than X, etc.) have produced significant improvements in the quality of wealth data (Juster and Smith 1995). In turn, these provide increased accuracy and validity in measures of income flows from these same stocks. The recent Eurostat experience with EHPS might also prove useful in this regard.

Panel data comparisons would also be most useful. At present, we are working hard to develop accurate cross-national cross-sectional estimates of the income distribution at a point in time. The next step is to capture not only the cross-sectional snapshot but also the dynamics of income distribution and economic mobility. Household panel data wherein the same individuals are followed over time presents its own set of promises (studying economic mobility, understanding the economic consequences of events such as death a spouse, divorce, etc.) but its own set of pitfalls as well (cumulative survey nonresponse and bias, ruled for following person into and out of households, etc.). Here , the experience of the Panel Data Comparability Project (PACO) at CEPS/INSTEAD and those of the United States-German Comparison project at Syracuse University (Wagner, Burkhauser, and Behringer 1993) can help set future guidelines for measuring the dynamics of well-being.

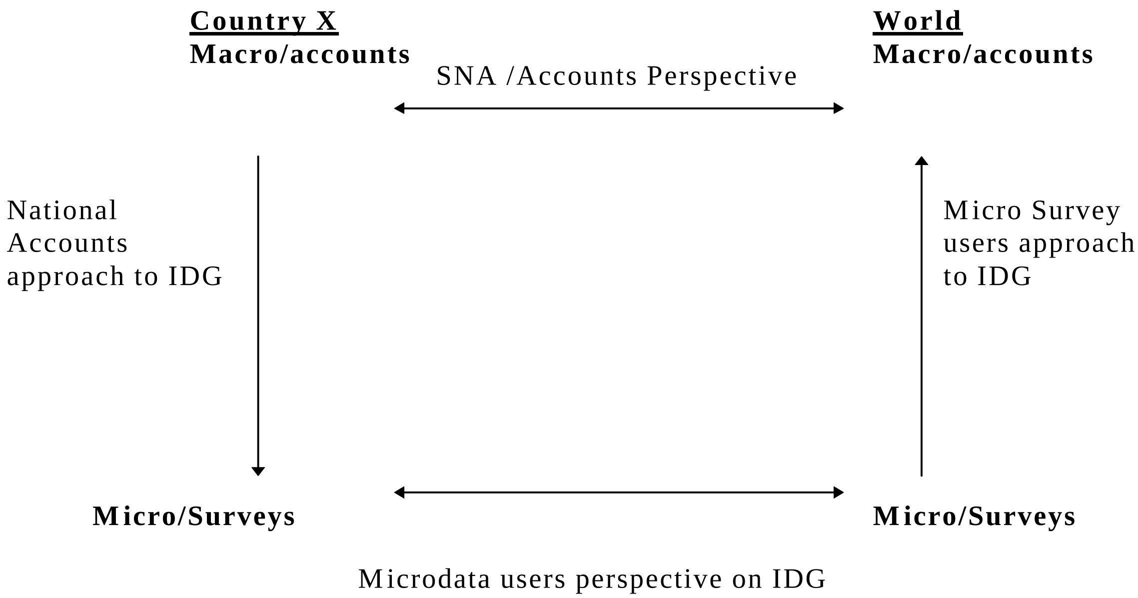
IV: Where Do We Go From Here?

The Canberra meeting of an Expert Group on Household Statistics (EGHIS) follows the IARIW meeting. Next on the agenda is a meeting of the Eurostat AISG in Luxembourg in January. Here, topics to be addressed include micro-micro comparisons, micro-macro comparisons, and related issues from the bottom up perspective. As is the case here in Canberra, the Eurostat meeting will begin with a summary of this meeting. Different groups are represented at each meeting, e.g., Europe versus Asia. Clearly the two groups should be merged into one working group with a common set of goals and a mutually supportive agenda.

The next step seems to be the unification of the two projects under the leadership of an organization with a strong interest *in all four* aspects of the IDG shown in Figure 1. The particular organizations I have in mind are the Economics and Statistics Divisions of the OECD. This sponsorship seems natural, not only this author, but to others (e.g., Wolfson 1996). OECD has sponsored the work of Atkinson, Rainwater, and Smeeding (1995). It continues to use the LIS microdata in many of its recent publications. It also uses household survey data based on consultant reports (e.g., *Employment Outlook*, July 1996). OECD has been intimately involved in work on PPPs and SNAs. While it does not collect household survey microdata, it has the most to gain from accurate consistent household income data which is theoretically and practically linked to macrodata. OECD should entertain a joint proposal from this group, the AISG, LIS, and other interested parties who pledge to take the material which has already been prepared for this meeting, for the AISG group, and by others and turn it into a useful set of IDG that are both proscriptive and descriptive. Further support from the World Bank or the United Nations Commission on Asia would help bring Asian nations not yet members of the OECD into the fold. Certainly the rapidly growing Pacific Rim nations are the next target for projects such as LIS to embrace.

I hope that we can begin to discuss the elements of a combined EGHIS and AISG approach with OECD and other (e.g., World Bank) support at this meeting.

Figure 1:
A Conceptual Framework for Cross National Comparative Research



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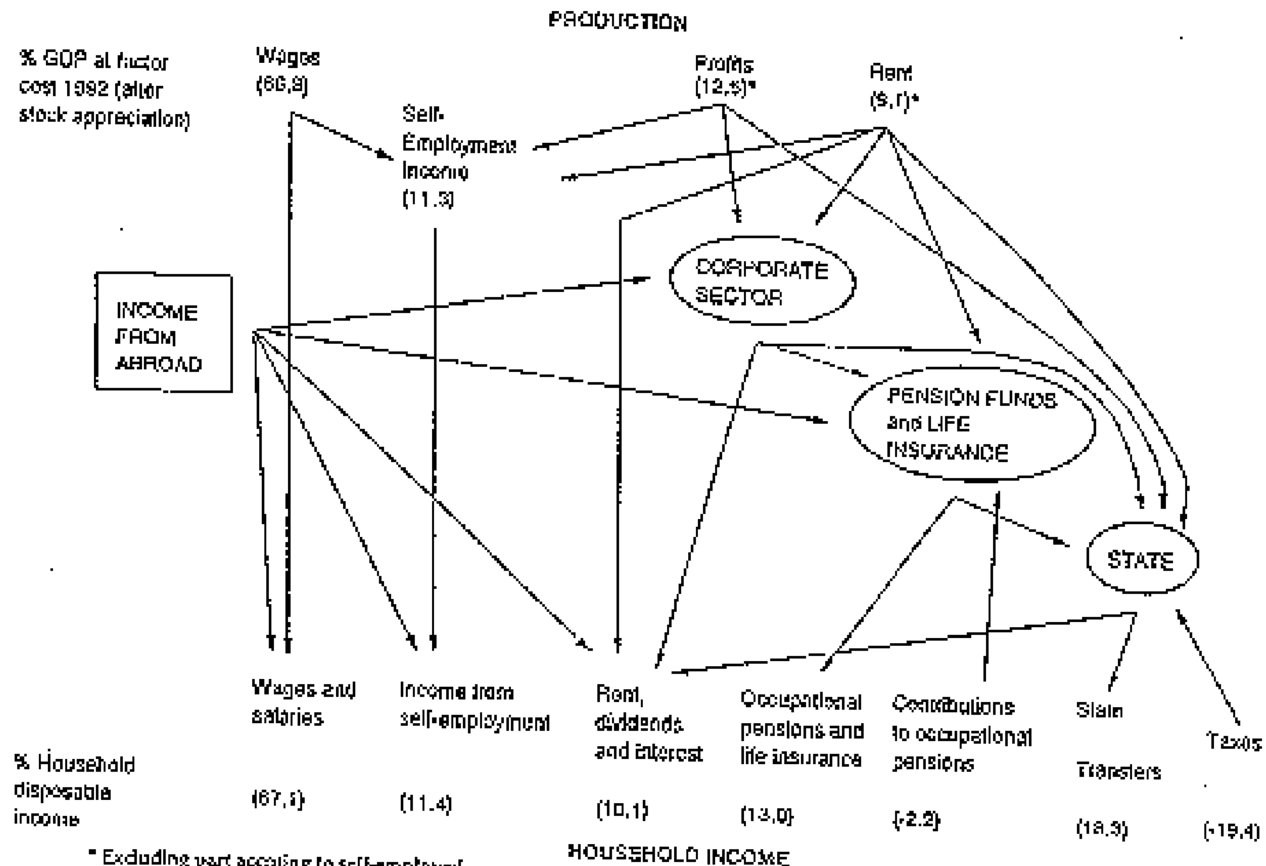
Note: While this framework addresses income, it could easily be extended to consumption/ expenditure data, and to national balance sheet/wealth- net worth accounts and survey data

Figure 2

The Links Between Factor and Personal Distributions



Note: * Excluding part accruing to self-employed.

Source:

(a) % GDP from Central Statistical Office (1993), Table 1.4. Omitted category is imputed charge for consumption of non-trading capital.

(b) % household income from Central Statistical Office (1993), Table 4.9. Omitted category (1.8%) is income in kind.

Source: Atkinson (1994), Figure 4, Page 17.

Table 1: Summary Income Variables: Beyond DPI

LIS Disposable Income (DPI)	LIS More "Ideal" Income
Gross Wages and Salaries (VI) Farm Self-Employment Income (V4) Non-Farm Self-Employment Income (V5)	+Mandatory Employer Contributions (V2) +Non-Mandatory Employer Contributions (V3) +Earnings In-Kind (V6)
A. Total Earnings (EARNING)	**A'. Total Compensation**
Cash Property Income (Interest, Rent, Dividends) (V8)	+ Noncash Property Income (V9) + Realized Capital Gains/Losses (V9a) - Interest Paid (VXX)
B. Factor Income (V8)	**B'. Total Factor Income**
Sick Pay (V16) Disability Pay (V18) Social Retirement Benefits (V19) Child or Family Allowances (V21) Unemployment Compensation (V21) Maternity Pay (V22) Military/Vet/War Benefits (V23) Other Social Insurance (V24)\	
C. Social Insurance Transfers (SOCI)	
Means-tested Cash Benefits (V25) Near-cash Benefits (V26)	
D. Social Transfers (SOCTRANS)	
Private Pensions (V32) Public Sector Pensions (V33)	
Alimony or Child Support Received (V34) Regular Private Income Transfers (V35)	-Alimony/Child Support paid (VXX)
Other Cash Income (V36)	
E. Total Gross Cash and Nearcash Income (GI)	
Mandatory Contributions for Self-Employed (V7) Mandatory Employee Contribution (V13) Income tax (V11)	+Other Direct taxes (v15) +Other Indirect taxes (v14) +Property/Wealth taxes (V17)
F. Cash and Noncash Disposable Income (DPI)	**F'. Full Disposable Income** + Social Transfers In-Kind Food Benefits (V27) Housing Benefits (V28) Medical Benefits (V29) Heating Benefits (V30) Education Benefits (V31) Child Care Benefits (Vxx)
	G. Full Household Income

Table 2: LIS Technical Database

A. Information on Origin and Main Focus of the Survey

B. Population, Sample Size and Sampling Methods

- sampling frame
- population excluded from sampling frame
- population not eliglble for interview
- samle design (random, probability, stratified...)
- differential probabilities of selection
- total number of units in the population from which the sample was selected
- total number of respondents who were actually surveyed (weighted and underweighted)
- information available on not interview households or individuals

C. Measures of Data Quality

- overall nonresponse rates
- nonresponse rates for important sub-groups
- item nonresponse rates
- reporting and underreporting of income data
    - comparisons with other surveys
    - comparisons with National Accounts or Administrative Records
- reporting or underreporting of tax, demographic, wealth, expenditure, etc.
- adjustments made to reported income data
- techniques applied to reduce error or to correct for item nonresponse ("hot deck", "cold deck" or other adjustments)
- simulated, estimated or imputed income (and tax) variables

D. Data Collection and Acquisition Techniques

- description of actual data collection process (personal visit, telephone, mail)
- organization of the questionnaire
- participation voluntary or required by law
- description of respondent rules
- utilization of pay records, tax returns, etc. during interview

E. Weighting Procedures

- purpose of sample weights (adjusting for nonresponse, undercoverage of particular population groups, missing data, representation of population)
- sum of survey weights equal to number of units in sampling frame

F. Determination of Survey Unit Membership and Basic Unit of Aggregation

G. Definition of Children and Spouses

H. Availability and Reference Periods of Basic Social and Demographic Information

- reference periods
- available for all persons in survey unit
- list of sources

I. Availability and Reference Periods of Labor Market Information

reference periods
- available for all persons in survey unit
- list of sources

J. Availability of Geographic Information

K. Sources and Amounts of Cash Income

- reference periods
- actual or usual amounts
- available for all persons in survey unit
- list of sources

L. Taxes

M. Variable List, Description of Variables, and Other Variable Specific Information

N. Bibliography of Reference Material and Publications Based on the Results of the Survey

CEPS/INSTEAD

Centre d'Etudes de Populations, de Pauvreté et de Politiques Socio-Economiques
International Networks for Studies in Technologie Environment, Alternatives, Development

LUXEMBOURG INCOME STUDY

A Division of CEPS/INSTEAD

INTRODUCTION AND OVERVIEW OF LIS

Fall 1996

The Luxembourg Income Study (LIS project) began in 1983 under the joint sponsorship of the government of Luxembourg and the Center for Population, Poverty and Policy Studies (CEPS) in Walferdange. It is now funded on a continuing basis by the national science and social science research foundations of its member countries and by CEPS/INSTEAD.

The LIS Project has four goals:

1) test the feasibility of creating a database consisting of social and economic household survey microdata from different countries;
2) provide a method allowing researchers to access these data under privacy restrictions required by the countries providing the data;
3) create a system that will allow research requests to be quickly received and returned to users at remote locations;
4) promote comparative research on the economic and social status of populations in different countries.

Since its beginning in 1983, the experiment has grown into a cooperative research project with a membership that includes countries in Europe, North America, the Far East and Australia. The database now contains information for more than 25 countries for one or more years. Negotiations are underway to add data from additional countries, including Korea, Mexico, and South Africa. The LIS microdatasets are accessed globally at zero direct cost using electronic mail networks by over 350 users in 28 nations.

The LIS databank has a total of over 70 datasets covering the period 1968 to 1994. Recently, additional surveys were added to more fully represent the period of the early 1990's for most of the nations. Starting in 1997, a fourth wave of data for the middle 1990's will be added. A list of countries and years for which data is available is attached. A new operating system for our remote access network was implemented in 1995. It is much more flexible, faster and provides additional user options, including SAS and SPSS. Extensive documentation concerning technical aspects of the survey data, and the social institutions of income provision in member countries is also available to users via electronic mail. This work has been supported by the U.S. National Institute on Aging, the Statistical Office of the European Community, the Office of Economic Cooperation and Development, the European Community Directrorate General's Office, the Ford Foundation, U.S. Agency for International Development, the Russell Sage Foundation, and by our member nations.

Reports by participants in the LIS project have appeared in books, articles and dissertations, and are often featured in the popular media. Each completed study is published in the LIS working paper series, which currently numbers more than 140 papers. Abstracts of working papers are available on the Syracuse University home page (http://www-cpr.maxwell.syr.edu/lis_part/lisintro.htm). The project conducts annual summer workshops to introduce researchers to the database, and to give scholars experience in cross-national analysis of social policy issues related to income distribution. Over 260 students attended the 1988 through 1996 sessions. A US Workshop was held in Washington, D.C. for 25 participants in May 1995. Two workshops were held in Luxembourg in July 1996, one an introductory workshop, the other our first advanced workshop. A LIS newsletter is published twice yearly and mailed to over 1300 scholars in 30 nations. Additional information on LIS is available from either letterhead office, most easily by electronic mail.

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LIS DATABASE LIST: Country and Year[1]						
COUNTRY[2]	Historical Databases		Wave I	Wave II	Wave III	Wave IV
Australia			1982	1986	1990	1994
Austria				1987	1991	1994
Belgium				1985	1988/1992	1994
Bulgaria					1991*	1993*
Canada	1971	1975	1981	1987	1991	1994
Czech Republic					1992	1995
Denmark				1987	1992	1994
Finland			1981	1987	1991	1994
France[3]			1979	1984/1984	1989/1989	1994
Germany[4]	1973	1978	1981/83	1984	1989/1993	1995
Hungary					1991	1995
Ireland				1987		
Israel			1979	1987	1992	1994
Italy				1986	1991	1994
Luxembourg				1985	1991	1995
Netherlands			1983	1986 /1987	1991	1994
Norway			1979	1986	1991	1994
Poland				1986	1992	1994
Portugal			1980	1989		
R.O.C.-Taiwan			1981	1986	1991	1994
Russia[5]					1992	1995/1994T
Slovak Republic					1992	1995
Spain			1980-81		1990-91	
Sweden	1968	1975	1981	1987	1992	1994
Switzerland			1982		1992	
United Kingdom	1969	1974	1979	1986	1991	1994
United States	1971	1975	1979	1986	1991	1994

1 Year given is reference year, not necessarily the year that the data were collected.

2 We are also in negotiation with Greece (1994), Korea (1993), Mexico (1990), South Africa (1993). Japan (1993), and New Zealand (1995).

3 France has an income survey (1979, 1984) and a budget survey (1984, 1989, 1994).

4 Germany has three different databases: an income and expenditure survey (1973, 1978, 1983); a transfer income survey (1981); and four cross-sections from the socio-economic panel (1984,1989,1993, 1995)

5. Russia has two different datasets: one national, the other (1994T) for the city of Tagenrog.
Will be available in early 1997.

* Will be available in late 1997.

Endnotes

1. The LIS experience is almost wholly related to microdata on income. LIS has begun a new Luxembourg Employment Study (LES) project on comparative labor force data. Most of the lessons which have been learned from LIS probably apply to consumption/expenditure microdata and wealth/net worth microdata as well. There have been few microdata-based harmonization projects involved in either consumption or wealth. The work of Hagenaars, et al, 1994 for the European Statistical Office involved household consumption data.

2. See Hagenaars, et al, (1994) and Zaidi and deVos (1996) for a similar but more limited cross-national comparison, based on household consumption data.

3. To reach the ABS 1996 framework, one would also need to add in such items as employer contributions to total compensation not paid in wages (e.g., company pensions), other realized capital income (e.g., capital gains), etc.

4. One practical example: the Austrian Microcensus and (before 1994) the Polish Household Income and Expenditure Survey do not collect data on income from self-employment. The importance of this omission (though not its distributional impact) can be gathered from such comparisons as these.

5. Finally, macro-macro linkages provide an avenue by which new components of well-being, e.g., value of time, can be added to both macro and micro measures of well-being. (See also Atkinson, Rainwater, and Smeeding 1995, Chapter 3 on this issue.)

6. The ABS and Statistics Canada are closest of all nations to such a survey. One only hopes they will heed this advice.

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