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The Well-Being and the Decisions of Farm Households: The Uses of Cross-Country Comparisons

by
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Paper Presented at
Workshop on the Farm Household-Firm Unit:
Its importance in agriculture and implications for statistics
12-13 April 2002

Wye Campus Imperial College, University of London

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Across Europe and North America, the structure of agriculture is remarkably similar over many dimensions. In these countries, farms are predominantly family-owned, the number of farmers has declined throughout the 20th century, the incomes of farmers are roughly equivalent to non-farmers, and off-farm employment is becoming more common. Due to these similarities, the differences that do exist can be particularly illuminating for policymakers. For example, in an effort to see how well a country is doing with respect to the aims of the Common Agricultural Policy (CAP), policymakers in Europe may be interested in their distribution of farm household incomes in comparison to other countries. And, for shocks that affect many countries simultaneously, policymakers may wish to consider how poverty rates among their country's farm families compare to other countries. The responses to these issues may generate further interest among policymakers in how policies to improve the well-being of farm households are faring. For example, they may want to consider how the distribution of farm subsidies and the methods of targeting these subsidies effects farm families. By looking at other countries alongside their own, policymakers are able to better understand the impacts of various policies. A further important question to policymakers involves the steady movement away from agricultural employment. As more farm households have members working off-farm, how does the agricultural sector change? And, how do specific policies influence these changes?

Agricultural economists have had a lot to say about these broad questions. However, these questions have generally been posed within rather than across countries. This relative lack of cross-country comparisons is due, at least in part, to the paucity of relevant household-level data. Some cross-country data sets, notably the Farm Accountancy Data Network (FADN, in France, RICA), do exist but these data are not been particularly comprehensive and, moreover, are often not disaggregated to the household level.

One should contrast this lack of cross-country farm household-level analyses with the large number of studies on cross-country comparisons for the broader population. These studies have flourished in large part due to the Luxembourg Income Study (LIS), a cooperative research project involving 25 countries. Of particular interest is the LIS database of household income surveys from these countries.

In this paper, I begin by reviewing two particularly well-suited research topics for cross-country farm household comparisons – income distributions among farm households and off-farm employment. Included in these reviews are some studies using cross-country comparisons. I then describe the LIS in more detail and the numerous studies generated by its existence. In the conclusion I consider what lessons about cross-country compilation of agricultural statistics we may learn from the construction of the LIS.

Cross-Country Comparisons and Agricultural Economics

Income Distributions in the Agricultural Sector

Cross-country comparisons of income distributions can help illuminate aspects of the farm economy. As an example, when some global macroeconomic shock occurs, countries may be interested in how its farmers fared relative to other countries. Within any country, it is often difficult to isolate how a country responded to such shocks but through comparisons with other countries, which also experienced the shock, new insights are possible. In addition to comparisons with other countries, information on distributions at the household level are important since the effects of shocks on inequality and poverty are obscured by simple summary statistics. Or, as another example, through comparisons with other countries, researchers may be interested in the performance of a particular country's safety net. In the devolution literature,

one of the arguments for diversity in policies across regions is the "learning from others" that may occur (Case, Rosen, and Hines, 1993). By understanding the relative performance of safety nets in different areas, improvement is possible. Or, the performance of farmers relative to the non-farm population presumably differs across countries. Understanding how and why this occurs would help design better policies. To cite a final example, the farm and non-farm policies of countries will presumably have an impact on household labor allocations.

Numerous studies have examined these issues within individual countries. In the U.S., for example, see Ahearn, Johnson, and Strickland, 1985; Blanford, 1987; Boisvert and Ranney, 1990; Gardner, 1992; Offutt, 2000; and Gundersen, *et al.*, 2000. Cross-country comparisons are not as common, however. I now consider three examples of cross-country income distribution comparisons from the past ten years, concentrating on the data limitations inherent in each. The papers are Hill, 1996; Allanson and Hubbard, 1999; and Bollman, Whitener, and Tung, 1995.

By the Treaty of Rome's Article 39, one of the goals of CAP is to "...ensure thereby a fair standard of living for the agricultural population, particularly by the increasing of the individual earnings of persons engaged in agriculture." (Quote taken from Hill, 1989, p. 19).² Evaluating the effectiveness of a country in meeting this goal, or meeting the within-country goals like the UK's 1947 Agricultural Policy Act, requires information beyond just the average farm income level. Moreover, because CAP is defined for all of Europe, cross-country comparisons are particularly relevant. In response, the Total Income of Agricultural Households (TIAH) in Member States statistics were developed. These statistics were designed to monitor the changing total income of the agricultural community; the changing composition of total

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¹ Earlier work on cross-country comparisons of income distributions includes Hill, 1989 and Slattery, 1966.

² For a discussion of CAP and some of the concordant issues, see, e.g., Rabinowicz, 1999; Swinbank, 1999; Mahé and Roe, 1996; and Philippidis and Hubbard, 2001. For a discussion of how a "fair" standard of living for farm households might be established, see Zioganas, 1988.

income; and compare the income situation with non-agricultural households (Eurostat, 1990). The surveys therefore included both farm income and non-farm income and the incomes earned by all members of the household. While the definition of income was inclusive, the number of farms included in this definition was more limited – less than half of all agricultural holdings were included in the survey.

For the 1987 to 1992 time period, twelve countries supplied data for at least one year. In these countries (Belgium, Denmark, France, Germany, Greece, Spain, Ireland, Italy, Luxembourg, Netherlands, Portugal, and the UK) the average household income received from farming was larger than from any other source. However, the total contribution of income varied widely – from over two-thirds in Netherlands and Ireland and less than half in Germany, Greece, and Italy. The direct effect of government policies on income varied widely. The amount of social subsidies received constituted between 5 and 15 percent of income in these countries. The percentage of income paid in taxes varied more widely, from almost 30 percent in Denmark down to less than one percent in Greece. In all countries, though, non-agricultural households paid more in taxes. (All results from Hill, 1996; Table 2-4.)

Hill (1996) used aggregate characterizations of the income composition of farmers in different countries. Allanson and Hubbard (1999) use a different data set, the Farm Accountancy Data Network (FADN). In the 1994-95 data, the sample they used contained almost 55,000 farms with samples ranging from 290 in Luxembourg to 17,034 in Italy. For reasons they note, the FADN was not particularly useful as a characterization of farm poverty because (a) only larger farms are in the survey and (b) off-farm income was not included. Because (a) smaller farms are more likely to be poor and (b) off-farm income is an important component of farmers' income, they choose not to consider poverty profiles. Instead, they concentrate on the relative

distribution of incomes in these countries. Using a second degree stochastic dominance criteria (Shorrocks, 1983), Allanson and Hubbard (1999) find that the farm family income situation is better in the Northern Europe than in the Mediterranean States but there is not uniform domination. If the sample is truncated to farm families in the bottom half of the income distribution (after removing farms with negative incomes), some Mediterranean states have lower income poverty gaps than some Northern States.

The previous two examples confined their analyses to European countries and had more than two countries. The third example is based on a comparison of Canada and U.S. Bollman, Whitener, and Tung (1995) use household surveys from both countries to compare farmers' economic well-being. Because of the advantages to similarities in cross-country data collection methods they use the Survey of Consumer Finances in Canada and the Current Population Survey in the U.S.³ The disadvantage to this approach, as they point out, is that the surveys are designed for the entire population rather than for the farm population. In both countries, the income of farming families has risen over time relative to non-farm families. However, this may be attributable, in part, to the increasing share of farm families' income from off-farm sources.⁴

Off-farm incomes

Over the 20th century, the majority of farm households moved from the agricultural to the non-agricultural sector. This was both for individuals moving from exclusively farm employment to non-farm employment and for individuals moving from farm employment to farm and non-farm employment. For example, in the U.S. from 1949 to 1982 the percentage of farmers working off-farm increased by 15 percent (Gould and Saupe, 1989) and in Canada, the

³ For more on comparisons of data sets in these countries, see Oliveira, Whitener, and Bollman, 1995.)

percentage of total income in Canada from off-farm activities rose from 15 percent in the 1940s to 50 percent in the 1980s (Bollman and Smith, 1987). In other countries, the percentage of income coming farm sources is also lower today. For example, in Denmark, income from farming accounted for only 41 percent of total household income in1984/5 (Hill, 1989, p. 135) and in Norway, in 1972 over 60 percent of farm households had off-farm incomes as well (OECD, 1978).⁵

As with income distribution analyses, there has been extensive research on the determinants of off-farm employment decisions within industrialized countries. As examples, in the U.S., see Huffman, 1980; Findeis and Jensen, 1998; and Corsi and Findeis, 2000; in Israel, see Kimhi and Lee, 1996 and Kimhi, 2000; in Canada, see Bessant, 2000; Howard and Swidinsky, 2000; and Furtan, Van Kooten, and Thompson, 1985; in Germany, see Pfeffer, 1989; and in Austria, see Weiss, 1997. At least two papers have further engaged in international comparisons of off-farm labor issues.

Jean (1996) presents a cross-country descriptive picture of off-farm employment. In the five countries he studied, 20 to 45 percent of farm households had at least one person employed off-farm. Out of these households, 90 percent said it was to meet the needs of the family but over 60 percent also said it was to help maintain the farm's financial status.

In the literatures described above on off-farm incomes and agricultural income distributions, cross-country differences were not used as an identification strategy. This approach has the potential to be a particularly rich use of cross-country data. In other contexts, geographic differences have been used as an identification strategy. For examples in the

⁴ Two other papers looking at cross-country comparisons of agricultural-related issues in the context of the Americas are Gundersen, *et al.*, 2000 and Sabates, Gould, and Villarreal, 2001.

agricultural economics literature using cross-state differences see Huffman and Evenson, 2001 (an analysis of agricultural productivity) and Figlio, Gundersen, and Ziliak, 1999 (an analysis of the determinants of Food Stamp Program caseloads).

One study using cross-country comparisons is Weersink, Nicholson, and Weerhewa (1998). They analyze dairy farm families in the bordering regions of New York, U.S. and Ontario, Canada. One of their concerns is with how farm support policies and social service policies effect off-farm labor decisions. It is always difficult with cross-sectional data within a particular region to ascertain the effect of various social policies due to issues like self-selection. The approach in their paper is to argue that many of the characteristics of these households across borders are relatively similar (e.g. the markets they face, the geography). But the farm supports and social service policies are markedly different allowing for identification of these policies. They found that, for example, the supply-managed marketing system in Ontario led to more stable incomes, necessitating less off-farm income as an insurance mechanism. In the context of social support systems, the existence of state health insurance in Canada meant there was no need for spouses to take jobs to obtain health insurance as might be the case for many U.S. farmers.

Cross-Country Comparisons for the General Population

Above, we described how cross-country comparisons of inequality in the agricultural sector and off-farm labor can grant us insights unavailable with the use of within country analyses. The possible analyses have been limited, however, by the lack of appropriate data.

This lack of appropriate data for analyses of the general populations has recently been overcome

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⁵ Some countries in Europe have decidedly less participation in the non-agricultural sector among farm households. For example, less than 20 percent of the farmers in the Netherlands and Luxembourg have off-farm incomes (Hill,

through the construction of the Luxembourg Income Study (LIS). The LIS has generated numerous studies which offer important insights into how one can conduct cross-country analyses and identify some of the issues that can arise within these analyses. I begin this section with a brief review of the LIS and then turn to studies using the LIS.

Luxembourg Income Studies

The LIS is a cooperative research project involving 25 countries across the world. In this project, the primary goal is to create a database of household surveys. To meet this goal, the LIS does not collect any data either within or across countries. Instead it compiles data from national surveys already collected by the member countries. In compiling this data, the LIS ensures the structure of the data sets are comparable. In addition to this harmonization of the data, the LIS serves as a forum to exchange research using the LIS in cross-country comparisons. The LIS began in 1983 and is continuously expanding the years and countries available.

The countries with data currently in the LIS are shown in Table 1. The earliest available data are from 1969, from Sweden. While some countries have data from the 1970s, most of the data series available through the LIS begin in the 1980s or 1990s. The types of datasets used by the LIS are structured in six primary ways. The surveys are from income or living standard surveys (Australia, Canada, Ireland, Italy, Netherlands, Switzerland, Taiwan); from a combination of survey and administrative records (Denmark, Finland, Sweden); from income tax records (France, Norway); from panel studies (Belgium, Germany, Luxembourg); labor force survey supplements (Austria, U.S.); and expenditure surveys (Spain, U.K.). (This description of data sources is from Gottschalk and Smeeding, 2000 as updated from Atkinson, *et al.*, 1995.)

1989, p. 142).

From these different data sources, the LIS then constructs a series of harmonized variables. These variables are available at the household, adult, and child level. In Table 2 we list selected harmonized variables at the household level in the LIS. These are broken into three main categories - demographic variables, expenditure variables, and income variables. As will be seen in the brief review of the literature below, two types of variables are particularly relevant for cross-country comparisons. First, there are numerous variables portraying the receipt of both cash and in-kind transfers (e.g., food, housing). The inclusion of these in-kind transfers in a country's poverty description can have important implications. For example, in the U.S., the inclusion of food stamp benefits as income leads to a 20-percent drop in the poverty-gap index for households with children and a 28 percent decline in the squared poverty-gap index for households with children (Jolliffe, et al. 2002). Second, a country's inequality description will often differ depending on whether or not pre-tax or after-tax income is used for the analysis. The inclusion of the variables needed to calculate a country's after-tax income is therefore included in the list of variables on the LIS. (The information in Table 1 and Table 2 is taken from http://www.lisproject.org/.)

Analyses Using the Luxembourg Income Studies

The most common use of the LIS is to analyze the relative inequality and poverty rates across countries. This emphases on these topics is probably due to the LIS's construction of these data and, from a policy perspective, the increased inequality found across industrialized countries beginning in the 1980s. I now review some of these studies, concentrating on how the techniques used in these studies and the construction of the LIS might be useful for the collection of cross-country agricultural household statistics.

In studies of poverty and inequality, four important questions are: What equivalence scale should we use? How do we set a poverty line? What is our definition of income? What is the extent of measurement error? These questions are obviously present for within country analyses but their complexity increases when one turns to cross-country comparisons.⁶

In an analysis of the U.S. and Germany, Burkhauser, Smeeding, and Merz (1996) analyze the effect of different equivalency scales on the distribution of poverty and inequality for the population as a whole and various sub-groups. They argue against applying the equivalency scale used for, say, poverty measurement in one country to another country because of the different contexts in which equivalency scales. Instead, they use the extended linear expenditure system based on country-specific data to construct the equivalency scales. They find that the choice of equivalency scale does not affect the relative distribution of poverty between the U.S. and Germany but the choice does matter for the poverty level for various sub-groups.⁸

To set the poverty line in this and other papers, relative poverty lines have generally been used because the process used to set absolute poverty lines vary widely. For example, in Smeeding, *et al.* (1993), the poverty line was set at half of the median household income level in each country. The robustness of these results was tested by considerations of other ratios of poverty lines to median income. Casper, McLanahan, and Garfinkel (1994) and Achdut and Kristal (1995) also use a series of relative poverty lines. The former paper further addresses the issue of how one compares education levels across countries.

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⁶ For a discussion of how the poverty line in the U.S. was set, see Orshanksy, 1965. For a definition of income used in the U.S. official poverty measures see, for example, Dalaker, 2001. Also see Citro and Michael, 1995 for a critique of both these approaches.

⁷ For other examples of cross-country constructions of equivalency scales, see Buhmann, *et al.*, 1988; Phipps and Garner, 1994; Ringen, 1991; and Wright, 1995.

⁸ In a non-LIS study of Argentina, Brazil, and Mexico LIS, Sabates, Gould, and Villarreal (2001) also analyzed equivalency scales in the context of food expenditures. Their work emphasized the need to use country-specific equivalency scales.

An important advancement of the LIS is to include information on a wide variety of non-income sources. In a study incorporating these non-cash benefits, Smeeding, *et al.* (1993) considers how much effect non-cash transfers have on the rankings of income distributions. Because countries with more generous non-cash transfers also tend to have more cash transfers and more progressive tax systems, the authors found little change in rankings after the inclusion of non-cash transfers.

As noted above, there was an increase in inequality in all countries in the 1980s and 1990s. Cross-country comparisons are useful in determining why these increases occurred insofar as they allow the researcher to isolate the impacts of different factors such as tax systems and social safety net programs. Within a country, such comparisons are, in theory, possible (e.g. interstate inequality in the U.S.) but these regional differences within a country are often not great enough to ascertain the relative impacts of different factors. Longitudinal data are also potentially useful but many years of data are often needed for these analyses. As an example of a paper using cross-country comparisons based on the LIS consider Gottschalk and Joyce (1998) who analyzed the relative contributions of market and institutional factors on inequality. Despite wage setting institutions in some countries that may constrain inequality increases, the main contribution to changes in inequality were market forces, even in countries with wage-setting institutions.

Another study using cross-country data to identify the effects of various policies is Jäntii (1997). While demographic changes are too slow to have an effect in the near term, Jäntii argues that policies such as taxes and transfers will have an effect on inequality. He finds that countries with progressive tax and transfer systems tended to have less increases in inequality in the 1980s

⁹ Within any country, absolute poverty lines are often used. For a discussion of absolute versus relative poverty lines see Foster, 1998.

compared to less progressive countries. Zandvakili (1994) also analyzes the effects of taxes on differences in income inequality among countries and Siegenthaler (1996) analyzes the effects of different old-age security programs.

The final paper I consider is Schoeni (1995). In contrast to the other studies above which are primarily concerned with cross-country comparisons, Schoeni is interested in whether the finding of higher earnings for married men in the U.S. is robust to the choice of country. He finds that this is the case. He also finds that selection bias issues, often thought to affect this result, were not present in 13 of the 16 countries he studied.

Conclusions

In this paper I consider the ways policymakers can benefit from cross-country comparisons of the well-being of farm households. I illustrated this with two examples from the existing agricultural economics literature and several examples from studies of the general population using the Luxembourg Income Studies.

I now conclude with some remarks about lessons we may wish to take from the LIS as we construct methods to facilitate cross-country comparisons within the agricultural sector. First, one must recognize the importance of equivalency scales. While this choice of equivalency scale is essentially left up to the researcher, the data necessary to make this choice must be available. Defining what constitutes a household is never straightforward and this is perhaps especially the case with farm households. As such, careful attention to how farm families are defined is essential. Second, one needs to consider the problems of measurement error for income, cash transfers, and non-cash transfers. The problems with underreporting in all these areas has been well documented. (In the context of income in the LIS see Gottschalk and

Smeeding, 2000 and for the underreporting of noncash transfers in the U.S., see Bollinger and David, 1997.) Since underreporting is especially a problem among households with selfemployed persons, one must use caution when examining income information from farm households (i.e. households with self-employed persons). Low-income households also tend to underreport income which, for farm households, may lead some to overstate the problems of poverty among low-income farmers. Third, one should consider how the structure of surveys designed for farm households may differ markedly from those for the general population. While it is, of course, encouraging to see the importance of "non-agricultural" information being collected for farm households, the uniqueness of farm households must still be incorporated. Fourth, the structure of the LIS is especially instructive in how it facilitates data for crosscountry analyses. Instead of taking on the massive undertaking of collecting data from multiple countries (like the FADN, the European Community Household Panel, and the International Social Survey Program (ISSP)), it harmonizes information from already existing surveys. In the process, there is less duplication of efforts and, perhaps of more importance, countries can begin to learn what works and doesn't work in their respective surveys. This "learning by doing" is not as easily done in cross-country surveys. Fifth, the construction of the sample can implicitly direct the policy questions one may ask. The surveys in the LIS are representative for each of the countries. Consequently, one can conduct analyses of income distributions and poverty without worrying about sample selection issues. In many country's agricultural surveys, however, the sample is restricted to only a subset of the larger farms. Since these are most likely the most well-off farms, this produces a decided bias in any consideration of poverty or inequality. Finally, while the primary contribution of the LIS is to facilitate cross-country analyses through its harmonization of different data sets, it also serves to encourage research in

this area. For example, the LIS asks all of its data users to publish their work in the LIS Working Paper Series. (This does not preclude publication elsewhere.) The collection of farm household data sets in different countries could also benefit from this precedent.

Along with emphasizing the possible benefits associated with collecting data to facilitate cross-country comparisons, I believe this paper also illustrates the necessity of collecting data at more than just the farm level. In the studies reviewed herein, the numerous factors affecting labor supply for farm households and income inequality across countries demonstrates the need for surveys to collect information across a wide spectrum of questions. In the context of agricultural surveys, this means taking into consideration information for the whole household and not just information regarding farming activities. By including more information, the types of questions one can ask increases and, consequently, the potential policy relevance of the respective studies is also enhanced.

References

- Achdut, Lea and Orit Kristal. "Poverty in Industrial Nations: A Comparative Perspective." *Journal of Income Distribution*, v5(1), 47-64. 1995.
- Ahearn, M., J. Johnson, and R. Strickland. "The Distribution of Income and Wealth of Farm Operator Households." *American Journal of Agricultural Economics*, v67(5), 1087-1094. 1985.
- Allanson, Paul and Lionel Hubbard. "On the Comparative Evaluation of Agricultural Income Distributions in the European Union." *European Review of Agricultural Economics*, v26(1), 1-17. 1999.
- Atkinson, A., L. Rainwater, and T. Smeeding. *Income Distribution in OECD Countries: The Evidence from the Luxembourg Income Study (LIS)*. OECD: Paris. 1995.
- Bessant, Kenneth. "Part-Time Farming Operations Among Manitoba Farm Operators: A Typological Approach." *Canadian Journal of Agricultural Economics*, v48, 259-277. 2000.
- Blandford, David. "Distributional Impact of Farm Programs and the Adjustment Dilemma." *American Journal of Agricultural Economics*, v87, 980-987. 1987.
- Boisvert, Richard and Christine Ranney. "Accounting for the Importance of Nonfarm Income on Farm Family Inequality in New York." *Northeastern Journal of Agricultural and Resource Economics*, v19(10), 1-11. 1990.
- Bollinger, Christopher R. and David, Martin H. "Modeling Discrete Choice with Response Error: Food Stamp Participation." *Journal of the American Statistical Association*, v92(439), 827-835. 1997.
- Bollman, R. and P. Smith. "The Changing Role of Off-Farm Income in Canada." *Proceedings: Canadian Agricultural Outlook Conference*. 1987.
- Bollman, Ray, Leslie Whitener, and Fu Lai Tung. "Trends and Patterns of Agricultural Structural Change: A Canada U.S. Comparison." *Canadian Journal of Agricultural Economics*, Special Issue, 15-28. 1995.
- Buhmann, Brigitte, Lee Rainwater, Guenther Schmaus, and Timothy Smeeding. "Equivalence Scales, Well-Being, Inequality and Poverty: Sensitivity Estimates Across Ten Countries Using the Luxembourg Income Study Database." *Review of Income and Wealth*, v34(2), 115-142. 1988.

- Burkhauser, Richard, Timothy Smeeding, and Joachim Merz. "Relative Inequality and Poverty in Germany and the United States Using Alternative Equivalency Scales." *Review of Income and Wealth*, v42(4), 381-400. 1996.
- Case, Ann, Harvey Rosen, and James Hines. "Budget Spillovers and Fiscal Policy Interdependence: Evidence from the States." *Journal of Public Economics*, v52(3), 285-307. 1993.
- Casper, Lynne, Sara McLanahan, and Irwin Garfinkel. "The Gender-Poverty Gap: What We Can Learn from Other Countries." *American Sociological Review*, v59, 594-605. 1994.
- Citro, Constance, and Robert Michael. *Measuring Poverty: A New Approach*. National Academy Press: Washington, DC 1995.
- Corsi, Alessandro and Jill Findeis. "True State Dependence and Heterogeneity in Off-Farm Labour Participation." *European Review of Agricultural Economics*, v27(2), 127-151. 2000.
- Dalaker, Joseph. *Poverty in the United States: 2000. Current Population Reports, Series P60-214.* U.S. Department of Commerce, Bureau of the Census: Washington, DC. 2001.
- Eurostat. *Total Income of Agricultural Households: Manual of Methodology*. Statistical Office of the European Communities, Theme 5, Series E: Luxembourg. 1990.
- Figlio, D., C. Gundersen, and J. Ziliak. "The Effects of the Macroeconomy and Welfare Reform on Food Stamp Caseloads." *American Journal of Agricultural Economics* v82(3), 635–641. 2000.
- Findeis, Jill and Leif Jensen. "Employment Opportunities in Rural Areas: Implications for Poverty in a Changing Policy Environment." *American Journal of Agricultural Economics*, v80(5), 1000-1007. 1998.
- Foster, James. "Absolute versus Relative Poverty." *American Economic Review* v88(2), 335-41. 1998.
- Furtan, W., G. Van Kooten, and S. Thompson. "The Estimation of Off-Farm Labor Supply Functions in Saskatchewan." *Journal of Agricultural Economics*, v36, 211-220. 1985.
- Gardner, Bruce. "Changing Economic Perspectives on the Farm Problem." *Journal of Economic Literature*, v30(1), 62-101. 1992.
- Gottschalk, Peter and Mary Joyce. "Cross-National Differences in the Rise in Earnings Inequality: Market and Institutional Factors." *Review of Economics and Statistics*, v80(4), 489-502. 1998.

- Gottschalk, Peter and Timothy Smeeding. "Empirical Evidence on Income Inequality in Industrialized Countries." *Handbook of Income Distribution, Volume I*, A. Atkinson and F. Bourguignon (eds.). Elsevier Science: 2000.
- Gould, Brian and William Saupe. "Off-Farm Labor Market Entry and Exit." *American Journal of Agricultural Economics*, v71, 960-969. 1989.
- Gundersen, C., M. Yañez, C. Valdez, and B. Kuhn. *A Comparison of Food Assistance Programs in Mexico and the United States*. Food Assistance and Nutrition Research Report Number 6. U.S. Department of Agriculture, Economic Research Service. 2000.
- Gundersen, C., M. Morehart, L. Whitener, L. Ghelfi, J. Johnson, K. Kassel, B. Kuhn, A. Mishra, S. Offutt and L. Tiehen. *A Safety Net for Farm Households*. U.S. Department of Agriculture, Economic Research Service, Agricultural Economic Report 877. 2000.
- Hill, Berkeley. "Monitoring Incomes of Agricultural Households within the EU's Information System New Needs and New Methods." *European Review of Agricultural Economics*, v23, 27-48. 1996.
- Hill, Berkeley. Farm Incomes, Wealth and Agricultural Policy. Avebury: Aldershot. 1989.
- Howard, Wayne and Michael Swidinsky. "Estimating the Off-Farm Labor Supply in Canada." *Canadian Journal of Agricultural Economics*, v48, 1-14. 2000.
- Huffman, Wallace. "Farm and Off-Farm Work Decisions: The Role of Human Capital." *The Review of Economics and Statistics*, v62(1), 14-23. 1980.
- Jäntii, Markus. "Inequality in Five Countries in the 1980s: The Role of Demographic Shifts, Markets and Government Policies." *Economica*, v64, 415-440. 1997.
- Jolliffe, Dean Craig Gundersen, Laura Tiehen, and Joshua Winicki. Food Stamp Benefits and Child Poverty in the United States: An Examination of Food Stamp Efficacy in Alleviating Child Poverty. Paper prepared for presentation at the Population Association of America, Annual Meetings. 2002.
- Kimhi, Ayal. "Is Part-Time Farming Really a Step in the Way Out of Agriculture?" *American Journal of Agricultural Economics*, v82, 38-48. 2000.
- Kimhi, Ayal and Myoung-Jae Lee. "Off-Farm Work Decisions of Farm Couples: Estimating Structural Simultaneous Equations with Ordered Categorical Dependent Variables." *American Journal of Agricultural Economics*, v78, 687-698. 1996.
- Mahé, L. and T. Roe. "The Political Economy of Reforming the 1992 CAP Reform." *American Journal of Agricultural Economics*, v78(5), 1314-1323. 1996.

- Oliveira, Victor, Leslie Whitener, and Ray Bollman. "Farm Structure Data: A Canada U.S. Comparative Review." *Canadian Journal of Agricultural Economics*, Special Issue, 29-45. 1995.
- Offutt, Susan. *Can the Farm Problem be Solved?* M.E. John Lecture, The Pennsylvania State University. 2000. URL: http://www.aers.psu.edu/Announce/AESeminar/offutt.pdf.
- Organisation for Economic Cooperation and Development. *Part-Time Farming in OECD Countries*. Paris: OECD.
- Orshansky, Mollie. "Counting the Poor: Another Look at the Poverty Profile." *Social Security Bulletin*, v28(1), 3-29. 1965.
- Pfeffer, M. "Part-Time Farming and the Stability of Family Farms in the Federal Republic of Germany." *European Review of Agricultural Economics*, v16, 425-444. 1989.
- Philippidis, G. and L. Hubbard. "The Economic Cost of the CAP Revisited." *Agricultural Economics*, v25, 375-385. 2001.
- Phipps, S. and T. Garner. "Are Equivalence Scales the Same for the United States and Canada?" *Review of Income and Wealth*, v40, 1-18. 1994.
- Rabinowicz, Ewa. "Redesigning the CAP to Meet the Challenges of EU Enlargement and the WTO: What Can Agricultural Economic Research Contribute?" *European Review of Agricultural Economics*, v26(3), 265-281. 1999.
- Ringen, S. "Households, Standard of Living and Inequality. *Review of Income and Wealth*, v37. 1991.
- Schoeni, Robert. "Marital Status and Earnings in Developed Countries." *Journal of Population Economics*, v8, 351-359. 1995.
- Shorrocks, A. "Ranking Income Distributions." *Economica*, v50, 3-17. 1983.
- Siegenthaler, Jurg. "Poverty Among Single Elderly Women Under Different Systems of Old-Age Security: A Comparative Review." *Social Security Bulletin*, v59(3), 31-59. 1996.
- Slattery, M. "Relative Incomes of Farmers: Some International Comparisons." *Quarterly Review of Agricultural Economics*, 115-127. 1966.
- Smeeding, Timothy, *et al.* "Poverty, Inequality, and Family Living Standards Impacts Across Seven Nations: The Effect of Noncash Subsidies for Health, Education, and Housing." *Review of Income and Wealth*, v39(3), 229-256. 1993.
- Swinbank, Alan. "CAP Reform and the WTO: Compatibility and Developments." *European Review of Agricultural Economics*, v26(3), 389-407.

- Weiss, Christoph. "Do They Come Back Again? The Symmetry and Reversibility of Off-Farm Employment." *European Review of Agricultural Economics*, v24, 65-84. 1997.
- Wright, Robert. "Women and Poverty in Industrialized Countries." *Journal of Income Distribution*, v5(1), 31-46. 1995.
- Zandvakili, Sourushe. "Income Distribution and Redistribution Through Taxation: An International Comparison." *Empirical Economics*, v19, 473-491. 1994.
- Zioganas, Christos. "Defining and Determining a 'Fair' Standard of Living for the Farm Family." *European Review of Agricultural Economics*, v15, 55-65. 1988.

Country	Dataset(s)	Years Available at LIS
Australia	Australian Income and Housing Survey	1981, 1985, 1989, 1994
Austria	Austrian Microcensus	1987, 1995
Belgium	Panel Survey of the Centre for Social Policy	1985, 1988, 1992, 1997
Canada	Survey of Consumer Finances	1971, 1975, 1981, 1987, 1991, 1994, 1997
	Survey of Labour and Income Dynamics	1998
Czech Republic	Microcensus	1992, 1996
Denmark	Income Tax Survey	1987, 1992, 1995, 1997
Finland	Income Distribution Survey	1987, 1991, 1995
France	The French Survey of Income from Income Tax	1979, 1984
	Family Budget Survey	1984, 1989, 1994
	CERC Survey of Women with Children	1981
Germany	Income and Consumer Survey (EVS)	1973, 1978, 1983
	German Social Economic Panel Study (GSOEP)	1984, 1989, 1994
	The German Transfer Survey	1981
Hungary	Hungarian Household Panel	1991, 1994
Ireland	ESRI Survey of Income Distribution, Poverty and Usage of State Services	1987
Israel	Family Expenditure Survey	1979, 1986, 1992, 1997
Italy	The Bank of Italy Survey	1986, 1991, 1995
Luxembourg	The Luxembourg Social Economic Panel Study	1985, 1991, 1994
Mexico	National Household Survey on Income and Expenditure (ENIGH)	
Netherlands	Additional Enquiry on the Use of (Public) Services (AVO)	1983, 1987
Netherlands	Socio-Economic Panel (SEP)	1986, 1991, 1995
Norway	Income and Property Distribution Survey	1979, 1986, 1991, 1995
Poland	Household Budget Survey	1986, 1992, 1995
Russia	Russian Longitudinal Monitoring Survey	1992, 1995
Slovak Republic	Slovak Microcensus	1992
Spain	Expenditure and Income Survey	1980, 1990
Sweden	Income Distribution Survey	1967, 1975, 1981, 1987, 1992, 1995
Switzerland	Swiss Income and Wealth Survey	1982
	Swiss Poverty Survey	1992
Taiwan	Survey of Personal Income Distribution, Taiwan Area	1981, 1986, 1991, 1995
United Kingdom	The Family Expenditure Survey	1969, 1974, 1979, 1986, 1991, 1995
2	The Family Resources Survey	1994
United States	March Current Population Survey	1969, 1974, 1979, 1986, 1991, 1994, 1997

Source: Author's summary of information from http://www.lisproject.org/techdoc/datasets.htm .

Table 2: Selected Household Level Variables in the Luxembourg Income Study			
Demographic variables	Expenditure variables	Income variables	
Married couple indicator	Total family unit expenditures	Gross wages & salaries	
Age of head & spouse	Food expenditures	Net wages & salaries	
Number of persons in household	Housing expenditures	Farm self-employment income	
Family (unit) structure	Clothing expenditures	Self-employment income	
Number of earners in household	Transportation expenditures	In-kind earnings	
Geographic location indicator	Child care expenditures	Cash property income	
Ethnicity/Nationality of head & spouse	Education expenditures	Noncash property income	
Educational level of head & spouse	Out of pocket medical expenditures	Value of residence	
Occupational training of head & spouse	•	Income taxes	
Occupation of head & spouse		Property or wealth taxes	
Industry of head & spouse		Mandatory employee contribution	
Tenure (owned/rented housing)		Other direct taxes	
Disability status head & spouse		Indirect taxes	
Number of children under age 18		Sick pay	
Age of the youngest child		Accident pay	
Number of persons aged 65 to 74		Disability pay	
Number of persons aged 75 or more		Social retirement benefits	
Labor force status head & spouse		Child or family allowances	
Weeks worked full time head & spouse		Unemployment insurance	
Weeks worked part time head & spouse		Maternity allowances	
Weeks unemployed head & spouse		Veteran benefits	
Hours worked per week head & spouse		Other social insurance	
Immigration status head & spouse		Means-tested cash benefits	
		Food benefits	
		Housing benefits	
		Medical benefits	
		Heating benefits	
		Education benefits	
		Private pensions	
		Public sector pensions	
		Alimony or child support	
		Other regular private income	
		Other cash income	
		Realized lump sum income	
		Gross wage/salary head & spouse	
		Net wage/salary head & spouse	
		Hourly wage rate head & spouse	
		Alternate noncash income	
		Near cash housing benefits	
		Near cash except housing	

Source: Author's summary of information from http://www.lisproject.org/techdoc/variables.htm .