# International Comparison of Household Inequalities: Based on Micro Data with Decompositions

by
Sourushe Zandvakili*

Working Paper No. 43

December 1990

Submitted to
The Jerome Levy Economics Institute
Bard College

* University of Cincinnati, Cincinnati, OH 45221 and the Jerome Levy Economics Institute.

Helpful comments from Alan Blinder, Joan Rodgers and other participants at the conference on Aspects of Distribution of Wealth and Income are appreciated. I would like to thank John Coder of the Luxembourg Income Study Program. Support from the Jerome Levy Economics Institute and a Taft Research Grant at the University of Cincinnati are acknowledged.

## ABSTRACT

This paper demonstrates the usefulness of the decomposability property of the Generalized Entropy (GE) family of measures in comparing inequality among countries. A family of Generalized Entropy measures are decomposed by family size and by the household head's age, gender, education, and ethnicity. This is done in order to learn about components which are due to demographic differences "between" households, and "within" group components which are free of such group characteristics. This will further our understanding of the impact of different social-economic structures upon the distribution of income. Looking at the overall inequality for comparative analysis without the decompositions can provide us with only a partial picture of the differences and thus is inadequate. Moreover, internal analysis is enhanced since the decompositions will locate the potential source of inequality for diagnostic policy purposes. Luxembourg Income Study data sets are chosen for their richness and comparability of micro data on variables and attributes such as income, age, education, family size, gender, and ethnicity.

## 1. INTRODUCTION

There is growing evidence that households are paying more attention to levels of economic well-being beyond their own national boundaries. This is partly due to the increased interdependence of the international community and partly due to the increased mobility of labor across national boundaries compared with two or three decades ago. Dramatic improvements in communications have also contributed to the process. Consequently, the level of economic well-being of one population relative to other (comparative) nations is of interest from a policy perspective; policy makers can learn from the polices and practices of other nations. An international comparison of income inequality is a first step towards this goal.

In the past, most researchers have relied upon published, aggregated data for comparative purposes. This approach has several weaknesses. First, aggregation results in a loss of information and limits the methodology that can be employed to measure inequality. Second, the method of aggregation varies across countries, resulting in a lack of comparability of official statistics. These, and other, difficulties suggest that comparisons based on published, aggregated data will be distorted. For further discussion see O'Higgins, Schmaus, and Stephenson (1985). It is only recently that comparable sets of micro data have become available from a number of countries. These data have allowed valid comparisons of economic inequality in several countries and have enabled a number of interesting policy issues/problems to be addressed.

The measurement and comparison of income inequality in several countries involves a number of problems, including: the appropriate measure of income ( disposable income, gross income, non-cash income, etc. ); the economic unit whose income is to be measured ( the individual, family or household ); the

weight to be attached to each individual within the economic unit ( should total income, income per capita or income per adult equivalent be used? ); purchasing power parity across countries; and the choice of inequality index. This paper emphasizes the usefulness, for the purpose of making international comparisons of income inequality, of the decomposability property of certain inequality measures. Indices with this property can be used to decompose overall inequality into "between" and "within" group components according to attributes chosen by the researcher. This will help the researcher identify sources of inequality, which in turn will assist policy makers in allocating resources to reduce inequality. Furthermore, the success of such allocations can be gauged by comparing decompositions before and after policy has been put into effect.

Policy issues which can be addressed using decomposable inequality indices, estimated with comparable sets of micro data include: the role of the welfare state ( as it exists in Scandinavian countries ) versus limited social protection ( as in the United States and Canada) in controlling inequality; the effect of demography on income distribution; differences in economic systems and economic well-being; and the redistributive effect of taxes and transfers. The need to address these issues is currently pressing since social and economic change is taking eastern and western Europe by storm.

This paper begins, in Section 2, with a brief review of the Generalized Entropy family of measures and their usefulness. There follows a description of the Luxembourg Income Study (LIS) data sets, which are employed in the empirical study. Overall inequality in each of the twelve countries is computed using indices from the Generalized Entropy family of measures. These overall inequality indices are decomposed according to household size as well as age, gender, education, and ethnicity of the household head (see Sections 3 through 8). Concluding remarks follow.

## 2. THE MEASUREMENT APPROACH

A variety of inequality indices can be found in the income inequality literature. It is natural to expect that, given a set of data, two inequality measures will disagree on the degree of measured inequality. This forces us to evaluate measures of inequality in terms of the properties they satisfy. Although there is no unique rule for the selection process, there appears to be agreement that the inequality measure should satisfy a number of fundamental welfare axioms. The axioms are: symmetry (inequality does not change if agents i & j trade incomes), homogeneity (proportional changes in the incomes of all agents does not alter inequality), the population principle (inequality depends on relative density as opposed to absolute density) and the Pigou-Dalton principle of transfer (a transfer from one agent to another with less income causes inequality to fall). In addition to the above axioms, Theil (1967) advocated an additive decomposability property. This property states that overall inequality equals "between-group" inequality plus a weighted average of "within-group" inequality. The recent axiomatic treatment of inequality measures are demonstrated in Bourguignon (1979), and Shorrocks (1980). Subsequently, the Generalized Entropy family of measures were shown to satisfy all of the above axioms; see Cowell and Kuga (1981).

Let $Y_i$ denote the income of household and $Y_i^* = Y_i / \sum_{j=1}^{n} Y_j$ be the income share of household i = 1, ..., N. Measures of inequality in the Generalized Entropy Family have the form:

$$I_\gamma(Y) = \sum_i [(NY_i^*)^{1+\gamma} - 1] / N\gamma(\gamma+1) \qquad \gamma \neq 0, \text{or } -1 \qquad (1)$$

$$= \sum_i Y_i^* \text{ Log } (NY_i^*) \qquad \gamma = 0 \qquad (2)$$

$$= \sum_i N^{-1} \text{Log } (1/NY_i^*) \qquad \gamma = -1 \qquad (3)$$

The choice of $\gamma$ determines the sensitivity of the measure to different portions of the income distribution. For example, $I_0$ and $I_{-1}$, which are the well known Theil (1967) information measures, differ in that the former is more sensitive to lower incomes than the latter. This family of measures satisfies the suggestion by Atkinson (1970) and others that every inequality measure must imply a social welfare function (SWF). Thus, our choice of $\gamma$ demonstrates the "degree of inequality aversion" given by the underlying SWF. For values of $\gamma < 0$ the Generalized Entropy measure is ordinarily equivalent to the family of measures proposed in Atkinson (1970).

The differences in the nature of decomposability for these measures also sets these measures apart from each other. Let there be G sets (groups) of households, $S_1, \ldots, S_g$, such that there are $N_g$ households in $S_g$, ($g = 1, \ldots, G$ and $\sum_g N_g = N$). If $Y_g$ is the income share of $S_g$, then the decomposition of $I_0$ as shown in Theil (1967) is given by:

$$I_0(Y) = \sum_{g=1}^{G} Y_g \text{ Log } \frac{Y_g}{N_g/N} + \sum_{g=1}^{G} Y_g \, [\text{Log } N_g - H_g(Y)] \qquad (4)$$

where $H_g(Y)$ is the entropy of group g for all $i \in S_g$. The first term given in (4) above is "between-group" inequality and the second term is a weighted average of the "within-group" inequalities. This type of decomposition is most useful when the incidence of inequality among the subgroups of the population based on factors such as age, gender, and education is of interest. Theil's $I_{-1}$ (second measure) is different from $I_0$ (first measure) in that the "within-group" term is weighted by groups' population shares rather than their income shares. The decomposition of $I_{-1}$ is preferred to that of $I_0$ in that

groups' income shares are sensitive to distributional changes in the latter case whereas the former is based on population shares. This point has been established in Shorrocks (1980).

## 3. OVERALL OBSERVATIONS

For computation purposes, data sets from the Luxembourg Income Study (LIS) are employed. LIS has gathered and organized sets of micro-data for several countries with some common standards, definitions, concepts and structures in order to enable comparative analysis. The most important task of LIS has been one of gathering detailed information on income sources. Although other variables have been gathered, income seems to be the richest variable in the LIS data sets in my view. The data sets vary in size and in the time period to which they pertain and further discussion of the nature of the data can be found in Smeeding, Schmaus, Allegreza (1985). The countries used in this study are Canada (1981), the United States (1979), Israel (1979), the United Kingdom (1979), France (1979), Australia (1981), Germany (1981), Sweden (1981), Switzerland (1982), the Netherlands (1983), Italy (1986), and Poland (1986). The data sets are intended to be comprehensive with respect to household population. However, the German data set excludes families headed by foreign nationals, so some 8% of the population are left out. Also, Israel covers only 90% of households, and the rural population is excluded. The data set for the United Kingdom is unweighted to adjust for the non-response within the sample. The data set for the United States has a top-coding of $50,000. This is particularly important since some measures are more sensitive to the top portion of the distribution than others.

Although data for individuals, families, and households are provided, this study only focuses on the latter. I believe economic units pool their incomes together and this behavior makes the household a better representative

of their economic well-being. Furthermore, definitions of what constitutes a family are different from country to country based on different social and cultural customs. It should be noted that the choice of equivalence scale for households generally effects measured inequality. Buhmann, Rainwater, Schmaus and Smeeding (1989) provided a good sensitivity analysis for a range of such scales. The results of their analysis indicate that choice of equivalence scale can sometimes affect inequality and thus rankings of countries. However, for simplicity, in this study I make adjustments for the household size by using Per Capita Household Income (PCHI). I have taken a 30% random sample of households from each of the United States, Canada, and Australia; 50% random sample form each of France, Sweden, Italy, and Poland. In the case of Israel, the Netherlands, the United Kingdom, Germany, and Switzerland the entire LIS data set was used. Households with non-positive incomes were excluded because some inequality measures are not defined with non-positive income values. This could understate our inequality results, especially for Germany where data set contains a large number of households with zero and negative income.

There are many studies in the literature which compare overall inequality between nations. The strength of these studies rests upon the method used to measure inequality. Although some have used theoretically sound measures, they have not utilized the decomposability property. In Table 1, inequality based on four different choices of $\gamma$ ( -2.0, -1.0, -0.5, and 0.0) and rankings based on these four values are reported. Our choice of $\gamma$ covers a wide range of measures for sensitivity purposes. It is evident from table 1 that the choice of inequality measure will determine our perception of inequality in each country and among them. For example the United States has the largest inequality based on $\gamma \leq -1.0$ but its ranking changes to fourth with $\gamma = -0.5$ and 0.0. Australia ranks anywhere from second to seventh depending on one's

choice of $\gamma$. The United States, France, Switzerland, Canada, Australia, and Israel report some of the highest inequality. Generally, Sweden, Germany, the United Kingdom, and Poland report the lowest inequality with $\gamma < -2.0$. Further generalizations about rankings are difficult to make. They do not provide detailed information about the breakdown of inequality among the population in a given country, and one needs to look at the decompositions in order to learn about the observed differences, based on characteristics of the population, on the one hand, and differences which are free of such features, on the other.

**[ TABLE 1 ]**

## 4. LIFE-CYCLE AND INCOME INEQUALITY

The decomposable inequality indices employed in Table 1 can provide further information about inequality in a given country and about observed differences in inequality between countries. In this section inequality is decomposed according to age of the household head. Six age categories are employed: under 25, 25-34, 35-44, 45-54, 55-64, and 65 years of age and older. This is done to detect differences between households in different age groups due to the life-cycle patterns, and differences among households in the same age group, which are free from such patterns. Looking at the between and within-group components of inequality in each of the 12 countries given in table 2, it is evident that the between-group component is not a major contributor to the overall inequality, except in Poland (6.3%), the Netherlands (3.8%), and the United Kingdom (9.8%). It appears that within each age classification there are other factors that are important as well. This observation is valid regardless of the type of inequality measure employed.

The anticipated life-cycle pattern is observed for countries such as

Italy, the Netherlands, Switzerland, Poland, Sweden, Germany, Canada, the United Kingdom, and France. That is, the observed inequality eventually diminishes with age. For some, the pattern starts off with an initial rise in inequality and then, as heads of households are older, inequality tends to drop. Observed income inequality among those who are in the oldest age category (65+) is shown to be rather small, regardless of our choice of inequality measure used. Although, some similarities among most countries, regarding old age benefits are anticipated, our information is inadequate regarding other old age support.

**[ TABLE 2 ]**

The exceptions to the life-cycle pattern are the United States, Australia ($\gamma = -2$), and Israel. The former two report more inequality among those in the (55-64) age group than among those in the (45-54) age group. An explanation, in the case of the United States, could be the emergence of pensions and the option of early retirement. As for the latter case, Israel reports higher income inequality with higher age, for all $-\gamma > 0$. The factor that comes to mind as a possible contributor to this pattern is the unique nature of immigration into Israel.

## 5. GENDER AND COMPARATIVE INEQUALITY

In recent decades there have been structural changes in the labor market for women. This has occurred in most western nations. Though most nations have subscribed to particular policies in order to assure equal opportunity, the success of such policies should be evaluated in terms of the economic well-being of households headed by women. This is particularly important due to the rise in the number of such households, particularly single-parent families. In the United States, many households headed by women have dependent children and there is large concentration of minorities among them.

Government policies have brought with them a situation in which two classes of women are created: one group has benefited from these programs and policies, and the other has been left behind. The implication of these structural changes should be of interest to most policy makers and analysts. The comparison of the observed changes in inequality based on gender across these countries will enable one to see if there is some uniformity regarding the economic progress of female headed households among these nations.

**[ TABLE 3 ]**

The data based on PCHI is decomposed according to the gender of the household head for each country, and the measured inequality, based on four choices of $\gamma$, is provided in table 3. The between-group component of the overall inequality is shown to be rather small in most countries relative to the within-group component. This could be given two different meanings. First, in these countries female heads of households have made some economic gains so inequality between males and females should be falling. Secondly, some women may have made economic progress, but others have been left behind. Therefore, inequality among women becomes the dominant factor. In the case of the United States, Australia, France and Canada, the second contention seems to be reasonable since the reported inequality among households headed by women is greater than those headed by men, for all values of $\gamma$. Measured inequality in countries such as Germany, Sweden, and the United Kingdom, is sensitive to the choice of $\gamma$. Thus the choice of the inequality measure influences our perception of inequality among households headed by men and women. In all other countries, inequality among female heads is smaller than that among male heads of households. The dominance of the within-group component for these countries indicates that there are other factors such as education, family size, etc. that need to be investigated as well.

## 6. HOUSEHOLD SIZE AND INCOME INEQUALITY

In the recent literature there has been talk about the use of equivalence scales for the purpose of inequality measurement. Our approach, using PCHI as opposed to household income is one of many normative scales. However, it is not sufficient to base our judgment on the overall measures, although scale is employed. We recommend the use of the decomposability property in order to learn about the component of inequality that can be attributed to the household size (scale) and to the component which is free of this characteristic. Five household sizes are considered, the last of which is for households of five or more individuals.

**[ TABLE 4 ]**

As shown in table 4, the between-group component of the overall inequality seems to be sizable for most of the 12 countries. The Netherlands, Israel, Germany, Sweden, and Canada report the highest between-group component. For example for the Netherlands' "between-group" component is 36% of the overall inequality with $\gamma = 0$, being only 22% with $\gamma = -2$, while Canada reports 17% and 8% respectively. This suggests that for these countries the household size is an important factor that needs to be considered for analysis of inequality.

It appears that inequality falls as household size increases and reaches a minimum with a household size of four. This pattern is true for most countries, especially for $\gamma < -2$ (the exceptions are Poland, Italy and France). One possible explanation could be the nature of the tax system and incentive mechanism for tax deductions ( this question currently is being investigated by the author ). The second possible explanation is the life-cycle phenomenon. The first two categories consist largely of very young and very old households. Although young households do not benefit from accumulated wealth, the return on wealth according to older households will

likely increase inequality among those smaller households. The third possible explanation could be attributed to human capital accumulation. Those households with a high degree of human capital accumulation tend to have smaller families. Those with low levels of human capital accumulation tend to have larger families and are concentrated in labor markets where wages and salaries are much more similar. If the above contention is true, the decompositions based on education should be rather significant.

## 7. HUMAN CAPITAL CONSIDERATIONS

In this section I will investigate the impact of investment in human capital (schooling) upon the level of earnings inequality. Individuals generally invest in human capital to acquire higher future earnings, so the contribution of education to income inequality should be of interest to most policy makers. The decompositions according to the level of education attained by the head of household could guide illustrate the magnitude of this contribution: the direction of inequality as a result of human capital investment.

There are seven countries with common variables for education in the LIS data sets. Looking at Table 5, decomposition based on three levels of education for the United States, Poland, Israel, Australia, the Netherlands, Italy, and Germany are provided. The three levels are: less than 10 years of education, between 10 and 12 years of education, and 13 years or more (including those with college degrees as well as more specialized degrees). Our decompositions reveal that although the within-group component is the dominant factor, the between-group component is rather conspicuous for the United States, Israel, the Netherlands, Italy, and Germany. Only in Poland and Australia is education's impact negligible. The highest level of contribution to the between-group component is reported by Israel (18.3%),

followed by Italy (12.2%), the United States (8.6%), and the Netherlands (8.2%) respectively.

[ TABLE 5]

Looking at the measured inequality for each of the three groups it is clear that there is no unique pattern. However it is interesting to note that in the Netherlands and Germany the observed inequality is higher among those households with higher education levels. The opposite is detected in the United States and Poland where lower measured inequality is reported as we move to higher levels of education, with $\gamma < -2$. It could be that in the Netherlands and Germany, experience, as well as education, is of importance and the impact of experience is far greater than in other countries. Also, there could be some life-cycle effect with respect to higher job security which brings with it higher earnings for the older generations. Generally, for most countries with higher levels of education we are observing higher inequality, but this could be attributed to our lumping those with more than a high school degree into a single category. This is a limitation of the data sets.

## 8. ETHNICITY AND EARNING OPPORTUNITY

In most nations it is considered desirable to provide equal opportunity to all households in the labor market. However, the labor market has imperfections which need to be corrected by public policies. One of the basic areas in which public policy has had a role to play is in providing better labor market access to national minorities as well as immigrants. There are many ways that this problem can be addressed, and each country is unique in the nature of its problem. In the United States this is the problem of white and non-white, while in Israel, Switzerland, Australia and Canada, immigration policies affect equality of opportunity. Thus in the latter countries the

decomposition is based on Immigrant (Group B) and non-immigrant (Group A).

**[ TABLE 6 ]**

The results in table 6 highlight the decompositions. It is evident that the average within-group component constitutes a larger proportion of the overall inequality. However, in Switzerland and the United States the between-group component is significant. Looking at the within group inequality, it is interesting to note that in Switzerland and Canada, inequality among non-immigrants is greater than the immigrants, while in Israel and Australia the contrary holds true. The nature of public policies, immigration policies, as well as the composition of immigrants are areas into which one has to look in order to have an understanding of the results. For example, Canada's immigration policy is set up such that skilled and educated individuals have a better chance of being admitted into the country. Consequently, the inequality among the immigrants is smaller. In contrast, Switzerland's immigration policy targets those in the semi-skilled category for jobs that in most cases a Swiss will not take. Inequality among this category of immigrants is small as well. However in Switzerland we detect an inequality differential between immigrants and non non immigrants, while in Canada, such a differential is not detected. This provides a partial explanation as to why many emigrants desire to go to Canada, but not to Israel or Australia. In these two countries inequality among immigrants is higher. In the case of Israel the nature of immigration has other important dimensions as well. In Israel there is homogeneity based on religion, without labor market considerations. Thus, the variance in earnings capacity is substantial. In Australia the same pattern holds for different reasons. It appears that Australia is competing with Canada and the United States for immigrants and because of its location it can not be as selective. Consequently, immigrants with different skill levels are allowed into the

country which will result in higher earnings differential among them.

## 9. CONCLUSIONS

Using the Luxembourg Income Study data sets, income inequality among households in each of twelve countries was measured and analyzed. A class of Generalized Entropy measures were employed to demonstrate the robust nature of our results. It has been shown that we have to look beyond the overall inequality within each country to detect the nature and source of inequality. The decomposability property of the Generalized Entropy measures allows this to be done. Decompositions by family size and by age, gender, education and ethnicity of the household head were conducted and revealed that family size and education were rather influential components of overall inequality. Furthermore, interesting patterns were detected within each group. Although the between-group inequality based on age, gender, and ethnicity was shown to be rather small, very important differences and similarities were detected for each group across countries. The usual life-cycle pattern was detected for some countries and not others. The decomposition by gender suggests that the situation of female heads of households varies across countries and that policies to enhance their labor market opportunities have had differential impacts in different countries. It has been shown that inequality does not fall with more education in some of these countries. Without the decompositions these observations would not have been possible, but further analysis of these patterns requires knowledge of institutional arrangements. Finally, words of caution: our results are accurate only to the extent that the data sets are representative of their respective populations; also, the data sets in the Luxembourg Income Study are for different years.

## REFERENCES


Atkinson, A.B. (1970), "On the Measurement of Inequality," Journal of Economic Theory, II, 244-63.

Bourguignon, F. (1979), "Decomposable Income Inequality Measures," Econometrica, 47, 2, p. 901-20.

Buhmann, B, Rainwater, L. Schmaus, G. and Smeeding, T. (1989), "Equivalence Scales, Well-Being, Inequality, and Poverty: Sensitivity Estimates Across Ten Countries Using the Luxembourg Income Study (LIS) Database." Review of Income and Wealth, p. 115-42.

Cowell, F.A. and Kuga, K. (1981), "Inequality Measurement: An Axiomatic Approach," European Economic Review, 15, 287-305.

Kakwani, N. (1984), "The Relative Deprivation Curve and its Applications," Journal of Business and Economic Statistics, 2, 384-405.

Maasoumi, E. (1987), "Information Theory," The New Palgrave, A Dictionary of Economics, 846-51.

O'Higgins, M., Schmaus G. and Stephenson G. (1985), "Income Distribution and Redistribution: A Micro Data Analysis For Seven Countries." Working paper #3, LIS/CEPS.

Rosen, S. (1984), "Comment" on Kakwani (1984).

Shorrocks, A.F. (1980). "The Class of Additively Decomposable Inequality Measures," Econometrica 48, 613-25.

Smeeding, T.M., Schmaus, G., and Allegreza, S. (1985), "Introduction to LIS" LIS-CEPS Working Paper #1, LIS/CEPS, Walferdange, Luxembourg.

Theil, H. (1967), "Economics of Information Theory." Amsterdam: North-Holland.

Table 1

**Ranking of Nations by Inequality**
**Generalized Entropy Measures Based On Per Capita Household Income**

| Country | $\gamma = -2.0$ | $\gamma = -1.0$ | $\gamma = -0.5$ | $\gamma = 0.0$ |
|---|---|---|---|---|
| United States | 1.0040 (1) | .2483 (1) | .2191 (4) | .2121 (4) |
| Australia | .5215 (2) | .2025 (6) | .1837 (7) | .1800 (7) |
| Canada | .3899 (3) | .2106 (5) | .1954 (5) | .1941 (6) |
| Switzerland | .3857 (4) | .2216 (4) | .2294 (2) | .2669 (1) |
| France | .3509 (5) | .2335 (2) | .2322 (1) | .2563 (2) |
| Netherlands | .3184 (6) | .1871 (8) | .1725 (8) | .1699 (8) |
| Israel | .2683 (7) | .2238 (3) | .2265 (3) | .2493 (3) |
| Sweden | .2458 (8) | .1575 (9) | .1449 (9) | .1403 (11) |
| Italy | .2304 (9) | .1894 (7) | .1900 (6) | .2051 (5) |
| Germany | .1832 (10) | .1408 (11) | .1376 (11) | .1407 (10) |
| United Kingdom | .1828 (11) | .1416 (10) | .1403 (10) | .1443 (9) |
| Poland | .1516 (12) | .1261 (12) | .1228 (12) | .1242 (12) |

**Table 2**

**International Comparison of Inequalities**
**Generalized Entropy Measures Based on Per Capita Household Income**
**By Age of Head of Household**

| Country | Choice of $\gamma$ | Overall | Between | Within | U25 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ |
|---|---|---|---|---|---|---|---|---|---|---|
| USA. | - 2.0 | 1.0040 | 0.0054 | 0.9990 | 1.4407 | 0.5663 | 2.5813 | 0.3876 | 0.5683 | 0.4379 |
| 1979 | - 1.0 | 0.2483 | 0.0055 | 0.2429 | 0.2749 | 0.2516 | 0.2651 | 0.2157 | 0.2442 | 0.2155 |
| | - 0.5 | 0.2191 | 0.0055 | 0.2136 | 0.2242 | 0.2249 | 0.2330 | 0.1924 | 0.2115 | 0.1971 |
| | 0.0 | 0.2121 | 0.0056 | 0.2067 | 0.2064 | 0.2177 | 0.2305 | 0.1848 | 0.2008 | 0.1962 |
| Sample Size | | 4468 | | | 453 | 1082 | 769 | 667 | 634 | 863 |
| Aust. | - 2.0 | 0.5215 | 0.0060 | 0.5156 | 1.8126 | 0.6647 | 0.3625 | 0.2534 | 0.4744 | 0.1437 |
| 1981 | - 1.0 | 0.2025 | 0.0059 | 0.1967 | 0.2427 | 0.2590 | 0.2211 | 0.1684 | 0.1709 | 0.1096 |
| | - 0.5 | 0.1837 | 0.0058 | 0.1780 | 0.1869 | 0.2256 | 0.2084 | 0.1557 | 0.1560 | 0.1117 |
| | 0.0 | 0.1800 | 0.0057 | 0.1743 | 0.1644 | 0.2139 | 0.2108 | 0.1525 | 0.1545 | 0.1186 |
| Sample Size | | 4730 | | | 464 | 1067 | 952 | 710 | 703 | 834 |
| Canada | - 2.0 | 0.3899 | 0.0027 | 0.3873 | 1.3134 | 0.3286 | 0.3384 | 0.3180 | 0.2587 | 0.1757 |
| 1981 | - 1.0 | 0.2106 | 0.0027 | 0.2080 | 0.2838 | 0.2162 | 0.2295 | 0.2080 | 0.1839 | 0.1567 |
| | - 0.5 | 0.1954 | 0.0027 | 0.1928 | 0.2267 | 0.2002 | 0.2183 | 0.1941 | 0.1695 | 0.1608 |
| | 0.0 | 0.1941 | 0.0027 | 0.1916 | 0.2054 | 0.1962 | 0.2221 | 0.1948 | 0.1640 | 0.1733 |
| Sample Size | | 4478 | | | 434 | 1083 | 803 | 655 | 667 | 836 |
| Switz. | - 2.0 | 0.3857 | 0.0077 | 0.3781 | 1.0145 | 0.5667 | 0.2501 | 0.4162 | 0.2530 | 0.1967 |
| 1982 | - 1.0 | 0.2216 | 0.0079 | 0.2138 | 0.2092 | 0.2029 | 0.2028 | 0.2376 | 0.2253 | 0.2069 |
| | - 0.5 | 0.2294 | 0.0080 | 0.2214 | 0.1563 | 0.1886 | 0.2060 | 0.2533 | 0.2435 | 0.2392 |
| | 0.0 | 0.2669 | 0.0081 | 0.2590 | 0.1331 | 0.1945 | 0.2219 | 0.3055 | 0.2926 | 0.3150 |
| Sample Size | | 6877 | | | 416 | 1228 | 1497 | 1254 | 1053 | 1429 |
| France | - 2.0 | 0.3509 | 0.0055 | 0.3454 | 0.2138 | 0.2478 | 0.3132 | 0.4100 | 0.5677 | 0.2462 |
| 1979 | - 1.0 | 0.2335 | 0.0053 | 0.2283 | 0.1276 | 0.1657 | 0.2561 | 0.2582 | 0.2825 | 0.1966 |
| | - 0.5 | 0.2322 | 0.0053 | 0.2270 | 0.1141 | 0.1597 | 0.2833 | 0.2466 | 0.2595 | 0.2011 |
| | 0.0 | 0.2563 | 0.0052 | 0.2512 | 0.1080 | 0.1643 | 0.3790 | 0.2557 | 0.2598 | 0.2186 |
| Sample Size | | 5454 | | | 156 | 1027 | 967 | 1236 | 948 | 1120 |
| Neth. | - 2.0 | 0.3184 | 0.0073 | 0.3111 | 0.1617 | 0.2159 | 0.2553 | 0.5801 | 0.4324 | 0.1805 |
| 1983 | - 1.0 | 0.1871 | 0.0071 | 0.1801 | 0.1146 | 0.1714 | 0.1940 | 0.2495 | 0.1844 | 0.1310 |
| | - 0.5 | 0.1725 | 0.0070 | 0.1655 | 0.1031 | 0.1618 | 0.1930 | 0.2146 | 0.1592 | 0.1273 |
| | 0.0 0 | .1699 | 0.0070 | 0.1629 | 0.0956 | 0.1574 | 0.2032 | 0.2052 | 0.1512 | 0.1306 |
| Sample Size | | 4747 | | | 209 | 1146 | 1045 | 741 | 684 | 922 |
| Israel | - 2.0 | 0.2683 | 0.0076 | 0.2607 | 0.1757 | 0.2076 | 0.2265 | 0.2861 | 0.2950 | 0.3311 |
| 1979 | - 1.0 | 0.2238 | 0.0074 | 0.2165 | 0.1422 | 0.1754 | 0.1992 | 0.2186 | 0.2199 | 0.2980 |
| | - 0.5 | 0.2265 | 0.0073 | 0.2192 | 0.1338 | 0.1754 | 0.2081 | 0.2078 | 0.2107 | 0.3176 |
| | 0.0 | 0.2493 | 0.0073 | 0.2420 | 0.1293 | 0.1876 | 0.2420 | 0.2080 | 0.2132 | 0.3763 |
| Sample Size | | 2271 | | | 57 | 619 | 462 | 371 | 324 | 438 |
| Sweden | - 2.0 | 0.2458 | 0.0023 | 0.2436 | 0.2769 | 0.2187 | 0.2883 | 0.2760 | 0.2609 | 0.0499 |
| 1981 | - 1.0 | 0.1575 | 0.0023 | 0.1553 | 0.1526 | 0.1456 | 0.1835 | 0.1791 | 0.1605 | 0.0471 |
| | - 0.5 | 0.1449 | 0.0023 | 0.1426 | 0.1311 | 0.1341 | 0.1713 | 0.1636 | 0.1458 | 0.0472 |
| | 0.0 | 0.1403 | 0.0023 | 0.1380 | 0.1194 | 0.1296 | 0.1694 | 0.1572 | 0.1389 | 0.0481 |
| Sample Size | | 4754 | | | 214 | 879 | 1261 | 939 | 961 | 500 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Italy | - 2.0 | 0.2304 | 0.0011 | 0.2293 | 0.2128 | 0.2236 | 0.2694 | 0.2624 | 0.2301 | 0.1582 |
| 1986 | - 1.0 | 0.1894 | 0.0011 | 0.1884 | 0.1748 | 0.1798 | 0.2220 | 0.2074 | 0.1842 | 0.1433 |
| | - 0.5 | 0.1900 | 0.0010 | 0.1890 | 0.1692 | 0.1744 | 0.2252 | 0.2077 | 0.1817 | 0.1468 |
| | 0.0 | 0.2051 | 0.0010 | 0.2041 | 0.1703 | 0.1774 | 0.2494 | 0.2263 | 0.1916 | 0.1594 |
| Sample Size | | 3970 | | | 37 | 484 | 863 | 936 | 791 | 859 |
| | | | | | | | | | | |
| Germany | - 2.0 | 0.1832 | 0.0014 | 0.1819 | 0.2241 | 0.1756 | 0.1779 | 0.2065 | 0.1740 | 0.1642 |
| 1981 | - 1.0 | 0.1408 | 0.0014 | 0.1395 | 0.1647 | 0.1498 | 0.1419 | 0.1437 | 0.1286 | 0.1276 |
| | - 0.5 | 0.1376 | 0.0014 | 0.1363 | 0.1516 | 0.1467 | 0.1415 | 0.1421 | 0.1233 | 0.1237 |
| | 0.0 | 0.1407 | 0.0014 | 0.1393 | 0.1457 | 0.1487 | 0.1473 | 0.1488 | 0.1244 | 0.1250 |
| Sample Size | | 2787 | | | 102 | 499 | 619 | 565 | 397 | 605 |
| | | | | | | | | | | |
| UK | - 2.0 | 0.1828 | 0.0147 | 0.1682 | 0.4953 | 0.2012 | 0.1933 | 0.1683 | 0.1277 | 0.0904 |
| 1979 | - 1.0 | 0.1416 | 0.0140 | 0.1276 | 0.1598 | 0.1723 | 0.1439 | 0.1256 | 0.1108 | 0.0870 |
| | - 0.5 | 0.1403 | 0.0137 | 0.1266 | 0.1454 | 0.1691 | 0.1425 | 0.1209 | 0.1083 | 0.0913 |
| | 0.0 | 0.1443 | 0.0135 | 0.1309 | 0.1415 | 0.1721 | 0.1471 | 0.1213 | 0.1093 | 0.0988 |
| Sample Size | | 6878 | | | 384 | 1401 | 1156 | 1035 | 1108 | 1794 |
| | | | | | | | | | | |
| Poland | - 2.0 | 0.1516 | 0.0079 | 0.1438 | 0.1829 | 0.1723 | 0.1670 | 0.1469 | 0.1203 | 0.0739 |
| 1986 | - 1.0 | 0.1261 | 0.0080 | 0.1182 | 0.1328 | 0.1414 | 0.1355 | 0.1205 | 0.1067 | 0.0691 |
| | - 0.5 | 0.1228 | 0.0081 | 0.1148 | 0.1252 | 0.1366 | 0.1307 | 0.1161 | 0.1049 | 0.0709 |
| | 0.0 | 0.1242 | 0.0082 | 0.1161 | 0.1237 | 0.1373 | 0.1315 | 0.1155 | 0.1059 | 0.0758 |
| Sample Size | | 5284 | | | 189 | 1132 | 1240 | 993 | 853 | 877 |

Table 3

International Comparison of Inequalities
Generalized Entropy Measures Based on Per Capita Household Income
By Gender of Household Head

| Country | Choice of $\gamma$ | Overall | Between | Within | Male | Female |
|---|---|---|---|---|---|---|
| USA | - 2.0 | 1.0041 | 0.0038 | 1.0005 | 0.8565 | 1.2647 |
| 1979 | - 1.0 | 0.2483 | 0.0037 | 0.2447 | 0.2149 | 0.3165 |
| | - 0.5 | 0.2191 | 0.0036 | 0.2155 | 0.1955 | 0.2691 |
| | 0.0 | 0.2121 | 0.0036 | 0.2086 | 0.1925 | 0.2556 |
| Sample Size | | 4468 | | | 3157 | 1311 |
| Australia | - 2.0 | 0.5216 | 0.0008 | 0.5208 | 0.4212 | 0.8296 |
| 1981 | - 1.0 | 0.2025 | 0.0008 | 0.2018 | 0.1903 | 0.2413 |
| | - 0.5 | 0.1837 | 0.0008 | 0.1830 | 0.1756 | 0.2098 |
| | 0.0 | 0.1800 | 0.0007 | 0.1793 | 0.1737 | 0.2005 |
| Sample Size | | 4730 | | | 3665 | 1065 |
| Canada | - 2.0 | 0.3899 | 0.0005 | 0.3894 | 0.2681 | 0.8065 |
| 1981 | - 1.0 | 0.2106 | 0.0005 | 0.2101 | 0.1908 | 0.2821 |
| | - 0.5 | 0.1954 | 0.0005 | 0.1949 | 0.1820 | 0.2455 |
| | 0.0 | 0.1942 | 0.0005 | 0.1937 | 0.1835 | 0.2349 |
| Sample Size | | 4478 | | | 3534 | 944 |
| Switzerland | - 2.0 | 0.3858 | 0.0002 | 0.3856 | 0.4000 | 0.3220 |
| 1982 | - 1.0 | 0.2216 | 0.0002 | 0.2215 | 0.2256 | 0.2044 |
| | - 0.5 | 0.2294 | 0.0002 | 0.2292 | 0.2368 | 0.1985 |
| | 0.0 | 0.2669 | 0.0002 | 0.2668 | 0.2809 | 0.2103 |
| Sample Size | | 6877 | | | 5549 | 1328 |
| France | - 2.0 | 0.3509 | 0.0008 | 0.3501 | 0.3488 | 0.3535 |
| 1979 | - 1.0 | 0.2335 | 0.0008 | 0.2327 | 0.2308 | 0.2420 |
| | - 0.5 | 0.2322 | 0.0008 | 0.2314 | 0.2251 | 0.2605 |
| | 0.0 | 0.2563 | 0.0008 | 0.2555 | 0.2360 | 0.3406 |
| Sample Size | | 5454 | | | 4520 | 934 |
| Netherlands | - 2.0 | 0.3184 | 0.0047 | 0.3137 | 0.3218 | 0.2578 |
| 1983 | - 1.0 | 0.1871 | 0.0048 | 0.1823 | 0.1878 | 0.1615 |
| | - 0.5 | 0.1725 | 0.0049 | 0.1676 | 0.1743 | 0.1459 |
| | 0.0 | 0.1699 | 0.0051 | 0.1648 | 0.1732 | 0.1396 |
| Sample Size | | 4747 | | | 3762 | 985 |
| Israel | - 2.0 | 0.2683 | 0.0001 | 0.2681 | 0.2709 | 0.2475 |
| 1979 | - 1.0 | 0.2238 | 0.0001 | 0.2237 | 0.2249 | 0.2153 |
| | - 0.5 | 0.2265 | 0.0001 | 0.2264 | 0.2282 | 0.2145 |
| | 0.0 | 0.2492 | 0.0001 | 0.2491 | 0.2529 | 0.2239 |
| Sample Size | | 2271 | | | 1988 | 283 |
| Sweden | - 2.0 | 0.2459 | 0.0002 | 0.2457 | 0.2422 | 0.2662 |
| 1981 | - 1.0 | 0.1575 | 0.0002 | 0.1573 | 0.1600 | 0.1417 |
| | - 0.5 | 0.1449 | 0.0002 | 0.1447 | 0.1481 | 0.1255 |
| | 0.0 | 0.1403 | 0.0002 | 0.1401 | 0.1440 | 0.1188 |
| Sample Size | | 4754 | | | 4052 | 702 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Italy | - 2.0 | 0.2304 | 0.0006 | 0.2298 | 0.2345 | 0.2007 |
| 1986 | - 1.0 | 0.1894 | 0.0006 | 0.1888 | 0.1939 | 0.1624 |
| | - 0.5 | 0.1900 | 0.0007 | 0.1893 | 0.1958 | 0.1576 |
| | 0.0 | 0.2051 | 0.0007 | 0.2044 | 0.2138 | 0.1601 |
| Sample Size | | 3970 | | | 3330 | 640 |
| | | | | | | |
| Germany | - 2.0 | 0.1832 | 0.0022 | 0.1811 | 0.1792 | 0.1849 |
| 1981 | - 1.0 | 0.1408 | 0.0022 | 0.1386 | 0.1384 | 0.1394 |
| | - 0.5 | 0.1376 | 0.0022 | 0.1354 | 0.1360 | 0.1336 |
| | 0.0 | 0.1407 | 0.0023 | 0.1384 | 0.1399 | 0.1341 |
| Sample Size | | 2787 | | | 2153 | 634 |
| | | | | | | |
| UK | - 2.0 | 0.1828 | 0.0013 | 0.1815 | 0.1744 | 0.2001 |
| 1979 | - 1.0 | 0.1415 | 0.0013 | 0.1403 | 0.1424 | 0.1333 |
| | - 0.5 | 0.1403 | 0.0013 | 0.1391 | 0.1406 | 0.1340 |
| | 0.0 | 0.1443 | 0.0013 | 0.1431 | 0.1438 | 0.1403 |
| Sample Size | | 6878 | | | 5275 | 1603 |
| | | | | | | |
| Poland | - 2.0 | 0.1516 | 0.0002 | 0.1514 | 0.1578 | 0.1326 |
| 1986 | - 1.0 | 0.1262 | 0.0002 | 0.1259 | 0.1304 | 0.1124 |
| | - 0.5 | 0.1228 | 0.0002 | 0.1226 | 0.1267 | 0.1100 |
| | 0.0 | .1241 | 0.0002 | 0.1239 | 0.1278 | 0.1115 |
| Sample Size | | 5284 | | | 3972 | 1312 |

## Table 4

### International Comparison of Inequalities
### Generalized Entropy Measures Based on Per Capita Household Income
### By Size of the Household

| Country | Choice of $\gamma$ | Overall | Between | Within | One | Two | Three | Four | Five+ |
|---|---|---|---|---|---|---|---|---|---|
| USA | - 2.0 | 1.0040 | 0.0371 | 0.9673 | 1.1186 | 1.1278 | 0.3951 | 1.4922 | 0.3181 |
| 1979 | - 1.0 | 0.2484 | 0.0330 | 0.2154 | 0.2764 | 0.2157 | 0.1822 | 0.1609 | 0.1760 |
| | - 0.5 | 0.2191 | 0.0314 | 0.1877 | 0.2365 | 0.1863 | 0.1565 | 0.1360 | 0.1563 |
| | 0.0 | 0.2121 | 0.0301 | 0.1821 | 0.2253 | 0.1760 | 0.1447 | 0.1265 | 0.1479 |
| Sample Size | | 4468 | | | 1332 | 1197 | 727 | 652 | 560 |
| Australia | -2.0 | 0.5216 | 0.0332 | 0.4884 | 1.0887 | 0.3860 | 0.2466 | 0.2723 | 0.2360 |
| 1981 | - 1.0 | 0.2026 | 0.0307 | 0.1719 | 0.2265 | 0.1717 | 0.1467 | 0.1293 | 0.1372 |
| | - 0.5 | 0.1838 | 0.0297 | 0.1540 | 0.1918 | 0.1573 | 0.1328 | 0.1143 | 0.1243 |
| | 0.0 | 0.1800 | 0.0290 | 0.1511 | 0.1802 | 0.1530 | 0.1275 | 0.1092 | 0.1197 |
| Sample Size | | 4730 | | | 1360 | 1223 | 720 | 804 | 623 |
| Canada | - 2.0 | 0.3899 | 0.0385 | 0.3514 | 0.6373 | 0.4747 | 0.2091 | 0.1794 | 0.1684 |
| 1981 | - 1.0 | 0.2106 | 0.0352 | 0.1754 | 0.2568 | 0.1811 | 0.1433 | 0.1228 | 0.1257 |
| | - 0.5 | 0.1955 | 0.0340 | 0.1615 | 0.2259 | 0.1625 | 0.1310 | 0.1134 | 0.1178 |
| | 0.0 | 0.1941 | 0.0330 | 0.1613 | 0.2176 | 0.1560 | 0.1257 | 0.1095 | 0.1150 |
| Sample Size | | 4478 | | | 1116 | 1182 | 743 | 785 | 652 |
| Switz. | - 2.0 | 0.3857 | 0.0340 | 0.3518 | 0.7228 | 0.2719 | 0.1633 | 0.1297 | 0.1590 |
| 1982 | - 1.0 | 0.2217 | 0.0299 | 0.1918 | 0.2151 | 0.2236 | 0.1379 | 0.1337 | 0.1484 |
| | - 0.5 | 0.2294 | 0.0283 | 0.2011 | 0.1964 | 0.2484 | 0.1472 | 0.1471 | 0.1636 |
| | 0.0 | 0.2669 | 0.0269 | 0.2401 | 0.2015 | 0.3141 | 0.1694 | 0.1724 | 0.1960 |
| Sample Size | | 6877 | | | 2157 | 2372 | 844 | 1023 | 481 |
| France | - 2.0 | 0.3509 | 0.0224 | 0.3285 | 0.3922 | 0.4188 | 0.2914 | 0.2434 | 0.2431 |
| 1979 | - 1.0 | 0.2335 | 0.0212 | 0.2123 | 0.1915 | 0.2537 | 0.2037 | 0.1860 | 0.2068 |
| | - 0.5 | 0.2322 | 0.0208 | 0.2114 | 0.1833 | 0.2569 | 0.1979 | 0.1868 | 0.2113 |
| | 0.0 | 0.2563 | 0.0204 | 0.2360 | 0.1907 | 0.3016 | 0.2060 | 0.2007 | 0.2319 |
| Sample Size | | 5454 | | | 1033 | 1518 | 1064 | 1053 | 786 |
| Neth. | - 2.0 | 0.3184 | 0.0703 | 0.2482 | 0.1816 | 0.1393 | 0.3006 | 0.1698 | 0.3413 |
| 1983 | - 1.0 | 0.1873 | 0.0645 | 0.1227 | 0.1172 | 0.1058 | 0.1538 | 0.1032 | 0.1760 |
| | - 0.5 | 0.1726 | 0.0626 | 0.1100 | 0.1101 | 0.1012 | 0.1359 | 0.0968 | 0.1519 |
| | 0.0 | 0.1698 | 0.0612 | 0.1087 | 0.1096 | 0.1001 | 0.1300 | 0.0967 | 0.1412 |
| Sample Size | | 4747 | | | 976 | 1444 | 766 | 1059 | 502 |
| Israel | - 2.0 | 0.2683 | 0.0627 | 0.2055 | 0.3101 | 0.3003 | 0.1350 | 0.1238 | 0.1653 |
| 1979 | - 1.0 | 0.2239 | 0.0574 | 0.1665 | 0.2666 | 0.2401 | 0.1135 | 0.1076 | 0.1415 |
| | - 0.5 | 0.2266 | 0.0556 | 0.1710 | 0.2684 | 0.2444 | 0.1085 | 0.1058 | 0.1381 |
| | 0.0 | 0.2492 | 0.0542 | 0.1951 | 0.2875 | 0.2765 | 0.1065 | 0.1078 | 0.1395 |
| Sample Size | | 2271 | | | 246 | 535 | 344 | 505 | 641 |
| Sweden | - 2.0 | 0.2459 | 0.0347 | 0.2112 | 0.3343 | 0.2081 | 0.1806 | 0.1446 | 0.1356 |
| 1981 | - 1.0 | 0.1576 | 0.0315 | 0.1261 | 0.1631 | 0.1261 | 0.1158 | 0.1044 | 0.1017 |
| | - 0.5 | 0.1450 | 0.0303 | 0.1147 | 0.1400 | 0.1148 | 0.1067 | 0.0971 | 0.0949 |
| | 0.0 | 0.1402 | 0.0293 | 0.1111 | 0.1285 | 0.1100 | 0.1035 | 0.0937 | 0.0916 |
| Sample Size | | 4754 | | | 955 | 1761 | 868 | 820 | 350 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Italy | - 2.0 | 0.2304 | 0.0201 | 0.2103 | 0.2021 | 0.1681 | 0.1774 | 0.2053 | 0.2601 |
| 1986 | - 1.0 | 0.1895 | 0.0196 | 0.1699 | 0.1695 | 0.1531 | 0.1445 | 0.1856 | 0.2127 |
| | - 0.5 | 0.1900 | 0.0195 | 0.1705 | 0.1661 | 0.1576 | 0.1398 | 0.1989 | 0.2176 |
| | 0.0 | 0.2050 | 0.0194 | 0.1857 | 0.1694 | 0.1721 | 0.1411 | 0.2382 | 0.2473 |
| Sample Size | | 3970 | | | 493 | 945 | 971 | 967 | 594 |
| Germany | - 2.0 | 0.1833 | 0.0339 | 0.1494 | 0.1940 | 0.1978 | 0.1136 | 0.0722 | 0.1328 |
| 1981 | - 1.0 | 0.1409 | 0.0316 | 0.1093 | 0.1422 | 0.1305 | 0.0889 | 0.0661 | 0.0880 |
| | - 0.5 | 0.1376 | 0.0307 | 0.1070 | 0.1352 | 0.1224 | 0.0876 | 0.0660 | 0.0831 |
| | 0.0 | 0.1406 | 0.0299 | 0.1107 | 0.1349 | 0.1206 | 0.0906 | 0.0674 | 0.0825 |
| Sample Size | | 2787 | | | 693 | 766 | 564 | 507 | 257 |
| UK | - 2.0 | 0.1828 | 0.0147 | 0.1682 | 0.2553 | 0.1676 | 0.1326 | 0.1237 | 0.1132 |
| 1979 | - 1.0 | 0.1416 | 0.0136 | 0.1281 | 0.1647 | 0.1446 | 0.1040 | 0.0876 | 0.1019 |
| | - 0.5 | 0.1404 | 0.0131 | 0.1272 | 0.1648 | 0.1403 | 0.1011 | 0.0858 | 0.1010 |
| | 0.0 | 0.1443 | 0.0127 | 0.1317 | 0.1720 | 0.1401 | 0.1018 | 0.0874 | 0.1029 |
| Sample Size | | 6878 | | | 1660 | 2136 | 1094 | 1247 | 741 |
| Poland | - 2.0 | 0.1516 | 0.0131 | 0.1386 | 0.0960 | 0.1325 | 0.1468 | 0.1235 | 0.1575 |
| 1986 | - 1.0 | 0.1262 | 0.0123 | 0.1139 | 0.0968 | 0.1163 | 0.1153 | 0.1055 | 0.1297 |
| | - 0.5 | 0.1229 | 0.0120 | 0.1108 | 0.1012 | 0.1150 | 0.1082 | 0.1033 | 0.1260 |
| | 0.0 | 0.1241 | 0.0117 | 0.1125 | 0.1087 | 0.1173 | 0.1050 | 0.1050 | 0.1276 |
| Sample Size | | 5284 | | | 699 | 1348 | 1018 | 1150 | 1069 |

**Table 5**

**International Comparison of Inequalities**
**Generalized Entropy Measures Based on Per Capita Household Income**
**By Education of Household Head**

| Country | Choice of $\gamma$ | Overall | Between | Within | LT 10 | 10-12 | 13+ |
|---|---|---|---|---|---|---|---|
| USA | - 2.0 | 1.0039 | 0.0223 | 0.9820 | 0.6789 | 1.0690 | 1.0040 |
| 1979 | - 1.0 | 0.2483 | 0.0216 | 0.2268 | 0.2485 | 0.2226 | 0.2189 |
| | - 0.5 | 0.2189 | 0.0214 | 0.1977 | 0.2165 | 0.1960 | 0.1936 |
| | 0.0 | 0.2122 | 0.0213 | 0.1909 | 0.2083 | 0.1880 | 0.1877 |
| Sample Size | | 4468 | | | 950 | 1883 | 1635 |
| Australia | - 2.0 | 0.5215 | 0.0055 | 0.5161 | 0.3572 | 1.4605 | 0.4412 |
| 1981 | - 1.0 | 0.2025 | 0.0054 | 0.1972 | 0.1852 | 0.2415 | 0.1969 |
| | - 0.5 | 0.1837 | 0.0054 | 0.1783 | 0.1723 | 0.2022 | 0.1778 |
| | 0.0 | 0.1800 | 0.0054 | 0.1747 | 0.1718 | 0.1887 | 0.1732 |
| Sample Size | | 4730 | | | 2048 | 560 | 2122 |
| Netherlands | - 2.0 | 0.3172 | 0.0149 | 0.3024 | 0.2694 | 0.3131 | 0.5897 |
| 1983 | - 1.0 | 0.1861 | 0.0153 | 0.1709 | 0.1599 | 0.1808 | 0.2272 |
| | - 0.5 | 0.1715 | 0.0156 | 0.1560 | 0.1470 | 0.1640 | 0.1939 |
| | 0.0 | 0.1688 | 0.0159 | 0.1529 | 0.1436 | 0.1584 | 0.1833 |
| Sample Size | | 4579 | | | 2713 | 1617 | 249 |
| Israel | - 2.0 | 0.2682 | 0.0426 | 0.2256 | 0.2073 | 0.1919 | 0.2346 |
| 1979 | - 1.0 | 0.2238 | 0.0411 | 0.1828 | 0.1808 | 0.1635 | 0.2074 |
| | - 0.5 | 0.2264 | 0.0406 | 0.1859 | 0.1802 | 0.1641 | 0.2180 |
| | 0.0 | 0.2493 | 0.0404 | 0.2089 | 0.1874 | 0.1747 | 0.2512 |
| Sample Size | | 2271 | | | 861 | 752 | 658 |
| Italy | - 2.0 | 0.2716 | 0.0223 | 0.2494 | 0.2482 | 0.1994 | 0.2047 |
| 1986 | - 1.0 | 0.1933 | 0.0236 | 0.1697 | 0.1662 | 0.1801 | 0.1742 |
| | - 0.5 | 0.1904 | 0.0244 | 0.1662 | 0.1594 | 0.1865 | 0.1733 |
| | 0.0 | 0.2015 | 0.0253 | 0.1761 | 0.1615 | 0.2070 | 0.1812 |
| Sample Size | | 3946 | | | 2847 | 856 | 243 |
| Germany | - 2.0 | 0.1832 | 0.0099 | 0.1734 | 0.1655 | 0.1694 | 0.2222 |
| 1981 | - 1.0 | 0.1408 | 0.0103 | 0.1306 | 0.1234 | 0.1351 | 0.1738 |
| | - 0.5 | 0.1376 | 0.0105 | 0.1271 | 0.1197 | 0.1314 | 0.1664 |
| | 0.0 | 0.1407 | 0.0107 | 0.1299 | 0.1212 | 0.1335 | 0.1664 |
| Sample Size | | 2787 | | | 1902 | 634 | 251 |
| Poland | - 2.0 | 0.1516 | 0.0023 | 0.1494 | 0.1482 | 0.1501 | 0.1411 |
| 1986 | - 1.0 | 0.1261 | 0.0024 | 0.1238 | 0.1257 | 0.1240 | 0.1131 |
| | - 0.5 | 0.1228 | 0.0024 | 0.1204 | 0.1240 | 0.1200 | 0.1078 |
| | 0.0 | 0.1242 | 0.0025 | 0.1217 | 0.1276 | 0.1205 | 0.1060 |
| Sample Size | | 5284 | | | 2097 | 2775 | 412 |

**Table 6**

**International Comparison of Inequalities**
**Generalized Entropy Measures Based on Per Capita Household Income**
**By Ethnicity of Household Head**

| Country | Choice of $\gamma$ | Overall | Between | Within | Group A | Group B |
|---|---|---|---|---|---|---|
| USA | - 2.0 | 1.0040 | 0.0089 | 0.9953 | 1.0597 | 0.7308 |
| 1979 | - 1.0 | 0.2483 | 0.0082 | 0.2401 | 0.2254 | 0.3024 |
| | - 0.5 | 0.2191 | 0.0079 | 0.2112 | 0.2008 | 0.2655 |
| | 0.0 | 0.2121 | 0.0076 | 0.2045 | 0.1958 | 0.2564 |
| Sample Size | | 4468 | | | 3615 | 853 |
| Australia | -2.0 | 0.5216 | 0.0001 | 0.5216 | 0.4900 | 0.6077 |
| 1981 | - 1.0 | 0.2025 | 0.0001 | 0.2025 | 0.1991 | 0.2122 |
| | - 0.5 | 0.1837 | 0.0001 | 0.1837 | 0.1817 | 0.1892 |
| | 0.0 | 0.1800 | 0.0001 | 0.1800 | 0.1785 | 0.1841 |
| Sample Size | | 4730 | | | 3490 | 1240 |
| Canada | - 2.0 | 0.3899 | 0.0001 | 0.3898 | 0.3989 | 0.3347 |
| 1981 | - 1.0 | 0.2106 | 0.0001 | 0.2105 | 0.2134 | 0.1939 |
| | - 0.5 | 0.1954 | 0.0001 | 0.1953 | 0.1978 | 0.1814 |
| | 0.0 | 0.1942 | 0.0001 | 0.1941 | 0.1963 | 0.1817 |
| Sample Size | | 4478 | | | 3813 | 665 |
| Switzerland | - 2.0 | 0.3858 | 0.0032 | 0.3825 | 0.3573 | 0.4921 |
| 1982 | - 1.0 | 0.2216 | 0.0030 | 0.2186 | 0.2243 | 0.1835 |
| | - 0.5 | 0.2294 | 0.0030 | 0.2264 | 0.2339 | 0.1755 |
| | 0.0 | 0.2669 | 0.0029 | 0.2641 | 0.2743 | 0.1842 |
| Sample Size | | 6877 | | | 5921 | 956 |
| Israel | - 2.0 | 0.2638 | 0.0011 | 0.2627 | 0.1718 | 0.2872 |
| 1979 | - 1.0 | 0.2186 | 0.0011 | 0.2175 | 0.1436 | 0.2404 |
| | - 0.5 | 0.2195 | 0.0011 | 0.2184 | 0.1406 | 0.2439 |
| | 0.0 | 0.2380 | 0.0011 | 0.2369 | 0.1441 | 0.2690 |
| Sample Size | | 2240 | | | 529 | 1711 |