Session Number: Session 2D

Time: Monday, 25 August, PM

*Paper Prepared for the 30th General Conference of*

*The International Association for Research in Income and Wealth*

**Portoroz, Slovenia, August 24-30, 2008**

# Title of Paper: LONG TERM TRENDS IN THE LEVY INSTITUTE MEASURE OF ECONOMIC WELL-BEING (LIMEW), UNITED STATES, 1959-2000

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# LONG TERM TRENDS IN THE LEVY INSTITUTE MEASURE OF ECONOMIC WELL-BEING (LIMEW), UNITED STATES, 1959-2004

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**July 30, 2008**

**For Presentation at the 2008 IARIW Conference, Slovenia [Session 2D]**

Abstract: The picture of economic well-being is crucially dependent on the yardstick used to measure it. The LIMEW is different in scope from the official US Census Bureau measure of gross money income (MI) in that our measure includes public consumption, income from wealth, and household production.

In previous work, Wolff and Zacharias (2007) found that the median U.S. household was much better off in 2001 relative to 1989 according to LIMEW in comparison to MI. They also found that the racial gap widened according to LIMEW, while MI suggested a mild improvement. On the other hand, the hump-shaped relationship between age and economic well-being was not found when the LIMEW is used as the yardstick, due to the higher relative well-being of the elderly. Measured inequality was lower according to LIMEW than gross money income but the increase between 1989 and 2001 was higher for the LIMEW.

In the current study, we extend the LIMEW backward in time to 1959. We find that median LIMEW and MI grew at about the same annual rate from 1959 to 2000 but LIMEW grew much slower from 1959 to 1982 and much faster from 1982 to 2000. Second, LIMEW showed a greater increase in inequality from 1959 to 2000 than MI (7.1 versus 5.7 Gini points), and particularly from 1959 to 1982. Third, the racial gap in mean values narrowed from 1959 to 1989 according to both measures but then widened from 1989 to 2000 according to LIMEW but continued to narrow according to MI.

JEL Codes: D31, D63, P17.
Keywords: well-being, living standards, inequality

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## 1. INTRODUCTION

Economic well-being refers to the household's command over, and access to, the goods and services produced in a modern market economy during a given period of time. The magnitude of the command or access that can be exercised by the household is approximated by an income measure, since household income should, in principle, reflect the resources available to the household for facilitating current consumption or acquiring assets. Traditionally, household money income is used as a measure that reflects such command.

Our aim in this paper is to propose a new measure of economic well-being. Gross money income (MI), the most widely used measure of economic well-being in the United States and several advanced capitalist countries, has been criticized on several grounds. The landmark report by the Canberra Group, a group of international experts on household income statistics, recommended, among other things, that estimates of in-kind social benefits need to be added and tax burden subtracted from money income to arrive at a better measure of household economic well-being [Canberra Group, 2001]. In a welcome and significant shift, the U.S. Census Bureau placed its "experimental measures of income" on par with gross money income (MI) in its annual reports [DeNavas-Walt et al., 2003]. The Bureau's most comprehensive measure, which we refer to as extended income (EI), is a better approximation of a household's command over commodities than MI, which is the most widely used official measure. EI is an after-tax measure of income. It expands the definitions of income from work and income from wealth. Furthermore, it has a better accounting of the government's role in household economic well-being.

The EI and MI measures seek to estimate the command over commodities. Although commodities are of critical importance, they form only a portion of the entire set of goods and services available to households. The state plays a crucial role in the direct provisioning of the "necessaries and conveniences of life" (to use Adam Smith's famous expression), such as public education and highways ("public consumption"). Nonmarket household work, such as childcare, cooking, and cleaning, also provides the necessaries and conveniences of life ("household production").

The Levy Institute Measure of Economic Well-Being (LIMEW) is a more comprehensive measure than the two official measures. We include estimates of public

consumption and household production in our measure, components that are excluded in most available measures of economic well-being. We also include estimates of long-run benefits from the ownership of wealth (other than homes) in the form of an imputed lifetime annuity, a procedure that, in our view, is superior to considering only current income from assets.

The argument that conventional measures are inadequate as a measure of economic well-being because of their omission of elements such as household production or their treatment of income from financial assets is hardly novel. In fact, there exists a substantial body of research, including the pioneering work being done at the Census Bureau itself, which has attempted to include, in addition to money income, one or the other elements mentioned to arrive at a more complete measure of income. What is novel about the LIMEW is that while previous research has typically attempted to include the effect of one element or the other in isolation, we integrate all of them simultaneously, into a comprehensive measure.

There are three key motivations behind constructing the LIMEW. First, trends in well-being and can be sensitive to how we choose to measure well-being. A broader measure of well-being might be better guide to actual trends in the economic determinants of the standard of living. While adding new components such as public consumption and household production to conventional measures of well-being is bound to raise the measured level of household well-being, it is also important to know: by how much? This might serve as a starting point to a quantitative assessment of the importance of non-market provisioning in sustaining living standards.

Another motivation behind developing the LIMEW is to study disparities among households in key demographic groups. By focusing only on money income, we might end up with a partial picture of the advantage or disadvantage faced by particular groups in one or more dimensions of well-being. For example, costs incurred by the government in paying public pensions to the elderly (e.g. Social Security payments) are included in their money income while the costs incurred by the government in the education of the young is not counted as a part of their economic well-being. Admittedly, there are problems in quantifying the latter but it is hard to believe that the best estimate of it is zero. Finally, the LIMEW is also motivated by the consideration that economic inequality

is broader than inequality in earnings, the main focus of most academic studies and the main driving force behind the changes in the inequality of money income. As one would expect, household production and public consumption are distributed much more equally than earnings among households. On the other hand, inequality in the ownership of assets is a crucial determining factor in overall inequality. As is well known, the inequality in wealth is generally much higher than that in income or earnings. Including an estimate of the long-run benefits from wealth in the measure of well-being will therefore boost measured inequality. In sum, our understanding of the extent and nature of group inequalities and overall inequality depends on the measure of well-being.

We begin by describing briefly the methodology for the LIMEW. The sources of data and methods used are described in the appendix. In the subsequent section (Section 2), we provide estimates that demonstrate that the economic fortunes of the average household over period from 1959 to 2004 followed substantially different trends depending on the yardstick of well-being used. Section 3 compares results based on the LIMEW and conventional measures for households in some key demographic groups. We discuss, in some detail, how the different components of the measures (income from wealth, government transfers etc.) contribute toward widening or narrowing disparities among groups. In the following section, we discuss the overall distribution of economic well-being. Section 4 compares our findings regarding inequality based on the LIMEW with those based on the official measures, highlighting the role of the individual components in shaping the differences in findings. Some policy implications are discussed in Section 5. The details regarding data sources and methods are discussed in the Appendix.

## 2. COMPONENTS OF THE LIMEW

The LIMEW is constructed as the sum of the following components (*see* Table 1): base income; income from wealth; net government expenditures (transfers and public consumption, net of taxes); and household production.

Base money income is simply gross money income *less* the sum of property income (interest, dividends, and rents) and government cash transfers (e.g., Social

Security benefits). Earnings make up the overwhelming portion of base income. The remainder of base income consists of pensions and other small items, such as interpersonal transfers and workers' compensation paid by the private sector.

The second item added to base money income is imputed income from wealth. In the official gross money income measure, property-type income consists of the actual receipts of interest, dividends, and rent. From our perspective, the actual, annual property income is an incomplete measure of the economic well-being derived from the ownership of assets. Real assets, such as houses, typically last for several years and yield services to their owners, thereby freeing up resources otherwise spent on housing. Financial assets, can, under normal conditions, be a source of economic security in addition to property-type income.

Our approach to the valuation of income from wealth is different from the methods suggested in the literature [e.g. Weisbrod and Hansen, 1968] in two significant ways. First, we distinguish between home and nonhome wealth. Housing is a universal need and home ownership frees the owner from the obligation of paying rent, leaving an equivalent amount of resources for consumption and asset accumulation. Hence, benefits from owner-occupied housing are reckoned in terms of the replacement cost of the services derived from it (i.e., a rental equivalent).[1] Second, we estimate the benefits from nonhome wealth using a variant of the standard lifetime annuity method.[2] We calculate an annuity based on a given amount of wealth, an interest rate, and life expectancy. The annuity is the same for the remaining life of the wealth holder and the terminal wealth is zero. (In the case of households with multiple adults, we use the maximum of the life expectancy of the head of household and spouse in the annuity formula.) We modify the standard procedure by accounting for differences in portfolio composition across households. Instead of using a single interest rate for all assets, we use a weighted

[1] This is consistent with the approach adopted in most national income accounts.

[2] Our rationale for employing this method is that it is a better indicator of the resources available to the wealth holder on a sustainable basis over the expected lifetime compared to the bond-coupon method. The latter assumes away the differences in individual household overall rates of return caused by differences in household portfolios. More importantly for our purposes here, it assumes that the amount of wealth remains unchanged over the expected (conditional) lifetime of the wealth holder.

average of asset-specific and historic real rates of return,[3] where the weights are the proportions of the different assets in a household's total wealth.

The third item that we add to base money income is net government expenditures—the difference between government expenditures incurred on behalf of households and taxes paid by households. Our approach to determine expenditures and taxes may be called the social accounting approach [Hicks, 1946; Lakin, 2002, 43–46].

Government expenditures included in the LIMEW consist of cash transfers, noncash transfers, and public consumption. These expenditures, in general, are derived from the National Income and Product Accounts [NIPA Tables 3.12 and 3.15.5]. The social accounting approach to government expenditures yields the generally accepted conclusion in the case of government cash transfers: they are to be considered entirely as part of money incomes of the recipients. Our approach to noncash transfers is that they must be distributed among recipients on the basis of the appropriate average cost incurred by the government.[4] In contrast, the Census Bureau includes the "fungible value" of the medical benefits in EI. The fungible value method is based on the theoretical argument that the income-value for the recipient from a given noncash transfer is, on the average, less than the average cost incurred by the government in providing that benefit [see, for e.g., Canberra Group, 2001, 24,65]. In practice, this involves estimating how much the household could have paid for the medical benefit, after meeting its expenditures on some basic items (such as food, clothing etc.), with the maximum payment for the medical benefit set equal to the average cost incurred by the government.

The alternative is not pursued by us primarily because of its important implication that households with incomes below the minimum threshold and participating in the program are presumed to receive no benefit from a product that they actually consume. This is inconsistent with our goal of measuring the household's access or command over products. Further, unlike the social accounting approach, the alternative method would not, by definition, yield the actual total government expenditure when aggregated across

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[3] The rate of return used in our procedure is real total return (the sum of the change in capital value and income from the asset, adjusted for inflation). For example, for stocks, total real return would be the inflation-adjusted sum of the change in stock prices plus dividend yields.

[4] In the case of Medicare and Medicaid—by far the biggest items in this list—the relevant cost is the "insurance value" differentiated by risk classes.

recipients. Such a feature is incompatible with our goal of estimating net government expenditures using a consistent methodology.

The other type of government expenditure that we include in our measure of well-being is some public expenditures ("public consumption"). We begin with a detailed functional classification of government expenditures on direct provisioning and exclude certain functions entirely because they fail to satisfy the general criterion. Most such functions form part of general social overhead and their major effect is to keep the ship of state afloat (e.g. national defense). Expenditures under other functional categories also may not meet the general criterion fully because part of such expenditures can be considered as being incurred on behalf of the business sector (e.g. transportation). The household sector's share in such expenditures can be approximated on the basis of information regarding its utilization or consumption of products provided via the expenditures. Finally, expenditures under certain functional categories are considered as incurred completely on behalf of the household sector (e.g. health).

In the second stage, the allocated expenditures for each functional category—public consumption—are distributed among the households. The distribution procedures followed by us build on the earlier studies employing the government cost approach [e.g., Ruggles and Higgins, 1981] in that some expenditures are distributed, in the same way as the split was made between the household and other sectors, on the basis of estimated patterns of utilization or consumption and some expenditures are distributed equally among the relevant population.

The final step in constructing net government expenditures is concerned with taxes. Our objective is to determine the distribution of actual tax payments by households in different income and demographic groups in an accounting sense rather than incidence in a theoretical sense. We align the aggregate taxes in the ADS (imputed by the Census Bureau) with their NIPA counterparts, as for expenditures. The bulk of the taxes paid by households falls in this group—federal and state personal income taxes, property taxes on owner-occupied housing, and payroll taxes (employee portion). Taxes on corporate profits, on business-owned property, and on other businesses, as well as nontaxes, were not allocated to the household sector because we assumed that they were paid out of business sector incomes.

The final item that we add to base money income is the imputed value of household production. Three broad categories of unpaid activities are usually included in the definition of household production: (1) core production activities, such as cooking and cleaning; (2) distribution activities, such as shopping for groceries and for clothing; and (3) childcare activities, such as caring for babies and reading to children. These activities are considered as "production", since they can be assigned, generally, to third parties apart from the person who performs them, although third parties are *not* always a substitute of the person, especially for the third activity.[5]

Our strategy for imputing the value of household production is to value the amount of time spent by individuals on household production using the replacement cost based on average earnings of domestic servants or household employees [Kuznets, et al, 1941, 432–433; Landefeld and McCulla, 2000]. Research suggests that there are significant differences among households in the quality and composition of the "outputs" of household production as well as the efficiency of housework [National Research Council, 2005, Ch. 3]. The differentials are correlated with household-level characteristics (such as wealth) and characteristics of household members [such as the influence of parental education on childrearing practices, e.g., Yeung and Stafford, 2003]. Therefore, we modify the replacement-cost procedure and apply to the average replacement cost a discount or premium that depends on how the individual (whose time is being valued) ranks in terms of a performance index. Ideally, the performance index should account for all the factors relevant in determining differentials in household production and the weights of the factors should be derived from a full-fledged multivariate analysis. Given the absence of such research findings we incorporated three key factors that affect efficiency and quality differentials—household income, educational attainment, and time availability—with equal weights attached to each of them.

[5] The third-party principle is sometimes ambiguous in the case of such personal care activities as shaving [see Organization for Economic Co-operation and Development 1995: 11].

## 3. LEVEL AND COMPOSITION OF WELL-BEING

The picture regarding economic well-being is substantially different between the LIMEW and the official measures. By construction, MI and EI have average values less than the LIMEW. The median value of MI amounted to 64 percent of LIMEW in 1959, 71 percent in 1972, 72 percent in 1982, and 61 percent in 2000 (*see* Table 2). Corresponding ratios of EI to LIMEW were similar. However, the three measures also show rather similar rates of change over the entire 1959-2000 period. Median EI shows the highest annual rate of growth, at 1.0 percent, followed by LIMEW at 0.9 percent, and then MI, at 0.8 percent. However, there are large differences by sub-periods. In the 1959-1972 period, both MI and EI grew twice as fast as LIMEW. From 1972 to 1982, both LIMEW and MI fell in absolute terms, while EI grew close to 1.0 percent per year. In contrast, in the years 1982 to 1989, all three indices recorded very high growth rates but LIMEW grew at about twice the rate of MI and EI. In fact, LIMEW gained close to 3 percent per year. In the third period, 1989-2000, LIMEW again grew faster than either EI or MI, 0.9 percent per year versus 0.7 and 0.4 percent per year, respectively.

Table 2 also shows two alternative LIMEW indices. As noted in the introduction, EI and MI are measures that seek to estimate the magnitude of the command over commodities. If we strip away public consumption and household production from the LIMEW, we arrive at a similar measure: LIMEW−C. EI is particularly suited to be compared with LIMEW−C because both estimates are post-tax, post-transfer measures of economic well-being. Both LIMEW−C and EI show very similar rates of increase over the entire 1959-2000 period though EI increased faster from 1959 to 1982 and LIMEW−C gained more after 1982.

The addition of public consumption to LIMEW−C results in a “post-fiscal income” (PFI) measure that reflects the effect of net government expenditures, which includes public consumption in addition to transfer payments net of taxes. Here, too, there is not much difference between PFI, EI, and MI in overall growth rates between 1959 and 2000 but EI grew faster than PFI in the 1959-1982 period (there was little

difference in growth between PFI and MI) while PFI grew faster than both EI and MI after 1982.

Addendum B shows trends in the various measures of well-being in equivalent dollars (that is, adjusted for changes in family size and composition). All three measures, LIMEW, EI, and MI, show higher rates of growth when an equivalence scale adjustment is applied. This difference reflected the reduction in average household size over these years. Over the entire 1959 to 2000 period, median equivalent EI grew the fastest, at 1.5 percent per year, followed by LIMEW and then MI. Once again the differences are not very pronounced. As before, median equivalent LIMEW led the way after 1982 while median equivalent EI and MI grew faster before 1982.

In Addendum A, we include our estimates of total hours worked for each of the four years. By our calculations, there was a noticeable decline in median annual hours worked from 1959 to 1982. Overall, it fell by 0.5 percent per year and this was almost entirely due to a large decline in housework. In contrast, from 1982 to 1989, there was a large rise in median hours worked, by 0.7 percent per year, and this was entirely due to a rise in market work (that is, in the labor market). There was little change from 1989 to 2000. Over the entire period, 1959 to 2000, median hours worked fell by 6.6 percent overall, with median market work gaining 8.8 percent and housework falling by 21.2 percent.

Figure 1 provides more details on the change in time worked. Results are shown for *mean* hours worked. Here it is clear that the large reduction in housework between 1959 and 1982 was attributable to a sharp drop in hours of housework of women (a change of 521 hours). Men actually increased their housework, by 319 hours over the period, but not enough to compensate for the decline among women. Women further reduced their hours of housework from 1982 to 2000 but the decline was very modest (31 hours). Men, on the other hand, continued to increase hours of housework but here again the change was quite small (57 hours).

With regard to market work, women almost doubled their hours from 1959 to 2000. The change was fairly uniform over the four sub-periods between 1959 and 2000. Men, on the other hand, showed a slight decline in hours of market work from 1959 to 2000. All told, total hours of work for women showed a slight decline from 1959 to 2000

because of the reduction in their housework while men's total hours rose by 222 hours or 9 percent due to their enhanced hours of housework.

*A. Composition of LIMEW*

The composition of the LIMEW by income quintile for various years is shown in Table 3. It is first of interest to consider changes for the third quintile, since this is most closely related to movements in median LIMEW over the years. The very slow growth of median LIMEW from 1959 to 1982 can now be traced to the sharp decline in household production, which fell from 27.2 to 21 percent of LIMEW and declined, in 2007 dollar terms, by $2,829. This occurred despite a robust growth in net government expenditures, which climbed from 3.7 to 10.2 percent of LIMEW over the period or by $4,212 in 2007 dollars. The composition of LIMEW remained relatively stable from 1982 to 1989. The very high rate of growth of median LIMEW over this period (2.83 percent per year) was due to relatively balanced growth in all four components, particularly base income (a gain of $6,078) and household production (an increase of $5,139). From 1989 to 2000, LIMEW growth slowed down to 1.0 percent per year. The composition of LIMEW was also relatively stable over this period and the slowdown in the overall growth of LIMEW was attributable to the reduced growth of each of its components.

With regard to the total population, the most notable change was in the income from wealth component. It jumped from 13 percent of LIMEW in 1959 to 16 percent in 1972 and then to 19 percent in 1982, fell slightly in 1989 and then surged to 25 percent in 2000 (see the row labeled "All" in Table 3 and also Figure 2). The movements over time largely reflected the growing magnitude of wealth overall and for the last period the bull market of the late 1990s.

Net government expenditures as a share of LIMEW fell between 1959 and 1972 from 1.9 to 0.1 percent, then climbed sharply to 4.3 percent in 1982, but fell off to 1.6 percent in 2000. The decline from 1959 to 1972 reflected the surge in taxes paid by households, which more than offset the large increase of income transfers and public consumption during this period. The subsequent increase in the share of net government expenditures in LIMEW during the 1970s was due to increasing government transfers and a decline in taxes. The subsequent fall off of the share of net government

expenditures in the 1980s and 1990s was due to the falling shares of both government transfers and public consumption in LIMEW rather than rising taxes.

The share of household production in LIMEW fell sharply from 26.2 percent in 1959 to 20.6 percent in 1982, rebounded a bit to 23.0 percent in 1989 but then fell off again to 20.8 percent in 2000. The overall change from 1959 to 2000 largely reflected the decline in hours spent on housework, particularly between 1959 and 1982 (see Figure 1).

It is also interesting to examine how the composition of the LIMEW has changed for households in different parts of the distribution because the relative importance of individual components can vary across the distribution (Table 3). The most dramatic changes appeared to have taken place at the bottom and top of the LIMEW distribution. For the bottom quintile, the share of net government expenditures, after surging from 12.7 percent in 1959 to 17.1 percent in 1972 fell off to 11.1 percent in 1982, then climbed to 21.6 percent in 1989 but declined once again to 17.9 percent in 2000. The share of base income in LIMEW increased rather steadily from 47 percent in 1959 to 56 percent in 1982, dropped to 51 percent in 1989, but then increased once again to 56 percent in 2000. In contrast, income from wealth fell by almost half as a share of LILMEW from 11.2 percent in 1959 to 6.5 percent in 2000, while the share of household production in LIMEW also fell off from 29 to 20 percent over these years.

For the top quintile, there was a sizeable increase in the share of income from wealth. It rose from 19 percent in 1959 to 30 percent in 1982 and then to 38 percent in 2000. Declines in the relative importance of base income (from 58 to 50 percent from 1959 to 2000) and household production (from 25 to 19 percent) accompanied the sharp growth in income from wealth at the top. Net government expenditure also fell off, from -1.9 percent in 1959 to -7.0 percent in 2000. Thus, it appears that the transformation in the structure of well-being over the four decades played out differently for those at the bottom and the top. For those at the bottom, the transformation meant a greater reliance on base income (mainly consisting of labor income) and on net government expenditures. On the other hand, for those at the top, income from wealth became significantly more important than base income and household production.

*B. Sources of Growth of LIMEW*

Figure 2A shows the contribution to the overall change in mean LIMEW by component and sub-period. From 1959 to 1972, mean LIMEW grew by 13.1 percent. Of this 13.1 percentage point increase, the main contributor was the growth in base income which accounted for 8.7 percentage points. The growth of income from wealth accounted for another 5.5 percentage points whereas the other components made very little contribution (actually slightly negative in the case of net government expenditures). During the 1972-1982 period, mean LIMEW increased by only 1.8 percentage points. The growth in income from wealth and net government expenditures both made positive contributions whereas base income and household production declined in absolute terms. From 1982 to 1989, mean LIMEW surged by 20.3 percent. The main contributors over this period were the growth in base income (9.6 percentage points) and the growth in household production (7.4 percentage points). Between 1989 and 2000 mean LIMEW again surged by 21.0 percent. In this period, the growth in base income and that of income from wealth made almost equal contributions (9.9 and 9.5 percentage points, respectively). The increase in household production added another 2.8 percentage points, while net government expenditures showed negative growth.

Over the entire 1959-2000 period, mean LIMEW registered a 68 percent increase. Of this almost half (31 percentage points) emanated from the growth in base income and almost 40 percent (26 percentage points) from the gains in income from wealth. About one seventh (9 percentage points) was contributed by increases in household production. Gains in net government expenditure added almost nothing.

## 4. DISPARITIES IN ECONOMIC WELL-BEING

The extent of disparities among households grouped according to salient social and economic characteristics and how these disparities change over time depend on the yardstick used for measuring well-being. In this section, we will discuss groupings based on the following characteristics of the householder: race/ethnicity, age, education, marital status, and region.[6] Our indicator of disparity between the subgroups within a particular

[6] In the years prior to 1980, the husband was always designated as the "head" or householder in married-couple families in the Census Bureau surveys. Since then, the householder is the person in whose name the

grouping (e.g. nonwhite versus whites in the grouping based on race) is relative economic well-being, as expressed by the ratio of mean values (e.g. the ratio of nonwhite LIMEW to white LIMEW).[7] Because the constituent components of the LIMEW and official measures differ in important ways, we also break down the absolute gap (measured in dollars) in well-being between subgroups into components. This is helpful in highlighting whether the sources of disparities differ by well-being measure (e.g. how large is the role of income from wealth in accounting for the well-being gap between whites and nonwhites in the LIMEW as compared to the EI?).

A. Racial Differences. Trends in racial disparities are shown in Table 4 and Figure 3A. In 1959, the mean LIMEW of nonwhites equaled 64 percent that of whites.[8] The ratio grew rather steadily to 79 percent in 1989 but then fell back to 73 percent in 2000. In contrast, according to EI, the racial gap decreased over the whole period, with the ratio of mean EI between non-whites and whites rising from 59 percent in 1959 to 76 percent in 2000. However, both LIMEW and EI show very similar trends in the ratio of median values, with the racial ratio of median LIMEW rising from 0.61 to 0.85 from 1959 to 2000 and that of EI from 0.56 to 0.76.

A major reason behind the decline of the relative mean LIMEW of nonwhites during the 1990s was the growing wealth gap. The income from wealth of nonwhites was 38 percent that of whites' in 1959 but dropped to 32 percent in 1989 and to only 17 percent in 2000, thus offsetting the trend toward greater parity in the other components (see Figure 3b). In fact, the gap in all other components, defined as mean value for whites minus mean value for nonwhites, narrowed (or moved in favor of nonwhites) over the four decades. The gap in base income fell from $17,300 to $13,700 in favor of whites between 1959 and 2000 (both in 2007 dollars), the gap in government transfers from $400 in favor of whites to $400 in favor of nonwhites, the gap in public consumption from $500 to $4,000 in favor of nonwhites, and the gap in household production from

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housing unit is owned or rented. If it is owned or rented jointly by a married couple, then the householder may be either the wife or the husband.

[7] We prefer to use the mean values rather than median values because it allows us to decompose the difference between subgroups into individual components.

[8] "Whites" are defined here as non-Hispanic whites. "Nonwhites" refer to everyone else.

$6,100 to $2,400 in favor of whites. The gap in the tax burden also increased between 1959 and 2000 from $4,300 to $7,000 in favor of nonwhites,

It is of note that public consumption favored nonwhites more than whites, largely reflecting the higher educational expenditures incurred on their behalf due to the higher number of children in the average nonwhite household. On the other hand, the value of household production was higher for whites as a result of two reasons: (i) the average hours of housework done by all adults were higher for white households because of the greater number adults in the average white household; and, (ii) the hourly replacement cost of household production was higher for white households because of their higher average money income and educational attainment.

B. Differences by Marital Status. We now turn to disparities among three subgroups based on marital status and sex of the householder.[9] All three measures show a very high gap in well-being between families with a single-female householder ("single females") and families with a married householder ("married couples") and a widening of the gap in 2000 as compared to 1959 (see Table 4, Panel D and Figure 4A). In 2000, single females had an average money income that was only about half that of married couples; EI and the LIMEW paint a slightly better picture since the ratios of mean values between single females and married couples were, respectively, 0.60 and 0.55. The disadvantage in well-being faced by families with a single-male householder ("single males") relative to married couples was considerably less than the disadvantage faced by single females according to all three measures. In 2000, single males had an average well-being that was roughly 68 percent of married couples according to the LIMEW measure, 76 percent according to EI, and 74 percent according to MI. Ratios of median values show very similar results for single females relative to married couples and single males relative to married couples in 2000.

Time trends are also striking. The ratio of mean LIMEW between single females and married couples declined rather steadily over time, from 0.74 in 1959 to 0.60 in 2000. The EI measure shows a similar time trend, with the ratio falling from 0.66 in 1959 to 0.55 in 2000, as does MI, with the ratio declining from 0.63 to 0.49. In contrast, the

ratio of *median* LIMEW between the two groups rose strongly over the period, from 0.61 to 0.85, as did the ratio of median EI from 0.56 to 0.76 and the ratio of MI from 0.54 to 0.74. The difference in time trends between the ratio of means and the ratio of medians largely reflects the rising share of income from wealth in the LIMEW of married couples, which primarily went to the upper income groups among married couples. As a result, mean LIMEW grew much faster than median LIMEW among married couples (also, see below).

The distinct roles played the individual components in shaping the absolute gap between single females and married couples in the LIMEW are highlighted in Figure 4B. In 2000, the average LIMEW for single females was lower by roughly $58,000 as compared to married couples.[10] The gap in base income was $41,700, 72 percent of the overall gap. The gap in income from wealth was a bit less, $24,700 for 43 percent of the overall gap. Further, the gap in home production was $16,700 or 29 percent of the gap. On the other side of the ledger, married couples paid, on average, $16,700 more in taxes than single females, and received $4,200 less in the way of transfers and $4,100 less in the way of public consumption. The total net government advantage for single females relative to married couples amounted to $25,000.

We can now see why the gap in mean LIMEW between single females and married couples rose sharply over the four decades. Fifty-six percent of the $38,800 rise in the gap in mean LIMEW between the two groups was ascribable to the increased gap in base income, 62 percent to the increased gap in income from wealth, and 29 percent to the increased gap in household production. Offsetting these increases were a large relative gain for single females in public consumption, 13 percent of the overall gap, and particularly in taxes paid, 34 percent of the overall gap (government transfers remained fairly constant over the four decades).

C. Differences by Age Group. We next examine the gaps in well-being between households with householders belonging to four age groups. The standard hump shape of

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[9] We include only family households in this comparison, thus leaving out households with only one person and households with only unrelated individuals (e.g. roommates or unmarried partners).

[10] The size of the difference can perhaps be appreciated by considering the following statistic: In 2001, the median annual earnings of average full-time, full-year, male worker were $38,275 and the corresponding mean value was $54,061.

the age-income relationship, with the youngest and oldest groups worse off and a peak for age group 35-50, held up for all three measures, LIMEW, EI, and MI, in 1959. The same patterns re-appeared in 1972, 1982 and 1989 for all three measures. However, in 2000, while the pattern repeated itself for EI and MI, a new pattern emerged on the basis of LIMEW, with age group 65 and older registering as the best off. In 2000, the mean LIMEW for the elderly was 8 percent higher than the average LIMEW for all households. In contrast, the average well-being of the elderly was 77 percent of all households according to EI and only 61 percent according to MI.

Indeed, the mean LIMEW of the elderly relative to the non-elderly climbed from 0.80 in 1959 to 0.96 in 1989 and then jumped to 1.10 in 2000 (see Figure 5A). In contrast, the mean EI of the elderly relative to the non-elderly increased moderately from 0.69 in 1959 to 0.78 in 1989 but then fell off to 0.73 in 2000. MI showed a different time trend, with the mean MI of the elderly relative to the non-elderly remaining relatively constant from 1959 to 1989, at about 0.59, and then trailing off to 0.55 in 2000.

Trends in median values also show a different pattern. The median LIMEW of the elderly relative to the non-elderly steadily increased from 0.61 in 1959 to 0.89 in 2000, though the average non-elderly household was still better off in 2000 than the average elderly household. The median EI of the elderly relative to the non-elderly also rose steadily from 0.50 to 0.73 from 1959 to 2000 but the gap was still much larger in 2000 than that of LIMEW. The median MI of the elderly relative to the non-elderly increased from 0.41 in 1959 to 0.48 in 1982 and then remained virtually unchanged through 2000. Here, again the gap in 2000 was much larger in terms of MI than in terms of LIMEW (or EI).

Among the non-elderly, the youngest age group (under age 35) saw the most rapid deterioration in living standards. The ratio of their mean LIMEW to the overall mean fell from 91 percent in 1959 to 76 percent in 2000. Similar though not as pronounced trends are evident for EI (91 to 84 percent) and MI (93 to 87 percent). Moreover, a similar worsening is evident for trends in median values as well. The other three age groups (35-44, 45-54, and 55-64) showed very little change in their relative level of well-being according to the three measures.

In absolute terms, the gap in mean LIMEW between the elderly and non-elderly widened to $11,100 in 2000 (Figure 5B). The non-elderly had a substantial advantage in terms of base income, a difference of $51,500, a more moderate advantage in public consumption of $7,500 and in household production of $1,800. However, the elderly were way ahead of the non-elderly in terms of income from wealth, a difference of $36,800, government transfers, a difference of $21,600, and in taxes paid, a difference of $13,500. The first of these reflects the fact that the LIMEW includes the annuity value from non-home wealth as income, which is quite high for the elderly owing to a greater amount of accumulated wealth and a shorter remaining life expectancy. Transfers also help raise the well-being of the elderly much more than they do for the non-elderly, reflecting the large share of age-based entitlement programs (Social Security and Medicare) in total transfers. Taxes also fall much more on the non-elderly household than on the elderly because of the former's larger taxable income.

Of the $24,500 reduction in the mean LIMEW gap between the elderly and the non-elderly from 1959 to 2000, fully $28,200 was due to the increase in the gap in income from wealth between the two groups. The other large contributors to closing the LIMEW gap were government transfers, $14,100, and taxes paid, $9,100. This was offset by the increased gap in base income between the non-elderly and elderly of $25,500.

D. Differences by Educational Attainment. We next examine the gaps in well-being between households classified by the educational attainment of the household head. The main story here is that the less educated groups (less than high school, high school graduates, and some college) have all seen deterioration in living standards relative to college graduates over the years 1959 to 2000 (see Table 4, Panel C, and Figure 6A). The ratio of mean LIMEW between those with less than a high school degree to those with a college degree fell from 0.53 to 0.50 over the period; the corresponding ratio between high school graduates and college graduates declined from 0.68 to 0.59; and the ratio between those with some college and college graduates decreased from 0.77 to 0.68. Similar trends are evident for mean EI and mean MI., as well as median LIMEW, EI, and MI.

Figure 6B highlights the change in the gap in mean LIMEW between high school and college graduates over the 1959 to 2000 period. In 2000, the overall gap stood at

$63,500. College graduates in 2000 had a $52,900 advantage in base income, a $25,900 advantage in income from wealth, and a $12,4000 advantage in household production. On the other hand, high school graduates paid on average $22,300 less in taxes and had a $5,000 advantage in income transfers and a very slight advantage in public consumption.

Of the $29,700 increase in the mean LIMEW gap between college and high school graduates, more than 100 percent ($30,200) was due to the increase in the gap in base income and $17,700 to the rising differential in income from wealth between the two groups. The other large contributors to reducing the LIMEW gap were government transfers, $14,100, and taxes paid, $9,100. This was offset mainly by the increased gap in taxes paid (a rise of $15,200 in taxes paid by college graduates relative to high school graduates) and to a lesser extent by a rise in the gap of income transfers received ($6,800).

E. Differences by Region.

Table 4 (Panel E) highlights regional disparities in well-being. The differences are relatively small. In 2000, The Northeast ranked first according to the mean values of three measures (LIMEW, EI, and MI), 6 to 8 percent above average), followed by the West, Midwest, and South (the last about 7 percent below average). According to the median values, the Northeast and West ranked the highest, followed by the Midwest and then the South. The ranking remained pretty much unchanged from 1959 to 2000. However, the South did show relative gains in mean LIMEW, EI, and MI (about 85 to 94 percent of the overall average) and even larger gains in median EI and MI (from about 80 to 92 percent of the overall average).

## 5. ECONOMIC INEQUALITY

Our understanding of the degree of inequality in well-being and its changes over time also depends significantly on how we measure well-being. In this section, we will

describe the extent to which the level of inequality differs among the various measures. Our indicator of inequality will be the Gini coefficient.[11]

However, before we embark on an examination of the Gini coefficients, it is perhaps useful to begin with an overview of the shares of each quintile in aggregate income (Table 5). The quintiles of each income measure are defined by ranking households according to the amount of that income. Therefore, in general, a given quintile of the different measures need not be made up of the same households. Nevertheless, it is striking that according to all three measures, the only quintile that experienced a substantial increase in their share of aggregate income between 1959 and 2000 was the top quintile. The extent of the increase in the top quintile's share was most pronounced in the LIMEW (6.5 percentage points), followed by MI (5.7) and EI (2.3). The increase in the share of the top quintile was relatively moderate from 1959 to 1989 (actually negative for EI) followed by a big surge from 1989 to 2000. As for their shares in the overall pie, the top quintile fared the best according to MI with a share of 50 percent in 2000; the top quintile of the LIMEW had a slightly lower share of 48 percent while the top quintile of EI had an even lower share of 46 percent.

Among the three measures, the share of the bottom quintile in 2000 was the highest in the LIMEW (5.5 percent), followed by EI (4.8) and MI (3.6). The share of the bottom quintile was about the same in 1959 as in 2000 for LIMEW, slightly higher for MI, and higher by 0.7 percentage points for EI. The share of the second quintile fell by about two percentage points for LIMEW and MI and by about one percentage point for EI. The share of the middle quintile was down by about 2.5 percentage points for LIMEW and MI and by about 1.5 percentage points for EI. The share of the fourth quintile fell by 2.1 percentage points for LIMEW, 1.2 percentage points for MI, and 0.6 percentage points for EI. Here, again, the most pronounced changes happened during the 1989-2000 period.

The rank order of the income measures according to top quintile shares are also reflected in their Gini coefficients (see Table 6). In 2000, the Gini coefficient for MI was

[11] We have examined the patterns of inequality using other indicators of inequality (e.g. the Atkinson index). However, since the patterns do not appear to be sensitive to the indicator employed, we prefer to use the most widely used indicator, i.e. the Gini.

the highest at 46.0, followed by those for LIMEW (42.4) and EI (40.8). Compared to the LIMEW and EI, MI overstates inequality because it is a pretax measure that does not take into account for government noncash transfers. Public consumption and household production are relatively less unequally distributed, and hence, their inclusion in the LIMEW also lowers the degree of LIMEW inequality relative to MI.

The official measures and the LIMEW indicate that the distribution of economic well-being was more unequal in 2000 than in 1959. The inequality in LIMEW showed a greater increase between the two years (6.2 Gini points) than in EI (1.7) and MI (5.7). According to all three measures, there was almost no change in inequality between 1959 and 1972. According to MI, almost all of the increase in inequality occurred from 1989 to 2000, In contrast, the LIMEW measure showed a 2.1 point increase from 1972 to 1982, then a 1.6 point decline from 1982 to 1989, and then a large spurt of 5.0 points from 1989 to 2000. In contrast, EI showed a sharp drop in inequality between 1972 and 1982, a small increase from 1982 to 1989, and then a large increase (3.9 points) from 1989 to 2000. The results for MI, it should be noted, are for *households*, not families, and the results for 1982, 1989, and 2000 line up fairly closely to the official CPS figures (at http://www.census.gov/hhes/www/income/histinc/h04.html).

We also show time trends for two other LIMEW measures, LIMEW-C and PFI. As we noted above, LIMEW-C is equal to LIMEW minus public consumption and household production. The Gini coefficient for LIMEW-C is about 5 to 6 points greater than that of LIMEW, reflecting the equalizing effects of both public consumption and household production. The inequality of LIMEW-C shows almost the same time trend as that of LIMEW. There is little change from 1959 to 1972, an increase from 1972 to 1982, a decline from 1982 to 1989, and then a surge from 1989 to 2000. Over the whole 1959 to 2000 period, the Gini coefficient for LIMEW-C increased by 7.0 points, compared to a 6.2 point increase for LIMEW.

The addition of public consumption to LIMEW–C results in PFI, which reflects the effect of net government expenditures. The addition of public consumption lowers measured inequality. However, the time trend for PFI is very similar to that for LIMEW and LIMEW-C. Over the entire period from 1959 to 2000, inequality of PFI increased by 6.1 Gini points.

Table 6 also shows equivalence scale adjusted measures of LIMEW, EI, and MI. Time trends are quite similar to those using unadjusted values of the corresponding measure. However, over the 1959-2000 period, the overall increase in inequality is smaller than the corresponding unadjusted measure (there was actually almost no increase in the Gini coefficient for equivalent EI). These results reflect the reduction in family size over the four decades.

Panel B of the table shows the same set of measures for family households only. Once again the time trends are very similar to those for all households. Moreover, once again, the overall increase in inequality is smaller using family households compared to all households. This difference reflects the growth of single individual households over the period and the fact that singles have lower incomes than families.

## 7. CONCLUSION

The picture of economic well-being is crucially dependent on the yardstick used to measure it. Although gross money income (MI), the most widely used official measure, may be suitable for certain purposes, it is an incomplete measure in several important ways. The elevation of more comprehensive measures to a status that is on par with MI in the official scorecard of the economic well-being of U.S. households is a sure indication that academic discussion and policy making will be increasingly informed by such measures.

The LIMEW is different in scope from the official measures. Our measure recognizes that economic well-being depends on public and self provisioning, in addition to the command over commodities. In contrast, the official measures are restricted to measuring the latter. Because we believe that these components are important, we have developed a set of estimates that reflect their effect and significance. The LIMEW differs from the official measures also in its methods, especially in our treatment of income from wealth and noncash transfers (see Table 1). These differences are more than formulae, since they are the result of alternative concepts of economic well-being [Wolff, Zacharias, and Caner, 2004, 7:9; Wolff and Zacharias, 2002].

The differences in scope and method may lead to different findings regarding economic well-being. We find that over the 1959 to 2000 period, median LIMEW grew slightly faster than median MI and slightly slower than median EI. However, the differences are not very large. The time pattern, on the other hand, is quite different. MI and EI showed more about double the growth of LIMEW from 1959 to 1972 but LIMEW grew faster than MI or EI from 1972 to 2000, particularly over the years 1982 to 1989.

It appears that the main factor behind the measured differences in the trend of economic well-being is the differences in the composition of the measures. While base income declined as a share of LIMEW from 1959 to 2000, particularly after 1972, income from wealth increased, particularly from 1989 to 2000. Government transfers first increased as a share of LIMEW from 1959 to 1982 and then declined a bit, while public consumption grew as a share from 1959 to 1972 and then fell off a bit. Taxes as a share of LIMEW showed a big increase from 1959 to 1972 and then a decline.

However, the compositional change differed between the top and bottom quintiles of the LIMEW. Between 1959 and 2000, households at the bottom became more reliant on base income (mainly consisting of labor income) and on net government expenditures. On the other hand, for those at the top, income from wealth almost doubled as a share of LIMEW over these years.

The LIMEW also provides a different picture of disparities among population subgroups. Racial disparities according to LIMEW first lessened from 1959 to 1989 but then increased between 1989 and 2001, while both EI and MI show a narrowing over the whole period. The worsening of the racial gap in the 1989-2000 period is traceable, mainly, to the considerable and growing disadvantage faced by nonwhites in wealth ownership. As for single females, the LIMEW and the official measures show a very high gap in well-being between them and married couples. Both sets of measures also show deterioration in the relative well-being of single females. However, the sources of disparity between the two groups in the LIMEW appear to be considerably different as it is shaped by the complex interaction of advantages and disadvantages in income from wealth, net government expenditures and household production. In contrast, the disparity between the groups in EI is largely a reflection of the gaps in their labor income.

The hump shape of the age-income relationship (i.e., the 35–64 age group is better off, while the youngest and oldest age groups are worse off, compared to the average) appears to hold for the official measures, but not for the LIMEW. The elderly were about 10 percent better off than the non-elderly (on the basis of mean values) in 2000 because of greater income from wealth owing to a greater amount of accumulated wealth and a shorter remaining life expectancy. Moreover, the LIMEW shows an almost continuous improvement in the relative well-being of the elderly, from 1959 to 2000. In contrast, EI shows an improvement from 1959 to 1982 and then a slippage from 1982 to 2000, while MI shows a slight worsening in the relatively well-being of the elderly over the whole period, though particularly from 1989 to 2000.

While all measures considered here indicate a growth in inequality over the years from 1959 to 2000, the LIMEW shows the largest increase. Time trends are also different. All three measures show little change in inequality from 1959 to 1972. LIMEW shows an increase from 1972 to 1982, a decline from 1982 to 1989, and then a surge from 1989 to 2000, reflecting the large increase in income from wealth which is highly concentrated at the top. EI shows a big drop in inequality from 1972 to 1982, a slight increase to 1989, and then a spurt from 1989 to 2000. In contrast, MI shows little change from 1972 to 1989 and then a large spike from 1989 to 2000.

## APPENDIX: SOURCES AND METHODS

### Introduction

The information required for constructing the LIMEW is not available in any single microdata file. At a very basic level, our empirical strategy in estimating the LIMEW can be described as starting with a large microdata file with income and demographic characteristics, and then adding on the supplementary information, either via statistical matching or other imputation techniques, to estimate the various components of the LIMEW. The key technique of statistical matching is described briefly in the next section (Section A1). Our empirical strategies involved in constructing the core synthetic file for 1959 and 1972 are sufficiently different from each other as well as for the later years to warrant separate descriptions (Sections A2 and A3). The subsequent section (Section A4) discusses the procedures followed for 1982, 1989, and 2000. Estimates of public consumption were derived in a relatively uniform fashion for all the years and hence it is discussed separately in the final section (Section A5) of the appendix. The wealth definitions and long-run rates of return used in the study are presented in the final section (Section A6). Due to limitations of space, our focus is on providing the crucial steps involved in constructing the estimates rather than on the minutiae.

### A1. Statistical matching

The microdata files are combined to create the core synthetic file using constrained statistical matching. The basic idea behind the technique is to transfer information from one survey (“donor file”) to another (“recipient file”). Such information is missing in the recipient file but necessary for research purposes. Each individual record in the recipient file is matched with a record in the donor file, where a match represents a similar record, based on the several common variables in the both files. The variables are hierarchically organized to create the matching cells for matching procedure. Some of these variables are considered as strata variables, i.e. categorical variables that we consider to be of the greatest importance in designing the match. For example, if we use sex and employment status as strata variables, this would mean that we would match only

individuals of the same sex and employment status. Within the strata, we use a number of variables of secondary importance as match variables.

The matching is performed on the basis of the estimated propensity scores derived from the strata and match variables. For every recipient in the recipient file, an observation in the donor file is matched with the same or nearest neighbor values of propensity scores. In this match, a penalty weight is assigned to the distance function according to the size and ranking of the coefficients of strata variables. The quality of match is evaluated by comparing the marginal and joint distributions of the variable of interest in the donor file and the statistically matched file.[12]

**A2. 1959**

Our basic file is the 1-in-100 national random sample of the population that consists of 579,000 household and 1,780,000 person records, drawn from the 1960 Census.[13] The file, abbreviated commonly as "IPUMS", contains detailed information on demographic characteristics (as of 1960) and money income (received during 1959). Additional information required to construct the core synthetic file was obtained from the following nationally representative surveys via statistical matching with the IPUMS: Consumer Expenditure Survey 1960-61 (CES) that consists of 13,745 consumer units;[14] Survey of Financial Characteristics of Consumers 1962 (SFCC) with a sample size of 2,557 households;[15] Individual Tax Model File 1960 (ITM) that contains a sample of 101,920 tax returns;[16] and two time-use surveys: Americans' Use of Time, 1965-1966 (sample size: 2,001 individuals) and Time Use in Economic and Social Accounts, 1975-

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[12] For a technical description and results of our matching algorithm, see Hyunsub Kum and Thomas Masterson, "Statistical matching using propensity scores: Theory and application to the Levy Institute Measure of Economic Well-Being", May 2008, Levy Economics Institute Working Paper No.535. Available at: http://www.levy.org/vdoc.aspx?docid=1065

[13] Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander. Integrated Public Use Microdata Series: Version 4.0 [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2008. http://usa.ipums.org/usa/

[14] U.S. Dept. of Labor, Bureau of Labor Statistics. CONSUMER EXPENDITURE SURVEY, 1960-1961 [Computer file]. ICPSR version. Washington, DC: U.S. Dept. of Labor, Bureau of Labor Statistics and U.S. Dept. of Agriculture [producers], 1980. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 1983. http://www.icpsr.umich.edu/

[15] Details on the survey can be found at: http://www.federalreserve.gov/pubs/oss/oss2/scfindex.html

[16] The general description of the file can be found at: http://www.nber.org/~taxsim/gdb/. We obtained the data from the National Archives: http://www.archives.gov/

1976 (sample size: 2,406 individuals).[17] The major steps involved in constructing the LIMEW by adding supplementary information are shown in Table A1.

**Table A1. Construction of LIMEW, 1959**

| Line No. | Component | Source |
|---|---|---|
| 1 | Earnings | IPUMS |
| 2 | Money income other than earnings | |
| 3 | Property income | Statistical matching of IPUMS and CES |
| 4 | Government cash transfers | |
| 5 | Other money income | |
| 6 | Money income (MI): Sum of Lines 1 and 2 | IPUMS |
| 7 | *Less*: Property income (Line 3) and Government cash transfers (Line 4) | |
| 8 | *Equals*: Base money income | |
| 9 | *Plus*: Income from wealth | Statistical matching of IPUMS and SFCC |
| 10 | Annuity from nonhome wealth | |
| 11 | Imputed rent on owner-occupied housing | |
| 12 | *Less*: Taxes | |
| 13 | Income taxes | Statistical matching of IPUMS and ITM; *IncTaxCalc* program; and, NIPA |
| 14 | Payroll taxes | |
| 15 | Property taxes | Statistical matching of IPUMS and SFCC (for home values); and, NIPA (for taxes) |
| 16 | *Plus*: Cash transfers | Same as Line 4 above; and, NIPA for relevant aggregates |
| 17 | *Plus*: Noncash transfers | IPUMS; Statistical matching of IPUMS and CES 1960-61; Administrative data; and NIPA (for amounts) |
| 18 | *Plus*: Public consumption | IPUMS and others (see section A.4) |
| 19 | *Plus*: Household production | Statistical matching of IPUMS and Time-use surveys of 1965and 1975 |
| 20 | *Equals*: LIMEW | |

Each of the steps described in the table are discussed briefly below:

[17] We used the version of the 1965 file compiled by American Heritage Time Use Study, release 1 (May 2006). Created at the Centre for Time Use Research, United Kingdom, by Kimberly Fisher, Muriel Egerton and Jonathan Gershuny, with Nuno Torres and Andreas Pollmann, and contributions from Anne H. Gauthier and John Robinson. Created for Yale University with initial funding from the Glaser Progress Foundation and supplementary funding from the ESRC (http://www.timeuse.org/ahtus/). We created the 1975 file by combining the AHTUS and the original study files. The original study is Juster, F. Thomas, Paul Courant, Greg J. Duncan, John P. Robinson, and Frank P. Stafford. TIME USE IN ECONOMIC AND SOCIAL ACCOUNTS, 1975-1976 [Computer file]. ICPSR version. Ann Arbor, MI: Survey Research Center [producer], 1978. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2001.

***Lines 3 through 5***: Statistical matching with CES was performed to determine the proportions in which money income other than earnings (Line 2) was distributed among its three components (Lines 3 through 5) for each household in the IPUMS with a nonzero amount for money income other than earnings. The proportions, imputed from the statistical matching, were utilized to calculate the dollar amount of income from each source.

***Lines 9 through 11***: Statistical matching with SFCC was conducted to obtain the amounts of assets and liabilities for each household in the IPUMS. Values of assets (other than homes) and liabilities were "aged" back from their 1962 to 1959 levels by deflating each asset and liability with their respective rate of return. Home values were deflated to the 1959 levels by the percent change in the median home price between 1959 and 1962. Lifetime annuities (including annutized payments on debts) were calculated based on the demographic information available in the IPUMS (age, sex, and, race of the head and spouse of wealth holding families), life expectancy tables for 1959 (differentiated by age, sex and race—obtained from the *Statistical Abstract* 1962), and long-term rates of return by asset type. The aggregate amount of imputed rent on owner-occupied housing for 1959 (reported in the national accounts, NIPA Table 7.12, Line 209) was distributed among households according to the gross value of homes.

***Lines 12 through 15***: Statistical matching with ITM was conducted to obtain the amounts of capital gains, capital losses, and deductions for each potential tax unit in the IPUMS. This information was utilized in conjunction with other relevant information in the synthetic file (including information derived from the statistical matches with the CES and SFCC) to construct the variables necessary for determining income and payroll tax payments. The actual amounts of taxes were calculated using the *IncTaxCalc* program (developed by Jon Bakija at Williams College), which incorporates detailed information regarding the tax regime in 1959 with respect to federal and state income taxes. Income and payroll taxes were aligned with their respective national accounts aggregates. The NIPA amount of property taxes on owner-occupied homes in each state was distributed among homeowners according to the gross value of homes.

***Lines 16 through 17***: The statistical match with CES allowed us to determine four cash transfers: Social Security, unemployment compensation, veterans' benefits, and

public assistance. They comprised 94 percent of all government transfers in 1959, as reported in the national accounts (NIPA table 3.12 "Government social benefits."). Additional imputations were done for some noncash transfers (e.g. medical assistance) reported in the national accounts, based on household/individual characteristics in the IPUMS, and a variety of administrative sources.

***Line 18***: See section A.5.

***Line 19***: The 1965 time-use Survey included only the nonelderly, urban adult (age 19+) population living in households in which at least one adult was employed. For individuals in the IPUMS within the same universe, a statistical match was conducted with the time-use survey to impute weekly hours of household production. For the elderly and the non-urban population (as well as individuals in urban households in which no adult was employed), an unconstrained statistical match was performed with the 1975-76 time-use survey to impute weekly hours of household production. We calculated the hourly wage rate for private household workers by pooling together the 1962, 1963 and 1964 files of the March CPS and deflating the wage rate to the 1959 level. Two variables required for constructing the performance index (educational attainment, and household income) were available directly in the IPUMS. The final variable, time availability, was constructed by utilizing the information regarding hours and weeks worked in the IPUMS and some supplementary information from the1962, 1963 and 1964 files of the March CPS.

**A3. 1974**

Our basic datafile is a special version of the 1973 March CPS file that was assembled by the Social Security Administration. This file contains, in addition to the variables in the standard file, information on tenure (own or rent home), income amounts reported on the tax returns, type of tax return filed, number of exemptions, etc. The sample consists of 44,899 household and 135,893 person records.[18] The file, abbreviated

[18]Social Security Administration. CURRENT POPULATION SURVEY, 1973, AND SOCIAL SECURITY RECORDS: EXACT MATCH DATA [Computer file]. ICPSR version. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census and Social Security Administration, Long-Range Research Branch [producer], 197?. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2001.

as “CPS” below, contains detailed information on demographic characteristics (as of 1973) and money income (received during 1972). Additional information required to construct the core synthetic file was obtained from the following nationally representative surveys via statistical matching with the CPS: Consumer Expenditure Survey 1972-73 (CES) that consists of 19,975 consumer units;[19] Augmented Individual Income Tax Model File 1972 (AIITM) that contains a sample of 106,581 tax returns;[20] and the time-use survey, Time Use in Economic and Social Accounts, 1975-1976 (sample size: 2,406 individuals).[21] The major steps involved in constructing the LIMEW by adding supplementary information are shown in Table A2.

[19] U.S. Dept. of Labor, Bureau of Labor Statistics. CONSUMER EXPENDITURE SURVEY, 1972-1973 [Computer file]. Washington, DC: U.S. Dept. of Labor, Bureau of Labor Statistics (BLS). We purchased the computer file from the BLS.

[20] Social Security Administration. AUGMENTED INDIVIDUAL INCOME TAX MODEL EXACT MATCH FILE, 1972 [Computer file]. Washington, DC: U.S. Dept. of Health, Education, and Welfare, Social Security Administration [producer], 1972. We obtained the data from the National Archives: http://www.archives.gov/

[21] We created the 1975 file by combining the AHTUS and the original study files. The original study is Juster, F. Thomas, Paul Courant, Greg J. Duncan, John P. Robinson, and Frank P. Stafford. TIME USE IN ECONOMIC AND SOCIAL ACCOUNTS, 1975-1976 [Computer file]. ICPSR version. Ann Arbor, MI: Survey Research Center [producer], 1978. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2001.

**Table A2. Construction of LIMEW, 1972**

| Line No | Component | Source |
|---|---|---|
| 1 | Earnings | CPS |
| 2 | Money income other than earnings | |
| 3 | Property income | |
| 4 | Government cash transfers | |
| 5 | Other money income | |
| 6 | Money income (MI): Sum of Lines 1 and 2 | |
| 7 | *Less*: Property income (Line 3) and Government cash transfers (Line 4) | |
| 8 | *Equals*: Base money income | |
| 9 | *Plus*: Income from wealth | Statistical matching of CPS with AIITM and CES |
| 10 | Annuity from nonhome wealth | |
| 11 | Imputed rent on owner-occupied housing | |
| 12 | *Less*: Taxes | |
| 13 | Income taxes | Statistical matching of CPS and AIITM; *IncTaxCalc* program; and, NIPA |
| 14 | Payroll taxes | |
| 15 | Property taxes | Statistical matching of IPUMS and SFCC (for home values); and, NIPA (for taxes) |
| 16 | *Plus*: Cash transfers | Same as Line 4 above; and, NIPA for relevant aggregates |
| 17 | *Plus*: Noncash transfers | Administrative data; NIPA (for amounts); and, statistical matching of CPS and CES |
| 18 | *Plus*: Public consumption | CPS and others (see section A.4) |
| 19 | *Plus*: Household production | Statistical matching of CPS and Time-use survey of 1975 |
| 20 | *Equals*: LIMEW | |

Each of the steps described in the table are discussed briefly below:

***Lines 9 through 11***: The major problem in estimating LIMEW for 1972 was the absence of a survey of household wealth. Amounts of principal nonhome assets were estimated from a statistical match with AIITM. Home values and the outstanding amounts of mortgage and consumer debt were estimated from a statistical match with the CES.

Statistical matching with AIITM was conducted to calculate the amounts of nonhome assets. The match allowed us to determine the dividends, interest and business-type income or loss for each potential tax-filing unit in the CPS. Benchmark aggregate amounts for assets yielding such incomes were constructed from the Flow of Funds (Table B.100) and distributed among households according to the distributions of incomes. The benchmarks for stocks and interest-bearing assets (government and corporate bonds, savings accounts etc.) were obtained by multiplying the aggregates

reported in the balance sheet of households with their estimated percentage shortfall with respect to the Flow of Funds aggregates in 1983.[22] This step was taken to ensure comparability of levels with the other years. Corporate stock was distributed according to dividends; interest-bearing assets were distributed according to interest income; and, equity in unincorporated business was distributed according to the absolute value of business income and loss. The three assets together accounted for 78% of all financial assets reported in the national balance sheet; the percentage rises to 82%, if we were to exclude from the national balance sheet the non-cash surrender value of life insurance and pension reserves.[23]

Statistical matching with the CES file provided an initial estimate of the distribution of home values. The final estimate was obtained by adjusting the home values reported in 1973 by a set of deflation factors that reflects the change in median home values between 1972 and 1973 by region and location (a combination of urban/rural status and population). The match also yielded estimates of mortgage interest and principal payments. We imputed the number of payments made by each household with current mortgage payments via a statistical match with the 1970 IPUMS, which contained a variable that indicates how many years ago the household moved into the present housing unit. The length of mortgage was assumed to be 30 years. We also assumed that the contract interest rate for a mortgage-holding household was the same as the average national mortgage interest rate in the year in which they moved into their house. Given the length of mortgage, number of mortgage payments, current total mortgage payment (sum of interest and principal payments), and the interest rate, we could calculate the outstanding mortgage balance using the standard amortization formula. Finally, total consumer debt held by the household sector, as reported in the Flow of Funds (Table B.100), was distributed among households according to the non-

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[22] The other items of the household balance sheet estimated here are known to diverge from their national balance sheet aggregates only in a trivial manner (e.g. homes) or due to inherent differences in concept (e.g. business equity). See Edward N. Wolff, "Estimates of Household Wealth Inequality in the U.S., 1962-1983" *Review of Income and Wealth*, Vol.33, Issue 3, pp.231-256.

[23] The latter comparison is perhaps more relevant in our context because wealth definitions for the other years includes the cash surrender value of (defined-contribution) pensions and life insurance.

mortgage interest payments. The latter was also obtained from the statistical match with the CES.

Lifetime annuities (including annutized payments on debts) were calculated based on the demographic information available in the CPS (age, sex, and, race of the head and spouse of wealth holding families), life expectancy tables for 1972 (differentiated by age, sex and race—obtained from the *Statistical Abstract* 1974), and long-term rates of return by asset type. The aggregate amount of imputed rent on owner-occupied housing for 1972 (reported in the national accounts, NIPA Table 7.12, Line 209) was distributed among households according to the gross value of homes.

***Lines 12 through 15***: Statistical matches with the CES and AIITM described above also provided information for the estimation of tax payments. Deductions for each potential tax unit in the CPS (property taxes, mortgage interest payment, medical expenditures, etc) were obtained from the statistical match with the CES. This information in conjunction with information available in the CPS was utilized to conduct a statistical match with AIITM to obtain the amounts of capital gains and capital losses. The variables obtained from the statistical matches were utilized in conjunction with other relevant information in the synthetic file to construct the variables necessary for determining income and payroll tax payments. The actual amounts of taxes were calculated using the *IncTaxCalc* program (developed by Jon Bakija at Williams College), which incorporates detailed information regarding the tax regime in 1972 with respect to federal and state income taxes. Income and payroll taxes were aligned with their respective national accounts aggregates. Property taxes on owner-occupied homes obtained from the statistical match with CES were aligned to the NIPA total.

***Lines 16 through 17***: Government cash transfers received under Social Security, unemployment compensation, veterans' benefits, public assistance, and workers compensation are identified in the CPS. We aligned them with their appropriate NIPA benchmarks. These cash transfers comprised 72 percent of all government transfers in 1972, as reported in the national accounts (NIPA table 3.12 "Government social benefits."). The statistical match with CES allowed us to determine the value of food stamps received by households. Additional imputations were done for some noncash transfers (most importantly Medicare and Medicaid) reported in the national accounts,

based on household/individual characteristics in the CPS, and a variety of administrative sources.

***Line 18***: See section A.4.

***Line 19***: Hours of household production were obtained via a statistical match with the 1975-76 time-use survey.[24] We calculated the hourly wage rate for private household workers from the 1971 May Current Population Survey because it included a special module on this occupational group. The hourly wage rate was "aged" forward to 1972 by using the percent change between 1971 and 1972 in the hourly wage of private household workers. Two variables required for constructing the performance index (educational attainment, and household income) were available directly in the CPS. The final variable, time availability, was constructed by utilizing the information regarding hours and weeks worked in the CPS.

**A4. 1982, 1989, and 2000**

Our main data source is the public-use data files developed by the U.S. Bureau of the Census from the Current Population Survey's Annual Demographic Supplement (ADS), which is the most comprehensive source of annual information regarding a number of key demographic characteristics (as of the survey year), household income, and receipt of noncash transfers (as of the previous year). The number of households was 59,026 in 1983, 59,941 in 1990 and 78,000 in 2001. Additional information required to construct the core synthetic file was obtained from the following nationally representative surveys via statistical matching with the ADS: the 1983, 1989 and 2001 rounds of the Survey of Consumer Finances (SCF) that contains detailed information on household wealth;[25] and, the Americans' Use of Time Project (AUTP) conducted in 1985, and American Time Use Survey (ATUS) conducted in 2003.[26] The major steps involved in constructing the LIMEW by adding supplementary information are shown in Table A3.

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[24] See note 21 above for the details regarding the survey.
[25]The 1983, 1989 and 2001 rounds of the SCF had, respectively, sample sizes of 4,262, 3,143 and 4,442 households.
[26] The AUTP and ATUS had, respectively, sample sizes of 5,358 and 20,000 individuals.

**Table A3. Construction of LIMEW: 1982, 1989 and 2000**

| Line No | Component | Source |
|---|---|---|
| 1 | Earnings | ADS |
| 2 | Money income other than earnings | |
| 3 | Property income | |
| 4 | Government cash transfers | |
| 5 | Other money income | |
| 6 | Money income (MI): Sum of Lines 1 and 2 | |
| 7 | *Less*: Property income (Line 3) and Government cash transfers (Line 4) | |
| 8 | *Equals*: Base money income | |
| 9 | *Plus*: Income from wealth | Statistical matching of ADS with SCF |
| 10 | Annuity from nonhome wealth | |
| 11 | Imputed rent on owner-occupied housing | |
| 12 | *Less*: Taxes | |
| 13 | Income taxes | ADS and NIPA |
| 14 | Payroll taxes | |
| 15 | Property taxes | |
| 16 | *Plus*: Cash transfers | Same as Line 4 above; and, NIPA for relevant aggregates |
| 17 | *Plus*: Noncash transfers | ADS, administrative data and NIPA |
| 18 | *Plus*: Public consumption | ADS and others (see section A.4) |
| 19 | *Plus*: Household production | Statistical matching of ADS and Time-use surveys |
| 20 | *Equals*: LIMEW | |

Each of the steps described in the table are discussed briefly below:

***Lines 9 through 11***: Statistical matching with SCF was conducted to obtain the amounts of assets and liabilities for each household in the IPUMS. Values of assets (other than homes) and liabilities were "aged" back from their 1983 to 1982 levels and 2001 to 2000 levels by deflating each asset and liability with their respective rate of return. Home values were deflated to the 1982 and 2000 levels by the percent change in the national median home price between the survey and previous year. Lifetime annuities (including annutized payments on debts) were calculated based on the demographic information available in the ADS (age, sex, and, race of the head and spouse of wealth holding families), life expectancy tables (differentiated by age, sex and race—obtained from the *Statistical Abstract*, various years), and long-term rates of return by asset type. The aggregate amount of imputed rent on owner-occupied housing (reported in the national accounts, NIPA Table 7.12, Line 209) was distributed among households according to the gross value of homes.

***Lines 12 through 15***: All taxes have imputed values in the ADS and were aligned with their NIPA counterparts by distributing for each tax the discrepancy between the NIPA and ADS aggregate among households according to the share of each household in the ADS aggregate.

***Lines 16 through 17***: Transfers for which actual or imputed amounts are reported in the ADS are aggregated across recipients and compared against the benchmarks. Any discrepancy between the ADS total and the NIPA benchmark for a given transfer payment is distributed across recipients according to the distribution of that payment in the ADS. Transfers that are recorded in the ADS have NIPA amounts that make up roughly 90 percent of all transfers reported in the NIPA Table 3.12 "Government social benefits." Additional imputations were carried out for some noncash transfers (e.g. the nutritional program known as WIC, payments to nonprofit organizations providing social benefits to households, etc.) reported in the national accounts, based on household/individual characteristics in the CPS, and a variety of administrative sources.

***Line 18***: See section A.5.

***Line 19***: Hours of household production were obtained via a statistical match with the time-use surveys. The AUTP was used for both 1982 and 1989; and, the ATUS was used for 2000. We calculated the hourly wage rate for private household workers from the annual file that was created by merging the Current Population Survey's monthly outgoing rotations files. The wage rate was defined as usual weekly earnings divided by usual weekly hours of work. The variables required for constructing the performance index (educational attainment, time availability, and household income) were available directly in the ADS.

### A5. Public consumption

Estimates of public consumption by households were constructed in three steps: (1) obtaining total expenditures by function and level of government; (2) allocating total expenditures between the household sector and other sectors of the economy; and (3) distributing expenditures allocated to the household sector among households.

***Expenditure by Function and Level of Government.*** The expenditure category used here is government consumption expenditures and gross investment (the same as

that on the product side of the NIPA). To group expenditures according to purpose, we adopted the functional classification in NIPA with minor modifications.

We distributed the NIPA aggregate of state and local expenditures for each function among the states using the interstate distribution of these expenditures in the Annual Survey of Government Finances (ASGF) or the Census of Governments conducted by the U.S. Bureau of the Census. Care was taken to ensure that the expenditure concept and the groupings of the functions in the Census Bureau data conform as closely as possible to the NIPA expenditure and function concepts.

***Allocation of Expenditures to the Household Sector.*** We started by constructing a schema of detailed functions by level of government (federal versus state and local).[27] Then, we grouped these functions into three categories. The first involved activities that do not expand the potential amenities available to the household sector. General public service, national defense, law courts and prisons are prominent examples. The second category included functions that are assumed to expand amenities directly only to the household sector, such as income security and recreation and culture.

The third category consisted of functions that can potentially serve both the household and nonhousehold sectors, such as economic affairs and housing and community services. Costs incurred in the performance of these functions are allocated to the household sector in accordance with the extent that they are "responsible" in generating such costs. Our judgment regarding the extent of responsibility is based on the available empirical information, as much as possible. A prominent example of this type of function is highways (included under economic affairs), where approximately 60 percent of expenditures were estimated to occur on behalf of households.

***Distribution of Allocated Expenditures among Households.*** After determining government expenditures allocated to the household sector (i.e., "public consumption") by function, we distributed them among households. We attempted to follow the same principles of direct usage and cost responsibility that were employed in splitting total government expenditures between the household and nonhousehold sectors. Two major

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[27] The detailed functional schema is outlined in Edward N. Wolff and Ajit Zacharias, "The Distributional Consequences of Government Spending and Taxation in the U.S., 1989 and 2000," *Review of Income and Wealth,* Vol. 53, No. 4, December 2007, pp. 692-715.

categories of public consumption are distributed among households: those distributed equally across persons (such as public health and hospitals, police and fire) and those distributed according to household-level, or person-level, characteristics (such as elementary and secondary education, highways).

The second group of expenditures account for the bulk of public consumption (nearly three-quarters). The person-level or household-level characteristics used in the distribution procedures, and their corresponding functions, are listed below:

- *Amount and type of income*: agriculture.

- *Type of income received (including receipt of noncash transfers)*: public housing, administrative costs of Medicare, disability, retirement income (Social Security), welfare and social services, and unemployment compensation.

- *Shares in consumption expenditures*: energy, pollution control and abatement, postal service, liquor stores, water supply, sewerage and sanitation.

- *Enrollment in public educational institutions*: education.

- *Patterns of vehicle ownership and transportation usage*: transportation and parking.

- *Employment status*: occupational safety and health.

Information on the type and amount of income, as well as the employment status of individuals, is obtained directly from the primary data file such as the IPUMS or ADS. All other characteristics were imputed to individuals or households in the primary sample from information gathered from external sources.

### A6. Wealth and rates of return

***1952, 1982, 1989 and 2000***

We divide net worth into two components. The first is the gross value of owner-occupied housing and its corresponding liability, mortgage debt on owner-occupied housing. The remainder, “nonhome wealth” equals the sum of (1) other real estate owned by the household and net equity in unincorporated businesses; (2) cash and demand deposits, time and savings deposits, certificates of deposit, money market accounts and the cash surrender value of life insurance plans; (3) government bonds, corporate bonds, foreign bonds, and other financial securities, corporate stock and mutual funds, equity in

trust funds; and (4) the cash surrender value of defined-contribution pension plans, including IRAs, Keogh, and 401(k) plans; less other (nonhome) debt such as auto and credit card loans.

The total real rate of return of each non-home wealth component is the average of annual rates over a relatively long period of time, varying from 14 to 40 years, depending on the asset (see Table A4). The total rates of return data we use are inclusive of both the capital gains and the income generated by the assets. The average rates of return by asset type were estimated from the data on asset holdings published by the Federal Reserve in the Flow of Funds Accounts for the United States and financial market information included in the 2005 Economic Report of the President.[28]

**Table A4. Long-term average rates of return (in percent)**

| | Nominal | Real | Period |
|---|---|---|---|
| Real estate and business | 6.95 | 2.56 | 1960-2004 |
| Liquid assets | 5.56 | 0.86 | 1965-2004 |
| Financial assets | 7.48 | 3.06 | 1960-2004 |
| Pension assets | 6.76 | 3.64 | 1986-2004 |
| Mortgage debt | 0.00 | -4.28 | 1960-2004 |
| Other debt | 0.00 | -4.28 | 1960-2004 |
| *Inflation rate (CPI-U)* | 4.28 | | |

Notes:

*Real rate of return = (1+Nominal rate)/(1+Inflation rate)-1*

*Real estate and business*: Holding gains (taken from the Flow of Funds table R.100) divided by equity in noncorporate business (taken from the Flow of Funds table B.100).

*Liquid assets*: The weighted average of the rates of return on checking deposits and cash, time and saving deposits, and life insurance reserves. The weights are the proportion of these assets in their combined total (calculated from the Flow of Funds table B.100). The assumptions regarding the rates of return are: zero for checking deposits, the rate of return on a 1-month CD (taken from the table "H.15 Selected Interest Rates" published by the Federal Reserve and available at: http://www.federalreserve.gov/releases/h15/data.htm) for time and saving deposits, and, one plus the inflation rate for life insurance reserves.

*Financial assets*: The weighted average of the rates of return on open market paper, Treasury securities, municipal securities, corporate and foreign bonds, corporate equities and mutual fund shares. The weights are the proportion of these assets in total financial assets held by the household sector (calculated from the Flow of Funds table B.100). The assumption regarding the rate of return on open market paper is that it equals

[28] The Flow of Funds data are available at: http://www.federalreserve.gov/releases/z1/Current/ and the 2005 Economic Report of the President is available at: http://www.gpoaccess.gov/eop/. Details on the data taken from the Flow of Funds, including series identifiers are available from the authors upon request.

the rate of return on 1-month Finance paper (taken from the table "H.15 Selected Interest Rates" published by the Federal Reserve and available at: http://www.federalreserve.gov/releases/h15/data.htm). The data for the rates of return on other assets are taken from the Economic Report of the President 2005, Table B.73. The assumptions regarding Treasury securities, municipal securities, corporate and foreign bonds, and corporate equities are, respectively, average of Treasury security yields, high-grade municipal bond yield, average of corporate bond yields, and annual percent change in the S&P 500 index. Mutual fund shares are assumed to earn a rate of return equal to the weighted average of the rates of return on open market paper, Treasury securities, municipal securities, corporate and foreign bonds and corporate equities. The weights are the proportions of these assets in the total financial assets of mutual funds (calculated from the Flow of Funds table L.123).

*Pension assets*: Net acquisition of financial assets (taken from the Flow of Funds table F.119c) divided by total financial assets of private defined-contribution plans (taken from the Flow of Funds table L.119c).

*Inflation rate*: Calculated from the CPI-U published by Bureau of Labor Statistics.

***1972***

The nonhome wealth definition used in 1972 was different from that used in the other years because there was no survey on household wealth for that year. The nonhome wealth for 1972 was calculated as the sum of (1) equity in real estate (other than owner-occupied homes) and unincorporated businesses; (2) interest-bearing assets that consists of time and savings deposits, certificates of deposit, money market accounts, government bonds, corporate bonds, foreign bonds, and other financial securities;[29] and (3), corporate stock; less consumer debt.

Given the difference in the wealth definition, the rates of return used in the 1972 annuity calculation also had to be different for interest-bearing assets and stocks. These were calculated using the same sources of data and methodology described above, with the requisite modifications. The resulting long-run real rates of return for interest-bearing assets and stocks were, respectively, 2.04 and 3.24 percent.

[29] The individual components of interest-bearing assets could not be estimated separately.

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**Table 1: A Comparison of the LIMEW and Extended Income (EI)**

| LIMEW | EI |
|---|---|
| Money income (MI) | Money income (MI) |
| *Less*: Property income and Government cash transfers | *Less*: Property income and Government cash transfers |
| *Equals:* Base money income | *Equals:* Base money income |
| *Plus*: Income from wealth | *Plus*: Income from wealth |
| Annuity from nonhome wealth | Property income and realized capital gains (losses) |
| Imputed rent on owner-occupied housing | Imputed return on home equity |
| *Less*: Taxes | *Less*: Taxes |
| Income taxes [1] | Income taxes |
| Payroll taxes [1] | Payroll taxes |
| Property taxes [1] | Property taxes |
| *Plus*: Cash transfers [1] | *Plus*: Cash transfers |
| *Plus*: Noncash transfers [1, 2] | *Plus*: Noncash transfers |
| *Plus*: Public consumption | |
| *Plus*: Household production | |
| *Equals*: LIMEW | *Equals*: EI |

*Note*: (1) Aligned with the NIPA estimates. (2) The government-cost approach is used: the Census Bureau uses the fungible value method for valuing Medicare and Medicaid in EI. The main difference between the two methods is that, while the fungible value method assigns an income value for a benefit according to the recipient's level of income, the government-cost approach assigns an income value for a benefit irrespective of the recipient's income. In 1959, neither the Medicare nor Medicaid program existed. However, there were means-tested medical assistance programs in a large number of states. The imputed value of medical assistance received by households was valued at government cost in the LIMEW and the same value was also used in the EI estimate for 1959.

**Table 2 Economic Well-Being and Work, 1959 to 2000**

| | Median Values in 2007 Dollars | | | | |
|---|---|---|---|---|---|
| | 1959 | 1972 | 1982 | 1989 | 2000 |
| **Levy measures** | | | | | |
| LIMEW | 57,716 | 62,834 | 61,175 | 74,398 | 82,244 |
| PFI[1] | 41,104 | 47,159 | 47,902 | 55,803 | 62,171 |
| LIMEW-C[2] | 35,706 | 38,969 | 40,279 | 46,814 | 51,542 |
| **Official measures** | | | | | |
| Extended income (EI) | 33,753 | 39,861 | 43,935 | 47,560 | 51,320 |
| Money income (MI) | 37,051 | 44,395 | 43,003 | 48,364 | 50,571 |
| *Addendum A: Annual hours of work (median values)* | | | | | |
| Market work | 2,150 | 2,105 | 2,080 | 2,236 | 2,340 |
| Housework | 2,617 | 2,065 | 2,155 | 2,103 | 2,063 |
| Total | 5,084 | 4,600 | 4,501 | 4,718 | 4,749 |
| *Addendum B: Equivalence scale adjustment* | | | | | |
| Equivalent LIMEW | 64,790 | 76,685 | 78,601 | 98,068 | 109,056 |
| Equivalent EI | 37,986 | 49,046 | 57,708 | 64,241 | 70,278 |
| Equivalent MI | 41,361 | 53,508 | 55,632 | 64,604 | 68,747 |
| | **Annual Percentage Change** | | | | |
| | 1959-1972 | 1972-82 | 1982-1989 | 1989-2000 | 1959-2000 |
| **Levy measures** | | | | | |
| LIMEW | 0.66 | -0.27 | 2.83 | 0.92 | 0.87 |
| PFI | 1.06 | 0.16 | 2.21 | 0.99 | 1.01 |
| LIMEW-C | 0.67 | 0.33 | 2.17 | 0.88 | 0.90 |
| **Official measures** | | | | | |
| Extended income (EI) | 1.29 | 0.98 | 1.14 | 0.69 | 1.03 |
| Money income (MI) | 1.40 | -0.32 | 1.69 | 0.41 | 0.76 |
| *Addendum A: Annual hours of work* | | | | | |
| Market work | -0.16 | -0.12 | 1.04 | 0.41 | 0.21 |
| Housework | -1.80 | 0.43 | -0.35 | -0.18 | -0.58 |
| Total | -0.77 | -0.22 | 0.67 | 0.06 | -0.17 |
| *Addendum B: Equivalence scale adjustment* | | | | | |
| Equivalent LIMEW | 1.30 | 0.25 | 3.21 | 0.97 | 1.28 |
| Equivalent EI | 1.99 | 1.64 | 1.54 | 0.82 | 1.51 |
| Equivalent MI | 2.00 | 0.39 | 2.16 | 0.57 | 1.25 |

1. PFI equals LIMEW less the value of household production.
2. LIMEW-C equals LIMEW less the value of household production and public consumption.

**Table 3 Composition of LIMEW by Quintile, 1959, 1982, 1989, and 2000 (in percent)**

| Quintiles | Mean LIMEW (in 2007$) | Total | Base income | Income from wealth | Net government expenditures | Household production |
|---|---|---|---|---|---|---|
| | | | | **1959** | | |
| Lowest | 18,491 | 100 | 46.6 | 11.2 | 12.7 | 29.4 |
| Second | 39,745 | 100 | 57.0 | 8.2 | 8.5 | 26.3 |
| Third | 57,710 | 100 | 62.3 | 6.8 | 3.7 | 27.2 |
| Fourth | 76,577 | 100 | 63.0 | 7.8 | 1.5 | 27.7 |
| Highest | 138,289 | 100 | 58.2 | 18.9 | -1.9 | 24.8 |
| All | 66,163 | 100 | 59.2 | 12.5 | 1.9 | 26.4 |
| | | | | **1972** | | |
| Lowest | 21,304 | 100 | 50.2 | 9.5 | 17.1 | 23.2 |
| Second | 43,191 | 100 | 57.0 | 9.0 | 11.3 | 22.7 |
| Third | 63,091 | 100 | 64.6 | 9.2 | 2.7 | 23.6 |
| Fourth | 87,470 | 100 | 66.0 | 10.0 | -1.3 | 25.2 |
| Highest | 159,162 | 100 | 57.1 | 24.5 | -5.4 | 23.9 |
| All | 74,844 | 100 | 60.1 | 15.9 | 0.1 | 24.0 |
| | | | | **1982** | | |
| Lowest | 21,228 | 100 | 56.4 | 10.1 | 11.1 | 22.4 |
| Second | 42,150 | 100 | 55.8 | 8.4 | 15.9 | 20.0 |
| Third | 61,365 | 100 | 60.2 | 8.5 | 10.4 | 21.0 |
| Fourth | 86,113 | 100 | 63.9 | 10.0 | 4.2 | 21.9 |
| Highest | 169,948 | 100 | 52.9 | 30.0 | -1.8 | 18.9 |
| All | 76,161 | 100 | 57.1 | 18.5 | 4.2 | 20.3 |
| | | | | **1989** | | |
| Lowest | 28,347 | 100 | 51.0 | 6.7 | 21.6 | 20.7 |
| Second | 52,041 | 100 | 54.3 | 7.5 | 15.8 | 22.3 |
| Third | 74,602 | 100 | 57.6 | 8.1 | 10.1 | 24.2 |
| Fourth | 103,098 | 100 | 60.7 | 10.1 | 4.0 | 25.2 |
| Highest | 200,043 | 100 | 52.8 | 31.0 | -5.7 | 21.9 |
| All | 91,626 | 100 | 55.4 | 18.4 | 3.2 | 23.0 |
| | | | | **2000** | | |
| Lowest | 30,605 | 100 | 56.1 | 6.5 | 17.9 | 19.5 |
| Second | 56,802 | 100 | 56.9 | 7.6 | 13.8 | 21.8 |
| Third | 82,566 | 100 | 57.8 | 8.6 | 10.0 | 23.5 |
| Fourth | 116,592 | 100 | 58.3 | 11.7 | 5.1 | 24.9 |
| Highest | 267,662 | 100 | 50.1 | 37.7 | -7.0 | 19.2 |
| All | 110,845 | 100 | 54.0 | 23.1 | 1.6 | 21.3 |

**Table 4 Economic Well-Being by Measure and Selected Household Characteristics, 1959-2000**
**Ratio of Dollar values in thousands of 2007 dollars**

| | Ratios of Mean values | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1959 | | | 1972 | | | 1982 | | | 1989 | | | 2000 | | |
| **Characteristic** | LIMEW | EI | MI | LIMEW | EI | MI | LIMEW | EI | MI | LIMEW | EI | MI | LIMEW | EI | MI |
| **A. Race/Ethnicity** | | | | | | | | | | | | | | | |
| White | 1.04 | 1.04 | 1.04 | 1.04 | 1.05 | 1.05 | 1.03 | 1.04 | 1.04 | 1.04 | 1.05 | 1.06 | 1.07 | 1.06 | 1.07 |
| Nonwhite | 0.67 | 0.62 | 0.60 | 0.78 | 0.76 | 0.75 | 0.78 | 0.75 | 0.72 | 0.83 | 0.79 | 0.76 | 0.79 | 0.81 | 0.80 |
| **B. Age** | | | | | | | | | | | | | | | |
| Less than 65 years | 1.04 | 1.06 | 1.08 | 1.03 | 1.07 | 1.11 | 1.01 | 1.04 | 1.09 | 1.00 | 1.05 | 1.10 | 0.98 | 1.06 | 1.10 |
| Less than 35 years | 0.91 | 0.91 | 0.93 | 0.87 | 0.93 | 0.96 | 0.77 | 0.83 | 0.90 | 0.80 | 0.83 | 0.87 | 0.76 | 0.84 | 0.87 |
| 35-45 years | 1.15 | 1.14 | 1.17 | 1.20 | 1.19 | 1.23 | 1.12 | 1.12 | 1.21 | 1.12 | 1.13 | 1.20 | 1.06 | 1.12 | 1.18 |
| 45-55 years | 1.12 | 1.16 | 1.18 | 1.18 | 1.23 | 1.27 | 1.26 | 1.28 | 1.31 | 1.21 | 1.29 | 1.34 | 1.14 | 1.24 | 1.31 |
| 55-64 years | 0.96 | 1.02 | 1.03 | 0.97 | 1.01 | 1.03 | 1.07 | 1.13 | 1.12 | 1.01 | 1.10 | 1.10 | 0.98 | 1.07 | 1.07 |
| 65 or older | 0.83 | 0.73 | 0.63 | 0.86 | 0.71 | 0.57 | 0.97 | 0.84 | 0.66 | 0.99 | 0.81 | 0.65 | 1.08 | 0.77 | 0.61 |
| **C. Education** | | | | | | | | | | | | | | | |
| Less than high school | 0.85 | 0.83 | 0.81 | 0.80 | 0.77 | 0.73 | 0.78 | 0.74 | 0.62 | 0.74 | 0.66 | 0.56 | 0.70 | 0.59 | 0.50 |
| High school | 1.08 | 1.08 | 1.10 | 1.01 | 1.03 | 1.05 | 0.93 | 0.97 | 0.95 | 0.89 | 0.91 | 0.89 | 0.84 | 0.82 | 0.78 |
| Some college | 1.22 | 1.27 | 1.27 | 1.09 | 1.13 | 1.15 | 1.02 | 1.04 | 1.08 | 1.02 | 1.04 | 1.05 | 0.96 | 0.98 | 0.98 |
| College | 1.59 | 1.64 | 1.70 | 1.44 | 1.46 | 1.52 | 1.42 | 1.40 | 1.56 | 1.40 | 1.44 | 1.56 | 1.41 | 1.49 | 1.59 |
| **D. Family Type**[4] | | | | | | | | | | | | | | | |
| Married couple | 1.11 | 1.11 | 1.12 | 1.15 | 1.14 | 1.15 | 1.25 | 1.21 | 1.23 | 1.28 | 1.23 | 1.25 | 1.31 | 1.29 | 1.31 |
| Single female | 0.82 | 0.73 | 0.71 | 0.83 | 0.77 | 0.72 | 0.77 | 0.71 | 0.63 | 0.76 | 0.71 | 0.64 | 0.79 | 0.70 | 0.64 |
| Single male | 1.09 | 1.03 | 1.02 | 0.93 | 1.10 | 1.05 | 0.89 | 0.99 | 0.99 | 0.93 | 1.02 | 1.02 | 0.90 | 0.98 | 0.97 |
| **E. Region** | | | | | | | | | | | | | | | |
| Northeast | 1.07 | 1.08 | 1.10 | 1.10 | 1.07 | 1.08 | 1.05 | 1.04 | 1.02 | 1.11 | 1.12 | 1.12 | 1.08 | 1.06 | 1.06 |
| Midwest | 1.03 | 1.05 | 1.03 | 1.00 | 1.00 | 1.02 | 1.00 | 0.98 | 1.00 | 0.98 | 0.96 | 0.97 | 0.99 | 1.00 | 1.00 |
| South | 0.86 | 0.84 | 0.83 | 0.91 | 0.93 | 0.91 | 0.97 | 0.95 | 0.95 | 0.92 | 0.92 | 0.91 | 0.94 | 0.94 | 0.93 |
| West | 1.09 | 1.08 | 1.09 | 1.03 | 1.03 | 1.03 | 1.00 | 1.06 | 1.06 | 1.04 | 1.07 | 1.07 | 1.03 | 1.05 | 1.06 |
| **All Households** | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

**Table 4 Economic Well-Being by Measure and Selected Household Characteristics, 1959-2000 (contd.)**
**Ratio of Dollar values in thousands of 2007 dollars**

| Characteristic | Ratios of Median values | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1959 | | | 1972 | | | 1982 | | | 1989 | | | 2000 | | |
| | LIMEW | EI | MI | LIMEW | EI | MI | LIMEW | EI | MI | LIMEW | EI | MI | LIMEW | EI | MI |
| **A. Race/Ethnicity** | | | | | | | | | | | | | | | |
| White | 1.04 | 1.04 | 1.05 | 1.04 | 1.06 | 1.06 | 1.03 | 1.04 | 1.05 | 1.04 | 1.06 | 1.07 | 1.05 | 1.07 | 1.08 |
| Nonwhite | 0.64 | 0.59 | 0.57 | 0.81 | 0.76 | 0.70 | 0.81 | 0.71 | 0.65 | 0.86 | 0.75 | 0.71 | 0.89 | 0.81 | 0.80 |
| **B. Age** | | | | | | | | | | | | | | | |
| Less than 65 years | 1.06 | 1.07 | 1.09 | 1.08 | 1.10 | 1.14 | 1.06 | 1.06 | 1.14 | 1.05 | 1.07 | 1.14 | 1.02 | 1.07 | 1.16 |
| Less than 35 years | 1.00 | 0.99 | 1.00 | 0.96 | 1.00 | 1.04 | 0.88 | 0.86 | 0.97 | 0.88 | 0.86 | 0.93 | 0.88 | 0.86 | 0.93 |
| 35-45 years | 1.20 | 1.19 | 1.20 | 1.32 | 1.26 | 1.30 | 1.27 | 1.17 | 1.30 | 1.24 | 1.19 | 1.30 | 1.19 | 1.17 | 1.28 |
| 45-55 years | 1.11 | 1.16 | 1.17 | 1.22 | 1.27 | 1.33 | 1.32 | 1.35 | 1.40 | 1.24 | 1.36 | 1.43 | 1.15 | 1.26 | 1.38 |
| 55-64 years | 0.89 | 0.95 | 0.97 | 0.94 | 0.99 | 1.01 | 1.03 | 1.13 | 1.10 | 0.98 | 1.08 | 1.07 | 0.92 | 1.04 | 1.07 |
| 65 or older | 0.64 | 0.54 | 0.44 | 0.68 | 0.61 | 0.44 | 0.78 | 0.81 | 0.55 | 0.82 | 0.77 | 0.54 | 0.91 | 0.78 | 0.55 |
| **C. Education** | | | | | | | | | | | | | | | |
| Less than high school | 0.85 | 0.84 | 0.82 | 0.81 | 0.76 | 0.66 | 0.78 | 0.73 | 0.56 | 0.76 | 0.64 | 0.51 | 0.76 | 0.60 | 0.48 |
| High school | 1.13 | 1.12 | 1.15 | 1.07 | 1.09 | 1.12 | 0.99 | 1.00 | 1.00 | 0.96 | 0.96 | 0.94 | 0.90 | 0.88 | 0.84 |
| Some college | 1.23 | 1.24 | 1.26 | 1.13 | 1.16 | 1.20 | 1.07 | 1.08 | 1.16 | 1.07 | 1.09 | 1.13 | 1.03 | 1.04 | 1.07 |
| College | 1.49 | 1.55 | 1.62 | 1.40 | 1.48 | 1.58 | 1.42 | 1.45 | 1.64 | 1.40 | 1.50 | 1.66 | 1.34 | 1.50 | 1.69 |
| **D. Family Type**[4] | | | | | | | | | | | | | | | |
| Married couple | 1.12 | 1.12 | 1.13 | 1.18 | 1.17 | 1.20 | 1.28 | 1.25 | 1.29 | 1.30 | 1.28 | 1.32 | 1.33 | 1.33 | 1.41 |
| Single female | 0.75 | 0.67 | 0.63 | 0.84 | 0.76 | 0.67 | 0.80 | 0.68 | 0.59 | 0.83 | 0.68 | 0.61 | 0.89 | 0.74 | 0.67 |
| Single male | 0.93 | 0.98 | 0.99 | 0.98 | 1.10 | 1.07 | 0.96 | 1.03 | 1.05 | 0.95 | 1.05 | 1.06 | 0.97 | 0.99 | 1.00 |
| **E. Region** | | | | | | | | | | | | | | | |
| Northeast | 1.06 | 1.08 | 1.10 | 1.09 | 1.06 | 1.08 | 1.04 | 1.06 | 1.02 | 1.11 | 1.12 | 1.13 | 1.07 | 1.05 | 1.04 |
| Midwest | 1.05 | 1.05 | 1.05 | 1.02 | 1.04 | 1.05 | 1.01 | 1.01 | 1.03 | 0.99 | 0.99 | 0.99 | 1.01 | 1.03 | 1.05 |
| South | 0.84 | 0.81 | 0.79 | 0.91 | 0.91 | 0.87 | 0.95 | 0.93 | 0.93 | 0.93 | 0.90 | 0.89 | 0.93 | 0.92 | 0.91 |
| West | 1.10 | 1.09 | 1.11 | 1.04 | 1.03 | 1.02 | 1.02 | 1.05 | 1.05 | 1.04 | 1.07 | 1.07 | 1.05 | 1.07 | 1.07 |
| **All Households** | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

**Table 5 Share of Each Quintile in Aggregate Income (percent), 1959, 1972, 1982, 1989, and 2000**

| | | Quintiles | | | | |
|---|---|---|---|---|---|---|
| | | **1** | **2** | **3** | **4** | **5** |
| | 1959 | | | | | |
| LIMEW | | 5.6 | 12.0 | 17.4 | 23.1 | 41.8 |
| MI | | 3.4 | 10.9 | 17.3 | 24.3 | 44.0 |
| EI | | 4.1 | 11.5 | 17.4 | 23.6 | 43.4 |
| | 1972 | | | | | |
| LIMEW | | 5.7 | 11.5 | 16.9 | 23.4 | 42.5 |
| MI | | 3.7 | 9.7 | 17.4 | 25.2 | 43.9 |
| EI | | 3.6 | 11.2 | 17.4 | 24.5 | 43.4 |
| | 1982 | | | | | |
| LIMEW | | 5.6 | 11.1 | 16.1 | 22.6 | 44.6 |
| MI | | 4.0 | 10.1 | 16.6 | 24.7 | 44.6 |
| EI | | 5.4 | 12.0 | 17.7 | 24.6 | 40.3 |
| | 1989 | | | | | |
| LIMEW | | 6.2 | 11.4 | 16.3 | 22.5 | 43.7 |
| MI | | 3.9 | 9.7 | 16.2 | 24.5 | 45.6 |
| EI | | 5.2 | 11.4 | 17.1 | 24.4 | 41.9 |
| | 2000 | | | | | |
| LIMEW | | 5.5 | 10.2 | 14.9 | 21.0 | 48.3 |
| MI | | 3.6 | 8.9 | 14.8 | 23.1 | 49.7 |
| EI | | 4.8 | 10.6 | 16.0 | 23.0 | 45.7 |

Note: Quintiles of each income measure is defined with respect to that income measure.

**Table 6 Economic Inequality by Measure, 1959 to 2000**
**(Gini coefficient x 100)**

| | 1959 | 1972 | 1982 | 1989 | 2000 |
|---|---|---|---|---|---|
| **A. All Households** | | | | | |
| **Levy Measures** | | | | | |
| LIMEW | 36.2 | 36.9 | 39.0 | 37.4 | 42.4 |
| LIMEW-C | 41.0 | 41.7 | 44.4 | 42.1 | 48.0 |
| PFI | 38.8 | 38.7 | 40.9 | 39.2 | 44.9 |
| **Official Measures** | | | | | |
| EI | 39.1 | 40.0 | 35.0 | 36.9 | 40.8 |
| MI | 40.3 | 40.7 | 40.9 | 41.8 | 46.0 |
| **Equivalence scale adjusted measures** | | | | | |
| Equivalent LIMEW | 33.3 | 32.7 | 34.5 | 33.1 | 38.8 |
| Equivalent EI | 38.5 | 38.1 | 32.9 | 34.8 | 38.6 |
| Equivalent MI | 40.1 | 38.9 | 39.1 | 40.0 | 44.1 |
| **B. Family Households** | | | | | |
| **Levy Measures** | | | | | |
| LIMEW | 32.5 | 31.9 | 34.8 | 32.7 | 37.3 |
| LIMEW-C | 38.2 | 38.0 | 42.3 | 39.6 | 45.1 |
| PFI | 35.6 | 34.2 | 37.6 | 35.5 | 40.6 |
| **Official Measures** | | | | | |
| EI | 35.8 | 36.3 | 31.4 | 33.3 | 37.1 |
| MI | 37.1 | 36.7 | 37.4 | 38.4 | 42.6 |

**Figure 1 Annual Hours of Total Work, Market Work and Housework by Sex, 1959 to 2000 (mean values, persons 19 years and older)**

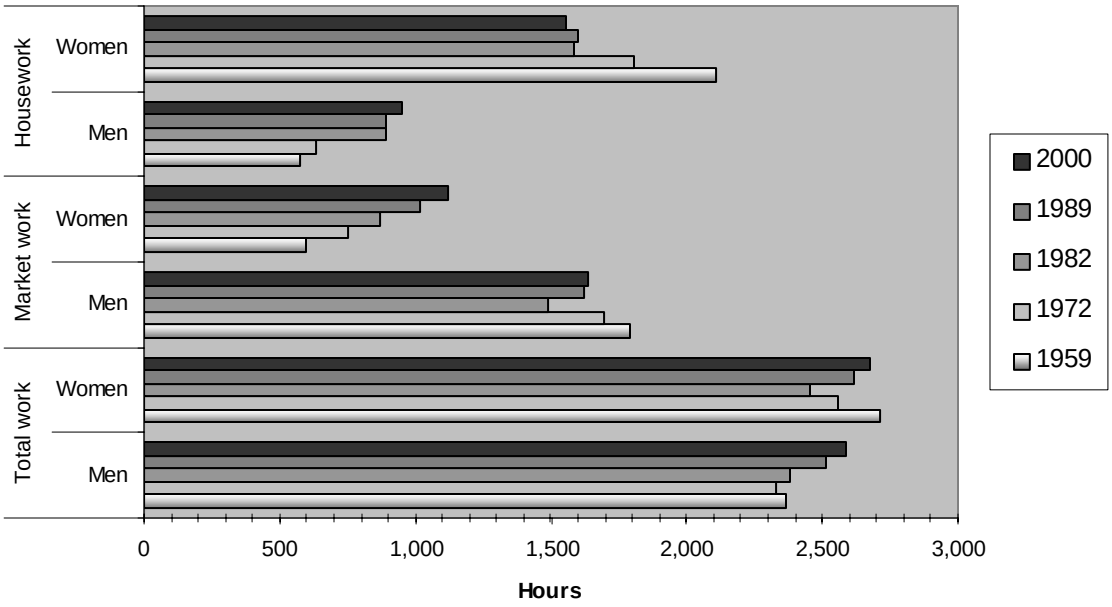
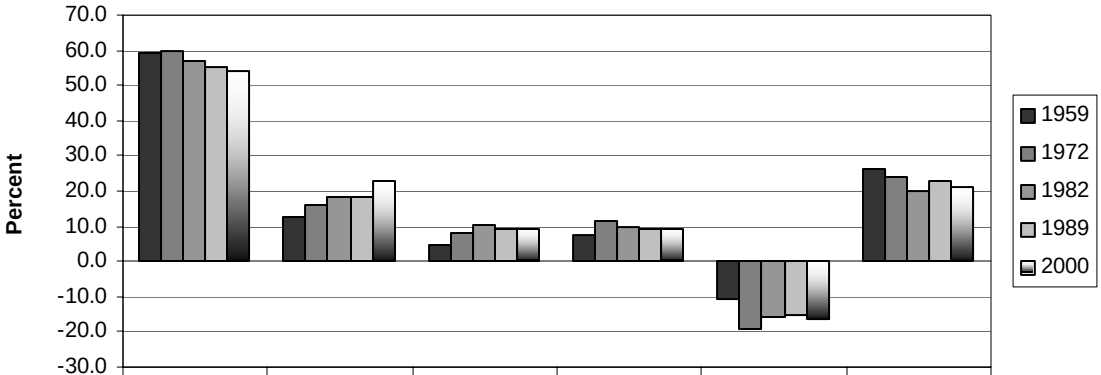


**Figure 2 Composition of the LIMEW, 1959-2000 (percent)**




| | Base Income | Income from wealth | Government transfers | Public consumption | Taxes | Household production |
|---|---|---|---|---|---|---|
| 1959 | 59.2 | 12.5 | 4.6 | 7.7 | -10.4 | 26.4 |
| 1972 | 60.1 | 15.9 | 7.9 | 11.2 | -19.1 | 24.0 |
| 1982 | 57.1 | 18.5 | 10.2 | 10.0 | -16.0 | 20.3 |
| 1989 | 55.4 | 18.4 | 9.1 | 9.5 | -15.4 | 23.0 |
| 2000 | 54.0 | 23.1 | 9.1 | 9.0 | -16.5 | 21.3 |

**Figure 2A Contribution to the percent change in the mean value of LIMEW (in percent)**

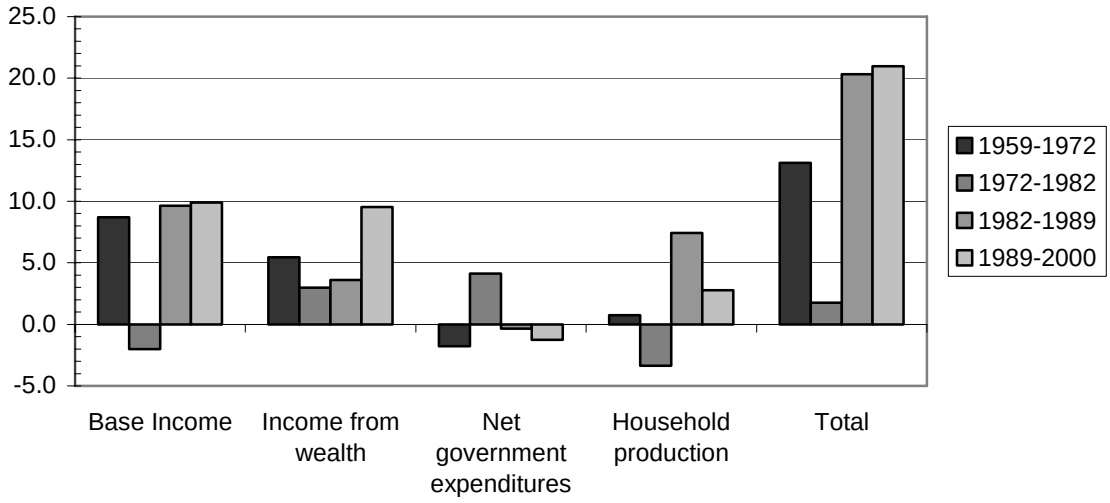


**Figure 3A Racial Disparity, 1959- 2000**
**(Nonwhite/White)**

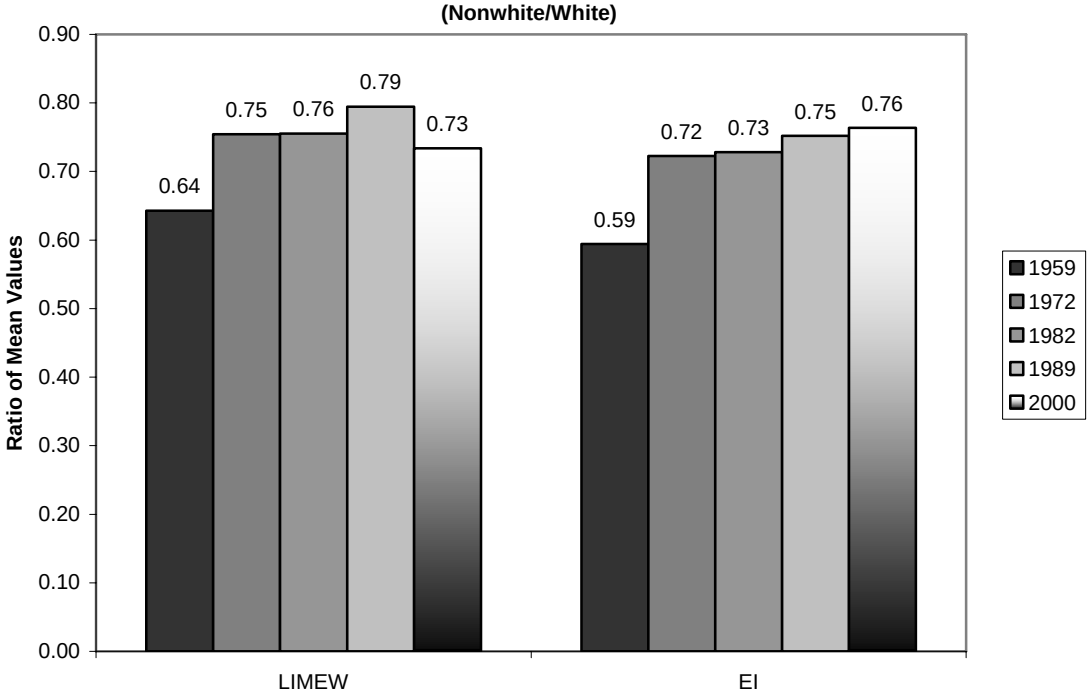


**Figure 3b Racial Disparity in Components, 1959-2000**
**(White minus Nonwhite in thousands of 2007$)**

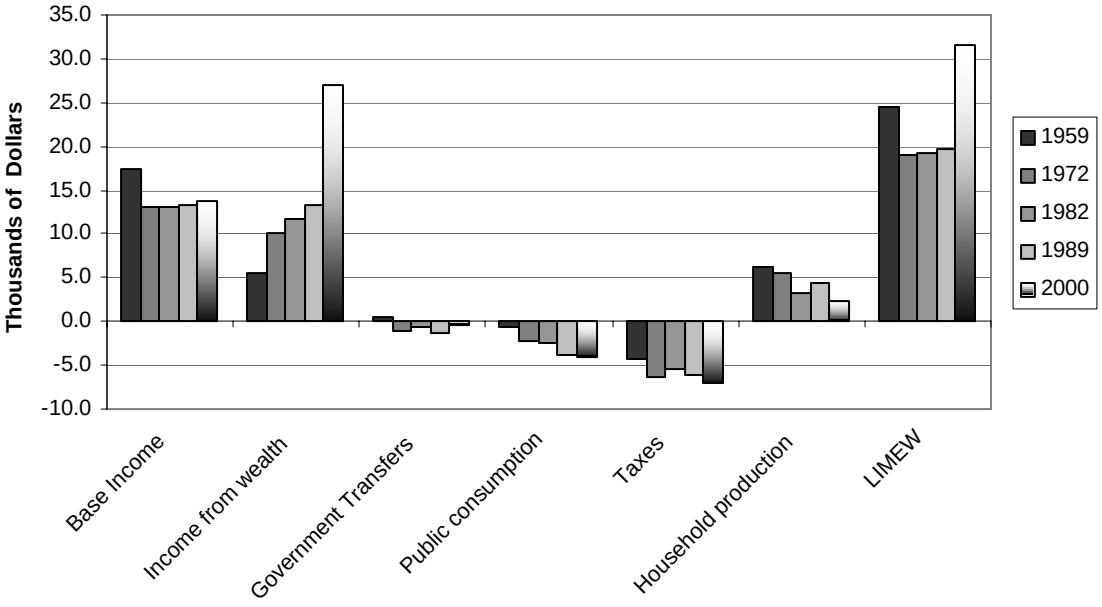


**Figure 4A Disparities between Types of Families, 1959- 2000**
**(Percent of Married Couples)**

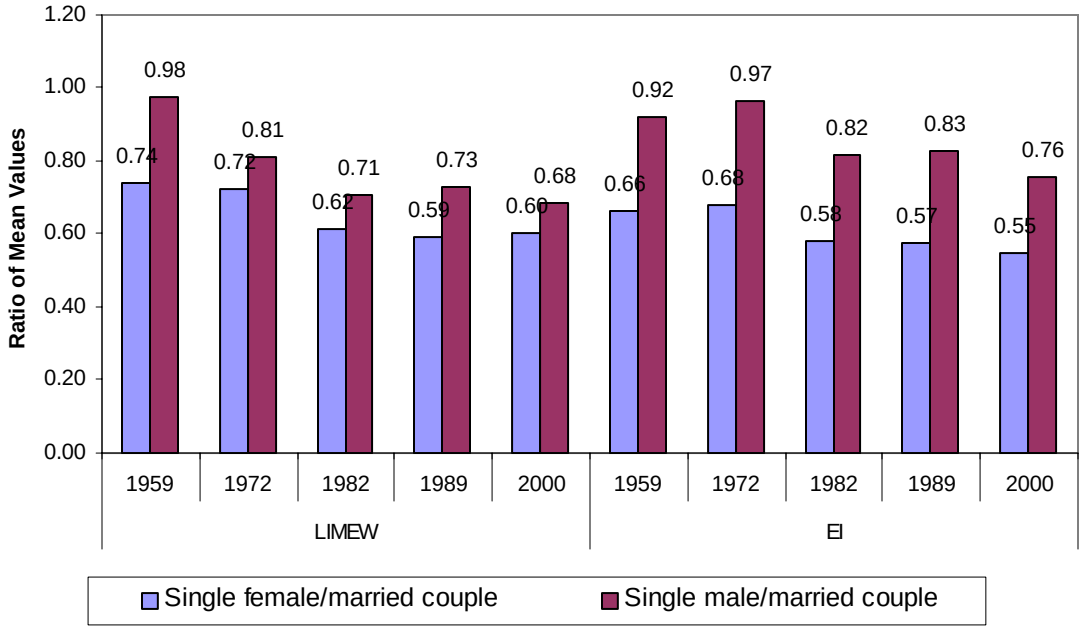


**Figure 4B Disparities between Single Female-Headed Families and Married-Couple Families in Components, 1959-2000 (Married Couple minus Female heads in thosuands of 2007$)**

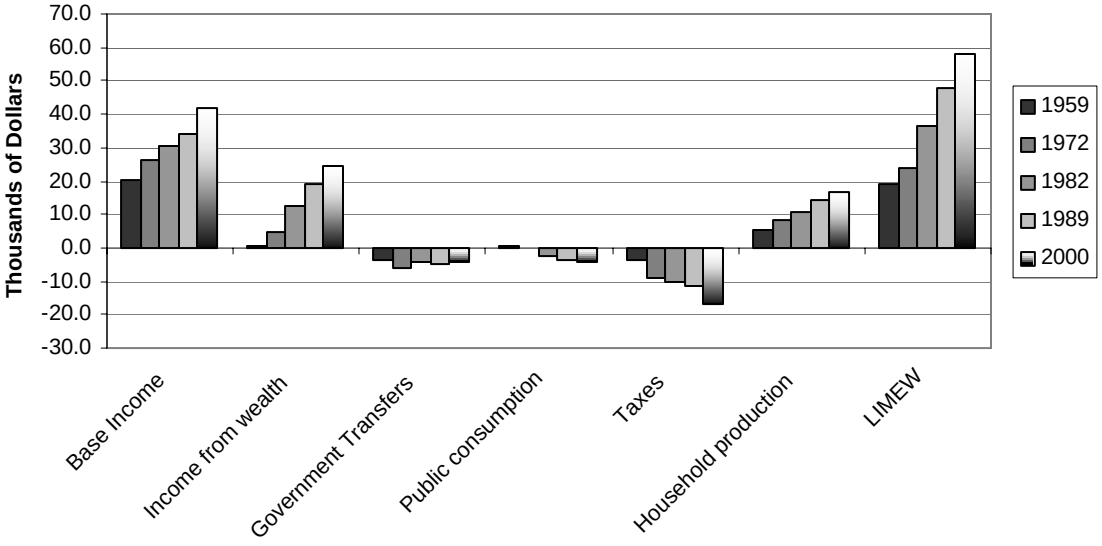


**Figure 5A Disparity between Elderly and Nonelderly Households, 1959-2000**
**(Elderly/Nonelderly Ratio)**

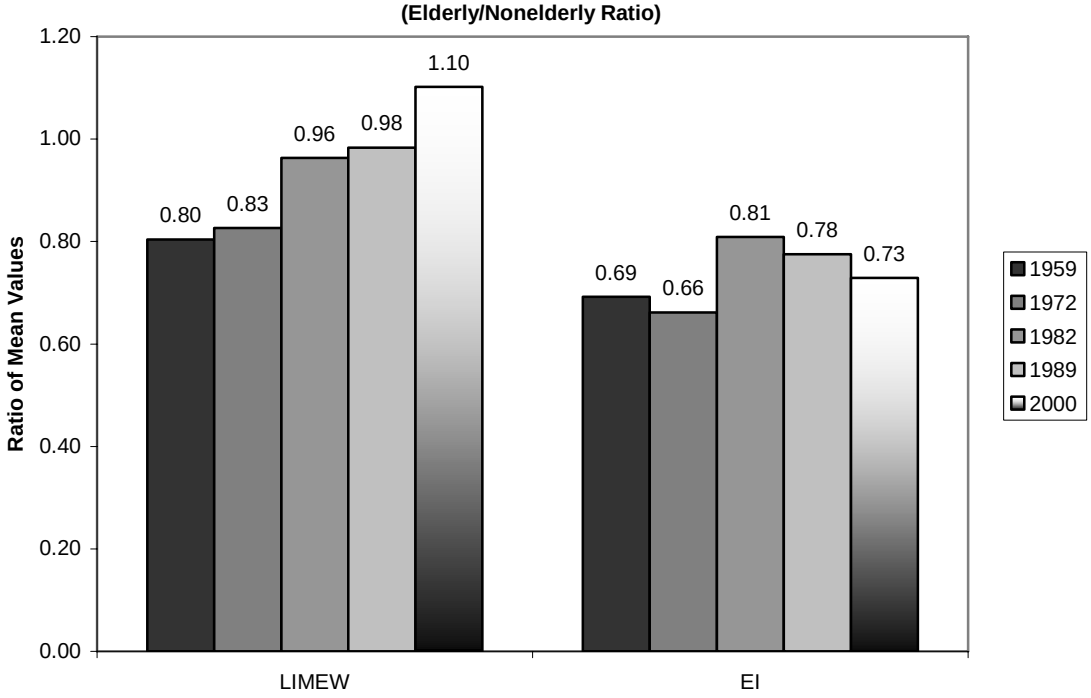


**Figure 5b Disparities between the Elderly and Nonelderly Households in Components, 1959-2000 (Nonelderly minus Elderly in thousands of 2007$)**

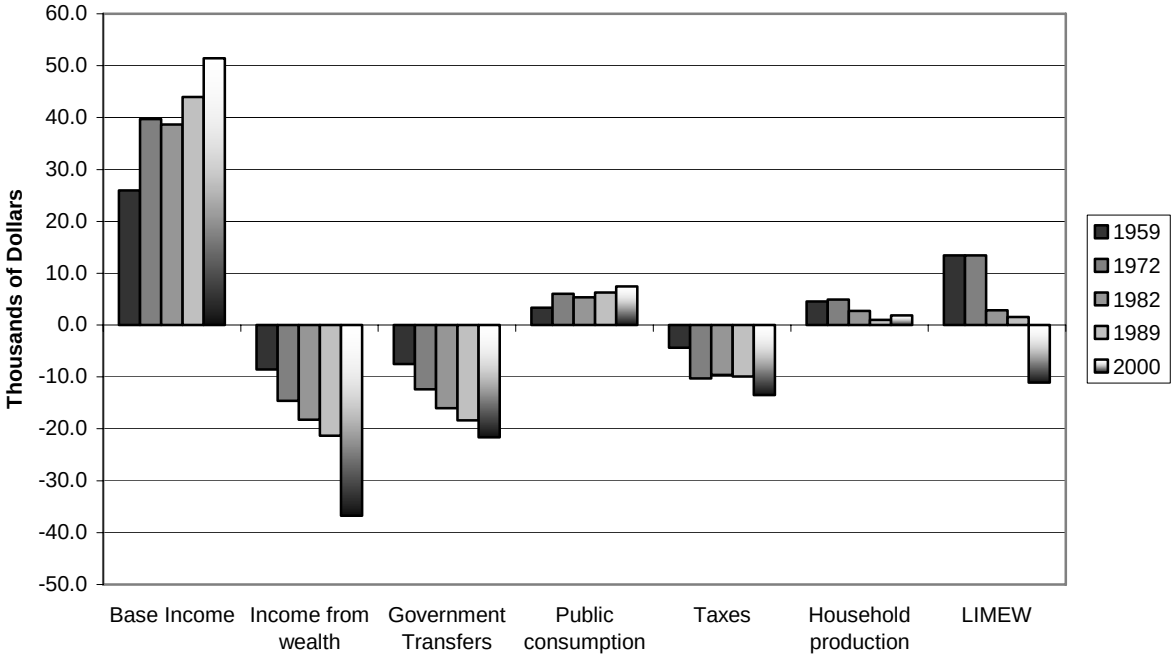


**Figure 6A Disparities by Educational Attainment, 1959- 2000**

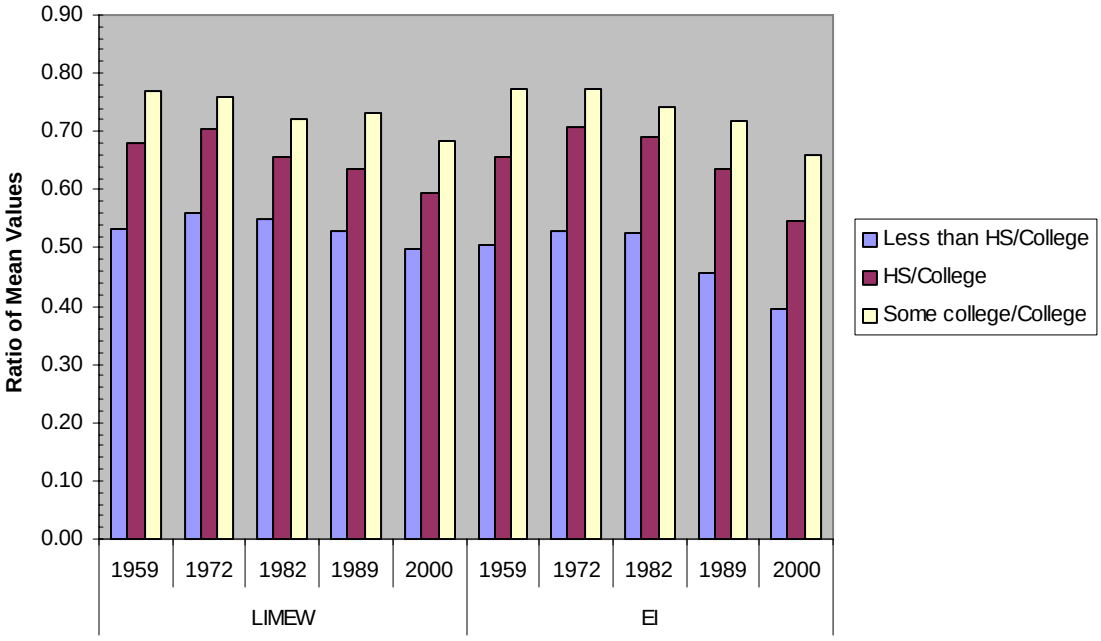


**Figure 6B Disparities between High School and College Graduate Headed Households in Components, 1959-2000 (Colllege Grad minus HS grad in thousands of 2007$)**

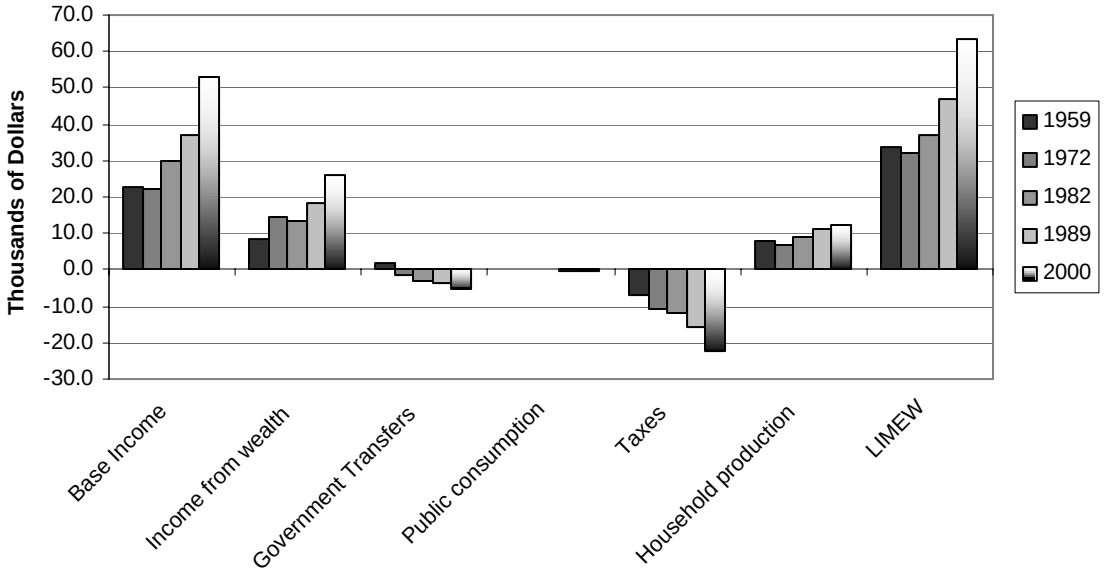
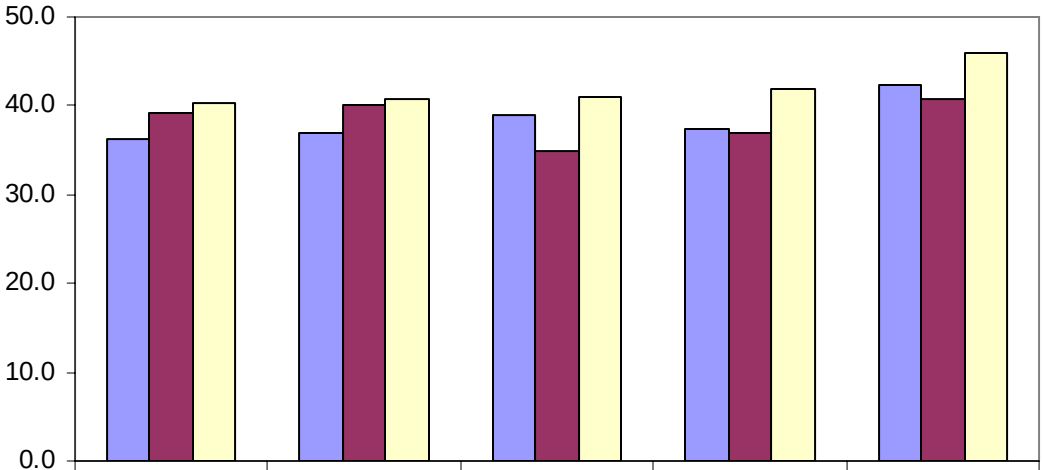


**Figure 7 Economic Inequality by Measure 1959 to 2000 (Gini x 100)**




| | 1959 | 1972 | 1982 | 1989 | 2000 |
|---|---|---|---|---|---|
| LIMEW | 36.2 | 36.9 | 39.0 | 37.4 | 42.4 |
| EI | 39.1 | 40.0 | 35.0 | 36.9 | 40.8 |
| MI | 40.3 | 40.7 | 40.9 | 41.8 | 46.0 |