The Levy Economics Institute of Bard College

Levy Institute Measure of Economic Well-Being

United States, 1989 and 2000

EDWARD N. WOLFF, AJIT ZACHARIAS, and ASENA CANER

December 2003

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The full report, *Levy Institute Measure of Economic Well-Being: Concept, Measurement, and Findings: United States, 1989 and 2000*, can be accessed on the Levy Institute website at www.levy.org.

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Preface

The Levy Economics Institute has, since its inception, maintained an active research program on the distribution of earnings, income, and wealth. Experience from the 1990s suggests that economic growth alone cannot dramatically reduce economic inequality. Because we are concerned with the improvement of well-being, we have initiated a research project, the Levy Institute Measure of Economic Well-Being (LIMEW), within the program on distribution of income and wealth. This project seeks to assess policy options and to provide guidance toward improving the distribution of economic well-being in the United States, and it gives us the opportunity to track the progress of economic well-being using a comprehensive measure. Our expectation is that the LIMEW will become a useful tool for policymakers to assess programs and to design policies that will ensure improvement in economic well-being.

Gross money income, the most widely used official measure of the level and distribution of economic well-being, is increasingly recognized as an incomplete measure. Our measure contributes toward filling this lacuna. Our analysis using the LIMEW suggests that the official measures of the command over commodities understate the level of inequality in the distribution of such command; that the increase in economic well-being attained during the economic expansion of the 1990s was accompanied by a comparable increase in hours of total work (paid and household work); and that the effectiveness of government spending and taxation policies in reducing inequalities generated by market forces has declined. While economic well-being has improved, government policies and regulations have failed to temper the time crunch faced by American households or to mitigate the growing inequality in the distribution of well-being.

Dimitri B. Papadimitriou, *President*
December 2003

Introduction

Economic well-being refers to the command or access by members of a household over the goods and services produced in a modern market economy during a given period of time. Household income should ideally reflect the magnitude of the command, or access, over the goods and services. Social and economic policies aimed at shaping economic well-being can then be formulated using comprehensive and accurate measures of household income.

Gross money income, the most widely used official measure of the level and distribution of economic well-being, is an incomplete measure. By definition, it is inclusive of taxes, which reduce the purchasing power of households. Its property income component (dividends, interest, and rent) is an inadequate measure of the economic advantage derived from wealth, which is a key determinant of economic well-being. Furthermore, household members do not exercise command over commodities by means of money alone. Well-known and important examples are employer contributions for health insurance and noncash benefits to the poor.

Gross money income is also an incomplete measure because commodities form only a portion, though a critical one, of the entire set of goods and services available to households. The state plays a crucial role in providing the "necessaries and conveniences of life" (to use Adam Smith's famous expression), as exemplified by public education and highways. Nonmarket household work, such as childcare, cooking, and cleaning, also provides the necessaries and conveniences of life.

The Levy Economics Institute has initiated a research project to construct a more comprehensive and accurate measure of economic well-being. The Levy Institute Measure of Economic Well-Being (LIMEW) attempts to simultaneously integrate the key components of economic well-being. This document provides estimates of the LIMEW and its components, estimates of the LIMEW for some demographic groups and of economic inequality, and discusses some policy implications suggested by our findings.

Estimating the LIMEW

The initial phase of our research has focused on the conceptual, methodological, and data problems in constructing an economic well-being measure for the United States in two benchmark years, 1989 and 2000, which are considered to be the peak years of the last two economic expansions. Specifically, the LIMEW is constructed as the sum of the following components: base money income (gross money income minus property income and government cash transfers),[1] employer contributions for health insurance, income from wealth, net government expenditures (transfers and public consumption, net of taxes) and value of household production. Income from wealth is estimated using imputed rental cost for homes and a variant of the lifetime annuity method for nonhome wealth. Net government expenditure is calculated using the government-cost approach. A modified replacement-cost approach is used to value the time spent on housework by adult household members. In the absence of an ideal, unified database to measure household economic well-being, the LIMEW uses information from the public-use datafiles derived from the Current Population Survey's Annual Demographic Supplement (ADS) by the U.S. Census Bureau.

Information on wealth and time spent on housework is generated via statistical matching of the ADS files with the Federal Reserve's household wealth surveys and national time-use surveys. Information from the National Income and Product Accounts (NIPA), government agencies, and the ADS is used to estimate different components of net government expenditures.

An inevitable part of the exercise is the number of judgment calls that have to be made about the various components of the LIMEW and estimation techniques. Sensitivity analyses testing a number of the key judgment calls are under way and the results will be forthcoming in Levy Institute publications.

Level and Composition of the LIMEW

The basic picture regarding economic well-being in the United States is substantially altered when the measure used is the LIMEW, rather than the standard measure. This is patently the case for the level and change in well-being between 1989 and 2000. As shown in Figure 1, the standard measure understates economic well-being by a sizeable amount. Median household money income, which is less than the LIMEW by construction, is only about 61 percent of the median LIMEW in 2000 (65 percent in 1989). Similarly, the change in money income between 1989 and 2000 is less than half of the change in the LIMEW (5 percent compared to 11 percent).[2]

An advantage of the information base constructed for the LIMEW is that it allows us to estimate the hours spent on total work (paid work plus housework) by the average household in attaining the reported level of well-being. Our estimates show that the median annual hours of total work increased by 7.4 percent (from 4,401 to 4,727 hours), an increase of 326 hours per year or more than eight weeks of full-time work (using a 40-hour work week). Thus, the reported increase in economic well-being using either measure was accompanied by a comparable increase in total hours of work.

Indeed, the discrepancies regarding the picture of economic well-being arise from the fact that money income can at best be considered as an incomplete measure of the command exercised over commodities alone. In contrast, the LIMEW is a more inclusive measure of command over commodities as well as the necessaries and conveniences available to the household via public provisioning (public consumption) and self-provisioning (household production).

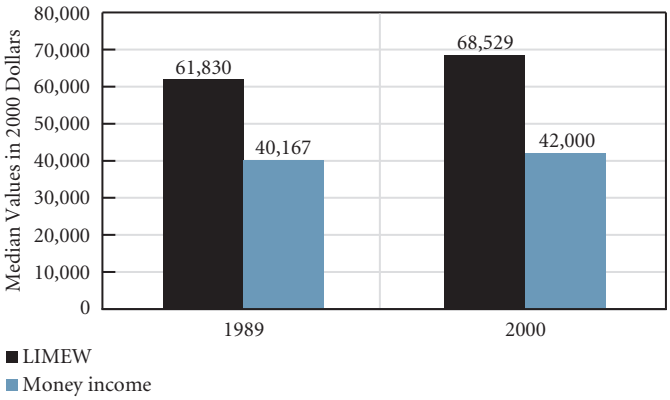
As shown in Figure 2, household production and public consumption account for nearly 30 percent of the mean value of the LIMEW in 1989 and 2000. Components that can be considered to be directly relevant to the command over commodities—base money income, private health insurance (employer contributions for health insurance), income from wealth, government transfers, and taxes—constitute the remainder of the measure.

A comparison of the composition of the LIMEW in 1989 and 2000 suggests that, while income from wealth and taxes increased their shares over time, the share of household production declined. The notable increase in the tax component, combined with stagnant shares of government transfers and of public consumption, pushed net government expenditures (government transfers plus public consumption minus taxes) on behalf of households from a small positive number in 1989 (1.3 percent) to a small negative number in 2000 (-0.3 percent).

Disparities in Economic Well-Being

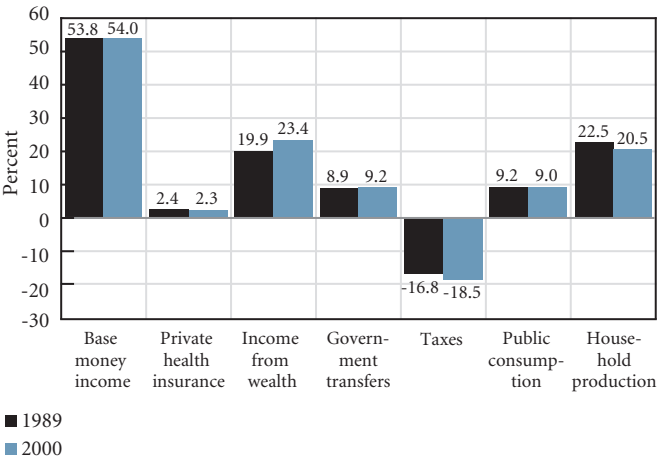
The picture of economic well-being also changes when we examine disparities among households grouped according to salient social and economic characteristics. Each bar in Figure 3 represents a ratio of median values using money income or the LIMEW. Racial disparity (measured here between whites and nonwhites[3]) is considerably less using the LIMEW—the

Figure 1 Household Economic Well-Being by Income Measure: 1989 and 2000



Source: Authors' calculations

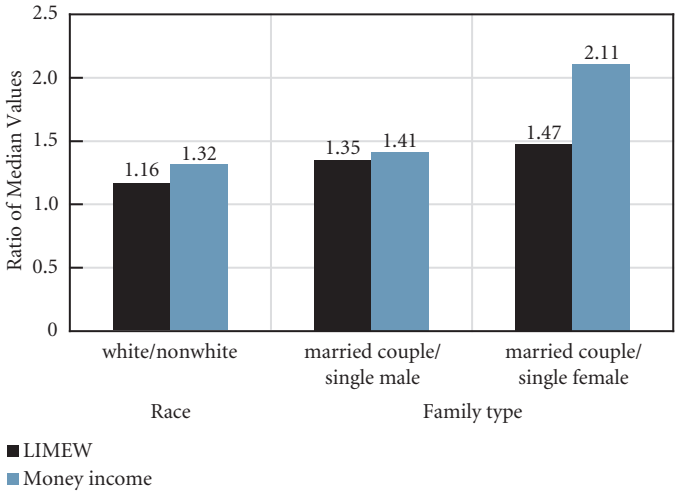
Figure 2 Composition of the LIMEW, 1989 and 2000



Source: Authors' calculations

Figure 3 Disparities in Economic Well-Being by Income Measure and Selected Characteristics, 2000

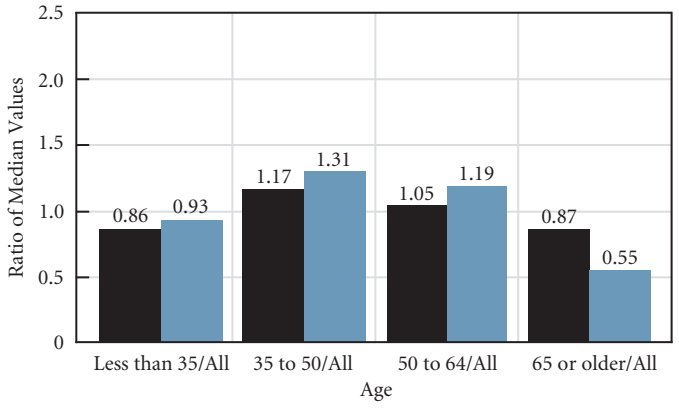
3A Race and Family Type



Note: Race: white = non-Hispanic white householder, nonwhite = householder belonging to any other race; Family type (family is defined as two or more persons living together and related by blood, marriage, or adoption): married-couple household, single male householder, and single-female householder.

Source: Authors' calculations

3B Age of the Householder



Note: All = all households

Source: Authors' calculations

ratio of median values is "only" 1.16 as opposed to 1.32 for money income (*see* Figure 3A). Similarly, the disparity between married-couple families and families with a single female householder is less using the LIMEW.

Other household groupings (e.g., by age and by money income) show also that the level of economic disparity may differ significantly, depending on the measure (*see* Figures 3B and 3C). The elderly appear to be better off (actually, relatively less worse off) than the average household, and the disparity between the bottom income group and the average household, and between the top income groups and the average household, is less using the LIMEW.

It is important to emphasize that disparities in economic well-being are reduced, but not eliminated, using the LIMEW. We note that comparisons of the LIMEW to conventional poverty thresholds are inappropriate because conventional thresholds do not include such "needs" as schooling or parental care. We also note that our finding—that certain groups appear less worse off in terms of the LIMEW, as compared to money income—is in line with the results of previous studies that have used more comprehensive measures of well-being than money income.[4]

Economic Inequality

An important advantage of a comprehensive measure of economic well-being is that it can facilitate a better understanding of the forces that shape economic inequality. We therefore proceed with a well-known type of thought experiment. We start with the distribution of economic well-being using only base money income, which is modified here to include employer contributions for health insurance. The next step expands the measure to include income from wealth and to reflect the economic advantage of asset ownership. This measure may be thought of as "primary income" or "market income." We then modify primary income by adding government transfers (net of taxes), so that the measure adequately reflects the distribution of the command over commodities. The next to last step includes public consumption and assesses the effect of net government expenditures. The last step includes household production and is synonymous with the LIMEW.

The results of the experiment are shown in Figure 4. The degree of inequality in the distribution of base money income, as measured by the Gini ratio,[5] is shown by the bars labeled BI.

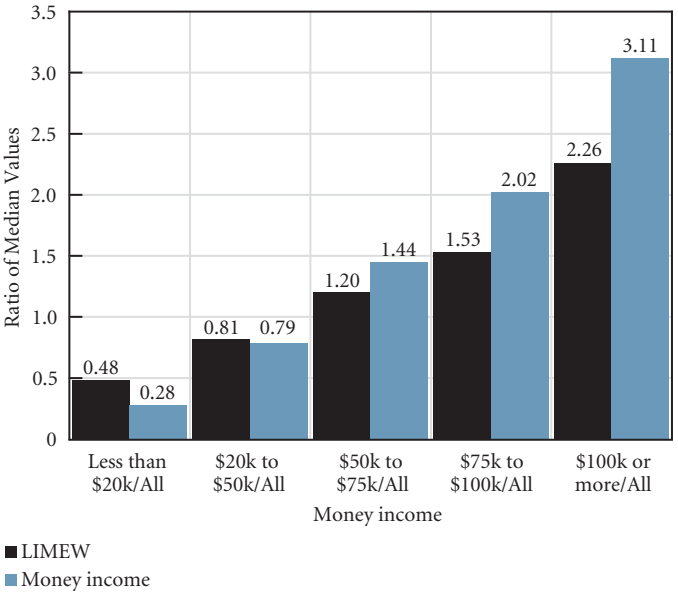
Because wealth is distributed much more unequally than base money income, adding income from wealth raises the level of inequality, as shown by the Gini ratio for primary income (PI). A growing concentration of wealth, especially financial assets, during the 1990s contributed to an increase in inequality from 1989 to 2000. We know from previous research that wealth inequality tends to rise when stock markets go up, so it is likely that the recent plunge in stock prices has reduced wealth inequality in the United States. As a result, the gap between the inequality in PI and BI has probably narrowed.

The third set of bars (PI + TR – TX) shows how government transfers and taxes alter the inequality in the command over commodities. Inequality that is associated with market-generated outcomes, primarily the distribution of earnings and wealth, is significantly reduced, but their effectiveness appears to have dwindled in 2000, as compared to 1989: the Gini ratio was 16 percent lower in 1989 compared to PI, while it was only 13 percent lower in 2000. We expect that the decline in the progressiveness of the transfer-tax regime has worsened since 2000, as a result of the pro-rich orientation of the federal tax cuts and the scaling-back of major discretionary transfer programs.

When public consumption is included in the income measure (PI + TR – TX + PC), inequality declines further. A comparison of this income measure to PI shows the extent that inequality is lowered by net government expenditures. The percentage decline in the Gini ratio, relative to PI, was 19 percent in 2000 compared to 22 percent in 1989, suggesting that the redistributive effect of government spending and taxes has declined. Recent developments affecting federal and state budgets suggest that the situation may not have improved. At the federal level, budgetary priorities have shifted in favor of defense and "homeland security"—items not included in our definition of public consumption. Moreover, the growing fiscal crisis at the state and local government levels, and the dominant method for dealing with it—cutbacks in social expenditures, such as education and public health—are not favorable toward expanding public consumption.

Incorporating household production into the income measure, which results in the LIMEW, lowers inequality by another 6 percent. Household production is a major component of the LIMEW (*see* Figure 2) and its distribution among households is relatively less unequal. While the average number of hours per week spent on housework by households has

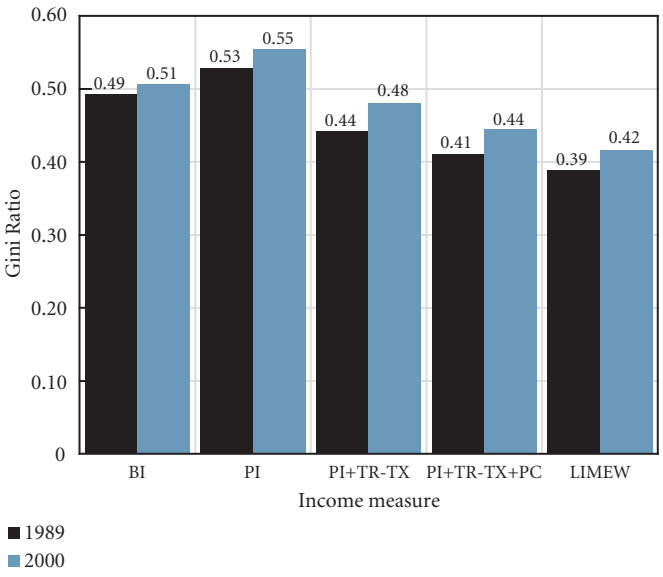
3C Household Money Income



Note: All = all households

Source: Authors' calculations

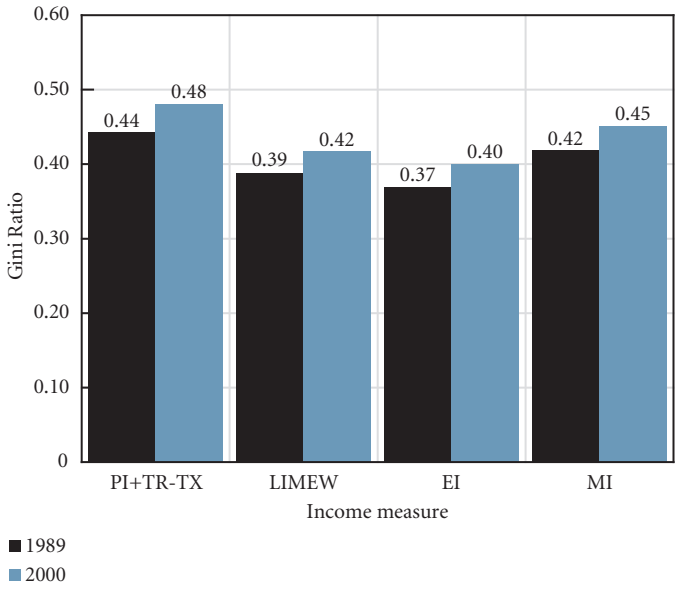
Figure 4 Economic Inequality, 1989 and 2000



Note: BI = sum of base money income and employer contributions for health insurance; PI (primary income) = sum of BI and income from wealth; TR = government transfers; TX = taxes; PC = public consumption; LIMEW = the sum of primary income, net government expenditure (TR-TX+PC) and the value of household production.

Source: Authors' calculations

Figure 5 Economic Inequality by Income Measure, 1989 and 2000



Note: PI = sum of base money income, employer contributions for health insurance and income from wealth; TR = government transfers; TX = taxes; PC = public consumption; LIMEW = the sum of primary income, net government expenditure (TR-TX+PC) and the value of household production; EI (Census extended income) = sum of base money income, employer contributions for health insurance, property income, realized capital gains, government transfers net of taxes and return on home equity; MI = gross money income.

Source: Authors' calculations

remained stable (approximately 46 hours), the burden still falls more on women than men. Women spent, on average, 31 hours per week on housework in 2000, while men spent 19 hours. The gender disparity in housework, however, has declined since 1989, as a result of changes in the economic status of women and in social norms and perceptions regarding gender roles.

It is instructive to compare measures of inequality using the LIMEW and its components with two measures of the Census Bureau, gross money income (MI) and extended income (EI). The EI is a better approximation of a household's command over commodities than MI. EI expands the notion of income from wealth to include, in addition to property income, realized net capital gains and returns on home equity. Unlike LIMEW, however, EI does not include an annuity flow from nonhome wealth. Including noncash transfers and taxes, in addition to cash transfers, also broadens the accounting of the government's role in mediating the command over commodities, while incorporating employer contributions for health insurance expands the definition of income from work. The Gini ratios for EI, MI, the component of the LIMEW that reflects the command over commodities (LIMEW excluding public consumption and household production), and the LIMEW are shown in Figure 5.

Since EI and the LIMEW excluding public consumption and household production (PI+TR-TX) are measures that, at least in principle, measure the command over commodities, it is noteworthy that our measure shows a much higher level of inequality (by about 20 percent). Our measure of the command over commodities is also more unequally distributed than MI. It is even more striking that the LIMEW, which includes public consumption and household production that lower inequality, also shows a higher level of inequality than EI. While there are a number of methodological differences between the measures, it is likely that a major factor causing the difference is the treatment of financial wealth. The Census Bureau, which focuses on actual cash income, attempts to capture the economic advantage of financial wealth using property income and realized capital gains. We capture this advantage by means of a lifetime annuity.

Policy Implications

The picture of economic well-being is crucially dependent on the yardstick by which it is measured. Official measures, such as gross money income and the Census Bureau's extended income, are meant to reflect a household's command over commodities, but, for the benchmark years studied here, these measures significantly understate the level and growth in such command. They also understate the inequality in the command over commodities.

The LIMEW is a more complete measure of economic well-being because it includes, in addition to the command over commodities, the availability of goods and services to households via public consumption and household production. We find that the LIMEW for the median household has increased faster than the conventional measures. The LIMEW is also more unequally distributed than extended income, which is the most comprehensive official measure of economic well-being.

Wealth inequality contributes a great deal to economic inequality, and its contribution to inequality was higher in 2000 than in 1989, as a result of the increasing concentration of financial wealth. Policies to promote the accumulation of wealth among households mired in debt, or without assets, combined with reasonable taxation of large amounts of financial wealth, are needed to mitigate the socially undesirable effects of wealth inequality. The marginal reduction in wealth inequality brought about by the bursting of asset prices since 2000 is not a substitute for the required government policies.

Government spending on behalf of households (transfers and public consumption) as well as tax legislation plays an important, progressive role by reducing inequality. However, the effectiveness of this kind of intervention was lower in 2000 than in 1989. Notably, mean net government expenditures were negative in 2000 and positive in 1989. Recent trends toward pro-rich tax cuts, scaling-back major discretionary transfer programs, federal budgetary priorities in favor of military expenditures and homeland security, and cutbacks in social expenditures by state and local governments may have further weakened the effectiveness of government policies. Previous accomplishments of popular legislation and efforts that brought about a progressive spending-tax structure will be seriously undermined if the current trends persist.

The growth rate of economic well-being between 1989 and 2000 was accompanied by a comparable increase in hours of total work by the median household. Since the time spent on household work remained constant, an increase in the hours of paid work reduced the availability of free time (time available for activities other than work). While the average household might be economically better off today, the improvement appears to have come at the expense of life-enriching activities and relaxation. Government policies and regulations, therefore, should actively support workplace arrangements that reduce the trade-off between income and free time.

Acknowledgments

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Notes

1. About 95 percent of base money income consists of earnings in both the benchmark years.
2. Comparison with the Census Bureau's extended income (a more comprehensive measure of command over commodities) reveals the same pattern.
3. Whites are non-Hispanic whites and nonwhites consist of everyone else.
4. For example, a common finding is that the elderly appear to be better-off when their economic well-being is assessed using a combined income and net worth measure rather than an income measure.
5. The Gini coefficient is an index that ranges from zero (perfect equality) to one (maximal inequality).

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