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INEQUALITY AND MULTIDIMENSIONAL WELL-BEING

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The world has undergone rapid and tremendous change in the last couple of decades, much of it attributed to some facet of globalization. We have witnessed the collapse of the Soviet Union; conflict and civil wars in many developing nations; the rapid economic progress of many countries in Asia, most significantly China and India; ongoing economic and social decline in sub-Saharan Africa; increased economic uncertainty in parts of Latin America and the Caribbean; and stagnation in many parts of the Pacific. Developed countries have not remained immune to the same global forces. While they have achieved ever higher per capita incomes, and higher well-being according to traditional measures, they have also experienced profound internal change, causing widespread concerns regarding, *inter alia*, social exclusion, human security, levels of personal satisfaction, and happiness. Thus everywhere we look seems to accord with the view of a global environment that is more dynamic and diverse, and, arguably, more volatile and uncertain.

Social science research on living standards, human well-being and quality of life has altered in response to the changing global conditions, new research priorities and improved data resources. Two decades ago, for example, a comparison of living standards across countries was typically accomplished using figures on average incomes converted into U.S. dollars using market exchange rates. Nowadays, a similar exercise would almost certainly take account of variations in purchasing power parity (PPP) between countries, and would also be likely to recognize two other important factors: the *non-income dimensions of well-being* that contribute to quality of life, and *population heterogeneity*, which casts doubt on the reliability and relevance of data on average income.

The increased recognition of population heterogeneity is reflected in the attention given to the distribution of income and expenditure, both within and among countries. There is now much more information on levels and trends in income inequality, prompted in part by the availability of more comprehensive and reliable data sets, and by greater comparability in national and sub-national

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income data. There is also a much larger selection of tools to assist in distributional analysis, including an ever growing number of indices of inequality (both vertical and horizontal), mobility, poverty and polarization.[1]

A similar expansion is evident in summary measures of human well-being, although here the principal thrust has been to supplement traditional economic indices of well-being with alternative indicators that capture non-economic or non-material dimensions of human life. In particular, it is now commonly accepted that human well-being should be treated as a multidimensional concept along the lines advocated by Sen (1985, 1993), Stewart (1985), Doyal and Gough (1991), Ramsay (1992), Cummins (1996), Narayan *et al*. (2000) or Nussbaum (2000). Among economists, the best known of these conceptualizations is the capability approach of Sen according to which a person's capability reflects the alternative combinations of functionings a person can achieve. Functionings, in turn, are the "parts of the state of a person in particular the things that he or she manages to do or be in leading a life" (Sen, 1993, p. 31). Well-being is thus assessed in terms of the capability to achieve valuable functionings.

At a more immediately practical level, numerous multidimensional measures of well-being have been proposed in recent years. Best known is the Human Development Index (HDI), introduced by the United Nations Development Programme in the *Human Development Report 1990* (UNDP, 1990). The HDI, which has been revised several times since 1990, currently combines PPP GDP per capita, life expectancy at birth, adult literacy, and the school enrolment ratio. It shares common features with a number of earlier multidimensional well-being indicators, including the Physical Quality of Life Index, which combined adult literacy, life expectancy and infant mortality (Morris, 1979). While the HDI has often been criticized by researchers, it is used extensively in research and policy work.[2] HDI values are currently available for 173 countries, with some series extending back to 1960 (UNDP, 1994, 2004).

Despite the progress achieved, many research questions concerning inequality and well-being remain open. For instance, there has been intense debate in recent years about the level and trend of global income inequality in the period since 1960, and especially since the early 1980s, seen by many as an era of particularly intensive globalization. Milanovic (2002a) distinguishes between three types of global income inequality: (I) inequality between countries in terms of GDP per capita; (II) inequality between countries in terms of GDP per capita weighted by population size; and (III) inequality among world citizens, irrespective of the country in which they live. Studies using data from the 1960s onwards tend to report increasing type I inequality (see, for example, Jackman, 1982; Barro and Sala-i-Martin, 1992; Sheehey, 1996; Jones, 1997; Firebaugh, 1999). Studies of type II inequality provide mixed evidence for recent decades: Ram (1989) and Korzeniewicz and Moran (1997) claim that inequality increased; Berry *et al*. (1983), Peacock *et al*. (1988), and Firebaugh (1999) suggest overall stability; while

[1]Silber (1999) provides a coverage of a number of these indices.

[2]The HDI has generated a large academic literature. Among the reviews of the index are those by Kelley (1991), McGillivray and White (1993), and Morse (2003). Anand and Sen (1992) and UNDP (1993) provide a survey of a number of early reviews.

Melchior *et al*. (2000) and Sala-i-Martin (2002) report declining inequality. While weighting clearly matters, Schultz (1998) and Firebaugh (1999) note that the way that GDP is measured also affects the results. Comparisons based on GDP converted using exchange rates reveal increasing inequality over the period 1960 to 1989, while those based on PPP adjusted GDP tend to show no trend (or even a decline, depending on the time period chosen). Relatively few studies have been published to date on type III inequality, but both Bourguignon and Morrisson (2002) and Milanovic (2002b) suggest that world income inequality increased during the periods 1960–92 and 1988–93, respectively.[3]

The six papers that follow in this Special Issue pick up on a number of the issues outlined above. They have been selected from papers presented at the UNU-WIDER conference *Inequality*, *Poverty and Human Well-being*, held in Helsinki in May, 2003.

The first paper by Steve Dowrick and Muhammad Akmal is entitled "Contradictory Trends in Global Income Inequality: A Tale of Two Biases." It asks whether global income inequality (of type II in the above taxonomy) rose or fell during the last decades of the twentieth century. The paper initially provides results consistent with those discussed earlier, suggesting that income inequality rose if the comparisons are based on exchange rates but fell if purchasing power comparisons (based on information from the Penn World Tables) are employed. The paper then argues that both measures of real incomes lead to biased international comparisons, because observations based on exchange rates ignore the relative price of non-tradeables, while the fixed price PPP method underlying the Penn World Tables is subject to substitution bias. The contradictory inequality trends reflect growing dissimilarity between national price structures that increase the degree of bias in each method of comparison. Dowrick and Akmal use the multilateral true index methodology of Dowrick and Quiggin (1997) to yield "true" PPP income comparisons that are free of both substitution bias and traded sector bias to examine changes in income inequality during the period under consideration. They find no evidence of a significant change in global income inequality.

The second paper by Peter Gottschalk and Sheldon Danziger is entitled "Inequality of Wage Rates, Earnings and Family Income in the United States, 1975–2002." It compares income inequality measured in four different ways: hourly wage rates; annual earnings of individuals; annual earnings of families; and total family income adjusted for family size. Although the precise causes are unclear, there is widespread agreement that wage rate and annual earnings inequality in the United States was higher in the late 1990s than 25 years earlier (Gottschalk, 1997). It is also commonly believed that family income inequality rose dramatically during this period, primarily due to increases in the late 1970s and early 1980s (Danziger and Gottschalk, 1995; Burtless and Jencks, 2003).[4] Gottschalk and Danziger find that both male wage rate inequality and family income inequality accelerated during the early 1980s, increased at a slower rate through the early 1990s, and then stabilized at a high level through the early 2000s. The similarity in the timing of

[3]Bourguignon and Morrison (2002) also report increasing income inequality from 1820 through to 1950.

[4]Cornia (2004) provides information on trends in other countries.

changes in these two distributions has been used in the past to support the view that increased inequality of wage rates is the principal cause of increased family income inequality. The paper casts doubt on this view, pointing to other, offsetting factors that affected family income inequality, including female wage inequality, which declined steadily from 1975 through to 2002.

The third paper in this Special Issue, "Using Functionings to Estimate Equivalence Scales" by Sara Lelli, uses Sen's capability approach to compute equivalence scales. Equivalence scales facilitate welfare comparisons across heterogeneous households by controlling for household composition. Lelli proposes using the achievement of a certain level of functioning as the identifying assumption for the scales. This procedure allows both for welfare comparisons between households of different size and composition and for the incorporation of other characteristics (such as location, employment status) in the creation of equivalence scales. The paper applies this approach to Belgian and Italian data to create equivalence scales for the functioning shelter. The results indicate that the income differences associated with different characteristics play only a small role in explaining differences in functionings, or conversely, that a household performing poorly in the functioning "shelter" would need a very large income transfer that would enable that household to address this functioning short-fall.

The fourth paper, by Xavier Ramos and Jacques Silber, is entitled "On the Application of Efficiency Analysis to the Study of the Dimensions of Human Development." This paper attempts to implement empirically some of the multidimensional concepts of human development reviewed by Alkire (2002). It compares the estimates of human development obtained on the basis of Sen's capability approach, the Narayan *et al*. (2000) dimensions of well-being, Cummins' (1996) domains of life satisfaction, and Allardt's (1993) comparative Scandinavian welfare study. Ramos and Silber utilize efficiency analysis, rarely applied to well-being assessments, to obtain these estimates of human development. Using data from the 1997 British Household Panel Survey, human development achievements are obtained for 7,545 individuals according to each of the above concepts. While the paper's findings vindicate the multidimensional approach to human development, they also show great empirical similarities between the four conceptual frameworks.

The fifth paper, entitled "How Should We Measure the 'Economic' Aspects of Well-being?" is by Lars Osberg and Andrew Sharpe. A number of multidimensional indices of well-being contain one or more variables intended to reflect economic well-being, variously defined. The HDI, for example, includes the logarithm of GDP per capita in order to capture the command over resources needed for a decent standard of living (UNDP, 1990). Osberg and Sharpe (2002) argue that a measure of economic well-being should contain dimensions representing average consumption, aggregate national accumulation of productive resources, income distribution and economic security. They go on to propose an Index of Economic Well-being (IEWB) that combines these four dimensions. In the paper here, Osberg and Sharpe present revised estimates of the IEWB for the U.S., the U.K., Canada, Australia, Germany, Norway and Sweden for the period 1980 to 2001. The paper then examines how estimates of the HDI would differ if the IEWB was used instead of GDP per capita. It shows that this changes the level and trend

of the HDI, even among affluent nations. One reason is that the IEWB incorporates four dimensions of command over resources, and these components may have significantly divergent trends, as is the case for the U.K. and the U.S.

The final paper of this Special Issue is "Measuring non-Economic Well-being Achievement" by Mark McGillivray. McGillivray observes that income per capita and most non-, or non-exclusively, income-based indicators of human well-being are highly correlated across countries. Yet it is also the case that many countries rank higher in the non-income components compared to the income component, while the reverse is true for many other countries. McGillivray begins by extracting the inter-country variation in a composite of various non-income-based well-being indices not accounted for by variations in income per capita. This residual is interpreted *inter alia* as a measure of non-economic well-being. The group of countries that does best in terms of this well-being is dominated by those which either still have, or in their recent pasts have had, non-market, centrally planned economies. The paper then looks at correlations between this residual and a number of new or less widely-used well-being measures, in an attempt to find the measure that best captures these achievements. A number of indicators are examined, including measures of poverty, inequality, health status, education status, gender bias, empowerment, governance and subjective well-being.

The papers in this Special Issue provide a number of insights, useful to both policy makers and researchers. Dowrick and Akmal add further weight to the argument that the measurement of real GDP matters critically for estimates of the extent of income inequality among countries. Their paper also casts further doubt on the view this inequality has risen in recent decades. The results reported by Gottschalk and Danziger show that different income measures provide different portrayals of changes in income distribution in the United Sates since 1975, as well as pointing to a fundamental apparent misconception regarding the causes of family income inequality. Lelli's results, outlined above, have an important message for policy that compensating people in monetary terms for functioning shortfalls will not necessarily be effective. Ramos and Silber show that while the various multidimensional well-being conceptualizations are quite distinct, empirically they seem quite similar based on data from the U.K. One is justified in asking whether this result might also hold for other countries. Osberg and Sharpe provide a case for more elaborate, multi-dimensional measures of economic well-being. The McGillivray paper shows that measures of gender empowerment and educational status do best, among the less widely reported and used indicators, in capturing non-economic well-being achievement. Given this finding it argues for more collection and reporting of these variables.

The topics covered in this Special Issue provide a good illustration of the range of current research on inequality and well-being. We hope that the papers will stimulate further research along similar lines.

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