COMMENTARY

Economic growth and the human lot

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In 1974, Richard A. Easterlin, a coauthor of the work by Easterlin et al. (1) in PNAS, published a seminal article (2) that has generated a huge literature. It sought to explain why the happiness score in the United States (and elsewhere) had stayed roughly constant, whereas income per capita had trended up. This evidence has come to be known as the Easterlin Paradox. His explanation was that economic growth has a positive effect on happiness with other things being equal; however, it also raises aspirations, and aspirations have a negative effect. Aspirations are determined by society, particularly reference group income. The combination of these two effects gives rise to a Hedonic Treadmill.

Subsequent literature has provided much evidence (based on increasingly rich microdata but mainly for developed economies) that is consistent with the original findings (3). Relative income is important for happiness, and although happiness always rises with income in the cross-section, it often fails to do so in the time series. It is true that a thorough investigation of many countries found a positive effect of income growth on happiness when imposing the same coefficient on income across countries (4). However, an analysis of the same data without that restriction found that the average value of the country coefficients was not positive (5).

Estimated functions show that income is by no means the only determinant of subjective wellbeing (the terms subjective wellbeing, happiness, and life satisfaction are used interchangeably). For instance, a study of Russia and Eastern Europe (6) found that life satisfaction followed a U-shape. It fell sharply when incomes collapsed during their economic Big Bangs, and it recovered less than the subsequent recovery of output would predict. It was argued that the loss of economic security that the centrally planned economies had provided dampened that recovery (6).

There is no better country than China for investigating the relationship between economic growth and life satisfaction. Over the period of economic reform, starting in 1978, income per capita rose 10-fold, China's Human Development Index score improved impressively in all three dimensions, and through its steady, evolutionary reforms, China avoided the hardship that would have accompanied an economic revolution. Surely the Chinese people became happier as a result?

Interpretation for China

The work by Easterlin et al. (1) draws together all of the available pieces of information on life satisfaction in China over the two decades from 1990 to 2010 to provide a time series. The work by Easterlin et al. (1) concludes that it follows a U-shape, the trough being in the years 2000–2005, but that, overall, there

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is no increase in life satisfaction. The interpretation placed on these results is that they reflect the socioeconomic changes that accompanied economic growth and transition. Before the mid-1990s, urban workers had enjoyed iron rice bowls—lifetime employment in mini welfare states provided by their employers. Over the following decade, the urban economy underwent the drastic reforms needed to sustain rapid growth. The state-owned enterprises were closed, privatized, or reformed, and many millions of their workers were made redundant. The iron rice bowl provided by firms collapsed, and its replacement by broader social insurance arrangements was tardy and incomplete. Urban unemployment—both actual and threatened—rose sharply from previous very low levels and only gradually declined. Thus, the low point in life satisfaction matches the high point in people's sense of economic insecurity.

It is consistent with the interpretation of the U-shape that analysis of a 2002 cross-section found that the mean subjective wellbeing of rural residents was higher than the mean subjective wellbeing of urban residents, despite the much higher mean income in the latter sample (7). However, both this unexpected rural advantage and the fact that life satisfaction failed to rise over the two decades might, in addition, require consideration of the role of relative income. The inequality of household income per capita (as measured by the Gini coefficient) rose dramatically: from 0.40 in 1988 (then largely regional) to 0.48 in 2007 (then the highest in Asia) (ref. 8, p. 217).

Cross-section studies for China report high sensitivity to reference group income: low income relative to one's reference group reduces subjective wellbeing (9). Reference groups in China are narrow, being fellow villagers or fellow city residents. (It is possible to distinguish the effects of absolute and relative income because of the wide variation in mean income across villages and across cities). Thus, another reason for the long-term constancy of life satisfaction may be that the effects of reference group income neutralized the effects of own income, even in a country as poor as China.

There is evidence of a marked increase over the two decades in the inequality not only of income and healthcare but also, life satisfaction (1). This finding is in line with the positive association between household income per capita and life satisfaction that is found in point-of-time cross-section data. However, the hypotheses that the effect of relative income on life satisfaction becomes more important and that mean life satisfaction falls as the inequality of income rises (and thus, social cohesion is weakened) remain to be tested for China.

Policy Implications

Although the Chinese government does not permit the official measurement of happiness, the post-2005 policy of promoting a Harmonious Society—including policies to reduce inequality and improve and extend social security—suggests that it has become concerned about the factors that may have held down life satisfaction.

Happiness equations have produced statistically significant, powerful, and understandable coefficients and impressive similarities across countries or contexts. They reveal many relationships that deserve explanations. However, there is no consensus on their normative implications and their use for policy purposes. Certainly, there are policy converts, which is illustrated by the recent *World Happiness Report* (10), but despite the centrality of the notion of utility (and its distribution) to traditional welfare economics, many economists remain skeptical. For instance, there is an uneasiness about the way that aspirations

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adjust endogenously; there is a view that preferences should be revealed by behavior and not by report and another view that happiness scores are biased by respondents' use of different scales. Yet another view holds that happiness, as measured, is just one component of the utility that is assumed to guide economic actions.

From small beginnings less than four decades ago, the debate on this fundamental issue—so crucial to the human lot—continues.

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