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## Relative Deprivation in China

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Relative deprivation (RD), also known as relative poverty<sup>2</sup>, an idea implicitly put forward by Adam Smith in *The Wealth of Nations* and formally conceptualized by Runciman (1966), refers to the discontent people feel when they compare their positions to others and realize that others in the group possess something that they do not have. RD is important to Chinese people as reflected in the traditional saying “*it is better to be the head of a chicken than the tail of a phoenix*”, indicating that taking a relatively good position benefits people in the Chinese society. RD is also a pressing issue for China after its three decade unprecedented economic growth accompanied by inequalities at historically high levels. This entry reviews key measures of RD and empirical findings for China. I also discuss some of the most pressing policy issues with regard to RD.

Reference group is crucial to RD measures. Reference groups can be defined quite differently in specific contexts. In a developed society, information flow is fast and efficient, such that reference groups are not straightforward. However, in an impoverished traditional community, poor public infrastructure drags resource flow, and the evolution of local norms strengthens reciprocity. These differences facilitate a much improved definition of reference group. Substantial ethnographic evidence documents social interactions more appropriate at the village level in less-developed rural communities. Mangyo and Park (2011) suggest that village reference groups are salient for residents living in close proximity in rural China, while relatives and classmates are salient reference groups for urban residents. Knight et al. (2009) find that two thirds of rural respondents reported their own village as the main comparison group, whereas very few stated main comparison group outside the village.

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<sup>2</sup> In contrast to absolute deprivation (or absolute poverty) that applies to all underprivileged people, relative deprivation comes from a comparison to the reference group. While economic growth may be accompanied by massive absolute poverty reduction, relative deprivation may not change as long as inequality persists.

RD has been measured along various socioeconomic distributions, including general consumption, status goods consumption, income, other perceived economic welfare and financial status relative to peer group members.

Studies first attempt to measure RD at the community level. Some studies identify the effect of relative income by community average income. Carlsson and Qin (2010) conduct a survey-based experiment to elicit people's preferences regarding relative standing. They find that poor Chinese farmers care about relative status to a high degree comparable to previous studies in developed countries. Mangyo and Park (2011) verify the negative impact of RD status on self-reported health and psychosocial health.

Meanwhile, the community Gini coefficient is often used since it can be derived from aggregation of RD. Li and Zhu (2006) find a significant inverted-U association between Gini coefficient and self-reported health. Meanwhile, Gini coefficient increases health-compromising behavior such as smoking and alcohol consumption. Gini coefficient does not explain any of the health outcomes and health behavior investigated except high waist circumference among older adults (Ling, 2009). However, community inequality measures mask individual RD and mix the impact of inequality with that of RD by implicitly assuming even the richest people suffer from RD. Jin et al. (2011) investigate differential RD impacts between the rich and the poor.

Higher order community RD measures, such as skewness and kurtosis statistic, are also used. Both are good measures of local density in tails of income distribution. Brown et al. (2011) document that the relatively deprived rural households increase spending on funerals and gifts as competition for status intensifies. Moreover, lower ranked families of grooms (but not brides) increase spending more on wedding ceremonies as local income competition increases.

*Individual* level measures gauge RD via the differences between own income and the incomes of the richer members of the group. One would feel more deprived as the number of individuals in society with higher income increases. To begin with, RD of Absolute Income (RDA) sums the income differences and weighs with the number of people in a reference group. One concern is that it does not normalize for income scale across groups. Doubling everyone's income

automatically doubles RD. Therefore, RDA overstates RD of individuals in high-income reference groups. To improve, RD over Individual Income (RDI) divides RDA by the individual's own income. Using both RDA and RDI measures, Li and Zhu (2006) find insignificant impact of RD on self-reported health status. Moreover, Wildman (2003) proposes a measure of individual-specific RD defined intuitively based on the Lorenz curve that incorporates the cumulative proportion of total income and population up to the individual. Ling (2009) finds that among older adults this measure imposes different effects on health behavior and outcomes, and those less relatively deprived are not necessarily healthier than those more relatively deprived.

Deaton (2001) proposes a measure of RD to integrate the model of mortality and income with the animal and human evidence on inequality and health. The Deaton RD measure takes normalized differences between the average income of those with higher income and this individual's income weighted by the proportion of those with income higher than the individual. Stark and Yitzhaki (1988) develop a RD measure to explain distinctive migration patterns for the rich and poor. While the two measures are in similar forms, the Deaton RD measure is further divided by average community income to normalize the RD index.

Four immediately advantages of the Deaton measure follow. First, large scientific evidence, in public health, psychology, animal science and economics and so on, lays its foundation. Second, it normalizes for scale to avoid overestimating RD in high-income groups. Third, relative to some other RD indexes, it is more sensitive to income distribution. Fourth, it is bounded between 0 and 1, which facilitates interpreting the magnitude of empirical findings.

Ling (2009) concludes that higher Deaton RD lowers odds of high waist circumference, increases nutritional intake, reduces probability of being overweight, and raises probability of ever smoking. However, probability of being underweight, hypertension and current smoking behavior are not much affected. Chen et al. (2012) utilize gift books kept by rural households to document that the relatively deprived households spend much higher budgets on gifts and festivals, and status seeking accounts for much of the recent escalating household social spending. On average, these scarce resources are barely enough to cover wasteful status games,

such as costly weddings and funerals. In consequence, children born to mothers in more relatively deprived households are more likely to suffer from malnutrition indicated by low height-for-age z-score and high stunting rate (Chen and Zhang, 2012).

Most *individual* level RD measures presume that the distance between two agents matters, either in proportional or absolute terms. However, studies on animals suggest rank over distance in importance. Unlike most of the other measures, rank is unaffected by changes in the shape of the income distribution and ignores the magnitude of income differences among individuals. Higher rank corresponds to lower RD. Li and Zhu (2006) and Sun and Wang (2012) utilize individual's rank within the reference group. Li and Zhu (2006) find no rank-specific harmful effect of income inequality on health, though lower rank corresponds to worsened health outcomes. Sun and Wang (2012) find a negative relationship between income rank in the community and its consumption rate, and the impact on total consumption is mainly reflected in the expenditures on housing, education, clothing and eating out.

RD studies in China concentrate on three aspects – saving and consumption, health, and happiness. I relate the empirical findings to policy discourse and then discuss RD's implication on poverty alleviation and more general development policies.

Regarding saving and consumption, non-positional and positional consumption are distinguished. People signal wealth and education attainment to improve social status that ties to large benefits in China. Worsening inequality raises benefits and entry costs for high-status and strengthens saving incentives to increase positional consumption, typically on housing, and reduces non-positional consumption, and cut non-positional consumption, especially for poorer groups (Jin et al., 2011). Future research is expected to investigate potential macroeconomic impacts of RD status, such as high saving rate, low consumption, and escalating housing price in China.

High RD raises the importance of social inclusion, which incurs large expenditure among the poor. There is a large literature documenting high spending on gifts and festivals among the poor that serve as essential social roles, and the consequences of refusing to participate are grave. Evidence from China has shown that the poor could spend more on basic food instead of

festivals but failed to do so. The studies on RD and social inclusion shed light on why the nutritional status of the poor is stagnant amid rapid growth in developing countries (Chen and Zhang, 2012).

Most studies on RD and health point to its negative consequences. These findings indicate the unintended impacts of economic policies in stimulating growth disparities to affect individual health and health inequality. The issue is further complicated by findings from older adults (Ling, 2009) that being less deprived may not guarantee better health and neither do those who are more deprived have worse health. More research is needed to examine absolute and relative income effects on health inequalities along major health behavior and outcomes.

Studies on RD and happiness attempt to account for the Easterlin Paradox: average happiness has remained constant over time despite sharp rises in income but, at the same time, positive correlations are found between individual income and subjective well-being. The two trends puzzle policymaking, and China studies confirm the important role played by RD (Knight et al., 2009; Mangyo and Park, 2011). To reconcile the two seemingly contradicting trends, we should know how RD works. RD may arise due to positional goods that give utility when most other people do not have them or aspirations formed by relative comparisons that affect utility. The former is evaluated relative to others (social comparison), while the latter is evaluated relative to oneself in the past (habituation) as well as to others (social comparison).

The strong evidence of RD in developing countries would point to important trade-off for current development policies and therefore cast serious doubt on the welfare justifications. Considering the case when relative income imposes counteracting impact (equal to the positive effect of own income) on well-being, an equal proportionate increase in all incomes would have no impact on average well-being. In this case, promoting poverty reduction without considering their income gains on social comparators would entail welfare efficiency costs, as poor people face inefficiently high incentives to escape poverty without taking account of their negative spillover effect.

Finally, the idea of RD can be generalized to analyze social competition in other aspects. For example, owning a house was not a prerequisite to getting married twenty years ago. However, skewed sex ratio favoring girls due to the combination of son preference and implementation of the One Child Policy has totally changed the landscape in the last decade. At present, families with son, especially those without a house, are relatively deprived in the marriage market, which bears long-term impacts that worth further investigation.

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