BOOK REVIEW

POVERTY, INEQUALITY AND POPULATION: ESSAYS IN DEVELOPMENT AND APPLIED MEASUREMENT

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Oxford University Press, New Delhi

Review by
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This collection brings together previously published papers by D. Jayaraj and S. Subramanian (hereafter referred to as JS), two scholars at the Madras Institute of Development Studies. Broadly speaking, these twelve essays cover the areas of Poverty, Inequality and Demography, with a major chunk (seven) focusing on the last issue. Apart from the authorship, a common thread that unites these essays is their concern with measurement. In the interests of space, in the review below, I will focus upon selected essays to highlight the major themes of this collection. Rather than dwelling upon technical details, I will try to discuss issues at the conceptual level.

The first three essays focus on poverty. The first essay deals with child labor, using a broader definition (than what is conventionally used) of this phenomenon: child laborers are children not in school. Deploying this definition, and using a multidimensional index of poverty (in the spirit of Amartya Sen's capability approach), this essay finds a strong association between child labor and poverty in rural India. The empirical strategy is to use data from the 1991 census to compute for each district, the head-count ratio of child labor and the multidimensional index of poverty. The index of poverty is constructed by summing up the proportions of the population lacking on each dimension and dividing this sum by the number of dimensions.[2] JS then examine the correlation between the head count ratio of child labor and the index of poverty, and find a strong association. This finding linking poverty and child labor has to be seen in the context of some studies that have been skeptical of such a link. Some may find the definition of child labor too expansive. I do think that there are certain advantages of using a narrower definition, e.g. it would throw light on different kinds of activities that children could be involved in (e.g. working at home, working on the family farm, working for a wage, idleness), but this is not a serious shortcoming. If we do accept this definition – essentially one of "lack of school attendance," the methodology is interesting and the findings are plausible. However, I would label the findings as suggestive, given that they are based upon correlations - that too at the district (and not at a

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[2] Eight dimensions are chosen: schooling (presence of a middle/high/higher secondary school in the village); potable water (access to tap water); mobility (presence of bus stop or railway station); mobility (connected by a metalled road); healthcare (presence of a health facility); fuel (presence of forests); fuel (access to non-labor intensive fuel sources) and electricity (access to electricity).

household or even village) level. A household level regression analysis, controlling for all the relevant variables and addressing the econometric issues that may arise (e.g. endogeneity) would be far more convincing. In my own research on human capital accumulation by Indian children (Motiram and Osberg 2011), I have found school attendance to be influenced by both demand side (e.g. female literacy within the household, scheduled caste or tribe status, income proxied by consumption expenditure) and supply side (availability and quality of schooling) factors. Policies focusing on the supply side (e.g. improvement in the quality of schooling) have a potential for making huge improvements to school attendance and time spent on human capital accumulation.[3]

The second essay focuses on poverty eradication through redistributive taxation. The third essay looks at the unequal sharing of poverty burden among various subgroups of the population (based e.g. upon caste, religion etc.). It develops measures of poverty by building upon the well-known Foster-Greer-Thorbecke class of poverty measures with the additional requirement (or to be more precise, while allowing for the additional possibility) that inequality of poverty among subgroups be penalized. Conceptually, the biggest merit of these measures is that they elucidate and incorporate notions of group justice (in contrast to notions of justice at the individual level). Using National Sample Survey data in 1983 (38th round) for rural India, JS show that average consumption expenditure for Scheduled Castes and Tribes (SCs and STs) is lower than the same for others, both at the all-India level and in various states, and that poverty among SCs and STs is higher at the all-India level. As expected, using these measures, increasing the penalty on inequality of poverty among subgroups (by using a sensitivity parameter) leads to an increase in poverty. More interestingly, the rankings of states are somewhat different when these measures are used, as compared to when standard measures are used. The empirical exercise also illustrates the relative disadvantage and discrimination being faced by the SCs and STs – a finding that is unsurprising, but one that needs to be emphasized. It may be worthwhile to point out that although the empirical analysis is dated (being from the 1980s), the relative status of the SCs and STs continues to be bad even today, as many recent studies have indicated (Deshpande 2011).

Continuing on the theme of subgroups, one criticism that has been made of the inequality literature (most notably by Stewart (2001)) is that it has focused largely upon interpersonal (vertical) inequality rather than upon inequality among groups (horizontal). Responding to this, the essay on "Horizontal and Vertical Inequality" develops certain indices to measure relative disadvantages of groups in a society. One could label the strategy of constructing these indices as focusing on "representational inequality" – for each group, the idea is to construct a measure by looking at its share in the population and comparing it with its share in income. One can then aggregate these group-level measures to obtain a societal-level index of relative disadvantage. There are two benefits of this strategy (and these indices): first, they are simple to compute and easy to interpret; second, one can go from horizontal to vertical inequality by computing these indices for atomistic groups (i.e. individuals). JS present an interesting illustration of these indices using geographical regions in the world (as subgroups) and real GDP, and show both the relative

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[3] JS would agree with these policies since they argue that: "A prioritized plan for the creation and supplementation of infrastructural facilities in the rural areas of the country is urgently called for, as is a plan for improving the quality of public services where they exist." (p. 61).

disadvantages of various geographical regions and how unequal the world is. However, one caveat needs to be made here - representational inequality is an important dimension, but only one of the several dimensions on which group-based inequalities can manifest themselves. Recent literature (e.g. see Chakravarty (2009) and the references therein) has made some advances on this front, although I think much work needs to be done. I have in mind studies on multidimensional inequality and polarization, particularly the work on occupational segregation and studies (e.g. Jayadev and Reddy 2010) combining representational inequality with other notions (e.g. segregation).

For a long time, economists have been aware of the importance of wealth (for entitlements, access to credit, occupational choice etc.). There has also been rich data available for India in the National Sample Surveys. It is therefore surprising that there has been very little work on the analysis of wealth in the Indian context. The essay "The Distribution of Household Wealth in India" fills this gap by using four rounds of the National Sample Survey data (1961-2 to 2002-3 at ten year intervals) on household assets and liabilities to discuss the patterns and distribution of household wealth in India. There are several interesting findings, but in the interests of space, I will mention only a few – land and buildings are the most important sources of wealth; there is considerable accumulation of wealth (both nominal and real) in the period examined, both in rural and urban areas; there is considerable inequality in wealth whether we focus upon households or subgroups (caste or occupational categories) – the worst-off being Scheduled Castes and Tribes and laborers (agricultural in rural areas and casual in urban areas). One criticism of the analysis is that it is done at the household level (i.e. ignoring household size), which implicitly assumes perfect returns to scale in the use of wealth within the household and that wealth is a public good. This issue is discussed in detail in Jayadev et al. (2007), who perform the analysis at the per-capita level[4] for the latest two rounds (1991 and 2002). They document similar patterns, but importantly, find a modest but perceptible increase in wealth inequality between 1991 and 2002.

As mentioned above, the largest chunk of the essays are on demography. They deal with age structure, agedness, femaleness, sex ratios, and the misuse of census data and demography. There are two essays that deal with the female to male (sex) ratio and its connections with wellbeing. The issue of falling sex ratio continues to be of great importance and concern in India, as is evidenced by the reactions to the preliminary figures from latest (2011) census (e.g. see the article in *The Hindu* by Kumar (2011)). In one of the essays ("Women's Well-being and the Sex Ratio at Birth"), JS examine the reasons for the decline in the Sex Ratio at Birth (SRB=number of females for every 1000 males) in India. In the literature, the dominant explanation for this trend has focused upon sex-selective abortion and female infanticide. While being cautious and not discounting this explanation, JS argue that economic development and the concomitant reduction in fetal wastage rates could partially explain the worsening of the SRB. Broadly, the basic idea is as follows: the wastage rate for male fetuses is higher than the same for female fetuses. Hence, a decrease in the fetal wastage rate (ceteris-peribus) would lead to a reduction in the SRB because compared to earlier, more male fetuses would be born for every female fetus born. There are several factors that occur in the process of economic development

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[4]   The main issue is one of the right equivalence scale. No consensus exists on this in the Indian context. Hence, the use of per-capita values is also not beyond critique.

that lead to a decrease in the fetal wastage rate (better sanitation, increased availability of trained medical professionals etc.) thereby contributing to a reduction in SRB. They also highlight the fact that the SRB has been declining for a while (Table 9.2) whereas the technologies for sex determination are more recent. What do we make of this claim? I am no expert of this literature (particularly the medical and biological strand), having been just a critical consumer, but it seems to me that JS have presented a plausible mechanism. I also agree with JS that: the idea that the process of economic development is/has been inimical to women[5] can be contested on empirical and theoretical grounds; what one can infer from a falling sex ratio can be complex; and the wellbeing implications of a change in sex ratio can also be complex.[6] However, in quantitative terms, how important is the mechanism that works through fetal wastage? In other words, what percentage of the decline in SRB can be explained by the reduction in fetal wastage rates? Is the contribution low or high – high enough to constitute a significant explanation/phenomenon? I am afraid that one does not find an answer to this question. The problem is the lack of reliable data – not only on sex-selective abortions and female infanticides, but also on fetal wastage rates. I myself find the sex-selective abortion and infanticide story compelling (despite the data issues) because of the enormous amount of suggestive evidence. One could also argue that (improperly documented) female infanticide has been occurring for a long time in India – long before sex determination technologies became available. It might be worthwhile here to refer to some studies[7] that have looked at Indians living in developed countries (e.g. US, UK), where the contribution of fetal wastage rate mechanism should be expected to be low. These studies have found not only lower SRB (compared to other groups, e.g. Whites), but also a decline in the SRB.

There are two essays on how demography can be (and has been) abused to suit partisan interests. The first ("Manufacturing Hysteria") describes how Indian "nationalists" misused the 2001 census findings to drum up hysteria about the possibility of Muslims overtaking Hindus in the not-so-distant future. At the heart of this (misplaced) nationalist argument is the: reduction (increase) in the share of the Hindu (Muslim) population from 1991 to 2001; reduction (increase) in the rate of growth of the Hindu (Muslim) population from 1981-91 to 1991-2001. JS show that changes in both the shares and growth rates were exaggerated in the initial reports because differences in geographical coverage (among different censuses) were ignored.[8] More importantly, JS show that for two different groups (e.g. Muslims and Hindus), differences in the proportion of women of child-bearing age can lead to differences in growth rates. Differences in proportions can arise as a result of differences in infant mortality rates and/or sex ratios. Essentially, contrary to nationalist claims, no sinister explanation (e.g. conversion, overproduction, illegal migration) is needed for the rising (falling) share of the Muslims (Hindus) or the falling growth rates of Hindu population. The second essay ("Abusing Demography") is a critique of a book that uses census data and regression analysis to show how the "Indian

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5   JS cite studies that have made this argument.

6   This is a concern of the other essay on sex ratio ("The Well-being Implications of Change in the Sex Ratio of a Population"), which uses decomposition analysis to examine the components that make up the sex ratio.

7   For example, Egan et al. (2011) from the US and Dubuc and Coleman (2007) from the UK. I thank S. Chandrasekhar and Anuja Jayaraman for referring me to these studies and for a discussion of this issue.

8   The states of Assam and Jammu and Kashmir were not included in the 1981 and 1991 censuses, respectively. However, this was not taken into account in the initial computations.

religionists" would be reduced to a minority status in the near future. JS persuasively demonstrate the dubious analytical content of the category of Indian religionists (which is used inconsistently, and excludes Muslims and Christians, but includes disparate groups like Hindus, Sikhs, Buddhists, Parsis and Jews). JS also demonstrate the arbitrary and problematic nature of the methodology (of third order polynomial regression) used to project population shares into the future. In my opinion, JS successfully show this "scholarship" for what it is - an example of religious bigotry masquerading as science. In these two essays, JS are also correct in highlighting and criticizing the role of media and other institutions (e.g. ICSSR) in aiding the nationalist agenda.

JS present a very good introduction that not only summarizes these essays, but also provides a context (including relevant recent literature) for some of them. I would have liked to see more of the latter since some of the findings from India are dated. In the introduction, JS state the following three purposes for these essays: "to clarify the analytical bases of certain approaches to the measurement of certain development indicators; to cast light on certain phenomena through the medium of measurement; and to warn against the conscious or unwitting employment of measurement as a tool for distorting social reality" (p. 2). I think, taken together, these essays serve these purposes quite well. Overall, this collection should be quite useful for people interested in development, particularly measurement in the context of developing countries. These essays offer a lot of information on various issues and debates in the Indian context, so they should be useful to people working on India.

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