

Intra-Household Inequality and Overall Inequality

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Introduction (1)

- The discourse on inequality in the welfare state has (at least) two strands.
- One strand focuses on inequality between individuals, and poverty of individuals. This is perhaps the fundamental orientation.
- Another strand looks, broadly speaking at inequality across groups defined by ethnicity, gender, region, etc. For example, total inequality is decomposed into a “between group” and a “within group” component.

Introduction (2)

- In this second strand, the grouping is sometimes envisaged as merely instrumental for policy, providing an instrument of intervention, eg targeting expenditures by race or gender or region (or nation for global inequality). The objective is still inequality between individuals.
- At other times, however, the group is seen as having normative significance. Now the inequality decomposition has ethical significance over and above the instrumental.
 - Race, Gender, Location of Birth and “Inequality of Opportunity”
 - Global Inequality and the Nation State
 - Within and Between Households?

Some Basic Analytics (1)

- Divide the population of individuals indexed into mutually exclusive and exhaustive groups indexed g .
- Let the density of income y be $f(y)$ overall and $f_g(y)$ for group g . Let the mean be m overall and m_g in each group. Let the inequality be I overall and I_g .
- Let I^B be the inequality when each member of a group g is given the mean income m_g of that group. Thus within group inequality is suppressed and what is left is the between group component.

Some Basic Analytics (2)

- The within group component is $I^W = I - I^B$
- Big technical literature on “decomposability.” For some indices, I^W has a particularly simple form. For example, for the Mean Log Deviation (MLD), I^W is simply a weighted sum of the group MLD_g s, the weights being the population shares of the groups.
- The contribution ratios I^W / I and I^B / I have been deployed extensively in the literature, in the positive and the normative context.

How Much Intra-Household Inequality? (1)

- There is, clearly, significant intrahousehold inequality, and a big literature on it. For example:
 - Differential gender based achievements in human development indicators.
 - Unitary vs Non-Unitary models of the household.
- However, we do not have decompositions of standard individual income/consumption/expenditure inequality into a between households component and a within household component, as we do for many other groupings.

How Much Intra-Household Inequality?

(2)

- This is understandable.
 - Household surveys typically collect expenditure data at the household level.
 - Difficult conceptually and empirically to allocate to each individual benefits of household public goods.
- However, what this means is that our standard statistical measures of inequality (and poverty) in effect suppress intra-household inequality and thus understate true inequality.
- But by how much?

How Much Intra-Household Inequality?

(3)

- Haddad-Kanbur (1990) used individual level calorie intake data from a specially conducted survey in the Philippines, and individual level calorie requirements for specific socio-demographic groups to calculate (i) true inequality of calorie adequacy and (ii) the inequality number if we ignored intra-household inequality.
- The results were striking. Inequality is understated by 25%-30% if intra-household inequality in calorie adequacy is suppressed. (Same is true of poverty).
- For some reason we have not had comparable exercises since then, assessing how far wrong we go with our standard statistical measures.
- But it matters! It is not a rounding error.

Exercise 1: Growth, Poverty Reduction and Inequality (1)

- So, standard measures of inequality based on household surveys understate the level of inequality, perhaps by 25%-30%.
- What else is understated, or perhaps overstated?
- Consider the literature on “growth elasticity of poverty reduction.” This literature creates a benchmark of distribution neutral growth where all incomes increase in the same proportion. The question is then asked—by how much more does the poverty index fall when the mean of the distribution, and each income in the distribution, increases by 1%?

Exercise 1: Growth, Poverty Reduction and Inequality (2)

- A basic result in this literature is that (under certain conditions), the growth elasticity of poverty reduction itself is lower when inequality is higher. Thus the transmission from growth to poverty reduction is weaker when inequality is higher.
- Now apply this to the case where true inequality is understated by our data because of the inability of household surveys to capture intra-household inequality.
- It must follow that because we are underestimating true inequality we must be overestimating the growth elasticity of poverty reduction. The true growth elasticity is actually lower than our standard estimates suggest.

Exercise 1: Growth, Poverty Reduction and Inequality (3)

- I have argued in Kanbur (2010) that this is one of several reasons for the seeming disconnect between improvements indicated by official poverty data and the ground level perceptions of civil society which tend to be more cautious.

Exercise 2: Minimum Wage and Poverty (1)

- There is a conventional debate between proponents and opponents of the minimum wage. If enforced, in a competitive labor market a minimum wage will increase wages of those employed but reduce employment. If those made unemployed fall below the poverty line, this factor will have to be taken into account in the evaluation of policy.
- However, COSATU in South Africa has mounted the counterargument that there is sharing between employed and unemployed within households. So if indeed unemployment is caused by a higher minimum wage, it cannot so easily be associated with an increase in poverty.

Exercise 2: Minimum Wage and Poverty (2)

- Consider the case where all workers are members of a grand household and that there is perfectly sharing between employed and unemployed.
- Then all that matters is the total wage bill. If the elasticity of labor demand is less than 1, an increase in the wage will increase the total wage bill and thus increase consumption of each worker.
- This would be the cleanest and strongest statement of the COSATU position.

Exercise 2: Minimum Wage and Poverty (3)

- But now suppose there isn't a grand national household, but workers are formed into 2-worker households. The probability that a worker gets a job is the national employment rate, e .
- Then the probability that both workers in household get a job with the wage w is e^2 ; that neither worker gets a job is $(1-e)^2$; and the probability that one of the two workers gets a job is $2e(1-e)$.
- Assuming perfect sharing within each household, the consumption of individuals in these three types of households is $w, w/2, 0$.

Exercise 2: Minimum Wage and Poverty (4)

- The distributional consequences of an increase in the minimum wage are now more complex, but still tractable.
- The poverty consequences of an increase in w and the attendant consequences for e are intricate, and depending not only on the poverty index but also on where the poverty line lies in relation to w , $w/2$ and 0 .
- And, of course, the assumptions on intra-household sharing matter as well.

Exercise 2: Minimum Wage and Poverty (5)

- Fields and Kanbur (2007) carry out this analysis of integrating intra-household considerations into the minimum wage debate.
- The conclusion is that the details matter. COSATU's claim has credence, but not blanket credence.
- But the main point is that intra-household distribution matters for this major policy debate in the welfare state.

Exercise 3: Targeting of Public Programs (1)

- Intra-household issues are quite prominent in the design of transfer programs.
- The old argument in the UK between whether child benefit should be given through the tax system (essentially through the male paycheck) or through the benefit system (say picked up at the post office by the mother) reflects these concerns.
- In the developing country context, and also in developed countries, the intra-household adjustment following on from nutritional supplements given at school are of great concern. What good is an extra glass of milk at school if the child gets a glass of milk less at home as a result? Intra-household flypaper effects, etc.

Exercise 3: Targeting of Public Programs (2)

- These policy issues are linked closely to the literature on unitary versus non-unitary models of the household.
- If households were unitary, with an integrated budget constraint, it would not matter to whom the resources from the public program were targeted. But there is now considerable evidence against the unitary model, with the implication that who has the transfer matters. (Alderman, Chiappori, Haddad, Hoddinott and Kanbur, 1995)
- The intricacies of intra-household transfers and adjustments thus need to be understood for a welfare state policy whose objective is to reduce inequality among individuals and the deprivation of individuals.

Exercise 3: Targeting of Public Programs (3)

- But two issues arise.
- First, keeping the objective of maximizing social welfare defined on individual wellbeing, is intra-household redistribution a more potent instrument for achieving impact on social welfare than inter-household redistribution?
- Although we have indirect discussions of this question, I do not see it being addressed directly in the literature and in my view it remains an open area of research.

Exercise 3: Targeting of Public Programs (4)

- Second, moving beyond the instrumental, what is the normative legitimacy of a welfare state getting deep into intra-household redistribution issues? At what point should such intervention stop? In my view progressives and egalitarians have not addressed this question sufficiently.
- [Similar questions arise in the context of global redistribution. If the objective is global inequality (or poverty), there is clearly a possible instrumental role for transfers to, say, poorer countries. But there are deeper philosophical debates between, for example, Global Rawlsians and Rawls himself, on the nature of moral responsibility towards the poor in non-poor nations—Kanbur and Sumner, 2012]

Conclusion

- Assessing the specific contribution of intra-household inequality to standard measures of overall inequality and poverty is problematic. More research is needed in this area.
- However, intra-household inequality is clearly important.
- Neglecting it would lead to
 - (i) an understatement of inequality and an overstatement of the impact of growth on poverty reduction;
 - (ii) an understatement of the potential impact of minimum wage policies on poverty;
 - (iii) mis-design of transfer policies to reduce inequality and poverty.

Some Papers

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Thank You!