Conspicuous Consumption, Social Status and Measures of Poverty – An Example

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ABSTRACT

The existing literature on poverty has discussed about the conflict between income-based measure and nutrition-based measure. However, the role of social inequality in influencing individual's consumption and inducing greater consumption of the so called status good has been relatively undermined. This paper attempts to show that in presence of inequality a status driven utility function reconciles the conflict between income based and nutrition based measures of poverty.

Keywords: Inequality, Utility, Poverty,

JEL Codes: D63, D11, I3

Introduction

The idea of conspicuous consumption and the so-called Veblen effect are quite well known in economics. Very recently Sivanathan and Pettit (2010) have confirmed the fact that individuals are quite sensitive to their relative status in the society. This is one of the building blocks of the utility function that we use and the subsequent analysis.

The paper starts off by highlighting a well observed empirical phenomenon discussed extensively in the literature on poverty in India. In this context Patnaik (2007) and Deaton and Dreze (2009) have discussed about the conflict between income-based measure and nutrition-based measure of poverty. In India people moving above the poverty line with greater monthly expenditure on overall consumption demonstrates lower nutritional intake. Thus Patnaik (2007) asserts that actual poverty estimate is is essentially an underestimation relative to the optimistic figure provided by the Government. Deaton and Dreze (2009) analyze various reasons for such a behavior. However, not much emphasize is given to the role of status driven consumption pattern. That social inequality can influence individual's consumption and induce greater consumption of the so called status good, becomes quite relevant for such analysis. Thematically this is undermined and underexplored in the poverty literature. In the current paper we shall demonstrate how preexisting social inequality can lead to the conflicting measures of poverty. Fafchamps ans Shilpi (2008) have demonstrated how the presence of richer persons in a community affects the perceptions of well being of the individuals. Such perception coupled with the status driven consumption behavior can lead to a bias towards current consumption.

A voluminous literature discusses the impact of social status, relative income and relative rewards on productivity such as Hopkins and Kornienko (2010), Ku and Salmon (2010), on optimal taxation such as Beath and Fitzroy(2010), Kanbur and Toumala(2010) and on network such as Ghiglino and Goyal (2008). However, these papers do not deal with the issues we are discussing in this paper.

The paper proceeds as follows. In the next section using a simple example we discuss the issue of possible conflict between income and nutrition based measures of poverty. The last section concludes the paper.

Basic Framework

We start from two possible axioms as to how perceived social inequality affects the individual welfare.

Axiom 1: Inequality hurts.

This implies that having below average income in a society reduces individual utility. Our assumption will be that being above average does not matter, but being below definitely hurts. This asymmetry is deliberate to highlight the implications of belonging in the downside of inequality.

Axiom 2: Inequality increases MU for status good.

Having lower than average income increases the marginal utility of conspicuous consumption or consumption of the status good. This is directly drawn from experimental psychology literature where intensity of desire to consume the status good seems to be greater among those who are psychology affected by social inequality.

We now invoke a simple log linear general utility function with *N*, the consumption of Nutrition good and *L*, the consumption of luxury or status good or non-nutrition good.

$$U = f\left(\frac{\bar{y}}{y}\right)\left[\log N + \phi\left(\frac{\bar{y}}{y}\right)\log L\right] \quad (1)$$

$\bar{y}$ is average income of the reference social group. y is individual income levels.

$$f\left(\frac{\bar{y}}{y}\right)\begin{bmatrix} = 1\ for\ y \geq \bar{y} \\ < 1\ for\ y < \bar{y} \end{bmatrix} \quad \text{and } f' < 0 \text{ [Follows from Axiom 1]} \quad (2)$$

$$\phi\left(\frac{\bar{y}}{y}\right)\begin{bmatrix} = 1\ for\ y \geq \bar{y} \\ > 1\ for\ y < \bar{y} \end{bmatrix} \quad \text{and } \phi' > 0 \text{ [Follows from Axiom 2]} \quad (3)$$

We shall use a special form of the general utility function that we have formulated. The special utility function goes behind the following conditions:

$$f\left(\frac{\bar{y}}{y}\right)\begin{bmatrix} = 1\ for\ y \geq \bar{y} \\ = \frac{y}{\bar{y}}\ for\ y < \bar{y} \end{bmatrix} \quad \text{and } f' < 0 \quad (4)$$

$$\phi\left(\frac{\bar{y}}{y}\right)\begin{bmatrix} = 1\ for\ y \geq \bar{y} \\ = \alpha\frac{\bar{y}}{y}\ for\ y < \bar{y} \end{bmatrix} \quad \text{and } \phi' > 0 \text{ ; note } \alpha > 1 \quad (5)$$

We shall not discuss the price effect and assume N as the numeraire commodity where relative price of L is represented by P.

Therefore, if we consider the case $y < \bar{y}$, the utility function under the special form becomes,

$$U = \left[\frac{y}{\bar{y}}\log N + \frac{y}{\bar{y}}\alpha\frac{\bar{y}}{y}\log L\right]$$

$$\text{Or, } U = \left[\frac{y}{\bar{y}}\log N + \alpha\log L\right] \quad (6)$$

Also, if U^* is the optimal value function $U^* = \left[\frac{y}{\bar{y}}\log N^* + \alpha \log L^*\right]$ where (N^*, L^*) are optimum values of N and L. And for the standard case with $y = \bar{y}$ we have $U^0 = [\log N^0 + \log L^0]$. Under this circumstances $(U^* - U^0) < 0$ if relative social status has to hurt.

Differentiating the optimum value function

$$\frac{dU^*}{d\left(\frac{y}{\bar{y}}\right)} = \log N^* + \frac{y}{\bar{y}}\frac{d(\log N^*)}{dN^*}\frac{dN^*}{d\left(\frac{y}{\bar{y}}\right)} + \alpha\frac{d(\log L^*)}{dL^*}\frac{dL^*}{d\left(\frac{y}{\bar{y}}\right)} \quad (7)$$

Due to the envelope condition

$$\frac{dU^*}{d\left(\frac{y}{\bar{y}}\right)} = \log N^* > 0 \quad (8)$$

This implies that if $\frac{y}{\bar{y}}$ goes down then U^* will also go down. Again, we know, for $y = \bar{y}$, $U^* = U^0$. Therefore, it is apparent that for $y < \bar{y}$, $U^* < U^0$. This validates our calim.

Thus the optimization problem that an individual faces

$Max\ U = \left[\frac{y}{\bar{y}}\log N + \alpha \log L\right]$

s.t. $PN + L = y$

From the first order condition we derive the value of L as

$$N = \frac{y}{P\left(1+\alpha\frac{\bar{y}}{y}\right)} \quad (9)$$

Note that when $y \geq \bar{y}$, we get the standard outcome, i.e. $N = \frac{y}{2P}$.

To assess the impact of an increase in y when $y < \bar{y}$ we need to go through the following exercise:

$$\frac{dN}{dy} = \frac{1}{P}\left[\frac{\left(1+\alpha\frac{\bar{y}}{y}\right) - y\alpha\frac{d\left(\frac{\bar{y}}{y}\right)}{dy}}{\left(1+\alpha\frac{\bar{y}}{y}\right)^2}\right]$$

This implies,

$$\text{Sign}\ \frac{dN}{dy} = \text{Sign}\left[1 + \alpha\frac{\bar{y}}{y} - y\alpha\frac{d\left(\frac{\bar{y}}{y}\right)}{dy}\right]$$

$$\text{Or, Sign}\ \frac{dN}{dy} = \text{Sign}\left[1 + \alpha\frac{\bar{y}}{y} - \left(\frac{\bar{y}}{y}\right)\frac{d\left(\frac{\bar{y}}{y}\right)}{dy}\frac{y}{\left(\frac{\bar{y}}{y}\right)}\alpha\right]$$

$$\text{Or, Sign}\ \frac{dN}{dy} = \text{Sign}\left[1 + \alpha\frac{\bar{y}}{y} - \left(\frac{\bar{y}}{y}\right)\mu\alpha\right] \quad \left(\text{where } \mu = \frac{d\left(\frac{\bar{y}}{y}\right)}{dy}\frac{y}{\left(\frac{\bar{y}}{y}\right)}\right)$$

Therefore, $\frac{dN}{dy} < 0$ iff $\mu\alpha > \left(\alpha + \frac{y}{\bar{y}}\right)$

As, $\lim_{y\to\bar{y}^+}\left(\alpha + \frac{y}{\bar{y}}\right) = (1+\alpha)$ and $\lim_{y\to 0}\left(\alpha + \frac{y}{\bar{y}}\right) = \alpha$

Before we describe this argument through a diagram (Figure-1) it would be prudent to interpret μ and α. μ is the elasticity of inequality. This captures the degree of responsiveness of inequality, i.e. $\left(\frac{\bar{y}}{y}\right)$ when *y* increases. And α implies the cultural response index of inequality. An increase in α reflects that people are sensitive to social status and are quick to raise conspicuous consumption if inequality gets worsened.

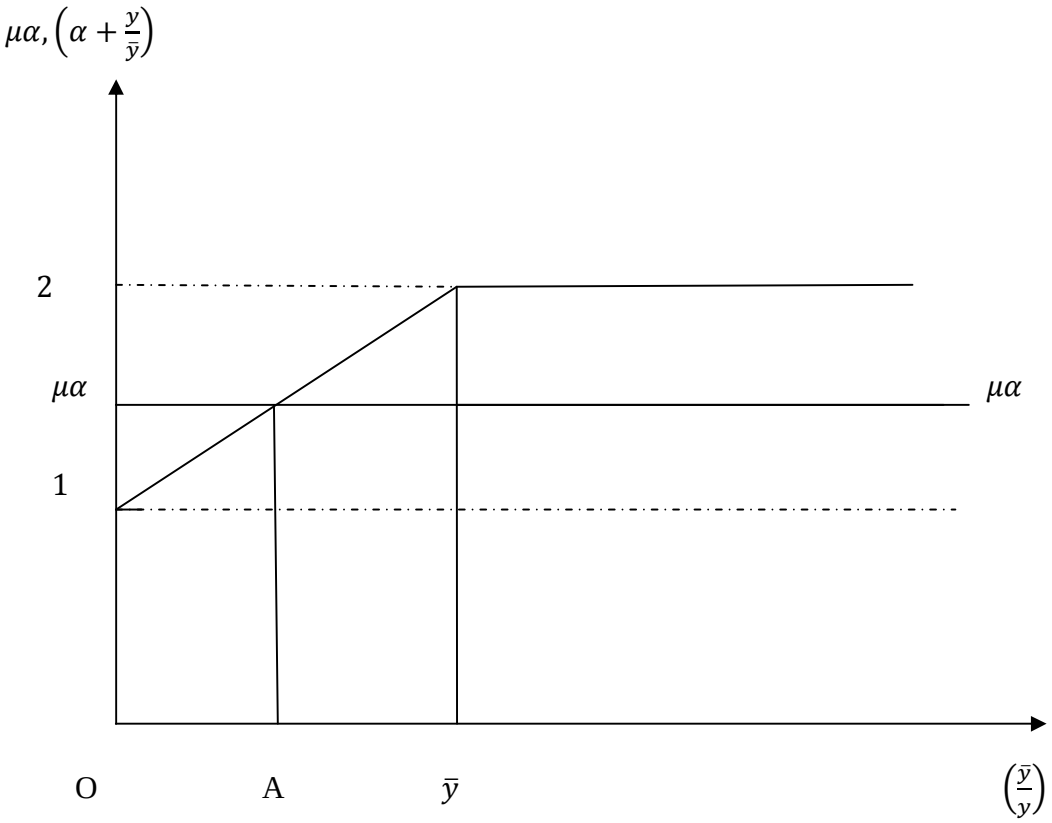

Fig-1

When y falls within OA, i.e. if y is low enough, N becomes an inferior good. Thus poor people tend to consume less of nutritional good N and this will always happen. Interestingly if α increases the diagram will look like Figue-2.

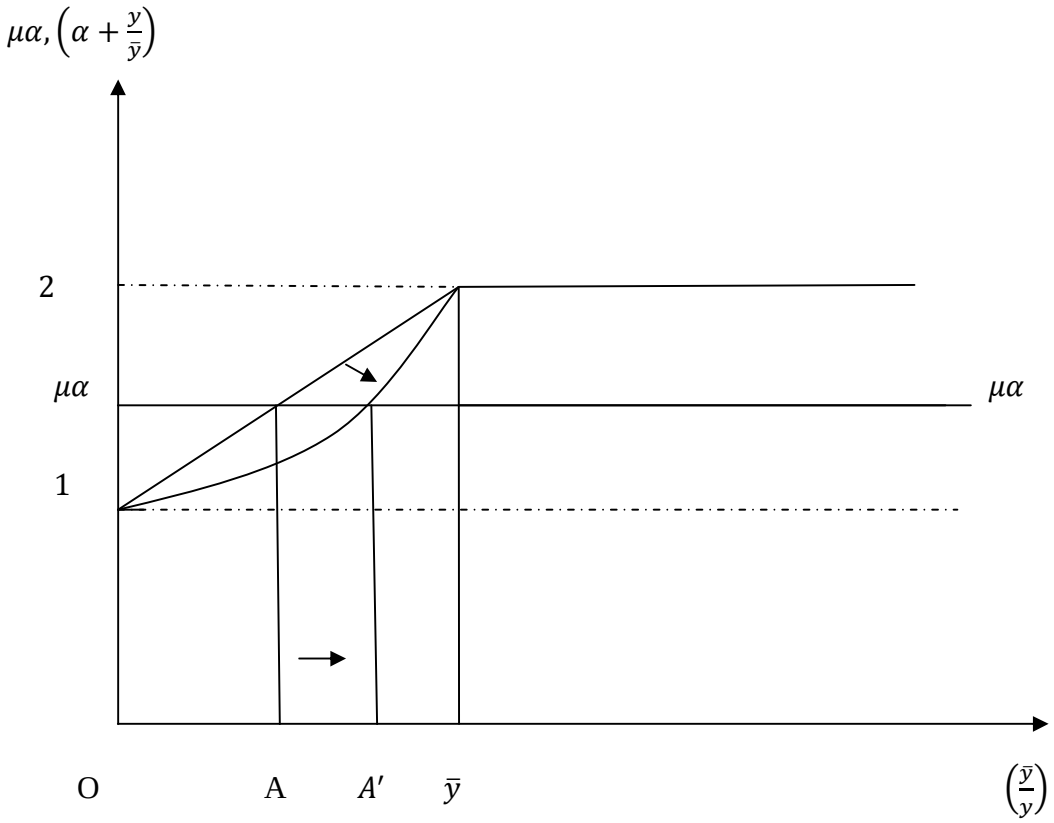

Fig-2

It is obvious that as people become more sensitive to social status they have a propensity to consume more of L because the range for which N becomes an inferior good expands from OA to OA'.

Concluding Remarks

The purpose of this paper has been to examine the role of status driven utility function in influencing poverty, in particular and measures of poverty in general. The log-linear utility function we work with yields standard outcomes when the concern for social status is absent. But drastic alterations of results are possible when we introduce the idea of relative social status in an otherwise simple utility function.

In our analysis we have normalized the price of N to unity where the relative price of L is represented by P. And we have further assumed the prices as fixed. However, one can consider the case where relative price of *N* (or *L)* is allowed to change. It is straight forward to argue that relative price of *N* will be lower in country with greater degree of inequality, other things

remaining the same. Therefore an economy with more skewed distribution of income will export the nutrition good and import the luxury good. The extent of inequality thus becomes a determining factor behind "comparative advantage". A more equitable distribution worldwide will increase relative price of food.

References

Beath, J. and Fitzroy, F. (2010) "Status, Happiness and Relative Income," mimeo, University of St. Andrews.

Deaton, A. and Drèze, J (2009) "Food and Nutrition in India: Facts and Interpretations," Economic and Political Weekly, 44(7), pp. 42-65.

Fafchamps, M. and Shilpi, F. (2008). "Subjective welfare, isolation, and relative consumption," Journal of Development Economics, 86(1), pp 43-60.

Ghiglino, C and Goyal, S (2008). "Keeping up with the neighbors: social interaction in a market economy", mimeo, University of Essex.

Hopkins, E and Kornienko, T (2010). "Which Inequality? The Inequality of Endowments Versus the Inequality of Rewards", mimeo, University of Edinburgh.

Kanbur, R. and Toumala, M. (2009). "Relativity, Inequality and Optimal Nonlinear Income Taxation", mimeo, University of Tampere.

Ku, H and Salmon, T. C. (2009). "Incentive Effects of Inequality and Economic Development", mimeo, Florida State University.

Patnaik, U (2007). "Neoliberalism and Rural Poverty in India", Economic and Political Weekly, 42(30) 28th July, pp 3132-50.

Sivanathan,N. and Pettit, N. C. (2010). "Protecting the self through consumption: Status goods as affirmational commodities", Journal of Experimental Social Psychology, 46(3), pp 564-570.