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Income inequality and the quality of public services: A developing country perspective

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ABSTRACT

That the high growth-rising inequality phenomenon – experienced by many high growth developing economies in the recent past – may lead to discontent among the poor is a well-discussed issue. This paper argues that as the demand for higher quality of the public services rises with income, the rising income in the hands of the rich leads to their dissatisfaction about the quality of available public services, thereby inducing them to form their own club for self-provision of the public services whenever possible. This, however, results in a lowering of quality available to the others outside the club despite less crowding at the publicly provided facilities.

1. Introduction

This paper deals with the welfare implications of social segregation, especially for the poorer section of the society, when some of the emerging economies are experiencing a gradual transition in the provision of public utility services like electricity, water and some of the merit goods like health, education, etc. from the public to the private institutions along with frequent manifestation of discontent by the common people regarding the quality of these services, coming mostly from those who are not buying the services from the market but dependent mostly on the public institutions due to lack of affordability. This social segregation is induced by increased income inequality and the absolute size of the rich group. When these measures exceed a critical level, the rich generally have the incentive to make own provision of superior quality services accessible to the members of the group only. If such clubs are formed to provide different public utilities like electric supply, water supply, supply of health services or education facilities, then eventually the club members will cease to participate in the public domain and this withdrawal will lead to a deterioration in the standard of the common pool services available to the mass from public sources.

In China, the Gini index soared from 0.29 to 0.415 in the past two decades as the per capita GDP increased by 9.8 % annually on an average. China has seen an incredible change in wealth distribution, turning from a more or less evenly distributed communal country into a distributed capitalist country with a wide income gap between rich and poor (Zhou, 2009). While the poorest 20 % of Chinese population shared less than 5% of gross domestic income, the richest 20 % has more than 45%. It has been shown in the Human Development Reports that in Brazil the poor earn only one tenth as much as the average person and the ratio of the income of top 20 % to bottom 20 % of population is nearly 32. Though India fared relatively better, many observers have started suggesting that with rapid growth in the first decade of the new millennium inequality is rising sharply across social groups and economic classes creating serious concern among Indian policy makers (Vakulabharanam, 2010; Motiram and Vakulabharanam, 2011).

A very special feature of this increased income inequality in all the emerging economies is its coexistence with overall reduction in poverty. Extensive studies with Chinese data have shown a negative growth elasticity and positive inequality elasticity of urban poverty (Yao et al., 2004) over the last two decades. This indicates an uneven growth of income among different sections of the population. In fact, in both India and China the income growth can largely be attributed to the increase in returns to education and to the shift of employment into secondary and tertiary sectors (Bardhan, 2007; Goh et al., 2009; Pieters, 2010; Cain et al., 2010). This growth has been accompanied by reduced social welfare provision and increased income inequality (Meng et al., 2005). We argue that this income inequality leads to social segmentation and encourages club formation to ensure private provision of public services. The club is a social closure which

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is formed by the rich people to exclude the less fortunate individuals from some common enterprises or social communities. Being dissatisfied with the quality of publicly provided services, they are creating and utilizing private arrangements (that is, the exit option is taken en mass), and this is affecting the quality of the public service available to the commoner even further. Since the richer people are paying tax but not using the service, the quality of the service would be adversely affected and the optimal tax rate will fall. The poorer section with very little tax-commitment will be the net loser in terms of reduced quality of public provision and in the absence of better windows of venting out protest against this loss they may take recourse to vandalism. Thus, higher inequalities are associated with lower civic participation on the part of the richer section (Lancee and Van de Werfhorst, 2012).

The continuous establishment of world-class private hospitals and schools with much higher user charges in all the emerging economies are siphoning of the affluent class from the public domain. According to the Annual Report to the People on Health (2011) of the Government of India, the private sector provides more than 80% of all outpatient care and 60% of all inpatient care and their presence in all sub-markets like medical education and training, medical technology and diagnostics, pharmaceutical manufacture and sale, hospital con-struction and ancillary services are fairly dominant in the recent years. Between 1993–94 and 2003–04 the private share in national health care expenditure has gone up from 66% to 83%. Similarly, in education sector the share of recognized privates schools are on the rise, which are mostly serving the elite class (Bangay and Latham, 2013). So, these newer expansions may be efficient but not inclusive. This would contribute towards sharper division between rich and poor and would help in accentuating social tension. It is more common to come across the cases of substandard provisioning of public utility services in the developing bloc and the destruction of social capital by the discontent mob as a popular expression of protest. Umpteen instances of such violence are reported in media indicating a poor state of public utility services; moreover, for the potential beneficiaries the cost of participation becomes very high, which is getting reflected in long waiting period, unpredictable quality of services, and so on. Thus, rapid economic growth is the demand of the day but, if this growth fails to be inclusive in nature it would eventually have its toll on social cohesion and integrity.

In this backdrop the present paper proposes a simple game theoretic formulation where there is a public service enjoyed by all members of society and when the income inequality exceeds some critical level the richer section would have incentive to form social club to arrange for their own provision. This would affect the quality of public service enjoyed by the poor and, under certain plausible assumptions that would affect the utility of the weaker section adversely. So, high growth leading to rising income inequality would lead to higher social segregation and that would benefit the club members at the cost of the poor people's welfare.

2. Existing literature

This paper draws insights from literature developed around at least five different but related issues, viz., the choice between enhancements of private income vis-a-vis improvements of public service provision as two alternative strategies of development, relative efficiency as well as limitations of private market in making effective provision of these social services, designing of efficient rate structure for these social services to protect the interest of the poor, effect of income distribution and economic inequality on both quality of and expenditure on social services and finally, the possibility of club formation to make private provision of publicly provided services.

There is a well-developed literature on voluntary provision of public good. Most notable works in this regard include those by Bergstrom et al. (1986), Bernheim (1986) and Andreoni (1988). All these papers employ a static model of voluntary donations where individuals simultaneously decide on the amount of voluntary contributions to a pure public good. The standard result coming out of these theories is that in general there is an under provision of public good from voluntary contributions. As the economy grows in size, only the very rich people contribute for the public good and the others free ride. A more relevant literature includes a few papers which consider mixed systems consisting of both governmental and private provision of public goods. These papers do not take the level of collective provision of public good by the government as exogenous. Decisions regarding the public good provision are taken by the government on the basis of majority rule supplemented by the individual decisions to contribute voluntarily. Important examples of such dual provision would include education and health care. The pioneering works in this regard have been done by Epple and Romano (1996a, 1996b, 2003). However, the quality aspect of public good is not considered explicitly in these models. That has been considered by Blank (2000) and Ireland (1990) where each consumer chooses to consume either social or private good and a vertical market segmentation results from differential demand for quality. In the context of this choice, the role of competition and the use of incentives have further been discussed in Besley and Ghatak (2003).

Another pertinent issue is the financing aspect where the distributive concern becomes important in presence of income inequality. The effect of inequality on the overall quality of public good has been studied by Motiram and Nugent (2007) and the relation among inequality, public goods and social mobility has been discussed in a survey by Osberg et al. (2004). The influence of income inequality in evolution of the institution of taxation has been critically discussed in Sokoloff and Zolt (2007) and the case for imposition of user charges on provision of social goods as a strategic instrument to protect interest of the poorer section has been elaborated in Balestrino (1999). By using a Downsian model of political competition Markussen (2011) illustrates the favorable effect of interaction between institutions of taxation and democracy to protect re-distributive interest in making private provision of public goods. In a slightly different context Gulati and Ray (2011) have shown the possibility of exclusion from social provision for the poorer section of the society in presence of acute income inequality. The poor community as a whole is initially better-off living in relatively richer societies, but, beyond a point, the aggregate market access and consumer surplus of the poor starts declining as the society becomes richer. Bardhan et al. (2007) discuss the presence of optimal level of inequality that may contribute to efficient provision of public good; with the increase in economic inequality the contribution of the richer class towards the maintenance of the public asset would go up, which would favorably contribute towards efficiency enhancement, but beyond a level it would lead to overuse of the complementary private good causing inefficiency, So, the maximum efficiency level would correspond to an optimal inequality. The present work is exploring re-distributive implications of the possibility of conversion of public good into club good in the presence of income inequality.

3. The model

3.1. Background

We consider an economy consisting of two types of people, poor with income Y_1 and rich with income Y_2 where $Y_2 > Y_1$. The total number of rich people in the economy is N_2 while the number of poor people is N_1. Furthermore, it is assumed that the poor and rich form a constant fraction of population. So, $N_1 = (1 - \delta)N, N_2 = \delta N$ where $0 < \delta < 1$. The rich people's income is a multiple β of the