

The Impact of Income Inequality and Intergenerational Mobility on Human Development: An empirical evidence from Pakistan

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Abstract

Human development of a society can be affected by different structural, socioeconomic and public policy variables. Income inequality is one of such variables. In literature, it has been identified as an important detrimental factor for human development. However, equal opportunities of upward intergenerational mobility for different segments of the society can mitigate the negative effects of income inequality. This study aims to investigate the role of income inequality and the opportunities of intergenerational mobility for the process of human development. By using the data of different districts in four provinces of Pakistan, we have found that income inequality and educational inequality have retarding effects on human development. Public provision of social services, decentralization, intergenerational income mobility and intergenerational educational mobility have been found to be positively and significantly associated with human development. It implies that the opportunities of upward socioeconomic mobility can help to mitigate the negative effects of inequality on human development.

Key Words: *Income Inequality, Educational Inequality, Intergenerational Mobility, Human development, Socioeconomic, Pakistan.*

1-Introduction

The relationship of income inequality with economic growth and human development has been widely studied by social scientists. The notion that inequality is harmful for economic and development outcomes has become a dominant point of view in literature by arguing that the negative effects of inequality surpass the positive effects, if any, and the net effects of inequality for economic and development outcomes remain negative. Different economic as well as sociopolitical channels have been suggested by this strand of literature through which inequality can retard economic growth and human development. These channels include the negative effects of inequality on economic growth and human development through its retarding effects for human capital creation ([Galor & Tsiddon, 1997](#); [Galor & Zeira, 1993](#); [Piketty, 1997, 2000](#)), public provision of social services ([Easterly, 2001](#)) sociopolitical harmony, social cohesion ([Alberro Alesina & Perotti, 1994](#); [Alberto Alesina & Rodrik, 1994](#); [Easterly, Ritzen, & Woolcock, 2006](#)) and health of individuals ([Subramanian & Kawachi, 2004](#); [R. Wilkinson & Pickett, 2011](#); [R. G. Wilkinson & Pickett, 2006](#)) It is further argued that inequality would not remain tolerable for masses of the society if it persists over a longer period of time because in such situation people may become frustrated particularly in ethno-linguistically heterogeneous societies. Contrary to this, societies may remain socially cohesive if individuals have feelings that despite inequality they have fair enough chances to move up on socioeconomic ladder ([Hirschman & Rothschild, 1973](#)). It implies that equality of opportunities may be more important than equality of income or any other outcome. Equality of opportunities is viewed as a situation where an individual's socioeconomic status in the society is determined by his efforts and not by the socioeconomic status of his parents ([Rawls, 1971](#)). Thus, despite heterogeneity in the society, availability of equal opportunities for all people can make a society more cohesive ([van Staveren & Pervaiz, 2017](#)) and can be helpful to

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lessen the negative effects of inequality. Literature on intergenerational mobility measures equality of opportunities in a society by estimating the elasticity of income or any other outcome of individuals with respect to the income or socioeconomic status of parents. A higher estimated elasticity suggests that there is less intergenerational mobility and hence more likelihood that children will remain in the same socioeconomic class as of their parents. Thus, intergenerational mobility is an indication of the likelihood of individuals to move up on socioeconomic ladder irrespective of the socioeconomic status of the previous generation. It means that it is not only the inequality of income or wealth but also the extent of intergenerational mobility in a society which may be important to determine economic development in a society. It is so because inequality only represents the relative socioeconomic position of individuals or groups of individuals in a society whereas intergenerational mobility tells about the ability of individuals to move across different socioeconomic groups. However, there is hardly any study which has investigated the effects of inequality and intergenerational mobility on economic or development outcomes in the context of Pakistan. This study fills this gap by utilizing the data from different waves of Pakistan Social and Living Measurement Survey (PSLM) over the period of 2007 to 2015. We have tried to investigate that how inequality of income, inequality of education, income mobility as well as educational mobility can affect human development across the different district of Pakistan.

2-Literature Review

Simon Kuznets research (Kuznets, 1955; 1963) is thought to be the pioneering attempt to establish a relationship between income inequality and economic development. Income inequality, according to him, is considered as an inevitable outcome of the process of economic development. However, this notion of inevitability of inequality for the process of economic development has been challenged by subsequent studies in literature which either observe no systematic relationship between inequality and economic development ([Castells-Quintana & Royuela Mora, 2011](#); [Ravallion & Chen, 1997](#); [Voitchovsky, 2005](#)) or report a negative effect of inequality for economic development ([Alberro Alesina & Perotti, 1994](#); [Alberto Alesina & Perotti, 1996](#); [Alberto Alesina & Rodrik, 1994](#); [Easterly, 2007](#); [Perotti, 1996](#); [Persson & Tabellini, 1994](#)). The later point of view, which reports negative effects of inequality on economic development and which is more prominent in economic literature, generally provides political economy interpretations of such relationship. It is argued that inequality can lower down economic growth and human development as human capital creation would remain low in unequal societies because of capital market imperfections. In the presence of capital market imperfections, some credit rationing would prevail in the financial market and poor people will remain liquidity constrained due to non-availability of collateral. Thus, investment and human creation in the society would remain low and will result in low economic growth ([Galor & Zeira, 1993](#); [Piketty, 1997, 2000](#)). Moreover such societies are expected to be less cohesive, politically unstable ([Alberro Alesina & Perotti, 1994](#); [Alberto Alesina & Perotti, 1996](#); [Alberto Alesina & Rodrik, 1994](#); [Easterly, 2007](#); [Persson & Tabellini, 1994](#)) and hence would have lower output ([Pervaiz & Chaudhary, 2015](#)). Low level of output can also be expected to be associated with lower level of educational and health outcomes. Apart from income, various development outcomes can also remain low in unequal societies. Health status of individuals is associated with inequality as lower life expectancy, a higher prevalence of HIV infection, high rates of mental illness, and obesity are observed in more unequal societies ([Babones, 2008](#); [Kondo, 2009](#); [Pickett & Wilkinson, 2015](#); [Subramanian & Kawachi, 2004](#); [R. Wilkinson & Pickett, 2011](#); [R. G. Wilkinson, 1997](#); [R. G. Wilkinson & Pickett, 2006](#)). Hence, it seems to be pertinent that equity would help to improve human development in the society ([Dasgupta & Ray, 1987](#); [Easterly, 2001, 2007](#)).

Besides inequality of income and wealth, inequality of opportunities can play important role in the determination of economic growth and human development. If opportunities are not equal for all sections of the society then the children of affluent individuals are expected to be equipped with higher human capital than the children of poor individuals due to which their income is likely to be higher. Thus, there is much likelihood that inequality of income would transfer from one generation to next generation ([Solon, 1992, 1999, 2002, 2004](#)) and human development of one generation would be function of human development of previous generation. Some studies argue that intergenerational mobility and inequality will be interconnected with each other in a way that intergenerational will be lower in unequal societies. This interconnection is termed as “Gatsby Curve” in literature ([Krueger,](#)

2012; Solon, 2004). However, this point of view can not be accepted as an established fact because empirical scrutiny has not always validated it. For example, despite being more equal Italy has been found less mobile (Checchi, Ichino, & Rustichini, 1999). The empirical literature on inequality and economic development has largely neglected the role of opportunities and focused on the relationship between inequality of outcomes and economic development, with inconclusive findings. Nonetheless, intergenerational mobility can play important role in improving human development of a society (Campos-Matos & Kawachi, 2015; Nikolaev & Burns, 2014).

3-Theoretical Framework, Methodology and Data

Human development as measured by improvements in income, education and health status of individuals can be affected by nature and extent of inequality in a society through various channels. These channels include socio-political instability (Alberro Alesina & Perotti, 1994; Alberto Alesina & Perotti, 1996; Alberto Alesina & Rodrik, 1994; Perotti, 1996; Persson & Tabellini, 1994), liquidity constraint for the poor (Galor & Zeira, 1993; Piketty, 1997, 2000), and deterioration of social cohesion (Easterly et al., 2006). On the other hand, intergenerational mobility can help to boost human development because it provides fair chances of upward socioeconomic mobility. Under such circumstances, the socioeconomic status of next generation is not determined by the socioeconomic status of their parents but by their own efforts. To investigate the effects of inequality and intergenerational mobility on human development, we have constructed an econometric model, where we have used Human Development Index (HDI) as dependent variable. Whereas independent variables include income inequality, educational inequality, income mobility, educational mobility, provision of public services and decentralization. Panel data of 105 districts of Pakistan at five point of times has been used. Data is for the period of 2007-2015 with two-year intervals. In order to control for the district specific effects, we have used panel fixed effect model. The econometric model used in the study is as given below

$$HDI_{it} = \alpha + \beta_1 InIneq_{it} + \beta_2 EduIneq_{it} + \beta_3 InMob_{it} + \beta_4 EduMob_{it} + \beta_5 PS_{it} + \beta_6 Dec_{it} + \phi_i + \varepsilon_{it}$$

where

HDI = Human Development Index with a value ranging from 0 to 1. A high value implies higher human development and a value closer to 0 indicates a lower human development.

The data of HDI has been taken from Pakistan Human Development Report⁴.

InIneq = income inequality constructed through Mean Log Deviation by using household of income of individuals aged twenty years and above.

EduIneq = educational inequality constructed through Mean Log Deviation by using data of educational attainments of individuals aged twenty years and above.

InMob = income mobility. For the construction of the variable of income mobility, we have estimated the elasticity of income of offspring with respect to income of their fathers. As the elasticity of income of individuals with respect to income of their parents is an indication of the persistence of inequality over generations. Hence for the measurement of intergenerational mobility, We take r squared minus 1 as income mobility.

EduMob = educational mobility. For the construction of the variable of educational mobility, we have estimated the elasticity of education of individuals (aged 20 and above) with respect to education of their parents. We take r squared minus 1 as educational mobility.

PS = provision of public services. An index of provision of public services has been constructed through Principal Component Analysis (PCA) by utilizing the variables of access to clean drinking water, facility of transport and health and educational services.

Dec = decentralization. Coded as 1 after the year 2010 and 0 otherwise.

4- Results and Discussion

Results of our regression analysis have been presented in table 1.

⁴ <http://www.pk.undp.org/content/pakistan/en/home/library/human-development-reports/PKNHDR.html>

Table1
Inequality, Intergenerational Mobility and Human Development
Dependent Variable: Human Development Index

VARIABLES	(1)	(2)	(3)	(4)
Income Inequality	-0.0902*** (0.0190)	-0.0878*** (0.0191)	-0.0444*** (0.0155)	-0.0417*** (0.0155)
Educational Inequality	-0.415*** (0.0772)	-0.404*** (0.0774)	-0.403*** (0.0618)	-0.393*** (0.0617)
Provision of Services	0.0365*** (0.00557)	0.0369*** (0.00557)	0.0258*** (0.00452)	0.0260*** (0.00450)
Income Mobility	0.0390* (0.0236)		0.00487 (0.0190)	
Educational Mobility		0.0432* (0.0244)		0.0404** (0.0195)
Decentralization			0.0599*** (0.00386)	0.0599*** (0.00381)
Constant	0.788*** (0.0546)	0.780*** (0.0559)	0.768*** (0.0438)	0.732*** (0.0447)
N	548	548	548	548
R ²	0.249	0.249	0.520	0.524
No of Cross Sections	116	116	116	116

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Our result of different regression models indicates that income inequality has negative and statistically significant effect on human development. Educational inequality has also found to be statistically significantly and negatively associated with human development. It implies that both educational and income inequality retard human development. Income mobility has positive and significant relationship with human development. Educational mobility is also positively and significantly related with human development. However, this significant effect vanishes when variable of decentralization is also included.

5-Conclusion

Human development is viewed as an important goal across the globe and particularly in developing countries where a large chunk of population is deprived of decent living standards and better facilities of education and health. Over the period of time, improvements in human development have been made in both developed and developing countries. However, the situation of human development still needs to be improved particularly in developing countries. Inequality can be an important detrimental factor for human development. Positive and significant effect of income and educational mobility on human development suggests that public policy must be formulated in a way which ensure upward socioeconomic mobility. This is possible when equality of opportunities is ensured for all segments of society. The significant effect of index of provision of public services on human development highlights the significance of public policy to improve the status of human development. Meritocracy and redistribution of income can be used as an important tool to improve the status of human development in the country.

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