Income Inequality, Intergenerational Mobility and Human Development in Pakistan: An Empirical Analysis

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Abstract

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. Low level of human development in any country can be attributed to different socioeconomic, cultural and institutional factors. Income inequality can be an important cause of underdevelopment as it can restrict the access of a large section of society to labour market and to opportunities of education and health. However, the negative consequences of inequality for human development can be narrowed if upward socioeconomic mobility is ensured by formulating appropriate pro-poor public policies. Intergenerational mobility is expected to be higher in the societies where irrespective of their socioeconomic and parental background characteristics, individuals have fair chances of upward mobility on the socioeconomic ladder.

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This study aims to investigate the effects of income inequality and intergenerational mobility on human development in Pakistan. By using the data of different districts in four provinces of Pakistan, we have found that income inequality has retarding effects on human development whereas intergenerational mobility can help to improve the status of human development in the country.

1-Introduction

The relationship of income inequality with economic development has been widely studied by social scientists without reaching any conclusive results about this relationship. Theoretical and empirical literature on this relationship can be placed in three broader categories. The first category of literature describes that this relationship is largely contextual specific and depends upon a number of intuitional, historical and political factors (Barro, 2000; Deininger & Squire, 1998; Papanek & Kyn, 1986; Ravallion & Chen, 1997).

The second set of studies view inequality as favourable for economic development because it provides incentives for the creation of physical and human capital in the presence of higher marginal rate of return associated with higher investments in physical and human capital. This strand of literature argues that unequal societies tend to invest more as saving rates are expected to be higher among richer than poorer (Kaldor, 1961). Moreover, inequality can also enhance economic growth by working as an incentive for entrepreneurship and innovations (Lazear & Rosen, 1981). Okun (1976) views a trade-off between redistribution and efficiency of the economy.

Third type of literature consists of those studies which provide theoretical justifications as well as empirical evidence of negative effects of income or wealth inequality on economic growth and human development. 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 reading 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 (Easterly et al., 2006) and health of individuals (Subramanian & Kawachi, 2004; Wilkinson & Pickett, 2011; Wilkinson & Pickett, 2006). The notion that inequality is harmful for economic development has become 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. Particularly, the political economy interpretations of the negative effects of inequality seem to be more convincing where it is argued that inequality will result in sociopolitical instability ((Alesina & Perotti, 1994; Alesina & Rodrik, 1994) and deterioration of social cohesion (Easterly et al., 2006). It is also 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 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 is 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

The relationship of inequality with different economic and development outcomes is complex one. In literature, ambiguous rather somewhat contradictory results about this relationship have been reported. Inequality is expected to be at its peak in the countries with medium level of economic development while it is likely to be at low level in the countries with either low or high level of development. This implies that an inverted-U type relationship can be

expected between inequality and economic development (Kuznets, 1956). One important implication of suck relationship is that inequality is an inevitable phenomenon in the process of economic development. As the saving rates are expected to be higher among richer than poorer therefore high investment are expected to made in unequal societies which in turn can boost economic growth (Kaldor, 1961). However, this notion of inevitability of inequality for the process of economic development has been challenged by subsequent studies in literature who 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 (Alesina & Perotti, 1994; Alesina & Perotti, 1996; 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 instable(Alesina & Perotti, 1994; Alesina & Perotti, 1996; 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; Wilkinson, 1996; Wilkinson & Pickett, 2011; 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 believed 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 "Gatsbay Curve" in literature (Krueger, 2012; Solon, 2004). However, this point of view can not be accepted as an established fact because empirical scrutiny has always not validated it. For example, despite being more equal Italy has been found less mobile (Checchi et al., 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-Thoretical 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 (Alesina & Perotti, 1994; Alesina & Perotti, 1996; 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. For our empirical analysis, we have used district level data of Pakistan to investigate the effects of inequality and intergenerational mobility on human development in Pakistan. Our dependent variable is Human Development Index (HDI), data for which has been taken from Pakistan Human Development Report[4]. Independent variables include income inequality, educational inequality, income mobility, educational mobility, an index of the provision of public services at district level and dummy variable for decentralization. The variables of income inequality, educational inequality, income mobility and educational mobility have been constructed by using the data of PSLM over the period of 2007-2015. Inequalities of income and education have been constructed by using household level data of income and educational attainments. For the construction of the variable of income and educational mobility, we have estimated the elasticity of income and education of individuals with respect to income and education of their parents. As the elasticity of income and

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

education of individuals with respect to income and education of their parents is an indication of the persistence of inequality over generations. Hence for the measurement of intergenerational mobility, we have subtracted the elasticity of income and education from 1 to convert these into measures of income and educational mobility. Index of provision of public services has been constructed through Principal Component Analysis (PCA) by utilizing the variables of access to clean drinking water and educational facilities (distance from educational institutes). Decentralization is a dummy variable; used 0 for the years before 2010 and 1 for the years after 2010. Table 1 provides the descriptive statistics of the variables used in our study.

Table 1

Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
HDI	Overall	0.510475	0.182614	0.03	0.922	N = 516
	Between		0.1804	0.111667	0.878	N = 115
	Within		0.053126	0.360875	0.719275	T-Bar = 4.48696
Income Inequality	Overall	0.352966	0.125888	0.0648	0.84257	N = 516
	Between		0.092622	0.17447	0.646142	N = 115
	Within		0.084695	0.134471	0.813071	T-Bar = 4.48696
Educational Inequality	Overall	0.08852	0.018508	0.04362	0.17392	N = 516
	Between		0.013237	0.05781	0.11953	N = 115
	Within		0.01286	0.040414	0.155914	T-Bar = 4.48696
Income Mobility	Overall	0.718007	0.142144	0.249597	0.997859	N = 516
	Between		0.085428	0.396041	0.940999	N = 115
	Within		0.117857	0.216922	1.060479	T-Bar = 4.48696
Educational Mobility	Overall	0.58007	0.122651	0.127526	0.951858	N = 516
	Between		0.077014	0.375561	0.761036	N = 115
	Within		0.097822	0.160383	0.970528	T-Bar = 4.48696
Access of Services	Overall	-0.31038	1.04165	-3.53741	2.20883	N = 516
	Between		0.978892	-2.79527	1.703642	N = 115
	Within		0.429656	-1.80109	1.458244	T-Bar = 4.48696
Decentralization	Overall	0.414729	0.493153	0	1	N = 516
	Between		0.118333	0	1	N = 115
	Within		0.485152	-0.25194	1.164729	T-Bar = 4.48696

4- Results and Discussion

Results of our regression analysis have been presented in table 2.

Table2

Inequality, Intergenerational Mobility and Human Development

Dependent Variable: Human Development Index

Variables	1	2	3	4
Income Inequality	-0.0720**	-0.0653**	-0.0482**	-0.0448*
	(0.0296)	(0.0299)	(0.0233)	(0.0236)
Educational Inequality	-0.421**	-0.404**	-0.457***	-0.453***
	(0.196)	(0.197)	(0.154)	(0.155)
Income Mobility	0.0533***		0.0457***	
	(0.0204)		(0.0160)	
Educational Mobility		0.0565**		0.0312
		(0.0249)		(0.0197)
Provision of Services	0.0458***	0.0457***	0.0342***	0.0343***
	(0.00565)	(0.00567)	(0.00450)	(0.00453)
Decentralization			0.0623***	0.0622***
			(0.00395)	(0.00399)
Constant	0.549***	0.551***	0.520***	0.533***
	(0.0234)	(0.0245)	(0.0185)	(0.0193)
N	516	516	516	516
No of Cross Sections	115	115	115	115
R^2	0.186	0.183	0.500	0.493

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

Our result of different regression models indicate 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. The statistically significant effect of index of provision of services highlights the significance of public policy to improve the status of human development. Positive and significant effect of income mobility on human development suggest that public policy must be formulated in a way which ensure upward economic mobility. This is possible when equality of opportunities is ensured for all segments of society. Meritocracy and redistribution of income can be an important tool to improve the status of human development in the country.

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Appendix

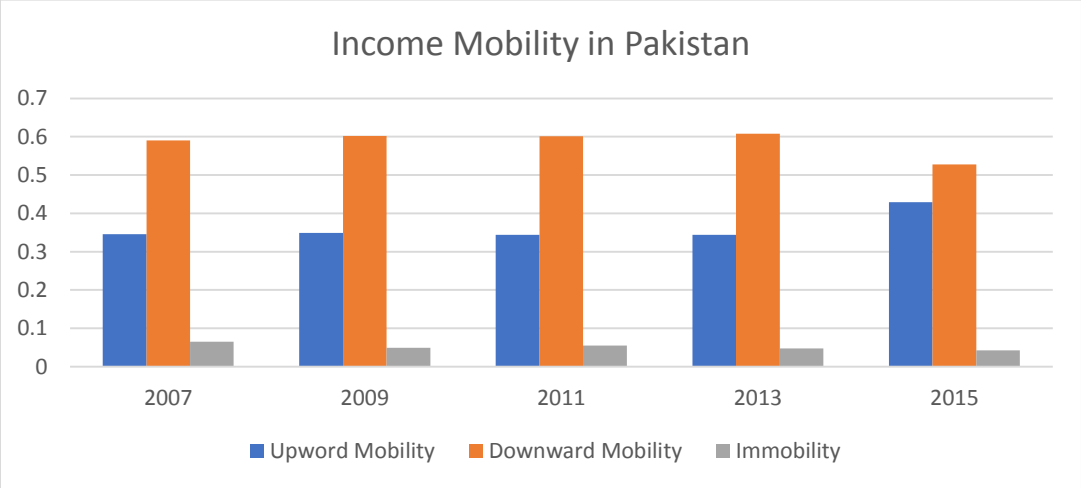

Fig. A-1 Income Mobility in Pakistan (2007-2015)

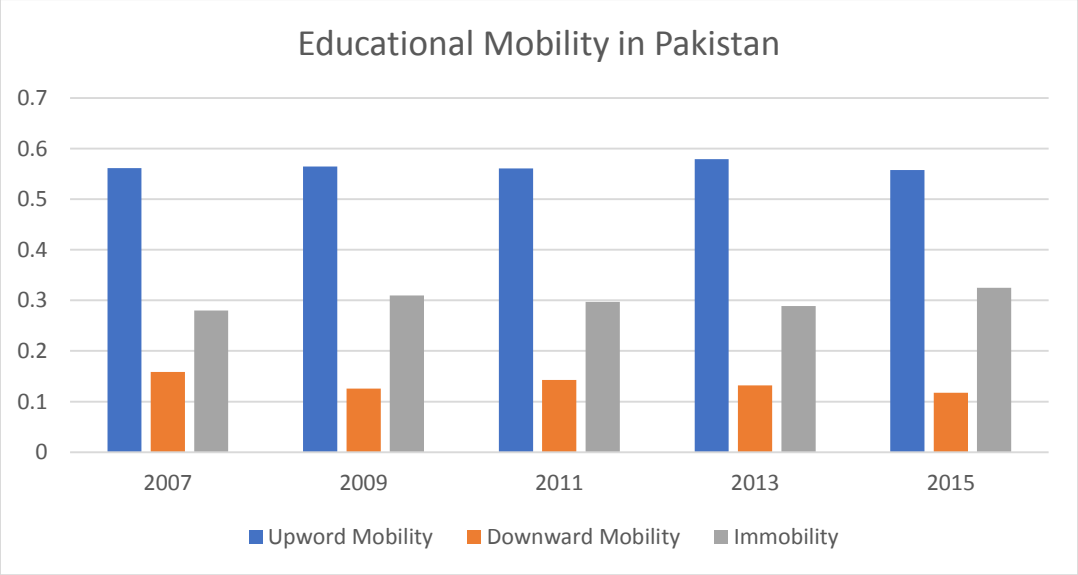

Fig. A-2 Educational Mobility in Pakistan (2007-2015)

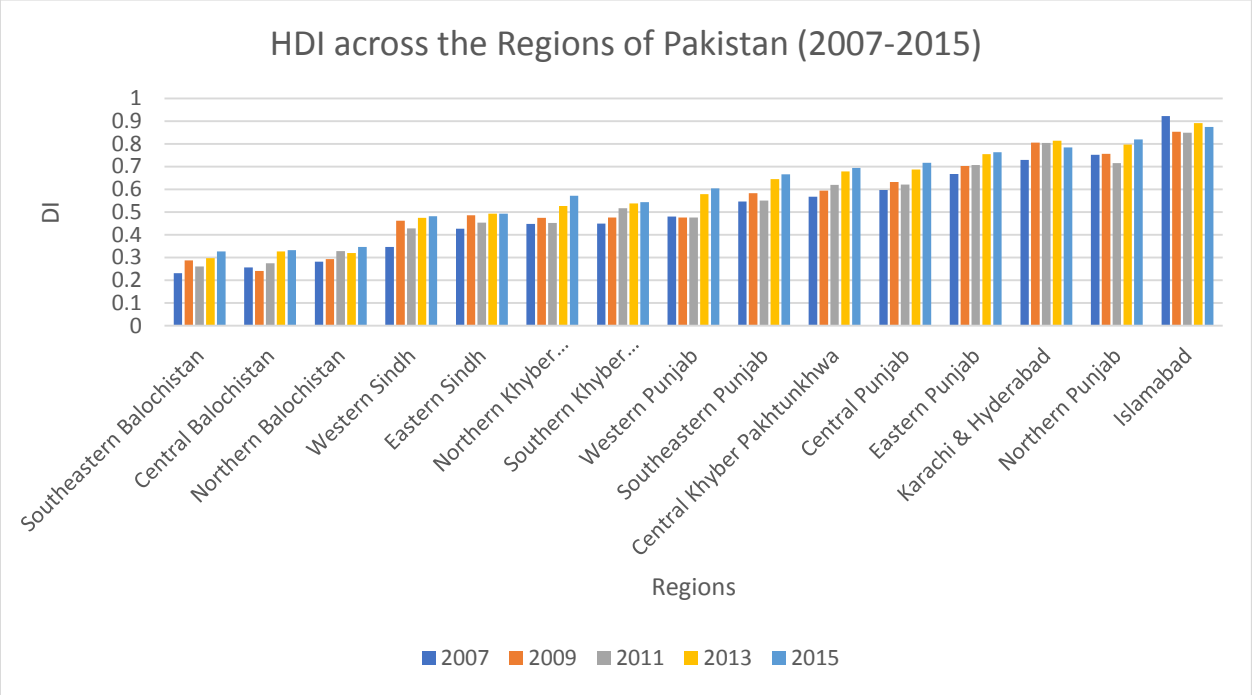

Fig. A-3 HDI across the Regions of Pakistan (2007-2015)

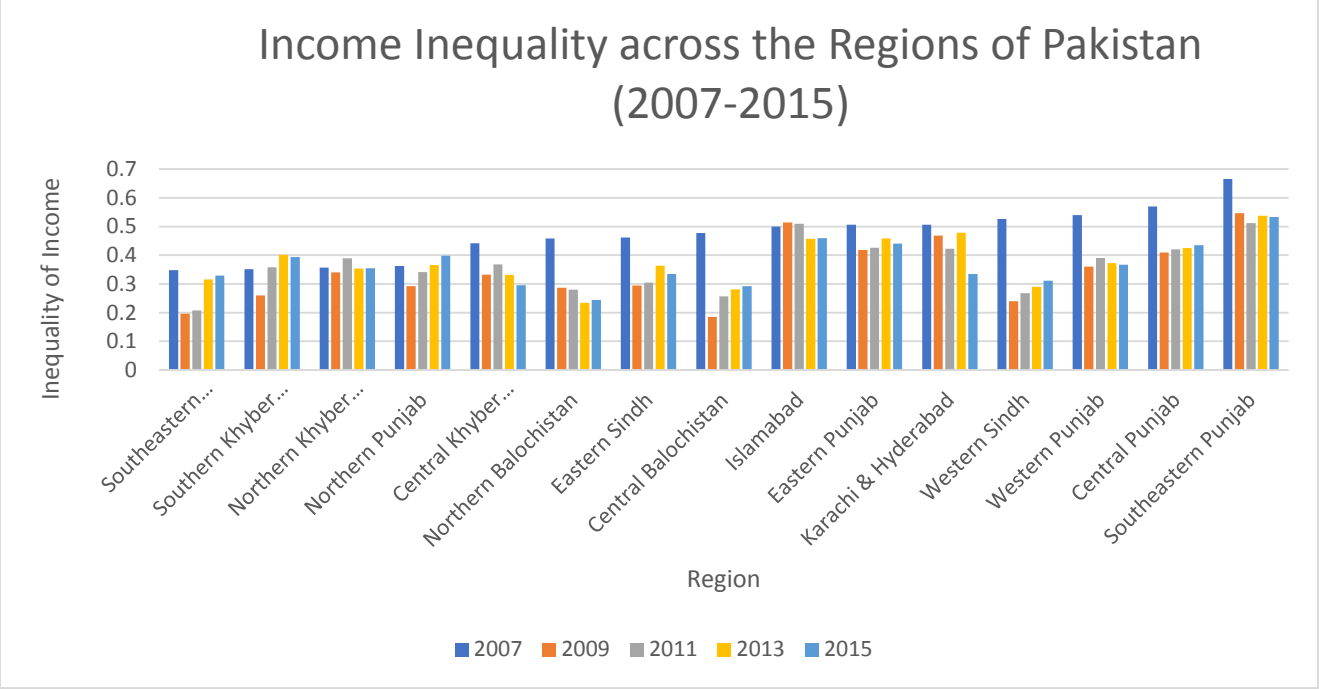

Fig. A-4 Income Inequality across the Regions of Pakistan

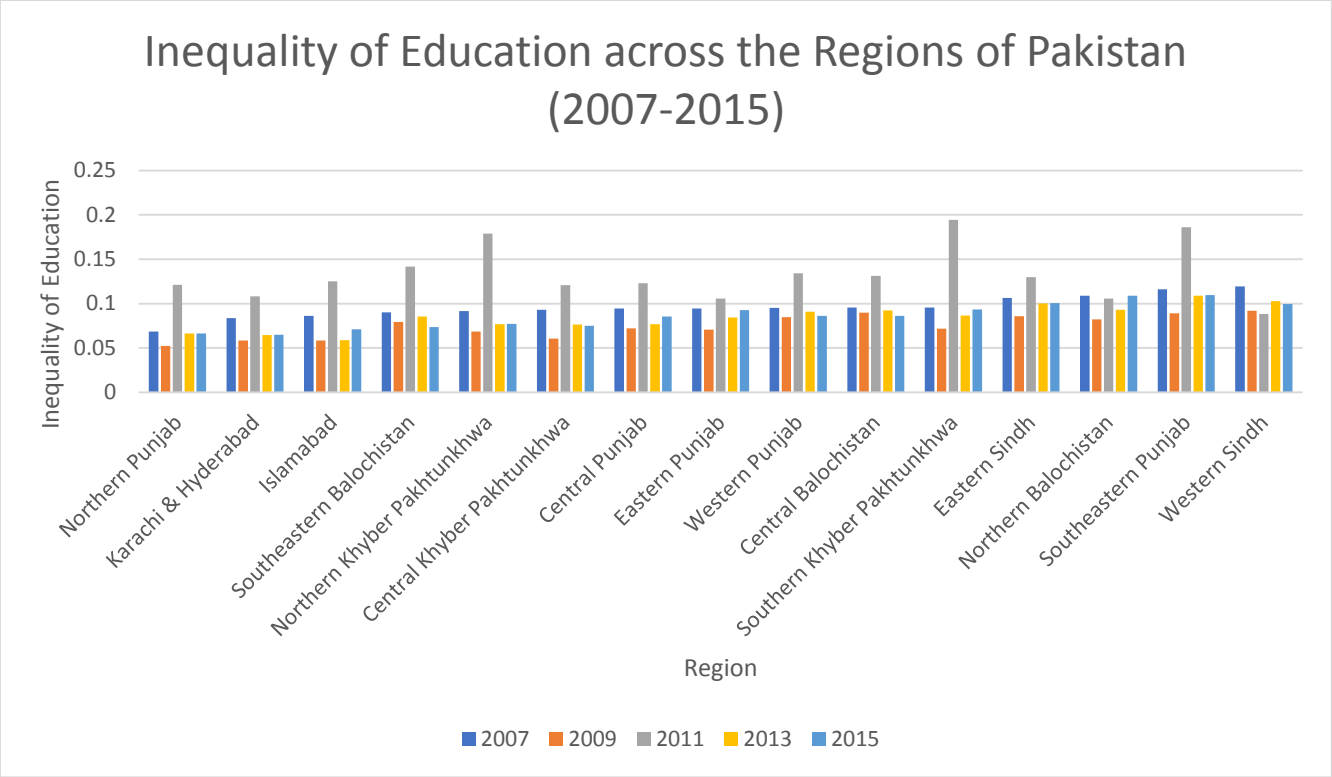

Fig. A-5 Educational Inequality across the Regions of Pakistan