MULTIPLE INEQUALITIES AND POLICIES TO MITIGATE INEQUALITY TRAPS IN PAKISTAN

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This research report was written to share research results, to contribute to public debate and to invite feedback on development and humanitarian policy and practice. It does not necessarily reflect the policy positions of the organizations jointly publishing it. The views expressed are those of the author and not necessarily those of the individual organizations.





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ABBREVIATIONS

ANAR	Adjusted net attendance rate
FATA	Federally Administered Tribal Areas
FBR	Federal Board of Revenue
GDP	Gross domestic product
GPI	Gender Parity Index
GoP	Government of Pakistan
HIES	Household Integrated Economic Survey
KP	Khyber Pakhtunkhwa
LFS	Labour Force Survey
MICS	Multiple Indicator Cluster Survey
PBS	Pakistan Bureau of Statistics
PSLM	Pakistan Social and Living Standards Measurement
SAARC	South Asian Association for Regional Cooperation
SAP	Structural Adjustment Programme
SRO	Statuary Regulatory Order
VAT	Value added tax

EXECUTIVE SUMMARY

1. INTRODUCTION

The growth–inequality nexus has long been debated by researchers, social commentators and politicians. Despite being controversial, there is growing evidence of multi-dimensional inequality in developing countries, including Pakistan. Economic growth seems to have benefitted only a few people while majority of them have remained deprived. Numerous manifestations of inequality can be pointed out, including inequalities of income, assets, public services, rural vs. urban and between regions. These inequalities lead to huge economic and social costs for society. This report focuses on multi-dimensional inequality in Pakistan with the aim to (1) highlight the nature and dimensions of inequality; (2) identify the inequality traps that tend to exacerbate multi-dimensional inequality; (3) examine strategies for mitigating multi-dimensional inequality; and (4) discuss the policy implications.

2. NATURE AND DIMENSIONS OF INEQUALITY: WHERE DO WE STAND?

A great deal of attention has been focused on poverty alleviation in Pakistan, but policy makers have turned away from directly dealing with the issue of multiple inequalities. This report argues that standard income and consumption measures cannot be reconciled with general perceptions of inequality in the country. The report also presents non-income inequality measures to highlight the nature and dimensions of inequality. Moreover, the analysis also features the role of tax evasion and inflation tax on inequality.

Inequalities of income and consumption

In Pakistan, estimates of income and consumption inequality are sometimes challenged because they suffer from serious under-estimation blamed on suspect quality of household survey data they depend on. The problem arises due to: (1) relatively smaller sample sizes than required for measuring income inequality, and (2) under-representation of the upper income strata due to non-response rates of highest and lowest income strata. Hence all inter-temporal inequality measures are fairly stable over time ranging near 0.4 or less. Our estimates of consumption inequality based on data obtained from household surveys from 1990-91 to 2012-13 can be summarized as follows.

First, our estimates of consumption inequality reveal that national income distribution has worsened in the nineties but has significantly improved afterwards.

Second, the quintile consumption shares indicate that the poorest 20 percent population has significantly decreased in the nineties; the middle 60 percent population has also seen its share decline while the richest 20 percent has made significant gains. The consumption share of richest 20 percent has been more than five times larger than the share of poorest 20 percent in both 1990-91 and 2011-12; this ratio has peaked in 1998–99.

Third, our calculations show that Palma index (ratio of income share of top 10 percent to bottom 40 percent population) increases throughout 1990s due to rising income shares of top 10 percent population and declining shares of bottom 40 percent population. However, this trend was reversed in mid-1990s as there was a marked decline (27 percent) in Palma between 1998-99 and 2010-11 with lowest values in 2010-11. The decline in Palma index is explained by nearly 16 percent increase in income shares of the bottom 40 percent population. The gains in income share of bottom 40 percent until 2007-08 can be attributed to high GDP growth rates in 2000s, lower inflation and more jobs in the manufacturing and services sectors. The period between 2007-08 and 2010-11 was marked by dramatic increases in global commodity prices especially agriculture commodities, which greatly helped rural communities raise their income shares. However, due to stagnation these gains in income distribution were reversed in the later period.

Fourth, the level of urban inequality is considerably higher than rural inequality. A higher Gini coefficient in urban areas may be explained by more diversity in urban than rural workers where rural workers possess a more uniform skill-set than urban workers leading to a more evenly distributed income. A post-1996-97 increase in urban inequality may be ascribed to the implementation of Pakistan's Structural Adjustment Programme (SAP) from 1996 to 2004. The gap between urban and rural Gini coefficients has remained roughly constant since 2000.

Finally, the Gini index is highest in Sindh, followed by Punjab, while Khyber Pakhtunkhwa (KP) and Balochistan provinces have the lowest levels of inequality. However, inter-temporal income inequality in Pakistan is not only low but is also stable.

Income polarization

Gini inequality measures are often believed to miss-out some critical features of 'distributional change', which are better measured by changes in income polarization. A polarized income distribution refers to 'clustering of households into groups' due to economic, social and political systems.

We find that Gini and Wolfson polarisation index do not always move in the same direction, which confirms that the Gini index does miss-out distributional changes that are otherwise well described by the polarisation index. Our findings suggest that since 1990–91, the middle-class in Pakistan has increased between 1993–94 and 1996–97, 1998–99 and 2001–02, and 2007–08 and 2010–11. However, it has gently decreased from 1990–91 to 1993–94, 2001–02 to 2007–08, and 2010–11 to 2011–12. We argue that the decline in the middle class can be attributed among other things to globalisation and trade liberalization (1998-2004), phasing-out of multi-fibre agreement and bilateral free trade agreements, especially the agreement signed between Pakistan and China in 2006. These trade related policies may have led to loss of middle-class manufacturing jobs requiring moderate skills to overseas competitors, relative to more unskilled jobs at the bottom of the scale. In this process, the divide between rich and poor in Punjab has widened. Meanwhile Balochistan and KP show the lowest levels of intra-province polarization, and Balochistan shows a declining trend in polarisation.

Measuring inequality by asset score

Income or consumption based inequality measures are narrow in scope because they ignore regional inequalities, especially at the district or *tehsil* level. We supplement these measures by providing evidence on household inequality, measured by asset score at the district and *tehsil* levels. This index is based on 30 multi-dimensional asset indicators that capture a household's asset profile. The indicators used to construct the asset index include household ownership of land, cattle, consumer durables, transport equipment and houses, quality of houses, and nature and quality of public services used, e.g. fuel, water (piped vs. non-piped), etc. Data were taken from the MICS 2007–08 and MICS 2010–11 for Punjab, which are representative at the *tehsil* level.

The asset scores present minor differentials between MICS 2007–08 and MICS 2010–11. Based on evidence from 2010–11 survey we find that disparity between least and most developed districts ranges from 7.61 for Lahore to -6.23 for Rajanpur. A low asset score is more common than a high asset score. Of the 35 districts, nearly 69 percent fall below mean, suggesting that households in these districts generally suffer from low levels of well-being. Mapping of Punjab *tehsils* by asset score suggests that there is persistent disparity in southern Punjab compared with northern and central Punjab.

Investment in human capital infrastructure and poverty alleviation

Recent studies suggest that human capital infrastructure investment alleviates poverty where poorest quintile benefits most. Some recent studies on Pakistan have found significant disparities across districts on the basis of multiple development indicators. These studies find pockets of developed and underdeveloped areas across all provinces. Investment in social infrastructure is generally concentrated in or around metropolitan districts, while districts located away from such centres (e.g. southern Punjab, interior Sindh and remote parts of KP and Balochistan) lag behind. It is also alarming that the human capital infrastructure gap between the most and the least developed districts is increasing over time.

Spatial inequality in road infrastructure

Market access depends upon distance from markets, availability of good road infrastructure, size of the market and availability of quality transport networks. Non-availability of good road infrastructure may limit market efficiency and promote market failures by creating factor scarcities leading to distorted factor prices. These constraints prevent districts to specialize by their comparative advantage. Moreover, lack of market access would lead to poor supply of goods and services and relatively higher market prices. Together these factors may lead to a vicious circle of chronic and persistent poverty and income inequality in deprived regions, which in turn may reinforce patterns of regional and spatial inequality.

Pursuit of socially inclusive growth demands improvement in regional road networks. Despite popular concerns about disparities between districts, there has been little or no systematic documentation of spatial development of road infrastructure over the past two decades. We provide evidence to show that while spatial inequality in road density has been large, it has fluctuated widely over time. Districts in southern Punjab are the most deprived in terms of road

density while those in northern Punjab have the highest road density. It can be argued that spatial inequality in road density may be responsible for lower levels of industrial concentration, higher poverty levels and greater income inequality in southern districts because the lack of connectivity with demand centres may be promoting market failures in factor markets (e.g., labour and capital markets) and product markets.

Empirical evidence shows that there is 'a strong negative relationship between road density and probability of poverty; however, the long run decline in poverty due to investment in roads almost doubles when we move from high-inequality/polarized and medium-inequality/polarized districts to low-inequality/polarized districts' (Burki, 2011). Moreover, 'with investment in road network, the poverty reduction potential of less polarized districts far exceeds the poverty reduction potential of less unequal districts': a further confirmation that issues of distributional change are indeed missed out by the inequality index (Burki, 2011). In sum, it can be concluded that 'public policies that seek more regional equality and less polarization are desirable for pro poor growth policies in developing countries' (Burki, 2011).

Inequality and taxation

It is widely believed that Pakistan's taxation system is regressive and that it also allows a great deal of space for tax evasion. To varying degrees, both these issues are thought to reflect elite capture. An important indicator of the elite bargain is the mismatch between contribution to GDP and contribution to revenue. For example, agriculture sector contributes 21 percent to GDP but just 1 percent to taxation. Similarly, the services sector contributes over 50 percent to GDP but only 30 percent to taxation. And while manufacturing pays disproportionately high taxes, tax collection is quite skewed within the manufacturing sector itself. Nearly 80 percent of all indirect taxes originate from only eighteen commodities and close to 70 percent comes from a few commodities such as petroleum products, automobiles, edible oil and tobacco.

The primary reason for such a mismatch is that industries bilaterally negotiate their own tax rates with the government. This is possible because the legislative arm of the government has absolved itself of the responsibility of debating tax rates. Instead, the executive arm of the government, in the form of the Federal Bureau of Revenue, has the authority to decide tax rates via the Statutory Regulatory Orders.

Inequality and inflation

Inflation is a particularly offensive tax on consumption. There is general consensus around the world that inflation is regressive since inflation affects poor people disproportionately. The primary reason for this disproportionate effect is that the poor hold most of their income in the form of cash – which is affected by inflation – rather than in interest-paying savings or investment accounts.

There is a broad consensus that inflation is caused by printing money which, in turn, is required to finance budget deficits. Further, the need to run a deficit arises in the first place because of the government's inability to raise enough taxes to cover expenses. It could be argued that the government's inability to raise enough taxes, its reliance on indirect taxes and its last resort of printing money to finance the deficit are underpinned by a basic distributional conflict. Increasing

direct taxation requires a political settlement: the elite either need to be convinced of the goodness of taxation, or they need to be taxed coercively. The latter option is difficult since it is the elite, by definition, who control the coercive power of the state. The former is difficult to the extent that it negates the basic impulse of accumulation. Given government expenditure, the fall-back option is to run deficits financed by printing money – to the detriment of the poorer sections of society.

3. IDENTIFYING INEQUALITY TRAPS

Inequality traps in earning levels

Inequality traps are situations where the entire income distribution is stable over time because the various dimensions of inequality (in wealth, power and social status) interact to protect the rich from downward mobility and the poor from being upwardly mobile. Empirically, there are two ways of measuring such persistence, through inter-generational earnings elasticity or through inter-generational transition matrices.

Intergenerational earnings elasticity measures the impact of a father's earnings on his son's earnings. In Pakistan, it is estimated that a 1 percent increase in father's earnings leads to a 0.29 percent increase in the sons' earnings. Given differences in data collection and estimation protocols, comparisons with other countries need to be made cautiously. However, having said this, most countries perceived to be egalitarian (e.g. Finland) have a lower elasticity than Pakistan, and countries perceived to be unequal (e.g. the USA) have a higher elasticity. It would not be incorrect to say: (1) that fathers' earnings are significantly associated with sons' earnings, and (2) the stability of elasticity over the most recent 11-year period (2000-11) is consistent with the idea of an inter-generational trap: not only does the father's earnings status predict that of the son, but this relationship does not appear to have weakened over the years.

Intergenerational transition matrices confirm the story of limited upward and downward mobility. 40 percent of sons born to bottom-quintile father remain in the bottom quintile, while only 9 percent make it to the top quintile. Similarly, 52 percent of sons born to top-quintile fathers are themselves in the top quintile; it is quite evident that privilege is passed on from father to son.

Inequality traps in educational attainment

Inequality in educational attainment appears to have generally worsened over the last two decades – fathers in the bottom and top quintiles in 1995 were statistically very similar in terms of mean years of attainment, and richer fathers' sons fared only marginally better than the sons of their poor counterparts. However, this picture has changed significantly in the past 15 years. Rich fathers now have three times as many years of education as poor fathers and rich sons have twice as many as poor sons.

A striking result over the last two decades pertains to the increasing enrolment rates for girls. In 1995 mothers in both the top and bottom quintiles were poorly educated; this seems to have changed dramatically in 2011. While there is a big gap between rich and poor daughters, the gap between sons and daughters within each quintile has actually decreased: the ratio of son/daughter mean years of education has reduced from 2.6 to 1.7 for the bottom quintile and from 2.7 to 1.2 for the top quintile. These figures seem to suggest that son preference may have decreased in the domain of education.

Inequality traps in occupational choice

Occupational choice is interesting because occupations are often associated with social status. To that extent, occupational mobility allows us a look at social rather than economic mobility. Data reveals that there is a very high level of occupational persistence in Pakistan; sons by and large join their father's occupational category. This is particularly important for 'elementary' occupations; 65 percent of sons born to elementary workers themselves become elementary workers. Moreover, it is very possible for a son to be in a higher income quintile than the father and be in the same social category i.e. it is possible to be economically mobile but socially stationary.

Gender and education

Despite the improvement in girls' education, there is much evidence that the level of expenditure on female education is significantly lower than the expenditure on male education. At least partly, lower expenditures reflect low enrolment rates for girls. While son preference could be a significant determinant of low enrolment for girls, the social institutions of purdah and caste have also been shown to be important. Providing a caste-concordant school, for example, would increase enrolment rates by 28 percent for low-caste girls and by 14 percent for low-caste boys.

Gender and employment

While labour force participation for women in Pakistan has been steadily increasing, a nuanced look reveals a far sorrier story. The rate of participation, at about 20 percent, is the lowest among South Asian Association for Regional Cooperation (SAARC) countries, and the sectoral division of labour reveals deep gender biases.

The biggest sector absorbing the female labour force is agriculture, and at least part of women's increased participation is because of a growing female labour force in this sector. This trend is probably tied to the migration of men to non-agricultural sectors in the cities. Despite increasing presence in the agricultural sector, available evidence suggests very few women have well established property rights in agricultural land- suggesting that their increased participation may not have led to economic empowerment.

4. MITIGATING MULTI-DIMENSIONAL INEQUALITY

Inequality is a complex and multi-dimensional problem. In any society it can be understood in terms of unequal outcomes or in terms of unequal opportunities to achieve valuable outcomes (such as income). It is best understood in terms of the inter-relation between these two types of inequalities. For example, inequalities in opportunities such as gender, racial, religious and ethnic discrimination can along with other "structural inequalities" (political participation, educational opportunities) affect the distribution of income.

The overall results of our analysis shows that there is persistence or a worsening of inequality in outcomes and significant variation both between and within provinces along various dimensions of inequality.

There are three main ways in which to understand the causes of economic inequality. It can be the result of market failures, a natural consequence of how markets work or, alternatively, be the product of structural inequalities-in particular those of political power ("elite capture").

It is self-evident that in the broad sense markets in Pakistan are not working given that so many people are unemployed, denied access to credit at reasonable terms and the chance to develop human and nutritional capital. A crucial policy implication follows from the fact is that inequality is inefficient or costly: egalitarian policies that improve the functioning of markets by encouraging more widespread access to health, education and credit actually *enhance* growth.

Market failures can also lead to the persistence of inequality over generations. In the presence of credit market imperfections and risk children from families with initial low levels of physical or human assets may have limited opportunities to invest in human capital accumulation, acquire adequate nutrition, or find high-wage, high-productivity work. It has to be borne in mind that access to market opportunities can also be hampered by structural and cultural inequalities and hierarchies, such as those associated with gender, kinship, caste, ethnicity and religion.

Some inequality may be the natural result of changes in a market economy (such as changes in technology or a shift in the structure of production). It may also be the result of government policies. In particular, the fiscal situation leaves little room for egalitarian investments in education and social infrastructure; in addition, a low tax/GDP ratio has ultimately resulted in inflationary pressures and worsening inequality.

Elite capture can explain the low levels of direct taxation and the overall low tax/GDP, both of which contribute to economic inequality. In addition, the prominent role of land ownership in politics may explain the low levels of public spending on health and education and, therefore, overall inequality in society. The wealthy and the powerful are also able to get more credit than those without assets or political connections, thus furthering inequality.

In summary, it appears that inequalities in income and assets between individuals and between regions are being perpetuated by a combination of poorly functioning markets and institutional weaknesses. If these inequalities continue to worsen there are likely to be profound implications for social cohesion and political stability.

5. POLICY IMPLICATIONS

There is no simple solution to multiple inequalities and inequality traps. A broad range of options need to be simultaneously pursued to tackle these problems.

First, the quality of household surveys need to be improved by minimizing measurement errors, increasing the sample size to make them district representatives so that standard income inequality measures are made relevant in policy decisions and inequality across districts is highlighted. In the interim period, policy makers can use non-income inequality measures to target deprived segments of society so that the widening gap between the most and least developed districts is arrested. Our findings suggest that if balanced development is the objective of development policy then decision makers must adopt a policy of 'geographical targeting' where development funds are disproportionately allocated to least developed areas on the basis of non-income inequality mapping of districts.

Second, there is evidence to suggest that inflation is a particularly regressive tax since it increases poverty and inequality. Macro-economic policy is a primary determinant of inflation and, therefore, of its associated ills. The discussion of inflation has essentially focused on the link between monetary and fiscal policy: the failure of fiscal governance leads to monetary authorities providing a cushion by printing money. The independence of the state bank is a valued ideal across the globe, and breaking the link between fiscal and monetary policy can be advocated.

Third, owing to structural weaknesses in the tax system, the tax-to-GDP ratio is one of the lowest in the world. While the new government has vowed to achieve a tax-to-GDP ratio of 15 percent in the next few years, this report proposes that under the tax reforms consumption taxes need to be made less regressive by having different levels of taxes on different goods. Rather than following a uniform sales tax regime, food stuff consumed by the poor can be made tax-free while those consumed by the rich can be taxed at a higher rate. The FBR needs to plug the loopholes in tax laws and enhance its capacity to be more vigilant in its tax collection. It is also desirable to make the FBR independent by constitutionally protecting appointments at the Chairman and Member levels.

Fourth, in inequality traps we identify four peculiarities: (1) a majority of the sons of poor fathers remain poor and the majority of the sons of rich fathers remain rich; (2) the educational gap between rich and poor people is increasing; (3) sons follow fathers in their choice of occupation; and (4) girls are discriminated against in terms of educational expenditure and are concentrated in certain occupational niches. It is not far-fetched to suggest that income; education and occupational choice are all linked together, reinforcing one another. The son of a sweeper does not go to a school where his talents are honed and where his aspirations are developed. While limited education is itself a barrier to upward mobility, the fact that the labour market operates through networks suggests that his chances of getting a good job are limited, despite a certain level of education. He therefore drops out of school and takes a job in the occupation of his father – where his connections do work. Naturally, he is then in the lower end of the income distribution – and the cycle continues.

Finally, the most effective space for government intervention is in schooling. Given that the fiscal space is unlikely to improve, the priority is to figure out how to efficiently allocate current resources. There are two plausible ways to proceed. One is to focus on enhancing the guality of primary education. Average attainment levels have gone up for those of both rich and poor backgrounds. While there is little data on schooling quality, it is anecdotally clear that the quality of private schools – which have a larger proportion of children from rich families – is higher. These schools can be emulated and expenditure can focus more on improving the quality of public schools than on their quantity. This directly addresses the income inequality trap, since better-guality education leads to higher productivity and the possibility of a better occupation later on. The other possibility is to focus on quantity. Again, since average attainment is already at the primary level, the focus could be on providing a higher quantity of secondary education rather than primary. This is particularly relevant for the income trap, since research suggests that there are increasing returns to scale in education. This will also address the problem of the education of girls, since the bias against girls in expenditure and enrolment is more prominent at the secondary level than at the primary level. Given that girls face mobility constraints, it is at the secondary level that a supply of education close to home will be most effective.

1 INTRODUCTION

The nexus between growth and inequality has long been debated by scholars, social commentators and politicians. Even though the link between growth and inequality remains controversial even today, there is growing evidence of multi-dimensional inequality in developing countries, including Pakistan. It appears that economic growth has benefited only a few people while the vast majority have remained deprived. Numerous manifestations of inequality can be pointed out, including inequalities of income, assets, public services, rural versus urban and between regions. These inequalities lead to huge economic and social costs for society.

This paper attempts to focus on multi-dimensional inequality in Pakistan. Its aim is (1) to highlight the nature and dimensions of inequality; (2) to identify the inequality traps that tend to exacerbate multi-dimensional inequality; and (3) to suggest policies that may help in mitigating multi-dimensional inequality.

Section 2 discusses the nature and dimensions of inequality in Pakistan by highlighting the current state of inequality in the country. Section 3 identifies inequality traps and provides concrete evidence on the nature and direction of trends. Section 4 looks at mitigating multi-dimensional inequality, while Section 5 presents conclusions and the policy implications of the study.

2 NATURE AND DIMENSIONS OF INEQUALITY: WHERE DO WE STAND?

2.1 Introduction

In the past four decades, much attention in Pakistan has been focused on the task of alleviating poverty. However, policy makers seem to have turned away from directly dealing with the country's multiple inequalities, which go far beyond numbers and encompass people's perceptions and experiences. This section of the report argues that the standard income and consumption inequality measures cannot be reconciled with general perceptions of inequality in the country. It also presents some non-income inequality measures to highlight the nature and dimensions of inequality at both the household and the regional levels. In addition, it highlights the role of tax evasion and inflation tax¹ on inequality in the country.

2.2 Inequalities of income and consumption

In Pakistan, the measurement of income or consumption inequality using household data is challenging because the quality of household survey data is doubtful (Kemal, 1981, 2003; Ahmad and Ludlow, 1988). Part of the problem is that household samples are rather small for the measurement of income inequality, including those used in the Pakistan Social and Living Standards Measurement/Household Integrated Economic Surveys (PSLM-HIES). The representation of the upper income strata in household surveys is also relatively small (Bergan, 1967), which leads to under-representation of upper-income groups. The problem is exacerbated by a relatively high non-response rate from the highest and lowest income brackets. These factors lead to serious under-estimation of the inequalities in incomes.

There is a general perception that income/consumption inequality in Pakistan is increasing overtime. However, due to the doubtful quality of the household surveys, this perception is difficult to reconcile with the most commonly used inequality measures. Income inequality may be quantified by various summary measures, but the Gini coefficient is the most widely used single statistical indicator of inequality.² It measures statistical dispersion representing income distribution in a country. The degree of inequality is measured by the value of Gini, which ranges from 0 (perfect equality) to 1 (perfect inequality). But for inequality based on per capita

$$G = \frac{1}{\mu N(N-1)} \sum_{i,j} \sum_{j} \left| \mathbf{y}_{i} - \mathbf{y}_{j} \right|$$

¹ Inflation tax refers to the loss of value or purchasing power caused by inflation for those who hold cash or fixed-rate bonds or who have a fixed income; see section 2.8.

² The Gini coefficient is based on the Lorenz curve, which is a cumulative frequency curve comparing a specific distribution with a uniform distribution representing equality. In other words, the Gini coefficient is a ratio equal to twice the area between the Lorenz curve and the equality line; it can be given by:

Where μ is for mean income of the distribution, N is for the number of observations and y_i , y_j represents income of *i*th and *j*th groups.

expenditure, it typically remains in the range of 0.2 to 0.5 and meets many desirable criteria.³ Moreover, the Gini coefficient is most sensitive to changes in the middle of the distribution and ignores changes in the distribution taking place at the upper and lower ends or tails. For the same reason, Gini estimates are often supplemented by quintile income shares computed to analyze inequality trends at the extremes, and by the income polarisation index to mitigate the problems associated with bipolar income distributions (Wolfson, 1997).

Because of poor data quality, in general, all inter-temporal inequality measures based on household surveys tend to be fairly stable.⁴ To begin with, recent studies based on income data suggest that average income distribution in Pakistan worsened during the 30-year period between 1970–71 and 1999–2000 (Anwar, 2005). Gini coefficient increased from 0.338 in 1970–71 to0.358 in 1986–87, and to 0.419 in 1998–99 (Anwar, 2005). Analysis by decade shows that income inequality improved in the 1960s and 1980s, but worsened in the 1970s and 1990s (Anwar, 2005; GoP, 2000).⁵ However, further assessment of income inequality trends in the post-2001–02 period is not possible because household income data in subsequent surveys are not comparable with the earlier surveys.⁶

Alternatively, income inequality trends can be assessed by using household consumption expenditure data from 1990–91 to 2012–13. These data were obtained from 10 rounds of household surveys. Firstly, looking at these trends, it can be seen that national income distribution worsened in the 1990s, but significantly improved in the later period (see Table 2.1 and Figure 2.1). This evidence is also consistent with Anwar (2005) and Jamal (2006), who confirm this trend.

Secondly, consumption share by quintile is another measure of inequality, and this shows that the share of the poorest 20 percent of the population significantly decreased in the 1990s (Table 2.1). Similarly, the middle 60 percent of the population also saw its income share decline in this period, while the richest 20 percent made significant gains. Taking the ratio of richest to poorest income groups demonstrates the extent of income inequality. The consumption share of the richest 20 percent was more than five times as large as that of the poorest 20 percent in both 1990–91 and 2011–12. Due to the worsening of income distribution across income groups, this ratio peaked at 6.18 times in 1998–99. These results are corroborated by Anwar (2005), who notes that the 1990s saw as lightly increasing magnitude of inequality, with the richest income groups increasing their relative shares of income to the highest level in more than 50 years. Growing inequality of income was reflected in the form of joblessness, household deprivation, economic and social polarisation and the alienation of the general public from politics and politicians.

³ These include mean independence, population size independence, symmetry and the Pigou-Dalton transfer principle. A problem with this measure, however, is that it cannot be easily decomposed to indicate the sources of inequality.

⁴ This is in line with the general proposition of Li et al. (1998) that 'income inequality is generally stable within countries; and that it varies significantly among countries'.

⁵ These estimates were based on grouped data, which ignore inequality within groups.

⁶ For instance, the Government of Pakistan (2006) notes that the 'aggregative nature of income data collected in PSLM 2004–05 is strictly not comparable with the corresponding data collected in PIHS 2001–02'.

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Gini index $ imes$ 100	1990 –91	1992 93	1993 94	1996 97	1998 99	2001 02	2005 06	2007 08	2010 11	2011 –12
Urban	32.39	35.97	34.00	33.74	39.18	35.16	33.30	34.77	33.44	34.66
Rural	26.71	28.73	29.34	35.12	26.23	24.79	25.41	27.00	24.84	24.73
Overall	29.79	32.11	32.49	33.89	34.27	30.41	30.55	31.65	29.82	30.96
Consumption share by quintile (%)										
Q1	8.5	8.4	8.2	8.4	7.7	8.5	8.4	8.28	9.13	8.49
Q2	12.0	11.5	11.3	11.5	11.0	11.9	11.8	11.52	12.55	11.75
Q3	15.2	14.6	14.3	14.4	14.3	15.1	15.1	14.67	15.76	14.93
Q4	20.1	19.3	19.1	18.7	19.4	20.0	20.3	19.62	20.52	19.84
Q5	44.2	46.3	47.1	47.0	47.6	44.5	44.4	45.91	42.05	44.99
Palma index	1.48	1.65	1.72	1.72	1.79	1.51	1.49	1.62	1.30	1.55
Top 10% (decile 10)	30.3	32.8	33.6	34.4	33.5	30.7	30.1	32.1	28.2	31.3
Middle 50% (deciles 5 to 9)	49.2	47.3	46.9	45.7	47.7	48.9	49.7	48.1	50.1	48.5
Wolfson index	0.112	0.114	0.115	0.107	0.126	0.116	0.120	0.123	0.114	0.118

Table 2.1: Changes in Gini coefficient inequality in Pakistan

Source: Authors' calculations from data at the household level

Thirdly, we calculate the Palma Index which is based on the ratio of consumption share of top 10 percent to the bottom 40 percent of the population (Palma, 2011). It is argued that in a period of rising global inequality, two opposite forces namely 'centrifugal' and 'centripetal' determine the global income distribution (Palma, 2011). The 'centrifugal' forces promote 'increased diversity in the shares appropriated by the top 10 and bottom 40 percent' while 'centripetal' forces at work promote 'growing uniformity in the income-share appropriated by the deciles 5 to 9' (Palma, 2011). In other words, the middle 50 percent population are expected to have a more stable consumption share over time. However, evidence from Table 2.1 reveals that Pakistan faced marked deterioration in income distribution in 1990s when Palma index continued to increase due to rising income share of top 10 percent and decrease in income share of bottom 40 percent population. However, this trend was reversed in post-1998-99 period as there was a marked decline in Palma reaching its lowest levels in 2010-11. To illustrate, there was nearly 16 percent decrease in Palma between 1998-99 and 2005-06 followed by a further decrease that added up to 27.4 percent fall in Palma by 2010-11. This decline is largely explained by the rising income shares of the bottom 40 percent population. For example, there was a 9.1 percent increase in income share of deciles 1 to 4 between 1998-99 and 2001-02 (from 18.7 percent to 20.4 percent) and a huge increase of 15.94 percent between 1998-99 and 2010-11 (from 18.7 percent to 21.68 percent). Post-1998-99 gains in income distribution may be attributed to a high growth period in the country from 2001-02 to 2007-08, lower inflation and more job creation in the manufacturing and services sectors. However, the period between 2007-08 and 2010-11 saw a dramatic increase in global commodity prices especially agricultural commodities, which directly benefitted the rural sector including its poor households. The distributional gains made until 2010-11 were reversed in the later period due to stagnation setting in to the economy. As described by Palma (2011), the stylised fact of 'homogenous middle' also does not hold true in the case of Pakistan where the middle 50 percent population have failed to hold on to their share in the last two decades.

Fourthly, the time profile of Gini coefficient by region shows that levels of urban inequality are much higher than in rural income groups (Table 2.1 and Figure 2.1). A higher Gini coefficient may be attributed to the fact that urban workers are much more diversified than rural workers; income-earning activities range from trade, industry and professional groups to petty traders and other own-account workers. By contrast, most rural households possess uniform skill-sets and the bulk of land-owners are small or very small, which leads to incomes being relatively more evenly distributed. The increase in inequality in urban areas, especially after 1996–97, may be attributed to the implementation of Pakistan's Structural Adjustment Programme (SAP) from 1996 to 2004.⁷ The reduction in national inequality after 1996–97 was due to a sharp decline in inequality in rural areas and a marginal decline in urban areas. The gap between urban and rural Gini coefficients has remained roughly constant since 2000.



Figure 2.1: Changes in Gini coefficient in Pakistan, urban vs. rural areas

Finally, looking at provincial inequality trends (Table 2.2 and Figure 2.2), the Gini index is highest in Sindh province, followed by Punjab, while Khyber Pakhtunkhwa (KP) and Balochistan provinces have the lowest levels of inequality. Also, while the Gini index increased in all four provinces up until the mid-1990s, it registered a declining trend throughout afterwards. This would suggest that households have become more equal within each province. However, as a differential, in 2011–12 the Gini index for Sindh was 9.8 percent higher than for Pakistan as a whole, while those of Balochistan and KP provinces were respectively 29 percent and 16 percent lower than the national figure, indicating that income distribution has most improved in Balochistan. In sum, inter-temporal income or consumption inequality in Pakistan is not only low but is also stable.

⁷ Terms under the SAP included trade liberalization, aligning domestic prices with world market prices, increasing government revenue by widening the tax base, reducing government deficits by lowering public expenditure, especially on subsidies and currency devaluation, etc.

2.3 Income polarization

Income inequality measures are often believed to miss out some critical features of 'distributional change', which are better measured by changes in income polarization. Today, income polarization and income inequality are widely accepted as two distinct concepts. While income inequality refers to 'inter-personal alienation' of individuals, a polarized income distribution refers to 'clustering of households into groups' due to economic, social and political systems (Wolfson, 1997). Phrases used to describe polarization include 'disappearing middleclass', individuals 'moving out from the middle to the tails of the distribution' and 'a hollowed out middle' (Wolfson, 1997).⁸ The Wolfson polarization index builds on the Gini index to accommodate individuals moving from the middle to the tails of the distribution.⁹ An increase in the polarization index indicates a decrease in the middle class (or those in the middle area of the distribution) and vice versa.

Year	Punjab		Sindh		КР		Balochistan		
	Gini	Wolfson	Gini	Wolfson	Gini	Wolfson	Gini	Wolfson	
1990–91	29.70	11.40	31.85	12.34	23.76	8.42	24.86	10.29	
1992–93	32.61	11.82	33.60	12.15	27.22	8.09	24.83	9.67	
1993–94	33.38	11.78	33.57	12.47	24.83	8.81	27.81	10.73	
1996–97	34.78	10.71	33.20	11.91	28.59	8.86	29.01	9.29	
1998–99	34.78	12.88	36.61	13.78	28.45	10.44	23.33	8.93	
2001–02	30.04	12.14	35.18	12.60	23.33	8.77	22.09	8.86	
2005–06	30.39	11.95	33.09	12.91	25.86	10.20	23.54	9.73	
2007–08	31.68	12.76	34.31	12.59	26.21	9.67	24.32	9.26	
2010–11	30.44	11.98	32.17	11.72	24.80	9.67	19.91	8.11	
2011–12	30.96	12.19	34.00	12.23	25.87	9.80	21.90	8.81	

Table 2.2: Gini coefficient and Wolfson polarization index, by province (Gini/polarization index 100)

Source: Authors' calculations from data at the household level

⁸ For more details, see Estaban and Ray (1994), Gradin (2000), Zhang and Kanbur (2001), Duclos et al. (2004) and Duro (2005).

⁹The Wolfson polarization index is defined as $W = 2(2T - \text{Gini})/(m/\mu)$ where *T* represents the area of the trapezoid = 0.5 – L(0.05) and *L*(0.5) denotes income share of the bottom half of the population; *m* is for median income; μ represents the mean income. The higher the index, the more polarization increases and the more the middle class decreases.



Figure 2.2: Changes in Gini inequality, by province

Table 2.2 shows that the Gini and the Wolfson indices do not always move in the same direction. These results also confirm that the Gini index does miss out distributional changes that are well described by the Wolfson index. Figure 2.3 depicts changes in income polarization over-time. As stated above, increases in the value of the index indicate a decrease in the size of the middle class and vice versa. The trends in Pakistan as well as in urban and rural areas are more or less symmetric. The trends reveal that the middle class increased between 1993–94 and 1996–97, 1998–99 and 2001–02, and 2007–08 and 2010–11. However, it gently decreased during three time periods, from 1990–91 to 1993–94, 2001–02 to 2007–08, and 2010–11 to 2011–12. There was a sharp decrease in the middle class between 1996–97 and 1998–99.

The declining middle class may be attributed to Pakistan's dramatic drive towards trade liberalization, which began in the late 1990s (1998–2004), the phasing out of the multi-fibre agreement that governed the world textile and garment trade from 1974 to 2004, and to bilateral free trade agreements, especially that signed with China in 2006. It seems likely that these trade-related policies have led to a loss of middle-class manufacturing jobs requiring moderate skills to overseas competitors, relative to more unskilled jobs at the bottom of the scale.



Figure 2.3: Changes in income polarization in Pakistan, urban vs. rural areas

In terms of intra-province polarization Figure 2.4 reveals that Sindh is the most polarized province in Pakistan, followed by Punjab, which follows the national trend. An increasing trend has seen Punjab become more and more polarized, overtaking Sindh by 2007–08. In other words, the divide between rich and poor in Punjab has widened with the passage of time. Balochistan and KP meanwhile show the lowest levels of intra-province polarization, and Balochistan shows a declining trend.



Figure 2.4: Changes in income polarization, by province

To conclude, Pakistan as a whole is maintaining existing levels of inequality and polarization. Punjab and Sindh provinces are more unequal and polarized than KP and Balochistan, and the polarization levels are widening, particularly in Punjab. However, a more meaningful analysis of inequality in Pakistan warrants a focus on measures of non-income inequality, which are explored in the following section.

2.4 Measuring inequality by asset score

In addition to the data issues in household surveys, income inequality and income polarization measures are narrow in scope because they do not shed much light on regional inequalities, especially at the district or *tehsil* level. Part of the reason is that household data on income or consumption are not representative at district or *tehsil* levels. Therefore, inequality and polarization measures must be supplemented by providing evidence from a normative framework to understand household inequality by assets across districts and *tehsils*. In this regard, Javaid et al. (2014) have constructed an asset index score by building on the methodology first proposed by Filmer and Pritchett (2001).¹⁰ They use 30 multi-dimensional asset indicators to capture a household-level asset profile. The indicators used to construct the asset index include household ownership of land, cattle, consumer durables, transport equipment and houses, quality of houses, and nature and quality of public services used, e.g. fuel, water (piped vs. non-piped), etc. Data were taken from the MICS 2007–08 and MICS 2010–11for Punjab, which are representative at the *tehsil* level.

Figure 2.5 shows the ranking of districts in Punjab on the basis of asset scores in 2007–08 and in 2010–11. The asset scores present minor differentials between the MICS 2007–08 and MICS 2010–11 surveys; evidence from the 2010–11 survey has been used for further analysis. The disparity between least and most developed districts measured by asset index ranges from 7.61 for Lahore to -6.23 for Rajanpur. A low asset score is more common than a high asset score. Of 35 districts, nearly 69 percent fall below the mean, suggesting that households in these districts generally suffer from low levels of well-being.

There is a huge disparity in asset scores even amongst the most developed districts. For example, in 2010–11 Lahore's asset score (the most developed district, with rank=1) was 24 times that of Multan (district rank=11), 9.6 times that of Jhelum (district rank=9), 3.3 times that of Faisalabad (district rank=7) and 1.5 times that of Gujranwala (district rank=2). At the other end of the scale, Rajanpur's asset score (the least developed district, with district rank = 35) was 69 times lower than that of Hafizabad (district rank=12), 31 times lower than that of Sargodha (district rank=17) and three times lower than that of Mianwali (district rank=21). A mapping of Punjab *tehsils* by asset score (Figure 2.6) suggests that the majority of top- and middle-quintile *tehsils* are located in northern and central Punjab, while an overwhelming number of *tehsils* in the lowest quintile are located in the south of the province. This would suggest a persistent disparity in southern Punjab compared with the northern and central areas.

¹⁰ See also Minujin and Bang (2002) and McKenzie (2005).



Figure 2.5. Ranking of Punjab districts by asset score, 2007–08 and 2010–11





2.5 Unequal opportunities in educational attainment

Pakistan's constitution promises education as a fundamental right, and the 18th Amendment to the constitution assures the right to free and compulsory education for all children up to 16 years of age, to be provided by the federal and provincial governments. Today Pakistani children are much more likely to attend school compared with earlier generations, but the profile of school-going children is marked by multiple inequalities.

There is wide variation in school attendance across primary and lower secondary levels and by gender, location, wealth and ethnicity profiles. Pakistan, along with Bangladesh, China and India, is one of four countries that account for more than 50 percent of the world's total illiterate population (UNESCO, 2010). It has been estimated that over 9.2 million children are currently out of school, which includes 6.5 million (or 34.4 percent) of primary school-age children and 2.7 million (or 30.1 percent) of lower secondary school-age children (UNICEF, 2013).¹¹ The number of out-of-school children in Pakistan is the second highest in the world, and they account for a significant share of the global out-of-school population (UNESCO, 2010).¹²

Disparities in education are reflected in differences between locations. For example, a UNICEF (2013) report shows that primary school-age children from urban backgrounds are more likely to be attending school than children from a rural background (an urban primary adjusted net

¹¹ The estimates in the UNICEF report are based on data from the Pakistan Social and Living Standards Measurement Survey (PSLM) 2007–08. This is the first ever study to profile of out-of-school children on the basis of household attributes.

¹² These numbers make it impossible for Pakistan to achieve the goal of universal primary education by 2015.

attendance rate (ANAR) of 78 percent compared with a rural ANAR of 60.5 percent¹³). Similarly, the report reveals that children from poorer families are less likely to go to school than children from richer families (the primary ANAR of the poorest wealth quintile is 50.8 percent, compared with 82.3 percent for the richest wealth quintile).

Gender disparity in education presents an even bleaker picture. The Gender Parity Index (GPI) is often used to measure the ratio of female to male participation in education. In Pakistan overall the GPI ratio is estimated at 0.86, which indicates that for every 100 boys only 86 girls are attending primary or lower secondary school (UNICEF, 2013). The GPI for Punjab, at 0.94, is higher than the national average, but the ratios in Sindh (0.79), KP (0.71) and Balochistan (0.69) are well below it. These numbers reflect various socio-economic restrictions and pressures that prevent girls from attending school. Disparities in education are also seen on the basis of ethnicity, measured by the mother tongue of children. For example, Balochi-speaking boys and girls have the lowest primary ANAR (54.2 percent), followed by those whose mother tongue is Sindhi (56.6 percent), Pushto (63.9percent), Urdu (70.5 percent) and Punjabi (74.3 percent) (UNICEF, 2013).

Low school attendance rates have huge negative externalities, including child labour. The incidence of out-of-school children is reported to be very high amongst boys and girls involved in child labour. For example, UNICEF (2013) shows that '15.9% of children aged 10–14 years are involved in child labor, and 89.3% of child laborers are out of school ...female child laborers are more likely than male child laborers to be out of school (96.9% compared to 82.4%)'.

There are various explanations as to why children go to work, and not to school. Most of these rely on demand- and supply-side factors as determinants of child labour and schooling (Basu, 1999; Edmonds and Pavcnik, 2005; Kambhampati and Rajan, 2006; Kruger, 2007). Based on data of 60,263 children drawn from eight rounds of the HIES between 1990–91 and 2007–08, Shahnaz and Burki (2015) show that in rural areas 'households respond differently to allocating the time of boys and girls due to the prevailing economic environment'. Their estimates suggest that daughters of working mothers are more likely than sons, and sons and daughters of literate mothers are less likely, to become child labourers. The probability of a child going to work decreases with the education level of the head of household and increases with the head's age, and also increases with heads who are self-employed or who are engaged in agricultural or manufacturing activities.

Exploring the phenomenon of child labour in developing countries, Basu and Van (1998) and Basu (1999) contend that household concerns for survival, along with the possibility of substituting between adult and child labour, determine whether a household sends its children to school or to work. They claim that low market wages can lead to more child labour and less schooling when adult income in a household falls below a certain threshold income. However, empirical evidence based on data from rural households in Pakistan reveals that higher districtlevel adult wages reduce the incidence of child labour in the case of girls, but higher adult wages do not prevent rural households from sending their sons to work (Shahnaz and Burki, 2015). There is no simple solution to the problems of out-of-school children and child labour, but

¹³ Primary ANAR is measured by the 'number of children of primary school age (5–9 years) attending primary or secondary education divided by the number of children of primary school age' (UNICEF, 2013).

for targeted programmes to increase household income levels it would be easier and more practical for policy makers to identify deprived districts where wages are low rather than identifying deprived households, which are much more scattered. The minimum wage law has been in place for more than two decades, but its efficacy is suspect due to the country's large informal sector and undocumented economy.

2.6 Investment in human capital infrastructure and poverty alleviation

Social spending in Pakistan has always suffered due to stagnant revenue generation and competition with other development priorities, leaving policy makers with few resources to meet the increasing backlog of investment in education and health infrastructure. Recent studies suggest that investment in human capital infrastructure alleviates poverty (e.g. Klasen, 2008; Gustafsson and Shi, 2004) while it has also been asserted that 'the poorest quintile benefits enormously from growth and from high average levels of education and physical capital accumulation' (Birdsall and Londono, 1997). Some recent studies have quantified levels of regional development and have found significant inter-district and inter-provincial disparities, based on a number of development indicators (Jamal, 2003; Wastiet al., 2008). They find pockets of developed and underdeveloped areas across all provinces.

More recently, Burki (2011) has quantified the regional concentration of education and health infrastructure using 26 education and health indicators. He ranked each district in all of Pakistan on the basis of a ranking technique known as the principal component of the post-primary school system and hospital index; the top-ranking districts included eight metropolitan cities and a number of districts in northern and central Punjab. These findings suggest that investment in social infrastructure is highly concentrated in the larger cities and their surrounding districts, while districts located further away from such centres (e.g. districts in southern Punjab, the interior of Sindh province and remote parts of KP and Balochistan) lag behind. It is also alarming that the human capital infrastructure gap between the most and the least developed districts is increasing over time (Burki, 2011).

2.7 Spatial inequality in road infrastructure

For farms and other businesses, market access is determined by ease of connectivity with market centres in their vicinity, which in turn depends upon the availability of good road infrastructure, the distance from market, the size of the market and the availability of quality transport networks.

The absence of good road infrastructure limits market possibilities for businesses because they are unable to connect with other cities and markets. Spatial inequality in road infrastructure constrains market efficiency and promotes market failures by creating factor scarcities and distorting factor prices; this in turn prevents districts from specializing their production by comparative advantage. Lack of market access may also result in poor supply of goods and services and in higher prices. A combination of these factors may lead to a vicious circle of chronic and persistent poverty and income inequality in deprived regions, which in turn may

reinforce patterns of regional and spatial inequality. Recent literature suggests that improvements in regional road networks contribute significantly to the pursuit of socially inclusive growth (e.g. Khandker et al., 2009; Jacoby and Minten, 2009).





Despite popular concerns about disparities between districts, there has been little or no systematic documentation of spatial development of road infrastructure over the past two decades. Burki (2011) has documented spatial concentration and changes that have taken place in road infrastructure between1990–91 and2005–06. The most striking pattern that emerges from his data is that while spatial inequality in road density has been large, it has fluctuated widely over time. Figure 2.7shows a map of districts in Punjab based on road density for 2005–06, with their relative ranks from most to least dense. It appears from this that districts in southern Punjab are the most deprived in terms of road density while those in northern Punjab have the highest density.

It can be argued that spatial inequality in road density may be responsible for lower levels of industrial concentration, higher poverty levels and greater income inequality in southern districts because the lack of connectivity with demand centres may be promoting market failures in factor markets (e.g., labour and capital markets) and product markets. In this regard, Burki (2011) uses six rounds of household data from the HIES and finds 'a strong negative relationship between road density and probability of poverty; however, the long run decline in poverty due to investment in roads almost doubles when we move from high-inequality/polarized and medium-

Source: Burki (2011)

inequality/polarized districts to low-inequality/polarized districts'. Moreover, he finds that 'with investment in road network, the poverty reduction potential of less polarized districts far exceeds the poverty reduction potential of less unequal districts': a further confirmation that issues of distributional change are indeed missed by the inequality index. In sum, it can be concluded that 'public policies that seek more regional equality and less polarization are desirable for pro poor growth policies in developing countries' (Burki, 2011).

2.8 Inequality and taxation

It is widely believed that Pakistan's taxation system is regressive and that it also allows a great deal of space for tax evasion. To varying degrees, both these issues are thought to reflect elite capture, thus forging a natural connection between inequality and the nature and magnitude of tax collection. This section argues that the regressive nature of the taxation system is a reflection of how Pakistan's elite have consolidated their bargain with the state. In a nutshell, powerful lobbies negotiate their own tax rates with the government bilaterally. Consequently, there is a great mismatch between contributions to gross domestic product (GDP) (income) and tax revenue. As a corollary, the government has to rely on taxes that have a disproportionate impact on common citizens.

A rough and ready measure of the regressive nature of taxation is the share contributed by indirect taxes, which account for roughly 60 percent of Federal Board of Revenue (FBR) receipts (GoP, 2014). Figure 2.8 shows that the ratio of direct to indirect taxation has remained fairly steady over the past two decades, and that the tax-to-GDP ratio has remained stable at a low level over the same period. From the perspective of political economy, the key issues are identifying the beneficiaries of such a tax structure, and identifying the mechanism that helps to reinforce it.





Source: Ministry of Finance, Pakistan Economic Survey of Pakistan (various years)

Who are the beneficiaries of such a tax structure? Clearly it is those who have high incomes and who pay low taxes – in other words, those whose contribution to GDP is much higher than their contribution to tax revenue. For example, Ahmed (2008) shows that agriculture contributes 20

percent to GDP but just 1 percent to taxation; to put this in context, in 2009–10 the agricultural sector generated Rs. 1.2 billion in tax revenue, of which Rs.1 billion was from Punjab alone (Nasim, 2013). If exemptions on agriculture were to be withdrawn and taxes imposed at the rates specified in the 2012 Finance Bill, the additional tax revenue would amount to Rs.80–115bn (Nasim, 2013). Since Naseem's calculations allow exemptions for small land holders, it can be assumed that it is the agricultural elite who are capturing about Rs. 100bn annually in rents.

Similarly, the services sector contributes over 50 percent to GDP but only 30 percent to taxation. Within this sector, the wholesale and retail sub-sectors contribute about 19 percent to GDP but just 0.5 percent to taxation (Ahmed, 2012). The reason for this is that the FBR collects sales tax directly from manufacturers in excise mode rather than in the value added mode from retailers. VAT, however, has the additional attraction of documenting hidden income. Collecting sales tax in the excise mode makes it impossible to tax incomes generated in the wholesale and retail sector; attempts to document this sector have met with stiff resistance from the trading community.¹⁴

It is clear then that manufacturing must be paying disproportionately more in taxes than the sector contributes to GDP. In fact manufacturing, combined with mining and quarrying, contributes 20 percent to GDP but 65 percent to tax receipts. But even here most of this contribution is in the form of indirect taxes; manufacturing contributes 50 percent of all indirect taxation (Ali, 2014). Furthermore, tax collection is quite skewed even within the manufacturing sector itself. Nearly 80 percent of all indirect taxes originate from only 18 commodities and close to 70 percent comes from 10 commodities (these include petroleum products, telecoms, automobiles, edible oil and tobacco), while the fertilizer and cement industries pay very little (see Figures 2.9 and 2.10).





Source: Ahmed (2008)

¹⁴ This does not imply an endorsement of VAT. Sales tax is regressive as it is, but if it is collected in VAT mode instead of excise mode, there will be a benefit of documenting incomes, which can form the basis of progressive income taxes.



Figure 2.10: Sectoral contributions to direct taxes

Source: Ahmed (2008)

Finally, powerful sectors are also able to gain advantage through tax exemptions. Since 2001, the Government of Pakistan (GoP) has recorded these exemptions under the category of tax expenditures, and the sums involved have risen dramatically (see Figure 2.11). All the main tax laws – the Income Tax Ordinance 2001, the Customs Act 1969, the Sales Tax Act 1990 and the Federal Excise Duty Act 2005– allow the government to waive taxes. This arrangement provides space for different sectors to negotiate their effective tax rates with the government – and it is this bargaining power that is reflected in the different contributions of different sectors.





Source: Ministry of Finance, Pakistan Economic Survey of Pakistan 2013-14

This raises the question of the institutions that sustain such a tax structure. The first and foremost point is that rates of taxation are not the prerogative of the legislative arm of the government but of the executive arm: parliament does not debate tax rates and exemptions; rather the FRB decides these. The Federal Board of Revenue Act empowers the Board's chairman to levy taxes and grant exemptions through Statutory Regulatory Orders (SROs) – which have now become synonymous with elite capture of taxation. However, instrumental as they might be, the narrative suggests that SROs are just one manifestation of the elite bargain. Exemptions from income tax are another. As Dr Hafeez Pasha, chairman of the country's Panel of Economists, has argued:

The real problem is not so much in the SROs as in the law. In particular, the Income Tax Ordinance is replete with hidden exemptions and concessionary treatments; the entire second schedule is devoted to giving concessionary exemptions.

Hafiz Pasha, interview with Business Recorder, 8 September 2014

Even if one disagrees with Pasha on the relative importance of SROs, It is important to understand that both SROs and income tax exemptions are legal. As such, both are a reflection of a deeper issue: the priorities of the state. To this extent, the non-tax-paying elite can be considered as being embedded in the state itself: the very framework within which tax collection occurs is biased towards the powerful, and the efforts of various trader and manufacturer lobbies contribute to maintaining the status quo.

But we must go further: such a bargain with the elite does not happen in a vacuum. Even if the law reflects the bargaining muscle of different lobbies, there is a narrative that justifies such a bargain: for example, the fertilizer sector is considered important from a national security perspective and the textile sector is considered by the FBR to be the 'backbone of Pakistan's economy'. If this is the FBR's opinion, it is not surprising that it should quickly bow down to pressure from the textile sector, as was the case with a recent proposal to increase sales tax on domestic sales. Furthermore, an efficient government needs flexibility to ensure the competitiveness of its industries. In a country where the state cannot meet either security or energy needs, it is easier to achieve competitiveness through protection. Industrial lobbies play on this narrative, highlighting their own contributions to the economy and their job-creating capacity to strike a better deal for themselves.

2.9 Inflation tax and inequality

Inflation is a particularly offensive tax on consumption. There is general consensus around the world that inflation is regressive, since the severity of its impact is felt more by poor people than by those who are rich. One of the main reasons why inflation affects poor people disproportionately is because they hold most of their income in the form of cash, which is affected by inflation, rather than in interest-paying savings or investment accounts. It is not surprising then that Easterly and Fisher (2001), using data from 38 countries, found that poor people are more likely than rich people to mention inflation as a top national concern.

Inflation is also politically offensive because of its impact on poverty and inequality. Rising prices due to inflation can be viewed as a tax which is more likely to impact the poor. As suggested by Figure 2.12, the relation between a measure of inflation tax and inequality is global (more on causation later). Moreover, Chaudhry and Chaudhry (2008) estimate that a 20 percent increase in food inflation increases the poverty headcount by 7 percent. Having said this, what makes inflation a really pressing issue is that macro-economic policy is primarily responsible for inflation and, therefore, its impact on people's welfare.

Figure 2.13, focusing on Pakistani data, show three important trends. Firstly, food inflation shows a clear upward trend since at least 2002–03; it is not a coincidence that broad money growth and net government borrowing show an uptick from around the same time. There is a broad consensus in mainstream literature that high money supply – a result of printing money – causes prices to rise, and the primary reason for printing money is to finance the budget deficit (see the series for net government borrowing in Figure 2.13). Further along the chain, the need to run a deficit arises in the first place because of the government's inability to raise enough taxes to cover expenses.



Figure 2.12: Inflation tax and inequality (OECD countries 1966–90)

Source: Albanesi (2006)



Figure 2.13: Food inflation rate, broad money growth and government borrowing, 1991–2008 in Pakistan

Source: Economic Survey of Pakistan (various issues), World Economic Outlook

It could be argued that the government's inability to raise enough taxes, its reliance on indirect taxes and its last resort of printing money to finance the deficit are underpinned by a basic distributional conflict (Albanesi, 2006). Increasing direct taxation requires a political settlement: the elite either need to be convinced of the value of taxation, or they need to be taxed coercively. The latter option is difficult since it is the elite, by definition, who control the coercive power of the state. The former is difficult to the extent that it negates the basic impulse of accumulation. Given government expenditure, the fall-back option is to run deficits financed by printing money – to the detriment of the poorer sections of society.

3 IDENTIFYING INEQUALITY TRAPS

3.1 Introduction

A key insight from Section 2 is that inequality in Pakistan has persisted over time, and in some instances has worsened. But Pakistan, it appears, is not alone in facing persistent inequality. A large body of literature has addressed similar concerns in different countries across the world, leading Tilly (1999) to name the phenomenon 'durable inequality'.¹⁵ Rao (2006) subsequently formalized these ideas in the framework of what he called an 'inequality trap'. This he defined as 'describing situations where the entire distribution is stable because the various dimensions of inequality (in wealth, power and social status) interact to protect the rich from downward mobility and the poor from being upwardly mobile' (Rao, 2006).

There are two characteristics of an inequality trap (Bebbington, 2008). Firstly, there is the persistence of *ranking*, where income distribution may shift without affecting the relative ranking of different population sub-groups, i.e. incomes increase (or decrease) at all points in the distribution.¹⁶ Secondly, an inequality trap draws attention to the causal interaction between multiple dimensions of advantage. Let us suppose, for instance, that income mobility is achieved through acquiring higher levels of good education. If good education is expensive, then poor people would need access to public or subsidized education. If poor people have minimal representation in state legislatures, they might not be able to legislate towards good public education. On the other hand, those who are rich and have meaningful representation in the legislature do not need public education and do need to legislate for it. In short, inequalities in political power may reinforce inequality in incomes by denying access to affordable education.

Similarly, consider the status of women in societies that have strong norms regarding masculine 'outside' activities and feminine 'inside' activities, with a semi-permeable border between the inside and the outside. In such regimes, women are often denied property and inheritance rights and their physical mobility is curtailed. To the extent that girls' access to education is disrupted by lack of mobility, they are more likely to work from home than outside the home and may choose occupations that pay less as a compensating differential. This reduces the options for women outside marriage and increases their economic dependence on men. Social inequalities therefore may reinforce economic inequalities along lines of gender. Moreover, social norms are transmitted across generations: If the norm is that women do not get educated and 'good' women stay at home, these beliefs are easily passed on to daughters who then make decisions similar to those made by their mothers (Akerlof and Kranton, 2000).

¹⁵Discussing different mechanisms that allow inequalities to persist, Tilly focuses on the relations of exploitation between dominant and subordinate groups and the maintenance of institutions and practices that support these relationships.

¹⁶In the same vein, it is possible for absolute poverty to diminish considerably without changing the relative ranking of different population sub-groups. It is straightforward, then, to see how an inequality trap is different from a poverty trap: the latter involves persistence in the absolute level of advantage, whereas the former involves persistence in relative advantage.

3.2 Inequality traps in Pakistan

Trap 1: Inter-generational persistence in income

As noted above, the definition of an inequality trap requires stability of income distribution and the preservation of relative ranks: those who are poor remain poor and those who are rich remain rich. One way of getting an empirical handle on this phenomenon is through measures of inter-generational mobility. The relevant literature focuses on two basic measures, inter-generational earnings elasticity and inter-generational transition matrices. This section focuses on each in turn.

Figure 3.1 presents measures of elasticity for the 21 years from 1991 to 2011, which show an average elasticity of 0.29: this suggests that a 1 percent increase in a father's income is associated with a 0.29 percent increase in the income of his son.¹⁷ Given differences in data collection and estimation protocols, comparisons with other countries need to be made cautiously. However, having said this, most countries perceived to be egalitarian (e.g. Finland) have a lower elasticity than Pakistan, and countries perceived to be unequal (e.g. the USA) have a higher elasticity (see Table 3.1). It would not be incorrect to say: (1) that fathers' earnings are significantly associated with sons' earnings, and (2) the stability of elasticity over the most recent 11-year period (2000–11) is consistent with the idea of an inter-generational trap: not only does the father's earnings status predict that of the son, but this relationship does not appear to have weakened over the years.¹⁸





Source: Authors' calculations using Labour Force Surveys (LFS), 1991–2011. The sample is limited to households with at least one head and one son in the labour market. All coefficients are statistically significant at the 5 percent level.

¹⁷ Inter-generational earnings elasticity is derived from an ordinary least squares(OLS) regression model as the estimate of the coefficient of β in the equation, where Y represents earnings for fathers and sons from a particular family. The constant term α captures the trend in average incomes across generations, due, for example, to changes in productivity, international trade, technology or labour market institutions. The coefficient β indicates the degree to which earnings are 'sticky' across generations within the same family. The higher the value of β , the higher the influence of a parent's income on the child's income.

¹⁸ These results are preliminary in nature.

Country	Estimate of inter-generational elasticity
Finland	0.18
Canada	0.19
Netherlands	0.22
Sweden	0.27
Germany	0.32
France	0.41
United States	0.47
United Kingdom	0.50

Table 3.1: International estimates of inter-generational elasticity

Source: Corak (2006)

A drawback of the elasticity measure is that it offers a summary measure of mobility without offering any insight into actual mobility. Elasticity does not tell us, for example, the number of sons who are upwardly or downwardly mobile. The easiest way to do this is to count how many sons of poor fathers have been able to 'transition' out of the fathers' income class.¹⁹ To be precise, we need to look at a son's movement out of his father's income quintile. A quintile constitutes 20 percent of a distribution; a person in the top 20 percent of his generation's income distribution is in the top quintile and a person in the bottom 20 percent of the distribution is in the bottom quintile. This investigation is interested in knowing whether the son of a bottom-quintile father is in the bottom quintile himself. If the son of a bottom-quintile father turns out to be in the top quintile instead of in the bottom one, he has 'transitioned' from a poor background to being rich.

Figure 3.2 shows how the sons of top- and bottom-quintile fathers have fared. Sons of topquintile fathers are represented by the light-coloured bars and sons of fathers in the bottom quintile by the dark-coloured bars. The results show that 40 percent of sons born to bottomquintile father remain in the bottom quintile, while only 9 percent make it to the top quintile. Similarly, 52 percent of sons born to top-quintile fathers are themselves in the top quintile; it is quite evident that privilege is passed on from father to son.



Figure 3.2: Income quintiles of sons born to bottom- and top-quintile fathers, 2010–11

Source: Authors' calculations using a sub-sample of PSLM-HIES2010–11. Quintiles are constructed separately for fathers' and sons' age cohorts.

¹⁹ The formal method involves computing transition matrices.

Despite a strong tendency for sons to be in the same quintile as their fathers, there is nevertheless some evidence of upward mobility. Nine percent of sons born to bottom-quintile fathers do make it to the top quintile. However, the bulk of upward mobility for these sons is to the second quintile – even when sons improve upon the father's position, the 'distance' travelled is quite limited.

It is useful, at this stage, to consider what such a graph would look like if people were allocated to quintiles randomly. Then 20 percent of the sons of bottom-quintile fathers should make it to the top quintile and 20 percent of the sons of top-quintile fathers should be in the bottom quintile.





Source: Authors' calculations using a sub-sample of PSLM-HIES2010–11. Quintiles are constructed separately for fathers' and sons' age cohorts.

To further contextualize mobility, or the lack thereof, compare the 2010–11 figures with a similar snapshot from 1994, depicted in Figure 3.3. The evidence is suggestive of worsening mobility, which is consistent with the earlier discussion of elasticity estimates. In 1994–95, roughly 30 percent of those born to both top- and bottom-quintile fathers remained in those quintiles. In 2010, the percentage born to rich fathers remaining rich themselves was higher than the percentage born to poor fathers remaining poor – though both percentages were large. Finally, the relative position of the quintiles (at least in terms of earnings) has changed quite dramatically over the past 15 years. Figure 3.4 shows that the earning distribution in 1994–95 was more 'compressed' compared with the 2010–11 distribution. In 1994–95 the top 20 percent earned twice as much as the bottom 20 percent, but in 2010–11 they earned almost three times as much.





Source: Based on authors' calculations using different rounds of the LFS. Quintiles are constructed for the entire sample in any given year.

Why is it that the quintiles are pulling apart? Why is it that so many sons of bottom-quintile fathers are stuck in the bottom quintile themselves? To some extent, wage persistence across generations could be driven by the effect of parental background on cognitive skills acquired by children in formal and informal education –productivity (Causa and Johanson, 2010). Recent studies show a clear connection between inter-generational wage mobility and inter-generational mobility in education, although educational mobility cannot account for all estimated persistence in incomes (Blanden and Machin, 2008). The extent to which educational mobility is responsible for wage persistence depends on how strongly educational achievement is tied to family background, i.e. the degree of persistence in education as well as the returns to education in the labour market.

Trap 2: Inter-generational persistence in educational attainment

It is generally difficult to establish whether poor people (a) genuinely do not have the opportunity to get more education; (b) are constrained by budget and make investment decisions that are different from the decisions of rich people; or (c) make decisions that do maximize expected income stream, but expectations are low for the bottom quintile because of segmented labour markets. As Munshi and Rosenzweig (2009) have pointed out, sons of blue-collar workers choose (low) levels of education commensurate with their expectation of getting blue-collar jobs through their own social networks. On the one hand, remaining blue-collar is a choice, but on the other hand this choice is a response to the low (expected) probability of getting a white-collar job, even if the individual works towards it (as Marx would have said, people do make choices, but not in the circumstances of their choosing). Discussing the fine line between choice and social constraint is beyond the scope of this paper. For now, it explores whether there is empirical evidence for an 'educational trap' and whether this line of investigation is useful for understanding economic mobility. Figure 3.5 suggests that the educational gap between rich and poor people in Pakistan increased significantly in the 16-year period between 1995 and 2011.²⁰

²⁰ Before comparing the results for 1995 and 2011, note that those characterized as fathers in 2011 had an average age of 46, implying that they were 30 years old in 1995. Meanwhile, those who were characterized as sons in 1995 were 18-year-olds – so the same age cohorts are not being compared across years.





Source: Authors' calculations using PSLM-HIES 2010–11. Calculations are based on the sub-sample for which income data were available for the father and there was at least one child who had either completed or dropped out of school.

Note firstly that fathers in the bottom and top quintiles in 1995 were statistically very similar in terms of mean years of attainment, and that the richer fathers' sons fared only marginally better than their the sons of their poor counterparts. However, this picture has changed dramatically in the past 15 years. Rich fathers now have three times as many years of education as poor fathers and rich sons have twice as many as poor sons. So, even though for a given year – 2010–11 – it appears as if the gap between the rich and the poor has closed, the gap has actually widened in comparison with 1995.

A very striking change over the 15 years has been the uptake of schooling for women of higher classes. In 1995 mothers in both the top and bottom quintiles were poorly educated; this seems to have changed dramatically in 2011. While there is a big gap between rich and poor daughters, the gap between sons and daughters within each quintile has decreased: the ratio of son/daughter mean years of education has reduced from 2.6 to 1.7 for the bottom quintile and from 2.7 to 1.2 for the top quintile. These figures seem to suggest that son preference may have decreased in the domain of education.

It can only be conjectured as to why the gender gap in education has diminished; there are several possibilities. Firstly, educational uptake for boys is known to be responsive to income (Aslam and Kingdon, 2008). With limited income, families invest only in the education of their sons. As incomes rose steadily over the 1994–2011 period, it could be that families no longer have to discriminate between their sons and daughters. Secondly, labour force participation for women has increased over the last 20 years (Siegmann and Majid, 2014). This could be due either to changing attitudes towards working women or simply to the creation of jobs considered appropriate for women. Since returns to education for women are quite high (Aslam, 2009), it is possible that increasing investment in girls' education is a response to this earnings potential. Thirdly, anecdotal evidence suggests that education increases the chances of receiving a good marriage proposal, and higher educational levels could be a response to this cultural phenomenon.

Finally, sons in the top quintile in 2010–11 had an educational level lower than that of their fathers. Two data artefacts account for this result. Firstly, this is an average over (possibly)

multiple sons. If, instead of the mean, the measure chosen is the maximum level of education that any son in a given family has acquired, then the sons' education level does go up. The fact that there are sons who have education levels lower than those of their fathers suggests that it is indeed possible, for at least some sons, to be downwardly mobile. Secondly, it is important to note that the top quintile has a mean level of education around 'Matric',²¹ suggesting that this is not a very highly educated population and that there might be an even starker difference between the top 1 percent and the bottom 1 percent. Unfortunately, the datasets available do not allow a reasonable statement to be made at that level of disaggregation.

Trap 3: Inter-generational persistence in occupations

The study of social mobility may be approached from other angles than income mobility. The focus can be, for example, on changes in social status, whatever the particular occupational base the status rests on, or on movements between occupational groups (clerks, farmers etc.), ignoring status differences within each group.

The occupational 'structure' pertains primarily to the relations between its constituent subgroups. The labour force has been divided into 10 occupational categories by the Pakistan Bureau of Statistics (PBS).²² Following the classic work in this field, Blau and Duncan (1967), the present study defines the structure of relations amongst these occupational groups in terms of the flow of manpower between them overtime, inter-generationally (the original definition allows for intra-generational flows as well). Each occupation is characterized by two flows: incoming flows and the supply of sons to other occupations. For example, elementary workers (low-skilled workers such as gate keepers) are disproportionally recruited from among their own ranks: 65 percent of sons who are elementary workers have fathers in the same occupations.

Note that occupational classifications do not conform to conventional social categories, and members of each category may not socialize with one another at all because their self-perceived identification might be much narrower (for example, 'professionals' include engineers, sociologists and doctors). Nevertheless, occupational categories are far from arbitrary – the children of professionals, despite the breadth of the category, could be expected to share a similar upbringing, and one that is different from children born to clerks. Children within a category can reasonably be expected to have similar opportunities.

Changes in the size of various occupational groups reflect changes in demand for different occupational services, which in turn often have their sources in technological advances. Higher levels of mechanization in the farming sector may have reduced the physical burden of farming in the sons' generation and may have required a redistribution of manpower to other occupations. Some mobility, however, also results from higher educational achievements in the sons' generation, and some from the indirect repercussions of changes in demand (e.g. for services). But the basic idea is that the flow of manpower, rather than the net redistribution (due to structural change), delineates the conditions governing an individual's success.

²¹ Matriculation examinations are the final exams for the ninth and tenth grades, taken at age 15–16. ²² Academic studies on this subject work with a finer resolution, differentiating between 'managers' who are 'salaried' and those who are 'self-employed'. In what follows, a higher level of aggregation is used, primarily because of sample size problems. Meaningful analysis at finer resolutions requires much larger samples than those available.

Table 3.2 presents the transition matrix of inter-generational mobility, i.e., movements between a father's occupation and his son's occupation. Since data on people's first occupations are not available, it is not possible to comment on mobility in a given person's work life. Perhaps more importantly, since sons are being sampled at a young age, it is quite possible that they will move up over time. Nevertheless, the differences across occupations are still revealing. The percentages in the table, computed horizontally, reveal the outflow from occupational origins to destinations. The percentages are highest in the diagonal for most occupations, which reflects a tendency towards self-recruitment and occupational inheritance. Additionally, elementary occupations have some of the highest rates of persistence. These occupations include street vending, shoe cleaning, construction work, etc. and have a median annual income of Rs.65,000, which places them in the second quintile. It is still possible for sons born to elementary workers to move up an income quintile while remaining in the elementary occupation; while most elementary workers are concentrated in the second quintile, there are also a few in the top quintile (though this is quite odd and could quite possibly be a recording error).

It is important to keep in mind that the influence of social origins on occupational destination finds expression in the relative and not the absolute proportion of men of the same origin who end up in a specific occupation, specifically in the ratio of the percentage from a given origin in one occupation to the percentage of the total labour force in this occupation. The last row in the table presents the percentage distribution of the total labour force and serves as the benchmark against which all percentages in the body of the matrix are to be compared. By dividing each value in the matrix by the corresponding figure in the 'total' row at the bottom of its column, an index can be obtained of the influence of occupational origins on occupational destinations. This ratio, which has been termed the 'index of association' or 'social distance mobility ratio', measures the extent to which mobility from one occupation to another surpasses or falls short of 'chance'; i.e. a value of 1.0 indicates that the observed mobility is equal to that expected on the assumption of statistical independence. (A value greater than 1.0 indicates that the flow is disproportionately higher than one warranted by the population share of the origin and the destination).

Father's	Son's occu	son's occupation													
occupation	Manager	Profes sional	Clerk	Livestock	Crafts man	Driver	Elementary	Service employer	Service worker	Agri self- employed	Agri employee	Owner cultivator	Share cropper	Contract cultivator	Ν
Manager	<u>0.15</u>	0.18	0.11	0.01	0.12	0.05	0.16	0.10	0.08	0.00	0.01	0.04	0.00	0.00	214
Professional	0.03	<u>0.23</u>	0.08	0.01	0.11	0.07	0.18	0.08	0.10	0.01	0.00	0.07	0.01	0.01	957
Clerk	0.01	0.13	<u>0.20</u>	0.01	0.16	0.06	0.21	0.08	0.12	0.00	0.00	0.02	0.00	0.00	438
Livestock	0.00	0.04	0.02	0.00	0.14	0.09	0.47	0.09	0.09	0.00	0.03	0.02	0.01	0.01	375
Craftsman	0.01	0.05	0.04	0.00	<u>0.46</u>	0.07	0.21	0.04	0.11	0.00	0.00	0.01	0.00	0.00	1137
Driver	0.01	0.03	0.03	0.01	0.15	<u>0.25</u>	0.30	0.06	0.12	0.00	0.00	0.03	0.01	0.01	1278
Elementary	0.01	0.02	0.01	0.02	0.09	0.07	<u>0.65</u>	0.03	0.08	0.00	0.01	0.01	0.00	0.00	5529
Service employer	0.02	0.07	0.05	0.01	0.14	0.09	0.23	<u>0.18</u>	0.18	0.00	0.01	0.03	0.01	0.00	1702
Service worker	0.01	0.04	0.04	0.01	0.14	0.10	0.21	0.06	<u>0.35</u>	0.00	0.00	0.03	0.01	0.00	805
Agri self- employed	0.03	0.04	0.03	0.01	0.18	0.19	0.26	0.05	0.12	<u>0.00</u>	0.05	0.01	0.02	0.02	65
Agri employee	0.00	0.03	0.00	0.04	0.09	0.03	0.28	0.00	0.05	0.01	<u>0.46</u>	0.01	0.00	0.00	205
Owner cultivator	0.02	0.07	0.03	0.03	0.10	0.12	0.41	0.13	0.07	0.00	0.02	<u>0.00</u>	0.00	0.00	1971
Share cropper	0.01	0.03	0.01	0.02	0.09	0.12	0.54	0.07	0.08	0.00	0.02	0.00	<u>0.00</u>	0.00	794
Contract cultivator	0.01	0.06	0.02	0.04	0.13	0.12	0.41	0.11	0.07	0.01	0.01	0.00	0.00	<u>0.00</u>	293
Total	0.01	0.06	0.03	0.02	0.14	0.10	0.42	0.07	0.11	0.00	0.01	0.02	0.00	0.00	15763

 Table 3.2: Occupation transition matrix (father and son)

Source: Authors' calculations from PSLM-HIES 2010-11 data

Table 3.3 presents the index of association for eight selected categories. Occupational inheritance is in all cases greater than expected on the assumption of independence, and the values on the diagonal are consistently larger than 1. Off-diagonal values larger than 1 are underlined. It can be seen that sons of managers are heavily represented in the manager category themselves, followed by professionals, clerks and service sector employers, so there is some mobility. However, no off-diagonal element in the craftsman row is significantly greater than 1.

Father's	Son's occupation											
occupation	Manager	Professional	Clerk	Craftsman	Driver	Elementary	Service employer	Service worker				
Manager	11.68	<u>3.11</u>	<u>3.10</u>	0.86	0.49	0.38	<u>1.31</u>	0.73				
Professional	<u>2.48</u>	4.12	<u>2.21</u>	0.80	0.70	0.43	<u>1.15</u>	0.95				
Clerk	0.98	<u>2.26</u>	5.68	<u>1.16</u>	0.60	0.50	1.03	<u>1.10</u>				
Craftsman	0.58	0.89	1.01	3.30	0.68	0.51	0.51	0.98				
Driver	0.67	0.59	0.97	1.06	2.55	0.71	0.81	1.09				
Elementary	0.38	0.39	0.39	0.62	0.74	1.56	0.44	0.69				
Service employer	<u>1.17</u>	<u>1.23</u>	<u>1.37</u>	1.01	0.91	0.55	2.40	1.62				
Service worker	0.63	0.70	<u>1.16</u>	1.00	0.97	0.50	0.80	3.22				

Table 3.3: Index of association for selected occupations

Source: Authors' calculations from PSLM-HIES 2010-11 data

3.3 Gender and education

As discussed in the introduction to this section, gender has long been considered a crosscutting theme; poor women are not deprived simply because they are poor, but also because they are women. A copious body of literature has documented how women are systematically discriminated against in education, employment and political participation, despite general improvement in most indicators. For example, Figure 3.5 above suggests that the educational attainment gap between sons and daughters declined from 1995 to 2011. In 1995, sons in the top quintile had 2.6 times more education than daughters in the same quintile. In 2011, the figure had dropped to 1.6. Similarly, there is much evidence to suggest that labour force participation by women has also increased, despite being quite low in absolute terms (see Siegmann and Majid, 2014).

One plausible reason for inferior outcomes in educational attainment by girls is that parents do not invest as much in girls as they do in boys. On average, Pakistani households spend 4.6 percent of their income on education, with those in urban areas spending a larger proportion (6.7 percent) compared with rural regions (3.5 percent). Aslam and Kingdon (2008) find significant bias in educational expenditures in favour of boys. Gender disparities are more strongly discernible in Balochistan, KP and the Federally Administered Tribal Areas (FATA) and in rural areas. Much of the bias in educational expenditures manifests itself in a significantly lower probability of girls' enrolment, and hence zero expenditure, rather than in lower expenditures conditional on enrolment. In attempting to explore the reasons for this bias, Aslam

and Kingdon fail to find any significant differences in tuition fees for boys and girls. This appears contrary to Aslam (2009), which suggests that male children are likely to be sent to more expensive private schools. They do, however, find that transport costs are much higher for girls aged 10–24. Coupled with the fact that pro-male bias is significantly higher in rural areas this could suggest that the bias is due to a supply-side problem rather than to gender discrimination within the household.

Differential returns to education are one possible reason why households may not want to invest in daughters. But Aslam (2009) finds, in fact, that returns to education are much higher for women than for men, although total returns are higher for men. Jacoby and Mansuri (2011) further explore the supply-side story with reference to both caste and gender. Their analysis focuses on the impact of two types of social barriers, caste stigma and female seclusion, on primary school enrolment. A key aspect of female seclusion is that it is enforced more strictly outside the immediate community than within it. The authors argue that sending a daughter to a school located outside her settlement is costlier than sending her to one equally far but within her settlement. Similarly, low-caste children, both boys and girls are deterred from enrolling when the most convenient school is in a hamlet dominated by high-caste households. In particular, low-caste girls, who are the most disadvantaged group, benefit from improved school access only when the school is also caste-concordant. Empirically, the authors find that providing a caste-concordant school would increase enrolment rates by 28 percent for low-caste girls and by 14 percent for low-caste boys.

The children of rich [high castes] are taught seriously but our children are paid no attention to. [..]. While our daughters have no access to the school at all, our boys receive no attention from the teachers.

Low-caste woman, Sindh

The teachers make the daughters of [high castes] sit inside the rooms, under the fans. Our poor children sit outside, under the sun and dust.

Low-caste woman, Southern Punjab

3.4 Gender and employment²³

While labour force participation for women in Pakistan has been steadily increasing, a nuanced look reveals a far sorrier story. The rate of participation, at about 20 percent, is the lowest among South Asian Association for Regional Cooperation (SAARC) countries, and the sectoral division of labour reveals deep gender biases.

Viewing the steadily increasing participation of women in the labour force through Sen's eyes (Sen, 1991); it is tempting to suggest that women's bargaining position in society is also steadily improving. Sen has emphasized that earnings outside the household improve women's bargaining position, give a sense of self-worth and increase a woman's perceived contribution to the household's economic position. However, as Siegmann and Majid, 2014 have discussed,

²³ This section borrows heavily from Siegmann and Majid (2014).

the nature of work is just as important as work itself: insecure jobs in low-paid sectors of the economy hardly improve a woman's status. As it turns out, across the globe women are over-represented in insecure jobs and home-based work.





Figure 3.6 shows, the biggest sector absorbing the female labour force is agriculture, and at least part of women's increased participation is down to a growing female labour force in this sector. This trend is probably tied to the migration of men to non-agricultural sectors in the cities. Nevertheless, it is still too early to say whether agriculture is 'feminizing'; even if there are a large number of 'employed' women in this sector, the small number of employed women implies that gainful employment is still dominated by men – only 38 percent of the agricultural labour force are women. This is still the sector with the largest concentration of women, but more importantly 80 percent of these women are unpaid family workers. This is despite the fact that women, on average, work only two hours less than men per day (six as opposed to four hours).²⁴

With women thus concentrated in the agricultural sector, land ownership rights merit a brief mention. 'Women own less than 3% of the country land and they may not have actual control over it', says a report issued by the Society for Conservation and Protection of Environment.²⁵ This is made at least partly possible by the legal framework within which property is defined. Property rights are governed by a complex mix of civil law, Islamic law and customary laws. These laws are, however, administered by the common law court system. While the civil laws dealing with ownership and transfer of property are gender-neutral, inheritance rights are subject to Muslim Personal Laws, which accord differential rights to women. More importantly, the superior courts deal with very few property cases involving women, suggesting that women rarely pursue property matters through the court system.

Source: Siegmann and Majid (2014)

²⁴ All figures presented in this paragraph are the authors' calculations, using the Labour Force Survey 2010–11.

²⁵ Daily Times, 18 September2014

The second most important sector for women is services, particularly teaching and nursing. While it is completely possible for women to self-select into these occupations, it is hard to ignore the equally likely role of purdah and social stratification in making these occupations the only choices available to them.

As with education, Jacoby and Mansuri have highlighted the roles of safety, purdah, honour and associated restrictions on women's mobility. They found that 80 percent of the women surveyed felt safe within the settlement, as opposed to 27 percent feeling safe outside the settlement. Similarly, 14 percent observed full purdah in their settlement as opposed to 31 percent who observed it outside. Jacobi and Mansuri take these figures to suggest that settlement boundaries matter to female reputational risk. It is conceivable that female participation in the agricultural sector is determined more by restricted mobility and reputational risk than as an option that women themselves consider optimal for their future. Siegman and Majid focus more on stratification as an explanation. They suggest that the increase in women's participation in agriculture and men's declining role in the sector are reflective of men's preferential access to higher-productivity and higher-wage manufacturing employment. Either way, power in the social domain appears to be strongly correlated with inequality in the economic domain.

4 MITIGATING MULTI-DIMENSIONAL INEQUALITY

4.1 Introduction

The analysis above demonstrates that inequality is a multi-dimensional issue. Following Sen's work (1979), it is necessary to understand the dynamic and inter-related aspects to fully appreciate the evolution and importance of inequality in Pakistan. Such an integrated framework is beyond the scope of this report, but a number of possibilities suggest themselves. For instance, to obtain a fuller understanding of the scope and persistence of inequality in Pakistan, it is necessary to take account of what may be significant differences in inequalities – across both households and regions – in various dimensions: income, wealth, welfare and capabilities.

In addition, there are structural inequalities in gender relations, educational opportunities, access to justice and access to adequate nutrition, and inequalities in political participation and power. This second group of inequalities obviously affect and are affected by the former set. Moreover, norms, culture and subjective attitudes to inequality are also implicated in the broader structure of inequality and may play some role in its justification and persistence over time. For example, a lack of agency and 'voice' is both a cause and a product of inequality.

This section does not address all of these issues, but instead attempts to place the results of this study in the context of recent academic discourse and policy discussions. First, it is necessary to summarize some of the key findings.

Given that it is only possible to tackle inequality and recommend policies if its causes are understood, the following sub-sections assess various frameworks that help to understand inequality. Section 4.2 looks at inequality as a consequence of broad market failures and what these imply for the costs of inequality. Of course, it is sometimes argued that even if markets were fully functioning there would still be unequal outcomes as wealth and income accumulate over time, and so the implications of that view are also briefly described.

One consequence of seeing inequality as a product of market failures is that its persistence over time can be understood in what are called 'inequality traps', and these are examined in section 4.3. Finally, section 4.4 suggests another framework to explain inequality– that of political and institutional failure. Under this framework, inequality is not simply the result of some given market failure but is ultimately driven by deeper structural failures: i.e. elite capture.

This report has calculated levels of inequality over some dimensions and has highlighted some of the correlations with other key variables. A word of caution is due here. The authors do not make any claims about the reasons or root causes of inequality in Pakistan, and the correlations should act only as a tentative guide to further analysis and policy recommendations. Policy can only be effective if those who make it have both a realistic set of assumptions about human behaviour and an understanding of institutional constraints.

The evidence of this study suggests that there has been some overall increase in inequality over time, but no radical change (as indicated by the Gini coefficient). This is in line with the view that income inequalities in this region are not extremely large and are relatively stable (although in Sri Lanka and Bangladesh they rose significantly in the 1990s, and inequality in India appears to be rising too (World Bank, 2006). Notably, though, the Gini measure does not indicate where in the distribution inequality might be increasing. However, an examination of inequalities in consumption between the richest and poorest groups shows that they are significant and have been roughly stable over the past 20 years (see Figure 2.1). In addition, the evidence suggests that there has been a growing divergence between the earnings of the top and bottom quintiles over the time period 1990–2011 (see Figure 3.4).

As has been seen, there are very significant inequalities in assets, health and educational infrastructure and educational attainment levels, both between and within provinces (see sections 2.3–2.6). This evidence is consistent with earlier work that shows the existence of significant inequalities across Punjab. For instance, compared with north and central Punjab, southern and western areas of the province have lower levels of urbanization, a lower percentage of the workforce employed in government and less access to gas and electricity. In terms of education, nationally 6 percent of 15–17-year-old boys have never been to school, whereas for the south of the country the figure is closer to 30 percent. More generally, nine of the 14 districts in the south and west of Punjab are consistently ranked in the bottom 10 districts across various measures of deprivation (Cheema et al., 2008).

It is generally not easy to assess levels of inter-generational inequality in developing countries; this report bases its estimates on the most common measure, the inter-generational elasticity of sons' earnings compared with their fathers. The lower the elasticity, the more mobility there is in the economy. The evidence suggests that overall there is significant but not extremely high immobility in Pakistan. However, in comparison with 1994–95, it is clear that there is deterioration in mobility (see Figures 3.2 and 3.3).

The overall picture, then, is one of persistent or worsening inequality. The exact reasons for this are not clear, but specific policies such as targeting improvements in school accessibility and quality are one obviously attractive response, not only because such policies might increase the relative income shares of the poorest people and those who are discriminated against (women), but also because of the potentially beneficial externalities of a more educated population for the economy and for society as a whole.

4.2 Market failures and inequality

It is quite clear that markets are not working in a very basic sense. The fact that so many people in Pakistan are unemployed or under-employed and that their fundamental aspirations are not being met clearly suggests that in a very real sense markets are inefficient and are not allocating resources and skills in an optimal way. Unequal outcomes are not, therefore, the simple result of individual choices in perfect market conditions or the consequence of an uneven distribution of talent, but follow from the fact that broad segments of the population are denied adequate opportunities. The lack of income-generating opportunities may be transmitted over time through inter-generational mechanisms (see section 4.3). Furthermore, those who are denied opportunities may have less of an incentive to work, save or innovate, so that not only are they less able to break free from the inequality trap, but they may also be less *willing* to do so.

It is now increasingly acknowledged that in developing economies markets may be absent or weak for a whole host of reasons (among them poor information, weak legal and regulatory systems, imperfect contracts in which goods cannot be fully specified, the possibility that transactions cannot be costlessly enforced and low levels of trust). As a result, there may be an equilibrium in which many poor people – those with few physical and financial assets and low nutritional status – will be 'crowded out' in labour and credit markets, thus leading to inequality and inefficiency.

The first important thing to learn from this framework is that there is a cost to inequality, from which it follows that egalitarian policy can lead to improvements and growth. In fact, there is significant empirical evidence that there is a negative correlation between inequality and growth (Persson and Tabellini, 1994; Alesina and Rodrick, 1994; UNCTAD, 2012). Birdsall (2006), too, confirms this and notes that the negative correlation is higher in developing countries, where markets are weaker. This is worth stressing, because for far too long policy makers have believed that there is a trade-off between growth and equality. More important in this context, perhaps, is the fact that for the most advanced industrial countries there was a positive relation between equality and productivity in the post-World War II period up until the late 1970s, and it is not unreasonable to see this as being at least partly a result of the establishment of the welfare state and the strength of social democracy. Beyond correlations, then, it is essential to look at policies and political economy.

Under this framework, the inefficiency of inequality often stems from market imperfections coupled with unequal distributions of wealth. For example, given market imperfections, those with low levels of effective assets/capital (De Soto, 2003) do not have sufficient collateral to obtain credit on reasonable terms or even at all. This may affect their occupational choice, their level of investment in agricultural production (Rosenzweig and Binswanger, 1993) and their investment in education, skills or high-risk (high-return) projects. As a result, it is not surprising that many of the poorest people are engaged in low-productivity activities (Banerjee and Duflo, 2007). The key point is that, given the weakness of formal insurance mechanisms, along with credit market imperfections, people with different levels of wealth are likely to end up with different contractual arrangements, and this explains levels of income inequality. In addition, recent literature suggests that poor people may also make more short-term decisions, so that even if there are potentially beneficial trades open to them, they will not take advantage of them (Mullainathan, 2005).

To summarize some of the main arguments: firstly, the concentration of ownership (or the distribution of property rights) may be inefficient. Given that income inequalities are often correlated with inequalities in capital, it may be that capital accumulation may lead to further inequalities of income or, to put it the other way around, redistribution of assets and/or better institutions may reduce inequalities and enhance growth. The evidence of this study suggests that

there are very stark asset inequalities between districts within Punjab (see Figures 2.5 and 2.6), and this does not bode well for the future unless remedial action is taken.

Secondly, in the absence of perfect markets (contracts), ethical codes or trust (social capital) may help resolve the coordination problem (Greif, 1993). But the level of trust in a society may itself be a function of ethnic or religious fragmentation. If that is true, there may be a virtuous cycle whereby a society of equals generates greater trust and therefore greater growth (Easterly, 2006) and equality. Or, alternatively, it may be that ethnic, religious and linguistic 'fractionalization' leads to worse institutions and lower growth (Alesina et al., 2002) and perhaps also adversely influences the amount and type of public goods (Alesina, et al., 1999).

The important point to emphasize in the Pakistani context is that economic inequality needs to be studied side by side with the structural/cultural inequalities and hierarchies associated with gender, kinship, caste, ethnicity and religion. It is quite clear that these latter inequalities need to be recognized because they can influence access to market opportunities (female labour participation, for example, or access to credit), access to public services and the structure of (local) institutional power. Social marginalization and subservience, as well as violence and vulnerability, then, have to be looked at through the prism of the interlocking inequalities of market opportunities and what Badiou calls the 'structure of domination' (Badiou, 2013). This point is underlined if it is considered that, according to the 1998 census, non-Muslims are half as likely to be able to read as Muslims and that in Punjab the non-agricultural classes are often the poorest and most exploited (Gazdar et al., 2013). In addition, as already noted, gender inequalities remain very significant (see section 3.3).

From the two points above a number of policy recommendations can be drawn. Firstly, there is a need to consider land transfers – especially given that domination by certain kinship/ethnic groups can be based on land ownership. Secondly, policy has to be geared to strengthening effective female ownership of property and access to work and educational opportunities. Thirdly, legal and educational reforms are needed to guarantee the citizenship rights of minorities.

A third main argument is that the distribution of wealth is not only important in generating efficiency but that it plays a role in determining political participation, the distribution of political power in a society and the subsequent optimal set of policies in a political economy framework (see section 4.4). It is crucially important to ask what the likely repercussions of growing intra- and inter-provincial inequality will be on the political system, if inequality is not seriously addressed.

Fourthly, inequality is costly. Inequalities in opportunities (health, educational and political) may result in lower overall growth and a more unequal society over time. Inequality in Pakistan may lead to more poverty (Jamal, 2006), through both direct and indirect effects. However, inequality is 'costly' not just because it can lead to lower growth, higher poverty and lower levels of solidarity; there may be a direct and sometimes significant economic cost of maintaining unequal structures through what is called 'guard labour'– the police, security personnel, army, prisons, etc. (Bowles, 2012). Low levels of development coupled with inequality of opportunities across regions and ethnicities may also have profound political and social impacts. This analysis tentatively suggests how inequality might be related to social problems, and the findings are broadly consistent with the work of others in this field (Wilkinson and Pickett, 2009).

As noted above, it is widely believed that even a fully functioning market system will lead to inequalities. Some of the major lines of inquiry in this regard have centred on the role of globalization – i.e. greater trade and financial liberalization – in generating and perpetuating inequalities. Changes in technology, a shifting structure of production, greater trade and differential levels of, and rates of return to, human capital might then explain some of the unequal outcomes, as wages fail to keep pace with price increases. A more careful analysis would have to determine which occupational groups are most adversely affected.

One way in which inequality or poverty may be exacerbated is as a result of 'inflation tax', with some poor citizens and low savers being disproportionately affected by increases in food and energy prices, a problem that has come to the fore since the 2006–07 spikes in commodity prices. Closely related to this concern is poor fiscal policy. A low tax base implies that there is little room for productivity-enhancing egalitarian investments in nutrition and public education. In addition, regressive taxation has an impact on inequalities and their persistence over time. Thirdly, lack of tax revenues puts pressure on the budget and can lead, ultimately, to inflationary monetary policies – which, as already noted, have an important impact on the distribution of real income.

Pakistan has a particularly low tax/GDP ratio (see Figure 2.9) and a narrow band of sectors contributing to direct and indirect taxes (Figures 2.10 and 2.11), which acts as a fundamental bottleneck to more equitable development. Given the persistently low level of the tax/GDP ratio, the structure of taxation and the existence of large undocumented sectors, it is not clear how effective a policy instrument tax reform is in reducing inequality. In particular, if the tax regime is at heart a product of elite capture, then any policy recommendations have to acknowledge this fact. However, at the very least it can be said that further work needs to be done to analyse the extent to which the system is progressive, as well as to inform civil society of the scale of tax shortfalls in various sectors. Governance issues (incentives, will and capacity) remain central to the problem of taxation in Pakistan.

4.3 The persistence of inequality

A noteworthy feature of the focus on market failures is that it helps in understanding the persistence of inequality over time. The standard economic argument that initial inequalities are unimportant because, given the same fundamental parameters across countries, there will be convergence is now generally not accepted, and the evidence of 'trickle-down' over the past 40 years remains very weak. Instead, history or initial inequalities are now thought to play a key role in the transmission of inequalities over time. Recent literature suggests that the mechanisms by which this occurs may vary from society to society; section 4.4 discusses the pivotal role of institutions in mediating the transition from past to future inequalities in income distribution. For now, a few of the ways in which the path of income distribution may be influenced by market failures and initial inequalities in wealth are suggested.

Eswaran and Kotwal (1986) show that in the presence of high monitoring costs, the initial distribution of wealth (land) can determine occupational choice in an agrarian setting, with the result that in equilibrium the occupational groups with low levels of wealth find themselves in

low-wage, low-productivity activities, while others emerge as rich 'capitalists'. Given the difficulty that poor people face in accumulating capital, it is not difficult to see how these inequalities could be sustained over time.

Banerjee and Newman (1993) show in a dynamic setting how unequal distributions in wealth, coupled with credit market constraints, determine occupational choice, bequests and therefore future distributions of wealth over time. These, in turn, determine occupational choices (or 'classes') and possibilities for future generations. Again, it is not hard to see how an initial unequal distribution may progressively become worse. As noted above, the evidence suggests significant differences in asset holdings across Punjab.

In the Pakistani context, mobility of workers across occupational groups appears to be low (Hussain, 2003). The evidence of this study confirms this for 10 occupational groups. It is not possible to estimate whether this is a result of the particular structure of demand, the rate of change of technology, educational achievements and aspirations or credit constraints coupled with the distribution of assets, and so policy recommendations await further analysis. However, it seems intuitively obvious that cheaper credit and better monitoring of projects by the financial sector may go some way towards improving occupational mobility and reducing inefficiencies due to inequality. Of course, the relation between occupational status and income may change over time, and this report says nothing about the relation between them, or what may generate differences in rewards. Suffice it to say, the evidence suggests little social mobility and, if occupation closely follows income, then it is fair to conclude that some of the persistence in inequality comes through occupational choice.

Galor and Zeira (1993) show how inequalities can be perpetuated over time through decisions to invest in human capital. Again, in the presence of credit market imperfections, households with initial low levels of wealth may not be able to borrow enough to invest in education and their members may end up as unskilled workers, transmitting less wealth to their children, with the result that *their* children are even less likely to get an education. In contrast, those with enough initial wealth face no such constraints and do invest in education. Given the high returns to education, it is easy to see how this model generates a divergence between the two groups. More generally, it is quite in line with some of the evidence that those with more human capital are in a better position to exploit the gains from globalization and changes in technology. In this model, more equal societies could attain higher growth rates.

It is easy to assume that low levels of education and skills are responsible for low productivity and subsequently low wages and/or little work, and there is some evidence to suggest that there are significant differences in educational attainments across income groups (Hussain, 2003). The evidence of this study is in line with these results, since it finds substantial differences in average years of schooling between the richest and poorest families. However, there are two caveats: firstly, no attempt has been made to empirically estimate how differences in years of schooling translate into income inequalities. In this regard, much work needs to be done to assess the quality (and not just the quantity) of schooling and how it interacts with changes in the labour market and technology. Secondly, while there is a growing body of literature on how education differentials may partly explain inequality in the developed world (Stiglitz, 2012), it is worth recalling that the mean levels of education referred to are relatively low and so there is a need to understand the extent to which extra education improves skills/productivity at this low level.

These findings are consistent with evidence from Latin America (Birdsall, 2006) which shows that differences in average years of schooling are significantly different from what they would be had background conditions been more equal. Given this fact, and given that education is important in its own right and that it may also contribute to a flourishing civil society, potential improvements in productivity and higher overall growth, it is clear that there are significant gains to me made by promoting education.

There are many other ways in which inequalities may persist in societies with weak markets and/or an unequal distribution of wealth, but these are only briefly noted here. Firstly, in the presence of imperfect information, social networks may play a key role in the allocation of jobs. Munshi (2006) has demonstrated how this may lead to the persistence of inefficient occupational choices.

Secondly, gender inequalities may play a pivotal role in the transmission of inequalities – either directly via differential earnings and status or indirectly through educational choices, human capital accumulation and fertility decisions. A closer look at inequality in Pakistan would have to focus on intra-household inequalities in opportunities (health and nutrition, education, etc.) and their inter-relation, as well as on the structure of inequality (property rights, inheritance laws). The present analysis shows that, despite improvements in educational inequalities, gender differences are still widely prevalent.

Thirdly, people with low levels of initial wealth may suffer from a relatively low nutritional status, which then impairs their educational opportunities and health status, resulting in an inequality trap of low status and low wages (Bose, 1997). In the Pakistani context, the evidence seems to suggest significant inequalities across income groups in health outcomes and in access to nutrition, hygiene, safe drinking water and basic health services (Hussain, 2003). More generally, evidence suggests that limited access to resources and opportunities (land, health facilities, housing and work) can play a role in explaining nutritional inequalities, as can cultural norms of food sharing within households. However, Deaton (2003) is probably right to claim that the health/income relationship can run in both directions and that causal relations may work themselves out over long periods of time. In addition, child labour may also be partly explained as a response to low levels of assets and weak insurance markets (Jacoby and Skoufias, 1997), with long-term consequences for future levels of inequality.

As has already been noted, specific government policies, a government's ideological stance and the quality of a country's institutions may play a major role in determining levels of inequality. Governments shape markets and the distribution of income through both macro public policies, as well as the quality of governance. The distribution and strength of property rights, information and regulation, taxation, tariffs and subsidies, expenditures on infrastructure and public education/health, as well as the enforcement of contracts via the legal system, all have an impact on levels of inequality, and so it is natural that the discussion turns next to structural issues.

4.4 Elite capture and inequality

The idea has already been raised that market failures can explain some of the unequal outcomes we see around us. But some of that failure need not be exogenous and may in fact be determined by government policy and the strength of government institutions. In some sense, then, inequality is *made* and is not simply a 'natural' outcome of markets (Stiglitz, 2012). Acemoglu and Robinson (2014) rightly point out: 'It is the institutions and the political equilibrium of a society that determine how technology evolves, how markets function and how the gains from various different economic arrangements are distributed.'

Birdsall (2006) shows that economic inequalities may be responsible for government failures and the undermining of good public policy, with the subsequent effect of producing lower growth and more inequality. There is now a growing political economy literature on the role of political institutions, corruption and poor governance in preventing societies from becoming prosperous and in generating and maintaining economic inequalities.

If societies can as a whole be made better off a result of reducing these inefficiencies, then why are these egalitarian, efficiency-producing policies not being implemented? There are social gains to be had from adopting better technologies, improving public services and implementing progressive taxation, social insurance and a host of other policies. The fact that societies do not make these changes is a 'coordination failure' that can be explained by poor governance structures or institutions that determine the incentives and constraints that people face, namely rules of ownership, forms of competition, norms and so on. These institutions, then, determine a country's long-term growth (Acemoglu et al., 2005) and the distribution of resources (inequality).

Crucially, however, the institutions can in part themselves be determined by the distribution of wealth and power and are therefore subject to elite capture. Glaeser et al. (2003) show how the wealthy subvert institutions and policy in their own favour. Acemoglu (2012) and Acemoglu et al, (2000, 2002) also demonstrates how an 'extractive elite' – or what others have called a parasitic or vampire elite (Lockwood, 2005) – can block technologies, competition, democracy or public spending on education even though these lead to social gains, because as a result of these changes they will lose out and cannot expect to be compensated. The key point is that it may not be in the interest of certain actors to promote equity-enhancing, growth-led policies. This is another way of saying that any policy reform that promotes greater equality has to be cognizant not only of the overall gains from the policy but of the distribution of gains across various sectors of society.

Furthermore, even when distributional impact is not a pressing problem, the fact cannot be ignored that the state may not have the administrative *capacity* to implement efficient policies and that there are costs involved in setting up effective institutions. Recent work (Besley, 2011) shows that states may be weak, lacking both fiscal and legal capacity. The former concept refers to the state's infrastructure – its ability to administer, monitor and enforce in order to raise taxes from a wide base – while the latter refers to the legal infrastructure (effective judges, adequate information and enforceable contracts). Besley shows that countries with greater legal and fiscal capacity (attributes that are generally correlated with one another) tend to have higher incomes.

In view of this last point, the establishment of independent research institutions is strongly recommended that can, for example, inform tax officials of the scale of inefficiencies produced by various tax regimes. In addition, more detailed and sustained analysis of the benefits of greater competition and less rent-seeking across different sectors could lead to an informed discussion of the costs of inequality. Such an analysis would have to take into account both the 'general equilibrium' and the dynamic effects of policy reform.

The wealthy, the powerful and the relatively educated may, then, have an incentive to influence policy (Dixit et al., 1997) and to capture rents, or what Do (2002) calls 'regulatory capture'. One important avenue of rent-seeking is explored by Khwaja and Mian (2005). They show that for the period 1996–2002, compared to companies that did not have political connections, politically connected companies received loans that were 45 percent larger and that these firms had a 50 percent higher default rate on those loans. The deadweight loss of the loans defaulted on is estimated to amount to up to 0.3 percent of GDP annually (Rs.13.7bn). In addition, the defaulted loans were inefficiently invested, leading to a further loss of an estimated 1.6 percent of GDP per year (or Rs.67bn) Here, then, is clear evidence that political influence on government banks can have very significant impacts (and since this ignores the possible influence of army officials, the figures probably underestimate the gravity of the distortion).

Initial structural inequalities (Easterly, 2006) or the initial distribution of factor endowments (Hoff, 2003) may go some way to explaining the formation of these elites and some of the inertia preventing large-scale and effective reforms (such as land reform, in Pakistan's case). They may also go some way to explaining ideologies and expectations that reinforce the likelihood of inequalities persisting. If what is said above is true, then greater economic competition and a redistribution of wealth may mean that elites have less to gain by controlling institutions (Acemoglu and Robinson, 2008), and a more egalitarian equilibrium may emerge.

There is not much direct scholarly evidence of elite capture in Pakistan, though the low level of direct taxation – 4 percent of GDP coupled with the decline in corporate tax over the last 10 years (Gazdar, 2009) – certainly indicates that it is very likely. In addition, given both the historically prominent role of land ownership in politics and kinship in the country, the low levels of public spending on health and education are not surprising (Easterly, 2003). In a traditionally agriculturally based economy, the elites may not have seen much benefit in investing in education for all, a point that is likely to have been reinforced if an educated population threatened their political power.

As suggested above, more detailed work needs to be done on the correlation between elite domination and ethnic fragmentation, not just on the low but on the unequal outcomes in health and education across regions and within them.

A more equal and fairer society, then, would be open to the talent and ideas of all would encourage public goods (like education) and would promote competition. The discussion about what constitutes a fair society is just beginning (see Hutton, 2010), but at the very minimum we would need to see if private rewards match social contribution and assess whether the concentration of wealth is a result of rent-seeking or the genuine creation of wealth. But in order to move to a society of equals where hierarchies and domination are minimized and where

certain distinctions (race, ethnicity, religion, gender) are considered irrelevant, there is a need for equitable institutions and political equality (a distribution of political power, rights for all and a limit on the influence of any one group). However, political equality is itself a product of history, political institutions (constitutions), culture and economic inequalities. There is now mounting evidence from both historical and contemporary experiences that better economic institutions (property rights) lead to growth and that more political equality (measured in terms of democracy and constraints on the executive) is correlated with both better economic institutions and more economic equality (Robinson, 2006).

In sum, this paper argues that more competitive markets, sounder fiscal policy and improvements in the quality of education are fundamentally important to reducing inequalities in Pakistan. Without equality and fairness, it is hard to see how any economy or society can sustain itself. Not only are effort, creativity and imagination stifled (Hutton, 2010); social cohesion and political stability themselves may be undermined.

5 POLICY IMPLICATIONS

There is no simple solution to the multiple inequalities and the inequality traps discussed above. While policy makers in the past have turned away from dealing directly with the multiple inequalities that exist in Pakistan, there is no further excuse for delaying difficult decisions now. A broad range of options needs to be pursued simultaneously.

First, the quality of household surveys needs to be improved and the measurement errors minimized, so that standard income inequality measures are made relevant in policy decisions. In this regard, policy makers may want to increase the sample size to make household income data district-representative, so that inequality across districts is highlighted. Until then, they may want to use non-income inequality measures to target deprived segments of society for the disproportionate allocation of development funds for quite some time, so that the widening gap between the most and least developed districts is arrested. For example, unequal opportunities in education and health infrastructure and in road density suggest that if balanced development is the objective of government policy, then decision makers must adopt a policy of 'geographical targeting' where development funds are disproportionately allocated to least developed areas on the basis of non-income poverty mapping of districts. This view has been corroborated by Jamal et al. (2003), who have previously noted that, due to widening spatial deprivation in Pakistan, geographical targeting of scarce funds in least developed areas may be a viable option.

Second, inflation is a particularly offensive tax. Not only is it regressive, there is evidence to suggest that it increases poverty and inequality. But what makes inflation a really pressing issue is that macro-economic policy is a primary determinant of inflation and, therefore, of its associated ills. The discussion of inflation has essentially focused on the link between monetary and fiscal policy: the failure of fiscal governance leads to monetary authorities providing a cushion by printing money. The independence of the state bank is a valued ideal across the globe, and breaking the link between fiscal and monetary policy can be advocated.

Third, due to structural weaknesses in the tax system,²⁶ the tax-to-GDP ratio has varied from 8.5 to 9.5 percent during the past eight years (GoP, 2014). The new government has introduced a comprehensive strategy aimed at enhancing domestic resource mobilization to achieve a tax-to-GDP ratio of 15 percent in the next few years. This report proposes that under the tax reforms consumption taxes need to be made less regressive by having different levels of taxes on different goods. Food essentials, particularly low-quality grain etc., can be made tax-free, while high-quality grains and foodstuffs consumed by the richer classes can be taxed at higher levels. Information that will allow such classification can easily be acquired from a regular round of the PSLM-HIES. Having said this, it is not particularly clear whether revenue generated from such marginal changes will allow the tax-to-GDP ratio to grow to a level where meaningful service delivery can occur. At another level, Burki et al. (2014) have shown how companies in

²⁶ Structural weaknesses include a 'narrow tax base, massive tax evasion and administrative weaknesses' which 'undermine the overall tax collection in the country' (GoP, 2014).

particular hire experts to locate and use loopholes in tax laws. To the extent that these loopholes do not require extensive legislation to close, the capacity of the FBR could be enhanced to be more vigilant in its tax collection. It remains to be seen whether the FBR is independent enough and interested in such vigilance. While not much can be done about the latter, it is possible to make the FBR independent by constitutionally protecting appointments at the chairman and member levels.

Finally, the discussion above on inequality traps identifies four peculiarities: (1) a majority of the sons of poor fathers remain poor and the majority of the sons of rich fathers remain rich; (2) the educational gap between rich and poor people is increasing; (3) sons follow fathers in their choice of occupation; and (4) girls are discriminated against in terms of educational expenditure and are concentrated in certain occupational niches. Gendered norms play a significant role in the inferiority of outcomes for girls. While it has not been possible to link the first three traps together rigorously, a reasonable narrative can still be offered. It is not far-fetched to suggest that income; education and occupational choice are all linked together, reinforcing one another. The son of a sweeper does not go to a school where his talents are honed and where his aspirations are developed. While limited education is itself a barrier to upward mobility, the fact that the labour market operates through networks suggests that his chances of getting a good job are limited, despite a certain level of education. He therefore drops out of school and takes a job in the occupation of his father – where his connections do work. Naturally, he is then in the lower end of the income distribution – and the cycle continues.

It appears evident that the natural space for government intervention is in schooling. Given that the fiscal space is not going to improve, the priority is to figure out how to spend current allocations. There are two ways to proceed. One is to focus on the quality of primary education. Average attainment levels have gone up for those of both rich and poor backgrounds. While there is little data on schooling quality, it is anecdotally clear that the quality of private schools – which the children of rich families attend – is higher. This is not to say that there are no public schools where good-quality instruction is provided. These schools can be emulated and expenditure can focus more on quality than on quantity. This feeds into the income inequality trap, since better-quality education leads to higher productivity and the possibility of a better occupation later on.

The other possibility is to focus on quantity. Again, since average attainment is already at the primary level, the focus could be on providing a higher quantity of secondary education rather than primary. This is particularly relevant for the income trap, since research suggests that there are increasing returns to scale in education. This will also address the problem of the education of girls, since the bias against girls in expenditure and enrolment is more prominent at the secondary level than at the primary level. Given that girls face mobility constraints, it is here that a supply of education close to home will be most effective.

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