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Growth in Pakistan: Inclusive or Not?

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1. INTRODUCTION

Cross country evidences reveal that Asian countries have experienced rapid growth over the last two decades. The increase in growth is accompanied with reduction in poverty from 1990 to 2001 as the number of individuals living below the poverty line has decreased over the time period [ADB (2006)]. Growth is considered to be a necessary condition for reduction in poverty but growth does not necessarily imply that it will lead to improvement in living standards of every one. Growth does benefit and improve standards of living but it may lead to increase in inequality if it leads to increase in benefits for few section of the society only. This has been witnessed in China as economic growth benefited all segments of the society, it lead to improvement in living standards for all, but the improvement benefited the rich more as compared to the poor. The same situation persists in India as well. In contrast, countries like Brazil, Mexico, and Thailand have different scenario where there is increase in economic growth and this increase is also accompanied with improvement in equity [Anand, *et al.* (2013)].

Pakistan historically has seen episodes of high growth but those unfortunately were not coupled with such macroeconomic conditions as are required to achieve lower poverty levels. Therefore, Pakistan has always been facing the challenge of achieving rather more inclusive growth that could benefit all classes of society. The provision of basic services such as education, health, sanitation, and housing for all the segments of population, and social security schemes to ensure social protection are critical for long run reductions in poverty.

This paper examines inclusive growth (growth accompanied with equitable distribution) for Pakistan using the microeconomic concept of social welfare function (social concentration curve) at the macroeconomic level. The methodology adopted is developed by Anand, *et al.* (2013). Inclusive growth is analysed by decomposing it into two components equity and efficiency. Efficiency requires the overall improvement in the country and equity requires the improvement to be equally distributed across various segments of the population. Our measures of welfare include; income per capita and a household asset index. The social mobility curve is plotted for Pakistan in time periods 2008-09 and 2010-11 at an aggregated and later at a disaggregated level using the

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household level data from Pakistan Social and Living Measurements (PSLM). Our objective is to test to what extent have the benefits of a positive economic growth rate that Pakistan has witnessed for a decade now (despite the global financial crisis of 2008) trickled down to all segments of population, rich and the poor alike.

Brief glances at the macroeconomic indicators of Pakistan reveal important insights about the issue of poverty. Poverty levels are determined by interplay of economic growth, inflation and unemployment levels. All of these three macroeconomic indicators have been worsening for Pakistan exacerbating poverty levels of the country. Pakistan's economic growth rate has been experiencing a decline since 2006-07 falling from a level of 6.8 percent to 4.1 percent in 2009-10. Inflation on the other hand has continued to be in double digits where it peaked to a level of 23.7 percent in 2008-09 though it declined afterwards to 12 percent in 2009-10.Unemployment rate in Pakistan has also witnessed a decline from a high of 6.8 percent in 2006-07 to a low of 5.5 percent in 2009-10.The rise in the prices of staple food crops such as wheat that has undergone a substantial price hike from Rs 625/40 Kg to Rs 950/40 Kg in the fiscal year 2009-10 is adding fuel to the fire. Moreover the sharp rise in international oil and food prices, combined with recurring natural disasters like the 2010 and 2011 floods have had a devastating impact on the economy [Pakistan (2009-10)].

Poverty levels in Pakistan witnessed a sharp decline in the earlier half of the previous decade however the trend reversed after 2005-06 and poverty headcount ratio as depicted in Table 1 peaked at 33.8 percent.

Table 1

Trend in Poverty: Headcount Ratios

Year	Headcount Ratio
1993	26.8
1997	29.8
1999	30.6
2001	34.5
2005	23.9
2006	22.3
2008	29.9
2009	33.8[1]

Source: Arif and Farooq (2011).

Some plausible explanations of this trend reversal could be that Pakistan has faced severe challenges since 2007/08—a falling rate of economic growth, double-digit inflation particularly the food inflation, energy crisis, oil price hikes and deteriorating law and order situation. The security concerns like war on terror have resulted in a diversion of public expenditure from development to defense. Thus the present socio-economic situation has adversely affected the efforts concerning poverty reduction.

The concept of inclusive growth was measured initially using access to opportunity such as education for countries like Philippines [Ifzal and Son (2007)], Pakistan [Newman

[1]Task force on food security (World Bank) cited in *Economic Survey 2008-09*.

(2012) and Asghar and Javed (2011); Ravaillon and Chen (2003)]. The literature also examines inclusiveness of growth using income per capita for Turkey [Taskin (2014)], which reveals that increase in per capita income has been achieved at the expense of equity.

The macroeconomic picture suggests rising poverty and inequality in Pakistan. Given this backdrop our objective in this study is to see whether growth in Pakistan has been beneficial for all or not. If the growth in Pakistan has been achieved at the expense of equity then the benefits of growth are unevenly distributed and the poor benefit less from growth as compared to the rich as the poor are constrained by circumstances or market failures. This situation prevails if market mechanism operates. Thus, the government can play its role by formulating policies that distributes the benefits of growth equally and reduce inequality.

2. METHODOLOGY

The methodology developed in this paper has been adopted from Anand, *et al.* (2013). Our measure of inclusive growth is based upon a social welfare function, which is also known as the concentration curve. In the social welfare function, inclusive growth depends upon two factors: average per capita income and distribution of income among the population. The inclusiveness of growth can be depicted using the social welfare curve (Z^C). The social welfare curve can be defined as follows:

$$Z^C = x_1, \frac{x_1+x_2}{2}, \frac{x_1+x_2+x_3}{3}, \dots\dots\dots, \frac{x_1+x_2+x_3 \dots\dots\dots+x_t}{t} \quad \dots \quad \dots \quad \dots \quad (1)$$

In the above equation, x is the income of population, which varies from x_1 to x_t where x_1 is the income of the poorest individual and x_t income of the richest individual. The generalised concentration curve is a cumulative distribution of a social mobility vector, which can be shown as:

$$Z = (x_1, x_2, x_3, \dots\dots\dots x_t) \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (2)$$

The above function satisfies two properties as we move from the lower to higher bound of the curve, income should be increasing i.e, from x_1 to x_t. The other property requires the social concentration curve to be higher for a superior income distribution.

In order to plot the social mobility curve, the population is arranged in ascending order of their income. We divide the population in different income groups and calculate the average income for each group $\overline{x_i}$, where i varies across income group from 0 to 100. Therefore $\overline{x_i}$ is the average income of the bottom i percent of the population. Let $\overline{x}$ be the average income of the entire population.

In order to find the magnitude of change in income distribution, we calculate social mobility index by calculating the area under the social mobility curve, which can be written as follows:

$$\overline{x^*} = \int_0^{100} \overline{x_i} di \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (3)$$

The greater is the value of social mobility index ($\overline{x^*}$), the greater will be the income. If the distribution of income is equitable then the social mobility index ($\overline{x^*}$) will be equal to the average income ($\bar{x}$) of the entire population. However, the distribution of income is inequitable if average income ($\bar{x}$) is greater than the social mobility curve ($\overline{x^*}$).

Following the methodology of Anand, *et al.* we propose an income equity index (ϑ), which is as follows:

$$\vartheta = \frac{\overline{x^*}}{\bar{x}} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (4)$$

The income equity index is a ratio of social mobility index and the average income. If the income equity index (ϑ) is equal to one, then it shows that there is perfect income equality. The closer the value of equity index to 1 the greater is the incidence of equity. By mathematical manipulation of (4), we derived:

$$\overline{x^*} = \vartheta * \bar{x} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (5)$$

Growth will be inclusive if it leads to increase in social mobility index ($\overline{x^*}$). Hence, social mobility index can be increased through: increase in average income ($\bar{x}$) through growth, increase in income equity index by increasing equity and a combination of both. Differentiating both sides of the equation leads to:

$$d\overline{x^*} = \vartheta * d\bar{x} + d\vartheta * \bar{x} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (6)$$

where $d\overline{x^*}$ represents the change in the degree of inclusiveness of growth and growth is more inclusive if $d\overline{x^*} > 0$. Equation (6) decomposes the measure of inclusive growth into two components: increase in income and the distribution of income. The first component will analyse increase in income while keeping the equity component constant. The second term analyses the change in income distribution while keeping the average income constant. Inclusive growth can be determined by analysing the direction and magnitude of the two terms.

Using Equation (6), we can propose all the possible combinations. Growth is unambiguously inclusive, if both change in income and change in income distribution ($d\bar{x},\ d\vartheta > 0$)are positive. While growth is unambiguously non-inclusive, if both change in income and change in income distribution ($d\bar{x},\ d\vartheta < 0$)are negative. However, if the change in income is positive and the change in income distribution (equity) is negative then there is higher social mobility, but the increase in social mobility is achieved at the expense of reduction in equity or income distribution (this case can be shown as $d\bar{x} > 0$ and $d\vartheta < 0$). The last possibility is when the change in income is negative and the change in income distribution is positive, then higher social mobility is achieved with decrease in average income.

By mathematical manipulation of Equation (6), we can get:

$$\frac{d\overline{x^*}}{\overline{x^*}} = \frac{d\bar{x}}{\bar{x}} + \frac{d\vartheta}{\vartheta} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (7)$$

Equation (7) shows the decomposition of inclusive growth ($\frac{d\overline{x^*}}{\overline{x^*}}$) into growthin average income (efficiency)($\frac{d\bar{x}}{\bar{x}}$) and change in income distribution (equity) ($\frac{d\vartheta}{\vartheta}$). Efficiency requires the overall improvement of income in a country and equity requires this improvement to be equally distributed across various segments of the population. The social mobility curve has been estimated for Pakistan using two measures which are income per capita and the wealth index.

3. DATA

Using Equation (7) we have plotted the social mobility curve for Pakistan using Pakistan Social and Living Standards Measurements (PSLM). The curve has been plotted for two time periods 2008 and 2010. The overall trends for Pakistan reveal that there has been a positive economic growth rate from 2008 to 2010 with falling inequality and increase in the incidence of poverty. In this paper we want to do a detailed analysis of the source of this inequality by decomposing our chosen sample into different income groups. The Table 2 summarises some of the basic household characteristics of our sample. The sample includes more than 71,000 households for each year. Out of the total sample, 35 percent of the households are residing in urban areas while 65 percent are in rural areas. On average, the size of the household is smaller for wealthier[2] households as compared to the poorer ones as in year 2011, the average size of the household in the top quintile is around 3.73 while the average household size is 5.61 in the bottom quintile. The average household income has increased from year 2008 and 2011 for all the income groups, which is also depicted in the Table 1 as the average household income for both the bottom and top quintile has increased.

Table 2

Descriptive Statistics of Sample Households: PSLM 2008-09 and 2010-11

Year	Region	No. of HH[3]	Avg. HH Size of the Bottom Quintile	Avg. HH Size of the Top Quintile	Avg Income of the Bottom Quintile	Avg. Income of the Top Quintile
2010-11	Pakistan	71,951	5.61	3.73	8,406	45,199
	Urban	35%	5.89	3.82	12055	61342
	Rural	65%	5.59	3.58	7333	36450
2008-09	Pakistan	71,491	5.77	3.76	7,714	37,508
	Urban	35%	5.95	3.64	9897	51160
	Rural	65%	5.69	3.79	7247	30003

Source: Author's own calculations.

Though the top quintile has experienced a greater percentage rise (a rise of 20 percent) in their incomes as compared to the bottom quintile (8.9 percent rise). The per capita income is greater for urban than rural areas for all income quintiles.

The Table 3 shows the distribution of wealth (ownership of assets) across income groups. The wealth has been categorised into productive (land, animals for transport, poultry, residential and commercial buildings) and non-productive assets (television, computer, refrigerator, air-conditioner, fans, cooler, motorcycle and tractor). The percentage change in ownership of assets has fallen from 2009 to 2011 for most of the assets except for fans, motorcycle, tractors, residential and commercial buildings. The ownership of assets for the top quintile has remained fairly constant for non-productive assets while for the productive assets it has shown a considerable increase where the reverse is so true for the bottom quintile for whom the ownership has fallen for most of the assets.

[2]We have distinguished households based upon their income and have classified them into 10 quintiles.

[3]This sample does not include households for whom income was not reported in PSLM.

Table 3

Descriptive Statistics of Asset Ownership for Sample Households: PSLM 2008-09 and 2010-11

	2010-11			2008-09			
	Percentage of HH with Ownership of Assets			Percentage of HH with Ownership of Assets			Change in Percentage of Ownership
Asset Ownership	Bottom 10%	Top 10%	100%	Bottom 10%	Top 10%	100%	
Non-productive Assets							
Television	0.27	97.9	54	0.91	99.21	55.93	–3.45
Urban	0.55	98.61	80.24	1.39	99.34	80.68	–0.55
Rural	0.25	96.37	40.48	0.9	98.73	42.39	–4.51
Computer	0.01	58.35	7.4	0	60.38	7.55	–1.99
Urban	0	66.42	16.62	0	65.31	16.85	–1.36
Rural	0.01	37.34	2.43	0	41.78	2.46	–1.22
Refrigerator	0	98.73	35.98	0.03	99.03	36.66	–1.85
Urban	0	99.02	60.34	0	99.16	60.09	0.42
Rural	0	97.98	22.86	0.03	98.54	23.83	–4.07
A/C	0	48.88	5.21	0.01	49.33	5.31	–1.88
Urban	0	58.05	12.68	0	55.17	13.09	–3.13
Rural	0	25	1.18	0.01	27.26	1.05	12.38
Fan	37.18	99.91	86.97	30.37	99.99	86.55	0.49
Urban	73.76	99.87	98.91	38.89	100	98.67	0.24
Rural	34.37	100	80.54	30.12	99.94	79.92	0.78
Air cooler	0	49.23	8.18	0	53.3	9.51	–13.99
Urban	0	47.4	15.19	0	50.78	17.71	–14.23
Rural	0	54	4.4	0	62.8	5.03	–12.52
Motorcycle	3.53	69.87	27.74	2.87	66.72	23.98	15.68
Urban	0.55	66.94	35.51	1.85	65.2	31.67	12.13
Rural	3.76	77.5	23.55	2.9	72.42	19.77	19.12
Tractor	0.25	9.73	2.73	0.71	6.56	2.64	3.41
Urban	0.18	4.45	1.39	0	3.53	1.26	10.32
Rural	0.25	23.49	3.45	0.73	18.03	3.4	1.47
Productive Assets							
Land	21.31	29.32	29.32	35.09	21.4	29.59	–0.91
Urban	3.3	14.81	8.47	18.98	13.17	9.55	–11.31
Rural	22.69	67.09	38.06	35.56	52.48	40.55	–6.14
Animals for Transport	11.55	4.27	7.75	22.72	2.19	9.05	–14.36
Urban	6.42	0.8	1.68	18.98	0.79	1.89	–11.11
Rural	11.94	13.32	11.02	22.83	7.45	12.97	–72.82
Poultry	13.1	6.05	15.65	30.25	3.59	18.05	–13.30
Urban	3.12	1.48	3.01	17.59	0.89	3.44	–12.50
Rural	13.87	17.94	22.46	30.63	13.76	26.04	–13.75
Residential building	85.59	88.12	86.84	83.8	86.34	86.82	0.02
Urban	69.54	84.61	78	77.31	83.62	78.79	–1.00
Rural	86.82	97.27	91.59	83.99	96.62	91.21	0.42
Commercial Building	0.72	11.88	4.21	0.37	12.2	3.56	18.26
Urban	0.92	11.84	5.75	0.46	11.86	5.42	6.09
Rural	0.7	11.96	3.39	0.37	13.5	2.54	33.46

Source: Author's own calculations.

The basic data description shows that there has been a general rise in income for all quintiles. On the other hand, wealth distribution is mostly skewed towards the top quintile and this concentration has increased for the given time period. This occurrence is only pointing towards rising inequality, which we also expect to see in our later analysis.

The Table 3 also presents the region wise (rural vs. urban) distribution of assets. It can be seen that in the urban areas for the top quintile the ownership of more valuable assets such as land, residential building, computer, motorcycle etc. has gone up. These are the same assets whose ownership for the bottom quintile has fallen. For the rural areas there is no clear pattern in the distribution of assets, however the data does point out out that for the top quintile it is mostly the productive assets that have experienced an increase in ownership whereas for the bottom quintile the ownership cannot be linked to a specific type of asset as one can observe for the top quintile.

4. RESULTS

The generalised concentration curves are plotted to examine inclusiveness of growth for entire Pakistan and then also at disaggregated level for urban and rural areas separately for 2008-09 and 2010-2011. The inclusiveness of growth has been measured using income per capita and wealth index. The upward sloping concentration curves for both years in Figures 1, 2 and 3 reveal that as one moves to a higher income group the per capita income increases but a rather steeper curve towards the top quintiles shows that the inter quintile income gap is increasing. This trend is evident in both the years for urban as well as rural areas. As shown in Figure 1 the concentration curve for Pakistan for 2010-11 is above the concentration curve for 2008-09, which is indicative of a rise in income for all the segments of population.

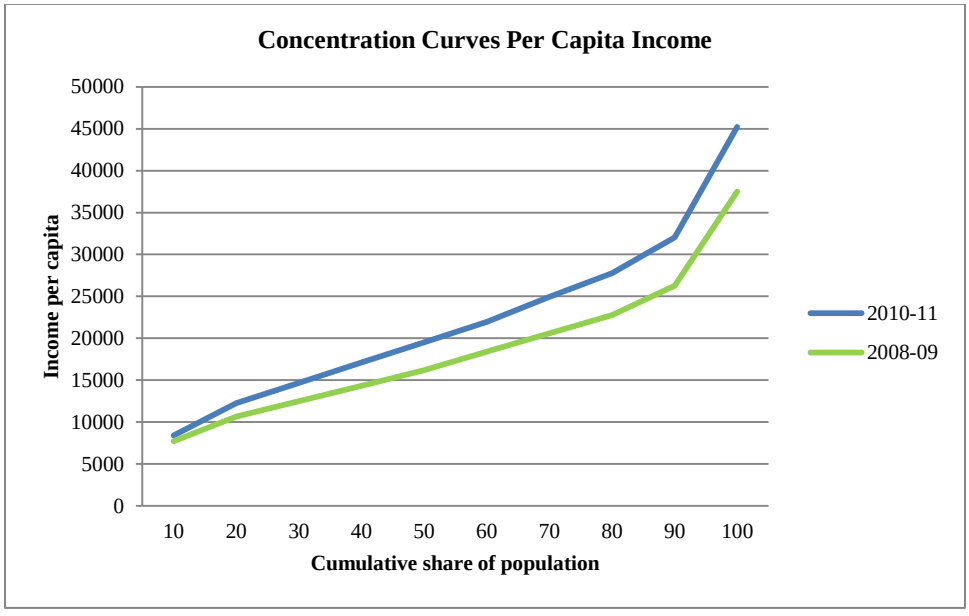

Fig. 1. Concentration Curve of per Capita Income for Pakistan for 2010-11 and 2008-09

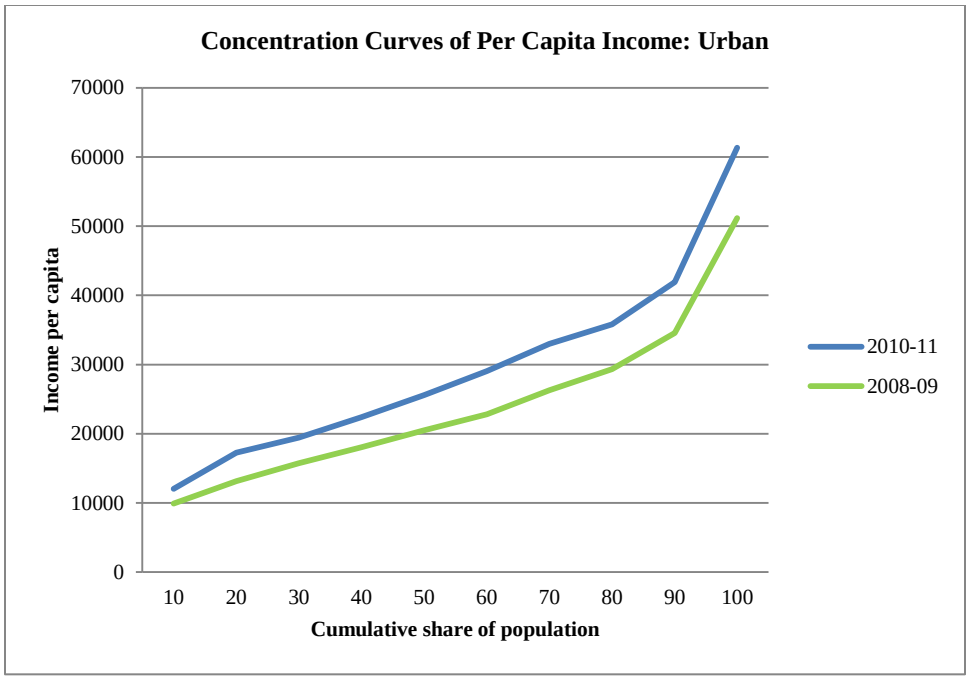

Fig. 2. Concentration Curve of per Capita Income for Urban Pakistan for 2010-11 and 2008-09

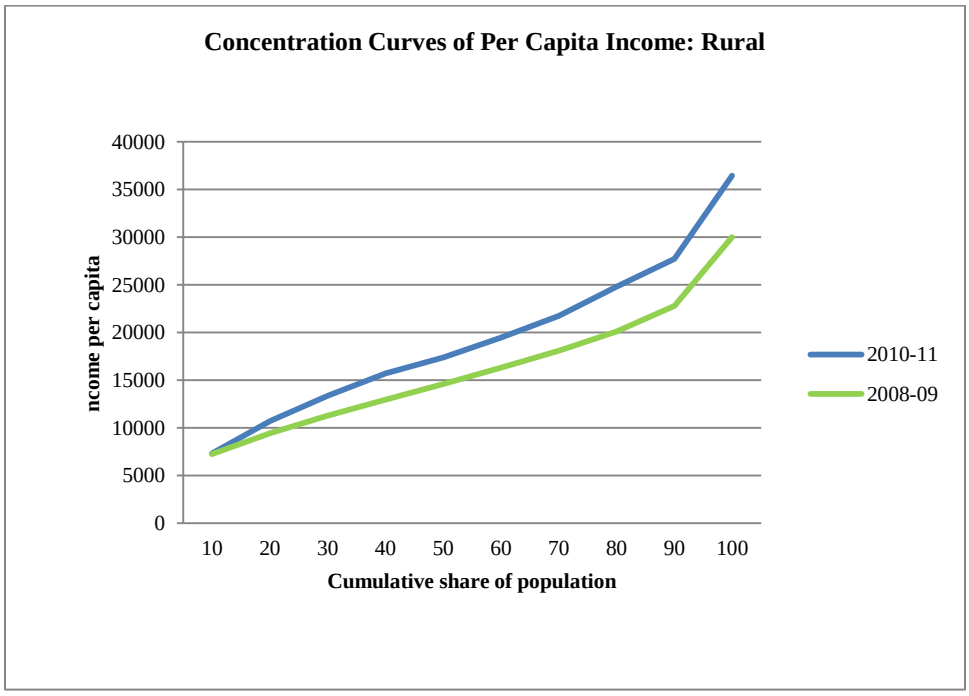

Fig. 3. Concentration Curve of per Capita Income for Rural Pakistan for 2010-11 and 2008-09

This trend is also evident for concentration curves of rural and urban areas in Figures 2 and 3. A general rise in income for all shows positive contribution to growth in Pakistan. However, a closer look at these curves reveals that this growth has given rise to increased income inequality as there has been a pivotal shift in the curve. This shows that income has increased by a larger percentage for the higher end whereas for the lower segments the increase in income has not been very large. Growth is not accompanied by increase in equity as there has been a non- uniform increase in income with the benefits of this growth mostly favouring the higher income quintiles. However, at the disaggregated level this shift in the concentration curves for rural and urban areas brings to light an interesting finding. The change in the position of the curve for rural areas for the bottom 10 percent of population is very minimal as compared to successive quintiles of the income distribution whereas for the urban areas there has been improvement in income for all segments of the population.

Our findings reveal that there has been overall improvement in the country but the curves are getting steeper over time, which is indicative of the fact that the inequality is not decreasing. We will further test this proposition using the income equity index, which will test whether the improvement is equally distributed across various segments of the population or not.[4]

We have also made use of the wealth index to analyse inclusiveness of growth for Pakistan and for both regions. The wealth index has been constructed using the principal component analysis. The PSLM dataset provides detailed information regarding the ownership of productive and unproductive assets for the households. The index is constructed using both productive and non- productive assets and detail of those assets has been reported in Table 3.[5] The Figures 4, 5 and 6 present the concentration curves using wealth index. According to the concentration curve, there has been reduction in ownership of assets over the time period as the curves have fallen from 2008-09 to 2010-11. The decline in the ownership of assets has not been observed in the top quintile of population, the drop is mainly for the lower quintiles. This shows that it is mainly the poorer segments of the population who are experiencing a decline in their economic status. The rich, if not getting richer are able to maintain their existing economic status. This has also been supported by descriptive stats on the ownership of assets where there has been a rise in ownership of productive assets and a reduction in the ownership of non- productive assets. The change in ownership of assets is increasing in assets that are more valuable, such as land and motor vehicles, and decreasing in less valuable assets such as electronic equipments.

[4]The numbers for income per capita used throughout our analysis are nominal in nature. Even if we used the deflated income figures it would still imply an upward shift in the income concentration curve since the inflation rate of Pakistan in 2008 was much higher than the inflation rate in the year 2010.

[5]The wealth index has been constructed using various categorisation of assets. We have measured ownership both in binary and continuous (monetary value of asset) terms. Our results are consistent for both the cases.

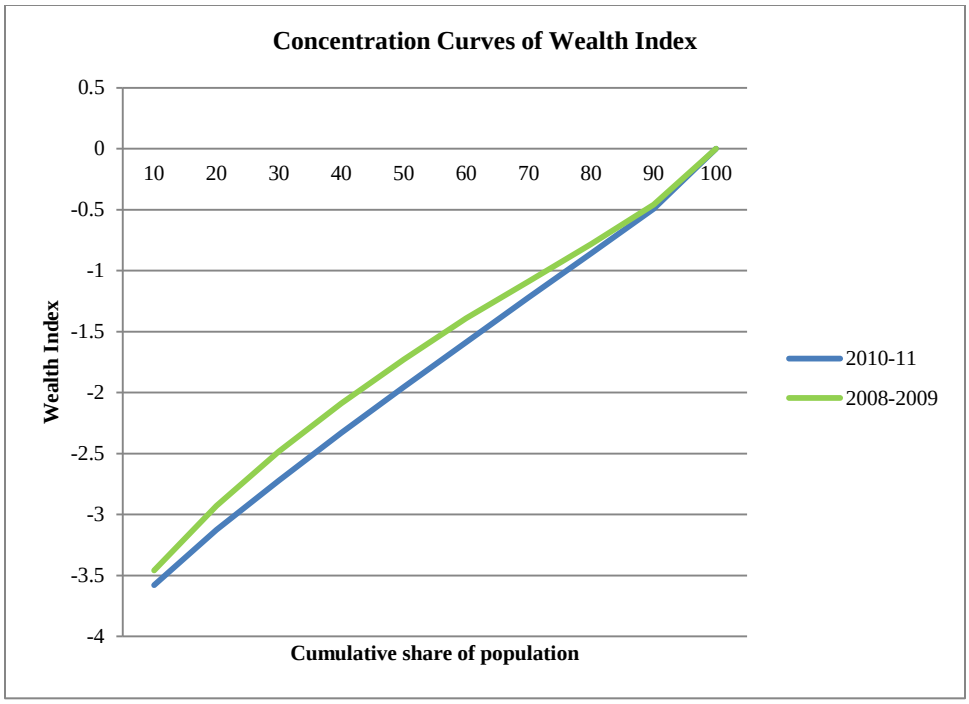

Fig. 4. Concentration Curve of Wealth Index for Pakistan for 2010-11 and 2008-09

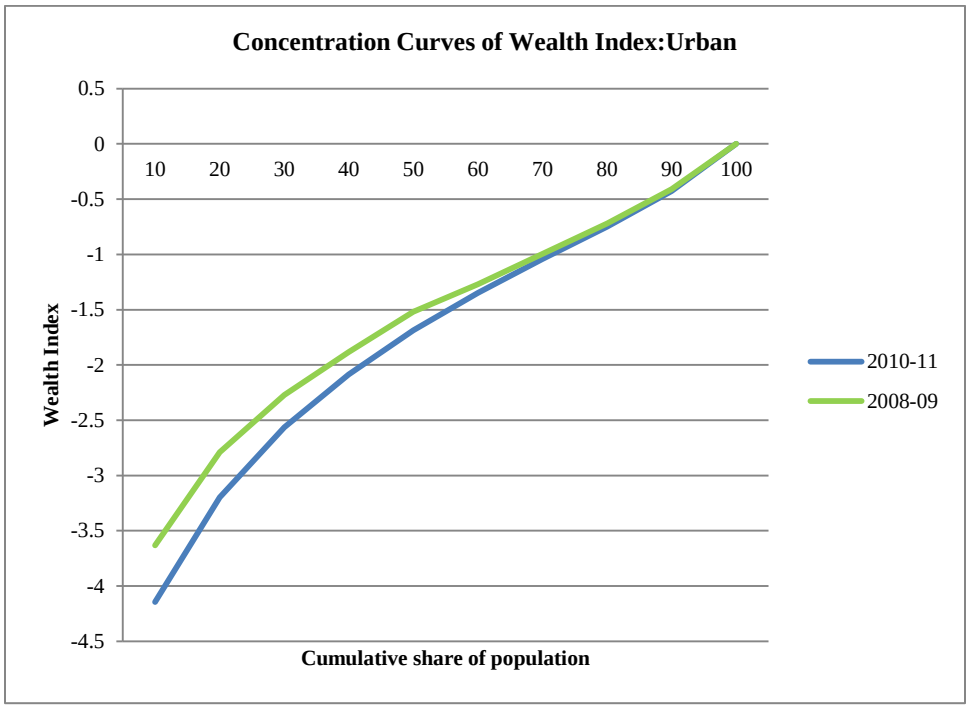

Fig. 5. Concentration Curve of Wealth Index for Urban Pakistan for 2010-11 and 08-09

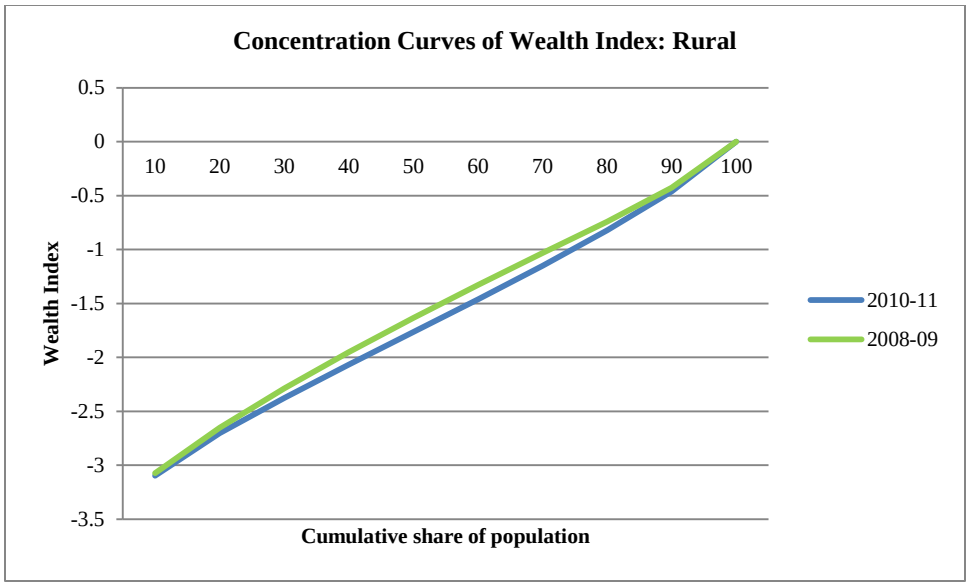

Fig. 6. Concentration Curve of Wealth Index for Rural Pakistan for 2010-11 and 2008-09

The concentration curve of wealth index for urban and rural areas also exhibit the same pattern as of the entire Pakistan. The lower quintiles have experienced a decline in ownership of assets while there has been no decline in economic status of the upper income groups. For the urban areas the ownership of assets has experienced a magnificent decline for the lower income groups as the curve has shifted by a larger magnitude. While, for the rural areas there has not been any decline at the extreme end income groups, it is only the middle income groups who have endured a falling wealth.[6]

The concentration curves of wealth index exhibit a contradiction in the results that we got from the concentration curves of income per capita. Income per capita, which represents temporary income has shown signs of improvement for all income groups whereas the wealth, which is a measure of permanent income has declined between 2008-09 and 2010-11. One of the explanations of this result could be that the rising income has not been able to keep pace with the rising price level in the economy as inflation continued to be in double digits during this time. With the rising price levels, the increase in income is being mostly used for consumption and is therefore not leading to increase in saving or accumulation of wealth. Especially, the lower quintile is not able to cope up with rising price. The alternative for them is to liquidate their stock of wealth as is also shown by the downward shift of the concentration curves for wealth. For the top income groups also rising income levels are not contributing towards greater accumulation of wealth. This can be due to the possibility that increasing income is being channelled towards higher expenditures and is not facilitating savings. These findings are consistent

[6]The y axis of the concentration curves drawn for the wealth index are the z scores estimated from principal component analysis, which assumes a normal distribution. These could be positive as well as negative. Negative z scores do not imply negative wealth holding. Though more positive z scores represent higher wealth holdings.

with those of the World Bank, which shows consistent fall in the gross domestic savings as percent of GDP for Pakistan (from a high of 12 percent to a low of 9.9 percent).

Decomposition of Inclusive Growth

The analysis of concentration curves of per capita income revealed that there has been improvement for all income groups and whether that improvement is equitable or not has been tested using the social mobility index[7] and income equity index.[8] The Figures 7, 8 and 9 show the comparison of average per capita income, social mobility index and income equity index specifically for per capita income for 2008-09 and 2010-11. The Figure 7 shows that the average per capita income ($\bar{x}$) has increased from 2008-09 to 2010-11 for entire Pakistan and for both regions as well. The magnitude of change in income distribution is demonstrated by the social mobility index ($\overline{x^*}$) which is the area under the concentration curve.

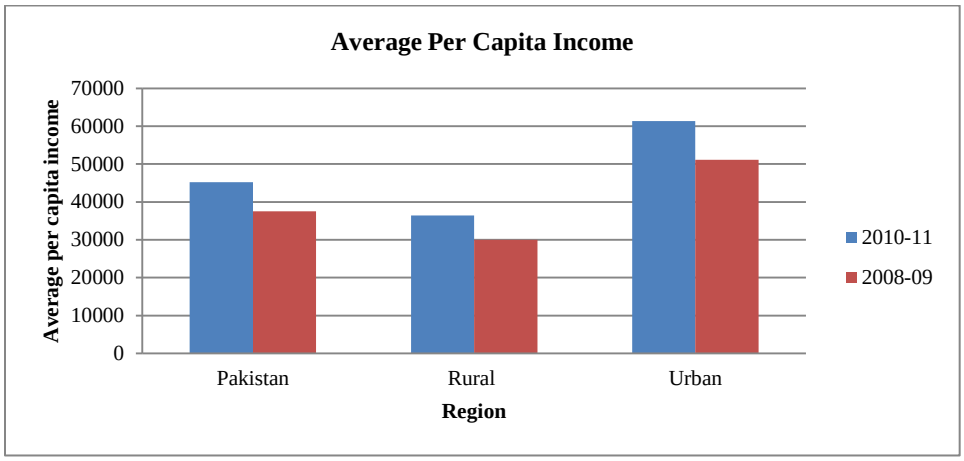

Fig. 7. Average per Capita Income for 2010-11 and 2008-09

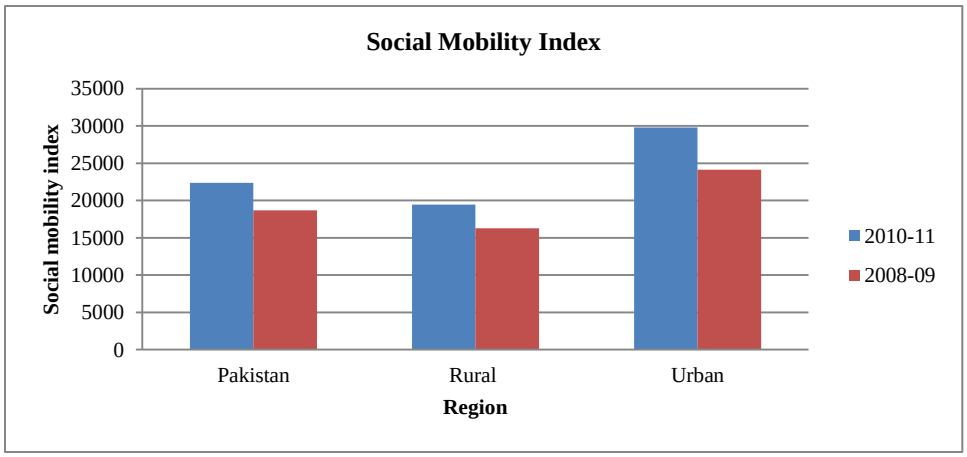

Fig. 8. Social Mobility Index for 2010-11 and 2008-09

[7]It has been constructed using Equation 3.
[8]It has been constructed using Equation 4.

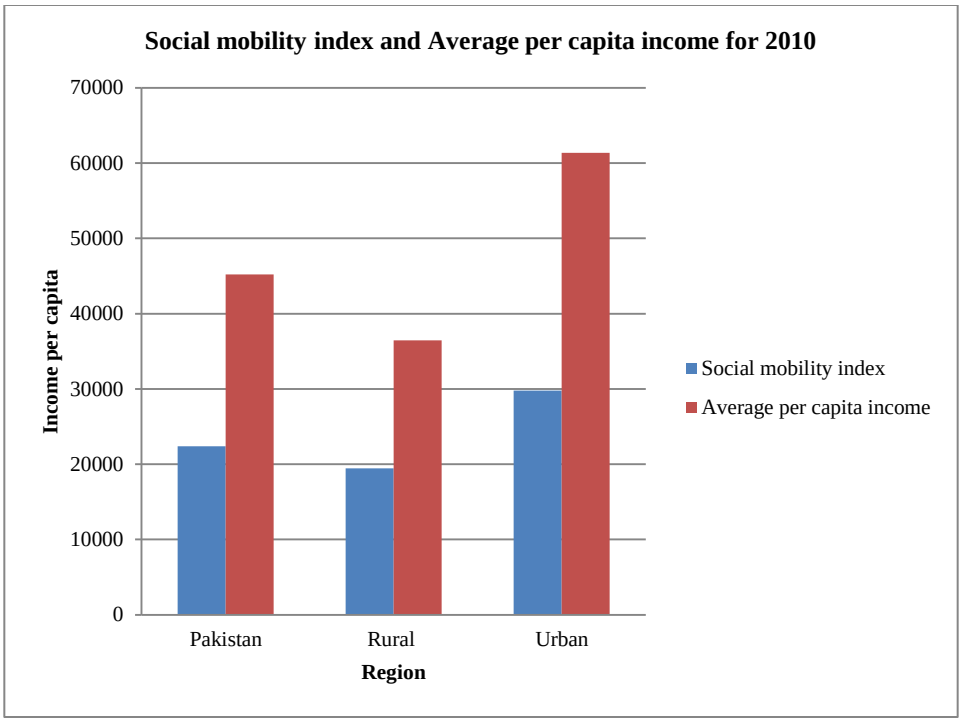

Fig. 9. Social Mobility Index and Average per Capita Income for 2010

The Figure 8 depicts an increase in social mobility index for the given time period at the aggregated and disaggregated level for Pakistan, which is a sign of improvement in the income. Equitable distribution of income requires the average per capita income to be equal to the social mobility index, which would be possible only if all income groups have the same average per capita income in which case the social concentration curve would be horizontal and not upward sloping like in our case. The Figure 9 presents the comparison of average per capita income and social mobility index depicting that the average per capita income is higher than social mobility index for 2010. This implies that the distribution of income is inequitable as the average per capita income is not equal to average per capita income for all groups.

The Figure 10 shows the income equity index, which is a direct measure of income inequality, ranges from 0 to 1 where the equality increases when the index approaches 1. The income equity index is less than 1 across all regions for both the years. However, the magnitude of inequality varies across regions. The value of the index for entire Pakistan is less than 0.5 which is a depiction of very high level of inequality and the index has fallen in 2010, which implies a worsening of income equality. The region wise analysis reveals the same pattern for rural areas as well but the magnitude of the index is higher (the value of the index is greater than 0.5), which marks lesser income disparity in rural areas. The extent of inequality is highest in the urban areas since the value of the index is very low but the extent of the inequality has fallen in 2011as shown by a higher bar for 2010-2011.

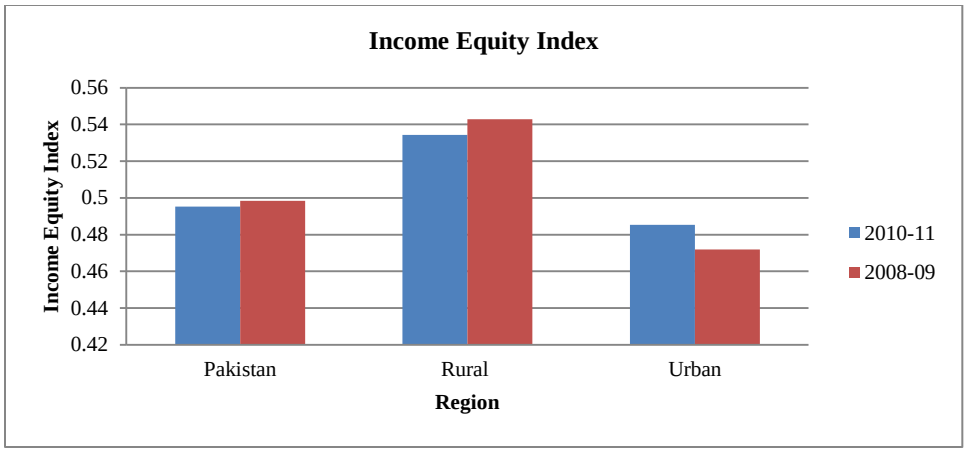

Fig. 10. Income Equity Index for 2010-11 and 2008-09

Table 4

Decomposition of Inclusive Growth; 2008-09 and 2010-11

	Income Equity Index (ϑ)			Social Mobility Index($\overline{x^*}$)			Average income of the Entire Population ($\bar{x}$)		
Year	Pakistan	Rural	Urban	Pakistan	Rural	Urban	Pakistan	Rural	Urban
2010-11	0.495	0.534	0.485	22386	19474	29777	45200	36450	61342
2008-09	0.498	0.543	0.472	18694	16286	24148	37508	30004	51161
Growth Rate	–0.624	–1.571	2.842	19.75	19.58	23.31	20.51	21.48	19.90

Source: Author's own calculations.

This paper examines whether Pakistan has been able to achieve inclusive growth or not. In order to achieve inclusive growth, we required efficiency (overall improvement) and equity (improvement to be equally distributed). The inclusiveness of growth has been tested using the criterion suggested by the inclusiveness conditions.[9] The results for Pakistan are presented in Table 4 which suggest that Pakistan and rural areas of Pakistan satisfy the third condition, which implies that the growth in per capita is occurring at the expense of equity as growth rate of per capita income is positive whereas the growth rate of equity index is less than zero. Only for the urban areas the growth rate of income equity index and that of average per capita income is greater than zero which according to the inclusiveness matrix is a case of unambiguously inclusive growth.

5. CONCLUSION

Pakistan has experienced tremendous economic growth rate over the last decade. However, to see whether this growth is inclusive or not, it is imperative to also examine the distribution of growth as growth by itself is not a sufficient condition for reduction in poverty and inequality. The growth can be categorised as inclusive in nature if it simultaneously leads to reduction in poverty.

[9]The conditions are stated using Equation 6.

The paper examines inclusive growth for Pakistan using the microeconomic concept of social welfare function (social concentration curve) at the macroeconomic level. The social concentration curve is plotted for two time period in order to see the improvement in social welfare over time. The methodology adopted is developed by Anand, *et al*. (2013), which analysed inclusive growth by decomposing it into two components equity and efficiency. Efficiency requires the overall improvement in the country and equity requires the improvement to be equally distributed across various segments of the population. The population is segmented using personal distribution of welfare by deciles across all households in the sample. Our measures of welfare include; income per capita and a household asset index. The social mobility curve is plotted for Pakistan in time periods 2008-09 and 2010-11 using the household level data from Pakistan Social and Living Measurements (PSLM).

Our findings reveal that there has been an overall improvement in the country's income due to the upward shift of the concentration curve but the concentration curves got steeper over time which is indicative of efficiency without equity. We further tested this proposition using the social mobility index and the income equity index. The comparison of average per capita income and social mobility index depicted that the average per capita income is higher than social mobility index implying that the distribution of income is inequitable whereas the income equity index is less than 1 across all regions for both the years, which depicts high level of inequality. However, the magnitude of inequality varies across regions. The condition of inclusiveness of growth suggests that Pakistan and rural areas of Pakistan satisfied the third condition that the growth in per capita is achieved at the expense of equity. Only for the urban areas the growth rate of income equity index and that of average per capita income is greater than zero, which according to the inclusiveness matrix is a case of unambiguously inclusive growth.

One of the important finding of our analysis is a fall in concentration curves of wealth index from 2008-09 to 2010-11. It exhibits a contradiction in concentration curves of income per capita. Income per capita, which represents temporary income has shown signs of improvement whereas the wealth, which is a measure of permanent income has declined between 2008-09 and 2010-11.This can be due to the possibility that increasing income is being channelled towards higher expenditures and is not facilitating savings.

Given these findings, we can see that the growth in Pakistan is not inclusive since growth has been achieved at the expense of equity. The benefits of growth are unevenly distributed where the poor benefit less as compared to the rich. Thus, there is a need for the government to play its role by formulating policies that distribute the benefits of growth equally and reduce inequality.

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