Pakistan Journal of Applied Economics, Vol.33 No.2, (241-249), Winter 2023

RESEARCH NOTES

UNVEILING ECONOMIC INEQUALITY: An analysis of Income inequality trends in Pakistan.

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I. Introduction

Improvement in the living standard of individuals in society is the basic notion of development, and it is not attainable with only an increase in the gross domestic product of the nation. Without knowing the income distribution, economic growth would be insufficient to achieve development. The nations experiencing noteworthy inequalities in the possession of assets only arrive at a lower level of growth [McKay (2002)]. Increasing disparities in the distribution of income and opportunities to get income, like access to education and health, and ownership of land and capital, lead to poverty in relative and absolute terms. Hence, it significantly contributes in social turmoil and misdeeds and imposes limits on nations to achieve sustainable development [Zagorski, et al; (2010)]. Many nations are currently placing a high priority on advancing efforts to reduce disparities as a key policy concern. This is partially because of concerns that persistent disparities in the allocation of economic gains might exacerbate class divides, spark social unrest, and ultimately result in political instability. Thus, the most critical challenge of this century is to evade this inequality trap. Interest of the economists to combat this challenge can be attributed to Sustainable Development Goal 1 and 10, which seeks to eradicate poverty for all people ubiquitously and lessen inter and intra countries inequalities.

This research aims to explore income inequality trends in Pakistan. In the context of Pakistan, the significance of analysing inequalities stems from the fact that Pakistan is a low-income country which never been able to uphold sustainable growth; therefore, the basic ideology of the trickle-down effect that higher investment would reduce poverty and inequalities later period via creating more employment opportunities and reducing wage differential between agricultural and industrial sector has been ineffective in the absence of sustainable growth for a reasonable time period to have its effect. Inequalities, particularly rural income in-

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equalities, have enlarged more severely than the rise in urban income inequalities from 1988 to 2011. Thus, the growth is not neutrally distributed during the period and eventually results in a low reduction in poverty [Jamal (2015)]. Reducing inequality is not only part of the explicit agenda of Sustainable Development SDG 10 but is also intrinsically linked with the entire SDG framework. Specifically, the goals of eradicating poverty and hunger (SDG 1 and 2), Health and wellbeing (SDG 3), quality education (SDG 4), gender equality (SDG 5), decent work and economic growth (SDG 8) and inclusive industrialisation (SDG 9) all are hard to meet if the considerable proportion of the population is receiving below average income.

To accomplish the objectives stated above, we need data over a period of time so that the fullest possible picture of inequality trends can be portrayed. Therefore, the data for four time periods 2005-06, 2010-11, 2015-16 and 2018-19 is used for the analysis. Equalised per capita income is used to measure inequality considering the fact that the need of income grows with each additional member but not proportionally due to 'economies of scale' in consumption. The need for housing utilities may not be four times as high for a household with four members than for only one member. Using the equalised scale, every household in the population is assigned a value proportional to its need. Two factors, the age of the household members and the size of the household, are generally considered for assigning these values. Multiple scales are available for this purpose, from which most commonly used scales are:

1. OECD equivalence scale (old): The assigned value 1 for the head of household, 0.7 to each additional adult and 0.5 to each child.

2. OECD equivalence scale (modified): Later, in 1994, the scale is modified to have a value of 0.5 to each additional adult member and 0.3 for the child. The value of the head of household remains the same.

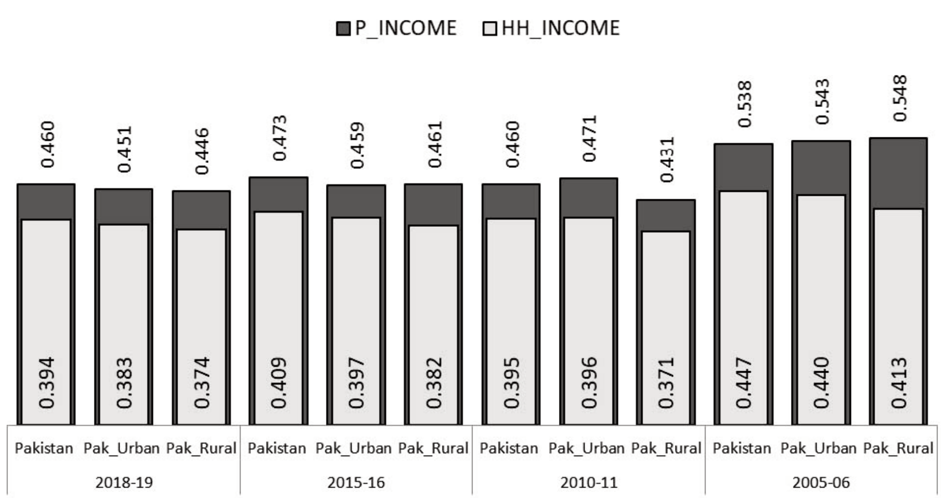
3. National equivalence Scale: the equivalence scale used at the national level assigns the value 1 to the head of household and 0.8 for other members in the household.

For analysis, household income is adjusted using the national equivalence scale. The Gini coefficient that comprehensively measures the differences across the entire population is used for capturing inequalities in the distribution of different income types. However, because the Gini coefficient is a summary measure and allows an overall conclusion regarding inequality and fails to identify which segment of the distribution is responsible for causing an increase or decrease in inequality, the analysis is supplemented by the estimation of the decile ratio, which illustrates disparities between different segments of the distribution.

II. Analysing Income Inequality

The disparities in the distribution of wage income declined in Pakistan over time as per the estimated Gini coefficient. Between 2005-06 to 2018-19, the inequalities in the personal distribution of income declined by 14.5 per cent, whereas at the household level, the decline is about 12 per cent reflecting growth in the income of labour. At the regional level, the decline in disparities across personal income is more pronounced than the decline in household income. Over this period, the largest decline is in the personal income distribution of rural areas, where inequalities decreased by around 19 per cent. It is worth mentioning here that in absolute terms the disparities are greater in personal income than the household income for each period (Figure 1).

Overall income inequality can be decomposed into various sub-groups in such a manner that the relative significance of each group can be quantified. This identification is crucial for policy formulation aiming at reducing income inequalities. The Theil entropy measure is widely used for decomposing income inequalities into within and between components. For instance, Table 1 shows the finding of the decomposition of income inequality measured by the Theil index across rural and urban regions of Pakistan. One of the most remarkable findings is that in relative terms, the personal and household income inequality between regions is very low, reflecting that in Pakistan, overall income disparities appear to be almost exclusively on account of inequalities within regions. However, in absolute terms, the



Source: Authors' estimation.

FIGURE 1

Gini Income Inequality Estimates

TABLE 1

Estimated Theil Index for Personal and Household Labour Income Distribution

	2018-19		2015-16		2010-11		2005-06	
	PY_Theil	HH_Theil	PY_Theil	HH_Theil	PY_Theil	HH_Theil	PY_Theil	HH_Theil
Pakistan, Overall	0.41	0.3	0.44	0.33	0.41	0.3	0.64	0.4
Pakistan, Urban	0.38	0.29	0.42	0.32	0.42	0.29	0.64	0.39
Pakistan, Rural	0.4	0.26	0.39	0.27	0.35	0.26	0.5	0.33
Within-group inequality	0.39	0.27	0.41	0.31	0.39	0.28	0.6	0.36
Between-group inequality	0.02	0.02	0.03	0.02	0.02	0.02	0.04	0.04

Source: Authors' estimation.

average yearly wage income in urban regions is about fifty-three per cent higher than the rural income (Table 2). Moreover, with regard to income inequality within the region, the Theil index also appeared higher for urban regions than for rural regions in all the years under consideration except for 2018-19.

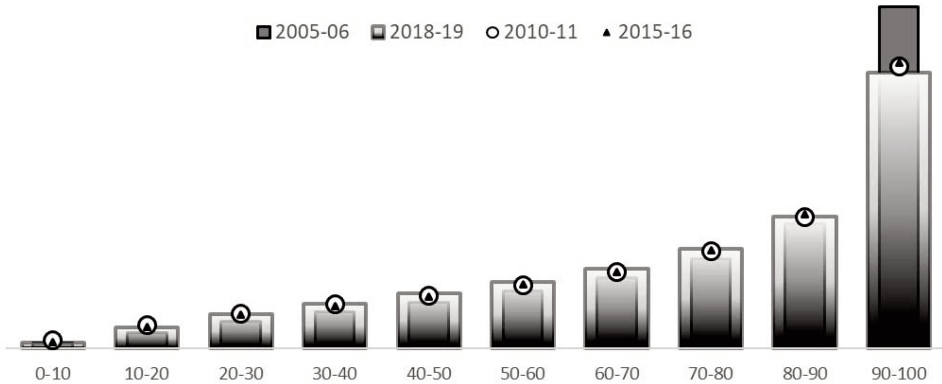
However, the overall income inequalities are showing a relatively declining trend at the national and regional levels but are still high in absolute terms; therefore, it might be appealing to take detailed insight into this overall trend. The percentile share in this context is a supportive tool for getting detailed insights. Each of the measures of inequality considered until now takes advantage of the entire income distribution. The percentile or share ratios have the advantage of making it clear which section of the distribution is driving the observed changes in the summary measure, which is more difficult to determine when using the Gini or Theil coefficients. The Figure 2 shows the share of total wage income going to each decile. The share of income going to the top decile decreases while the share of all other deciles increases over the period under consideration. The greatest increase is visualised in the share of the second decile (10-20), which is around 38.16 per cent, while the share of the income going to the highest decile (90-100) decreased by around 19 per cent since 2005-06 to 2018-19.

TABLE 2

Average Yearly Personal Labour Income

	Rural	Urban	Difference	% Difference
2005-06	48027.31	83484.33	35457.02	73.8
2010-11	99447.62	146289.6	46841.98	47.1
2015-16	144523.7	247925.7	103402	71.5
2018-19	180988.6	277610.9	96622.3	53.4

Source: Authors' estimation.



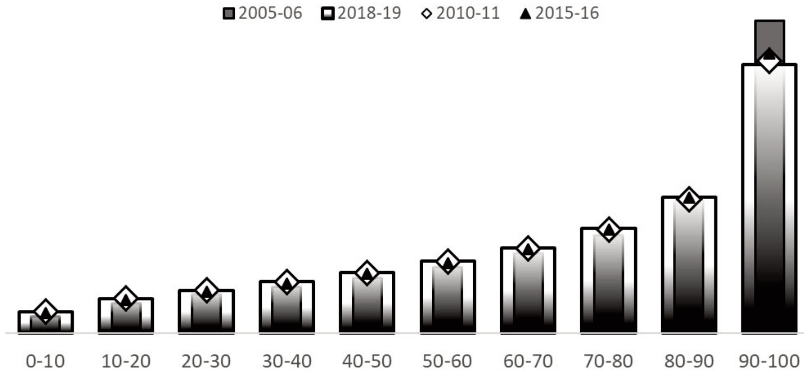
Source: Authors' estimation.

FIGURE 2

Share of each Decile in Total Wage Income (individual level)

In 2005-06, 42 per cent of the total wage income goes into the pocket of the uppermost decile; by 2015-16, this share had fallen to about 35 per cent and then further declined by 18-19 to 33 per cent, indicating that falling inequalities at the national level is primarily driven by the decrease in the share of uppermost decile. The individuals belonging to the bottom and middle deciles are the main beneficiaries with an expanding share of income. However, in contrast to the income share of the poor and lower middle class, the proportion of the income of the upper middle class has grown at a slower rate despite the fact that the richest 20 per cent of earners still get more than half of overall income.

Figure 3 displays the share of income for each decile at the household level. Estimated statistics reveal the same conclusion as those derived from the distribution of personal in-

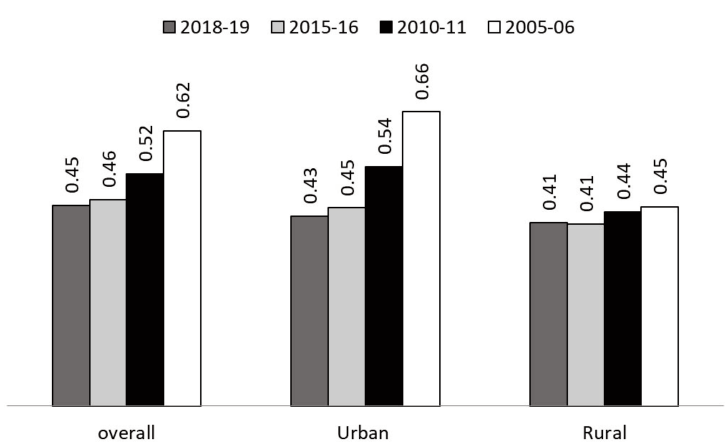


Source: Authors' estimation.

FIGURE 3

Share of each Decile in Total Wage Income (Household level) come distribution. Again, the share of income going to the uppermost decile falls, whereas the share of all other deciles rises during the time period considered for analysis. At the household level, since 2005-06 to 2018-9, the share of income going to the lower decile (0-10) has increased by 27.3 per cent while the percentage of income going to the highest decile (90-100) has fallen by around 14 per cent. In 2018-19, the richest 10 per cent of households get almost the same income share (31 per cent) as the poorest 60 per cent of households, which indicates significant differences in household income distribution.

Till now, the focus of the analysis has centred on examining the distribution of personal and household wage income as the share of labour income in total income is usually higher, especially in labour-abundant economies like Pakistan. Apart from labour income, a household also generates income by employing other factors such as land, capital and entrepreneurial abilities. After being incorporated in the labour income, earnings from these factors alter the overall income distribution at individual and household levels. However, the data set in hand only permits the re-estimation of inequalities at the household level. Again, the unit of analysis is neither household income nor per-capita income; as stated earlier, these concepts are not appropriate for comparing relative deprivation of households. The first one ignores the size of the household, and the other ignores economies of scale in consumption within the household; therefore, again, inequalities are measured using equalised household income. The Figure 4 indicates the estimated Gini coefficient over time across rural and urban regions of Pakistan. In contrast to previous findings, household inequality has grown after integrating income from various sources such as capital land and entrepreneur income. Rising disparities at the national and regional levels demonstrate that the distribution of these factors is also unfair, and only a small number of households have access to these income sources.



Source: Authors' estimation.

FIGURE 4

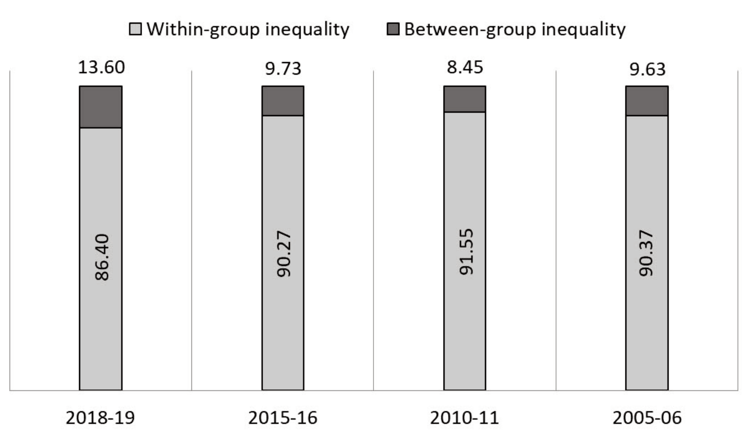
Gini Inequality Estimates of Household Total Income

In absolute, disparities in total household income are reducing over time at both the national and regional levels, with urban income inequalities dropping more rapidly than rural income inequalities, and a similar pattern can be observed at the national level. In the period from 2005-06 to 2018-19, inequalities in total household income declined by 35 percentage points in the urban region while they decreased by eight percentage points in the rural region. The shrinking gap between rural and urban inequality estimates can be attributed to the quick decline in urban disparities.

The Figure 5 depicts the finding of the decomposition of total household income inequality measured by the Theil index across rural and urban regions of Pakistan. Again, the within region inequalities are shown to be greater than between-region inequality but over time, between-regions inequality has increased from around 10 to 14 per cent while within region inequality has decreased with the same rate as both sums up to a hundred per cent.

III. Discussion and Conclusion

The concentration of income is becoming a pervasive concern in Pakistan as it seems to be linked with long-term sluggishness in achieving sustainable economic development by restricting many individuals from taking advantage of equal opportunities and reaping the same benefits, resulting in a long-term stagnation of living standards. Therefore, combating inequality and ensuring that each and every individual has their respective rights is the most pressing task right now, especially for policymakers, whose major concern is the wellbeing of society. The purpose of this research was to explore economic inequalities, measured by labour income and total household income, their trends over time and their magnitudes across regions



Source: Authors' estimation.

FIGURE 5

Decomposition of Total Household Inequality by Region rather than just on the national level. Economic inequality is a multifaceted phenomenon that may be quantified using a variety of indicators and data sources, but whatever data source and indicators are used to track economic inequality; they always start with the same fundamental input: a distribution of any income, as individuals' prospects in life and the future of their next generation heavily influenced by the level of income or wealth they own. Therefore, anyone interested in designing effective policies should thoroughly grasp present and historical inequality dynamics. In reality, the total income of a household (or individual) is the sum of income received from multiple sources like labour, capital, and land. In view of this, disparities in the distribution of total income are the summative of inequalities in these sources and variation in the overall inequality are inclusive of change in its components. The total income in most of the developing nations are majorly comprised of labour income; therefore, inequalities are also defined mainly on the basis of labour income. For a comprehensive evaluation, distributional disparities are examined through the consideration of personal labour income, household labour income and household total income (adding the income received from other sources). This analysis allows for the assessment of distributional inequalities both in absolute and comparative ways.

The relative contribution of labour income inequalities at personal and household levels is declining in Pakistan during the assessment period as a whole, from 2005 to 2018-19, with some phases of expansion and decline within the period. However, in absolute terms, it could be fine to conclude that its contribution might be increasing due to urbanisation as the labour income inequality is relatively higher in urban areas as compared to rural ones. The enlargement of the urban population, a natural long-term trend in all emerging countries, makes overall inequality comparatively larger. Notably, inequalities are greater in personal income than household income in absolute terms each time. Next, to analyse how the distribution of capital, land and entrepreneurial income distribution altered inequalities in favour of the few who own these factors, the income received from these is incorporated in household labour income to re-estimate inequalities. In contrast to the aforementioned results, household inequalities have enlarged after integrating income from these sources at national and regional levels. Rising disparities specify that the distribution of these factors is also unfair, and only a few households have the opportunity to use these income sources.

References

Jamal, H., 2015, Private returns to education in Pakistan: A statistical investigation.

McKay, A., 2002, Inequality Briefing, Overseas Development Institute, University of Nottingham, Briefing Paper No 1 (1 of 3).

Zagorski, K., M. D. Evans, J. Kelley, and K. Piotrowska, 2014, Does national income inequality affect individuals quality of life in Europe?, Inequality, happiness, finances, and health, Social Indicators Research: An International and Interdisciplinary Journal for Quality of Life Measurement, Springer,117(3): 1089-1110.