

# Empirical Analysis Of Income Inequality And Its Causes

Ume Ruqia Saadat<sup>1</sup> & Dr. Muhammad Naimatullah Babar<sup>2</sup>

1. *PhD Scholar, Department of Economics, Institute of social sciences Gomal University, Dera Ismail Khan, Khybper PakhtunKhwa, Pakistan*
2. *Professor, Department of Economics, Institute of social sciences Gomal University, Dera Ismail Khan, Khybper PakhtunKhwa, Pakistan*

**Abstract:** The present study was aimed to analyze the income inequality and its cause. The key objective of the study was to find out the income disparity among the household in perspective of their different demographic characteristics. The study was conducted in three districts i:e Dera Ismail Khan, Charsada and Malakand. The nature of the study was survey in nature. Therefore, a questionnaire was used to collect data from the households. A sample of 400 households was taken out of 410161 households. ANOVA and Independent sample t-test was used for data analysis whereas Coefficient of Variation (CV) was used to measure the income disparity among the households in term of their demographic attributes. The result of the study indicates that gender play a role in the income inequality. Female had fewer opportunities as compared to male in the sample districts. The study also found that significant difference in male and female households' income literacy is one of the key issues in selected districts which cause income inequality among the households. High qualified households earn more wages as compared to low qualified households.

**Keywords:** Income Inequality

## Introduction

In all over the world, unequal distribution of wealth and resources create disturbance among the people irrespective of religion, creed, cast, color, nationality etc. Developing countries as well as developed countries are succumbed to this curse of unequal distribution of wealth and resources. Due to this reason, gap between poor and affluent class is being increased (McCall & Percheski, 2010). According to Li, Wang and Yuan (2020) unequal and unjustified distribution of resources cause the dissatisfaction among people and impoverished class succumbs to depression and stress. Unrest can be seen in those societies where inequality is exercised. When the gap between rich and poor people become higher than there would be dissatisfaction and unrest in the society. Disproportionate distribution of

resources are the main cause of violence, uncertainty, poverty and other social evils in the society consequently leads to low investment and reduce of growth. According to Shaheen, Awan and Cheema (2016) a person earns reward by providing services or producing goods which is the main source of income. It is essential for the developing economies to give the right reward to those persons who are rendering services and helping to produce goods. Each person in the society should be given equal opportunities to earn livelihood so that each person could play his/her due role in the development of the society.

In the view of Ali (2018), there is a wide gap among the income of different kind of people having different socioeconomic status in the society of developing countries like Pakistan. Rich people are becoming richer and poor people

are becoming poorer due to unequal distribution of wealth and resources. This inequality gap is increasing with the passage of time. Elite class enjoys luxuries of life while poor class is not having the basic necessities of life and has to face the hardships of life. The problems of unequal distribution of wealth not only exist in the urban areas of Pakistan but it also exists in the rural area.

In the developing countries, there is a wider gap among the people's income. There is inequality of resources and this gap of inequality is increasing day by day. Most of the people living in the rural areas, and work in the fields, their income is not sufficient and they are paid low salaries. Due to this discrimination of income, their living standard cannot be improved until they are not given their proper share of income. It is remarkable that people living in the urban areas works in factories and offices and they earn sufficient amount of income while people working in the rural areas works dawn to dusk and they are paid little pay for valuable services. This discrimination leads to depression and is the main cause of their low living standard. It is the priority of the governments to improve the standards of the people living in the rural areas having not sufficient income. It is cry of the day that there should be equality of wealth among the people whether they are working in the rural areas or in the urban areas of the country so that every person could improve their living standard and lead better life (Ravallion, 2014).

Income inequality is one of the main reasons for poor economic condition of the country. Agriculture sector plays significance role in the economy of the country. Majority of the people living in the rural areas depend their livelihood on agriculture sector. Due to unjustified distribution of wealth, affluent people enjoy not only the basic facilities of life but they have every kind of luxurious facilities and have the full taste of life. Deprived class has to face

severe kinds of hardships as they have nothing to enjoy due to lack of resources. In this study, the researcher has endeavored to highlight the disparity in income among the various groups in the province of Khyber Pakhtunkhwa. In the views of economists, income disparity is the main cause of poor economic condition of the country (Mookerjee & Kalipioni, 2010). According to Burki et al (2015), income inequality in Pakistan is existed everywhere in the country but the urban areas; income inequality is in higher level. In the past few research studies, it was also indicated that the elite class has captured the most of the resources and this class is even has more influence on the policy makers institutions. That is a reason that elite class is more beneficial class in the country and is using illegal practices to continue hold on wealth and resources of the country. The present study was main emphasis to analyze the income inequality and its causes. The key objectives of the study were given below:-

1. To find out the income disparity among the households in perspective of demographic variables (gender, literacy, education level, family size and occupation)
2. To identify causes and consequences of income inequality in Pakistan

### **Significance of the study**

In fact, poverty and inequality are the two main problems of the developing countries. In order to overcome on these problems, effective and solid measures should be taken by the governments. The present study is helpful for the economist that which factors contributing in income inequality among the households. The current study investigates the role of demographic attributes of the households such as gender, locality, age, literacy and marital status in income disparity. Thereby, the present study is beneficial for the policy makers to develop such policies to reduce

the income distribution in the light of demographic characteristics of households.

### **Hypotheses of the Study**

**H<sub>01</sub>:** There is no significant difference among households' Income across sample district.

**H<sub>02</sub>:** There is no significant difference among households' Income across gender.

**H<sub>03</sub>:** There is no significant difference among households' Income across Literacy.

**H<sub>04</sub>:** There is no significant difference among households' Income across Age.

**H<sub>05</sub>:** There is no significant difference among households' Income across Education Level.

**H<sub>06</sub>:** There is no significant difference among households' Income across Occupation

### **Literature Review**

#### **Income inequality in perspective of national scenario**

Different trends are shown over time in the Gini coefficient in the country (urban areas & rural areas across the country). Gini coefficient improved sharply in the urban areas of Pakistan. In 1963, Gini coefficient was 0.3698 and in 1967, it was improved up to 0.4068. However, in rural areas, income inequalities declined. In 1963, it was 0.3543 in rural areas but in 1970, it was decreased to 0.3122. The shares in income of different quintiles indicate similar trends. Income share of those who were the poorest indicated 20 percent improved from 7.3 percent to 8.5 percent in the rural areas and the richest 20 percent decreased from 43.17 percent to 39.86 percent. In urban areas across the country, the poorest 20.00 percent lost the earnings share and that of richest 20.00 percent gained considerably in the duration 1963-1967. However, in the later period changes in the shares overturned (Cheema & Sial, 2012).

It was indicated in the provincial analysis data that there was major improvement in the figures of income inequality in the duration of 1987 to 1999. In this period, Gini coefficient

increased from .34 to .41. The effect of the SAP (Structural Adjustment Program) was explored across the all over the provinces of the country (Jamal, 2003). It was noticeable that the particular values of Gini coefficient across the country showed a major development from 1987-1988 to 1998-1999. Statistical analysis of regional data indicates that there is more income inequality than rural areas for the period of 1987-1988 to 2004-2005. In the year 2000-2001, in the urban area of Pakistan, the income inequality was highest which was shown 0.44 in the Gini coefficient. However, in the mentioned duration, the Gini coefficient indicates the highest (0.36) in the rural areas (Shaheen, 2019).

#### **Provincial Scenario**

During the year 1987-1988, the inequality was lowest in NWFP followed by Baluchistan, Sindh and Punjab respectively. The income inequality was higher than any other province of Pakistan. However, Punjab province was behind in income inequality to Sindh and it was a second province of Pakistan where income inequality was higher. The major change was observed in the Sindh province as well as in Khyber Pakhtunkhwa (KP). In these provinces of Pakistan, inequality was increase by the percentage of eight points in the period of 2001-2002. The duration of 2004-2005 was compared with 2001-2002; it was observed that this duration was stable to some extent. In the same year, the figures of income inequality were almost same in the province of Punjab but in the province of Sindh, inequality was decreased by 4 percent according to Gini coefficient. The inequality was too decreased by 2 percent in the province of NWFP but in the province of Baluchistan, figures remain same (Shaheen, 2019).

#### **Household Inequalities in Urban Area in Pakistan**

Urban inequality in Pakistan has been an important topic in social sciences. Various studies have been conducted to investigate the

reasons for urban inequality and various steps have been recommended by the researchers to impede urban inequality. In the western countries, urban inequality moved from poverty to the present development of the society for the last twenty years (Munir et al., 2022). Those countries which are not yet developed and are in developing stage, inequality is considered strongly associated with poverty.

In big cities of Pakistan, inequality can be found in the slums and informal housing where a large number of people are living. It has been tradition since long that inequality researches have been normally conducted having focusing on income. It is also noteworthy that analysis are made at city are national level (Bhatti et al., 2015). Besides income inequality, inequality can be finding out in several other fields such as social, religious, political, spatial, cultural, racial, age, sex, gender and status etc. The general pattern of household's expenditures and the housing arrangement are better manifestations of inequalities in urban and rural societies (Jamal, 2005).

### **Income Inequalities in Pakistan**

According to Naseer et al. (2016), various studies have been carried out by the researcher to know the impacts of income inequality and distribution of resources in Pakistan. Pakistan has been a case study for the researcher since long as there is income disparity at a large scale among the people living in the different areas of Pakistan. In the view of Ogbeide and Agu (2015) inequality is a great hurdle in the way of well being of the people. Unemployment, poverty, political unrest, conflicts among people and institutions, violent are factors that impede in the way of development.

According to Burki et al. (2015) income inequality in Pakistan, in the recent years remained low and stable. However, in the urban areas of the country, inequality is higher than

rural areas. Burki et al. (2015) further argue that income inequality is challenge in those areas where its ratio is higher than other part of the country. They further point out that affluent class has occupied most of the resources of the country and poor are deprived. Due to this reason, affluent class is enjoying all kinds of facilities and is leading luxurious life where poor class is deprived all kinds of facilities and this class is too deprived from basic facilities of life. Cheema and Sial (2012) carried out a research study and concluded in the research that in the province of Punjab, educational achievements are persistence. They find out that wealth, land and resources determine the status of the people. Social class determines the role of people in the society.

Burki et al. (2015) argue that ratio of education among the social classes is different. Elite class has all kinds of resources. This class avail best health and education facilities. People of this class admit their children in private and higher standardized schools where best facilities and best teaching staff are available. However, lower class has very little resources. The people of this class have lack of education and health facilities. Their children are unable to get higher education due to lack of low income. Ratio of education is low of lowest class than upper class. Children belong to poor class get little achievement in education. Drop rate ratio is also higher among the children of lowest class.

### **Research Methodology**

The present study was followed Positivism' philosophical approach as per the researcher's nature. Positivism philosophical approach claims that social world can be understood through object way. In other words, the key theme of this approach believed on empirical results (Park, Konge & Artino, 2020). Therefore, quantitative research method was used. Moreover, survey research design was employed while conducted

this study. The universe of the study comprised of three districts including Dera Ismail Khan (D.I.Khan), Charsada and Malakand. The selection of universe for the current study was made purposively due to the reason that households are involved in multiple and different livelihood activities and natural resources are richly available. According to the Pakistan Bureau of Statistics [PBS] (2020), the number of households in three districts comprised of

410161. Researcher applied Yamane’s (1967) formula to determine the exact number of households (sample). The present questionnaire adapted which developed by Pakistan Standard Living Measurement (PSLM, 2015-2016). The questionnaire contained several sections which were based on the information regarding source of income, education, health, consumption, expenditure, occupation and employment type.

**Table 1 Distribution of sample households in selected Districts**

District	Total number of households	Percent distribution of households as per district	Sample size (n)	Sample fraction
D.I.Khan	148007	36.1%	144	9.72
Charsada	180251	43.9%	176	9.76
Malakand	81903	20.0%	80	9.76
	410161	100.0%	400	

**Data analysis Techniques**

Independent sample t-test is used to examine the mean difference where two are taken from two populations which have symmetrical distribution. In the present research, researcher used Coefficient of Variation. According to Cancian

and Reed (1998) Coefficient of Variation measure the income inequality of households is calculated by dividing the standard deviation of the household’s income distribution by its Means.

**Results and Discussion**

**Table 2**

**H<sub>01</sub>: There is no significant difference among households’ Income across sample district**

District	Mean	SD	df	F	Sig.
D.I.Khan	3.23	1.64	399	.436	.647
Charsada	3.42	1.89			
Malakand	3.35	1.63			

Table 2 shows the income difference among household wages/earning across district. The result indicates that Mean score of district D.I.Khan was estimated 3.23 with SD 1.64, average score of households’ income of district charsada was estimated 3.42 with SD 1.89 and

mean score of household income was estimated 3.35 with SD 1.63. The value of F= .436 with p=.647>.05 which indicates that no significant difference in the household income across selected district.

**Table 3****H<sub>02</sub>: There is no significant difference among households' Income across gender**

Research Variable	Male		Female		t-value	Sig	Cohen's D
	Mean	SD	Mean	SD			
Household Income	3.37	1.73	2.87	1.85	2.52	.012	0.451
Inequality CV	51%		64%				

Note:  $CV = \frac{SD}{Mean} \times 100$

Table 3 shows the difference in the income gap between male and female households in selected districts of Khyber PakhtunKhwa. The result indicates Mean score of male households' income was estimated 3.37 with SD 1.73 and average score of female households' income was estimated 2.87 with SD 1.85. The result shows that value of  $p = .000 < .05$  with  $t = 2.52$  which indicates that there is significant difference in the

income of male and female households' income. Male households had low CV percentage (51%) as compare to female households CV percentage (64%) which indicates income of male households found increased than female households. The Cohen's D effect size was estimated 0.451 which means there is medium effect size between the two groups.

**Table 4****H<sub>03</sub>: There is no significant difference among households' Income across Literacy**

Research Variable	Literate		Illiterate		t-value	Sig	Cohen's D
	Mean	SD	Mean	SD			
Household Income	3.49	1.82	2.88	1.71	3.39	.001	0.510
Inequality CV	52%		59%				

Note:  $CV = \frac{SD}{Mean} \times 100$

Table 4 shows the difference in the income gap between literate and illiterate households in selected districts of Khyber PakhtunKhwa. The result indicates Mean score of literate households' income was estimated 3.49 with SD 1.82 and average score of illiterate households' income was estimated 2.88 with SD 1.71. The result shows that value of  $p = .001 < .05$  with  $t = 3.39$  which indicates that there is significant difference

in the income of literate and illiterate households' income. Literate households had low CV percentage (52%) than illiterate households CV percentage (59%) which indicates income of literate households found increased than illiterate households. The Cohen's D effect size was estimated 0.510 which means there is medium effect size between the two groups.

**Table 5****H<sub>04</sub>: There is no significant difference among households' Income across Age**

Age Group (in years)	Mean	SD	df	F	Sig.	Inequality CV
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20-30	2.10	1.79				85%
31-40	3.18	1.83				57%
41-50	3.23	1.87	399	4.24	.002	56%
51-60	3.33	1.74				52%
61-70	2.40	1.72				71%

Note:  $CV = \frac{SD}{Mean} \times 100$

Table 5 shows the income gap among the households across their age. The result indicates that Mean score of age group 20-30 was estimated 2.10 with SD 1.79, age group 31-40 was estimated 3.18 with SD 1.83, age group 41-50 was estimated 3.23 with SD 1.87, age group 51-60 was estimated 3.33 with SD 1.74 and age

group 61-70 was estimated 2.40 with SD 1.72. The value of  $F = 4.24$  with  $p = .002 < .05$  which indicates that is significant difference in the household income across different age. Percentage of CV shows the households' income inequality across their age. Lowest percentage shows increase in income.

**Table 6**

**H<sub>05</sub>: There is no significant difference among households' Income across Education Level**

HH Education Level	Mean	SD	df	F	Sig.	Inequality CV
Primary	2.08	1.50				72%
Middle	2.21	1.26				57%
Matriculation	2.29	1.46	213	7.35	.000	63%
Intermediate	3.23	1.54				47%
Graduate and Above	3.54	1.64				46%
Religious Education	2.64	1.54				58%

Note:  $CV = \frac{SD}{Mean} \times 100$

Table 6 shows the income gap among the households across their education level. The result indicates that mean score of primary level of education of households was estimated with SD 2.08 with 1.50, mean score of middle level of education of households was estimated 2.21 with SD 1.26, mean score of matriculation education level of households was estimated 2.29 with SD 1.46, mean score of intermediate education level of households was estimated 3.23 with SD 1.54,

mean score of graduation and above level of education of households was estimated 3.54 with SD 1.64 and mean score of religious education of household was estimated 2.64 with SD 1.54. The value of  $F = 7.35$  with  $p = .000 < .05$  which indicates that there is significant difference in the household income across their education level. . Percentage of CV shows the households' income inequality across their education level. Lowest percentage shows increase in income.

**Table7 H<sub>06</sub>: There is no significant difference among households' Income across Occupation**

Occupation	Mean	SD	df	F	Sig.	Inequality CV
Farming	3.04	1.72				56%
Service (Public or Private sector)	2.95	1.57				75%

Daily wages	2.07	1.90	399	8.24	.000	91%
Business	3.47	1.96				56
Oversees Employment	4.21	1.61				38%
Other	3.07	1.49				48

Note:  $CV = \frac{SD}{Mean} \times 100$

Table 7 shows the income gap among the households across their occupation. The result indicates that mean score of households related to farming occupation was estimated with SD 3.04 with 172, mean score of households working in Government or Public organizations was estimated 2.95 with SD with 1.57, mean score of households earning their income through daily wages was estimated 2.07 with SD with 2.02, mean score of households related to business sector was estimated 3.47 with SD with 1.96, mean score of households with oversees income was estimated 4.21 with SD with 1.61 and mean score of households related to other occupations was estimated 3.07 with SD with 1.49. The value of  $F = 8.24$  with  $p = .000 < .05$  which indicates that there is significant difference in the household income across their occupation. Percentage of CV shows the households' income inequality across occupation. Lowest percentage shows increase in income.

## Discussion

Income Inequality is one of the most important issues which significantly impact on the economic growth. The income inequality becomes extremely high in Pakistan which causes social dissatisfaction and threat to social and political disturbance. Evidence from empirical studies depicted that positive relationship existed between income inequality and poverty. The result of the study indicates that significant difference in male and female households' income. The result of the current study is in line with study conducted by Saheed et al. (2021). They found that share male income is more than female income. In addition, they found that the

earning share of female is increased due to the more opportunities in recent year. The result of the study depicts that the difference in income found significant in perspective of literacy. Parallel results were reported by Saheed et al. (2021) and Kiani et al. (2019). They reported that literacy plays a crucial role in household income inequalities. Literate household had high wages as compared to illiterate household. The result of the study shows that the significant difference was found in the households' income across their educational level. Same result was reported by Israr (2010) and Saheed et al. (2021). They reported that coefficient of education level of households found positive and highly significant to income. The found that high qualified.

## Conclusion

Thus, the study concluded that gender play a role in the income inequality. Female had fewer opportunities as compared to male in the sample districts. The study also found that significant difference in male and female households' income. Only few sectors where female have opportunities to earn wages like education and health. The study also concluded that literate households had earned more income than illiterate in the selected districts. Therefore, literacy is one of the key issues in selected districts which cause income inequality among the households. High qualified households earn more wages as compared to low qualified households. The Coefficient of Variation (CV) score shows that the income of low qualified person found less as compared to the income of high qualified person. The reason behind those low qualified households has limited

opportunities and less skill than high qualified households.

### **Causes of income inequality**

The study explored that male earned more wages as compared to female households. The reason behind that female has fewer opportunities as compared to male households. Landholding, foreign remittance and part time business is one of the key sources of underlie income inequality in the selected districts of Khyber Pakhtunkhwa, Pakistan. Literacy also plays a key role in the income disparity. There is disparity in income among the illiterate and literate households. There is devastating consequence for low income countries like Pakistan. Due to income inequality, the per capita income of Pakistan is \$1,629. Poor families bear the cast of health, food, education and other basic needs

### **Recommendations**

The result of the study shows that there is income disparity between male and female households. Therefore, it is recommended that government may produce opportunities in government departments other than education and health to decrease the income disparity between male and female. Moreover, Government may provide SMEs loan for women entrepreneurs with minimum markup. The study recommended that loan program for domestic women to encourage for small business for beauty products, decoration and design, cookery and meal delivery service. The study depicts that education level has play a vital role in income inequality. Thereby, the study recommended that education level may be improved in order to reduce the income disparity between educated and un-educated households. Unfortunately, education faculties are different in rural and urban areas in selected districts. Therefore, adequate faculties may be provided to both regions and for all citizens apart from gender and locality.

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