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Measuring Horizontal Inequality in Income: An Intersectionality Perspective on Ethnicity and Education in Pakistan

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Abstract

Pakistan with federation of four provincial administrative boundaries, it is heterogeneous based on linguistic-ethnicity and class. Income shared by bottom 20% is less than one tenth to top 20%. This situation is severe under ethnic—class intersectionality. Researchers shed light on vertical inequality but, gave less importance to group inequalities and their potential interaction. This study invested effort to measure horizontal inequality in socio-economic wellbeing and tested intersectionality between ethnicity and class by utilizing nationally representative household level data of Pakistan Social and Living Standards Measurement Survey (PSLM-2015). Two proxies used for measuring the income level: (a) total amount received by all household members from all possible earning sources of the household, (b) weighted asset index. Mean years of schooling is used for measuring education level to test intersectionality with ethnicity. Empirical findings contain detailed description of wellbeing based on ethnicity and social class, further, for instance, ethnic inequality is measured using group Gini index. Contribution of socio-economic factors in horizontal inequality is estimated using two step, regression-based decomposition analysis. Group Gini estimates reveal that ethnic inequality in asset index is higher than income estimates. Results using interaction terms show that for every unit increase in schooling years, there are disproportionate gains in economic status among ethnic groups. Contribution in economic inequality is shared by ethnicity, employment status, education, housing amenities and demography. Improvement required in level of education and housing amenities for Balochi, Sindhi, and Siraiki, as these communities are found to have less productivity gains with reference to other communities.

Key Words: Ethnicity, Group Gini, Horizontal Inequality, Income, Pakistan, PSLM

Introduction

Improving the quality of life and enhancing human well-being are the most studied topics in development economics and social divisions can have major impacts on quality of life (Banerjee et al. 2005). High and persistent inequalities among groups leads toward reduction in human well-being and lead towards underdevelopment, violent conflict, and poor public goods provision (Alesina et. al. 2016). Recent studies highlighted the importance of horizontal inequalities for developing important policy making for reducing inequalities. One of the famous books of Piketty (2014), Capital in the Twenty-First Century also highlighted the issue of inequality from the viewpoint of income and wealth concentration and discussed large range of concerns on inequality between and within groups. In addition, international organizations address increasing inequality within countries and their consequences. Various social aspects, disproportionate gains from economic growth, and inadequate access to opportunities are generally matter for disparities among groups (World Bank, 2013).

Inequality is not new in the development economics literature. Globally the debate and empirical work on inequality is becoming rich part for policy makers and academia. Recently several studies have focused on the issue of inequality by specifying the concept into multiple dimensions by differentiating between vertical inequalities; inequality among individuals and Horizontal inequality; inequality between groups with common identity (Stewart, 2013). Horizontal inequalities (HIs) are inequalities between groups of people who share a common identity People can be categorized into groups in many ways: by ethnicity, religion, race, region, gender, or age group, for example, with frequent overlaps in group membership. Significant categories are those which appear to be important to people; both inside and outside the group (Stewart, 2016).

Many studies pay attention to internationality on certain aspects. Kabeer (2014) argued that social exclusion is not based on a single side of the horizontal inequality and claimed that intersecting groups group inequalities are more important, which can define as intersectionality. Similarly, Andersen and Collins (2012) argued that ethnicity, race, class, and gender are intersecting categories of experience that affect all aspects of human life including housing. They simultaneously structure the experiences of all people in society. At any moment, ethnicity, race, class, geography, and gender may feel more salient or meaningful in each person's life, but they are overlapping and cumulative in their effects. Many empirical studies have shed light on group inequality, intersecting ethnicity, race, social class, and gender (Lopez et al., 2018; Sulley, 2018). However, there are only a few empirical studies found based on the intersection between ethnicity, income class, education class and geography.

Among other developing countries Pakistan is frequently used as case study for researchers to measure inequalities in multidimensional indicators and their empirical findings suggested that there are large vertical inequalities exist in Pakistan which in return affecting human wellbeing at large (Naseer and Ahmad, 2016 and Shaheen et al., 2016). Existing literature determines that the phenomena has emerged that vertical inequality which harm the individual wellbeing is outcome of horizontal inequalities. Theoretically few studies have identified that group differences play critical role in increasing vertical inequality and lead to underdevelopment, poverty, unemployment, political unrest, violent conflicts, and regional conflicts in Pakistan (Malik, 2009).The different ethnic groups in Pakistan do not have an identical class composition. Nor do they have an equal, or even proportional, representation in the higher echelons of military and bureaucracy. Therefore, the various elements of Pakistan's ruling class have a disproportionate representation of the various ethnic groups in society. This situation represents a case, not of cross- cutting cleavages, but of overlapping of class and ethnicity to a large extent.

Purpose of the current study is to empirically measure ethnic inequalities in income, and determinants of these inequalities with special reference to Pakistan. The study further tested intersectionality between ethnicity and education level. There are issues in developing correct estimates for inequalities on micro data sets and literature also highlighted the methodological issues which may arise in measuring the true numbers of inequality among groups. Works of Stewart (2000), Stewart (2008), Stewart et al. (2010) have provided solid platform for the researchers to measure the said aspect of group inequalities. Some decent measures have been evolved and

existing indexes are modified for the reliable measurability of HIs, such as, group Gini coefficient, group Theil index and group Coefficient of Variation (COV).

After introduction, the study is composed into four section. Section 2 provides overview of existing literature. Section 3 is about research methodology, which provides understanding about the methods for measuring horizontal inequalities, variables description, and data sources. Section 4 is about findings of the study which covers descriptive analysis of horizontal inequalities and regression-based decomposition for determinants of horizontal inequalities. Section 5 is about concluding remarks and policy suggestions.

Literature Review

Some traditional literature has estimated inequalities of vertical nature but measuring horizontal inequalities are neglected by the researchers. In recent years' horizontal inequalities are taking vital place in empirical and theoretical literature in global perspective; Canelas and Gisselquist (2017) estimated the horizontal inequalities for wages among different ethnic groups in Latin America, Stewart (2016) investigated the implications of horizontal inequalities on labor migrations and by measuring inequalities among group global corporate. Langer and Stewart (2013) defined and specified dimensions of horizontal inequalities and determined impact of HIs among ethnic and religious groups on civil conflicts in global perspective. Lindquist (2012) measured educational horizontal inequality among gender by using data over 46 countries ranging from developing to developed countries. Tesfay (2012) measured horizontal inequalities in children education in Ethiopia. D'Uva et al. (2007) measured horizontal inequality in health care services access to different population growth in Europe. Works of Stewart (2008), Jayaraj and Subramanian (2006), Ostby(2003, 2008) are also in line with measurement of horizontal inequalities at with global perspective. In case of South Asia Vanneman and Dubey (2010) measured vertical and horizontal inequality in India and claimed that vertical inequality is the outcome of existence of horizontal inequalities among ethnic and religious groups in India. Chaudhury (2014) measured horizontal inequalities for India, economic, social, and political. In case of Pakistan the literature on vertical inequalities is very rich, Naseer and Ahmad (2016), Idrees and Ahmad (2010), Amir and Bilal, Anwar (2009) and Shaheen et al. (2016) have measured the vertical inequality in Pakistan, ranging from, income, education, health and resources. Khalid et al (2016), Burki et al. (2015) and Malik (2009) provided a debate on horizontal inequalities in Pakistan, however, no study has comprehensively measured HIs with special reference to Pakistan. Significance of the study based mainly on empirical side of generating data on multidimensional measures of inequality and special focus is given to horizontal inequalities in economic and social perspectives. The current study initiates research field in Pakistan by empirically investigating the measurement and determinants of HIs in Pakistan. The study provides a comprehensive base for all theoretical and technical aspects for measurement issues and will provide suitable solutions for measurement of HIs. The study helps for developing proper policy implications to reduce HIs in Pakistan and beneficial for future research to explore more depth analysis on group inequalities in Pakistan.

Material and Methods

Measurement of Horizontal Inequalities

To measure income inequality among ethnicity several studies provided arguments for suitable measures. Works of Stewart (2003), Stewart (2008) and Stewart and Langer (2016) provide comprehensive insight for measuring group inequalities; however, the most frequently used are the Group GINI, Group Theil, and Group Coefficient of variations. We have estimated the following indices and compared the results.

$$GCOV = \frac{1}{\bar{y}}\left(\sum_{r}^{R} P_r(y_r - \bar{y})^2\right)^{\frac{1}{2}} \ldots\ldots\ldots Eq.1$$

$$GGINI = \frac{1}{2\bar{y}}\sum_{r}^{R}\sum_{s}^{S} P_r P_s |y_r - y_s| \ldots\ldots\ldots\ldots Eq.2$$

$$GTHEIL = \sum_{r}^{R} P_r \frac{y_r}{\bar{y}} log\left(\frac{y_r}{\bar{y}}\right) \ldots\ldots\ldots\ldots Eq.3$$

Where $\bar{y}$ the sample is mean, y_i is the income of individual i and n is the sample size. Where y_r the income of r group and P_r is the share of population in r group. $\bar{y}$ is the mean income. Since, Group Gini compares each group with every other group in distribution, so, P_s is the share of population in corresponding group and y_s is the value of index for respective group.

The first index is the Group-weighted Coefficient of Variation (GCOV) which compares the mean of each group with the national average. GCOV is weighted by the population size of each group, so that changes in the position of large groups get more weight than those of smaller groups.

The second measure is the Group-weighted Gini Coefficient (GGINI) which compares every group with every other group. It is based on the size of the differences between group averages of a variable under consideration and the group's relative population size (its share of population).

The third measure is Group-weighted Theil (GTheil) which compares each group with the national mean. The GTheil captures the population-weighted ratios of the group mean to the national average for the variables under consideration, summing them up by dimension of inequality (UNICEF, 2015).

Each index varies from 0 to; 1, for example, for horizontal inequality in mean years of schooling, 0 index value describes that every group of population under consideration has same level of mean years of schooling and 1 index value demonstrate that there are extremely high differences between groups in attaining education stock.

Determinants of Inequalities—Regression-based Decomposition

This study uses regression-based decomposition to estimate determinants of income inequality, as produced by Fields (2003) and used by Naschold (2009). The analysis followed by two steps: First multivariate regression model is incorporated to fid determinants of income factors,

$$y = \alpha + X\beta + D\delta + \varepsilon \ldots\ldots Eq.4$$

Where y is the N-vector of the household income, education, or health, α is the intercept, X is the NxK matrix of k household characteristics. We combine subgroup and source inequality decomposition in the same analysis. Since we are interested in ethnicity so,subgroups added in Equation (4) by including subgroup-specific dummy variables, and ε is the normally distributed error term ε~N(0, σ_ε^2).The only restriction is that subgroups must be exogenous (Heltberg, 2003).

The second step is to use the estimates from the regressions to construct factor inequality weights for each variable in the regression by exploiting the analogy to Shorrocks' (1984) inequality decomposition by sources (Fields, 2003). Validation of the estimated models is tested with standard diagnostic criteria. Selection of appropriate model is based upon significance of F- statistics, significance of the regressors, adjusted R square and R square. Variance inflation factor (VIF) is estimated to check multicollinearity between regressors, which confirms no significant multicollinearity exists among regressors. Heteroscedasticity tested with Breusch-Pagan/Cook-Weisberg test for heteroskedasticity and it rejects the null hypothesis of constant variance; in this regard, we estimate robust standard errors to ensure the validity of the findings.

Variables

Since we are concerned with economic perspective of inequality, first, we measure income of the household using summation of income from employment, business, and remittances, as primary, secondary, and foreign source income, respectively. The income is computed at yearly household level in Pakistan rupee. Second, an asset-based approach to measuring household economic position is one alternative to income and consumption expenditure (Howe et al., 2008).This approach has arisen from demographic studies such as the, demographic health survey (DHS), which although lacking data on income or consumption expenditure, collect information on ownership of a range of durable assets (e.g. air cooler, car, refrigerator, television and others). Although data on income is available in Pakistan Social and Living Standard Measurement Survey (PSLM), but many studies have questioned the reliability of the data on income of the household at comparable quality (Jamal, 2011). This study has followed the existing literature and estimated weighted asset index using Principal Component analysis. The index ranges from 0-1; 0 for no durable asset in possession by the household and 1 for perfect availability of assets in underlying household.

For measuring impact of social perspective on income inequality we utilized two indicators; we take mean of completed years of schooling at household level for the age group 25 and above. While using this age group lead 1025 households

excluded from the analysis because of all members below this age group. Same indicator has been taken by many researchers developing inference on Horizontal inequalities in education among ethnicity, geography, economic class add social class (Canelas & Gisselquist, 2019).

We followed the individual production function and human capital model to select explanatory variables for microeconomic determinants of housing inequality. Housing capital primarily depends on economic status. We have considered members employed and weighted asset index for capturing the economic situation. Education is considered in both models to provide insight on contribution of education in contributing housing inequality. We have considered following household's demographic characteristics in the models: household's head age, household's head gender and household size. Following literature, we have also taken the square of the household's head age and square of the household size to consider the economies of scale, but it resulted in multicollinearity, so we dropped both. To check the relationship between housing indicators we included facility index and room per capita in their opposite models.

The Data

The study utilized the national representative micro data set of Pakistan Social and Living Standards Measurement Survey PSLM (2014-15). PSLM is largest survey conducted by Pakistan Bureau of Statistics from78,635 households and provide large range of relevant indicators which are in line to Sustainable Development Goals. It provides comprehensive sections in measuring income, education level, health status and living environment of the people. The data set covers 13965 urban and 64670 rural households covering 1210 urban and 4116 rural primary units. Validity of the data is justified in many recent empirical studies which incorporated this data in measuring socio-economic status at household level.

Results and Discussion

Empirical findings of the study are composed in two sets; first, descriptive analysis of horizontal inequality in source variables according to ethnicity and class are decomposed in Table 1, further, horizontal inequality using Group Gini is framed in Figure 1. Second, determinants of inequalities using two stage regression-based decomposition are presented and discussion is made on overall findings of the study.

Horizontal Inequalities in Economic Factors

Descriptive decomposition of economic factors based on social status is providing clear picture of group in equalities in income, asset index, education, and health provision. Analysis of variances determines the status of socio-economic significantly varies among ethnic groups, income quantile, education level, region, and gender. Findings reveal that, Punjabi community enjoying better economic and health status by having, highest level of per capita income (Pak Rupee, 55653.66) asset index (0.41/1) and health index (0.56/1). Worst case is for Baluchi community with lower per capita income (Pak rupee 35686.46), asset index (0.26/1). In case of income quantile bottom 20% is having almost ¼ of average per capita income. Similarly, in asset index, lower quantile is far lower than the average level, however, top 20% is

significantly higher than the average level in all factors. Head education level pay significant contribution in inequality, household heads with no schooling have three times less per capita income than households having heads with master level education. The income level increases with increase in education level and significance of difference is confirmed by ANOVA. Similarly, asset index for households varies positively with education level from lower to high. For detailed description of the decomposition

Table 1
Descriptive decomposition of ethnic and class-based inequality in Pakistan, 2015

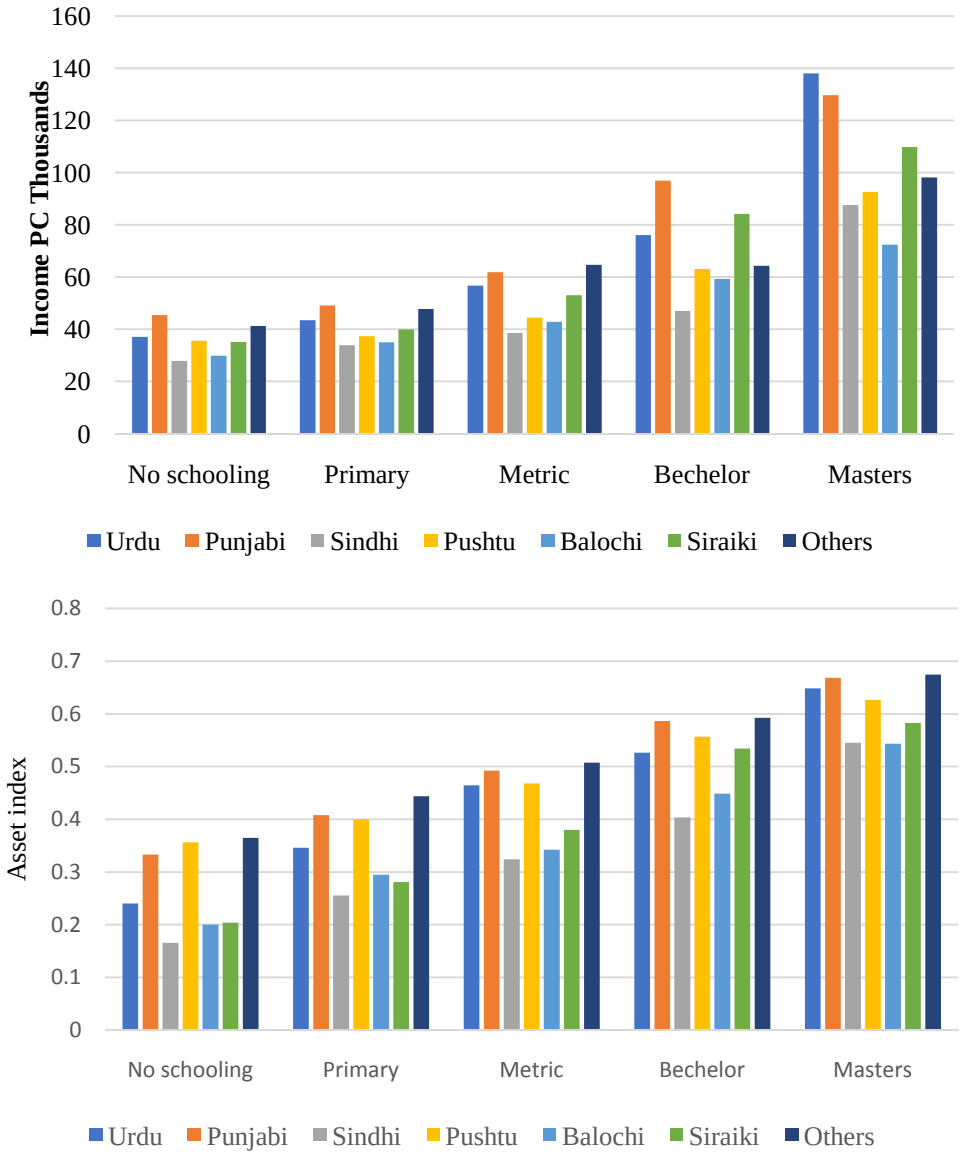
Social status		HH%/total	PC income	Asset index
Aggregate		(100)	45578.61	0.346
Ethnicity	Urdu	23.08	54184.46	0.369
	Punjabi	25.95	55653.77	0.415
	Sindhi	21.66	36262.51	0.251
	Pushtu	13.18	42160.28	0.409
	Balochi	1.87	35686.46	0.263
	Siraiki	13.41	42444.91	0.268
	Others	0.84	52657.9	0.443
	ANOVA F(value)		177.34***	1286.21***
Income Quintiles	Quintile 1 (bottom 20%)	20.06	12731.92	0.215
	Quintile 2	19.95	23043.6	0.267
	Quintile 3	20.02	32900.82	0.328
	Quintile 4	20.13	48124.91	0.397
	Quintile5 (top 20%)	19.85	119606.8	0.523
	ANOVA F(value)		8258.13***	5276.59***
HH's Head Education	No Schooling	49.74	36300.91	0.257
	Primary	16.28	41608.13	0.337
	Metric	23.52	53642.56	0.442
	Graduate	4.99	70527.94	0.506
	Masters	5.48	113219.3	0.614
	ANOVA F(value)		1479.73***	5175.07***
Region	Rural	82.24	43635.73	0.306
	Urban	17.76	63508.64	0.532
	ANOVA F(value)		945.36***	12603.96***
HH head Gender	Female	8.06	50870.86	0.402
	Male	91.94	46840.14	0.341
	ANOVA F(value)		19.5***	410.17***

Note: The decomposition is carried out at country level with full sample data, and analysis of variance test is applied for testing group differences. ANOVA for social categories signifies the group differences.
Data source: PSLM, 2015.

Intersectionality between ethnicity and education is important to be described here. The potential of each ethnic group has different gains from education. Figure 1 presents intersectionality which reveals that at same level of income level and asset

index is not equal for communities. 4.2 reveal that in case of ethnic-asset intersectionality ethnic groups have unequal outcomes for education. Deprived communities in every social class are Sindhi, Baluchi and Siraiki.

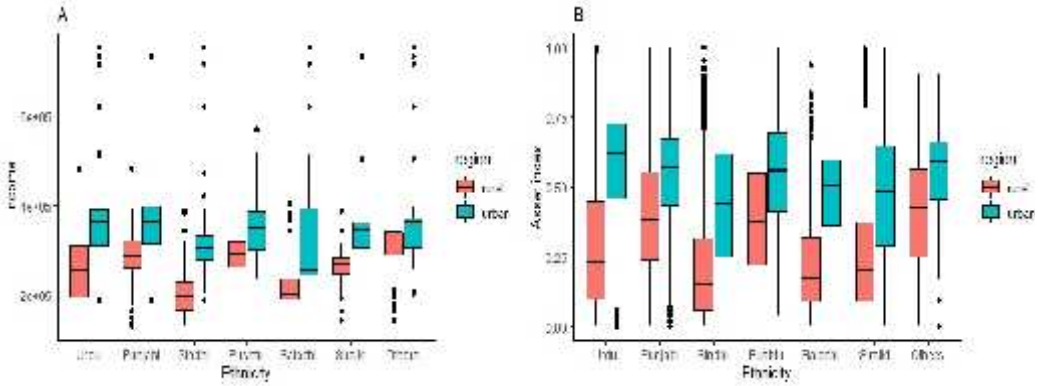
Figure 1Ethnic-education intersectionality in income and asset index in Pakistan, 2015



Note: Bar chart indicates that ethnic groups at same category of education have unequal potential to gain economic status. Baluchi, Sindhi and Siraiki have lower educational gains with compare to other communities. Inequality based on ethnicity can be seen at every level in income as well as in asset index Data source: PSLM, 2015.

Since, in Pakistan ethnic composition is diverse based on regional location which plays important role in defining their socio-economic status. Inequality among ethnic communities in rural Pakistan is relatively higher than in urban Pakistan. Moreover, urban-rural gap among similar communities is also visibly high in income and asset index Figure 3 presents the region wise economic status of ethnic groups in Pakistan.

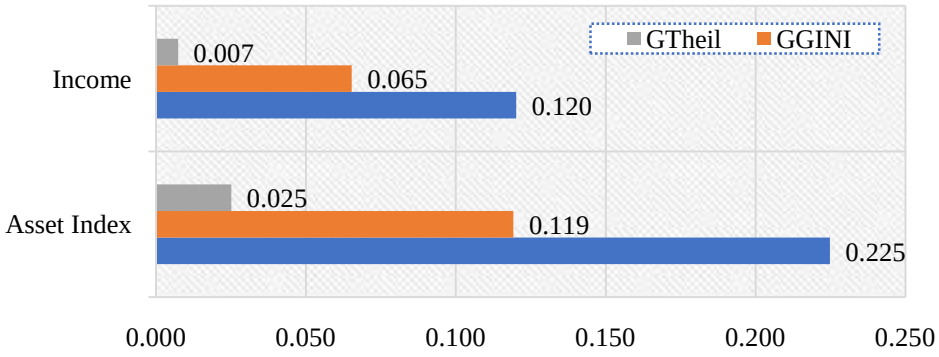
Figure 2 Ethnic-region wise socio-economic status in Pakistan, 2015



Note: Urban-rural inequality within ethnicity is highest in asset indexthan income level. However, Sindhi and Balochi rural are found vulnerable with compare to other rural communities. In case of urban areas, similarly, Sindhi, and Baluchi are observed relatively behind in economic factors. Data source: PSLM. 2015.

The measurement of horizontal inequality in economic factors is followed by standard group measures: group Gini, group Theil and group COV. Findings of ethnic inequalities reveal that horizontal inequality in asset index (group Gini, 0.119), and income (group Gini, 0.065). the trend in other measures, is in the same way to GGini. Results for ethnic inequality is presented in figure 3.

Figure3 Ethnic inequality in income and asset index in Pakistan, 2015



Note: three measures of horizontal inequality reveal that there is high ethnic inequality in asset index. There is positive association can be seen from bar chart between group Gini, group Theil and group COV.

Data Source: PSLM, 2015

Determinants of income inequality—regression-based decomposition

In this section the study we incorporate multivariate regression-based decomposition analysis to dig deep ethnic differences by controlling relevant social, economic, demographic, and housing indicators. For capturing intersectionality between ethnicityand education we incorporate interaction terms in each model for income and asset index. See results in Table 2

In the first stage of income model, all socio-economic and demographic variables have significant and positive contribution in income level. The ability to earn primary depends on level of employment and level of skill (education) which in both models is significant with magnitude, on average one unit increase in members employed per household leads to expected increase of 0.142 units in log income, and one unit increase in mean of schooling years leads to expected increase of 0.073 units in log income. Highest magnitude is in case of facility index (0-1), on average one unit increase in facility index score will leads to an expected increase of 0.439 units in log income. Community variables indicates that, with compare to Urdu Siraiki, Pushtu, and Sindhi have lower income level. In case of interaction term (model, Income-1) with mean years of schooling and ethnicity, the findings reveal that for every one unit increase in mean of schooling years Punjabi and Pushtu communities have higher ability to earn more income than Urdu and all other communities. Siraiki and Sindhi has lower productivity gains for each one unit increase on education level for earning income with compare to Urdu.

In case of asset index model in stage one, education, household size, region (urban) and housing amenities has positive and significant impact. However, male headed households are expected to have lower level in asset index. In case of ethnicity, by controlling socio-economic and demographic factors, Sindhi and Siraiki communities expect to have lower level in asset index with compare to Urdu. With inclusion of interaction term in model AI-2 reveal that with each one unit increase in mean of schooling years, Punjabi, Pushtu and Balochi are expected to gain higher level in asset index than Urdu. Similarly, Sindhi and Siraiki communities have lower gains on education with compare to Urdu.

The selection of the models is followed by robust criteria, test for multicollinearity, variance inflation factor (VIF) confirmed nonexistence of multicollinearity in all the models including interaction terms. Overall model's explained variation is 28% for log income and for asset index model it is 60%.

Table 2 Determinants of income and asset index in Pakistan, 2015.
Stage-I results from regression-based decomposition
(DV: log of yearly income of the household and asset index)

Variables	Income (log)		Asset Index	
	Income-I	Income-II	AI-I	AI-II
Members employed	0.142***	0.142***	-0.006***	-0.006***
Mean years of schooling	0.073***	0.073***	0.023***	0.024***
HH size	0.081***	0.081***	0.014***	0.014***
HH's head age	0.003***	0.003***	0.001***	0.001***
HH's head gender (male)	0.134***	0.137***	-0.031***	-0.030***

House ownership (owner)	0.134***	0.133***	0.030***	0.030***
Room per capita	0.359***	0.362***	0.117***	0.117***
Facility index	0.439***	0.439***	0.367***	0.366***
Region (urban)	0.006	0.005	0.069***	0.068***
Ethnicity (reference = Urdu)				
Punjabi	0.003	0.023*	0.040***	0.050***
Sindhi	-0.224***	-0.259***	-0.076***	-0.076***
Pushtu	0.031***	0.032**	0.055***	0.065***
Balochi	0.036	0.022	0.010**	0.026***
Siraiki	-0.110***	-0.099***	-0.024***	-0.024***
Others	0.064*	0.124***	0.047***	0.076***
Ethnicity × Mean years of schooling (MYS)				
Punjabi × MYS		-0.006**		-0.003***
Sindhi × MYS		0.012***		0
Pushtu × MYS		-0.001		-0.003***
Balochi × MYS		0.006		-0.006***
Siraiki × MYS		-0.006*		0.001*
Others × MYS		-0.016*		-0.008***
Constant	10.338***	10.337***	-0.166***	-0.171***
Observations	75,962	75,962	75,962	75,962
R-squared	0.274	0.275	0.597	0.598

2,673 households missed due to mean years of schooling; all the household members are aged less than 25.

*** p<0.01, ** p<0.05, * p<0.1

Table 3 presents the results of the second stage of regression-based decomposition analysis, the first column, factor k, presents contribution to income inequality indices and second column presents the percentage share in inequality, calculated using R-square. Findings reveal that by controlling the share of ethnicity in income inequality (4%) members employed have 19% contribution in inequality and mean of schooling years contribute 32% and household size has 30% share in income inequality. in case of asset index major share is contributed by housing amenities, facility index (37%) and education (35%). Ethnicity alone has 9% contribution in asset index inequality.

Table-3 Determinants of level of inequality in income and asset index in Pakistan, 2015.
(Stage-II results from regression-based decomposition)

	Contribution of factor levels of inequality			
	Income (log)		Asset index	
	Factor inequality	Percentage	Factor inequality	Percentage

Variables	weight ($S_{k,1}$)	contribution ($p_{k,1}$)(%)	weight ($S_{k,1}$)	contribution ($p_{k,1}$)(%)
Members employed	5.137	18.722	0.391	0.656
Mean years of schooling	8.604	31.355	20.778	34.802
HH size	8.113	29.566	1.975	3.309
HH's head age	0.805	2.934	0.733	1.228
HH's head gender (male)	0.366	1.335	0.260	0.435
House ownership (owner)	0.235	0.856	0.019	0.031
Room per capita	0.770	2.805	3.990	6.683
Facility index	2.256	8.221	21.909	36.696
Region (urban)	0.027	0.099	4.209	7.050
Ethnicity (Urdu omitted)		(4.107)		(9.111)
Punjabi	0.007	0.024	1.323	2.215
Sindhi	0.952	3.471	2.790	4.673
Pushtu	0.038	0.138	0.834	1.397
Balochi	-0.004	-0.015	-0.031	-0.051
Siraiki	0.122	0.446	0.452	0.758
Others	0.012	0.042	0.071	0.120
Residual	72.560		40.296	
Total	100	100	100	100

Discussion

Findings of the study indicates that overall, ethnic inequality exist in Pakistan in economic indicators. Group inequality in asset index is higher than income inequality. Ethnic inequality among rural regions is more severe than in urban areas, however, in both urban and rural regions, Sindhi, Siraiki and Balochi are observed deprived in economic factors. However, Urdu and Punjabi speaking communities are enjoying higher living standards in used indicator. In regression analysis, the picture is more clear, by controlling, economic, social, demographic and housing factors in income and asset index both Sindhi and Siraiki are highly deprived. Other factors which were included in analysis are also provides important insight. Head education is found to be important determinant along with demographic, and housing indicators. More sophisticated houses lead to enhancement of income level.

Overall findings of the study are according to expectations and in line with existing evidence which discussed the issue theoretical and empirical with special reference to Pakistan and other similar countries. Ethnic class diversification debate made by Ahmad (1996) and Rahman (1997), is still valid and proved in this study that language based ethnic inequality is important issue in Pakistan. Our findings are compatible to the study by Majid and Memon (2019), who investigated ethnic inequalities in Pakistan and found similar results. Other studies such as Waleed et al. (2016) and Burki et al. (2015) also in line with current study on vertical inequalities and found similarities in their analysis. The results of the study highlight strong validity in terms of rigorous theoretical and empirical background in literature and can

be suit fit for designing appropriate policy intervention for reducing group inequalities in Pakistan.

Conclusion

The study empirically measured horizontal inequality in economic perspectives among ethnic groups in Pakistan. Micro data set of Pakistan Social and Living Standards Measurement Survey (PSLM) 2014-15 is utilized which contains information about economic, social, and demographic indicators at household level. Pakistan is diverse country in terms of ethnicity; four administrative boundaries are occupied by language based ethnic majorities differently in each province. Qualitative literature on ethnic inequality is rich in case of Pakistan, deprivation in economic, social, and political status among some ethnic groups is frequently discussed by academia. Many political movements based on their native language are also seen active since 1947 to protect their socio-economic and political rights. However, quantitative literature is scarce on this issue and this study hold significant place in literature to justify neglected fact of horizontal inequalities in Pakistan. Empirical sections of the study clearly indicate the severity of ethnic gap in terms of income and asset index. Siraiki, Balochi and Sindhi are found deprived with compare to Urdu, Punjabi and Pushtu speaking communities. Qualitative analyses are supported with theoretical bases for measuring horizontal inequality and multivariate regression analysis for controlling relevant factors to dig deep facts pf group inequality. On the basis of findings, the study concludes that to achieve sustainable development goals leading toward reducing inequality within country and to achieve inclusive growth, there is need to give importance to horizontal nature of inequalities which are previously neglected in quantitative research. Marginalized groups in economic status not only lead themselves deprived but also lead to underdevelopment of the nation.

Although, this study provides reasonable base of quantitative understanding of the subject discussed in this study, but still there are a number of observation restricted the scope of the study; quality of available information of income, stability of the empirical analysis with special case of Pakistan, where ethnic disparities are more linked with political infrastructure and may not be tested quantitatively within the scope of current study. Further, research can be conducted with more depth by including regional analysis separately for urban and rural communities and political factors can also be included by enhancing the scope of survey by including political factors.

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