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Intergenerational Mobility in Occupational Status

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Abstract

Persistence in socio-economic status causes inequalities and misallocation of talent and skills. As a result, both fathers' as well as sons' generations experience backwardness and country experiences inequality, poverty and slow economic growth. We used the occupation as a proxy for socio-economic status and investigated intergenerational occupational mobility in Pakistan. We utilized data set of Pakistan Social and Living Standards Measurements (PSLM-2012-13) for our analysis. Results of transition matrices and multinomial logit show a strong persistence in occupational status. While persistence is stronger in the higher status occupations in urban regions, it is stronger in the lower status occupations in rural regions. Opportunities are not open equally for rich and poor. There are limited chances for the sons whose fathers are in lower status occupations to move to the higher status occupations as compared to those whose fathers are in high status occupations. Moreover, while sons of "Clerks" are more mobile towards higher status occupations in urban regions, they are more mobile towards the lower status occupations in the rural regions. Similarly, more downward mobility is observed for the sons of "Technicians and Associate Professionals" and "Professionals" towards the "Skilled Agricultural and Fishery Workers" in the rural regions. Increase in human capital, experience in the job market and income and wealth of a father are found to be important determinants of occupational status of a son.

Keywords: Intergenerational Mobility, Equality of Opportunity, Occupational Choice

JEL Classification: J24, J62

1. Introduction

Intergenerational mobility relates the socio-economic status of children to the socio-economic status of their parents. If this link is strong then society is deemed to be less mobile. In a less mobile society, opportunities are not equal for rich and poor. It causes under development, deprivation and misallocation of the

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skills and talent. Attraction and desire for education and high status occupations decrease which contribute to poverty, inequality and slow economic growth. On the other hand, a society is more mobile if link between socio-economic status of children and parents is weak. Mobility enhances equality of opportunities and reduces inequalities. It helps in increasing efforts, productivity, innovations and accelerates economic growth.

Due to various forms of discriminations, some specific social groups are excluded from the process of capability formation and earnings opportunities which cause them poorly endowed in terms of human capital and hence reduce the income of their next generation as well. As a result both parent and child generations experience backwardness and low socio-economic status. Moreover, hereditary nature of different social classes also imposes social restrictions on the traditional assignment of jobs which is one of the biggest hurdles to social mobility for the poor. For example son of a poor uneducated fisherman is likely to be poor uneducated fisherman because it is very difficult for him to find employment in other occupations. The interest of such person to get education is also limited because attraction of acquiring education is its value in getting jobs. Therefore, children born in poor families are unlikely to escape their start positions in life and have limited opportunities to climb on the ladder of social status and thus cause inequality to continue in the next generation.

Most widely, economists used income as a measure of socio-economic status. However, income suffers from number of issues related to its measurements, transitory vs. permanent income, life cycle fluctuations and variation of patterns of income from generation to generation. Moreover, as income varies significantly over the life cycle of an individual while children and parents are at different points of their life, therefore it is difficult to find a link between their incomes. Further, measurement error in income, especially in the income of parents, causes bias and inconsistent estimates. Therefore, we use non-monetary measure, occupations, as a proxy for overall socio-economic status of an individual. Occupational status represents the income as well as power status of the individuals. It reveals the required mental and physical efforts and outcome i.e. the income earned. Information on occupations can be easily recalled and cannot be refused easily and is relatively more reliable as compared to income. Occupational status of an individual remains stable for a long period of time and provides enough information of long run standing and is better indicator than a single year income measures.

The rest of the paper is organized as follows. Section 2 discusses past research on occupational mobility and objectives of the study. Section 3 presents theoretical model. Section 4 discusses estimation methodology. Section 5 provides description of the data. Section 6 presents empirical results while section 7 concludes the study.

2. Literature Review

A massive research work on intergenerational is available for both developed and under developed countries. Galton (1886) is the first study of intergenerational mobility that regressed height of children on the height of their parents. Sorokin (1927), a sociologist, formulated 23 mobility tables using data collected between 1900 and 1925. Occupational mobility has been studied in detail by Ginsberg (1929), Glass (1954) and Goldthrope (1980), amongst other, for Britain while Blau and Duncan (1967) and Featherman and Hauser (1978) are the pioneer studies for US. However, ooccupational mobility attracted the attention of many researchers after the notable study of Blau and Duncan (1967) on American occupational structure in which authors explore significant role of family background and education on status attainments. Findings of Behrman et al. (2001) for US and four Latin American countries show that improvement in education accelerates occupational mobility more than the economic growth. Not only education of a child but education of parents also plays its role in choosing high status occupations as found by Sjogren (2000) for Sweden. The study also shows that individuals, especially poor, are more concerned to economic benefits from the occupation and feel hesitation to choose unfamiliar occupations.

Erikson and Goldthorpe (1992) reject the hypothesis that industrialized courtiers exhibit more occupational mobility in a sample of 12 countries by finding Czech, Australia, Japan, US, Poland and Sweden more mobile and Scotland, Netherland, France, Ireland and Germany as the less mobile nations. Upward mobility from the lower status is more likely than the downward mobility from the higher status, as found by Ermisch and Francesconi (2006) for UK, and mobility is higher in the younger children as compared to the older children. Emran and Shilpi (2011) reveal that intergenerational occupational persistence, especially for daughter, is stronger in Nepal. In case of Vietnam, the intergeneration occupational correlation between mother and daughter is found stronger as compared to the correlation between father and son. The correlation in occupation choice between mother and daughter is much stronger and is unlikely to be driven by moderate genetic correlations in Nepal, though the same correlation is entirely driven by genetic correlation in Vietnam. Van Bavel (2011)

in Belgian city - The Antwerp found that increase in number of children dilute resources of the parents and thus chances of downward occupational mobility of the children increase. A study by Motiram and Singh (2012) reveals strong persistence in occupational status in India. They find higher mobility in urban regions as compared to rural regions. In rural regions sons of fathers with high status occupations are more likely to fall in lower status occupations, especially in farmers, while in urban regions the sons of farmers are more mobile towards the higher status occupations.

Mobility is also influenced by macroeconomic variables. For example Ganzeboom et al. (1989) explore the positive role of openness and substantial differences across 35 countries and across time in occupational mobility. Beller and Hout (2006) find that15% of the mobility is due to structural changes in the economy and economic growth in US, that is, more professional jobs and less farms jobs are available to sons than to their fathers. Zijdeman (2008) for Zeeland finds that differences in occupational mobility across the space and time are partly due to industrialization, urbanization and means of communications.

Though there are numerous studies for both developed and underdeveloped countries but no single comprehensive study available for Pakistan on intergenerational mobility. Study by Havinga et al. (1986) is confined to1200 respondents of 10 major industrialized cities only and focus on the mobility in income and wealth across the generation[2]. Cheema and Naseer (2013) focus on only one district (Sargodha) and explore a higher upward mobility in education in propertied than non-propertied and is much higher among *zamindar* (landlords) than *artisan* and *historically depressed quom.* Although Javed and Arif (2014)[3] is a good attempt in this direction but their study suffers from a number of shortcomings. First the data, Pakistan Panel Household Survey (PPHS)-2010, used in their study is not a good representative sample for the whole country. It covers only sixteen districts and ignores all big cities. Second, the sample size in their study is small, particularly, in high level of education and occupation. Third, they use only transition matrices and ignore the importance of other relevant variables in the attainment of occupational status.

[2] They find upward mobility in both income and wealth for individuals as well as for the family.

[3] Show a strong persistence in educational attainments, particularly in older cohort. Similarly, strong persistence is found in low status occupation. However, in the high status occupations, they found downward mobility. Results of income mobility indicate a high persistence at the lowest quintile. Regression results of their study suggest that income mobility in urban regions is larger than the rural regions and the older cohorts are more mobile than the younger cohort.

It is evident from the literature cited above that there is plethora of research work at international level, yet the area has been neglected in Pakistan economic research. This is quite surprising although the problems of social exclusion, income inequality, poverty and low economic growth have been quite substantial in Pakistan. The current study intends to fill this gap and tries to focus on intergenerational mobility in occupational status in Pakistan. Specifically we will explore answers to the questions:

- Are the fathers with low socio-economic status able to help their sons to gain social promotion? Or by contrast, are the fathers with high socio-economic status transmit the same high socio-economic status to the next generation?
- Are the patterns of intergenerational mobility of occupational status same across the regions?

With this background, we will try to determine occupational structure of sons and fathers in Pakistan. The same will be explored in rural and urban regions. After examining occupational structure we will then investigate mobility across the generations. This will help us to explore the regions as well as the social classes in terms of strength (weak or strong) of mobility. Besides, we will also explore the importance of other socio-economic variables in occupational mobility. Specifically the impact of family background in terms of income and wealth, role of experience and human capital on the status attainment of a son will be examined.

3. The Model of Occupational Mobility

We follow the model proposed by Emran and Shilpi (2011) which is a sort of extension to Becker and Thomes (1979, 1986) and Sjogren (2000). Unlike Emran and Shilpi (2011), who use their model to make a choice between farm and non-farm sector, we have nine categories of occupations; (1) Elementary (2) Plant and Machine Operators and Assemblers (3) Craft and Related Trade Workers (4) Skilled Agricultural, Forestry and Fishery Workers (5) Service and Sales Workers (6) Clerical Support Workers (7) Technicians and Associate Professionals (8) Professionals (9) Managers.

It is assumed that an i^{th} individual starts working life with given level of capital (human, physical and financial) endowment[4] (k_i) and the estimate of

[4] The higher is the level of k_i the higher is the probability of getting a better paid job. k_i is influenced by parents through :(1) investment in child education, (2) transfer of financial and physical capital and (3) children can gain valuable skills and experience by observing their parents at work.

ability ($\hat{\delta}_{ij}$) and optimally chooses the occupation O_j where $j = 1, 2,3,\ldots,9$. Conditional distribution of income (Yi) when individual chooses $O_j$occupation is $F(Yi \mid O_j;\ \Omega_i)$ where Ω_i is the information set available to i^{th} individual. The associated probability density function is $P\ (Yi \mid O_j;\ \Omega_i)$. Utility from choosing O_j as occupation is $U_i(O_{ij}, \Omega_i) \equiv \int V_i(Y_i)P(Y_i|O_{ij}, \Omega_i)dY_i$ and utility from choosing O_h as occupation is $U_i(O_{ih}, \Omega_i) \equiv \int V_i(Y_i)P(Y_i|O_{ih}, \Omega_i)dY_i$. An individual chooses O_j as an occupation if $U_i(O_{ij}, \Omega_i)$ - $U_i(O_{ih}, \Omega_i) \geq 0$ for all $j \neq h$ (1)

Children are motivated by the success of parents and follow them in choosing their occupations (Boyd and Richerson 1985). Revelation of information about parental occupation reduces uncertainty; therefore, risk averse children will prefer to choose familiar parental occupation relative to other alternatives (Sjogren, 2000). As a result, conditional distribution of income from occupation O_j when parents are also in O_j , $F(Yi \mid O_j^C;\ O_j^P; \Omega_i)$, dominants over the conditional distribution of income when neither of the parents is in occupation O_j, $F(Yi \mid O_j^C;\ NO_j^P;\ \Omega_i)$, where NO_j^P means that parental occupation is other than O_j.

Genetically, preferences have gender dimensions where sons (daughters) are more likely to select occupations of their fathers (mothers) as compared to that of their mothers (father). Further, father (mother) is the natural role model for the son (daughter). The father's (mother's) social network is more easily accessible to a son (daughter). This means that conditional distribution of income from $O_j$when father is also in O_j , $F(Yi \mid O_j;\ {O_j}^f\ ;\ \Omega_i)$ dominates the conditional distribution with mother in O_j, $F(Yi \mid O_j;\ {O_j}^m; \Omega_i)$.

For estimation, we assume following stochastic form of the model:

$$O_{ij}^C = \alpha O_{ij}^P + \acute{X}\gamma + \varepsilon_i \qquad (2)$$

where O_{ij}^C is the j^{th} occupation of an i^{th} child, O_{ij}^P is the j^{th} occupation of parent of an i^{th} child, $\acute{X}$ is a vector of explanatory variables and ε_i is the stochastic error term.

Family background variables like income and wealth reduce financial constraints and play important roles in the human capital and productivity enhancement of a child, which in turn influences his/her occupational status. Wealth can be used as collateral to get capital which can be used for establishing high status personal business or for enhancing human capital. High level of

education increases efficiency and productivity of an individual and thus helps to achieve high status occupations. Efficiency and productivity play important roles in the recruitment in this era of "universalism" where most qualified person is selected for the most important position (Blau and Duncan, 1967). Along with level of education, age of a child is included as human capital variable representing work experience (Hauser, 1971). Age may also capture the time varying part of labor market opportunities in different regions of the country and the effect of any cohort (Emran and Shilpi, 2011). Access to j^{th} jobs may depend on the personal networks that often run along ethnic group. Inclusion of regional dummies will control the unobserved location-specific heterogeneity and capture the peer effects and labor market opportunities available in different regions for different occupations.

In the light of above conceptual framework, equation (2) can be written as:

$$O_{ij}^{C} = \beta_0 + \beta_1 O_{ij}^{P} + \beta_2 Y_i^{P} + \beta_3 W_i^{P} + \beta_4 A_i^{C} + \beta_5 Ed_{ij}^{C} + \beta_6 R_R + \beta_7 P_p + \beta_8 P_S + \beta_9 P_B + \epsilon_i \quad (3)$$

Where Y_i^P, W_i^P, Ed_{ij}^C, A_i^C are parental income, parental wealth, j^{th} level of education and age of an i^{th} child respectively. R_R is equal to "1" if a child belongs to rural region and "0" otherwise. Similarly P_p, P_S and P_B are dummies for provinces, Punjab, Sind and Baluchistan respectively. Error term "ϵ_i" captures the effects of all other omitted variables.

4. Methodology

To find intergenerational mobility in occupational status, we use transition matrices and regression analysis. Transition matrix represents positions of the children relative to their parents. It computes the probability of a child being in a particular occupation given the occupation of his parents. However, this method does not analyze the impact of other variables on the objective variable and thus does not show the causal relationship between parental status and the status of their children.

Regression analysis is more rigorous method in which we can analyze the impact of other relevant control variables on the occupational status of children along with the parental occupations. In this method, the coefficient of parental occupation shows intergenerational inertia. A higher value means low mobility and vice versa. As our dependent variable in equations 3 is categorical, therefore, we use multinomial logit model for estimation. In this method of estimation, we have different slope coefficients of the independent variables for each outcome of

dependent variable. This model normalizes one set of coefficients (using it as base model) and interprets all other sets of coefficients relative to this base model. Therefore, we will have J-1sets of coefficients to interpret if there are J outcomes of a dependent variable.

5. Data Source Data Limitations and Construction of Variables

We use data of PSLM 2012-13- a district a level household survey which covers urban and rural regions of all the four provinces of Pakistan, the federal area, AJK, FATA and Northern areas. However, PSLM survey is not specifically designed for the purpose of estimation of occupational mobility; therefore there are some issues and limitations in our data. First, PSLM is household level survey; therefore we can collect information on those children and parents who are living in the same household. Children living outside their parents' houses are excluded from the analysis. Second, women once married leave the home of their parents and live either with husbands in nuclear families or in joint families with their husbands and parents-in-law. They are either wives or daughters-in-law of the head of a household. Therefore we cannot extract information of the parents of these married women. Similarly women who are heads of households, the survey does not report any information on characteristics of their parents. Third, very limited numbers of women are in job market and mostly they are engaged in low status and low paid jobs like agricultural workers and craft industry.

Due to above mentioned issues in data; our analysis is limited to co-resident son-father data only. These issues in data are quite common in the studies of intergenerational mobility. Despite this, PSLM data is more rich and representative of the household structure as compared to other available data. We can draw meaningful and insightful inferences on the intergenerational occupational mobility in Pakistan on the basis of this data set. In the survey questions about occupation were asked from 356949 individuals from 75516 households. However, we extracted information on 25241 co-resident working father-son pairs with age 16 years and above who are not currently enrolled in any educational institution.

Data available from PSLM are not directly useable in our analysis; rather we have to construct the variables. Definitions and constructions of variables are given as under:

5.1. Occupational Status

PSLM uses classification of Pakistan Standard Classification of Occupations (PSCO-1994) for the collection of data on occupation. Under this

classification first all the jobs are classified into 390 unit groups. Then these 390 units are aggregated into 116 minor groups, 28 sub major groups and 10 major groups. Based on four different levels of skill required for different occupations, these 10 major groups are then aggregated into four different skill levels. In PSLM survey, data is available on 28 major groups. We merged these 28 major groups into 9 categories[5] from highest to lowest status occupations as: (1) Managers (2) Professionals (3) Technicians and Associate Professionals (4) Clerical Support Workers (5) Service and Sales Workers (6) Skilled Agricultural, Forestry and Fishery Workers (7) Craft and Related Trades Workers (8) Plant and Machine Operators and Assemblers (9) Elementary Occupations.

Income of a father is the sum of income received from his occupation, by selling the kinds received as wages, pension, remittances and rent form property. Level of Educational is constructed by merging 20 different levels of education[6] into 7 categories as; (1) Never attended school (2) Up to Primary (3) Up to Middle (4) Matriculation (5) Intermediate (6) Graduation (7) Post-Graduation. The Wealth Index is constructed from different variables by using Principal Component Analysis (PCA). It includes possession of twenty consumer durables[7], access to water and electricity, housing characteristics (number of sleeping rooms, quality of floor material, quality of wall material and toilet facility), the source of cooking fuel and the type of phone used for communication. It also included the value of personal agricultural land, animals, chickens and poultry and livestock, non-agriculture land, property or plot, residential building and shop, commercial building. These assets are selected on the basis of their availability in PSLM survey. Age of a son is the reported age in year for variable age of a son. Region, data reports region, rural, urban as well as province, of an individual. We use dummy variable which takes value "1" for rural and "0" otherwise. We also use three dummy variables for Punjab, Sind and Baluchistan. KPK is taken as reference province.

[5] We excluded the 10th category-armed force from our analysis due to (1) smaller number of observations, (2) PSLM survey was not carried out in the armed force area, therefore the available observations may not be true representative of this category and (3) mixed rank individuals in this category but only one code is assigned to armed force in PSLM data which does not distinguish among different rank jobs.

[6] We drop category "other" which comprises mixed level of educations

[7] possession of Iron, fan, sewing machine, chair/table, radio or cassette player, watch, TV, VCR/ VCP/VCD, refrigerator/freezer, air cooler, air conditioner, computer/ laptop, phone or mobile, bicycle, motor cycle, car, tractor/ truck, cooking range, stove and washing machine

6. Results

In this section we discuss our results which comprise on descriptive statistics, transition matrices and regression analysis.

6.1. Descriptive Statistics

To understand occupational structure of son and father generations, we report percentage of fathers and sons in different occupational categories in the following table 1:

Table 1: Percentages of Individuals by Occupational Categories

	Father			Son		
	Overall Pakistan	**Urban**	**Rural**	**Overall Pakistan**	**Urban**	**Rural**
ELT	19.1	20.92	18.25	25.42	20.79	27.57
PMO	5.27	8.34	3.84	5.87	6.94	5.37
CRW	7.77	14.65	4.58	11.29	19.9	7.3
AFW	42.07	8.55	57.63	29.98	4.58	41.76
SSW	6.28	11.04	4.07	9.76	16.46	6.65
CLK	1.52	3.24	0.72	2.11	3.93	1.27
TAP	2.95	5.06	1.97	2.99	4.41	2.33
PRF	1.51	2.45	1.07	1.44	2.5	0.95
MGR	13.54	25.75	7.87	11.14	20.49	6.81

Note: ELT = Elementary Occupations PMO= Plant and Machine Operators and Assemblers CRW= Craft and Related Trades Workers AFW= Skilled Agricultural and Fishery Workers SSW =Service Workers and Shop and Market Sales Workers CLK= Clerk TAP= Technicians and Associate Professionals PRF = Professionals MGR = Managers

Overall picture of the occupations show that in Pakistan as a whole and urban-rural regions separately, individuals are more concentrated in low status occupations. This is true for both, sons as well as fathers. For example in overall Pakistan, proportions of fathers and sons in top four higher status occupations (CLK,TAP, PRF, MGR) are 19.52% and 17.68% respectively while in the four lower status occupations (ELT, PMO, CRW, AFW), the proportions of fathers and sons are 74.21% and 72.56% respectively. Percentages of sons and fathers in high status occupations are greater in urban regions (36.5% and 31.33%) as

compared to the rural regions (11.63% and 11.36%). On the other hand, the percentages of both fathers and sons are higher in the lower status occupations in rural regions. In both urban and rural regions the percentage of fathers in agriculture and related occupation is higher than the percentage of sons. It may be due to (1) decline in share of agriculture in general and particularly in urban regions over time, and (2) because of migration from rural to urban areas. However, the percentage of sons is greater in the lowest status "elementary" occupations.

These results show that percentages of both fathers and sons are higher in lower status occupations. Percentages of fathers are larger than the percentage of sons in higher status occupations, showing a decline in the occupational status of the sons' generation. However it provides only absolute picture of the occupational status of the sons and fathers' generations separately. In order to assess positions of the sons' status relative to their fathers, we present results based on transition matrices.

6.2. Transition Matrix

Transition matrices provide relative occupational status of the sons relative to their fathers. Table 2 presents the summaries of transition matrices.

Table 2: Occupational Mobility

Region	Son – Father		
	Downward Mobility	**Immobility**	**Upward Mobility**
Pakistan overall	26.42	55.40	18.19
Urban	27.37	48.69	24.01
Rural	25.97	58.50	15.52

Results of Table 2 depict a strong persistence in occupational status; that sons are like their fathers. This persistence is strong in rural regions where 58.5% of the sons and fathers fall in the same occupations as compared to 48.69% in the urban regions. Along with persistence results also show that downward mobility is greater than the upward mobility. It means that society is not only stuck to their status but also observe a decrease in the status of sons' generation. Sons of the poor fathers remain poor while those born in the high status families are gaining

the high status. If there is any movement, then it is more towards the lower status as compared to the higher status. Similar findings are reported by Girdwood and Leibbrandt (2009) for South Africa.

Further, to know the probability of occupational status of a son if the occupation of his father is give, we compute conditional probabilities as presented below in Table 3:

Table 3: Conditional Probabilities of Occupations of Sons

Occupation of Father	Total								
	Occupation of Son								
	ELT	PMO	CRW	AFW	SSW	CLK	TAP	PRF	MGR
ELT	62.34*	5.56*	10.91*	7.03*	8.55*	1.06*	1.33*	0.44*	2.78*
PMO	23.55*	27.92*	15.2*	8.05*	11.5*	4.14*	2.78*	0.98*	5.87*
CRW	16.06*	4.08*	54.28*	3.26*	11.67*	1.99*	2.4*	0.92*	5.35*
AFW	17.9*	4.01*	4.33*	62.55*	3.89*	0.96*	1.97*	0.79*	3.6*
SSW	17.74*	7.01*	12.63*	6.31*	45.39*	3.6*	2.78*	1.52*	3.03*
CLK	16.15*	4.95*	13.28*	7.81*	18.75*	12.5*	8.33*	5.99*	12.24*
TAP	16.94*	5.78*	10.89*	9.27*	12.37*	5.91*	23.79*	3.9*	11.16*
PRF	11.81*	3.94*	8.66*	14.44*	11.02*	8.14*	8.66*	18.9*	14.44*
MGR	10.77*	4.33*	6.79*	4.68*	9.72*	3.1*	3.25*	2.31*	55.05*
Urban									
ELT	52.54*	7.41*	18.59*	0.84*	13.15*	1.61*	1.97*	0.6*	3.29*
PMO	21.59*	28.04*	19.79*	1.5*	13.19*	4.65*	2.4*	1.5*	7.35*
CRW	11.35*	4.61*	57.85*	0.94*	13.05*	2.56*	2.82*	1.02*	5.8*
AFW	15.64*	3.95*	10.67*	42.4*	9.36*	2.34*	3.36*	2.19*	10.09*
SSW	16.76*	6.8*	14.95*	0.68*	48.13*	4.87*	2.38*	1.81*	3.62*
CLK	13.51*	4.63*	13.51*	1.16***	18.53*	16.2*	10.42*	7.72*	14.29*
TAP	13.09*	5.19*	13.83*	1.48*	16.05*	7.65*	25.68*	3.46*	13.58*
PRF	7.14*	4.59*	12.24*	2.55**	15.82*	10.2*	10.2*	22.45*	14.8*
MGR	7.28*	2.96*	7.33*	1.02*	10.83*	3.59*	3.69*	2.86*	60.44*
Rural									
ELT	67.56*	4.58*	6.83*	10.33*	6.1*	0.76*	0.99*	0.35*	2.51*
PMO	25.53*	27.79*	10.57*	14.65*	9.82*	3.63*	3.17*	0.45***	4.38*
CRW	23.04*	3.29*	48.99*	6.71*	9.62*	1.14*	1.77*	0.76*	4.68*
AFW	18.06*	4.02*	3.89*	63.94*	3.51*	0.87*	1.87*	0.69*	3.15*
SSW	18.97*	7.28*	9.7*	13.41*	41.94*	2.00*	3.28*	1.14*	2.28*
CLK	21.60*	5.6*	12.8*	21.6*	19.2*	4.8*	4.00*	2.4***	8.00*
TAP	21.53*	6.49*	7.37*	18.58*	7.96*	3.83*	21.53*	4.42*	8.26*
PRF	16.76*	3.24*	4.86*	27.03*	5.95*	5.95*	7.03*	15.14*	14.05*
MGR	16.06*	6.41*	5.97*	10.24*	8.03*	2.36*	2.58*	1.47*	46.87*

Note: * P < 0.01, ** P < 0.05, *** P < 0.1.

Results of Table 3 show that sons are more likely to choose occupations of their fathers[8] as shown by probabilities given in principal diagonal for overall Pakistan. The persistence is highest in the lower status, especially in "elementary" and "skilled agricultural and fishery", occupations. Probability of a son to fall in "elementary" ("skilled agricultural and fishery") occupations is 62.34% (62.55%) given that his father is also in the same occupations. At the other extreme, the chance for a son to move to highest status occupation (Manager) is 55.05% if his father is also Manager. Moreover, the chances for a son to move to higher status occupations (TAP, PRF and MGR) are smaller, given that his father is in lower status occupations as can be seen from the probabilities given in columns of these occupations. It implies that opportunities are not equal for rich and poor to move to high status occupations. Even most discouraging finding is that whatever the occupation (high or low status) of a father may be, the chances for a son to move towards the lower status occupations are higher than his chances towards higher status occupations. Resembling the findings of Motiram and Singh (2012) for India, we observe that there is not only strong persistence but also a downward mobility in occupational status in Pakistan. Most of the sons either adopt the occupations of their fathers or fall in lower status occupations relative to their fathers. Our results contradict with Javed and Irfan (2014) who find larger probability for the sons to fall in lower status occupations whose fathers are in high status occupation.

Like all Pakistan data, the diagonal probabilities are largest except for "clerk" in urban region. In rural region, along with "clerk", we observe that son, whose father is in high status "professional" occupation, is more likely to fall in "Skilled Agricultural and Fishery Workers" and "elementary" occupations. Similar results are found by Motiram and Singh (2012) for India. However, Motiram and Singh (2012) combine "clerks", "service workers", "skilled agriculture and fisheries workers and related", into one category. While persistence is strongest at the highest status occupation in urban regions, it is strongest at the lowest status occupation in rural regions. Overall picture that emerges from our results of the rural-urban data depicts that not only there is a strong persistence in occupation status in both the regions but downward mobility is higher than the upward mobility.

[8] Except for "clerk"

6.3. Regression Analysis

We apply multinomial logit model[9] to equation (3) given in section 3 and present results in Table 4. Marginal effects reveal strong persistence in the occupational status. The increase in probabilities of a son to fall in the occupation of his father (when father is moving from "elementary" to any high status occupation), are largest except for "clerk" and "professionals". When father switches from elementary to "Plant and Machine Operators and Assemblers", the increase in probability of a son to fall in the same occupation is 19.89 percentage points. Similarly when father is moving from elementary to "Craft and Related Trades Workers", "Skilled Agricultural and Fishery Workers", "Service Workers and Shop and Market Sales Workers", "Technicians and Associate Professionals" and "Managers" the increase in probabilities of a son to fall in the same occupations are 32.18, 30.48, 11.69 and 39.90 percentage points respectively. Further, results also depict that sons of the "Clerks" and "Professionals" are the most mobile, moving in either

Table 4: Marginal Effects (overall Pakistan)

	ELT_sn	**PMO_sn**	**CRW_sn**	**AFW_sn**	**SSW_sn**	**CLK_sn**	**TAP_sn**	**PRF_sn**	**MGR_sn**
PMO_Fr	-0.2629*	0.1989*	0.0024	0.0286*	0.0016	0.0166*	0.0018	0.0019	0.0109
	(0.0139)	(0.0124)	(0.0094)	(0.0105)	(0.0090)	(0.0057)	(0.0055)	(0.0046)	(0.0070)
CRW_Fr	-0.3062*	-0.0194*	0.3218*	-0.0236*	0.015***	-0.0001	0.0027	-0.0010	0.0112***
	(0.0123)	(0.0059)	(0.0121)	(0.0081)	(0.0086)	(0.0045)	(0.0052)	(0.0038)	(0.0063)
AFW_Fr	-0.3476*	-0.0120*	-0.0465*	0.4352*	-0.0380*	-0.0053	0.0028	-0.0017	0.0130*
	(0.0082)	(0.0046)	(0.0060)	(0.0068)	(0.0056)	(0.0035)	(0.0038)	(0.0030)	(0.0047)
SSW_Fr	-0.3091*	0.0062	-0.017**	0.0183**	0.3048*	0.009***	-0.0003	0.0029	-0.0149*

[9] Before marginal effects we apply number of tests for validity of MNLM as given in table A1 in appendix. First we test the assumption of "Independence of Irrelevant Alternatives" (IIA). Hausman test, given at the top panel of table, reports nine tests of IIA. In all nine cases, we do not reject the null hypothesis which means that assumption of IIA is not violated. For three categories, "PMO_sn, CRW_sn" and "MGR_sn", we have negative values of the χ^2 test statistics, which according to Hausman and McFadden (1984) is evidence that assumption of IIA is not violated. Wald test, given at the second panel of the table A2, tests that all coefficients associated with given variable(s) are equal to zero. We have 21 Wald tests. Results of all these tests show that we can reject the null hypothesis. It means that all independent variables have statistically significant effect on all occupational categories of sons, simultaneously. So there is no "irrelevant variable" in our model. Finally, LR test given at the lower panel of the table A2, tests the overall significance of the model. The value of Likelihood Ratio (LR) statistics 27836.77with p-value of 0.00 tells that overall model fits significantly better than a model with no explanatory variable.

	(0.0129)	(0.0073)	(0.0085)	(0.0100)	(0.0132)	(0.0049)	(0.0050)	(0.0040)	(0.0055)
CLK_Fr	-0.2249*	-0.0054	-0.0008	0.0762*	0.0567*	0.0247*	0.015***	0.0134	0.0454*
	(0.0294)	(0.0131)	(0.0164)	(0.0249)	(0.0183)	(0.0075)	(0.0081)	(0.0059)	(0.0131)
TAP_Fr	-0.2487*	0.0031	-0.0133	0.0666*	0.0195	0.0078	0.1169*	0.004*	0.0441*
	(0.0204)	(0.0103)	(0.0121)	(0.0163)	(0.0127)	(0.0055)	(0.0110)	(0.0043)	(0.0101)
PRF_Fr	-0.2262*	0.0023	-0.0061	0.1418*	0.0124	0.0032	0.0055	0.0206*	0.0464*
	(0.0344)	(0.0164)	(0.0192)	(0.0264)	(0.0176)	(0.0057)	(0.0067)	(0.0051)	(0.0131)
MGR_Fr	-0.3331*	-0.0088	-0.0517*	-0.0002	0.0014	-0.0029	-0.0029	-0.0008	0.3990*
	(0.0112)	(0.0058)	(0.0067)	(0.0075)	(0.0074)	(0.0037)	(0.0041)	(0.0031)	(0.0102)
Income	-0.0333*	-0.0017***	0.0026**	0.0250*	-0.0016	-0.0005	0.0003	0.0010*	0.0082*
	(0.0023)	(0.0010)	(0.0011)	(0.0012)	(0.0012)	(0.0004)	(0.0004)	(0.0001)	(0.0005)
Wealth	-0.0042*	0.0010*	0.0018*	-0.0008*	0.0003	0.0002*	0.0003*	0.0001	0.0015*
	(0.0003)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0002)
Pr_sn	-0.0394*	0.0058	0.0312*	-0.0298*	0.011**	0.0008	0.0027	0.0007	0.0167*
	(0.0071)	(0.0049)	(0.0060)	(0.0062)	(0.0052)	(0.0008)	(0.0020)	(0.0009)	(0.0054)
Mi_sn	-0.0403*	0.0045	0.0245*	-0.0399*	0.0148*	0.0072*	0.004***	0.0008	0.0247*
	(0.0078)	(0.0050)	(0.0059)	(0.0070)	(0.0054)	(0.0014)	(0.0021)	(0.0009)	(0.0055)
Ma_Sn	-0.0625*	-0.0181*	0.0027	-0.0547*	0.0425*	0.0235*	0.0298*	0.0053*	0.0315*
	(0.0086)	(0.0050)	(0.0063)	(0.0076)	(0.0062)	(0.0023)	(0.0031)	(0.0013)	(0.0058)
Int_Sn	-0.1014*	-0.0308*	-0.0325*	-0.0823*	0.0681*	0.0603*	0.0649*	0.0190*	0.0348*
	(0.0118)	(0.0059)	(0.0075)	(0.0108)	(0.0094)	(0.0058)	(0.0063)	(0.0033)	(0.0075)
Gr_Sn	-0.1826*	-0.0414*	-0.0568*	-0.1254*	0.0482*	0.1404*	0.1332*	0.0655*	0.0190**
	(0.0164)	(0.0070)	(0.0091)	(0.0168)	(0.0132)	(0.0139)	(0.0132)	(0.0093)	(0.0098)
PG_Sn	-0.2072*	-0.0622*	-0.0769*	-0.1872*	0.0010	0.1380*	0.1509*	0.2315*	0.0119
	(0.0204)	(0.0050)	(0.0090)	(0.0221)	(0.0135)	(0.0175)	(0.0180)	(0.0250)	(0.0109)
Age of Son	0.0002	0.0026*	-0.0007*	-0.0043*	-0.0003	0.0002	0.0009*	0.0005*	0.0007*
	(0.0078)	(0.0041)	(0.0054)	(0.0076)	(0.0053)	(0.0024)	(0.0028)	(0.0019)	(0.0047)
Rural	-0.0379*	-0.0023	-0.052**	0.1597*	-0.0461*	-0.0031	0.0017	0.0036**	-0.0233*
	(0.0078)	(0.0041)	(0.0054)	(0.0076)	(0.0053)	(0.0024)	(0.0028)	(0.0019)	(0.0047)
Punjab	-0.0397*	-0.0191*	-0.0253*	0.0785*	0.013**	-0.0004	-0.0042	0.0028	-0.0056
	(0.0083)	(0.0050)	(0.0063)	(0.0074)	(0.0054)	(0.0025)	(0.0031)	(0.0020)	(0.0051)
Sind	-0.0225*	-0.0285*	-0.0559*	0.1193*	-0.0012	-0.0011	-0.007**	-0.0002	-0.0028
	(0.0088)	(0.0053)	(0.0067)	(0.0078)	(0.0058)	(0.0026)	(0.0032)	(0.0020)	(0.0056)
Baluch	-0.0863*	-0.0310*	-0.0862*	0.1468*	0.0091	0.0172*	0.0145*	-0.0026	0.0185*
	(0.0090)	(0.0056)	(0.0070)	(0.0081)	(0.0066)	(0.0039)	(0.0043)	(0.0024)	(0.0062)
Constant	0.2542*	0.0587*	0.1129*	0.2998*	0.0976*	0.0211*	0.0299	0.0144*	0.1114*
	(0.0024)	(0.0014)	(0.0018)	(0.0022)	(0.0017)	(0.0009)	(0.0010)	(0.0007)	(0.0016)

Note: * P < 0.01, ** P < 0.05, *** P < 0.1. Standard errors are in parentheses. Pr = upto primary school, Mi=Middle, Ma=Matric, Int.=intermediate, Gr=graduate, PG=post graduate, Sn=son, Fr = father

direction. However, on average, their mobility towards low status occupation, "Skilled Agricultural and Fishery Workers", is higher than the mobility towards high status occupations. Overall results reveal that son generation either achieves the same occupational status as the father generation did or on average they fall behind the status of their fathers. Our results contradict with the findings of Girdwood and Leibbrandt (2009) who find upward mobility in occupational status for South Africa. Our results also contradict with Nguyen and Getinet (2003) who find higher occupational status for sons relative to their fathers in US.

Income and wealth of father have positive impacts on the probabilities of high status occupations while their impacts on the probabilities of lower status occupations are mixed. This shows that rich and wealthy are more likely to get high status occupations. With the increase in level of education of a son (human capital variable), the probabilities to achieve higher (lower) status occupations increase (decrease).Occupations "Clerk", "Technicians and Associate Professionals" and "Professionals" are more likely to be chosen with the increase in level of education. Moreover, the changes in probabilities of the highest status occupation "Managers" are positive, though small in magnitude, for each level of education[10]. Age is another human capital variable representing work experience. With the increase in age (and thus getting more experience of the job market), the chance to move towards high status occupation increases and probabilities of lower status occupations either decrease or insignificant, except for "Plant and Machine Operators and Assemblers". This is consistent with the findings of Girdwood and Leibbrandt (2009).

Labor market opportunities are not same in the provinces, urban and rural regions; therefore, we can observe different impact of regional dummies on different occupations. However, for comparison we separately estimate equations for urban and rural regions only and results are given in tables A2 and A3 in appendix.

There is strong persistence in the occupational status of both urban and rural data. In both the regions, increases in probabilities of sons to fall in the

[10] But it is insignificant in case of "post graduate". Apart from highly qualified occupations like Senior Government Officials, Senior Officials of Special-Interest Organizations, Directors and Chief Executives, this category also includes occupations like "Traditional Chiefs and Heads of Villages", "General Managers" and "Legislators" who do not require high level of education. Especially "General Managers" (which include owner of the shops, businesses, schools, colleges, factories etc.) are usually less educated. The reason that impact of "post graduate" is insignificant may be that our data contains 96.7 percentage points of the observations on "General Managers" in the highest status category "Managers".

fathers' occupations are the largest, except for "Clerk" and "Professionals", when fathers switch from "elementary" to any other higher status occupation. In urban region, the probabilities to fall in high status occupations ("Technicians and Associate Professionals", "Professionals" and "Managers") increase for sons of the clerks. On the other hand, in rural region the probabilities of sons of "clerks" are found to increase more in the lower status occupations ("Skilled Agricultural and Fishery Workers" and "Service Workers and Shop and Market Sales Workers"). In case of "Technicians and Associate Professionals" upward and downward mobility can be observed in both urban and rural regions. While a larger upward mobility is observed for the urban region, a larger downward mobility can be seen for rural data. For the sons of "Professionals", increase in probability is largest (6.03 percentage points) to fall in "Service Workers and Shop and Market Sales Workers" in urban region and in case of rural region it is largest (17.66 percentage points) to fall in "Skilled Agricultural and Fishery Workers".

Increase in income and wealth leads to decrease probability of a son to fall in the lowest status occupation ("Elementary") and increase the probabilities to fall in the higher status occupations ("Technicians and Associate Professionals", "Professionals"[11] and "Managers") both in urban and rural regions. Probability to choose "Clerk" as an occupation increases with the increase in income and wealth in rural regions while it decreases in urban regions. Impacts of level of education of a son on occupational status are, more or less, the same in both rural and urban regions. With the increase in level of education, probabilities to fall in lower status occupations decrease while probabilities to move to higher status occupations increase in both the regions[12]. Another human capital variable, age, has positive impact on the choice probabilities of high status occupations, though significant only in case of "Managers", and negative impact on the probabilities of lower status occupations in urban regions. In case of rural regions, age has negative or insignificant impact on the probabilities of lower status occupations and its impact is positive on probabilities of high status occupations.

[11] In urban region, the change in probability to fall in "Professionals" when income changes, is insignificant.

[12] Impact of "graduate" and "post graduate" on highest occupational status "Managers" is insignificant in case of urban region. In case of rural region the impact of "graduate" is insignificant on "Managers".

7. Conclusions and Policy Recommendations

The strength of intergenerational mobility in socio-economic status of a country represents the equality of opportunities available to the citizens. It affects motivation and efficiency of individuals and thereby overall inequality and economic growth of a country. In this study, we investigated intergenerational mobility in socio-economic status for Pakistan. We extended our analysis to urban and rural regions as well. We used occupation as a measure of socio-economic status of an individual.

Our analysis is based upon survey data of PSLM, 2012-13. We explored that majority of the individuals, especially sons, are engaged in lower status occupations. Specifically percentages in lower status occupations are higher in rural regions. Using transition matrices and multinomial logit model, we, not only observed a strong persistence, but also downward mobility in occupational status. This downward mobility is higher in rural regions than the urban. "Clerk" and "Professionals" are the most mobile occupations while persistence is the highest in the "elementary", "Skilled Agricultural and Fishery Workers" and "Managers".

Level of education of an individual is found to be the most important factor in determination of high status occupations. In order to improve socio-economic status of the citizens, government should implement and enforce the minimum education laws. For example, in US, there is a policy that individuals with age between 5 to 17 years must be in an educational institute. This will help in improving skills and human capital of individuals and will increase their socio-economic status. Further, government should finance education to remove financial constraints of the poor to educate their children. Moreover, there are limited opportunities of high status occupations in rural regions that is why, people are engaged in the lower status occupations. Therefore, like urban regions, government should create high status occupations in the rural regions. Our results show that opportunities for the children are based in and transmitted from the home, so reliance upon the education system or job market to increase mobility may be an overly optimistic strategy. There is a need for institutional reforms and behavioral changes to improve the socio-economic status of the current generation. Finally government should ensure the policy of merit in order to equalize the opportunities for every talented person and eliminate nepotism from the job market.

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Appendix

Table A1: Statistical tests

The Hausman Test of IIA							
Ho: Odds(Outcome-J vs Outcome-K) are independent of other alternatives							
	$\chi 2$	Df	P> $\chi 2$		$\chi 2$	df	P> $\chi 2$
ELT_sn	167.383	147	0.12	CLK_sn	10.387	144	1.00
PMO_sn	-103.646	147	.	TAP_sn	0.913	145	1.00
CRW_sn	-75.057	145	.	PRF_sn	17.615	146	1.00
AFW_sn	11.357	147	1.00	MGR_sn	-129.188	147	.
SSW_sn	109.932	146	0.989				
Wald test							
Ho: All coefficients associated with given variable(s) are 0							
	$\chi 2$	Df	P> $\chi 2$		$\chi 2$	df	P $\chi 2$
PMO_Fr	501.751	8	0.00	P_sn	96.041	8	0.00
CRW_Fr	936.977	8	0.00	Mi_sn	128.7	8	0.00
AFW_Fr	2384.287	8	0.00	Ma_Sn	325.131	8	0.00
SSW_Fr	793.846	8	0.00	Int_Sn	491.629	8	0.00
CLK_Fr	91.634	8	0.00	G_Sn	582.672	8	0.00
TAP_Fr	282.883	8	0.00	PG_Sn	581.065	8	0.00
PRF_Fr	84.331	8	0.00	Age	271.114	8	0.00
MGR_Fr	1264.111	8	0.00	Rural	515.002	8	0.00
Income	456.039	8	0.00	Punjab	133.137	8	0.00
Wealth	384.761	8	0.00	Sind	283.745	8	0.00
				Baluch	511.709	8	0.00
LR $\chi 2$ (168)	=	27836.77		**N**	=	25241	
P > $\chi 2$	=	0.00		**Pseudo R^2**	=	0.2995	

Table A2 Marginal Effects (Urban)

	ELT_sn	PMO_s	CRW_s	AFW_sn	SSW_sn	CLK_s	TAP_s	PRF_sn	MGR_s
PMO_	-0.2198*	0.1995	-0.0130	0.0064	-0.0235	0.0248*	-0.0121	0.0110	0.027
	(0.0190)	(0.0176	(0.0174	(0.0053)	(0.0157)	(0.0108	(0.0100	(0.0100	(0.0131
CRW_	-0.3104*	-	0.3429	0.0018	-0.0170	0.0041	-0.0018	-0.0016	0.0100
	(0.0152)	(0.0086	(0.0173	(0.0039)	(0.0138)	(0.0085	(0.0096	(0.0076	(0.0104
AFW_	-0.282*	-	-	0.3929*	-0.0495*	-0.0084	-0.0050	0.0025	0.057
	(0.0178)	(0.0097	(0.0164	(0.0198)	(0.0152)	(0.0082	(0.0102	(0.0080	(0.0145
SSW_F	-0.2657*	-0.0079	-	-0.0016	0.3231*	0.0258*	-0.0134	0.0072	-
	(0.0167)	(0.0101	(0.0152	(0.0037)	(0.0190)	(0.0098	(0.0092	(0.0082	(0.0100
CLK_F	-0.2191*	-0.0078	-0.0190	0.0064	0.0546*	0.0514*	0.024**	0.0278*	0.082*
	(0.0315)	(0.0188	(0.0283	(0.0090)	(0.0283)	(0.0139	(0.0146	(0.0111	(0.0222
TAP_F	-0.2478*	-0.0114	-0.0270	0.0099	0.0311	0.0219*	0.1529*	0.0005	0.0699
	(0.0244)	(0.0143	(0.0225	(0.0079)	(0.0226)	(0.0112	(0.0191	(0.0080	(0.0176
PRF_Fr	-0.2547*	0.0220	0.0185	0.031**	0.0603*	0.0196	0.009	0.0369*	0.057*
	(0.0412)	(0.0303	(0.0396	(0.0176)	(0.0365)	(0.0132	(0.0141	(0.0108	(0.0228
MGR_	-0.3186*	-	-	0.0035	-	-0.0014	-0.012	-0.0016	0.4928
	(0.0151)	(0.0084	(0.0127	(0.0036)	(0.0130)	(0.0071	(0.0081	(0.0065	(0.0142
Income	-0.0081*	0.0002	0.0031	0.0022*	-0.0024	-	-0.0002	0.0011*	0.0071
	(0.0028)	(0.0015	(0.0020	(0.0003)	(0.0022)	(0.0010	(0.0008	(0.0002	(0.0011
Wealth	-0.0045*	-0.0001	0.0015	-0.0002	-0.0003	-0.0002	0.0006*	0.0001	0.0033
	(0.0005)	(0.0004	(0.0005	(0.0002)	(0.0005)	(0.0003	(0.0003	(0.0002	(0.0005
P_sn	-0.0567*	0.0035	0.0295	-0.0275*	0.0241*	0.0016	0.0042	-0.0032	0.025*
	(0.0144)	(0.0116	(0.0150	(0.0074)	(0.0132)	(0.0021	(0.0059	(0.0025	(0.0148
Mi_sn	-0.0609*	-	0.0372	-0.0217*	0.0363*	0.0075*	0.0028	-0.0018	0.021
	(0.0145)	(0.0108	(0.0146	(0.0075)	(0.0129)	(0.0026	(0.0054	(0.0026	(0.0139
Ma_Sn	-0.0829*	-	-0.0068	-0.0285*	0.0678*	0.0306*	0.0222*	0.006**	0.0373
	(0.0152)	(0.0108	(0.0151	(0.0075)	(0.0141)	(0.0045	(0.0063	(0.0034	(0.0143
Int_Sn	-0.1193*	-	-	-0.0355*	0.0756*	0.0825*	0.0586*	0.0187*	0.0396
	(0.0184)	(0.0119	(0.0174	(0.0087)	(0.0182)	(0.0102	(0.0097	(0.0055	(0.0165
G_Sn	-0.2037*	-	-	-0.0332*	0.0447*	0.2163*	0.1158*	0.0502*	0.0096
	(0.0204)	(0.0131	(0.0192	(0.0110)	(0.0235)	(0.0232	(0.0168	(0.0107	(0.0195
PG_Sn	-	-	-	-0.0536*	-0.0174	0.2021*	0.1239*	0.2053*	-0.0210
	(0.0240)	(0.0109	(0.0197	(0.0094)	(0.0233)	(0.0274	(0.0205	(0.0277	(0.0200
Age	-0.0005	0.0029	-	-0.0006*	-	0.0003	0.0003	0.0004	0.0014
	(0.0008)	(0.0005	(0.0008	(0.0003)	(0.0008)	(0.0004	(0.0004	(0.0003	(0.0007
Punjab	0.022**	-0.0068	-	0.0108*	0.0375*	-0.0004	-0.0005	0.0144*	-0.0070
	(0.0131)	(0.0098	(0.0150	(0.0060)	(0.0128)	(0.0072	(0.0076	(0.0048	(0.0124
Sind	0.0719	-	-	0.0121*	0.0159	-0.0056	-0.0024	0.008**	-0.0031

	(0.0142)	(0.0102	(0.0158	(0.0064)	(0.0134)	(0.0071	(0.0077	(0.0046	(0.0129
Baluch	0.036**	-	-	0.0264*	0.040**	0.019**	0.0376*	0.0102*	0.0232
	(0.0174)	(0.0115	(0.0186	(0.0077)	(0.0175)	(0.0102	(0.0118	(0.0066	(0.0160
Consta	0.2079	0.0694	0.1990	0.0458*	0.1646*	0.0393*	0.0441*	0.0250	0.2049
	(0.0040)	(0.0027	(0.0040	(0.0019)	(0.0039)	(0.0020	(0.0021	(0.0016	(0.0036

Note: * P < 0.01, ** P < 0.05, *** P < 0.1. Standard errors are in parentheses.

Table A3: Marginal Effects (Rural)

	ELT_sn	PMO_sn	CRW_sn	AFW_sn	SSW_sn	CLK_sn	TAP_sn	PRF_sn	MGR_sn
PMO_Fr	-0.2971*	0.1953*	0.0117	0.0455*	0.021***	0.0144**	0.0111	-0.0047	0.0030
	(0.0193)	(0.0168)	(0.0117)	(0.0162)	(0.0121)	(0.0069)	(0.0072)	(0.0046)	(0.0083)
CRW_Fr	-0.2984*	-0.0219*	0.3179*	-0.0394*	0.0305*	-0.0030	0.0024	-0.0013	0.0132
	(0.0183)	(0.0076)	(0.0172)	(0.0128)	(0.0122)	(0.0057)	(0.0065)	(0.0047)	(0.0089)
AFW_Fr	-0.3977*	-0.0116**	-0.0367*	0.4951*	-0.0344*	-0.0076**	0.0003	-0.0043	-0.0031
	(0.0095)	(0.0049)	(0.0057)	(0.0079)	(0.0055)	(0.0036)	(0.0037)	(0.0030)	(0.0045)
SSW_Fr	-0.3572*	0.0124	0.0022	0.0369*	0.3177*	-0.0023	0.0063	-0.0002	-0.0158**
	(0.0184)	(0.0101)	(0.0109)	(0.0160)	(0.0191)	(0.0052)	(0.0062)	(0.0046)	(0.0066)
CLK_Fr	-0.2437*	-0.0056	0.0131	0.1341*	0.0814*	0.0026	-0.0003	0.0007	0.0177
	(0.0473)	(0.0184)	(0.0229)	(0.0416)	(0.0302)	(0.0087)	(0.0092)	(0.0070)	(0.0174)
TAP_Fr	-0.2425*	0.0140	-0.0092	0.0932*	0.0081	0.0005	0.0972*	0.0078	0.0309**
	(0.0300)	(0.0148)	(0.0146)	(0.0248)	(0.0159)	(0.0061)	(0.0139)	(0.0058)	(0.0132)
PRF_Fr	-0.1924*	-0.0118	-0.0211	0.1766*	-0.0211	-0.0038	0.0026	0.0132**	0.0579*
	(0.0480)	(0.0175)	(0.0198)	(0.0387)	(0.0164)	(0.0055)	(0.0073)	(0.0059)	(0.0194)
MGR_Fr	-0.3445*	0.0097	-0.0226*	-0.0058	0.0102	-0.0022	-0.0003	-0.0023	0.3578*
	(0.0157)	(0.0082)	(0.0083)	(0.0115)	(0.0094)	(0.0044)	(0.0047)	(0.0036)	(0.0142)
Income	-0.0520*	-0.0060**	0.0010	0.0472*	0.0031**	0.0006**	0.0003	0.0010*	0.0048*
	(0.0031)	(0.0013)	(0.0012)	(0.0021)	(0.0014)	(0.0003)	(0.0005)	(0.0001)	(0.0007)
Wealth	-0.0040*	0.0014*	0.0017*	-0.0014	0.0007*	0.0004*	0.0002**	0.0004*	0.0012*
	(0.0003)	(0.0002)	(0.0002)	(0.0013)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0002)
P_sn	-0.0310*	0.0068	0.0309*	-0.0332*	0.0076	0.0005	0.0019	0.0017***	0.0147*
	(0.0082)	(0.0051)	(0.0055)	(0.0084)	(0.0049)	(0.0008)	(0.0019)	(0.0009)	(0.0048)
Mi_sn	-0.0311*	0.0152*	0.0186*	-0.0487*	0.0059	0.0070*	0.0031	0.0015***	0.0286*
	(0.0094)	(0.0056)	(0.0055)	(0.0096)	(0.0052)	(0.0016)	(0.0021)	(0.0009)	(0.0053)
Ma_Sn	-0.0540*	-0.0059	0.0100*	-0.0712*	0.0322*	0.0199*	0.0332*	0.0042*	0.0317*
	(0.0105)	(0.0054)	(0.0061)	(0.0106)	(0.0064)	(0.0026)	(0.0038)	(0.0014)	(0.0057)
Int_Sn	-0.0974*	-0.0166**	-0.0199*	-0.1071*	0.0742*	0.0498*	0.0687*	0.0174*	0.0309*
	(0.0156)	(0.0070)	(0.0076)	(0.0155)	(0.0118)	(0.0073)	(0.0088)	(0.0042)	(0.0085)
G_Sn	-0.1685*	-0.0255	-0.0133	-0.1765*	0.0638*	0.0880*	0.1446*	0.0740*	0.0134
	(0.0245)	(0.0093)	(0.0124)	(0.0249)	(0.0192)	(0.0161)	(0.0199)	(0.0143)	(0.0123)
PG_Sn	-0.2354*	-0.0493*	-0.0430*	-0.2398*	0.0170	0.1025*	0.1818*	0.2354*	0.031***

	(0.0297)	(0.0059)	(0.0115)	(0.0354)	(0.0221)	(0.0241)	(0.0308)	(0.0376)	(0.0179)
Age	0.0006	0.0025	0.0001	-0.0059*	0.0004	0.0002	0.0011*	0.0005*	0.0005***
	(0.0006)	(0.0023)	(0.0003)	(0.0006)	(0.0003)	(0.0002)	(0.0002)	(0.0001)	(0.0003)
Punjab	-0.0638*	-0.0250*	-0.0058	0.1060*	0.0033	-0.0021	-0.0045	-0.0012	-0.0069
	(0.0104)	(0.0056)	(0.0063)	(0.0105)	(0.0054)	(0.0021)	(0.0031)	(0.0020)	(0.0050)
Sind	-0.0654*	-0.0259*	-0.0578*	0.1696*	-0.0048	0.0000	-0.0082*	-0.0023	-0.0052
	(0.0111)	(0.0063)	(0.0066)	(0.0111)	(0.0060)	(0.0026)	(0.0033)	(0.0021)	(0.0059)
Baluch	-0.1314*	-0.0277*	-0.0595*	0.1920*	-0.0007	0.0127*	0.0083**	-0.0063*	0.0127**
	(0.0110)	(0.0063)	(0.0064)	(0.0113)	(0.0061)	(0.0034)	(0.0041)	(0.0021)	(0.0059)
Constant	0.2757*	0.0537*	0.0730*	0.4176*	0.0665*	0.0127*	0.0233*	0.0095*	0.0681*
	(0.0030)	(0.0017)	(0.0018)	(0.0030)	(0.0018)	(0.0008)	(0.0011)	(0.0007)	(0.0017)

Note: * P < 0.01, ** P < 0.05, *** P < 0.1. Standard errors are in parentheses.