

The Rural Non-farm Economy, Livelihood Strategies and Household Welfare in Pakistan

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Introduction

- Rural non-farm economy has mostly been remained unobserved in developing world.
- During 1980s and onward both the agricultural growth and globalization spur the non-farm activities.
- The dominant growth-centric development paradigm in Pakistan has widely ignored the non-agricultural activities for rural poverty alleviation.
- In the presence of skewed land distribution and fluctuated agricultural growth, rural non-farm sector is an important pathway for poverty reduction and employment provision.

Composition of Rural Non-farm Employment by Continent (in %)

Region	Nonfarm Share of Rural Labor	Women Share of total Rural Nonfarm Labor	Share of Rural Non-farm Employment by Sector			
			Manu.	Commerce and transport	Personal Financial and Community services	Construction, utility and mining
Africa	19	35	21	31	36	12
Asia	30	25	22	28	34	15
Latin America	30	40	23	22	35	20
West Asia and North Africa	24	8	22	24	32	21

Note: the reported numbers are un-weighted

Source: Haggblade et al. 2007

Introduction (Cont....)

- A considerable body of literature has discussed the issues of agriculture and poverty in Pakistan; however, role of rural non-farm economy in poverty alleviation and resources diversification is widely ignored.
- The present study aims to examine the structure of rural non-farm enterprises, household livelihood strategies and the impact of household livelihood strategies on household welfare.

Theoretical Considerations of Rural Non-Farm Economy

- Traditional rural insight, developed in colonial era has notion the non-farm sector as a low productivity sector.
- During late 80s and early 90s, the novel liberalization has launched new opportunities for the private sector in rural areas.
- In some South East and some South Asian countries higher agricultural production expand of rural non-farm economy.
- From a social welfare perspective, employment creation is important even in lower labor productivity non-farm sector.

Data Sources

- Various datasets have been used i.e. Pakistan Labor Force Survey, Pakistan Panel Household Survey (PPHS)-2010, Pakistan Social and Living Measurement Survey (PSLM)-2010 and Household Integrated Economic Survey (HIES)-2010.
- PPHS-2010 is used to examine the profile of non-farm enterprises.
- PSLM-2010 is used to analyze rural employment, labor diversification and its determinants.
- HIES-2010 (a sub-set of PSLM) is used to analyze the impact of household labor diversification on household welfare.

Methodology

- Clarification on three concepts is necessary which are ‘non-farm’, ‘rural’ and ‘poverty’.
- The study has defined labor diversification at individual level with 5 categories and at household level with 3 categories.

Activity Status	Definition
Main Agriculture	In which the primary sector of activity is agriculture
Main Non-farm	In which the primary sector of employment is non-farm activity
Only Agriculture	It which primary sector of employment is agriculture and have no secondary sector of employment or the secondary is also agriculture
Only Non-farm	It which primary sector of employment is non-farm and have no secondary sector of employment or the secondary is also non-farm
Mix activity	In which the primary sector of employment and secondary sector of employment are varying

Methodology (Cont....)

- The following equation has been estimated to find out the determinants of rural labor diversification;

$$Act_cat_i = \alpha_0 + \alpha_1 I_i + \alpha_2 Hh_i + \alpha_3 Rg_i + \mu_i$$

- Headcount poverty rate and child school enrollment status (age 5-15 years) have been taken as the household welfare indicators in this study.
- The following two equations have been estimated to analyze the impact of labor diversification on household's welfare;

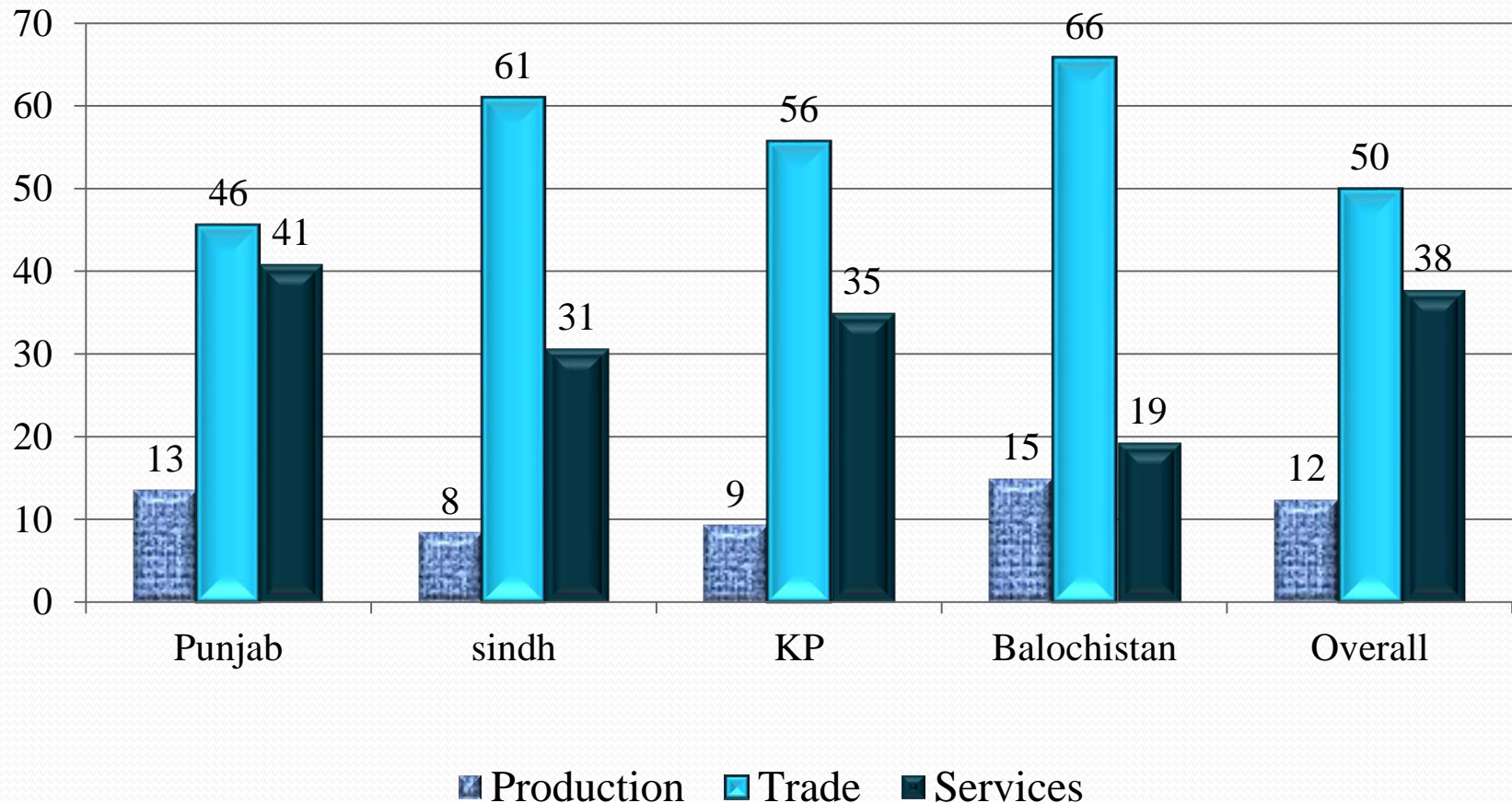
$$Pov_i = \alpha_0 + \alpha_1 Hh_diversification_i + \alpha_2 I_i + \alpha_3 Hh_i + \alpha_4 Rg_i + \mu_i$$

$$En_i = \alpha_0 + \alpha_1 Hh_diversification_i + \alpha_2 I_i + \alpha_3 Hh_i + \alpha_4 Rg_i + \mu_i$$



***Profile of Rural Non-Farm
Enterprises in Pakistan***

Sectoral Distribution of Rural Nonfarm Enterprises (in %)

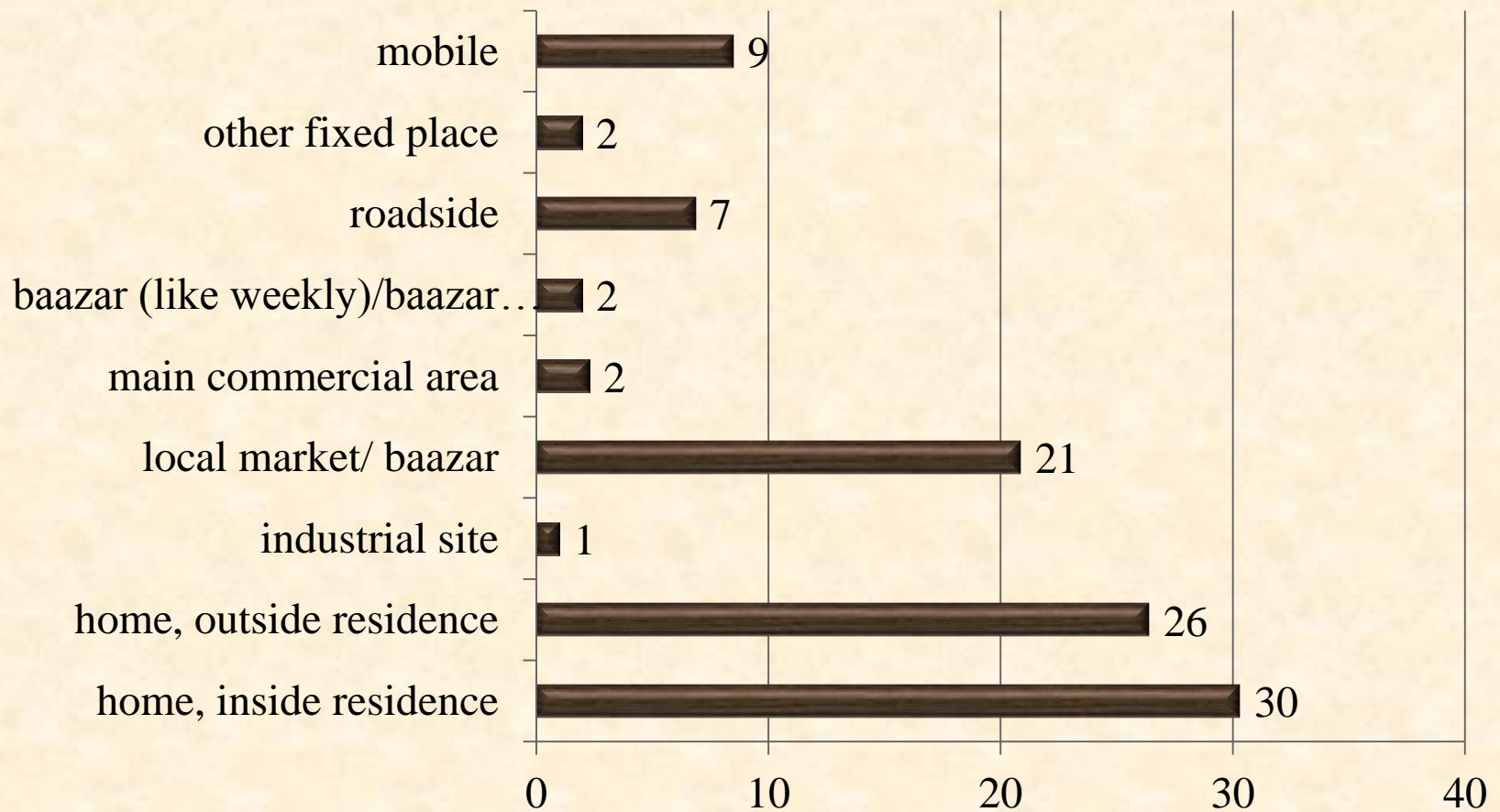


Province-wise Profile of Rural Non-Farm Enterprises in Pakistan

	Overall	Punjab	Sindh	KP	Balochistan
Enterprise Profile					
Sole-proprietorships (%)	95.1	95.9	93.2	96.0	91.7
Pay any tax to govt. (%)	10.8	11.2	8.2	16.0	9.1
Average Age of enterprise (years)	11.3	12.0	7.4	16.8	12.7
Manager Profile					
Manager is male (%)	94.1	92.4	97.3	96	100.0
Manager Education (in grades) by category					
Illiterate	35.8	38.8	29.7	20.0	58.3
1-5 grade	24.8	22.5	35.1	20.0	8.3
6-9 grade	20.9	25.5	10.8	20.0	8.3
10 and above	18.6	13.3	24.3	40.0	25.0

Source: Authors' estimation from the PPHS 2010 micro dataset

Place of Business of Rural Non-farm Enterprises (%)



Province-wise Employment Size of Rural Non-Farm Enterprises in Pakistan

Employment Distribution	Overall	Punjab	Sindh	KP	Balochistan
Average number of workers	2.3	2.6	1.7	1.5	1.4
Employment size distribution of enterprise					
Less than 2 workers	77.9	81.6	77.0	60.0	58.3
2-5 workers	19.5	15.3	20.3	40.0	41.7
More than 5 workers	2.6	3.1	2.7	0.0	0.0
Enterprise hiring full time paid workers (%)	15.3	10.7	21.6	36.0	8.3
Enterprise hiring full time family Paid workers (%)	26.1	18.9	32.4	52.0	50.0
Enterprise hiring part time paid workers (%)	4.2	4.1	2.7	8.0	8.3
Enterprise hiring par time family Paid workers (%)	13.4	14.3	10.8	4.0	33.3

Note: Manager is not included in employment calculation

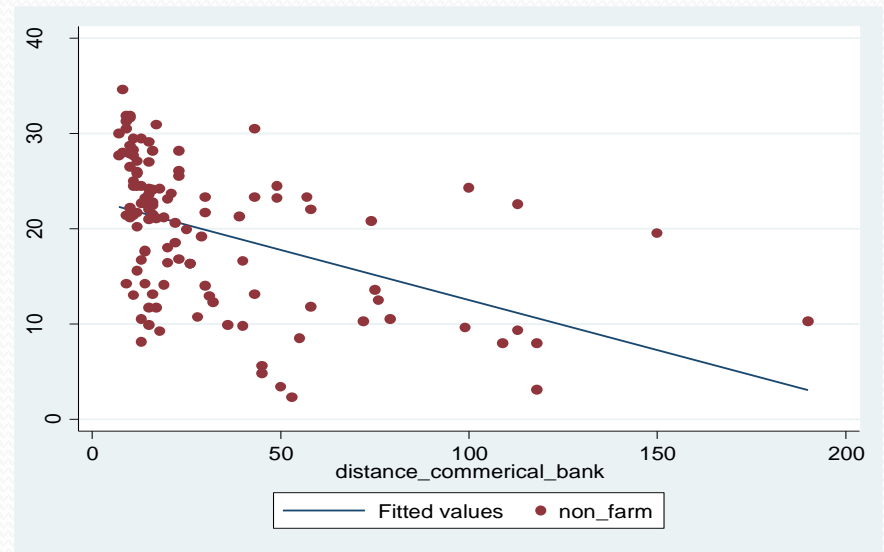
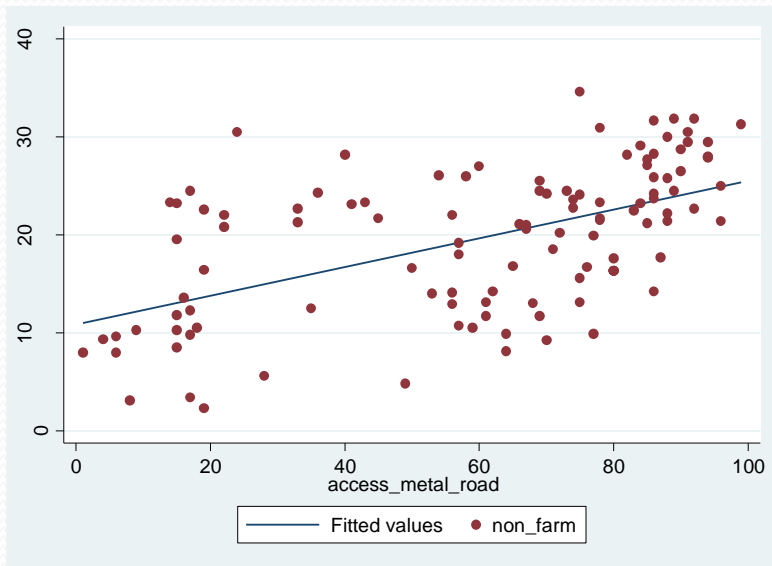
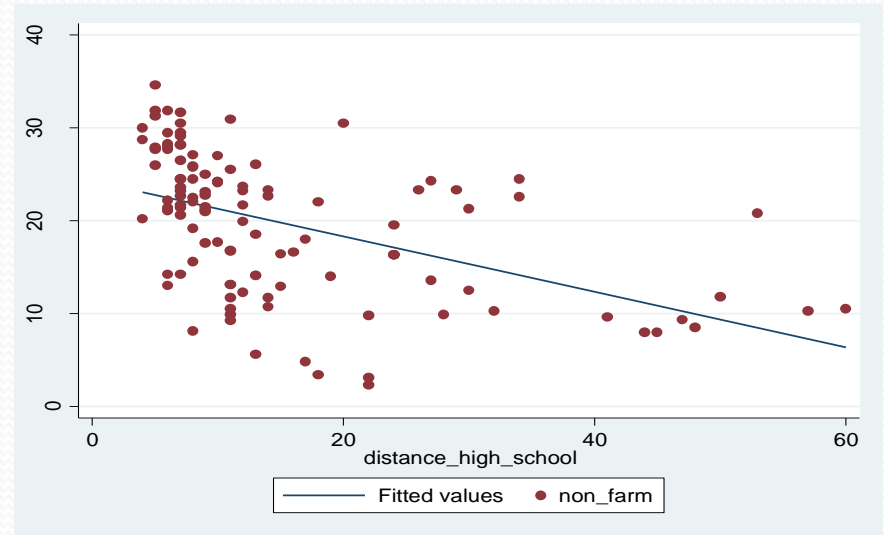
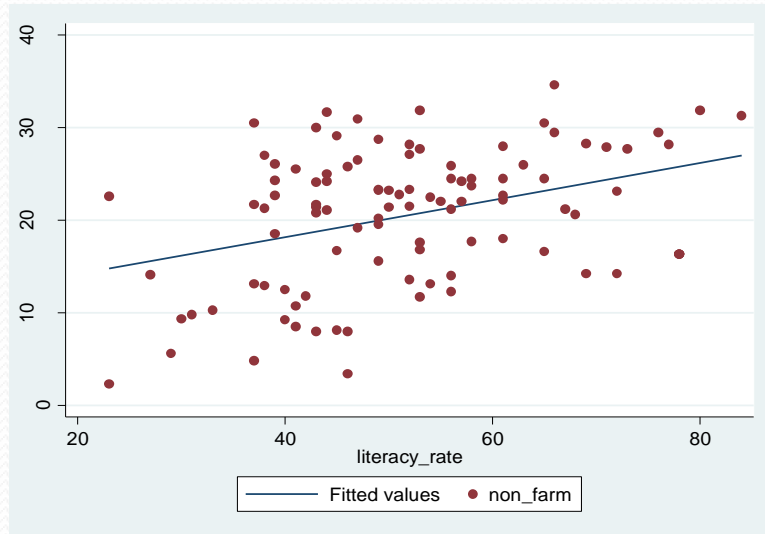
Source: Authors' estimation from the PPHS 2010 micro dataset

Average Daily Wage in Rural Non-farm Sector by Type of Activity

Type of Industry	Pakistan (in Rupees)			Sudan (in Sudani Pounds)
	Both sexes	Male	Female	
Agriculture	327	357	90	-
Manufacturing	232	238	89	21 - 23
Trade/Commerce	321	323	177	75 - 80
Services	350	365	202	150 - 180

Source: Authors' estimation from PSLM 2010 for Pakistan, Haggblade et al. (2007) for Sudan

District level Rural Infrastructure & Households own Non-farm Enterprise (in %)





***Employment Provision and Labor
Diversification in Rural Non-farm
Economy***

Percentage Distribution of Employed Persons of 10 Years Age and Above By Major Industry, 1974-2013 IN Rural Areas(Primary Activity only)

Type of Industry	1974-75	1982-83	1990-91	2001-02	2007-08	2012-13
Agriculture Forestry, Hunting and Fishing	72.1	67.7	63.8	59.0	60.9	59.5
Mining and Quarrying	0.1	0.1	0.1	0.1	0.1	0.2
Manufacturing	9.3	9.4	8.1	8.7	8.4	8.8
Electricity, Gas and Water	0.2	1.0	0.5	0.6	0.4	0.4
Construction	3.4	4.1	6.6	6.2	6.1	7.7
Wholesale, Retail Trade, Restaurant and Hotels	5.8	7.1	7.8	9.2	9.2	14.0
Transport, Storage and Communication	2.9	3.1	3.7	4.8	4.4	2.6
Financing, Insurance Real Estate and	0.1	0.3	0.3	0.3	0.4	0.5
Community, Social and Personal Services	5.7	6.9	9.0	11.1	10.0	6.3
Activities Not adequately Defined	0.3	0.3	0.1	-	-	-
Total	100	100	100	100	100	100

Source: Various editions of Labour Force Survey of Pakistan

Rural Non-farm Employment in Pakistan by Employment Type and Status (in %)

Type of Industry	1996-97			2010-11		
	All non-farm workers	Self employed	Paid employees	All non-farm workers	Self employed	Paid employees
Mining	0.5	0.4	2.9	1.7	0.4	1.7
Manufacturing	13.4	13.2	11.9	11.3	8.7	11.4
Electricity gas & water	1.5	0.1	1.9	1.2	0.3	1.6
Construction	24.1	2.5	31.7	22.4	2.0	31.4
Whole sale & retail trade	19.3	55.7	6.4	23.1	54.7	9.6
Transport & communication	12.1	12.4	12.8	11.7	14.7	11.1
Professional services	0.9	0.5	1.0	1.03	1.2	1.0
Social & personal services	28.3	15.2	31.4	27.6	18.2	32.2
% share	100	20.2	73.6	100	24.3	68.9
Total	100	100	100	100	100	100

Distribution of Rural Employed Worker by Employment Diversification (in %)

Activity Type	Male	Female	Both Sexes
Only Agriculture	46.7	81.2	52.9
Only Non-farm	44.9	15.5	39.6
Both Agriculture	1.8	2.5	2.0
Both Non-farm	0.7	0.3	0.6
Mix activity	5.9	0.6	5.0
Total	100	100	100

Source: Author's calculation from PSLM, 2010 micro dataset

Distribution of Rural Households by Employment Diversification (in %)

Province	Only Farm Households	Only Non-farm Households	Mix Households	Doing Nothing	Total
National	36.3	38.1	19.9	5.7	100
Punjab	35.0	34.0	24.0	7.0	100
Sindh	44.9	34.7	18.9	1.5	100
KPK	20.3	42.0	24.4	13.3	100
Baluchistan	44.2	46.5	8.5	0.7	100

Source: Author's calculation from PSLM, 2010 micro dataset

The Determinants of Livelihood Strategies of Rural Workers--Multinomial Logistic

Model

Correlates	Only Non-Farm/Farm		Mix/Farm	
	RRR	St. Error	RRR	St. Error
Sex (male=1)	4.541*	0.114	20.375*	2.099
Age (years)	1.096*	0.003	1.252*	0.009
Age square	0.999*	0.000	0.997*	0.000
Education (below primary grade as ref.)				
5-9 grades	1.738*	0.032	1.464*	0.058
10-12 grades	3.030*	0.071	2.317*	0.106
14 and above grades	14.621*	0.859	9.069*	0.783
Land ownership (acres)	0.920*	0.002	0.980*	0.002
Middle school (>44 mint)	0.617*	0.016	1.028	0.057
Public transport (>44 mint)	0.751*	0.031	1.143***	0.087
Province (North and Central Punjab as ref.)				
South Punjab	0.586*	0.015	1.025	0.049
Sindh	0.500*	0.011	0.464*	0.022
KPK	1.465*	0.037	1.988*	0.092
Baluchistan	0.677*	0.016	0.096*	0.009
Constant	0.067*	0.004	0.000*	0.000



***Role of Non-farm Economy in
Equity Enhancement and
Household Welfare***

Percentage of Rural Households that Own Enterprise and Annual Household Income Shares by Expenditure Quintile

Ownership and income sources	Household's Per capita Expenditure Quintile					Overall
	Poorest quintile	Quintile 2	Quintile 3	Quintile 4	Richest quintile	
Households own enterprise	18.2	22.3	23.4	27.6	31.8	23.0
Household's source of income						
Agricultural wages	11.3	8.4	5.3	4.3	1.2	7.3
Total Farm (excl. agric. wages)	31.4	34.6	43.8	48.6	55.5	44.8
Net Business Income	11.1	13.1	14.6	15.6	16.2	13.8
Non-agricultural Wages	46.2	43.9	36.3	31.5	27.1	34.1
Total Non-farm	57.3	57	50.9	47.1	43.3	47.9

Source: Authors' estimation from HIES 2010 micro dataset

Incidences of Poverty by Activity Status of Rural Employed Workers and Households, 2010-11

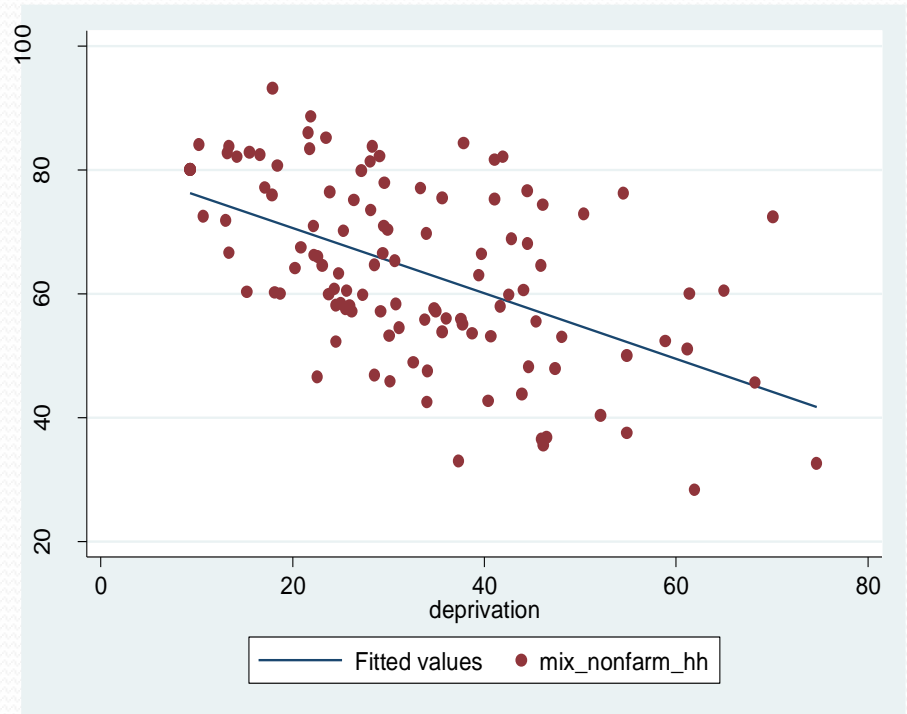
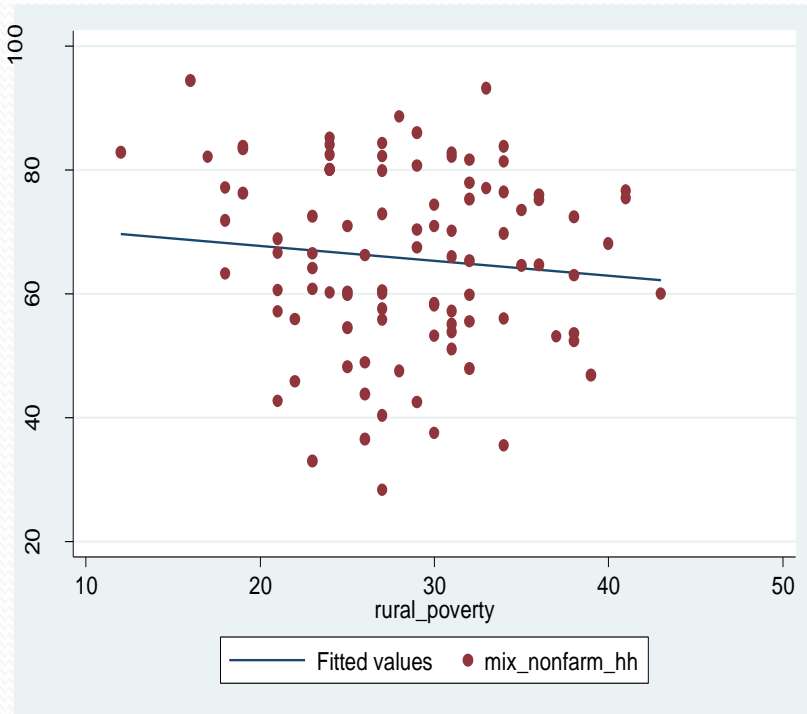
Activity type	Both sexes	Male	Female
At individual level			
Employer (non-agriculture)	5.1	5.1	-
Self-employed (non-agriculture)	13.6	13.1	22.8
Paid employee	20.2	19.2	29.3
- Non-agriculture	18.8	18.4	23.2
- Agriculture	25.3	22.3	39.4
Own cultivator	7.9	8.0	4.8
Share cropper/contract cultivator	15.6	15.7	-
Live stock	9.7	9.7	9.7
At household level (by sex of head of household)			
Only farm households	14.1	14.1	11.6
Only non-farm households	19.3	19.2	22.0
Mix households	16.2	16.3	9.4
Overall poverty (%)	16.0	15.5	19.6

Source: Author's calculation from HIES, 2010 micro dataset

Incidences of Poverty in Rural Non-farm Employment in Pakistan by Employment Type and Status (in %)

Type of Industry	Overall			Female only		
	All non-farm workers	Self employed	Paid employees	All non-farm workers	Self employed	Paid employees
Mining	13.8	23.5	19.4	6.7	-	-
Manufacturing	23.3	17.8	24.5	40.8	36.4	43.3
Electricity gas & water	3.5	1.1	3.6	-	-	-
Construction	22.3	9.6	22.4	37.9	-	42.1
Whole sale & retail trade	16.1	11.6	24.5	31.2	19.3	55.4
Transport & communication	15.0	17.9	15.1	4.4	-	6.0
Professional services	10.7	10.8	13.0	17.1	-	17.1
Social & personal services	13.8	15.4	13.5	15.2	16.4	15.0
Overall poverty (%)	17.3	13.7	18.8	23.3	22.8	23.2
Total	100	100	100	100	100	100

District level Rural Poverty and Deprivation by Household's Labor Diversification



The Impact of Household's Labor Diversification on Rural Poverty—Logit Model

Correlates	Odd ratio	Std. Error
Farm household as ref.		
Non-farm. household	1.491*	0.144
Mix households	1.297**	0.142
Sex of head (male=1)	1.908*	0.392
Age of head (in years)	1.014	0.017
Age square of head	1.000	0.000
Education of head (below primary grade as ref.)		
5-9 grades	0.563*	0.054
10-12 grades	0.293*	0.044
14 and above grades	0.120*	0.044
Dependency ratio	1.832*	0.074
Land ownership (acres)	0.920*	0.016
Province (Punjab as ref.)		
Sindh	1.114	0.103
KPK	0.724*	0.081
Baluchistan	0.426*	0.057
Constant	0.039*	0.018
Pseudo R2		0.093
N		7,242

The Impact of Household's Labor Diversification on Child Enrollment (age 5-16) —Logit Model

Correlates	Odd ratio	Std. Error
Farm household as ref.		
Non-farm. household	1.331*	0.056
Mix households	1.223*	0.058
Sex of child (male=1)	2.412*	0.085
Age of child (in years)	0.956*	0.005
Education of mother (below primary grade as ref.)		
5-9 grades	0.988	0.242
10-12 grades	3.720*	0.318
14 and above grades	4.077*	0.760
Education of father (below primary grade as ref.)		
5-9 grades	1.853*	0.082
10-12 grades	2.729*	0.162
14 and above grades	3.177*	0.315
Household size (in numbers)	0.990**	0.005
TV (yes=1)	1.984*	0.076
Province (Punjab as ref.)		
Sindh	0.412*	0.020
KPK	1.115**	0.059
Baluchistan	0.456*	0.025

Conclusion

Study highlights some important factor relating the role of rural non-farm economy in employment provision and household welfare in Pakistan.

- 23 percent of the rural Pakistani households own non-farm enterprises where 96 percent of the non-farm enterprises are micro-enterprises.
- Most of the enterprises are informal with poor asset endowments and are highly influenced by the available soft and physical capital and infrastructure.
- The present analysis shows that non-farm income accumulates to rural households primarily come through the paid employment and self employment.

Policy Recommendation

- Efficiency of institutions need to be improved for the development of rural non-farm economy.
- Public investment is required to improve the productivity and size of this sector.
- The lower participation of poor households in non-farm activities can be improved through social and economic resource mobilization.
- Policy intervention to promote rural non-farm employment is also justified to stop, to some extent, migration to cities.

Thank You