



The informal Employment in Southern Punjab: An Empirical Evidence

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Abstract

A household survey is conducted in the three divisions of Southern Punjab, Pakistan in order to examine employment patterns in the formal and informal sectors. The present study aims to examine competing views of informal sector employment in Southern Punjab. The result indicates that some human capital and socio-economic variables play substantial role in determining the participation decision of workers in the informal sector.

Keywords: Informal Sector Employment; Labour Market and Growth and Development

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I. Introduction

The high population growth has high effects on the growth and development of the economy and also on the well-being of the economy. The government helpfully allocates funds and measures on an innovative policy to highlight the serious issue of managing growth in population and the labour force. The health facilities and promoted population welfare activities through the Ministry of Population Welfare favorably declines the crude birth and fertility rates significantly, that in turn decreases the average population growth with labour force participation rate. Hence, further efforts for development of improved human resources are necessary.

The conventional approach of informality is supported by the dualistic model of economy. The structuralist interpretation of this dualism looks at development in economy in the form of transformation in its structure, where labour have a tendency to move from a low productive traditional sector to a growing modern sector with high labour productivity as mentioned in Lewis's (1954) model of economic development which discusses unlimited labour supply. This model assumes informal sector employment as a transitory phase as it considers the traditional sector that is likely to contract with labour relocates to the formal sector.

The legalist approach to informality, usually preferential to the neoclassical economists, depends on the World Bank arguments that labour transfer can be controlled if the modern sector owes restrictive job security legislation which decrease the modern sector's growth. Thus, the workers in majority participate in the 'unprotected', poor quality employment in informal sector work relations which is unfair or exploitative (Heltberg and Vodopivec, 2004). The entrepreneurs compellingly launch and run their timely and profit-oriented informal sector business instantaneously because of government institutions and regulations. Therefore, informal sector is referred as a source of economic dynamism disallowed to reach its full potential by government regulation (de Soto, 1989).

This lead to trade liberalization for the informalization enhancement. The competitive domestic firms decrease their costs by either subcontracting to the informal sector by foreign competition forces, by firing workers or by hiring workers in informal work arrangements (Attanasio et al. 2004). Contrarily, the growth of employment (formal) does not require implying a contraction of informal employment if the two are complements not substitutes. Firms may probably decreases the costs by subcontracting incompatible everyday jobs (Marcelli, 2004). It is viewed as the marginalist characterization of employment in informal sector accentuating on the production process, employment relationships and relationships with larger economies at national and global level.

Indeed, since the mid-1980s, insecure employment conditions have been spread in formal-sector enterprises and production chains which fundamentally define informality broadly which covers the formal sector. The concept of informal sector by ILO2 includes employed workers who work on perilous basis by formal-sector enterprises in direct or indirect way. Consequently, all workers having employment associations are not reliant on state of affairs by labour regulations relating to taxation, social security influences and social protection that are viewed as informal (Tokman, 2007).

Recent research indicates that a noteworthy part of the informal sector' has an energetic, business character that compares with the traditional informal sector view that serves as a way of sanctuary work. This latest informal sector concept includes evolving small-scale capitalists, the efficient small scale production processes and those businesses that are beyond the regulation of the formal sector.

Almost previous studies in the literature have documents dynamics of the informal sector. These studies are exploratory or based on small independent surveys of some specified subgroup of the informal sector. So, it becomes difficult to assess the important factors that determine the sector of employment which further determine development of the sector and of country. Here, in this study, a household data from three divisions is used in order to investigate the informal employment determinants in urban areas of Southern Punjab. Majority of the poor and self-made population consists of in these three districts. The labor force is increasing in informing economic activities. This increases the growth potential of urban informal sector in Southern Punjab. The three districts of Southern Punjab make available the specific information in order to study the informal employment determinants.

Previous research shows that that informal sector is both traditional and dynamic nature. In this study a household survey is conducted to determine the informal sector in Southern Punjab. The study examines the characteristics of workers in both the sectors. In this study, the informal sector is defined to incorporate the workers who are hired in firms that employ less than four employees who are non-professional or administrative workers, casual workers,

unpaid family workers and all self-employed workers. This structure of the study is as follows. Section II explains the labour market in Pakistan. Section III indicates literature review of the relevant studies of the informal sector. Section IV reveals the data and methodology. Section V explains the results and discussion. The concluding remarks are discussed in section VI.

II. Labour Market in Pakistan

Pakistan has a high population growth rate which is not compatible with the low economic growth and the human resources. Different sectors of the economy are contributing well in the gross domestic production. However, the results are not satisfactory. The formal sector enhances the development of the economy by generating employment however it has not been capable to satisfy the increasing population growth by satisfying their requirements. In fact, the formal sector is incapable to absorb a growing labour force in the economy. On the other hand, formal sector's role is noteworthy as it also generates employment for labour force increasing at alarming rate. So, the production needs to increase here. Yet, the informal sector requires attention to absorb the surplus labor (i.e., the migrants and urban dwellers).

III. Literature Review

In this section we review some of the important studies concerning with the different aspects of formal and informal sector. These are presented below. House (1984) analyses the informal enterprises in mid-1977 in Nairobi and shows that the workers with low skill level easily engage them in informal sector. He concludes that the informal sector provides a reliable way to urban existence, even at a simple survival. Funkhouser (1996) examines employment determinants and earning structures in the Spanish-speaking countries of Central America. The probit model estimates indicate that the participants experience higher returns to a year of education and of experience. Married people are less willing to involve in the sector. The major conclusion is that development level is recognized as an imperative determinant of informal sector employment. Meng (2001) analyses the informal sector employment in Chinese city. Multinomial results reveal that talented and trained individuals are preferably self-employed. Finally, results conclude that the informal sector workers are in a better position as compared to their earning advantages. Roberts (2001) examines the job choice factors of rural-urban migrants by surveying floating population of Shanghai. The result reveals that socio-economic factors, region of origin and village-based networks determine the job choice.

By using a national household survey data Florez (2003) examines that recently migrants and low educated are working in the informal sector. Less male and low aged workers are found in the informal sector. Moreover, the socio-economic status per se is deemed to be considerably related with informal labour market. Finally, more old age individuals enter into the informal subsistence sector. The rural migrants having low quality skills are forced to work in urban labour market. The empirical results suggest that migration condition mainly determines the low quality employment. The informal service employment is discussed by Dasgupta (2003). The results show that the employment in informal services sector does not require complex skills yet experienced people are invoked to this employment. Low education of workers also determines the informal sector employment. Moreover, lack of education and credit facilities determine workers towards informal service employment. Gindling and Terrell (2005) analyse the effect of minimum wage on actual wages in both the sectors. Using 12 years of micro data, results reveal that legal minimum wages significantly influence the wages of employees working in smaller (five or lesser employees) and larger firms in urban as well as rural areas. Wamuthenya (2009) investigates how formal and informal sector employment is determined by using data from Labour Force Survey cross sectional data of 1986 and 1998. A multinomial logit result reveal that personal characteristics, household headship and wages in the market and household characteristics as well as the socio-economic background affect the sectors of employment. Workers participate in the sectors of employment with their increasing age. The low educated work in the informal sector. The results conclude that working hours are unified and it was more flexible to combine care and productive work in informal sector.

Angel-Urdinola and Tonabe (2012) make a study on micro-determinants of informal employment in the Middle East and North Africa (MENA) region viewing human development. They conclude that the size of both the public sector and of the agriculture sector seem to be associated with informality in the region. Moreover, the average informal sector participants' are disadvantageous. However, Tansel and Ozdemir (2015) show the highly static nature of the Egyptian labor market. Williams et al (2016) determine the degree of informality by analyzing informality. The entrepreneur and enterprise characteristics predict the degree of informality. The result indicates that lower informality is related with the women workers, educated and entrepreneur having higher income and the older enterprises that hire the workers in the manufacturing sector.

IV. Data and Methodology

Urban informal sector is the most significant for more employment opportunities creation in Pakistan. It contributes 71% to GDP of the economy. A high proportion of labour force turns into the urban informal sector. There are 34 districts and nine divisions in Punjab province. Three Divisions such as Bahawalpur, Multan and Dera Ghazi Khan are important and form integral part of Punjab Province which is selected for research purpose because majority of them is inhabited. These districts enhance the growth potential of the informal sector and are developing. The determinants of informal sector employment in Southern Punjab are possible with the possibility of a household survey. In the present study, we use surveys from three districts (i.e., Multan, Bahawalpur and Dera Ghazi Khan) during the year 2012 and 2013. The questions regarding personal, socio-economic and demographic factors are included in the survey. The data is collected from urban areas of southern Punjab.

As the dependent variable is a binary variable with the value of one and zero depending on being as informal sector employed worker or not, it is observed that:

$$\begin{aligned} Z_i &= 1 \text{ if } Z_i^* > 0 \\ Z_i &= 0 \text{ if } Z_i^* \leq 0 \end{aligned}$$

Where

$$Z_i^* = \beta_0 + \beta_1 Y_i + \mu_i \quad (1)$$

Eq.(1) shows probability of being employed in the urban informal sector Z_i^* is based on the vectors of the variables (Y_i) that are observed and a random error (μ_i). The probability of being employed in the urban informal sector can be written as:

$$\Pr(z_i=1|Y) = \Pr(z_i > 0|Y) = \Pr[\mu_i > -(\beta_0 + \beta_1 Y_i) | Y] = F(\beta_0 + \beta_1 Y_i)$$

Therefore, the regression equation takes the form:

$$ISE_i = \alpha + \beta_1 Y_i + \mu_i$$

Where ISE_i is probability of the i th worker involved in the urban informal sector.

On the basis of the methodology mentioned above, the model is given as

Model I

Informal Sector Employed Employment Model (With Different Levels of Education). In the 1st model of informal sector employment, three categorical educational dummies are introduced to check out the influence of various education levels on employment in the informal sector while illiteracy has been taken as base outcome.

$$\begin{aligned} ISE = f(\alpha_0 + \alpha_1 BMLED + \alpha_2 MLED + \alpha_3 AMLED + \alpha_4 CYAG + \alpha_5 SEX + \alpha_6 MRTS + \alpha_7 FTRN + \alpha_8 FAEDU \\ + \alpha_9 MEDU + \alpha_{10} SPLED + \alpha_{11} FAMSP + \alpha_{12} NODP + \alpha_{13} SPNE + \alpha_{14} PASTS + \alpha_{15} NADLT + \alpha_{16} PMADL + \\ \alpha_{17} PFADL + \mu_i) \end{aligned}$$

Model II

The Informal Sector Employment Model (With Complete Years of Education).

$$\begin{aligned} ISE = f(\beta_0 + \beta_1 CYED + \beta_2 CYAGE + \beta_3 SEX + \beta_4 MRTS + \beta_5 FTRN + \beta_6 FAEDU + \beta_7 MEDU + \beta_8 SPLED + \\ \beta_9 FAMSP + \beta_{10} NODP + \beta_{11} SPNE + \beta_{12} PASTS + \beta_{13} NADLT + \beta_{14} PMADL + \beta_{15} PFADL + \mu_i) \end{aligned}$$

In the above equation of informal sector employment of the model, the independent variables are, below matric level education (BMLED), matric level education (MLED), above matric level education, complete years of education, complete years of age (CYAGE), sex (SEX), marital status (MRTS), formal training (FTRN), father's education level (FAEDU), mother's education level (MEDU), spouse education level (SPLED), family set up (FAMSP), number of dependents (NODP), spouse participation in economic activities (SPNE), presence of assets (PASTS), number of adults (NADLT), presence of male adolescents (PMADL) and presence of female adolescents (PFADL).

V. Empirical Analysis

In this section we analyze the statistical as well as empirical analysis of informal sector employment. The characteristics of the workers aged 18 to 65 are revealed in the above tables. Both the male workers and female workers are participating in the sector of employment. The statistical analysis indicates that those engaged in the informal sector are tending to be older than workers in the formal sector. Above 60 % of the males are working in both the sectors. A higher proportion of married sector is engaged in the informal as compared to the formal sector workers.

The mean education and mean different levels of education are also noteworthy. Mean education in the formal sector is noticeably above the mean education of informal sector workers. The mean matric level education and above matric level education are significantly above the mean education in the formal sector. The formal sector employed have mean father, mother and spouse education level are greater than that of the informal sector participants. The informal sector workers have mean adult children and adolescents above the mean presence of these children and adults. However, mean presence of assets in the informal sector is above than the formal sector.

Table 1: Summary statistics of some selected variables for formal sector employed workers.

Variables	Mean	Standard Deviation	Minimum	Maximum
BMLED	0.0907	0.2875	0	1
MLED	0.2066	0.4052	0	1
AMLED	0.6737	0.4692	0	1
CYED	12.3707	3.4419	0	16
CYAGE	37.2355	10.0250	21	62
SEX	0.6197	0.4859	0	1
MRTS	0.7162	0.4513	0	1
FTRN	0.3958	0.4895	0	1
FAEDU	0.7162	0.4513	0	1
MEDU	0.5521	0.4978	0	1
SPLED	0.6390	0.4808	0	1
FAMSP	0.4324	0.4960	0	1
NODP	2.7143	1.8627	0	9
SPNE	0.4981	0.5005	0	1
PASTS	0.7027	0.4575	0	1
NADLT	0.4981	0.5004	0	1
PMDL	0.43050	0.4956	0	1
PFADL	0.3668	0.4824	0	1

Table 2: Summary statistics of some selected variables for the informal sector employed workers.

Variables	Mean	Standard Deviation	Minimum	Maximum
BMLED	0.3442	0.3753	0	1
MLED	0.3025	0.4596	0	1
AMLED	0.2772	0.4478	0	1
CYED	9.0619	3.8447	0	16
CYAGE	40.9776	10.5499	18	65
SEX	0.6244	0.4845	0	1
MRTS	0.7411	0.4382	0	1
FTRN	0.1320	0.3386	0	1
FAEDU	0.3482	0.4766	0	1
MEDU	0.1817	0.3852	0	1
SPLED	0.3695	0.4829	0	1
FAMSP	0.6437	0.4792	0	1
NODP	3.6954	2.0984	0	15
SPNE	0.3130	0.4638	0	1
PASTS	0.7695	0.4214	0	1
NADLT	0.6091	0.4882	0	1
PMADL	0.4051	0.4912	0	1
PFADL	0.5888	0.4923	0	1

Empirical Analysis

The important factors affect the informal sector employment. The empirical analysis is presented here.

Table 3: Determinates of informal sector employment (Average marginal effects)

Variables	Model (1)	Model(2)
Below matric level education(yes=1, no=0)	0.1026** (2.01)	-----
Matric level education(yes=1, no=0)	0.0191 (0.39)	-----
Above matric level education(yes=1, no=0)	0.1091** (-2.28)	-----
Complete years of education	-----	-0.0245*** (-7.75)
Complete years of age	0.0017* (1.63)	0.0014 (1.34)
Sex(male=1, no=0)	0.0368* (-1.74)	-0.0337* (-1.59)
Marital status(married=1, no=0)	0.0263 (1.00)	0.0277 (1.06)
Formal training(yes=1, no=0)	0.1480*** (-6.64)	-0.1422*** (-6.37)
Father's level of education(yes=1, no=0)	0.1025*** (-4.80)	-0.0977*** (-4.57)
Mother's level of education(yes=1, no=0)	0.1273*** (-5.88)	-0.1216*** (-5.59)
Spouse level of education(yes=1, no=0)	0.0958*** (-4.46)	-0.0898*** (-4.16)
Family set up(joint family=1, no=0)	0.0708*** (4.58)	0.0718*** (3.49)
Number of dependents	0.0255*** (4.58)	0.0253*** (4.54)
Spouse participation in economic activities(yes=1, no=0)	0.0705*** (-3.13)	-0.0709*** (-3.14)
Presence of assets(yes=1, no=0)	0.0760*** (3.33)	0.0855*** (3.72)
Presence of adult children(yes=1, no=0)	0.0259 (1.24)	0.0237 (1.13)
Presence of male adolescents(yes=1, no=0)	0.0872*** (-3.86)	-0.0925*** (-4.08)
Presence of female adolescents(yes=1, no=0)	0.0999*** (4.46)	0.1046*** (4.66)
Number of observations	1503	1503
Pseudo R ²	0.32	0.31

Table 4 reveals an empirical analysis of participation in informal sector employment in a multivariate framework for the informal sector participants. The analysis is made with completed years of education and different categories of education. The marginal effects from a logit regression for informal sector employment are shown in the table. The result indicates that an increase in years of education lowers the probability of working in the informal sector employment. An increase in education leads to a decrease in the probability of working in the urban informal sector. The coefficient of below matric level education is positive and significant. However, those having above matric level education are less likely to work in the informal sector. There is a trend of switching off from the informal to the formal employment. The male workers are significantly less likely to be engaged in the informal sector than the female workers. Those having formal training are significantly less likely to partake in the informal sector. They move to

formal sector for performing their work efficiently. The variable number of dependents is also positive. The results indicate that those whose spouses are participating in economic activities are significantly less probable to be laboring in the informal sector. For those who have assets the increased probability of employment is significant. A presence of female adolescents in the household is related with a lower probability of employment in informal sector. The variable age has less effect on informal sector employment. Those who belong to joint family setup are less willing to work in the informal sector.

VI. Conclusions

The employment patterns are defined by using a household surveys in three districts of southern Punjab. The informal sector presents itself a significant sector of the economy. The study results are consistent with the previous studies. The analysis indicates that informal sector is the sector of female workers. It indicates that more females are employed in this sector. It is a sector of less educated workers. The workers having female adolescents' members are employed in the informal sector. Finally, it increases the living standard of the workers employing in it. The spouse participation in economic activities lowers the probability of work participation. Education and formal training lowers the work participation in the informal sector. So, government should increase the education level of the workers to participate in the informal sector in order to increase the development of human capital and growth. Government must create more employment opportunities for the adolescents' members.

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