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DETERMINANTS OF UNEMPLOYMENT AMONG EDUCATED YOUTH: A CASE STUDY OF DISTRICT MUZAFFARGARH, PAKISTAN

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Abstract

The study investigates the determinants of unemployment among educated young individuals who have at least secondary school education and belong to age group of 18-29 years in the district Muzaffargarh, Pakistan. The logit and probit techniques are employed to estimate the model. The study found that the probability of unemployment increases with education level. Technical education is found important to reduce unemployment among educated youth. Likewise, age is likely to have important inverse impact on the probability of unemployment among educated young people. In addition, it is revealed that male workers belonging to larger families and living in urban areas are less unemployed in the district.

Keywords: Determinants, Unemployment, Educated, Youth

JEL Classification: E24, I24, J64

1. INTRODUCTION

The issue of unemployment has attained greater importance for academicians and policy makers over the last decade. Youth unemployment is a worldwide issue. About 185 million people are unemployed around the world. Half of them are young employed between ages of 15 to 24 years, (Bhebhe et al., 2016). According to the World Bank definition of youth unemployment 'youth unemployment refers to the share of labor force aged 15-24 years without work but available for and seeking employment'.

Unemployment shows underutilization of human capital. It inversely effects the development of a country. According to economic theory, unemployment occurs when an individual is actively seeking for work but is unable to find one. Young individuals are the most important resource that countries need to have for economic prosperity and development. Energetic and potential young labor force, if properly utilized, can contribute a lot to the social and economic development of a country (Msigwa and Kipesha, 2013). However, unemployment among individuals leads to an extensive increase in social, economic and psychological disasters. Nazir et al. (2009) found that unemployment affects socio-economic status of families.

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Mismatch between skills required by employers and skills provided by job seekers is one of the important determinants of unemployment. According to Daly et al. (2012), a mismatch is usually known as a likely cause of increase in unemployment rate in the long run. It is suspected that education may not well equip the educated youth according to the requirements of labor market work. Rabten (2014) discussed that higher educational attainment has turned down in the job market particularly in the developing countries. The study found that education and training system has prepared the young labor force inefficiently to fulfill the requirements of job market with reference to the skills and experience.

Structural unemployment is a phenomenon where skills of unemployed labor force do not match with the requirements of available jobs. Such type of unemployment occurs as a result of transition in technology and shift in the structure of the economy. If labor force does not keep up with these changes, it will lead to the structural unemployment. Qayyum (2007) analyzed that low quality education and training systems leads to unemployment among educated people. Inclination for public sector employment also causes higher joblessness among educated youth in Pakistan. In Pakistan, higher population growth rate leads to higher labor force and also higher unemployment rate consequently.

Unemployment indicates conditions when individuals are agreed to work and capable to work at the given remuneration, however they are not able to find a job. According to International Labor Organization (2020), the global youth unemployment rate was about 14 percent of the youth labor force in 2019. It is expected to increase in successive years. Therefore, it is important to find out the factors which create hurdles for the youngsters to enter in the job market.

The emphasis of the government should be to create job opportunities for young labor force by providing productive activities. A rapid addition in the labor force every year in developing economy like Pakistan creates many social and economic issues. This leads to increase in unemployment and backlog of unemployment. Persistent unemployment in the country may lead to external migration of labor force. This can be dangerous for the nation in the future period, particularly when other nations are attracting its brain drain. Therefore, persistent unemployment in an economy could be a main factor worsening the economic growth. Moreover, persistent unemployment always leads to problems like poverty, crimes, family breakdown, homelessness and loss of self-respect and self-confidence.

Pakistan is also facing challenges related to unemployment, particularly youth unemployment. In Pakistan, unemployment is speedily growing over time. According to Federal Beaurau of Statistics (2018), unemployment rate was about 5.8 percent in 2017-18 in Pakistan. Unemployment rate among youth (aged between 15 and 19) was 10 percent in 2014-15 and it increased to 10.4 percent in 2017-18. It was 11 percent for youth aged between 20-24 years during 2014-15 and increased to 11.6 percent in 2017-18.

Employment is important to determine economic health of a country. At maximum efficiency level of an economy, every individual would be likely to find a reasonable earning opportunity. An unemployed individual is considered as a burden on the economic resources of a country. It lowers the social status of individuals as well as households. Joblessness leads to psychological evils such as hopelessness, disappointment and gradual glide to criminal activities among youngsters (Bakare, 2011). It exerts severe negative impact on the socio-economic position as well as on the standards of living of unemployed individuals in particular and on the society in general. Therefore, it is important to investigate the factors that lead to unemployment among educated youth.

This study is based on micro data of young educated individuals, collected from district Muzaffargarh. Primarily this study intends to identify the factors which lead to unemployment among educated youth in district Muzaffargarh. Micro data provides us direct access to collect information from number of individuals through questionnaires about different characteristics of respondents. Any research regarding youth unemployment in the district has hardly been conducted previously. Therefore, the present study is conducted to highlight this important issue prevailing in the area.

This study analyses causes of unemployment among youth in Muzaffargarh, a district of Southern Punjab. Many studies have examined the issue of unemployment at national as well as international level. The present study contributes in the literature on youth unemployment by examining the issue of unemployment with particular focus on the district Muzaffargarh. Muzaffargarh is one of the largest districts in province of Punjab. People of the district are hard working. They belong to various occupations but agriculture is the main occupation in the area. People also provide their services both in public as well as in private sectors.

The sample size comprises of 400 educated individuals. The data comprises of both urban and rural areas of the district Muzaffargarh. The dependent variable (to be unemployed or employed) is a binary variable. This is equal to one if young educated individual is unemployed and contains the value of zero if he or she is employed. The data is collected about individuals who have acquired at least secondary school education and belong to age group of 18-29 years. The independent variables are age, education, gender, marital status, preference for public or private sector job and household size. The model is estimated by using Logit and Probit estimation techniques.

Objective of the research is to examine the probability of unemployment among young educated individuals in Muzaffargarh.

The hypotheses of the study are given below:

$H_{O:}$ Education has insignificant effect on the probability of unemployment among educated youth.

H_1: Education has significant effect on the probability of unemployment among educated youth.

H_0: Job preferences for private or public sector jobs have insignificant effect on the probability of unemployment among educated youth.

H_1: Job preferences for private or public sector jobs have significant effect on the probability of unemployment among educated youth.

H_0: Other control variables have insignificant effect on unemployment of educated youth.

H_1: Other control variables have significant effect on unemployment of educated youth.

The study is organized as follows. Section 2 presents the relevant literature review. Section 3 provides a descriptive analysis of the data. Section 4 describes the methodology of the study. Section 5 explains the empirical results. Finally, section 7 describes the conclusions and gives policy recommendations.

2. REVIEW OF LITERATURE

A number of theories have been developed in economics that indicate the interaction of free market forces and would lead the economies to the equilibrium position. That is, the labor market always moves to equilibrium position ultimately based on the assumption of flexible wage rate. However, the market may not clear in the presence of minimum wage legislation and leads to involuntary unemployment. Goodwin et al. (2006) pointed out that when the minimum wages are paid above the equilibrium wage rate, fewer workers will be hired and this will result in involuntary unemployment.

According to Keynes (1936), unemployment results from low market demand for workers such as the available jobs are inadequate for all those who are willing to work. Lack of demand would lead to lower investments and increase in unemployment. Human capital theory indicates that human capital variables such as education and training explicate the prospects of unemployment among youth (Lindley, 2005).

A study by Sofi and Yasmin (2011) analyzed educated unemployment in Jammu and Kashmir. The study found that unemployment among educated youth is mainly because of the traditional education system that mainly focuses on theoretical knowledge rather than field practices.

Similarly, Rajarshi and Mukherjee (2013) analyzed the educated youth unemployment in India. The study focused on the intensity of unemployment among educated youth. The study found that mismatch exists between demand for educated young workers and supply of these workers. There is a need to analyze the strategy of human resources development in the country. Similarly, Maqbool et al. (2013) analyzed the determinants of unemployment in Pakistan over a period of 1976-2012. The study examined the relationship between

unemployment, population, foreign direct invest, inflation and external debt. The study found that Philips curve exists both in short run as well as in long run.

Batu and Hussen (2016) analyzed the major factors responsible for youth unemployment in Ethiopia. The study indicated that youth unemployment represents underutilization of scarce resources which are vital for social and economic progress of the country. The study is based on the cross-sectional data collected by Central Statistical Agency (CSA) in 2015. The study used descriptive and cross tabulation analysis for this purpose. The study showed that youth unemployment is highly associated with regional location, gender, marital status and education. The unemployment rate changes with references to regions, marital status, gender and education. The study found that students' willingness to start their own business is constrained by lack of finance and availability of appropriate workplace. The study suggested that government should work to create appropriate business conditions so that youths can create their own jobs. On the whole, provision of finance and workplace to initiate business and provision of training on entrepreneurship are important.

Dagume and Gyekye (2016) investigated the determinants of unemployment of young labor force in rural areas. The study was conducted in Limpopo (South Africa). Based on primary data, the binary logistic technique was applied to identify the social, demographic and economic factors which lead to unemployment. It was found that training and work experience were related with condensed odds of being unemployed. The study identified the worth of training and skills in explaining the challenges of unemployment among young work force.

Raifu (2017) focused on the economic growth and unemployment rate in Nigeria for 1981-2014. The study employed autoregressive distribution lag estimation technique. The study focused on the short run dynamic and long run impact of trade openness and current account balance on unemployment rate in Nigeria. The study found that trade openness worsened unemployment rate both in short run and long run. The study suggested that domestic production is needed so as to guarantee the creation of employment opportunities in the country.

A study by Pettersen (2017) analyzed the issue of youth unemployment in Kampala particularly in the context of unemployment among young women. It was found that the mismatch in skills, low level of experience, and high migration rate are major reasons of unemployment in Uganda. The study found that household factors are more likely to affect the employment of women. More specifically, women are unable to participate in the labor market due to their husbands' preferences to perform the traditional household role.

Likewise, Tangtipongkul and Wangmo (2017) explored the determinants of unemployment using Labor Force Survey of Bhutan. The study found that reservation wages have strong positive impact on unemployment among youth. Similarly, education is likely to have positive impact on unemployment among young individuals. The study found that young workers who have acquired some

skills have lower probability to be unemployed by about 5 percentage points. Increase in age is likely to decrease the intensity of unemployment. Moreover, married workers are less likely to be employed as compared to unmarried workers. This may be so because the married workers have to perform more household chores.

Hussain (2019) analyzed the causes of youth unemployment in Pakistan. The data used for this paper was collected from secondary sources using previous researches, official documents, newspapers and journal articles. The study analyzed that the causes of high youth unemployment are lack of proper skills, low education level, poverty, lack of capital, favoritism, corruption and high population growth rate in Pakistan. The study suggested that government should introduce development programs for youth. In addition, investment on education may be important to resolve the issue of youth unemployment in Pakistan.

Similarly, Imtiaz et al. (2020) investigated the factors which cause youth unemployment in Pakistan. The study observed that there are variety of factors such as political instability, lack of investment, backwardness of agriculture sector and over-population that influence youth unemployment in Pakistan. The study found that young people aged (15-24) have been affected by reduction in output production level. The study explained that political instability will increase the youth unemployment in the country. Whereas, political stability will lead to improve the economic opportunities which increases employment opportunities for young workers. Provision of jobs for youth is required for growth and peace in the country.

With the present scenario, this study is an effort to find out the determinants of unemployment among educated young workers in district Muzaffargarh, Pakistan.

3. PROFILE OF DISTRICT MUZAFFARGARH, PAKISTAN

The Town of Muzaffargarh was founded in 1794 by the Governor of Multan, Nawab Muzaffar Khan.[2] The meaning of Muzaffargarh is "Fort of Muzaffar" because the old town lies inside the walls of a fort built by Nawab Muzaffar Khan of Multan. In 1861 it became the headquarter of district Muzaffargarh. Muzaffargarh spreads over an area of 8,249 km and forms a strip between the Chenab River on its east and Indus River on its west, which pass along the eastern and western boundaries respectively of the district and a triangle at Ali Pur tehsil of the district. The district is bounded on the north by district Layyah, on the south by Bahawalpur and district Rahim Yar Khan across the river Chenab. District Multan is on the eastern side of district Muzaffargarh, across the river Chenab. District Jhang touches it on the northeast. Dera Gahzi Khan and Rajan Pur districts lie on the western side across the river Indus.

[2] The discussion in this section is partly based on information taken from (www.mgarh.com/profile.htm).

Table 1. Distribution of Educated Individuals

	Unemployed	Employed	Total
Region			
Urban	75	25	40
Rural	88	12	60
Gender			
Female	92	08	28
Male	78	22	72
Education			
Secondary Level	75	25	09
Intermediate level	88	12	23
Bachelor and Higher Level	81	19	68
Technical training			
Not Acquired	82	18	60
Acquired	73	27	40
Job preference			
Private Job	48	52	19
Government Job	90	10	81
Age in years			
18-20	90	10	38
21-23	85	15	30
24-26	73	27	25
27-29	62	38	07
Marital status			
Single	94	06	81
Married	32	68	19

Note. Authors' calculations. Figures are in percentages.

Muzaffargarh is the oldest and largest district of Pakistan by area and population. It has 4 tehsils and 93 union councils. According to the Census of Pakistan 1998, Population of the area is 3.4 million. People in the area are engaged both in public sector as well as private sector jobs. People work in the education and banking sector in the district, but the pace of the market is not much wider. The educated individuals face problem in finding work as required number of jobs is not available in the market. In other words, a limited number of jobs is available to educated people in the area. The main occupation in the district is found farming.

The economic activity is not much stronger due to lack of provision of sufficient number of jobs both in public and private sectors in the district. The young people particularly educated ones face difficulty to find jobs in the area. The level of education is increasing day by day. People are availing the local educational institutes to get education. They also move to other nearby cities like Multan for higher education. People in the area are ambitious about quality education of their children. They expect to have a high standards job for their children but they seem to fail in their mission due to non-availability of standard jobs in the area. In the district Muzaffargarh, different government and private sector educational

institutes produce a bulk of young graduates every year. When these educated young individuals enter in the labor market, they face difficulties to find jobs because of narrow capacity of the local labor market. Since the labor market cannot absorb the educated labor force to a greater extent, it produces educated unemployment in the district. Therefore, unemployed educated young individuals are likely to be a burden on the economic resources of the area.

Table 1 shows the distribution of educated unemployed persons. It is seen that 40% data is collected from urban areas and 60% from rural areas. Data indicates that unemployment increases with education level. It is observed that individuals with intermediate education have 88% higher probability to be unemployed. Even high unemployment is observed among those individuals who have bachelors and higher education.

This study examines that individuals without any vocational training are more unemployed. This shows that acquiring training would help youngsters to secure their job. Data reveal that 27% individuals having technical training are able to find some job than 18% individuals without any training. Likewise, those who prefer government job are more likely to be unemployed than those who prefer private job.

It is observed that the probability of being unemployed is higher among youngsters than older individuals. This is so because the experience level increases with age and therefore the probability of finding a job among educated individuals also increases.

Single workers are found more unemployed than married individuals. As the single workers have less household financial responsibility than married individuals, they may have higher reservation wages than married individuals.

4. DATA SOURCE

The objective of the study is to identify the factors which effect the probability of being unemployed among educated youth. This study uses the micro data of young educated individuals. The data set contains information of educated young individuals about their employment status, public and private job preferences, age, gender, marital status, level of education, family setup and size, family income, and residence. Data explores the dimensions of unemployed and employed young educated labor force. It provides information about intensity of unemployment among educated youth.

Data is collected from field survey of district Muzaffargarh. Sample comprises of unemployment among educated individuals of 18 to 29 years having at least secondary school education. The sample size consists of 400 persons where 330 educated individuals were found unemployed as compared to 70 individuals who were employed. The information was obtained by questionnaires. Convenient sampling technique was adopted to collect information about educated youth.

Mainly the individuals were interviewed from the public and private sector offices.

Table 2 provides sample distribution of respondents. It is found that 82% educated individuals remain unemployed whereas 18% are able to acquire some job.

Table 2. Sample Distribution

	Unemployed	Employed	Total
Frequency	330	70	400
%	82	18	100

Note. Authors' calculations.

5. METHODOLOGY

Dependent variable

Dependent variable is binary variable. That is, it takes value = 1, if individual is unemployed and value = 0, if the one has some job.

Independent variables

Age of Youth: Age is likely to be an important determinant of employment among educated young people. It is expected that age has negative relation with probability of unemployment among educated youth. This indicates that experience level increases with age and the probability of acquiring job also increases. In addition, the individuals may acquire some technical skills in terms of training and therefore, they are more able to qualify for some highly paid job with age.

Gender: In this study, both males and females are part of the labor force. It is expected that educated women may bear higher unemployment than educated males. This is so because the male members of the society are liable to find a job as they have primary responsibility to fulfill household basic needs whereas women are considered as the secondary earner of the family. In addition, male members of the labor force are preferred in the job market as compared to the female labor force.

Marital Status: It is observed that the married educated people feel more household financial responsibility than unmarried educated individuals. They have low reservation wages in order to accept a job offer as compared to unmarried educated people. Therefore, they may accept jobs which involve low wage rate and are relatively less likely to be unemployed. Qayyum (2007) found that married workers may accept low paying jobs in order to fulfill household financial responsibilities.

Preference for government/ Private Job: It is expected that educated individual having greater preference for government job than private may remain unemployed for longer time. The educated young individuals feel more job security in public sector job. That is, uncertainty in terms of wage payments and length of job tenure may be lower in government sector. However, people feel greater insecurity in terms of payments, working environment and length of job tenure in private sector jobs. The preference for government job may positively affect the probability of being unemployed. Hyder (2006) found similar results.

Education Level of Youth: We have classified education in four groups like secondary, higher secondary, bachelors and higher. Therefore, dummy variables are formulated for four groups of education. It is observed that human capital investment increases the expertise of individuals and thus the probability of finding a job. Workers with higher human capital may become status conscious and like to wait until they get suitable job. Hence they remain unemployed for some time.

Technical Education: Lack of technical skills may be one of the important reasons of unemployment among youth. It is expected that educated youth may have acquired education which mainly lack element of technical skill and training. Technical education is likely to increase the probability of acquiring a job. It is anticipated that having technical education may have strong positive impact on employment.

Family size: The educated young individuals belonging to larger households are expected to have lower probability of being unemployed than those belonging to smaller household size. This is because individuals in larger families have to bear the higher financial burden than smaller families due to presence of a greater number of members in larger households. Therefore, the educated young individuals may accept low profile job offer. In other words, educated individuals living in larger families may join jobs offering less rewards in order to bear the expenses of larger families.

Residence: It is expected that educated young individuals living in urban areas are more likely to be employed than those living in rural areas. This may be because of the fact that more high profile economic opportunities are available to educated youngsters in urban areas as compared to those living in rural areas. It is observed that labor market in urban areas is relatively of formal nature and presents higher prospects of work to educated people. However, the nature of the labor market in rural areas is relatively informal and therefore mainly offers work in family occupation. In family occupations, individuals have to either work free of rewards or for nominal rewards.

Specification of the model is as follows:

Unemployment= f (*age, gender, marital status, job preference, educational dummy for intermediate, bachelor and higher education, technical training, family size, region*)

Table 3 provides description of variables.

Table 3. Description of variables

Variable	Name of variables	Description
Dependent variable		
Unemp	Unemployment	=1 if an individual is not involved in some economic activity for wage, pay or profit and; =0 otherwise
Independent variables		
Personal Profile		
Age	Age of respondents	Age of individual in years
Male	Gender of young individual	=1 if individual is male and; =0 otherwise
Single	Marital status of individual	=1 if individual is unmarried and; =0 otherwise
Pref_govt	Preference for job	=1, if person has preference for public sector job and; =0 otherwise
Educational Profile		
Intermediate	Intermediate level of schooling	= 1, if individual has attained 12 years of schooling and; =0 otherwise
Bachelor	Bachelor level of schooling	= 1, if individual has 14 years of schooling and; =0 otherwise
Higher	Higher level of schooling	=1, if individual has acquired higher than 14 years of schooling and; =0 otherwise
Technical	Technical training	=1, if individual has acquired some training (like diploma); =0 otherwise
Household Profile		
F-size	Household size	Total family members
Urban	Residence	=1, if an individual lives in urban areas and; =0 otherwise

5.1. Normal Probability (Probit) Model

The binary dependent variable can be explained with the help of probit model. This technique emerges from normal cumulative distribution function (Gujarati, 2009). Assume that y* is the probability of being unemployed and depends upon a set of observed factors *Xi.*

$$y_i^* = \beta X_i + \varepsilon_i \qquad (1)$$

Where β is row and Xi is column vector that affect y* and εi has normal distribution with zero mean.

Y =1, if y^*> 0

=0 otherwise

Probability that y* is less than or equal to Y can be computed from normal cumulative distribution function as

$$P_i = \Pr(Y = 1) = (y^* \leq Y) = F(Y_i) = \int_{-\infty}^{\beta X_i} f(z)dz \qquad (2)$$

F(z) is density function. Z has normal distribution with zero mean and constant variance. P is probability distribution.

5.2. Logit Model

Another equally popular nonlinear model to handle limited dependent variable case is logit model. The model assumes the following cumulative probability density function:

$$P = \frac{1}{1 + \exp(-\beta X_i)} \qquad (3)$$

where P is the probability that educated individual is unemployed, e is the exponential value and β and X are the same defined as earlier. Since P, the probability of being unemployed is not directly observable, a dichotomous (0, 1) variable is constructed, taking the value of 1 if an educated individual is unemployed and zero otherwise.

It is straightforward to derive the following regression equation from logistic probability equation.

$$\ell n[P/(1-P)] = \alpha + \beta X_i \qquad (4)$$

Logit and Probit models give almost similar results. They are very close in the midrange but logistic function has slightly heavier tail than the Probit. The close similarity between them is confined to dichotomous dependent variable.

6. RESULTS AND DISCUSSION

This study employs probit and logit models to examine the factors that affect the probability of educated unemployment in Muzaffargarh.

The results of the probability of unemployment among educated youth are given in Table 4. The values of Pseudo R^2 are reasonably rational in the two models. We consider marginal effects to clarify estimates as the dependent variable is binary. Sign and significance of results are accurate. Estimated results from overall district (Table 4) are interpreted in detail. Results for urban and rural areas given in (appendix) can be interpreted in a similar way.

The results show that the educated males are less unemployed than educated females in the district. Generally, males are considered main bread earners in the families. Therefore, they are 12% less unemployed than female workers. This

finding is found related with findings of Tansel and Tasci (2004). According to Rabten (2014), the number of males hired were three times higher than the number of females hired in Bhutan. It is found that female labor force participation is low as compared to that of males.

Table 4. Overall Estimates of Unemployment

	Probit Estimates			Logit Estimates		
Variables	**Coefficients**	**t values**	**Marginal Effects**	**Coefficients**	**t values**	**Marginal Effects**
Personal profile						
Age	-0.11	-3.01*	-0.02	-0.21	-3.10*	-0.02
Male	-0.64	-2.48*	-0.12	-0.58	-2.43*	-0.12
Single	0.62	2.57*	0.11	0.55	2.71*	0.12
$Pref_{\_govt}$	1.28	6.72*	0.23	1.26	6.65*	0.23
Educational Profile						
Intermediate	0.60	1.85***	0.11	0.57	1.95**	0.12
Bachelor	0.62	2.01**	0.11	1.20	2.13*	0.12
Higher	0.40	1.17	0.07	0.82	1.32	0.08
Technical	-0.33	-1.74***	-0.06	-0.60	-1.76***	-0.06
Household Profile						
F-size	-0.06	-2.29*	-0.01	-0.11	-2.29*	-0.01
Urban	-0.29	-1.64	-0.05	-0.52	-0.52	-0.05
Constant	2.71	2.94*	-	5.09	3.00*	-
Summary of Statistics						
N	400			400		
Prob> chi2	0.000			0.000		
LR chi2(10)	-110.760			-131.739		
Pseudo R^2	0.296			0.295		

*Note: *, **, & *** indicate significance level at 1%, 5% & 10% respectively.*

Age is found an important determinant of unemployment. The results show that estimates of age have significant and inverse effect on the probability of unemployment. This explains that young workers are less expected to be employed than old workers. That is the workers may become more productive with age as they gain more experience with time. Tasci and Tansel (2004) found similar results for Turkey.

The results show that unmarried individuals are relatively more unemployed than married individuals. The single workers have to bear less economic

responsibilities in the household. The unmarried workers are about 11% more unemployed in both models. The results in both models are found significant at 1% level. Aranki and Daud (2012) found that unemployment among unmarried workers is higher than married workers.

The coefficients of dummy variables for education categories have positive and significant relationship with unemployment. This shows that probability of unemployment rises with education level. This indicates that individuals having intermediate or bachelor's education are more unemployed than those having secondary education. This may be mainly the result of mismatch between educational skills offered by the applicant and employment skills required by the employers. However, the coefficient of higher education is positive but insignificant. This shows that individuals with masters and higher education have higher probability to acquire job than those having secondary education. This reveals that highly educated individuals find higher probability of securing job even if market is not very favorable for them. Singh (2003) examined that given the higher education level, skillful individuals are more likely to be employed than those without skills.

Technical education is found to have negative and significant affect on the probability of unemployment among educated youth. This implies that people having technical education are more likely to acquire a job. This indicates that technical training lowers the probability of unemployment among educated individuals. It is therefore explored that workers who have acquired technical training have 6% probability to remain unemployed according to the estimates of both models. This shows that technical education improves their market skills and therefore they can get more chance to find job. Qayyum (2007) found similar results.

The results indicate that educated individual having greater preference for government job than private one remain unemployed for longer time. This is so because, the educated young individuals feel more job security in public sector job than in private sector job. The preference for government job may positively affect the probability of being unemployed. It is found that those who have preference for government job have 23% higher probability to be unemployed. Hyder (2006) support similar results. The preference for government job has positive association with the probability of unemployment.

Household size has negative correlation with unemployment. This shows that knowledgeable individuals belonging to larger families have lower probability to be unemployed as they are in need of acquiring job to fulfill the household financial responsibilities.

Location is one of the important determinants of unemployment. It is estimated that young individuals living in urban areas are more employed than those living in rural areas as they find higher educational and job facilities available in urban areas. Hence the coefficient of urban dummy is negatively associated with the chance of being unemployed. The results indicate that individuals belonging to

urban areas have 5% lower probability to remain unemployed as compared to those living in rural areas of the district.

7. CONCLUSION AND POLICY RECOMMENDATIONS

The study concluded that probability of unemployment is found to increase with education level. Workers with higher human capital level may become status conscious and like to wait until they get suitable job. Hence they remain unemployed for some time. The coefficients of dummy variables for education categories are found to have positive and significant relationship with the probability of unemployment among youth. This shows that probability of unemployment rises with education level. Technical education is found important to reduce unemployment among educated young individuals. This implies that people having technical education are more likely to acquire a job. The results indicate that educated individual having greater preference for government job than private one remain unemployed for longer time. This is so because, the educated young individuals feel more job security in public sector job than in private sector job.

In addition, it is revealed that male workers belonging to larger families living in urban areas are found to be less unemployed than female workers living in rural areas. The educated young individuals belonging to larger household have lower probability of being unemployed than those in smaller household size. This is because they have to bear the higher financial burden in larger household.

- It is expected that acquiring technical skills may be valuable in lowering the unemployment among educated young people. Therefore, it is suggested that more institutes for technical education should be opened in the area so that young individuals may have proper facility to acquire technical education.
- Young educated work force may be encouraged to participate in the productive activities by creating job opportunities for them in the labor market.
- Young educated women may be facilitated in the labor market by providing them incentive (such as child care facilities at work place)

References

Aranki, T., & Daud, Y. S. (2012) Unemployment duration in the Palestinian territories: An analysis of personal and political factors, Progress in Economics Research: Nova Science, Volume 21, pp.107-132. https://www.researchgate.net/publication/.

Bakare, A. S. (2011).The determinants of urban unemployment crisis in Nigeria: An Econometric analysis. Journal of Emerging Trends in Economics and Management (JETEMS), 2(3), 184 -192.

Batu, M., & Hussen, M. (2016). Determinants of youth unemployment in urban areas of Ethiopia, International Journal of Scientific and Research Publications, 6(5), 343-350.

Bhebhe, B. t., Bhebhe, R., & Bhebhe, S. (2016). An investigation to the causes of the unemployment among youths in the city of Harare. Global Journal of Arts, Humanities and Social Sciences, 4(2), 90-102.

Dagume, M. A., & Gyekye, A. (2016). Determinants of youth unemployment in South Africa: Evidence from the Vhembe district of Limpopo province. Environmental Economics, 7(4), 59-67.

Daly, M.C., Hobijin, B., Sahin, A., and Valletta, R. G. (2012). A search and matching Approach to labor markets: did the natural rate of unemployment rise? The Journal of Economic Perspectives, 26(3), 3-26.

Gujarati, D.N. (2009). Basic Econometrics. Tata McGraw-Hill New Dehli.

Goodwin, N. R., Nelson, J. A., Ackerman, F. & Weisskopf, T. (2006). Theories of unemployment.Online,http://www.eoearth.org/article/Theories-of-unemployment.

Government of Pakistan (2018). Federal Bureau Of Statistics, Statistics Division, Islamabad.

Government of Pakistan (2017). General information about district Muzaffargarh, (www.mgarh.com/profile.htm).

Hyder, A. (2007). Preference for Public Sector Jobs and Wait Unemployment: A Micro Data Analysis duration in Pakistan, Pakistan Institute of Development Economics Working paper, No. 20., 1- 9.

Hussain, W. A. (2019). A study on the causes of youth unemployment in Pakistan, Gilgit Baltistan Awareness Forum. https://gbcef.blogspot.com/2019/12/a-study-on-causes-of-youth- unemployment.html

Imtiaz, S., Ali, A., Khan, Z., Ullah, M., Khan, M. & Jacquemod, J. (2020). Determinants of Youth Unemployment in Pakistan. International Journal of Economics and Financial Issues, 10(5), 171-177.

International Labour Organization. (2020), Global Employment Trends for Youth 2020:

Technology and the Future of Jobs. Geneva: International Labour Organization.

Keynes, J. M. (1936). General Theory of Employment, Interest and Money. Macmillan, Cambridge University Press.

Lindley, J. (2005). Explaining ethic unemployment and activity rates: Evidence from the QLFS in the 1990s and 2000s. Bulletin of Economic Research, 57(2), 185-203.

Maqbool, M. S., Mehmood, T., Sattar, A. & Bhalli, M. N. (2013). Determinants of Unemployment: Empirical Evidences from Pakistan, Pakistan Economic and Social Review, 51(2), 191-207.

Msigwa, R., Kipesha, E. F. (2013). Determinants of youth unemployment in developing Countries: Evidences from Tanzania. Journal of Economics and Sustainable Development, 4(14), 67-77.

Nazir, F., Cheema, M. A., Zafar M. I., & Batool, Z. (2009), Socio-economic impacts of unemployment in urban, Faisalabad, Pakistan. Journal of Social Sciences, 18(3), 183-188.

Rabten, P. (2014). Understanding the dynamics of labor market and youth unemployment in Bhutan: A study for policy and strategic responses. (V.R.F series No. 487). Japan: Institute of developing economies, Japan external trade and organization, 180-200.

Rajarshi, M. & Mukherjee, D. (2013). Unemployment among educated youth: Implications for India's demographic dividend. Department of Economics, University of Burdwan, Golapbag, Burdwan, West Bengal-713104, India, 1-13.

Pettersen, A. (2017). Youth unemployment in Kampala: Challenges and survival strategies for young women in Kampala. Faculty of Humanities, Social Science and Education Centre for Peace Studies Kampala, 1-50.

Qayyum, W. (2007). Causes of youth unemployment in Pakistan. Pakistan development Review, 46(4), 611-621.

Raifu, I. A. (2017). On the determinants of unemployment in Nigeria: what are the roles of trade openness and current account balance? Review of Innovation and Competitiveness, 3(4), 5-30.

Singh, C. S. K. (2003). Skill, Education and Employment: A dissenting essay. Economic and Political Weekly, 3271-3276.

Sofi, B. A., & Yasmin, E. (2011). Magnitude of educated unemployment among Rural youth of Jammu and Kashmir: A Case Study of Pulwama District. International Journal of Educational Research and Technology, 2(2), 126-136.

Tansel, A. & Tasci, H. M. (2004). Determinants of unemployment duration for men and women in Turkey. IZA Discussion Paper No. 1258.

Tangtipongkul, A., & Wangmo, D. (2017). Determinants of unemployment: Characteristics and policy responses, Southeast Asian Journal of Economics, 5(2), 27-48.

Appendix

Estimation results Table 1A and Table 2A almost provide comparable symbol and implication for urban and rural areas. It is found that magnitude of unemployment is higher in rural areas than in urban areas because labor market for educated workers is relatively weaker than rural labor market.

Table 1A. Estimates of Unemployment in Urban Areas

	Probit Estimates			Logit Estimates		
Variables	**Coefficients**	**t values**	**Marginal Effects**	**Coefficients**	**t values**	**Marginal Effects**
Personal profile						
Age	-0.25	-2.92*	-0.02	-0.46	-2.95*	-0.02
Male	-1.78	-2.40*	-0.15	-3.24	-2.36*	-3.24
Single	1.60	2.61*	0.14	2.98	2.62*	0.14
Pref_govt	1.09	2.08*	0.09	2.03	1.93***	0.09
Educational Profile						
Intermediate	2.22	2.65*	0.19	4.08	2.50*	0.18
Bachelor	1.75	2.42*	0.15	3.06	2.02**	0.14
Higher	1.70	2.12*	0.15	3.18	2.12*	0.14
Technical	-0.44	-2.02**	-0.04	-0.83	-1.72***	-0.04
Household Profile						
F-size	-0.21	-2.72*	-0.02	-0.44	-2.76*	-0.02
Constant	6.42	3.08*	-	12.24	3.16*	12.24
Summary of Statistics						
N	161			161		
Prob> chi2	0.000			0.000		
LR chi2(10)	-24.880			-24.712		
Pseudo R2	0.612			0.615		

*Note: t-values with *, **, and *** are significant at 1%, 5%, and 10% levels of significance, respectively.*

Table 2A. Estimates of Unemployment in Rural Areas

	Probit Estimates			Logit Estimates		
Variables	**Coefficients**	**t value**	**Marginal Effects**	**Coefficients**	**t values**	**Marginal Effects**
Personal profile						
Male	-0.76	-1.85***	-0.13	-1.40	-1.82***	-0.14
Age	-0.10	-1.91***	-.017	-0.17	-1.88***	-0.02
Single	0.73	2.31*	0.13	1.41	2.59*	0.14
Pref_govt	0.59	5.79*	0.08	2.73	5.63*	0.07
Educational Profile						
Intermediate	1.01	2.48*	0.18	1.81	2.43*	0.18
Bachelor	1.15	2.84*	0.20	2.11	2.80*	0.21
Higher	0.58	1.28	0.18	1.042	1.28	0.15
Technical	-0.49	-1.90***	-0.03	-0.81	-1.77***	-0.03
Household Profile						
F-size	-.06	-1.87***	-.01	-0.05	-1.83***	-0.05
Constant	1.73	1.40		2.63	1.21	-
Summary of Statistics						
N	239			239		
Prob> chi2	0.000			0.000		
LR chi2(10)	75.547			76.411		
Pseudo R2	0.362			0.355		

*Note: t-values with *, **, and *** are significant at 1%, 5%, and 10% levels of significance, respectively*