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Private Financial Returns to Education for Employees of Financial Institutions in Lahore: Microeconometric Analysis

Muhammad Afzal*, Ishrat Begum**, Hina Fatima & Kafeel Sarwar***

Abstract

This study intends to econometrically determine whether earnings of employees, of financial intuitions in Lahore-Pakistan, are affected by their education only or by some other factors. Primary data through a questionnaire were collected from a sample of 455 employees. There results reveal that the main determinants of employeeôs earnings in financial institutions are education, experience, computer literacy, gender, nature of job, family background and family status. The concavity in experience-earnings profile is found. Higher returns coupled with education, experience, and computer use variables provide a clear support to Human Capital theory. The returns to education for entire sample is found to be around 12 percent. The returns to education for the employees of Punjab Provincial Cooperative Bank is found to be the highest (15.4 percent) among all. Public sector financial institutions, on average, are paying more to their employees as compared to their counterparts in private sector. Work experience is found to be the most important factor for the earnings of the employees of each category of financial institutions. Those who intend to join Islamic Banks like Meezan Bank must have sufficient work experience, computer literacy and family background and family status. The policy makers of financial institutions are suggested to formulate such salary structure that would help in eliminating the earnings differential for the employees of Islamic, Schedule and Governmentôs banks.

Key words: Returns to education, financial institutions, microeconometric analysis. JEL classification: I21, I24, I25, P36, P46, J01, J21, O15

*Professor of Economics Department of Economics, Lahore College for Women University, Lahore.
e-mail: muhammad_afzalch@yahoo.com
**Ph.D. Scholar at Department of Political Science University of the Punjab, Lahore.
***Graduate from Department of Economics, University of the Punjab Lahore-Pakistan.

Introduction

Investment in education was not well thought in any country earlier to 19th century. Spending on schooling, on-job training and other similar forms of investment were small. During the 20th century, education, skills and the attainment of knowledge have become important element of an individual as well as nationôs productivity. Becker (1962) and Mincer (1974) developed the conventional theory of human capital that explained the importance of human capital in life time earnings. Lucas (1988) developed one of the first Endogenous Growth models and said that education is one of the significant elements that generate the technological development in an economy. Later, Mankiw, Romer & Wiel (1992) explained that high level of economic growth rate could be achieved by high level of human capital.

Human capital consisted of many variables including education, health, skills, experience, aptitudes, on job trainings and migration to better job. Goode (1959), Schultz (1961), Khilji (2005), Afzal, Rehman, Farooq & Sarwar (2011) and Afzal et al. (2012) have viewed that education served as the most significant constituent of human capital. Firms do not hire the human capital, in fact they hire the employees who attain the traits of the human capital *i.e.,* skill, experience and knowledge as it improved the productivity and have economic value (Hyder, 2007). Education not only broadens the horizon of individuals by enhancing their thinking power, but it also motivates the people to actively participate in the social and economic development of the economy. Education enhances the chances of getting a better job and higher rewards.

Education has a positive impact on earnings and it is also the important determinant of the economic growth (Kingdon & Soderbom, 2007; Seetanah 2009; Afzal, 2011). The workers with better education are capable to earn more (Card, 1998; Duraisamy, 2002; Pages & Stampini, 2009; Afzal, 2011; 2014). Government should keep an eye on the availability of educational attainment which could be favorable in high earnings and ultimately leads to high economic growth and development (Milcher & Zigova, 2005).

Investing in education not only helps workers to enhance their productivity which is the source of high life cycle earning profiles, but it also affects the quality of the economies of labor force. The following are some important questions regarding investing in education that come in oneôs mind: what should one get by investing in education rather employment? Is investing in education more profitable? How much investing in education is profitable? It is the profit on the basis of which people and government give priority to acquire education (Psycharopoulos, 1995). This is very

important for families as well as government because they are running with shortage of reserves with aiming of maximizing their needs. This could also be a better determinant of enhancing the performance of the economy which also affects the planning of the government regarding education (Chuang & Lai, 2010).

The returns to education (RTEdu.) are of many kinds on the basis of different segments of society, persons and institutions *etc.,* which are benefited from education differently. Different form of RTEdu.isdescribed as given below:

Private Returns to Education: On the basis of private returns, individuals decide to acquire higher education rather than employing themselves.

Private financial returns to education: Wage benefit of education; acquiring education improves the earnings and/or employment prospects of individuals.

Private non-financial returns to education: it includes improvements in individualôs welfare that are not a part of measured earnings e.g., easy access to highly paid jobs, better working environment etc.

Social Returns to Education: On the basis of these returns, the society or state decide to further invest in the field of education.

Narrow Social Returns to Education: These returns are only internalized by the individual with attainment of education.

Wide Social Return to Education: The wide social returns also include the externalized effect of the education.

Fiscal Returns to Education: Returns which are purely related to the countryôs public finance *i.e.,*what the treasury of a country will get when it will spend on education.

It has been analyzed in the human capital theory that the demand for education is mainly determined by the social and private RTEdu.. On the basis of private returns, individuals decide to study further rather than employing themselves. Fersterer & Ember (2002) found that the RTEdu. is falling over time not because of the lower quality of education but it is due to the increase in supply of more educated workers. Investment in human capital is just like investment in physical capital under the consideration that the benefits of the investment in human capital is greater than the rate of interest. It is actually that investment which has some cost at present in the

form of fee but expect to get benefits from this investment in future in the form of high wages (Wei, Tsang, Xu& Chen, 1999). The investment in human capital is profitable as it improves the productivity of individuals which, in turn, raises their wages. This could also reduce the poverty level by providing high earnings. The decision of the individual to invest in education rather than employing is based on the earning returns which they could get on the basis of acquired education.

Empirical literature reveals that RTEdu.is observed higher in developing countries as compared to developed countries. The employees who have obtained the training related to job earned higher income as compared to the others. The impact of training and education has long lasting effects on earnings and economy as well. Education brings inequality in individualôs earnings on the basis of the skills they acquired. In developing countries like Pakistan, most of females are deprived of the educational facilities. They are not permitted to go to schools and if permitted, are sent to low quality schools. Hence the gender gap regarding education earnings has significantly widened. That is the reason that females are less productive and do not efficiently and effectively take part in the growth process of the economy. Females are equipped with less education thus they are not able to grasp high paying job which further reduces the parentôs insight of increasing investment in education of females. Whereas, studies have proved that the females are more productive than males if they are jeweled with proper qualification, training and skills (Blundell, Dearden, Meghir & Sianesi, 1999).

Education impacts positively the earnings profile, productivity of the individuals and the economy as a whole. Education also boosts the economic growth and development of a nation. Education is an important basic necessity of the developed, developing and underdeveloped countriesô residents. Earning profiles of the workers in different sectors are also observed discriminations on the basis of education, gender, working and education sector etc. To examine the education earning relationship for the employees of financial institutions in Lahore, the impact of these discriminations on employeesô earnings is considered in this study.

Wage differentials can be observed extensively in financial institutions on the base of experience, educational qualification, age, tenure and switching to other job etc. Financial institutions play the important role in the process of economic growth. The financial institutions serve to the consumers, businesses and other institutions by providing them the facilities of transactions and credit. These institutions include the banks (Commercial, Specialized and Islamic banks), insurance companies, stock markets and money lenders.

It can be concluded from the discussion that education in each and every sense is very important for economic growth and individualôs earnings. On the other side, financial institutions also play a significant role in economic growth process of a country. There seems to be a gap in literature that there is hardly any study in literature that measures the relationship between education and earnings for the employees of financial institutions. There also hardly exits any study that found the determinants of earnings for employees of financial sector in Lahore. This is perhaps the first study in Pakistan which covers the relationship between education and earnings and also finds out the determinants of earnings of the employees working in financial institutions of Lahore Punjab-Pakistan.

Statement of Problem

The linkage between education and earnings have been very strong. The literature based on education and earnings found positive relationship between education and individualôs earnings. The significant effect of education on earnings is considered to encourage the younger to continue their studies beyond the compulsory level of education. Economists are always having keen interest to study the education and its impact on the earning profile of individual and the society. Menon (2008) found that RTEdu. have significantly effect on the intentions of the students to pursue higher education rather than to enter in the labour market.

There exists a gap in literature that the linkages between education and earnings have not been examined in the financial institutions of Pakistan. It is high time the researchers examined the relationship between education and earnings and explored drivers of earnings of the employees working in financial institutions of Pakistan. This study is designed to explore the relationship between education and earnings and also find out the determinants of earnings of the employees working in financial institutions of Lahore Punjab-Pakistan. This study also makes a comparison of education-earning linkages between Governmentôs banks, Islamic banks, Specialized banks, Schedule banks and Insurance companies.

The present study has following objectives:

1. To estimate PFRTEdu. for employees working in financial institutions of Lahore Punjab-Pakistan.
2. To determine the relationship between education and earnings of the employees working in financial institutions of Lahore Punjab-Pakistan.
3. To examine the major determinants of earnings of the employees in financial institutions of Lahore Punjab-Pakistan.

Present research work is only confined to determine the relationship between education and earnings of employees of financial institutions of Lahore. This study is also delimited to the employees of financial institutions of Lahore Punjab-Pakistan as the employees of other institutions cannot be treated at par. The rest of the paper is organized as: section II includes review of literature. Research methodology is presented in section III. Section VI consists of empirical results and their interpretation. Conclusion and recommendations are given in last section.

Review of Literature

Education increases individualôs productivity and earnings and ultimately influences economic growth and development of an economy. The more educated and high skilled persons can avail high earnings as compared to their counterparts. Many studies examined the education- earning relationship by using different factors including levels of education, skills, pre-job training and post job training, experience, family background, wealth of the household, mode of the education and gender of the employee. Selected reviews of literature are presented below from all over the world, especially from developing countries like Pakistan.

The employees who are empowered with higher level of education, skills and trainings are capable enough to increase productivity of firms and thus the economy as a whole by grasping technological changes and innovations in the market structure. Blundell, Dearden, Meghir & Sianesi (1999) have found that the higher level of education and better skills increased the chances of higher earnings.

People have acquired level of their education on the basis of their ability. Chaung & Lei (2010) have estimated the rate of RTEdu. in Taiwan and concluded that returns were higher for the university education *i.e.,*19 percent and 15 percent, as compared to the returns of average education *i.e.,*11.55 percent and 6.6 percent for 1990-91 to 2000-01, respectively. The returns were showing decreasing trend in 2000-01 as compared to 1990-91. This may due to the availability of the large number of universities and massive supply of graduates in 2000-01 than that of in 1990. Ashenfelter, Harmon & Oosterbeek (1999) reviewed 97 different studies on education- earning relationships. The study results show that no doubt education impact positively on earnings but the effect on earnings is not solely awarded through education. It is also affected by some other factors *i.e.,* ability and quality of education.

Psacharopoulous & Patrinos (2002) have found that returns were higher for middle and low income countries. The average return has been found 10percent. In

case of Asia, they found that the returns by acquiring primary, secondary and higher education were 16.2 percent, 11.1percent and 11.0percent, respectively. The overall world average return to education by acquiring primary, secondary, and higher education were 18.9percent, 13.1percent and 10.8percent, respectively. The private returns are 26.6percent for primary education, 17.0percent for secondary education while 19.0percent is for higher education. The returns have found the higher for female with higher education than male with higher education and it found lower for female with primary education than male with primary education. Psacharopoulos & Patrinos (2004) examined that the tendency of RTEdu. for female was higher than male in developing countries which reflects the femaleôs lower base level of education as compared to males. Vaillancourt (1995) has examined that education return rates were found to be higher for female than that of male (who completed college and bachelor degree). The rate of returns has tended to diminishing with the increased in educational level. Rate of returns was also pertaining variation across the fields of study as the rate of return was higher for those who acquire health degree as compared to those who completed the degree of humanity. Donoghue (1999) is also in the favor that, female workers earned more than male workers.

The study by Wei, Tsang, Xu& Chen (1999) reveals that male workers earn more than female. Nasir (2002) found that although earnings of female workers increased with the increase in education and experience but still it was lower than their male counterparts. The male workers having skills have earned 10 percent more than those who have not. The five year experience revealed that earning has increased by 28 percent and 21 percent for male and female, respectively. Male worker reached at the highest level of earning with 34 years of experience while female reached with 39 years of experience. The male and female workers working in urban area have higher earnings as compared to rural areas employees.

The results of the study by Asadullah (2006) and Warunsiri & Mcnown (2010) showed that workers who worked in urban areas earn more than those who worked in rural areas. RTEdu. have found more for female workers than that of the male workers. Further, Asadullah (2006) have also found that earning differentials have found in sectors, as private sector paid more as compared to the public sector. Hyder (2007) also found that male workers have higher wages at all levels of education than that of female. Public sector workers have higher wages and higher education as compared to private sector workers.

Naderi & Mace (2003) have analyzed relationship between education and earning in the manufacturing sector of Iran. The multilevel estimation has showed

that there was positive and significant association between higher education, earning and experience. OLS estimation results showed that firm variable, year of schooling and experience have the significant effect on workers earnings.

Investment in human capital is profitable as it enhances the productivity and earnings of the individuals. Using primary data, Afzal (2011) estimates the private financial returns to education for the workforce working in educational institutes of Lahore. The author found that years of education, experience, family background and status, age, working hours, computer literacy, spouse education and occupation have affected the earnings of the workforce positively and significantly. The returns of obtaining college education were higher (9.1 percent) than university education (4.2 percent) and school education (3.8 percent). The contribution of computer literacy to the earnings has been found to be highest (15.3 percent) in case of university employees. Earing differentials, have been found in favor of male employees as compared to female and in favor of teaching employees as compared to non-teaching employees.

Ashraf & Ashraf (1993) have analyzed the earning differentials on the basis of gender, sectors, province and residence in Pakistan. They found that workers of the urban area enjoyed high earnings as compared to the workers of the rural areas. Agricultural workers irrespective of gender earn high wages than any other sectors except finance sector. Females earn comparatively high than males at the completion of the each level of education. The gender gap experienced higher in rural areas as compared in the urban areas. The male-female earning gap was observed higher in 1979 *i.e.,* 63.27percent which dropped down to 33.09percent in 1985-86. This gap was still facing the declining trend due to the change in social attitude towards the increasing participation of women in process of economic growth. The gender earning gap was found to be the negative in case of Baluchistan. Male to female earning differentials were found to be the highest in rural Sindh. In Punjab and KPK and in three industries, the gender earning gap was dropped sharply between 1979-80 and 1985-86.

Aakvik, Salvanes & Vaage (2005) showed that family characteristics were very crucial indicators of school enrollment, especially for girlôs enrollment. Family income appeared to be highly significant and positive with educational attainment. The results also showed that fathersô college degree impact additionally 25percent more on childôs college degree. The chances of childôs education increased with the increasing in parental education. Motherôs education found a key indicator for girlsô enrollment. Heyneman (1979) has concluded that socioeconomic status have appeared significant for United States students but not for Uganda students. Altonji &

Dunn (1995) have found that family background and school characteristics impacted significantly and positively on the high return of the education. Cooper & Cohn (1997) have measured that fatherôs educational attainment have the positive and significant effect on individual education except in the case of black males. Patrinos (1995) found that the relationship between family status and family background have negative in United Kingdom, positive in France, whereas no linear relationship was observed in USA. He has also found direct linkages between family status and childôs returns in Israel, Tanzania, Brazil and Kenya. Khan & Irfan (1985) has projected and analyzed the effect of the family background on the earning function in the case of Pakistan. They also computed the private rate of returns at attainment of the different levels of education. It has been analyzed that, as the level of education increased, the returns are also increased but unlike other developing countries, the private rate of returns are lower in Pakistan. The results showed that, the family background impact positively and significantly on the earning profile of the individuals.

Aslam (1999) has explored the relationship between education, employment and earning in Pakistan. The author highlighted the importance of education in the improvement of individual productivity, increasing earnings which could elevate the people from their poor life style. In Pakistan, females are kept underprivileged of the education facility which resultantly broadens the gender gap in achieving better employment opportunities. It is of great importance to narrow down the gender gap through accessing the educational facilities and conveyed the equality in male-female earning by providing lucrative jobs for women.

Saxton (2000) analyzed that the demand of human capital was going to be increased in future which ultimately increased the financial returns. The returns were only 6.2percent in 1979 which increased to 10percent in 1993. Earning of individual was effected positively with year of schooling, family background and educational institutions. The author also showed that education also contributed to the economic growth through dissemination and transmission of knowledge. Educational returns are not only financial but also non-financial and social (capable of being better father, mother, voters and citizen). Government should mainly focus on the educational facilities provided to the public for the development and improvement of the human capital and ultimately economy as a whole.

Psycharopoulos (1995) studies the profitability which an individual received by investing in education. He explored the social and private returns of education by taking sample data of Venezuela and Guatemala. The result of *Full Discounting Method* has showed that in Venezuela the private returns were 12.4 percent, 10.2

percent, 29.4 percent for, university secondary and primary level education, respectively. The social returns were 7.1 percent, 7.9 percent and 19.4 percent for university, secondary and primary level. The result of extended earning method showed that in Guatemala, the rate of return was 14.7 percent,15 percent and 31 percent for higher level, secondary and primary, respectively. In different countries, the returns pattern varies with educational level. Academic qualifications have attracted higher rewards in labour market (Sianesi, 2003). Returns from primary education returns are found more than that of secondary education and even from higher education (Psacharopoulos, 1994).

In case of Pakistan, Khan & Irfan (1985) examined that the rate of returns positively varied with the educational level. In Pakistan, the returns of different level education have found lower compare to other developing countries. Positive and significant relationship have also found between workerôs family background and his earnings. Afzal (2011; 2014), Cohn & Addison (1998), Light (1998), Cohn (1997), Carnoy (1997), Preston (1997), Griffin & Ganderton (1996), Griffin & Edwards (1993), Mace (1992), Ashenfelter, Harmon & Oosterbeck (1990), Psacharopoulos (1985), Psacharopoulos & Layard (1979), Cooper & Griliches (1977) and Mincer (1974) have used earnings functions to found the linkages between education and earnings. The results of all above studies supported the positive relationship between education and earnings.

Some studies have analyzed the education earning relationship and earning differentials among the employees resides in Pakistan. Some of these studies are presented by Ahmad & Sirageldin (1994), Ashraf & Ashraf (1993; 1993a), Guisinger *et al.* (1984), Hamdani (1977), Haqe (1977) and Khan & Irfan (1985). However, most of these studies are based on the secondary data such as Pakistan Integrated Household Survey (PIHS), Pakistan Living Standards Measurement Survey (PLSM) and Labour Force Survey. However, Afzal (2011) and Afzal (2014) have used primary data but these studies are delimited to workforce working in educational institutes of general nature. There are two main reasons to conduct present study. Firstly, there are only two studies in Pakistan which are based on primary data collected by the researcher himself to investigate the PFRTEdu. and determinants of earnings. Secondly, econometric analysis to estimate earning differentials for the employees of the financial institutions is not yet applied.

This research also enlightens the different sources which are the base of the earning differentials in the financial institutions of Pakistan. The results of this study can easily be generalized for provincial and national levels as the data for the study was collected at random sample basis. The primary users of this study would be

economic planners and policy makers in banking sector. The students in general can also benefit from the results of this study for future career planning and to continue further studies.

Methodology

This study makes use of the econometric model to estimate effect of the education on earnings profile of workers, who are working in financial institutions of the Lahore, Pakistan. It is a quantitative study to explore different indicators of earnings of employees of the financial institutions of Lahore. Primary data were collected by the researchers themselves to achieve the objective of this study. Data were collected by conducting surveys in banks (Government, Specialized, Scheduled and Islamic banks) and Insurance Companies using a questionnaire.

Population and the Sample of the Study

All type of employees of different banks (Government, Specialized, Scheduled and Islamic banks) and Insurance Companies that are working in the domain of Lahore, Punjab-Pakistan are population of this study. This study selects the National Bank of Pakistan (NBP) as it represents the government bank. This study also selects the Muslim Commercial Bank (MCB), as it represents the Schedule Commercial Bank. Meezan Bank (MB) was selected as it represents the Islamic mode of banking. From the side of specialized banks, the Punjab Provincial Cooperative Bank (PPCB) was selected. Adamjee Insurance Company Limited and Atlas Insurance Limited were selected as these banks represent the insurance companies. The two insurance companies were selected because the population of these two companies is limited in Lahore. So make a reasonable sample both the insurance companies were selected. Stratified random sampling technique was employed for the collection of data. A sample of 455 observations from the different banks and insurance companies was selected for the analysis of the data through a questionnaire. In the sub sample,129 workers from NBP, 117 workers from MCB, 77 workers from MB, 69workers from PPCB and from Insurance Companies (Adamjee Insurance Company Limited and Atlas Insurance Limited) 63workers were selected. The initial draft of questionnaire has borrowed from Afzal (2011). The necessary amendment and improvement have been made in that questionnaire on the basis of literature review, objective of the study and discussion with the experts. After that, questionnaire got validation by the expertôs opinion in the field of education, economics, finance and banking sector. Pre-testation of this questionnaire was also made.

Model Specification

To estimate the education-earning relationship, this study has applied Earning Function approach which was the work of Mincer (1974) and this approach (also the augmented version of it) is also used by many researchers who worked in the domain of labor economics.

The specification of the regression models for the variable *'lnearnings'* was as follows:

$$lnEarnings_i = \alpha_0 + \alpha_1 Edu_i + \alpha_2 Experi_i + \alpha_3 Experi^2_i + \varepsilon_i$$

(Basic Model)

$$lnEarnings_i = \alpha_0 + \alpha_1 Edu_i + \alpha_2 Experi_i + \alpha_3 Experi^2_i + \alpha_4 Comp_i + \alpha_5 Gender_i + \alpha_6 J.nature_i + \alpha_7 F.back_i + \alpha_8 F.status_i + \varepsilon_i$$

(Augmented Model)

Where:

$lnEarnings_i$ = Natural logarithm of hourly earnings of the employee of the financial institution.Net hourly earnings have been taken that includes net salary from the main job addition to the income from occasional jobs. Income from agricultural land and running a private business are not included.

Edu_i = Education represents schooling year of respondent. This indicator intends to capture the quantity side of education. The estimated coefficient α_1 measures the marginal rate of private financial returns to an additional year of education. The percentage change in earnings due to one more year of education is called the PFRTEdu.. It is the main explanatory variable in the model as suggested by human capital theory. Survey for this study minimizes the errors while estimating the schooling year from the levels of schooling. A direct question is asked to the respondents *i.e.,* ñyears of schooling completedò to get the exact years of education.

$Experi_i$ = Experience was also considered one of the most important explanatory variables of earnings equation. It represents the total actual working experience of respondents. Present research uses the actual working experience by asking a

direct question in the survey i.e., ñtotal number of working years up to the time of surveyò. However, some of the previous studies have used potential working experience instead of actual working experience. Potential working experience does not take into account of any type of unemployment, so this working experience may overestimate the years of working that, in turn, underestimates the rate of PFRTEdu..

$Experi_i^2$ = The term experience squares determines the diminishing returns to experience as it was used in the model of Mincer (1974) and Afzal (2011; 14).Negative value of the coefficient associated with ñexperience squaresò shows the concavity in the earnings experience profile. This shows that additional years of experience will lead to high earnings but at decreasing rate.

$Compu_i$ = Computer literacy is also used as the potential determinant of earnings. Computer literacy is measured in this study by use of computer and internet (1 for using computer and internet and 0 for not using computer and internet) at work place.

$J.nature_i$ = Job nature is also expecting to contribute significantly to the earnings of the employees working in financial institutions. In this study, job nature is measured by using dummy as: 1 for permanent job nature and 0 for non-permanent job nature.

$F.\ back_i$ = Family background which is measured by fatherôs education. Afzal (2011, 2014) said that in Pakistan, family background is measured in terms of fatherôs education because in Pakistan, an individual is known by his fatherôs name, income, profession and education. In developing countries like Pakistan, the fatherôs education effects the childrenôs education and their earnings. Generally it is considered that if father has a high level of education then his children must have high qualification. Father education is measured as numbers of years of father education in this study.

$F.\ status_i$ = Family status was measured by the car ownership of the respondent as measured by Afzal (2011, 2014).In many

developing countries, especially in Pakistan having a car is considered as one of the most important factor of family status. Keeping higher family status leads towards the higher earnings. This study measured the family status by using dummy as:1 for having car ownership and 0 for not having car ownership.

U_i = White noise error term

Empirical results and their interpretation

Data have been collected through the survey of different banks and insurance companies of Lahore. This survey has introduced the different determinants which are the reasons of the earning differentials in banks and insurance companies. Table 1 presents the estimated regression results for different cases.

Table 1 presents OLS estimates of "Basic Earnings Equations" (also known as "Basic Model") as well as of "Augmented Earnings Equations" (also known as "Augmented Model") for the employees of financial institutions, using employees education in years, actual work experience in years, and also actual work experience in quadratic term, as the main explanatory variables.

Table 1
OLS regression results
Dependent variable: ln earnings, where the education of the employees of entire financial institutions is measured by 'year of education completed' (aggregated)

Employees of all/entire financial institutions			
	1	2	3
Basic Model			
Constant	2.600(0.000)	2.600(0.000)	2.600(0.000)
Edu (in years)	0.187(0.000)	0.187(0.000)	0.187(0.000)
Experi (in years)	0.121(0.000)	0.121(0.000)	0.121(0.000)
$Experi^2$ (in years)	-0.004(0.000)	-0.004(0.000)	-0.004(0.000)
Augmented Model			
Constant	2.822(0.000)	2.933(0.000)	2.887(0.000)
Edu (in years)	0.129(0.000)	0.117(0.000)	0.117(0.000)
Experi (in years)	0.087(0.000)	0.093(0.000)	0.092(0.000)
$Experi^2$ (in years)	-0.003(0.000)	-0.003(0.000)	-0.003(0.000)
Comp.uses	0.296(0.000)	0.255(0.000)	0.260(0.000)
Gender (Male = 1)	0.150(0.005)	0.163(0.002)	0.159(0.002)
J. nature	0.202(0.000)	0.209(0.000)	0.212(0.000)
F. back	0.015(0.005)	0.016(0.002)	0.017(0.001)
F. status	0.289(0.000)	0.290(0.000)	0.289(0.000)
Institution sector (Gov_Pvt)		0.227(0.000)	0.214(0.000)
Bank_Insurance			0.043(0.494)
Obs.	*455*	*455*	*455*
Adj. R^2 (Basic model)	*0.406*	*0.406*	*0.406*
Adj. R^2 (Augmented model)	*0.505*	*0.534*	*0.534*

F Statistic (Basic model)	*105.26(0.000)*	*105.26(0.000)*	*105.26(0.000)*
F Statistic (Augmented model)	*49.01(0.000)*	*58.85(0.000)*	*52.94(0.000)*

Values in parentheses are p-values.

The results given in column 1 of Table 1 reveals that all the variables included in the model *i.e.,* education, experience, computer use, gender, nature of job, family background and family status have been found to be the determinants of the earnings of the employees of financial institutions.

The results of ôBasic Modelô presented in *Table 1* also show that the rate of PRTEdu. has been found to be 18.7 percent for every one year increase in education of employees of entire financial institutions. The coefficient for education variable of ôAugmented Modelô shrinks remarkably as compared to those obtained in Basic Model, confirming that the variables added to this specification do affect PFRTEdu..

In column 2 of *Table 1* comparisons have been made between private financial institutions and government financial institutions. The results show that workers working in government sector financial institutions earn more than the workers working in private sector financial institutions. The results given in column 3 of *Table 1* show that employees that are working in banks have higher rewards than that of the workers who are employed in insurance companies.

The positive and statistically significant coefficient of the variable ***'actual work experience'*** and negative and statistically significant coefficient of the variable ***'actual work experience squared'*** depict diminishing return to scale to employeeôs experience. This means that, as experience increases, earnings of the employees of financial institutions also increases but at a decreasing rate. This also exhibits parabolic linkage between earnings and actual working experience for the employees of entire financial institutions. The concavity (*i.e.,* earnings increases with increasing actual working experience but at a decreasing rate) of experience-earning profile is clearly observed from the negative and significant coefficient of actual working experience squared term. The results in Table 1 further point out that the ***computer use*** variable has been found to be contributing positively and significantly to the returns for the employees of financial institutions.

All of the above discussion reveals that the higher returns/earnings coupled with education, actual working experience, and computer use variables provide a clear support to human capital theory in case of the employees of financial institutions in Lahore Punjab province of Pakistan. In other words, the highly significance of

estimated coefficients associated with education, actual working experience, training and computer use variables indicate the applicability of ***Human Capital Model*** for the employees of financial institutions. The greater the employeeôs education, experience, and computer use stock is, the greater is his/her earnings in the labour market.

Gender earning differentials have also been found in financial institutions of Lahore. Male employees are found to earn 15 to 16.3 percent more than that of their female counterparts. The coefficient of the variable ónature of jobôdepicts that the employees have permanent job are found toreceive higher rewards than that of their counterparts having non-permanent job.

The variables indicating family background and family status have been found substantially positive and highly significant for the employees *of financial institutions*. The positive and significant coefficients associated with family background and family status variables means that the family background and family status are important in determining the earnings of the workers of financial institutions of Lahore.

The results in *Table 1* show that the goodness of fit of óAugmented Modelô estimates has been found more satisfactory. The *adjusted* R^2 increases remarkably compared to that found in the case of óBasic Modelô. The F-statistic consistently rejects the null hypothesis that all the explanatory variables additional to those in the Basic Model are jointly equal to zero.

In Table 2, determinants of earning have been found in each bank and insurance companies separately. Workers who have permanent job are getting higher rewards than that of the non-permanent workers in the case of NBP and MCB. Gender earning differentials favoring male employees has also been found in case of the employees of NBP and MCB. No gender earning differentials have been found in case of MB, PPCB and insurance companies. Computer literacy appeared to be insignificant in case of PPCB due to the reason that PPCB is still working on manual basis. On line banking is recommended for better banking in case of PPCB.

The PFRTEdu.of entire sample has been found to be the 11.7 to 12.0 percent. The disaggregated analysis of different banks shows some interesting results. The PFRTEdu.of PPCB (a specialized bank) is found to be the highest (15.4 percent) among all cases. The PFRTEdu.has been found to be *positive but statistical insignificant* in case of MB and insurance companies. PPCB and NBP are under the

control of government of Pakistan, while Islamic banks, schedule banks and insurance companies are under the private sector control.

Table 2

OLS regression results

Dependent variable: lnearnings, where the education of the employees of financial institutions is measured by óyear of education completedô (disaggregated)

Employees of various financial institutions					
	NBP	MCB	MB	PPCB	Insurance
	4	5	6	7	8
Basic Model					
Constant	2.730(0.000)	3.116(0.000)	3.230(0.000)	2.940(0.000)	1.738(0.071)
Edu (in years)	0.196(0.000)	0.157(0.000)	0.124(0.000)	0.173(0.000)	0.233(0.000)
Experi (in years)	0.123(0.000)	0.114(0.000)	0.137(0.000)	0.062(0.018)	0.108(0.016)
$Experi^2$ (in years)	-0.004(0.000)	-0.004(0.017)	-0.004(0.061)	-0.001(0.415)	-0.002(0.248)
Augmented Model					
Constant	3.795(0.000)	3.781(0.000)	3.797(0.000)	3.081(0.000)	3.105(0.002)
Edu (in years)	0.098(0.002)	0.102(0.009)	0.035(0.213)	0.154(0.000)	0.065(0.286)
Experi (in years)	0.074(0.001)	0.047(0.171)	0.098(0.000)	0.078(0.005)	0.082(0.062)
$Experi^2$ (in years)	-0.003(0.009)	-0.001(0.421)	-0.001(0.392)	-0.001(0.551)	-0.003(0.145)
Comp.uses	-0.173(0.281)	0.042(0.813)	0.382(0.000)	0.090(0.640)	0.545(0.089)
Gender (Male = 1)	0.174(0.045)	0.229(0.062)	0.068(0.415)	0.060(0.749)	0.190(0.219)
J. nature	0.313(0.003)	0.243(0.010)	0.114(0.142)	-0.544(0.010)	0.250(0.258)
F. back	0.026(0.004)	-0.001(0.900)	0.033(0.002)	0.000(0.980)	0.030(0.116)
F. status	0.316(0.000)	0.263(0.002)	0.230(0.001)	0.077(0.451)	0.666(0.000)
Obs.	129	117	77	69	63
Adj. R^2 (Basic model)	0.383	0.283	0.553	0.486	0.341
Adj. R^2 (Augmented model)	0.547	0.382	0.753	0.516	0.516
F Statistic (Basic model)	27.67(0.000)	16.51(0.000)	32.29(0.000)	22.44(0.000)	11.89(0.000)
F Statistic (Augmented model)	20.32(0.000)	9.98(0.000)	29.97(0.000)	10.06(0.000)	9.28(0.000)

The relative importance (measured by standardized coefficient of regression coefficients) of the explanatory variables towards explained variable i.e., towards the earnings of the employees of financial institutions is given in Table 3.

Table 3

Relative importance of the explanatory variables towards explained variable (earnings of the employees of financial institutions of Lahore)

	Employees of entire financial institutions			Employees of various financial institutions				
				NBP	MCB	MB	PPCB	Insurance
	1	2	3	4	5	6	7	8
Augmented Model								
Edu (in years)	0.285	0.257	0.258	0.238	0.223	0.084	0.429	0.133
Experi (in years)	1.128	1.200	1.196	1.086	0.452	0.862	1.301	0.929
$Experi^2$ (in years)	-0.730	-0.868	-0.860	-0.847	-0.251	-0.178	-0.250	0.681
Comp.use	0.141	0.121	0.124	-0.066	0.018	0.341	0.042	0.159
Gender (Male = 1)	0.099	0.107	0.105	0.136	0.168	0.053	0.030	0.118
J. nature	0.144	0.149	0.151	0.202	0.226	0.103	-0.451	0.120
F. back	0.098	0.108	0.111	0.206	-0.010	0.205	0.002	0.152
F. status	*0.238*	*0.239*	*0.238*	0.286	0.256	0.216	0.070	0.456
Institution sector (Gov_Pvt)		0.185	0.175					
Bank_Insurance			0.024					
Obs.	455	455	455	129	117	77	69	63

The results given in Table 3 depicts that the variable ‘actual working experience’ has been found to be the most important factor for the earnings of the employees of each category of financial institutions as the value of standardized coefficient for the variable ‘actual working experience’ for each category of financial institutions has been found to be the highest among all. The second and third important factors for the earnings of employees of entire financial institutions have been found to be the employee’s own education and family status, respectively. Computer use has been found to be the most important factor for employees of MB.

Conclusion and Recommendations

Conclusion

Education positively affects the individualôs earnings. It is the source of the formation and accumulation of human capital. There seems to be a positive relationship between earnings and education of individuals. The purpose of this study is to empirically estimate whether individual earnings are determined with education only or it is also determined by some other factor like work experience, computer use, gender, nature of job, family background, and family status.

The regression results reveal that education, work experience, computer use, gender, nature of job, family background, and family status are the determinants of earnings of the employees working at financial institutions of Lahore. Education has a strong linkage with the earnings. The coefficient of the variable óactual experience squaredô shows diminishing return to scale. As experience increases, earnings group but at decreasing rate. Higher returns/earnings coupled with education, actual working experience, and computer use variables provide a clear support to human capital theory in case of the employees of financial institutions in Lahore Punjab province of Pakistan. The estimated coefficient of variable ónature of jobô shows that the workers who have permanent job are getting higher returns in the form of earnings than that of the non-permanent workers for almost all categories of workers, expect the workers of PPCB.

The PFRTEdu. for overall sample have been found to be around 12 percent. The disaggregated analysis of different kinds of banks shows some interesting results. The PFRTEdu.of PPCB (a specialized bank) has found to the highest (15.4 percent) among all banks. Public sector financial institutions, on average, are paying more to their workers than that of the private sector financial institutions.

Work experience has been found to be the most important factor for the earnings of the employees of each category of financial institutions. The 2ndand 3rdimportant factors for the earnings of employees of entire financial institutions have been found to be the employeeôs own education and family status, respectively. Computer use has been found to be the most important factor for employees of MB.

Recommendations

Based on findings, this study made following recommendations:

1. The major determinants of the earnings, that is of education, work experience, computer literacy, gender, nature of job, family background and family status, found in this study may be considered while formulating any policy that intends to raise the earnings status of the employees of financial institutions.
2. The causes of low earnings for the employees of private sector financial institutions must be explored further by undertaking an independent study.
3. This study recommends that the policy makers should formulate such salary policies that would eliminate the earning differences between Islamic, schedule and governments banks. This will help to reduce the mobility of employees from on bank to another.
4. The administrative authorities of financial institutions should revise their policies regarding employees on contract basis as the effect of the permanent job status on employeeôs earnings has been found to be positive.An independent study is needed to determine the relationship between job satisfaction of contract and permanent employees and their performance.
5. The management of banks and insurance companies may initiate different programs to boot the earnings status of their employees, especially Islamic banks like *Meezan Bank* may revise their salary structures so that they may further positively contribute for the betterment and smooth running of the bank.
6. Those workers who intend *to join Islamic Bank* like Meezan Bank *must have sufficient work experience, computer literacy and family background and status.*

Future Avenues

1. For the further improvement in the estimates of PFRTEdu., additional econometric estimation techniques other than OLS method would be desirable in this area.
2. The rate of PFRTEdu. could be further tested and generalized by using a large sample at national level that should include not only the information of the employees of financial institutions, but also give overall information of investment in education in all other sectors of the economy.
3. PNFRTEdu. and social RTEdu. for the employees of financial institutions may be determined and explored.
4. Non linearity in earningsçeducation and earningsçexperience profiles may also be explored in future in an independent study.

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