The Impact of Literacy Level and Population Growth on Unemployment
(Time Series on 1994 to 20014)

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Abstract

Study investigates the impact of literacy level and population growth on unemployment in case of Pakistan over the period 1994-2014. The prime objective of the study was to identify and establish a link between Literacy level, Population Growth and Unemployment. Data was collected from the ministry of finance government of Pakistan, linear regression was applied through SPSS. 18, and also Bivariate, one tailed correlation used to determine the long-run relationship among variables. The results show that our independent variables have significant impact on the dependent variables in long-run. The research also provides some suggestions for the policy purpose to increase the literacy level in the country.

Keywords: Literacy level, Population Growth, Unemployment

Introduction

Population increases dramatically in under develop countries like in Pakistan. Which has less Literacy rate and children are not interesting to go to school. Literacy can be defined as the human ability to read and write. The United Nations Educational, Scientific and Cultural Organization (UNESCO) states literacy as the "capacity to recognize, perceive, interpret, generate, communicate and compute, using printed and written materials. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society". Generally educated people have better socio-economic class and live better health and employment aspects of life. The Planning makers of Pakistan have always argued that literacy increase to enter in higher education that will automatically to increases job opportunity. Pakistan economic survey defined 2013 to 2014 slightly increase literacy male 71 and female level rate 48.

The different researcher expresses the relation of education and health

1) Poor level of health will lead to low level of school.
2) The higher education must improve health.
3) Both factors improve education and health.

Employment is the most essential factor to gain economic prosperity in approximately all countries of the world. Employment is stated as “to be in working position in return of wages or the condition of being in labor”. Provision of employment is critical problem for developing countries owing to high percentage of employment level is a only factor which leads to economic prosperity and but in developed countries provision of employment is a general problem. Most of the social disharmony is deteriorate with the allocation of employment, like suicides, terrorism, street crimes, and poverty rate. Provision of high employment satisfy employee, employee’s family and even nations, achievement of job generate revenue both at individual and at national level. Employment rate and rate of return to education and has a constructive affiliation. Illiterate workers are less competent than educated workers in searching for new jobs and achieving more earnings. If we focus on the study of specified developed countries literacy or education is most vital element about their societal and economic problems. The developed countries spend lion share of their budget on education sector but Pakistan expends merely 2.4% of its GDP on education sector in 2012.

Another cause of concern related with unemployment in Pakistan is unmanageable increase in population growth. The population of Pakistan is increasing at very high rate this time. The statistics of population of Pakistan manifest that the population of Pakistan is increasing at the rate of 2.2%. There are multifaceted causes of overpopulation like, early marriages, increase in illiteracy, desires for male child, lack of awareness etc. The aforementioned passage article shows tha the Pakistan’s education system is not up to the level. Therefore rate of increasing in population means create more illiterate person into the sphere of labor. In this way Government or other labor consuming company cannot provide employment to this large mass of illiterate people at time.

LITERATURE REVIEW

Substantial amount of literature is accessible in this perspective which provides us to scrutinize the different dimension of unemployment as experienced throughout
the world. The literature provide us to know its determinants, reasons, magnitude of its spread in different historical periods, the causes of downfall in different societies to outwit this maldescription and the strategy implication as propagated by different economies to chalk it out. One thought is that the young people are more probable of quitting their jobs voluntarily.

(Mundi, 2013) In 1983 the rate of unemployment in Pakistan was just 3.85% which extended to 6.195% in 2010. The researchers have highlighted many essential factors of unemployment. The first and foremost factor is the rate of literacy level. Theoretically, a high rate of literacy decreases the rate of unemployment. Many studies have been taken to find out the impact of literacy level on unemployment. (Literacy, 1994) Report reveals that 50% of the adults lowest literacy level (level 1) were not included in the labor force, remains at home or not employed.

In developed countries like USA, UK, JAPAN etc the accomplishment of education is substantially correlated to unemployment. The developed country like UK, the rate of unemployment is 13% for 25 to 64 years age with primary and lowers secondary education, 8.3% for those with upper secondary education and 3.9% among those with non-university tertiary and university level education (OECD, 1997). This phenomenon is clear to the other side of countries with largely different distribution of educational attainment in their populations and labor market sectors. Basically literacy and numeracy attainment have a deep impact on labor market contribution and unemployment. Manifestation from (PARSONS & BYNNER, 19997) highlighted that the experience of those with low literacy and very low numeracy skills is particularly marked. In terms of labor force market access the person without basic skill agency get only 1 in every 50 jobs. “entry level skill” and the person with basic entry level skills, 50% of the job are occupied by them (Moser, 1999). Eventually the person with poor skills has five times more chance to remain without job, contrasting with those who have average skills (PARSONS & BYNNER, 19997) and (Ekinsmyth & Byrne, 1994).

Suedekum, (2006) Analyzed the factors of human capital by taking labor force participation rate as dependent variable for West Germany case over the period of 1976 to 200. Results suggest that technically skilled cities or nations grow more than less educated and less healthy. Nation with highly skilled labor force shrinks the level of unemployment in the particular area of study. Study concludes that there is significant relation between human capital and work force.

Laplagne & Glover, (2007) examined the change in work force due to change in health and education indicators by taking panel data for estimation. Probability logic model has used to check the impact of explanatory variables and results shows there is positive and significant relation of health and education variable on employment level.

Richard & Thomas, (2007) Used the standard time dependent model makes the individual unemployment rates and evaluate the impact of human capital on unemployment. They found, that there is positive impact of education to remain employed. More years of education tend to enhance the time period of employment. And also suggested that there is negative relationship between the level of human capital and unemployment.

Pandey, (2009) predicted 2SLS model to examine that rate of labor force participation fluctuated due to variation in different aspects of health sector. Findings shows that there is profound and positive relation between health of the people and labor force participation rate as the healthy and physically good worker get job within short interval of time.

Christelle Garrouste, (2010) investigate the link between long period of unemployment and education aspects. To find the effect of education on unemployment they used both a binary logic model and a binary SC obit model for time period 2004-2006. The results suggest that the person who spends large part of the life on education has less chance to be unemployed. The research also highlights that adult works (20-30) get more benefit than older workers (50-65) and after the age of 40, their education skills shrinks.

Philip, Seamus, & Elish, (2010) Portrays a statistical profiling frame-work of long-run unemployment risk in Ireland by employing a clusters of administrative data and information collected from a typical questionnaire that was issued to all persons who are interested in getting employment doing a social welfare claim between the months of September and December 2006 then these were tracked for eighteen months. They found that several elements like a recent study of unemployment in long run, advanced duration of life, numbers of dependents, decrease levels of education, literacy/numeracy problems, geography of urban areas, absence of having own vehicles, low rates of wages of works, spousal earnings and particular place of

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residence, all have great impact on the likelihood of remaining unemployed for 12 months or more.

Global Employment Trends, (2010) over the last year the rate of literate labor force increase than the rate of illiterate labor force. This can be spell out from unscientific reason that during the process of betterment the industries attempt to employ jobs efficiently and hire the educated people and technical Labor Force. The different composition of population having greater number of age group of working people accompanied with increase percentage of uneducated labor force shows the immense need for greater concern on literacy and technical skills to aware the demographic dividends.

Doppelt, (2012) highlighted a theoretical macroeconomic model to express the fact that short term job drop lead to long-life income losses. Employed staff must effectively remunerate their employers for the skills that they posses because skills are more beneficial during recession, which leads do determine their wages by doing general human affects. Workers assemble particular human capital on the job, since suffering human capital deterioration during unemployment.

Methodology

Date was collected from Economic Surveys(Published Book), Ministry of Finance Government of Pakistan years wise accordingly mentioned in the topic and analyzed by using linear regression and Bivariate, one tailed correlation through the software named(Statistical Package for Social Sciences .18)

**Purposed Research Model**

```
    Population Growth
        ^
     /   \
Unemployment     Literacy Rate
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**Research Hypothesis**

H1: Population Growth is positively related with Literacy Rate.

H2: Unemployment is significantly related with Literacy Rate.

**Diagnostic Test**

Literacy Rate= α+P.Gβ1+Uβ2+µ

**Results and Discussion**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>864.316</td>
<td>2</td>
<td>432.158</td>
<td>76.917</td>
<td>.000a</td>
</tr>
<tr>
<td>Residual</td>
<td>95.514</td>
<td>17</td>
<td>5.618</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>959.830</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Unemployment, PopulationGrowth
b. Dependent Variable: literacyrate
Overall fitness of the model can easily be understood by looking at the value of adjusted $r$ square that is .889 approximately 89% which states that Population Growth and Unemployment are the major contributors/Predictors of the Literacy Rate and model is significant at 100% confidence interval.

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>81.941</td>
<td>5.323</td>
</tr>
<tr>
<td>PopulationGrowth</td>
<td>-20.188</td>
<td>1.737</td>
</tr>
<tr>
<td>Unemployment</td>
<td>1.620</td>
<td>.544</td>
</tr>
</tbody>
</table>

a. Dependent Variable: literacyrate

According to the Betas of Population Growth and Unemployment: Population Growth is negatively but significantly related with Literacy Rate, strength of relationship between Population Growth and Literacy Rate is very much high at 0.000 significance level, Beta of Unemployment is positively and significantly related with literacy rate but strength of relationship between Unemployment and Literacy rate is moderate.

### Correlations

<table>
<thead>
<tr>
<th></th>
<th>literacyrate</th>
<th>Unemployment</th>
<th>Population Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>literacyrate</td>
<td>1</td>
<td>.332</td>
<td>-.921**</td>
</tr>
<tr>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td>.076</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Unemployment</td>
<td>.332</td>
<td>1</td>
<td>-.115</td>
</tr>
<tr>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td>.076</td>
<td>.315</td>
</tr>
<tr>
<td>N</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Population Growth</td>
<td>-.921**</td>
<td>-.115</td>
<td>1</td>
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<tr>
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<td>.000</td>
<td>.315</td>
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<tr>
<td>N</td>
<td>20</td>
<td>20</td>
<td>20</td>
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</tbody>
</table>

**. Correlation is significant at the 0.01 level (1-tailed).

According to the table one worth while relationship can easily be seen in between Literacy Rate and Population Growth that is -921, level of significance is .000 that is major suggestion for the policy makers to work it out by utilizing resources to strengthen the Education System as far as Population is growing.

### Limitations

Study is limited to:

1. Time horizon as mentioned in the topic.
2. Selected variables of economic system.
3. Economic conditions of Pakistan at that time.

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