

## DETERMINANTS OF UNEMPLOYMENT IN PAKISTAN

Muhammad Aqil<sup>\*</sup>

Munawar Ali Qureshi<sup>\*\*</sup>

Dr. Rizwan Raheem Ahmed<sup>\*\*\*</sup>

Seemab Qadeer<sup>\*\*\*\*</sup>

### ABSTRACT

Unemployment is one of the most important issues in macro economics. Unemployment creates many economic and social problems in the economy. This is inevitable to address this issue by means of identifying the causes which influence the level of employment. This paper determines the factors that influence the employment level in Pakistan. Four important independent variables are selected as determinants which include GDP Growth rate, inflation, FDI and Population growth rate. The correlation and multiple regression analysis reveal that GDP Growth rate and inflation have no significant relationship with the Unemployment. However, FDI and Population growth rate have significant and negative relationship with unemployment.

*Key words: FDI, GDP Growth, Inflation, Population Growth, Unemployment*

<sup>\*</sup> Assistant Professor, Commerce Department, Defence Authority Degree College, Karachi, Pakistan

<sup>\*\*</sup> Assistant Professor, Commerce Department, Defence Authority Degree College, Karachi, Pakistan

<sup>\*\*\*</sup> Professor, Department of Business Administration & Commerce, Indus University, Karachi, Pakistan.

<sup>\*\*\*\*</sup> Assistant Professor, Economics Department, Defence Authority Degree College, Karachi, Pakistan

## 1. INTRODUCTION

Unemployment is one of the significant variables that depicts the health of an economy. A higher unemployment rate reflects that people are not earning according to their desire and ability. There are many definitions of unemployment. According to IMF (1998), “Unemployment is measured annually as percentage of labor force that can’t find a job.” International Labor Organization (1996) defines that unemployment is the situation of being out of work or need a job and continuously searching for it in the last four week or unemployed ( age 16 or above) but available to join work in the next two weeks. People who voluntarily do not want to work, full time students, retired people and children are no included in unemployed category. In short, unemployment means the state when people who are willing and able to do a job but fail to get the desired job.

Unemployment is not a healthy sign for a country from social and economic point of view. It causes poverty, crime, political and social unrest. Therefore, this is necessary to address this issue in detail and understand the factors which are responsible for causing unemployment.

The objective of this paper is to find out the factors that affect the unemployment in Pakistan. This paper also attempts to find out the degree to which the factors influence the rate on unemployment in the country over a period of time.

## 2. LITERATURE REVIEW

The unemployment rate in Pakistan was 3.85% in 1983 which reached to 6.195% in 2010 (Mundi, 2013). The experts have mentioned many important causes of unemployment.

The first factor that may influence unemployment is economic growth. Theoretically, a high rate of economic growth may reduce unemployment as the entrepreneurs and state become more capable in this period. Many studies have been conducted to find out the relationship between economic growth and unemployment. It was assumed and explained that there was a negative relationship between economic growth and unemployment (Fanati and Manfredi, 2003). This is commonly believed that the relationship between the unemployment rate and economic growth is governed by Okun’s Law (Malley and Molana, 2007). According to the original research of Okun, an above normal rise in GDP rate (more than 3%) will result in the reduction of unemployment by 1% (Walterskirchen, 1999; Altig, Fitzgerald, and Rupert, 1997). Many

empirical studies have been conducted to prove the law in different regions. Although many studies endorse the negative relationship between the variables, there is no consensus on the negative relationship between GDP growth and unemployment rate. Izyumov and Vahaly (2002) stated that the relationship between the variables is weak in the countries where the labour market is inflexible with high employment. Muscatelli and Tirelli (2001) argued that the empirical evidence on this subject is very thin and has yielded mixed results. According to them there are many other factors which many influence unemployment along with economic growth. These factors include labour market conditions, political factors and demographic elements etc. Therefore, it can be concluded that the relationship between economic growth and unemployment has been significantly negative, however, there are evidences which prove a reverse phenomenon.

Inflation is another important macroeconomic factor which affects unemployment. The relationship between two variables has been of great significant since 1958 when A.W.Philip showed a negative relationship between the variables. Although the Philip Curve shows a negative relationship, the traditional literature advocates the positive correlation between the variables. For example, Hansen (1989) and Rogerson's (1988) proved empirically that a rise in inflation decrease the labor supply through a consumption-leisure substitution mechanism. As a result, the unemployment increases. Similarly, Beyer and Farmer (2007) found an insignificant and positive relationship between the variables. Hence the correlation between inflation and unemployment may be positive, negative or insignificant.

Another macroeconomic variable is Foreign Direct Investment that affect the level of employment by means of technology transfer. Nunnenkamp, Bremont, and Waldkirch (2007) conducted a research by taking data of 200 manufacturing concerns. They concluded that there was a significant and negative correlation between FDI and unemployment. Blomström et al.(1997) state that rivalry for markets is one of the main reasons for a positive relationship between FDI and employment. Therefore, if this element is missing, the direction of relationship may be negative.

Population growth rate is assumed to have a positive impact on unemployment. Hollister and Goldstein (1994) produced results that the high population growth rate resulted in increase in

supply of labour force. As a result, the rate of unemployment increases. However, in the low populated countries, the results may be in contrast.

### 3. RESEARCH METHODOLOGY

The Independent variables are GDP growth rate, inflation, FDI and population growth rate. The dependent variable is unemployment rate. A time series data from 1983 to 2010 have been collected for Pakistan. Data have been collected from IMF, World Bank and Mundi. First of all, the correlation is applied on the variables. Later on, regression model is developed for those variables which have significant correlation. The following hypothesis is established:

Ho: There is no significant impact of GDP growth, Inflation, FDI or Population Growth rate on unemployment in Pakistan.

H1: There is a significant impact of GDP growth, Inflation, FDI or Population Growth rate on unemployment in Pakistan.

### 4. DATA ANALYSIS AND INTERPRETATION

The correlation between the variable is as follows:

		UR	INF	GDP_PC	FDI	POP_Gr
UR	Pearson Correlation	1	-.047	.028	.387*	-.874**
	Sig. (2-tailed)		.811	.889	.042	.000
	N	28	28	28	28	28

The above analysis shows that unemployment rate has strong correlation with FDI and population growth rate. However, it has an insignificant correlation with inflation and GDP growth.

#### 4.1 Regression

Since only two independent variables have strong correlation with unemployment, the following regression model is developed:

$$UR = a + b_1 FDI + b_2 PG$$

Where UR= Unemployment Rate

a= intercept

b1 = slope of FDI

FDI= Foreign Direct Investment

b 2= Slope of PG

PG= Population growth

**Variables Entered/Removed**

Model	Variables Entered	Variables Removed	Method
1	POP_Gr, FDI <sup>a</sup>		Enter

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.901 <sup>a</sup>	.811	.796	.72602

a. Predictors: (Constant), POP\_Gr, FDI

**ANOVA<sup>b</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	56.609	2	28.305	53.698	.000 <sup>a</sup>
	Residual	13.178	25	.527		
	Total	69.787	27			

a. Predictors: (Constant), POP\_Gr, FDI

b. Dependent Variable: UR

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	13.418	.930		14.420	.000		
	FDI	-.471	.188	-.283	-2.510	.019	.596	1.677
	POP_Gr	-2.895	.309	-1.053	-9.359	.000	.596	1.677

a. Dependent Variable: UR

**Collinearity Diagnostics<sup>a</sup>**

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	FDI	POP_Gr
1	1	2.586	1.000	.00	.03	.00
	2	.401	2.539	.00	.45	.02
	3	.012	14.457	.99	.52	.98

a. Dependent Variable: UR

## 4.2 Interpretation

From the above analysis, this is clear that there is a strong correlation between Unemployment and FDI and PG. The value of Adjusted R square shows that there is around 79.6% variations in Unemployment due to FDI and Population Growth. This variation is very high the unemployment is influenced by these two variables collectively to a great extent. The value of F is 53 which is very large with 0.000 level of significance. It means that at least one the variables are fit for the model. Further, the value of “t” for FDI also has “p” value equal to 0.019 and if we reject the null hypothesis, the probability of committing type I error is just 1.9% which is almost negligible. Similarly, the value of t for Pop\_Gr also have p value equal to 0.000 and if we reject the null hypothesis, the probability of committing type I error is almost nil. The results of coefficients form the following equation:

$$UR = 13.418 - 0.471 FDI - 2.895PG$$

The equation reveals that if there is no FDI and Population growth the unemployment rate will be around 13%. It further explains that there is a negative relationship between the variables which is theoretically justified. if there is a 1% rise in FDI and PG, the Unemployment rate will be reduced by 3%.

## 4.3 Decision on Hypothesis

On the basis of above analysis, we conclude the Population Growth and FDI have great impact on Unemployment Rate. Therefore, we reject the null hypothesis and conclude that FDI and PG have strong impact on unemployment rate.

## 5. CONCLUSION

The impact of GDP growth, Inflation, FDI and Population growth was examined on unemployment rate of Pakistan. The analysis reveals that GDP growth and inflation have no significant impact on unemployment. However, FDI and Population Growth have significant and negative impact on unemployment. It means higher the FDI and Population Growth, lower the unemployment in the country.

## REFERENCES

- Altig, D., Fitzgerald, T., and Rupert, P., (1997), 'Okun's Law Revisited: Should We Worry about Low Unemployment?', Economic Commentary.
- Beyer, A., and Farmer, R. E. (2007), Natural rate doubts. *Journal of Economic Dynamics and Control* 31, 3 (March 2007), 797–825.
- Blomström, M., Fors, G. and R.E. Lipsey (1997).” Foreign Direct Investment, International Center for Economic Growth. Employment: Home Country Experience in the United States and Sweden,” *The Economic Journal*, 107 (November), pp. 1787-1797.
- Fanati, L. and Manfredi, P., (2003), 'Population, Unemployment and Economic Growth Cycles: A Further Explanatory Perspective', *Metroeconomica*, 54(2-3): 179-207.
- Holister, R. and Goldstein, M. (1994). "Reforming Labour Markets in the Near East". International Center for Economic Growth.
- IMF (1998), retrieved March 15, 2014 from <https://www.imf.org/external/pubs/ft/fandd/basics/unemploy.htm>
- International Labor Organization (1996), retrieved March 14, 2014 from <http://www.ilo.org/global/lang--en/index.htm>
- Izyumov, A. and Vahaly, J., (2002), 'The Unemployment-Output Tradeoff in Transition Economies: Does Okun's Law Apply?', *Economics of Planning*, 35: 317-331.
- Malley, J. and Molana, H., (2007), 'The Relationship between Output and Unemployment with Efficiency Wages', *German Economic Review*, 8: 561-577.
- Mundi, (2013), retrieved March 14, 2014 from <http://www.indexmundi.com/pakistan/>
- Muscattelli, V. A. and Tirelli, P., (2001), 'Unemployment and growth: some empirical evidence from structural time series models', *Applied Economics*, 33: 1083-1088.
- Nunnenkamp, Bremont, and Waldkirch (2007), "FDI in Mexico: An Empirical Assessment of Employment Effects," Kiel Working Paper No. 1328.
- Phillips, A. W. (1958). The relation between unemployment and the rate of change of money wage rates in the united kingdom. *Economica* 25, 100 (November 1958), 283–299.
- Rogerson, R. (1988). Indivisible labor, lotteries and equilibrium. *Journal of Monetary Economics* 21, 1 (January 1988), 3–16.
- Walterskirchen, E., (1999), 'The Relationship between Growth, Employment and Unemployment in the EU', European Economists for an Alternative Economic Policy (TSER Network), Workshop in Barcelona, 16 to 18 September 1999.