

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/324184334>

Economic Growth and Unemployment Rate: An Empirical Study of Indian Economy

Article in PRAGATI Journal of Indian Economy · January 2018

DOI: 10.17492/pragati.v4i02.11468

CITATIONS

27

READS

36,903

3 authors, including:



[Khem Chand](#)

Raffles University Neemrana

9 PUBLICATIONS 131 CITATIONS

[SEE PROFILE](#)



[Rajesh Tiwari](#)

Graphic Era Deemed to be University

47 PUBLICATIONS 162 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Economic Growth [View project](#)



Crop Insurance [View project](#)

PRAGATI: Journal of Indian Economy
Volume 4, Issue 2, July-December 2017, pp. 130-137
doi: 10.17492/pragati.v4i02.11468

Economic Growth and Unemployment Rate: An Empirical Study of Indian Economy

Khem Chand, Rajesh Tiwari** and Manish Phuyal****

ABSTRACT

Unemployment has been a major problem for India from a long time. The problem of unemployment is a global phenomenon, with international bodies like ILO predicting the rise in unemployment in India in coming years. The study attempts to find out the effect of economic growth on unemployment rate in India. Gross Domestic Product has been considered as an indicator of economic growth for the study. The data regarding GDP and unemployment rate have been collected from secondary sources like WorldBank database. Correlation and Regression analysis have been used to study the nature and degree of effect of economic growth on unemployment rate. It has been found that there is a strong negative correlation between economic growth and unemployment rate. Also, it was found that GDP accounts for 48% of cause of change in unemployment rate. The findings are in line with the Okun's law and the conclusions of studies conducted in the past.

Keywords: *Unemployment; Gross Domestic Product; Okun's Law.*

1.0 Introduction

Unemployment has been a continuous issue for years, particularly in India. One of the primary causes of unemployment is lack of suitable jobs for people; specifically, full time jobs. Full time job opportunities are decreasing day by day due to part time and casual work.

**Corresponding author; Assistant Professor, Head of Department, Management, Asia Pacific Institute of Information Technology SD India, Panipat, Haryana, India. (Email id: choudharykc24@gmail.com)*

***Associate Professor, Head of Department, International Institute of Management Studies, Pune, Maharashtra, India. (Email id: ambitionrajesh@yahoo.co.in)*

****Assistant Professor, Asia Pacific Institute of Information Technology SD India, Panipat, Haryana, India. (Email id: phuyal.manish@gmail.com)*

Negative development of economic activities, substitution of labour by capital, and increasing workforce supply are identified as causes of unemployment in India. India is facing a serious problem of unemployment day by day. According to UN (ILO), It is projected that unemployment will be 17.8 million in 2017 as compared to 2016 (17.6 million) and 18 million in 2018. It also is described that unemployment problem are faced globally due to social and economic crises and failing to creating good quality of job for labour market. In developing countries, approximately 3.6 million unemployed increased between 2016 and 2017 (Times of India, 13/01/2017).

Unemployment is a situation of joblessness which occurs when people are without jobs. Unemployment is a measure of the frequency of unemployment and formula for calculating the unemployment rate is the number of unemployed people divided by the total number of people in the civilian labor force (International Labour Organization, 2009).

It is very difficult to manage the economy in high rate of unemployment situation. Demand and supply of labour force is the part of labour market which is affected by increasing and decreasing of employment. Existing of demographic conditions and movement of a country significantly influence the balance of labour force market regarding the supply of labour force. According to the 'Wage Fund Theory', wages of the labour force are fixed in advance but because of the lack of capital, the manufactures appoint only a small number of labour force which results in unemployment

Some economists have referred to the unemployment as a cause of imbalance between demand and supply. Overproduction also increases the unemployment; it reduces the prices of commodities which necessitates reducing the workers, which increase unemployment. Manufactures in the case of low demand of product in market, drop the price; windup the companies/factories, stop the wage and labour force are shifted from the employed to the unemployed.

The migration of the population from rural to urban settlement leads to unemployment in towns due to increase of labour force supply. Social factors contribute in increasing the unemployment such as de-grading social status, geographical immobility, increase in the population, and defective education system. There are some other factors like lack of experience, vocational unfitness, and illness and disability.

Unemployment is cause of less demand of product in market. Less demand is the cause of slow rate of development and postponing investments due to poor trade and commerce and low/shift investment from manufacturing and non-manufacturing sector. Geographically immobility is another reason of unemployment. One place shows surplus labour as compared to another place (insufficient labour) and labour force refuse to move

from one region to others. It has identified that most of parents send their daughter for college/university education primarily for consideration of marriage rather than for providing them qualification for jobs. Girls are trained from childhood both by parents and society to play prime role as a wife, mother and house- keeper. Gil-Alana (2010) has identified that public attitude is positively influenced by governmental responsibility. It has also been described that due to higher long term unemployment rate, people have more negative attitude towards governmental provision for unemployment.

2.0 Review of Literature

Hassan and Nassar (2015) have identified that unemployment rate is negatively affected by economic growth. Balan (2014) concluded that there is a statistically significant negative effect of GDP on unemployment and the effect of net average wage on youth unemployment is positive. Gil-Alana (2010) studied unemployment and GDP of USA, UK and Japan. It has been found that there is negative effect of unemployment on GDP in case of USA and UK and while in case of Japan it is not statistically significant. Fakhri (2011) concluded that there is a nonlinear relationship between inflation and economic growth.

Umar and Zubairu (2012) described that there is a negative effect of inflation on economic growth. Sackey and Osei (2006) concluded that younger people are more likely to be unemployed as compared to older people group due to lower labour market skill. Anyanwu (2013) found that young people have less experience as compared to old people due to which it is very difficult to gain the employment; they have to bear less salary and wages for same work as compared to older/experienced people. Shapiro and Stiglitz, (1984) have concluded that increasing the higher wages above the equilibrium wages as incentives to increase the efficiency of employee is the cause of unemployment. Efficiency wages model are kept higher above the market clearing wage with view to reducing employee turnover. Efficiency wages framework creates the difficulty for jobseekers to secure employment.

Graetz (1987) has described that working class people are less aware about causes of unemployment. They acquire knowledge from mass media. Media responds to public desire for exposure of deviant behaviour and further belief in personal unwillingness to work as the basic causes of joblessness. Lui (2009) described that there is a relationship between inflation and unemployment that give either positive or negative results which depend on goods and labour market availability. It has also found that a higher rate of inflation increases workers' incentives to work and generates a negative effect on unemployment as compared to inflation lowers.

3.0 Objectives and Research Methodology

This study aims to study the effect of economic growth on unemployment rate in India post 1991. This study is based on exploratory research design. Data has been collected from secondary sources like newspaper and the World Bank database. For the purpose of the study, the data on economic growth and unemployment rate from 1991 to 2016 has been considered (Refer to Appendix). Okun' Law is tested to check the effect of unemployment on economic growth. Correlation and Regression techniques are applied for studying relationship between unemployment and economic growth. SPSS v20 was used for the analysis of the data.

3.1 Analysis

The following hypothesis is proposed for the study of relationship between economic growth and unemployment rate in India.

Ha: There is a negative effect of economic growth on unemployment rate.

It is clear from Table 1 that the mean Gross Domestic Product (GDP), as an indicator of economic growth, is 959061538461.5385 and standard deviation is 677564158764.80540. The average unemployment rate (UER) is 3.9158, and the standard deviation of UER is 0.30300.

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
GDP	959061538461.5385	677564158764.80540	26
UER	3.9158	.30300	26

Source: secondary data based result, GDP: Gross Domestic Product, UER: Unemployment Rate

From Table 2, it is evident that there is a negative correlation (-0.707) between GDP and UER. The correlation is strong (approx. 71%), which means change in a variable has a strong influence on the value of the other. The correlation is significant at 1% level. This implies that increase in GDP will result in decrease in unemployment rate and vice versa. Hence, the data supports the alternative hypothesis.

Regression analysis was performed with GDP as an independent variable (predictor) and Unemployment Rate (UER) as a dependent variable to test the degree of impact of economic growth on unemployment rate. Based on the findings of regression analysis, as shown in Table 3, the adjusted R square value is 0.480, which means 48% of

effect on Unemployment Rate is caused by GDP. In other words, 48% changes in unemployment rate can be predicted with the help of GDP.

Table 2: Test of Correlation between GDP and UER

Correlations			
		GDP	UER
GDP	Pearson Correlation	1	-.707**
	Sig. (2-tailed)		.000
	N	26	26
UER	Pearson Correlation	-.707**	1
	Sig. (2-tailed)	.000	
	N	26	26

** . Correlation is significant at the 0.01 level (2-tailed).

Source: secondary data based result, GDP: Gross Domestic Product, UER: Unemployment Rate

Table 3: Regression Analysis

Model Summary						
Model		R Square	Adjusted R Square	Std. Error of the Estimate		
1	.707 ^a	.500	.480	.21860		
a. Predictors: (Constant), GDP						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.219	.075		56.044	.000
	GDP	-3.163E-013	.000	-.707	-4.902	.000
a. Dependent Variable: UER						

Source: secondary data based result, GDP: Gross Domestic Product, UER: Unemployment Rate

4.0 Conclusion and Discussion

Based on the findings of the study, it can be inferred that economic growth has a negative impact on unemployment rate. The finding is in line with the Okun's law which explains the negative relationship between economic growth and unemployment. An implication of the finding is that in order to bring down the problem of unemployment in

an economy, the focus should be on boosting the economic growth. The relationship between a country's unemployment rate and the growth rate of its economy has been discovered by Okun. According to Okun's Law 1% percentage point increase in unemployment is related to 2% point decrease of real the GDP. There are other reasons which contribute to faster decrease or increase of GDP compared to unemployment. Keynes (1936) described that the unemployment arise due to deficiencies in aggregate demand over certain periods in the business life cycle so it is very difficult to create the more jobs for people who is interested in doing work. These types of demand are called cyclical and involuntary demand because it is related to seasonal. In seasonal demand organization provide some jobs for the people. Dickens and Lang (1995) described that there is significant difference between male and female regarding unemployment in Sri Lanka. Female is more affected by unemployment as compared to male. AfDB et al. (2012) identified that the urban youth unemployment rate is to be more than six time higher than the rate in rural areas. Sackey and Osei (2006) concluded that older cohorts are more employed as compared to younger people due to high labour market skill. Sileika & Andriusaitiene (2006) described that unemployment problem can be dissolved with the inflow of direct foreign investment and economic growth.

References

- AfDB, OECD, UNDP & UNECA (2012). Promoting youth employment. *African Economic Outlook*. Retrieved from www.africaneconomicoutlook.org.
- Anyanwu, J. C. (2013). Characteristics and macroeconomic determinants of youth employment in Africa. *African Development Review*, 25(2), 107-29.
- Balan, M., (2014). Analysis of unemployment among young individuals from Romania by econometric methods. *Internal Auditing and Risk Management*, 9(3), 90-97.
- Dickens, W. T. & K. Lang (1995). An analysis of the nature of unemployment in Sri Lanka. *The Journal of Development Studies*, 31(4), 620-636.
- Fakhri, H. (2011). Relationship between inflation and economic growth in Azerbaijani economy: Is there any threshold effect? *Asian Journal of Business and Management Sciences*, 1(1), 1-11.

Gil-Alana, L.A. (2010). A seasonal fractional multivariate model. A testing procedure and impulse responses for the analysis of GDP and unemployment dynamics. *Empirical Economics*, 38(2), 471-501.

Graetz, B. (1987). Unemployment, social policy and public opinion. *Australian Journal of Social Issues*, 22(4), 321-31.

Hassan, M. & Nassar, R. (2015). Effects of debt and GDP on the unemployment rate: An empirical study. *Journal of International Business Disciplines*, 10(2), 52-69.

Keynes, J. M. (1936). The general theory of employment, interest and money. *Macmillan Cambridge University Press*. Retrieved from www.marxists.org.

Lui, L. Q. (2009). Inflation and unemployment: The roles of goods and labor market institutions, 1-31. Retrieved from http://www.docs.fce.unsw.edu.au/economics/news/VisitorSeminar/090303_LucyQianLiu.pdf

Sackey, H. A. & B. Osei (2006). Human resource underutilisation in an era of poverty reduction: An analysis of unemployment and underemployment in Ghana. *African Development Review*, 18(2), 221-247.

Shapiro, C. & J. E. Stiglitz (1984). Equilibrium unemployment as a worker discipline device. *American Economic Review*, 74(06), 433-444.

Sileika, A., & Andriusaitiene, D. (2006). Problems of identifying and regulating the structure of the labour market in depressive Lithuanian regions. *Journal of Business Economics and Management*, 7(4), 223-233.

Times of India (2017). Unemployment in India to increase marginally in 2017-18: UN report. Retrieved from: <https://timesofindia.indiatimes.com/india/unemployment-in-india-to-increase-marginally-in-2017-18-un-report/articleshow/56512962.cms> [Last Accessed: 05-10-2017]

Umar A. & Zubairu A. A. (2012). Effect of inflation on the growth and development of the Nigerian economy: An empirical analysis. *Internal journal of Business and Social Science*, 3(10), 183-191.

Appendix

Year	Unemployment Rate	GDP
1991	4.00	2.66502E+11
1992	3.90	2.84364E+11
1993	4.06	2.7557E+11
1994	3.70	3.2291E+11
1995	3.97	3.55476E+11
1996	3.95	3.87656E+11
1997	4.39	4.1032E+11
1998	4.12	4.15731E+11
1999	4.22	4.527E+11
2000	4.31	4.62147E+11
2001	3.78	4.78965E+11
2002	4.32	5.08069E+11
2003	3.93	5.99593E+11
2004	3.89	6.99689E+11
2005	4.40	8.08901E+11
2006	4.33	9.20317E+11
2007	3.72	1.20111E+12
2008	4.15	1.18695E+12
2009	3.91	1.32394E+12
2010	3.55	1.65662E+12
2011	3.54	1.82305E+12
2012	3.62	1.82764E+12
2013	3.57	1.85672E+12
2014	3.53	2.03539E+12
2015	3.49	2.11175E+12
2016	3.46	2.26352E+12