

Impact of Poverty and Unemployment in Economic Growth: Case Study of India

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Abstract

Unemployment rate causes poverty. Poverty affects the growth rate of an economy. Poverty and unemployment are interrelated. Both affect the growth of an economy. Data of the indicators unemployment rate, head count ratio and GDP of India was taken from the official website of the World Bank during the time span 1980-2019. The main objectives of the study are to examine the correlation and impact of poverty and unemployment in economic growth of India. Study also focuses on checking the trends between variables. Correlation and OLS methodology has applied to fulfil the objective of the study. Unemployment rate and head count ratio shows negative low degree of correlation with growth rate. Head count ratio and unemployment rate are positively correlated. 58% of variations in growth rate explained by head count ratio and unemployment rate in India. The GDP of India has fluctuated since 1980. Trends of head count ratio and unemployment rate are decreasing from 1980. The study suggested that the government must increase the usage of proper policies to reduce unemployment and poverty in India.

Keywords: *unemployment rate, head count ratio, correlation, OLS, GDP.*

1 Introduction

In India, the issues of poverty and unemployment have consistently been the main problem to economic growth. Unemployment is said to the people who are employable and looking for work yet can't get work. It happens when an individual who is effectively looking for work but can't get employment. Unemployment is measured by the unemployment rate.

$$\text{Unemployment rate} = \frac{\text{number of unemployed people}}{\text{Total number of people in the labour force}}$$

Higher unemployment rate shows distress in the economy. Higher rates of unemployment shows peoples are not working according to their ability and desire. Poverty is the state of an

economy when a person's income is not enough to fulfil his basic needs. In this state a person is not able to meet the minimum level of living standard. Poverty has various appearances, changing here and there and across time, and has been depicted from multiple points of view. Poverty is a situation people need to get away. Poverty and unemployment is not a healthy sign of an economy. They create social and political unrest, crimes.

According to the Suresh Tendulkar committee report (2009), if a person earns 27 rupees per day in rural areas and 33 rupees per day in urban areas then they do not come under the poverty line. In 2014, Rangarajan Committee also gave their recommendation on poverty but our government accepted the Suresh Tendulkar Committee recommendation. There is an amount of income given by the government and world bank, if a person earns above the amount then they are not said to be poor. That amount of line is called the poverty line. Head count ratio also tells the poverty of the persons. Here we count the heads of the persons who come above the poverty line.

Economic growth tells about the health of the economy. It measures the per capita income of the country. High economic growth shows a large amount of production increasing in the economy. It would increase manpower in the economy. It means a high growth rate is connected with high employment opportunities. Then it will reduce poverty in the economy.

In our study we want to check the impact of unemployment and head count ratio on economic growth of India. Here we want to explore the correlation, trends and impact between unemployment and economic growth as well as head count ratio correlates with economic growth. Higher rates of unemployment and poverty badly impact the growth of the economy.

This causes low quality of living and henceforth low human capital and abilities which thus lead to poverty. And this poverty turned into a vicious circle of poverty. Poverty might be characterized as a social condition where people don't have essential monetary earnings to satisfy the most essential values of life.

Unemployment diminishes the income of people to an enormous degree and they are unable to access health services, education and proper sanitation. Poverty can be reduced after increasing government expenditure in the economy. More and more spending on health and education should be done by Indian government. Education will improve the efficiency of the persons so that they are able to grab employment opportunities. It will reduce unemployment and poverty. High economic growth reduces unemployment and poverty.

In other ways, poverty and unemployment are major constraints on economic growth. Poverty negatively affects skills and poverty. It also reduces the productivity of the country.

It also affects investment and saving in the economy. Low income and low life expectancy are the symbol of poverty.

Eradicating poverty and hunger is the first millennium development goal. According to MDG, the World Bank wanted to eradicate poverty till 2015 but it couldn't happen. In 2010, 21% of people in the developing world lived at below \$1.25 per day. Comparable assessment of poverty across nations has been provided by the World Bank. But various methods used by the national government to measure poverty. Poverty and unemployment are major concerns these days especially for developing countries like India.

2 Literature Review

G Datt, M Ravallion (2002) et. al. has utilized 20 family studies for India's 15 significant states time spanning 1960 – 1994. They have studied how the sectoral arrangement of economic development and beginning conditions interface to impact how much development decreased consumption deficiency. The versatilities of estimated poverty to cultivate yields and advancement spending didn't vary across states. The non-farm development measure was all the more favourable to poor in states with at first higher literacy rate and rural living standard, higher farm efficiency, lower infant mortality and landlessness.

I Gupta, A Mitra (2004) et. al. investigated the connections between poverty, health and economic development of Indian states. The results demonstrate that growth and poverty are negatively related. But health and growth are positively correlated. Education and industrialisation appear to improve both development and health.

N Feriyanto, DE Aiyubbi, A Nurdany (2020) et. al. observed in various nations included Indonesia, poverty frequently blocks economic improvement. Poverty, because of the disappointment of financial turn of events, should proceed to be smothered. The motivation behind this study is to inspect the effect of minimum wage, unemployment and real gross domestic product (GRDP) on poverty decrease in Indonesia. They use panel data over the time span 2010-2019 from the central bureau of statistics (Badan Pusat Statistik-BPS). The outcome demonstrated that wage and unemployment had a huge beneficial outcome on poverty in regions of Indonesia. But poverty and GRDP show a negative impact in Indonesia. Government should focus on decreasing poverty and unemployment.

NH Quy (2016) et. al. examined the connection between poverty, unemployment and economic growth at provinces level in Vietnam. The examination is directed on an example of long term perceptions in 63 Vietnam regions for the time of 2012-2015. Economic growth and public investment shows positive impact. Employment has a negative impact on export &

import and poverty. Unemployment and public investment has a positive impact. But poverty has a negative impact on public investment, unemployment and import & export. Based on our discoveries, we propose 03 gatherings of suggestions for reasonable economic development, unemployment and poverty decreases in Vietnam regions.

OA Adelowokan, OE Maku, AO Babasanya (2019) et. al. examined the connections between poverty, unemployment and economic development in Nigeria. They use the time series data from the period 1985-2015. Data collects from the Central Bank of Nigeria, World Bank and National Bureau of Statistics. They use econometric tools Augmented Dickey Fuller test, Johansen cointegration, Granger causality test and Error Correction Model. Result shows that variables are first difference stationary. There is absence of causal connection and absence of long run connection between poverty, unemployment and economic development in Nigeria. Unemployment and poverty shows positive correlation. This analysis recommends that the yield development in the nation will happen regardless of whether there are needy individuals as characterized in total terms. The economy will at present grow regardless of whether the quantity of needy individuals increases. This study favours equal distribution of income.

P Agrawal (2007) et. al. observed the connection between poverty alleviation and economic growth. They use province level data of Kazakhstan. It shows that areas with higher development rates accomplished quicker decrease in poverty. This happened to a great extent through development, which prompted expanded business and higher genuine wages and contributed fundamentally to poverty decrease. Quickly expanding oil incomes since 1998 have made a difference fundamentally raising both GDP development and government income in Kazakhstan. Some portion of the oil reserve was utilized to subsidize an annuity and social security program that has diminished poverty. Be that as it may, consumption in other social areas like health and training has not expanded much and needs more help. It is additionally demonstrated exactly that expanded government use on social areas contributed essentially to poverty reduction. This proposes that both quick economic development and improved government support for the social areas are useful in diminishing poverty.

R Pal, MGK Vidyapith (2020) et. al. observed the improvement of backward areas has been a significant worry of organizers in India. This paper talked about the issue of poverty and unemployment in Uttarakhand. This paper discovers the explanations behind backwardness of the state and recommends answers for diminishing poverty and unemployment.

SC Makaringe, H Khobai (2018) et. al. tried to explore the patterns and effect of unemployment on economic development in South Africa. They have used time series data

over the period 1994Q1 to 2016Q4. They have used Auto Regressive Distributed Lag (ARDL) approach to fulfil the objective of the study. The outcomes from the ARDL model recommend that there is a long term relationship present between economic growth and unemployment in South Africa. The observational outcomes affirmed that there is a negative connection among joblessness and economic development both in the short and long run.

2.1 Objective of the study

- 1 To examine the correlation between GDP, head count ratio and unemployment rate.
- 2 To examine the impact of unemployment rate and head count ratio on GDP.
- 3 To examine the trends of unemployment rate, head count ratio and GDP.

2.2 Data

Data of Indicators was taken from 1980-2019. Data of GDP, unemployment rate and head count ratio of India has been taken from the World Bank website. All the figures are in terms of percentage.

3 Methodology

This section covers all the econometrics methodology which we have applied in our study.

3.1 Descriptive statistics

It tells about the summary of the data. Median provides mid values of the data. Mean tells about the average values of the variables. skewness tells about the symmetry of the variables. Maximum and minimum tells about the highest and lowest value of the variable. Kurtosis tells about the peak of the series. Jarque bera tells about the difference of kurtosis and skewness.

3.2 Correlation

It measures the association between variables. It considers the values of the variables 0 to 1. 1 Value tells the perfect correlation between variables and 0 tells about the absence of correlation. Positive correlation means that variables are increased in the same way but negative correlation tells one variable increases and the other variable decreases.

3.3 Ordinary Least Square Method

Least square method is used to estimate the relationship between dependent variables and one or more independent variables. This model is helpful to decide if this model is best fit for data. This method is also helpful to forecast the behaviour of dependent variables.

4 Data Analysis

Now we analyse the results of our data.

Table 4.1 Results of descriptive statics

	GDP	Head count ratio	Unemployment rate	Time
Mean	6.164	40.62	5.99	1999.5
Median	6.253	41.65	5.64	1999.5
Maximum	9.628	61.6	8.90	2019
Minimum	1.057	21.9	5.28	1980
Std. dev.	1.894	11.85	1.01	11.69
Skewness	-0.449	-0.0051	1.96	8.14E-17
Kurtosis	2.657	2.005	5.23	1.798
Jarque-bera	1.541	1.650	34.04	2.406
Probability	0.462	0.438	0.00	0.300
Sum	246.57	1624.9	239.83	79980
Sum sq. dev.	139.96	5480.53	40.07	5330
observations	40	40	40	40

Descriptive statistics tells about all the summary results of our data. Here GDP and head count ratio shows negative skewness which means distribution of the variables are on the left side .We can also say that variables are flatter tailson the left side of the distribution. Whereas unemployment rate shows the flatter tail on the right side of the distribution. Here mean, median, maximum value and minimum value of all the variables shows in the above table 4.1. Here data of GDP and head count ratio are normally distributed because its p value is greater than 0.05. But data of unemployment rate is not normally distributed.

Table 4.2 Result Analysis of Correlation

	GDP	Head count ratio	Unemployment rate
GDP	1.00	-0.241	-0.159
Head count ratio	-0.241	1.000	0.699
Unemployment rate	-0.159	0.699	1.000

Correlation shows how much variables are correlated with each other. According to table 4.2, GDP shows negative correlation with head count ratio and unemployment rate. Correlations values of the variables are less than 0.5 which means low degree of correlation exists between variables. Negative correlation means one variable increases so that the other variable decreases. But the head count ratio and unemployment rate both show positive correlation with each other.

Table 4.3 Result Analysis of OLS estimation

$$\text{GDP} = \text{C (1)} + \text{C (2)} * \text{HEAD COUNT RATIO} + \text{C (3)} * \text{UNEMPLOYMENT RATE}$$

variables	coefficient	Std. error	t-statistics	Prob.
C(1)	7.607952	1.837089	4.141308	0.0002
C(2)	-0.040592	0.035675	-1.137827	0.2625
C(3)	0.034263	0.417197	0.082127	0.9350

$$\text{GDP} = 7.607952 - 0.040592 * \text{HEAD COUNT RATIO} + 0.034263 * \text{UNEMPLOYMENT RATE}$$

Here in our equation GDP is on the left side and head count ratio and unemployment rate both are on the right side. We want to check both the variable unemployment rate and head count ratio, how much they impacted the GDP of India. Here C (1), C (2) and C (3) show constant terms. C (2) does not explain the head count ratio in a good way and C (3) also does not explain the unemployment rate in a good way. But the constant coefficient C (1) explains the equation in a good way. Only C (1) is significant in the table 4.3.

4.3.1 Analysis of OLS results

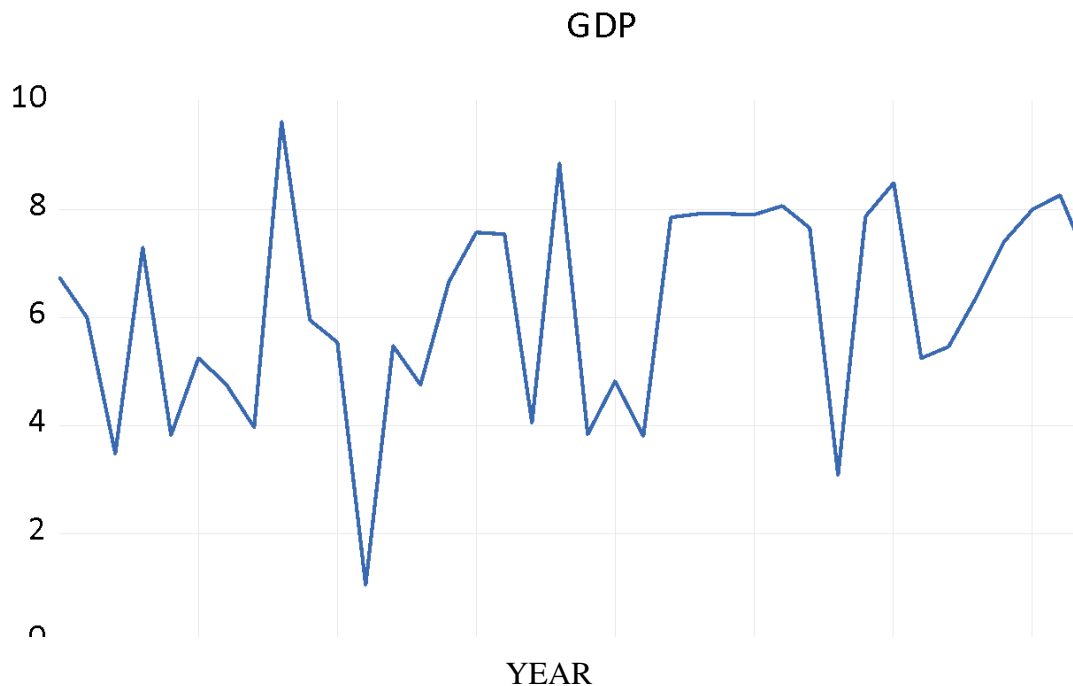
	values		values
r-squared	0.05833	Mean dependent VAR	6.1644
Adjusted r- squared	0.00743	S.D. dependent VAR	1.8944
S.E. of regression	1.8873	Akaike info criterion	4.1802
Sum squared resid	131.80	Schwarz criterion	4.3069
Log likelihood	-80.60574	Hannan-quinn criter	4.2260
F-statistic	1.1561	Durbin Watson stat.	2.0364
Prob (F-Statics)	0.3288		

Values of r-squared and adjusted r-square value tell how much dependent variable explains independent variable. Here 58% of variations of GDP are explained by unemployment rate and head count ratio. 42 % of variations in GDP are explained by other variables. According to table 4.3.1, Probability of the model is 0.32 that means the model is less significant.

4.4 Trends between variables

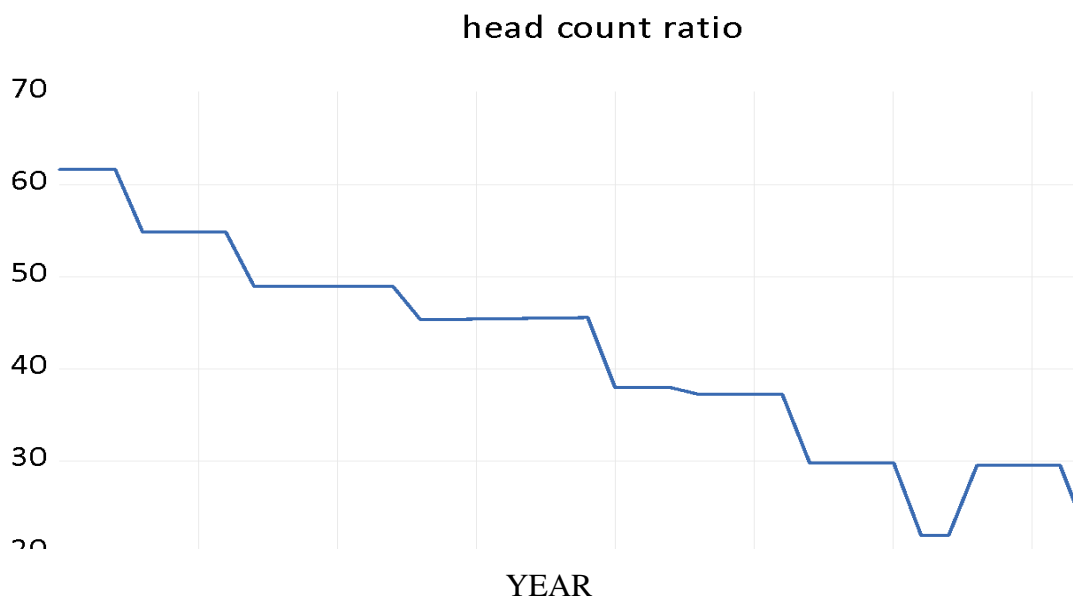
Now we analyse trends of the variables unemployment rate, head count ratio and economic growth of India.

Diagram 4.4.1 Trends of India's GDP



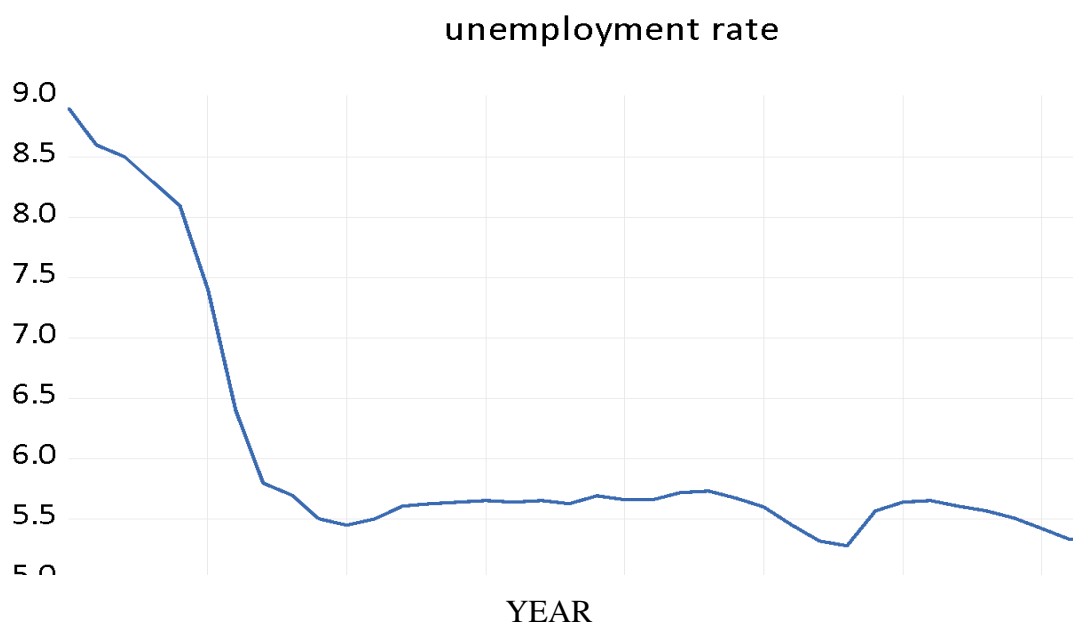
In this diagram 4.4.1, growth rate of India shows on the vertical side of the diagram and years shows on the horizontal side of the diagram. Data of India shows fluctuation since 1980. India's GDP comes at its lowest level 1990-1995.

Diagram 4.4.2 Trend of head count ratio



In this diagram 4.4.2, we check the trend of head count ratio. Here year shows on the horizontal side and head count ratio shows on the vertical side. Head count ratio tells about the poverty of the country. Here data seems like a ladder. But 2010-2015 after decreasing the data it is increasing again.

Diagram 4.4.3 Trend of unemployment rate



Here years show on the horizontal side and unemployment rate shows on the vertical side in the diagram 4.4.3. At the starting of 1980 unemployment of India was at its highest. But 2005-2010 data is at its lowest level. Otherwise data is going up and down throughout the time.

5 Result and conclusion

Here data of GDP and head count ratio are normally distributed. But data of unemployment is not normally distributed. GDP and head count ratio shows negative skewness whereas unemployment rate shows positive skewness. Growth rate of India shows a negative low degree of correlation with the unemployment rate and head count ratio. But unemployment rate and head count ratio are positively correlated. When the growth rate of India increases then the unemployment rate and head count ratio decreases. According to the results, 58% of variations of GDP explain the unemployment rate and head count ratio of India. Growth of India has fluctuated since 1980. Unemployment rate and head count ratio trend are decreasing from 1980. The Government of India should spend on employment opportunities so that it will lessen poverty.

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