

PROBLEM OF UNEMPLOYMENT IN INDIA: AN EMPRICAL STUDY

By

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Abstract:

Unemployment is a serious problem in contemporary times for India and for many countries around the world. The current paper demonstrates the Problem of unemployment in India. The whole study is based on secondary data, which is taken from the year 2010-2020. The variables taken for the study is GDP (MKTP) and Inflation (INF) as independent variable while Unemployment (UNEMP) was taken as dependent variable. The statistical tool used to study the impact of former on later is regression analysis. The descriptive statistics was also used to understand the different properties of variables. The Null hypothesis was formulated to understand the problem. The first null hypothesis was accepted because the results of the data show that inflation does not impact the unemployment while the second null hypothesis was rejected because the data shows that GDP (MKTP) impacts the unemployment. The data also reveal there is a positive correlation between the GDP (MKTP), Inflation and Unemployment. Different types of unemployment were also discussed in the current study.

Key words: GDP (MKTP), Inflation, Unemployment, Regression Analysis, Descriptive Statistics.

1. INTRODUCTION

India is the world's second largest populated country after china. At current the population of India is an about 1.4

billion people, which account 18% of the total population of the world. The problem of unemployment is very critical around the globe, so is in India. With the rapid increase of population the problem of unemployment has become more severe. At current the total workforce of India is 471 million (World Bank 2021). Not taking away the impact of Covid-19 which has hit the world and has affected the people around the globe. So many people around the globe have lost their jobs. The most important defiance the growing economies face is the problem of unemployment and economic development. Since the independence of India the two major challenges that India has to face was unemployment and poverty alleviation (Sinha, P. (2013)).Around 23 % of India's youth (age 15-24) are unemployed among the total labor force as per the data of 2019. Young people are considered as the most valuable assets of any economy. The forces which bring the change in major sectors that includes social change, economic development and bring the new technological innovations young people plays an important role in bringing the change. The unemployment of youth is considered as major economic development dilemma of twenty-first century Venkatanarayana, M., & Mahendra Dev, S. (2012).

With the increase in the population of young people as a result of the demographic "dividend" or "youth bulge" looks to be main factor of India's economic growth in future. Due to the fact

that the percentage of young people in the labour market has slowly decreased as school and college enrolment rates have increased, their presence in the labour population shows that youth unemployment and underemployment will be a main policy problem in India and for many developing countries around the globe (Digvijay, D. B. (2021).

Unemployment is the main problem in India and it is very much credited to the negative development of economic activities, using other means like technology as a substitution of labour, and an increase in the supply of workforce in the economy. Unemployment is the everyday problem of Indian economy (Chand, K., Tiwari, R., & Phuyal, M. (2017). Indian economy was facing these serious challenges from 1980s when the country was functioning under a 'one-sector growth model'. India had under taken new steps in the early 1990s, to curtail the rising unemployment problem and static growth, but the consequences of these policies have taken behind the economic and employment growth, leads to increase in unemployment, which economists are very much serious to make the recent experience as one of "jobless growth" Padder, A. H., & Mathavan, B. (2021).

The two major challenges that create problems for common man are rise in inflation and unemployment. The major economic goals that an economy wants to achieve are high GDP, Price Stability and Low unemployment. They are the most desirable goals that an economy wants to accomplish. Inflation is term which is used when the price of the goods and services in the economy increases and it depreciates

the value of money and lessens the purchasing power of household. The unemployment condition arises in the economy when the supply of labour increases in the labour market i.e. when the person who is ready to do the job but due to the shortfall he/she cannot find the one due to the shortage of jobs in the economy is known as unemployment Singh, D., & Verma, N. (2016).

2. DEFINING THE PROBLEM

There are so many variables that contribute to India's unemployment scenario, many of which have yet to be known. The two of the most important elements influencing unemployment in India is India's GDP and inflation rate. The main variables that provide to the problem of unemployment in every developing country's economy throughout the world, and have an influence on high unemployment in developing economies like India are GDP and inflation rate. The following queries may be acknowledged by concentrating on the two most important variables impacting unemployment in India:

- To understand the various types of unemployment in India.
- To understand and analyze the impact of GDP & Inflation on Unemployment of Indian economy.

Null Hypothesis

H01: There is no significant impact of Inflation on Unemployment.

H02: There is no significant impact of GDP (MKTP) on Unemployment.

3. REVIEW OF LITERATURE

Review of literature plays a significant part in research studies. It helps in identifying various trends, assumptions, specifying important issues and helps in conducting and spreading research into a meaningful manner.

Karanassou, M., & Sala, H. (2010) demonstrated that the trade-off between unemployment and inflation in long run is because of money and productivity which helps to decline the rate of unemployment, while the downfall in supply leads to the increase in prices which leads to the increase in unemployment. In the case of 1970, the monetary explosion led to the hype in inflation and declined the unemployment which was very negligible, that shows downward shift in productivity which also enhanced the inflation and unemployment.

Singh, D., & Verma, N. (2016) they argued that unemployment and inflation are the main challenges that are critical to economic development of every developing country. This paper explores the short-run trade-off in Indian economy from the year 2009-2015, between inflation and unemployment. The result of the data in the short-run shows the inverse relationship between inflation and unemployment. The results show that the increase in inflation leads to the decline in unemployment and so on. For the analysis of the data Bivariate regression was used. For the study three models were prepared, Unemployment was taken as dependent variable, inflation and real GDP were taken as dependent variables in second and third model. The results reveal that the unemployment has negative effect on inflation and shows positive effect on real GDP. The findings of the study proved

that the relationship between unemployment and inflation influence each other and unemployment and real GDP also influence each other, but in Indian economy it is non-significant.

Tiwari, R., Anjum, B., Chand, K., & Phuyal, M. (2017) demonstrated that the Gross Domestic Product (GDP) was used as the study's economic growth indicator (GDP). Secondary data was used for the study, such as data from World Bank, have been taken to compile GDP and unemployment figures. Correlation and regression analysis was used to examine the data; the nature and extent of the effect of economic growth on the unemployment rate were examined. Economic growth and unemployment rates have shown a negative relationship. It has been found that GDP is responsible for 48% change in unemployment rates.

Thiruneelakandan, M., & Ullamudaiyar, R. (2018) they demonstrated that the stagnation reduces the productive capacity of an economy. The study was carried out to understand the unemployment and inflation trade-off in the sectors that are using modern technology and excess labour force of the nation. Phillips curve was used to understand the trade-off between unemployment and inflation in Indian economy. Secondary data was used for the study from 2009 to 2017. The data were taken from Reserve bank of India (RBI) statistical bulletin and Ministry of labour and Employment and using with simple average, percentage method and trend line. The result of the test revealed that unemployment and inflation are inversely related to each other.

Xia, X. (2021) the paper analysed the inflation and lack of employment are

primary challenges that affect every economy in all developing countries. The objective of the study was to demonstrate the rate of lack of employment and inflation in the Indian economy in six years to determine a trade-off between inflation and lack of employment. The results of the data shows an inverse relationship exist between inflation rate and the rate of lack of employment. The result of the analysis also shows that the increase in inflation reduces the level of unemployment and so on. Bivariate correlation analysis along with the Phillips curve was used to study the variables of the study. The variables of the study include lack of employment and inflation rate. The Phillips curve examines the relationship between lack of employment and rate in which the wages change. The data used for the study is taken for the year 2001-2015 from United Kingdom. The results of the data show the lack of employment impacted the inflation. The rate of unemployment is the problem of every economy which is occurring frequently. The results of the data shows there is a good association between inflation and unemployment, but the data shows the lack of relationship in Indian economy. The paper concludes that the policymakers should put good efforts to reorganize economy, unemployment and should manage inflation.

Padder, A. H., & Mathavan, B. (2021) the study demonstrates the relationship between unemployment and economic growth in India. The objective of the study was to understand the impact of economic growth on unemployment. The data used for the study from the year 1990 to 2020. The statistical method used for the study was Hodrick-Prescott, descriptive

statistics, Granger causality, and the Ordinary least squared model. The results of the data reveal that, The Granger causality test found no link between the two variables; it shows that GDP does not cause unemployment nor does unemployment cause GDP. The regression analysis shows that economic growth is inversely impacted the unemployment. The data shows only 6% of economic growth impact the unemployment while rest of 94% is caused by other factors that impact the unemployment rate of India.

4. Unemployment in India

Unemployment is defined as, when there are large numbers of people who are willing to work but is not able to find work. People are either unable to work or are not willing to work. There are different reasons of unemployment in developing countries like India as compared to developed countries. One of the main reasons of labour market crisis around the world is unemployment and insecurity of employment. There are several types of unemployment depending upon the various reasons which cause it.

Types of Unemployment

There are three main types of unemployment:

1. Frictional Unemployment: The least amount of unemployment which arises, because the workers who left their previous job in search of finding the better one or are looking for the job for first time. The frictional unemployment remains in the economy. The people are unable to

find the jobs immediately because of friction such as lack of market information the about availability of jobs and lack of perfect mobility on the part of workers. The frictional unemployment remains for shorter period of time before they get the job. The different characteristic of frictional unemployed persons is that the number of job vacancies is equal to the number of unemployed persons in the economy.

2. Structural Unemployment: Structural unemployment exists to some extent in growing and developing economies which is other form of unemployment. Structural unemployment arises because of the mismatch between unemployment persons and the demand for a particular type of persons. The mismatch arises because of the demand of one kind labour expands and decline in other kind of workforce due to the change in demand and other technological factors. The structural unemployment arises because the unemployed people lack the necessary skills which are required for the job. The structural unemployment tends to remain in the economy for a longer time than the frictional unemployment. It is more serious problem because the workforce is available in the economy but they are

unable to get the job because of the lack of skills and professional capability.

3. Cyclical Unemployment: The unemployment which occurs due to the deficiency of effective demand. Cyclical unemployment is also called "keynesian" unemployment. Cyclical unemployment occurs and increases during the recession or depression and capitalist economies have been suffering from this from time to time. This type of unemployment occurs in industrial developed economies because recession and depression is the one phase of business cycle. This type of unemployment is because of the fact that the effective demand of the economy is not enough to absorb the whole production of goods that can be produced with the available capital.

5. Research Methodology

For the current study secondary data was used from 2010-2020. The data used for the study were taken from Reserve Bank of India (RBI), World Bank and other published sources. For the current study Gross Domestic Product (GDP MKTP) and Inflation (INF) are taken as Independent Variables and Unemployment (UNEMP) is taken as dependent variable. To understand the impact of Independent Variables (GDP & INF) on Dependent Variable (UNEM) Linear Regression analysis was used.

A. Unemployment (Dependent Variable)

Table 1. Unemployment Rate (%) of India during 2010-2020

YEAR	UNEMPLOYMENT RATE (%)	ANNUAL CHANGE (%)
2020	7.11%	1.84%
2019	5.27%	-0.06%
2018	5.33%	-0.08%
2017	5.41%	-0.10%
2016	5.51%	-0.05%
2015	5.56%	-0.04%
2014	5.60%	-0.07%
2013	5.67%	0.01%
2012	5.66%	0.01%
2011	5.65%	0.00%
2010	5.65%	0.04%

Data source: Macro Trends

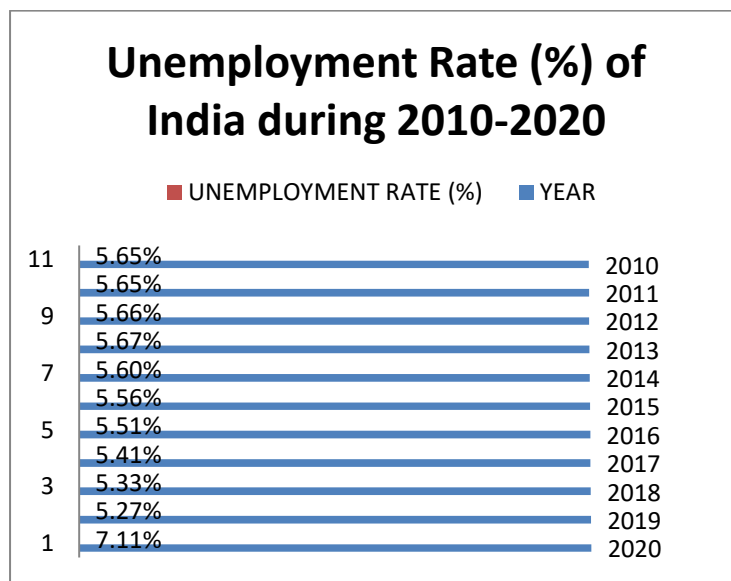


Figure: 1

The above picture depicts the unemployment of India from 2010-2020. In the year 2010 the unemployment rate of India was 5.65% and it remains same for the year 2011. In the year 2012 and 2013 the unemployment rate increases by 0.01 % simultaneously. In 2014, 2015, 2016, 2017, 2018 and 2019 the unemployment rate decreases by -0.07%, -0.04%, -0.05%, -0.10, -0.08 and -0.06. In 2020 there is a rapid increase in unemployment from 5.27% (2019) to 7.11%.

B. Inflation (Independent Variable)

Table 2. Inflation Rate (%) of India during 2010-2020

YEAR	INFLATION RATE (%)	ANNUAL CHANGE
2020	6.62%	2.90%
2019	3.72%	-0.22%
2018	3.95%	0.62%
2017	3.33%	-1.62%
2016	4.95%	0.04%
2015	4.91%	-1.74%
2014	6.65%	-4.41%
2013	11.06%	1.75%
2012	9.31%	0.45%
2011	8.86%	-3.33%
2010	11.99%	1.11%

Data source: Macro Trends

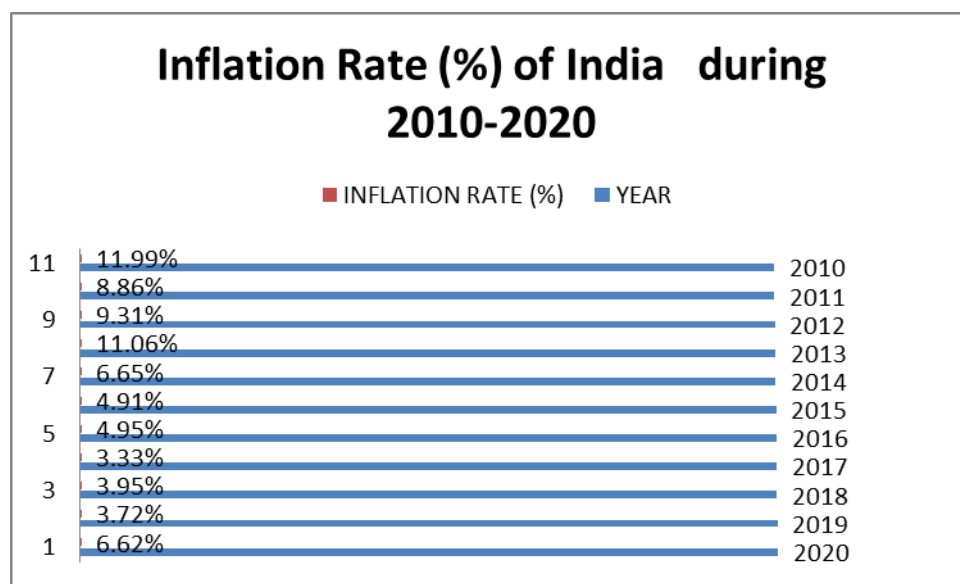


Figure: 2

The above figure shows the inflation rate of India from 2010-2020. The inflation rate in 2010 was 11.99%. In 2011 the inflation rate decreases to 8.86% with the annual change of -3.33%. In the year 2012 the inflation rate increases by 0.45%. The inflation rate in 2013 was 11.06% with annual increase of 1.75%. In the year 2014 there was a big decline in inflation by -4.41% from the previous year. In the year 2015 the inflation rate further decreases by -1.74% and it stands at 4.91%. In the year 2016 the inflation rate increases by 0.04% and then in 2017 the inflation rate shows further decline of -1.62% and stood at 3.33%. It increases by 0.62% in the year 2018 and in 2019 the inflation rate declines by -0.22%. In the year 2020 the rate of inflation increases by 2.90% and stood at 6.62%.

C. Gross Domestic Product (Independent Variable)

Table 3. GDP Growth (MKTP %) of India in percentage during 2010-2020

YEAR	GDP GROWTH (%)	ANNUAL CHANGE (%)
2020	-7.25%	-12.01%
2019	4.04%	-2.49%
2018	6.53%	-0.26%
2017	6.79%	-1.46%
2016	8.25%	0.26%
2015	7.99%	0.59%
2014	7.41%	1.02%
2013	6.38%	0.93%
2012	5.45%	0.22%
2011	5.24%	-3.26%
2010	8.49%	0.64%

Data source: World Bank

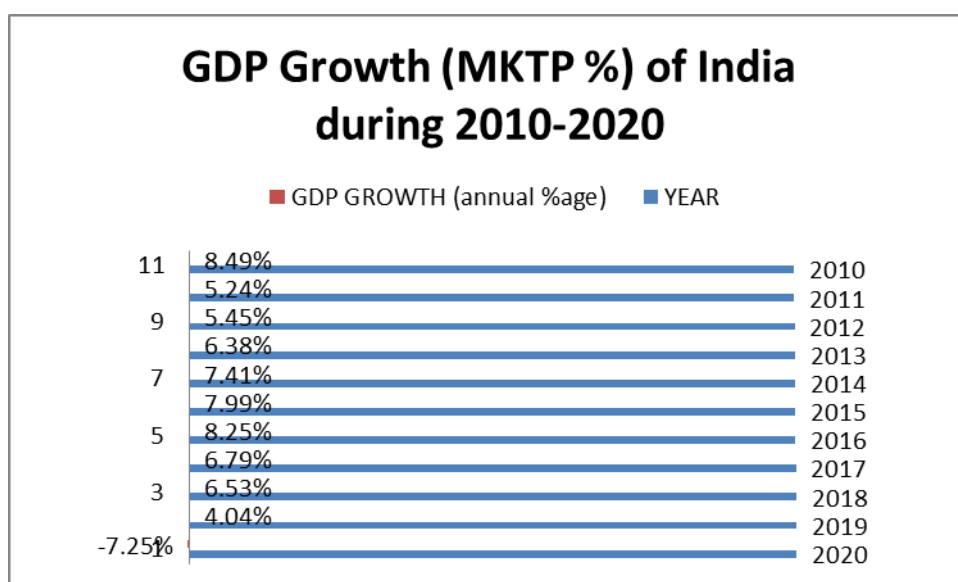


Figure: 3

The above figure demonstrates the Gross Domestic Product (GDP-MKTP) of India from the year 2010-2020. In the year 2010 the GDP was 8.49%. There was a decline of -3.26% in 2011 and GDP was 5.24%. In year 2012 the GDP rate was 5.45% with the annual change of 0.21%. In the year 2013, 2014, 2015 and 2016 the rate of GDP improves with 0.93%, 1.02%, 0.59% and 0.26%. In the year 2017 there was a decline in GDP with -1.46% and annual GDP stood at 6.79%. In 2018 it further shows decline of -0.26%. In 2019 and 2020 the GDP shows the massive decline of -2.49% and -12.01%.

Table:4 Percentage wise Inflation, GDP (MKTP) and Unemployment rate in India

YEAR	UNEMPLOYMENT (%)	INFLATION (%)	GDP (MKTP %)
2020	7.11%	6.62%	-7.25%
2019	5.27%	3.72%	4.04%
2018	5.33%	3.95%	6.53%
2017	5.41%	3.33%	6.79%
2016	5.51%	4.95%	8.25%
2015	5.56%	4.91%	7.99%
2014	5.60%	6.65%	7.41%
2013	5.67%	11.06%	6.38%
2012	5.66%	9.31%	5.45%
2011	5.65%	8.86%	5.24%
2010	5.65%	11.99%	8.49%

Data Source: Macro Trends

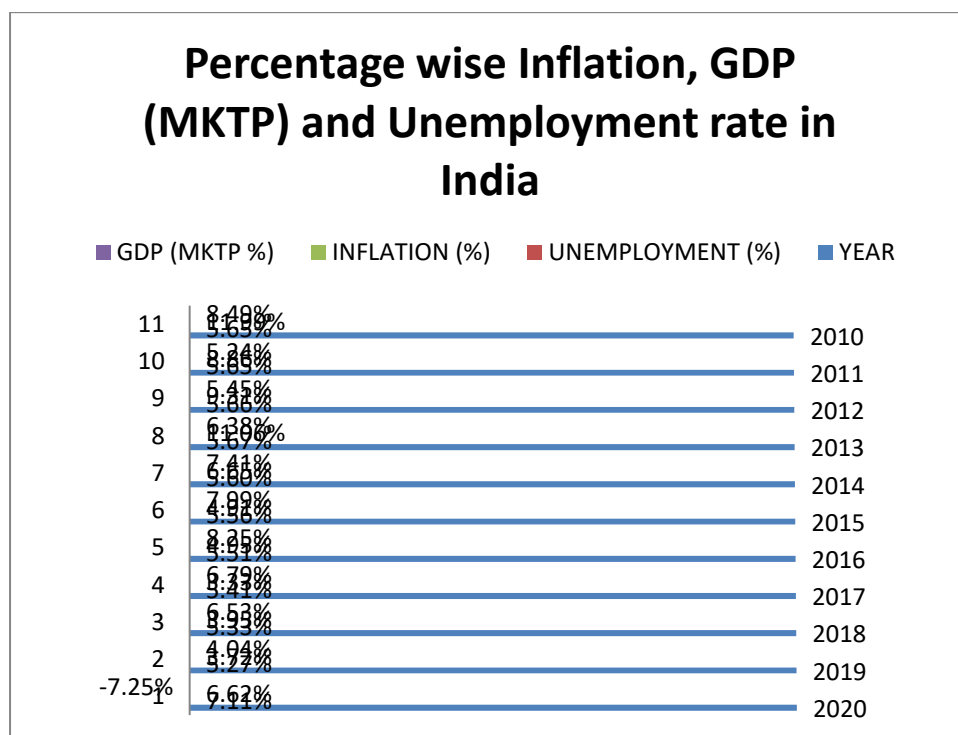


Figure: 4

6. Data Analysis and Interpretation of Results

1. The analysis of the data begins with the descriptive statistics which will help to demonstrate the time series properties of the variables. Two types of statistic are used to describe data in descriptive statistics which include Mean and Standard deviation.

Table: 5. Descriptive statistics of Unemployment, Inflation rate and GDP (MKTP)

Variables	N	Minimum	Maximum	Mean	Std. Deviation
INF	11	3.33	11.99	6.8500	3.03808
GDP	11	-7.25	8.49	5.3927	4.41008
UNEMP	11	5.27	7.11	5.6745	0.49599

The above Table 5 demonstrates the descriptive statistics about unemployment, inflation, and GDP (MKTP). It can be seen in the table, that minimum and maximum values of Unemployment have little gap in the eleven years period. The gap indicates that India's unemployment is consistent and less volatile. The minimum and maximum values of inflation have a big gap in the eleven years period. The gap depicts that India's inflation is not consistent and highly changeable. While the variation and gap between maximum and minimum values can be found comparatively low, but still inconsistent in few years. The variation between minimum and maximum value of the GDP (MKTP) can be found very high while in some cases it is found good. The overall results show that the mean and standard deviation of current set of data are quite significant. The data shows there is a significant impact of Inflation and GDP (MKTP) on Unemployment.

2. Regression analysis helps to formulate the model and analyse the relationship between dependent variable and independent variable. It helps to understand the impact of independent variable on independent variable. For the current paper the Independent variables are GDP (MKTP) and Inflation (INF) and dependent variable is Unemployment (UNEMP). To test the impact of independent variable on dependent variable following Null hypotheses had been formulated. The regression analysis helps to accept or reject the hypothesis.

Null Hypothesis

H01: There is no significant impact of Inflation on Unemployment.

H02: There is no significant impact of GDP (MKTP) on Unemployment

Table 6: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimates
1	0.924	0.853	0.816	0.21249

Predictors: (Constant) INF & GDP (MKTP)

The table 6 provides the value of R and R Square. The value of R shows the simple correlation which is 0.924. It shows the high degree of correlation. While the value of R Square indicates the total variation in the dependent variable i.e Unemployment, can be explained by the independent variables i.e GDP (MKTP) and Inflation. A value above in the table is 0.853 which is good enough to determine the relationship.

Table 7: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
1 Regression	2.099	2	1.049	23.242	0.000
Residual	0.361	8	0.045		
Total	2.460	10			

Dependent Variable: UNEMP Predictors: (Constant) INF & GDP (MKTP)

The ANOVA is used to understand, how well the regression equation fits the data. The table 7 demonstrates that the regression model predicts the dependent variable (UNEMP) very well. The level of significance proves it. The value of $P=0.000$ which is less than 0.05 this shows that overall regression model significantly predicts the outcome variable. The value of F is 23.242 which are greater than 1. This indicates the model is very good for the prediction of variable.

Table 8: COEFFICIENTS

Model	Unstandardized Coefficients		Standard Coefficients	t	sig
	B	Std. Error	Beta		
1 Constant	5.925	0.180		32.899	.000
GDP(MKTP)	-0.101	0.015	-0.901	-6.637	.000
INF	0.043	0.022	0.265	1.952	0.087

Dependent Variable: UNEMP

The coefficients table shows the strength and magnitude of relationship between independent and dependent variable. The table demonstrates the necessary information regarding how much dependent variable (UNEMP) gets affected by independent Variables [GDP (MKTP) and INF]. This model helps us to accept or reject the hypothesis.

7. Findings

- The analysis of the data in table 6 shows that there is a high degree of positive correlation between the

independent variable and dependent variable 0.924.

- The R-square of 0.853 demonstrates that 85.3% variation in unemployment is explained by GDP (MKTP) and Inflation.

- The adjusted R-square with a value of 0.816 which shows 81.6% variation in dependent variable is explained by independent variable when the degree of freedom is taken care off.
- The analysis in the table 7 demonstrates that the level of significance is 0.000 which is less than 0.05%. Therefore the results of the analysis are favouring to the rejection of null hypothesis.
- The analysis of the data in table 8 is favouring the H01 hypothesis. The data shows that there is no impact of Inflation (INF) on Unemployment (UNEMP). The data shows there is no significant change in unemployment due to inflation. This is because the sig value is 0.087 which is more than the acceptable limit 0.05%.
- The analysis of the data in the table 8 is favouring to reject the HO2 hypothesis. The data shows that there is the impact of GDP (MKTP) on Unemployment (UNEMP). The data shows that there is the significant change in Unemployment due to change in GDP (MKTP). This is because the sig value is 0.000 which is less than the acceptable limit 0.05%.

8. Limitations

- The whole research paper is based on secondary data no primary data was used.
- To study the problem the data regarding the research problem were taken from 2010 -2020 which was not good enough to determine the exact results.

- To study the Current problem limited variables were taken.

9. Conclusion

The findings of the data reveal that there is a positive correlation between GDP (MKTP), Inflation and Unemployment. The finding of the data also shows that GDP (MKTP) does impact the unemployment while the inflation shows no sign of impact on unemployment. The data shows that increase in GDP can decrease the rate of unemployment while the rate of higher inflation can promote the unemployment if not controlled. Unemployment and inflation poses a serious problem in any economy. The research taken in the recent past also shows that there is a serious need to reduce unemployment and rising inflation need to control in a better way.

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