Factors affecting high unemployment in India

Digvijay, Dilip Bhujbal and shafighi, Najla

bbw University of Applied Sciences

August 2021

Factors affecting high unemployment in India

Digvijay Dilip Bhujbal
Najla Shafighi *
bbw University of Applied Sciences, Berlin, Germany
* Corresponding author: Najla.shafighi@bbw-hochschule.de

Abstract

The goal of this research is to learn more about India's unemployment condition and how the country's GDP and inflation rate influence unemployment. We used data from the years 2000 to 2019 in our research. In this research, regression analysis is used to determine the relationship between India's unemployment, GDP, and inflation rate. The technique of finding the connections between two or more variables is known as regression analysis. Unemployment is a dependent variable and GDP, and rate of inflation are two independent variables. The findings of the final study are presented as a linear regression analysis. We can readily determine how India's GDP and inflation rate influence unemployment in India using linear regression analysis. Unemployment is greatly influenced by GDP. India's unemployment rate falls as the country's GDP rises. While India's inflation rate has a no significant impact on the country's unemployment rate.

Keywords: unemployment, GDP, Inflation

1) Introduction:

India has a population of about 1.3 billion people, accounting for around 18 percent of the world's total population. So, if unemployment is a severe problem in India, it is also a major one throughout the rest of the globe. It is critical to research and comprehend unemployment in India in order to reduce the danger of unemployment.

The two most significant problems that any growing country's economy confronts is unemployment and economic development. It was faced with the twin problems of unemployment and poverty when it achieved independence in 1947 (Pravin, 2013).

Unemployment is India's most serious problem. It's becoming more serious every day. When a person who is actively searching for job is unable to find one, they are considered unemployed. Unemployment is exacerbated by population growth, migration, a lack of practical skills, and the unequal distribution of industrialization. As a consequence, poverty, stress, crime, and social and economic inequalities have increased. A scenario in which job seekers are unable to obtain employment. Unemployment is defined as the proportion of the workforce that is jobless.

The amount of people who are jobless varies based on economic and other variables. Persons who have been actively searching for employment for the previous four weeks and have not found work are considered unemployed. Unemployment is a complex problem that impacts both the economy and the social structure of a nation.

An increase in the proportion of young people as a consequence of the demographic "dividend" or "youth bulge" seems to be one of the key drivers of India's future economic growth. Despite the fact that the percentage of young people in the labour market has decreased as school and college enrolment rates have risen, their significant representation of the labour population suggests that youth unemployment and underemployment will remain a key policy problem in India for many years.

Young people are an important human resource, key actors in social change, and a driving force behind economic development and technological innovation. On the other hand, putting these resources to good use is a major problem. The youth

dilemma is a term used to describe the most important economic development issue of the twenty-first century (Venkatanarayana, 2012).

1.1) Description of problem:

There are numerous variables that contribute to India's unemployment crisis, many of which have yet to be identified. However, India's GDP and inflation rate are two of the most important elements impacting unemployment in India. The primary variables that contribute to the problem with every developing country's economy throughout the world, and have an influence on high unemployment in emerging nations like India, are GDP and inflation rate.

The following analytical questions may be answered by focusing on the two most important variables impacting unemployment in India: 1) How GDP affect unemployment in India? And 2) How inflation rate affect unemployment in India?

2) Literature review:

The two most urgent problems facing any developing country's economy are inflation and unemployment. This article's research analyses the rate of unemployment and inflation in the Indian economy over a six-year period in order to determine the inflation-unemployment trade-off. The connection between inflation and unemployment has flipped; a rise in inflation leads to a reduction in unemployment, and vice versa. The research used the Bi-variate analysis method, using the unemployment rate as the first theory's variable and the inflation rate as the second theory's variable. The Phillips curve is the most important instrument in this study. The graph depicts the relationship between unemployment and wage growth. The study's findings indicate that a lack of employment has influenced inflation. In the economy of all developing nations, a lack of employment is a frequent issue. The results showed a significant connection between inflation and unemployment, but in India's economy, the link is insignificant (Xinhe, 2021).

India's future economic prosperity depends on a well-trained and competent workforce. Increased school and college enrolment rates, as well as a growing proportion of the population under the age of 25, are nothing short of a blessing to the Indian economy. However, owing to inelastic employment prospects, a significant proportion of educated young people are unable to find suitable work,

exacerbating the issue of educated unemployment. In academic and strategic research, the causes of unemployment are often a source of heated dispute. It is a well-known fact that every country's increasing population need a diverse range of occupations. Unemployment rates are still alarming in a lot of nations, including India. Several studies have been conducted to date in order to better understand the true causes of unemployment (Mehra, 2018).

The Gross Domestic Product (GDP) was used as the study's economic growth indicator (GDP). Secondary sources, such as the World Bank database, have also been used to compile GDP and unemployment figures. Using correlation and regression analysis, the nature and extent of the effect of economic growth on the unemployment rate were examined. Economic growth and unemployment rates have been shown to have a strong negative connection. Furthermore, GDP has been found to be responsible for 48% of the variation in unemployment rates (Chand Khem, 2017).

Among the variables utilized in the study were the unemployment rate (UNEMP), real gross domestic product (RGDP) as a standard proxy for economic growth, consumer price index as a proxy for inflation. The literature shows that Granger causality occurs in both directions between the labour force and unemployment rate. Based on these findings government provide more work opportunities as soon as possible in order to absorb the country's fast increasing unemployment rate (Malayaranjan Sahoo, 2019).

2.1) Unemployment and it’s situation in India:

Employment is a crucial component of economic growth. India's economy is historically diversified and developed, with a strong emphasis on the private sector. India's economic structures have changed very little as a consequence of the development process. The increase of collective employment is the first major change from the preceding reporting period. The most important point is that, in the setting of relatively high growth in the organized sector and improved labour productivity, still decreasing real wages are insufficient to guarantee employment growth. Many emerging countries are grappling with rising unemployment and underemployment. While unemployment is caused by hunger, sickness, psychological stress, despair, and a decline in human values on an individual level,

it also refers to the underutilization of human resources at the macroeconomic level (Nalla Bala Kalyan Kumar, 2012).

Unemployment is increasing in India; everyone wants a genuine job, but someone has to do it. Most businesses nowadays do not want to invest additional time or money on training. These are the primary causes of the country's slowing development. According to the 2011 Indian Census, India has 1.21 billion people, accounting for 17.5 percent of the world's population (Chahal, 2018).

It is very difficult to run the economy when there is a high rate of unemployment. The labour market is influenced by the rise and decrease of employment, which is known as demand and supply of labour. The demographics and movements of a nation have a significant impact on the labour market's supply and demand balance. According to the ‘Wage Fund' hypothesis, labour salaries are set aside, but owing to a shortage of capital, manufacturers only hire a limited number of employees, resulting in unemployment. Unemployment has been cited by some economists as a cause of supply-demand imbalances. Overproduction also raises unemployment because it reduces commodity prices, which forces people to work longer hours, resulting in more unemployment. In the event of low market demand, products are decreased, companies/factories are redeployed, pay is suspended, and labour is shifted from employees to the jobless. Due to bad commerce and trade, as well as low/shifting investment in the industrial and non-producing sectors, less demand promotes slower development rates and postponement of investments. Geographic immobility is another factor that contributes to unemployment. (Chand Khem, 2017)

2.2) Types of unemployment:

Unemployment comes in a variety of forms. Joblessness induced by cyclical economic fluctuations is known as cyclical joblessness. Frictional unemployment occurs when the demand for and supply of labour are not balanced. Structural unemployment arises when there aren't enough collaborating production components or when society's economic structure changes. "Not because of advances in manufacturing methods, but because of organizational tactics," says one expert. Disguised joblessness is the preparedness for employment, but they are unable to obtain work throughout the year owing to a lack of other criteria. It is described in depth below to further explore this.

1) Cyclical Unemployment: The economy's cyclical fluctuations generate cyclical unemployment. This may also be the fault of international soldiers. A business cycle is described as a sequence of economic ups and downs. For example, during the Great Depression, the jobless rate reached as high as 25%. That implies one in every four individuals is eager and capable of working yet unable to do so. The bulk of this joblessness is believed to be cyclical in nature. After a time, unemployment started to decrease again. As you can see, studying the economy's cycles, or ups and downs, may help explain some of the unemployment.

2) Frictional Unemployment: Frictional unemployment arises when there is a lack of adjustment between labour demand and supply. This may be due to a lack of knowledge on the part of businesses about labour availability, or on the part of employees about job opportunities at a particular area. It may also be caused by a lack of appropriate skills for a certain job, labour stagnation, mechanical issues, raw material limitations, and so on. The period of unemployment between leaving one job and getting another is known as frictional unemployment.

3) Structural Unemployment: Structural unemployment may be caused by a number of factors. It may be caused by a lack of cooperative elements or by changes in the economic structure of society.

4) Technological Unemployment: Technology-related unemployment is due to "organizational technicalities, not advances in manufacturing methods." It entails more efficient management, which may choose whether to upgrade existing facilities or shut down obsolete ones.

5) Disguised Unemployment: In developing nations, disguised or concealed unemployment or underemployment is a common occurrence. People are eager to work, but they cannot find employment all year owing to a lack of complementing elements. This unemployment is due to the seasonal nature of agriculture and inefficient land and equipment to guarantee full employment among rural and small-scale farmers (M. Rakna, 2017).

3) Methodology:

Regression analysis is a method for determining the relationships between two or more variables. Unemployment is the dependent variable in this study. The elements that may impact (might affect) the dependent variable are known as independent variables. There are two independent variables in this study. India's

GDP is the first, while the country's annual consumer price inflation rate is the second. We'll use regression analysis to see how India's GDP and inflation rate influence the country's unemployment rate.

Regression analysis may help us understand how the dependent variable changes when one of the independent factors changes, and it can also help us figure out which of those variables has the most effect mathematically.

A regression analysis model is mathematically based on the sum of squares, which is a method of determining the dispersion of data points. A model's aim is to get the lowest feasible sum of squares and create a line that closely resembles the data.

Multiple R values, R Square, the significance of F, the coefficient value, and the P-value are all included in the analysis. These are the values we need to pay attention to in our regression. We will, however, go on to the following stage in this regression, known as linear regression.

'Multiple R' is a metric for determining how strong a linear connection between two variables is. It is called correlation coefficient and its value can be any value between -1 and 1. Where 1 means strong positive relationship and -1 means a strong negative relationship (Mazher, Gharleghi, Fah, 2015).

The 'Significance F' value indicates how trustworthy (statistically significant) your findings are. Your model is acceptable if Significance F is less than 0.10 (10 percent). If it's more than 0.10, you should definitely choose a different independent variable. In this study, we'll utilize basic linear regression analysis to help us comprehend and illustrate the connection between the two variables.

The null hypothesis that the independent variable has no connection with the dependent variable is tested using the p-value for each independent variable. There is no link between changes in the independent variable and shifts in the dependent variable if there is no correlation. If p-value is ≤ 0.05 then hypothesis is accepted and if p-value is ≥ 0.05 then hypothesis is rejected, meaning that there is no significant correlation between independent variable and dependant variable (Wadood, Gharleghi, Samadi, 2016).

3.1) Unemployment data

Unemployment is defined as individuals who are unemployed and have been actively searching for work for at least a month. The number of jobless individuals

fluctuates depending on economic and other factors. The unemployment rate in India from 2000 to 2019 is shown in the table below (bank, macrotrends, 2021).

Table 1: Unemployment rate in India from 2000 to 2019. (bank, World bank, 2019)

No.	Year	Unemployment rate (%) (Y)
1)	2000	5.66%
2)	2001	5.66%
3)	2002	5.72%
4)	2003	5.73%
5)	2004	5.67%
6)	2005	5.60%
7)	2006	5.45%
8)	2007	5.32%
9)	2008	5.28%
10)	2009	5.57%
11)	2010	5.64%
12)	2011	5.64%
13)	2012	5.65%
14)	2013	5.67%
15)	2014	5.61%
16)	2015	5.57%
17)	2016	5.51%
18)	2017	5.42%
19)	2018	5.33%
20)	2019	5.36%

4) Empirical Analysis

From 2000 to 2019, the unemployment rate, GDP of India and Inflation rate of India are shown in the table below. Because it is generally recognized throughout the globe, the statistics on India's GDP is derived from the World Bank's website. (bank, World bank, 2019).

Table 2: Unemployment rate, GDP and Inflation rate of India from 2000 to 2019. *(bank, World bank, 2019)*

Year	Unemployment rate (%) (Y)	GDP.MKTP.CD (X1)	Inflation, consumer prices (annual %) (X2)
2000	5.66%	4.68395E+11	4.00943591
2001	5.66%	4.85441E+11	3.779293122
2002	5.72%	5.14938E+11	4.297152039
2003	5.73%	6.07699E+11	3.805858995
2004	5.67%	7.09149E+11	3.767251735
2005	5.60%	8.20382E+11	4.24634362
2006	5.45%	9.4026E+11	5.796523376
2007	5.32%	1.21674E+12	6.372881356
2008	5.28%	1.1989E+12	8.349267049
2009	5.57%	1.34189E+12	10.88235294
2010	5.64%	1.67562E+12	11.98938992
2011	5.64%	1.82305E+12	8.858360966
2012	5.65%	1.82764E+12	9.312445605
2013	5.67%	1.85672E+12	11.06367478
2014	5.61%	2.03913E+12	6.649500151
2015	5.57%	2.10359E+12	4.906973441
2016	5.51%	2.2948E+12	4.948216341
2017	5.42%	2.65275E+12	3.328173375
2018	5.33%	2.71317E+12	3.945068664
2019	5.36%	2.86893E+12	3.723276483

Regression analysis output:

Summary output:

The following table shows how well the linear regression equation matches the original data. The summary of the R-square is given below:

Multiple R	0.51035921
R Square	**0.260466523**
Adjusted R Square	0.173462584
Standard Error	0.001295864
Observations	20

Table 3: ANOVA Analysis

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	1.00545E-05	5.0273E-06	2.99373255	0.07693813
Residual	17	2.85475E-05	1.6793E-06		
Total	19	0.000038602			

Table 4: Result of regression analysis of Unemployment rate, GDP and Inflation rate of India.

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.056362882	0.000871525	64.67	8.7666E-22
GDP.MKTP.CD (X1)	-9.03437E-16	3.79522E-16	-2.38	0.02925904
Inflation, consumer prices (annual %) (X2)	-0.00008537	0.000105229	0.811	0.42838709

	Lower 95%	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.054524126	0.058201638	0.05452413	0.05820164
GDP.MKTP.CD (X1)	-1.70416E-15	-1.02715E-16	-1.704E-15	-1.027E-16
Inflation, consumer prices (annual %) (X2)	-0.000136637	0.000307389	-0.0001366	0.00030739

Discussion

This graph below depicts the link between India's unemployment rate and its GDP. The graph below shows the outcome of a basic linear regression study. The slope of the linear graph in the graph below is important. We can readily observe that unemployment in India falls as the country's GDP rises. It shows that India's GDP has a direct effect on the country's unemployment rate.

The p-value of GDP of India results to (0.02925904) which is lower than 0.05. It is clearly shows that there is correlation between unemployment of India and GDP of India. The value of coefficient is (-9.03437E-16) is negative and it means that the GDP of India has negative impact on unemployment of India. Hence as GDP of India increases, unemployment rate of India decreases.

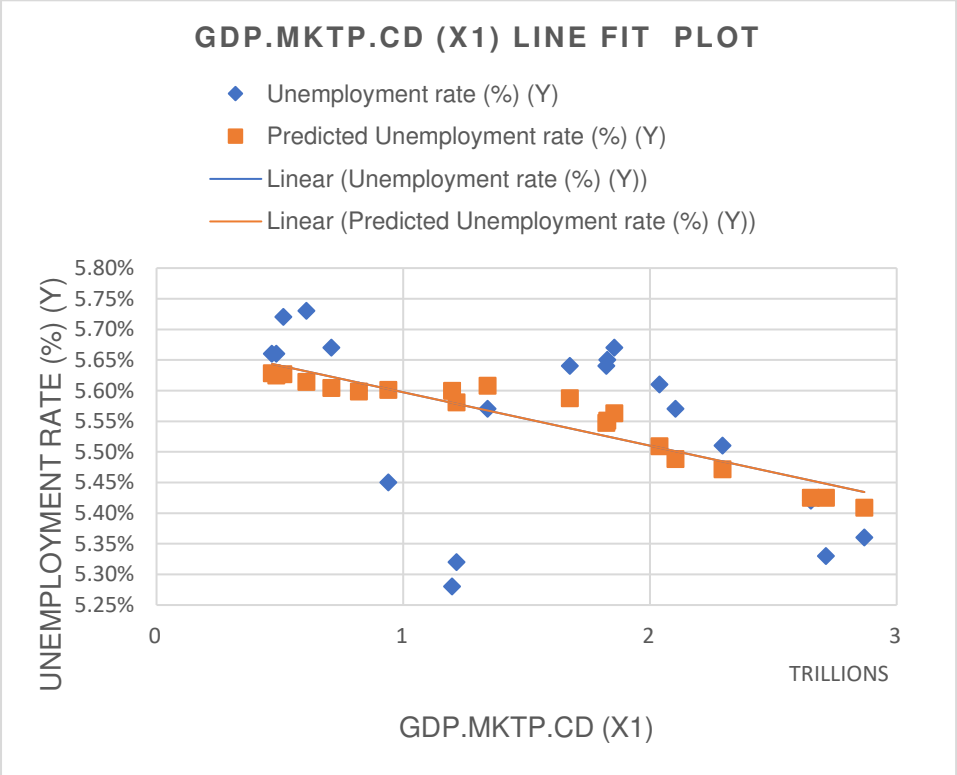

Figure 1: Linear graph of unemployment rate and GDP of India.

The graph below shows the outcome of a basic linear regression study but according to p-value it shows that there is no significant correlation between unemployment of India and inflation rate of India. The slope of the linear graph in the graph below is modest. We can clearly observe how India's unemployment rate decreases as inflation rate decreases. Despite the fact that the graph indicates a little impact of inflation on unemployment in India, the two do not have a substantial relationship. Inflation rate of India is not statistically significant because its p-value (0.42838709) is greater than 0.05. The p-value that is greater than the significance

level indicates that there is insufficient evidence in sample to conclude that a non-zero correlation exists.

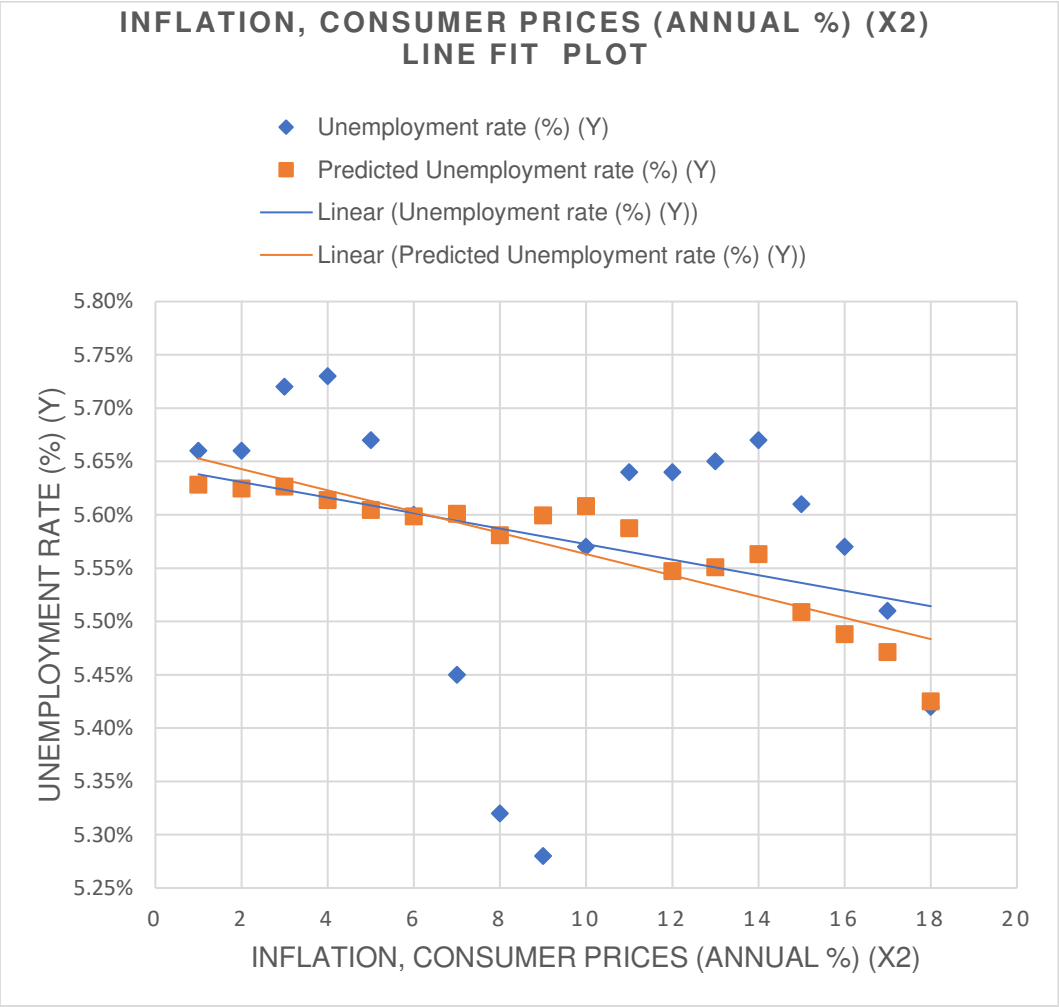

Figure 2: Linear graph of unemployment rate and Inflation rate of India.

5) Conclusion:

According to our results, India's GDP has a substantial effect on unemployment, while the rate of inflation has a no significant impact. However, the findings of the study indicate that the connection between unemployment, GDP, and inflation rate has only a little impact on each other.

Lack of employment, GDP and inflation are issues in emerging nation's economies, and they have an effect on the average citizen's quality of life. Every growing country's economy strives towards a low rate of lack of employment, price stability etc. In different nations at different times, there is a trade-off between unemployment and inflation rates, particularly in the short term. As a result, it is

suggested that the Indian government (policymakers) should concentrate on restructuring the Indian economy, increasing rate of employment, and controlling price volatility.

The Indian government should examine a few measures suggested in this research. Instead of adopting foreign ideas in the Indian economy, the Indian government should focus more on local development. Second, the Indian government should provide funds to research and development so that India may develop sophisticated technologies that will help generate more employment while simultaneously giving employees a good salary.

Furthermore, the COVID-19 epidemic stunned the whole world's economy, including India's. During this crisis, many individuals all around the globe have lost their employment. The government must seek for methods to re-hire individuals who have been laid off as a consequence of the crisis.

Bibliography

bank, w. (2019). *World bank*. Retrieved from https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2019&start=1960&view=chart

bank, w. (2021). *macrotrends*. Retrieved from India Unemployment Rate 1991-2021. www.macrotrends.net. Retrieved 2021-06-27.

Chahal, M. (2018). UNEMPLOYMENT SCENARIO IN INDIA. *International Journal in Management and Social Science, 06*(11), 135-139.

Chand Khem, T. R. (2017). Economic Growth and Unemployment Rate: An Empirical Study of Indian Economy. *Journal of Indian Economy, 4*(2), 130-137.

Dr. Mahesh kumar Kurmi, D. B. (June 2021, 06 25). IN-DEPTH ASSESSMENT OF THE IMPACT OF COVID-19 ON INDIAN ECONOMY. *EPRA International Journal ofEconomic and Business Review-Peer Reviewed Journa, 9*(6), 43-53.

M. Rakna, N. M. (2017). CAUSES AND EFFECTS OF UNEMPLOYMENT IN INDIA. *Indo – Asian Journal of Multidisciplinary Research (IAJMR), 3*(4), 1168-1171.

Malayaranjan Sahoo, J. S. (2019). The relationship between unemployment and some macroeconomic variables: Empirical evidence from India. *Theoretical & Applied Economics, 26*(1), 115-128.

Mazher, U., Gharleghi, B., & Fah, B. C. Y. (2015). A study on the factors affecting total quality management in the Saudi Arabian construction industry. *International Journal of Business and Social Research*, *5*(3), 30-40.

Mehra, G. (2018, January 3). Unemployment: Stumbling Block to Economic Growth. *nternational Journal of Research in Humanities, Arts and Literature, 6*(1), 71-78.

Nalla Bala Kalyan Kumar, V. J. (2012, September 1). Employment and unemployment in India. *Bookman International Journal of Accounts, Economics & Business Management, 1*(2319-426).

Pravin, S. (2013). *Combating youth empolyment in India.* Friedrich-Ebert-Stiftung.

Venkatanarayana, M. a. (2012). *Youth employment and unemployment in India.* IGIDR publications.

Xinhe, X. (2021). Unemployment, Inflation and Impact of GDP in India. *International Conference on Financial Innovation and Economic Development, 166*, pp.641-647.

Wadood, S., Gharleghi, B., & Samadi, B. (2016). Influence of change in management in technological enterprises. *Procedia Economics and Finance*, *37*, 129-136.