

Impact of Employment on GDP Contribution of Various Sectors in India

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EDITORIAL BOARD EXCERPT

At the initial time of submission paper had a 8% plagiarism which is an accepted for publication. THE editorial viewpoint is of an observation that article had a successive close watch by the blind reviewer's which at later stages had rectified and amended by authors (Sugandha, Deepa and Priyanka) in various phases as and when requisite to do consequently. The reviewers had in beginning stages mention with minor revision with a following stamen which at a small duration streamlined by authors. The comments related to this manuscript are tremendously noticeable. This paper justifies its objective very keenly. Author have crafted this paper in a structured manner. Regression analysis is major part of this paper which clear the picture of current situation very nicely and easily. The literature review gives the clear perspective about the topic. Conclusion of this paper highlight each and every detail perfectly. Over all this paper is easy to understand and open many facets of studies.

By and large all the editorial and reviewer's comments had been incorporated in a paper at the end and further the manuscript had been earmarked and decided under "Theme Based Paper" category as its highlights and emphasize the Impact of Employment on GDP Contribution of Various Sectors in India with the help of regression analysis

ABSTRACT

Purpose: Gross domestic Product of a country is the combination of GDP of various sectors in the country. The growth of any sectors depends on various factors like capital formation, expansion, policies and the human capital. Productivity in any organization is directly linked with the efficiency of the human resource. Employment means capability and willingness of the individual to work. A sector fully employed indicates the efficiency and effectiveness of the organization or sector. So a relationship can be established between the employability and the productivity. For the rationality of study productivity is assumed to be the GDP of the particular sector. This purpose of this paper is to find out the trends in the GDP and the employability of India and its various sectors.

Design/Methodology/ Approach: Regression analysis is also done to analyze the effect of employment rate on the GDP of India and its agriculture sector, industry sector, and service sector.

Findings: it was concluded that employment is not an important factor which is affecting the GDP contribution of the sector. GDP in industry might have increased due to technological advancement, advance process, quality parameters, rapid expansion and growth.

Originality/ value-the study is investigated the relationship between the GDP and employability in various sector in India.

KEYWORDS GDP | Employment | Productivity | Quality | Industry

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Unemployment is the major issue which India is facing currently. The unemployment rate in year 2006 was 4.237 and from 2006 to 2018 there are many variations in the unemployment rate. It was witnessed low rate in year 2007 (4.060) and then again a rise up to 4.116 (2007). Post 2008 there was a steep downfall in the unemployment rate. It was lowest in year 2014 (3.414). Employment is an important aspect for the growth in any sector. If skilled people are not available in the industry it will directly affect the productivity of that industry. There are many factors like technological advancement, process improvement, financial benefits, education, industry demands, employment etc which affect the productivity of any sector. Employment opportunities should increase with the growth of any sector. Human resource is an important factor which contributes to the efficiency and effectiveness of any sector. Unavailability of human resource will degrade the performance of the industry's the burden of work on limited people will adversely effect the quality which is expected in the organization.

In this study we are trying to establish a relationship between the employment opportunities and the GDP contribution of the sector. Although there are many other reasons for productivity but human factor considering the most important special emphasis is given to the employment rate is the industry.

In India there are many sectors which are divided majorly into three sectors i. e. agriculture sector, Industry and service sector.

Literature Review

(Rubee, 2018) Explained the impact of GDP and Inflation on Unemployment Rate with longitudinal study. The study found positive correlation (0.477) between unemployment and inflation. At the significant level of 10% the study concluded insignificant level at 0.477. Research concluded the influential role of inflation but is insignificant for GDP and unemployment due to macro economic factors in India.

(Dr. k. Murali, 2016) Studied economic growth and raise in employment opportunities are inter related to each other and is of major concerns for government of any country. This paper focus reasons of unemployment, interrelation between the employment of engineering graduates and economic growth.

(Prasad, 2016) Stated the relation between the inflow of FDI leading to raise in employment and productivity. For the developing countries capital is a crucial concern in the environment of homogeneous development. Every economy focuses on the inflow of FDI and with India it is a key concern as it will raise the productivity in the economy which will also raise the employment level in the country.

(Mosikari, 2013) Investigated how unemployment is affecting the GDP in South Africa through annual time series from 1980-2011. Augmented Dickey-Fuller (ADF) stationarity test tool is applied to prove integrating of variable. To establish the existence of cointegrating vectors in the variables Johansen cointegration test is applied. Through granger causality test it was observed that there was no causality between the unemployment and GDP. Researcher suggested adoption of policies for economic growth and increasing the employment opportunities.

(Shatha Abdul-Khaliq, 2014) Paper examined the relationship between unemployment and GDP in the nine Arab Countries within the era of 1994 -2010. The relationship is tested by using the Pooled EGLS (Cross-section SUR) and concluded that there is a significant relationship between of unemployment and growth rate.

(Kreishan, 2011) Relationship between unemployment and economic growth is studied through Okun's Law. Time series analysis, Augmented Dickey-Fuller (ADF) for unit root, cointegration test and a simple regression tools is used to explain the relationship between the unemployment and



economic growth. Results depicts the economic growth is not directly affecting unemployment problem. The economic policy is not affecting the unemployment; however it is oriented to structural changes and reform in labour market.

(ULLAH, 2013) Impact of inflation on GDP and unemployment in Pakistan through longitudinal study from the period of 2000-2010 is examined. Study describes the negative correlation between GDP and unemployment, whereas there is a positive correlation between the inflation and unemployment. Inflation plays an important role in influencing the variables but is not insignificant on GDP and unemployment.

(Dumitrescu Bogdan Andrei) Explain that increase in real GDP raised the standard of living. Saving, population growth and technological pressure affects the economic growth as per the theory of neoclassical approach. According to the okun's law a low unemployment rate leads to high inflation and reduced sustainable economic growth. The reduction of unemployment effects the reduction of real GDP growth by fifty percent.

Objectives of Study

- To analysis the trend of GDP contribution and employment in various sectors (viz. Agriculture, Industry & service).
- To understand the relationship between the GDP and employment in various sectors.

Research Methodology

For the purpose of research three sectors are identified

- Agriculture sector: activities engaged in growing of crops, animal husbandry, fish and other natural habitat harvesting. Almost 43% of land area is covered by agriculture and still is a major contributor of GDP in India.

- Industry Sector: with the post liberalization and LPG policy the Indian Industry sector has observed the enormous growth
- Service Sector: activities like trade, transport, hotels, restaurants, communication, financing, insurance, real estate, etc includes in the service sector. this sector is growing very fast and also attract the foreign investment in the country.

Hypothesis

H₀1: There is a noteworthy association between the employment rates and GDP of the agriculture sector.

H₀2: There is a noteworthy association between the employment rates and GDP of the industry sector

H₀3: There is a noteworthy association between the employment rates and GDP of the service sector

Employment Rate and GDP contribution in Agriculture Sector

Trend line for employment rate along with the GDP of the agriculture sector in country is drawn from the year 2007 to 2017.

Table 1 GDP & Employment rate of Agriculture Sector

Year	GDP	Employment
2007	5.8	53.68
2008	0.1	53.16
2009	0.8	52.38
2010	7.9	51.52
2011	3.6	48.8
2012	3.7	47
2013	2	46.66
2014	4.5	45.52
2015	4.5	44.36
2016	4.5	43.44
2017	4.5	42.74

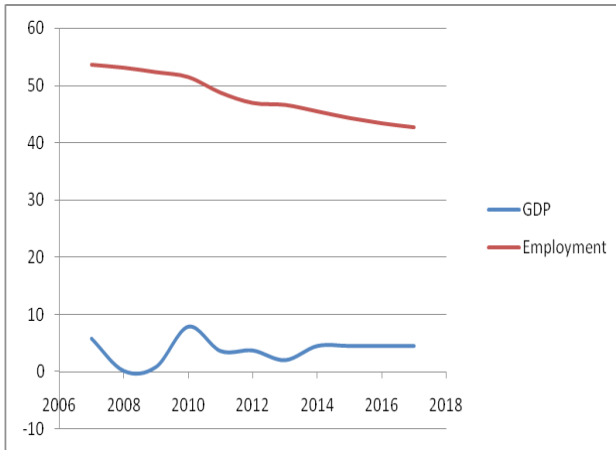


Figure 1: Employment Rate and GDP

The trend line of GDP and employment is showing a wide difference. Employment is showing the reducing trend on the other side there is major fluctuation from the year 2007 to 2011 and later minor fluctuation up to 2018. On conducting regression analysis ($P \text{ Value} \geq 0.05$), we find that there is no noteworthy association between the employment rate and GDP therefore we can say that this null hypothesis is failed to reject. With this we can conclude that although the employment in agriculture sector is decreasing in the country still the GDP contribution is increasing. This also means that apart from employment there are other factors like technological advancement, attitude, knowledge, and natural constraints etc which are affecting the productivity of agriculture sector. This shows that employment rate is not directly affecting the productivity in the sector. The reason might be the requirement of human resource in agriculture sector is less and already there is an effective utilization of manpower in sector.

Employment Rate and GDP contribution in Industry Sector

Trend line for employment rate along with the GDP of the industry sector in country is drawn from the year 2007 to 2017.

Table 2: GDP and Employment of Industry

Year	GDP	Employment rate
2007	9.7	20.62
2008	4.4	20.72
2009	9.2	21.33
2010	9.2	21.81
2011	3.5	23.45
2012	7.2	24.36
2013	4	23.79
2014	6.6	23.95
2015	8.4	23.8
2016	9.4	23.72
2017	9.8	23.79

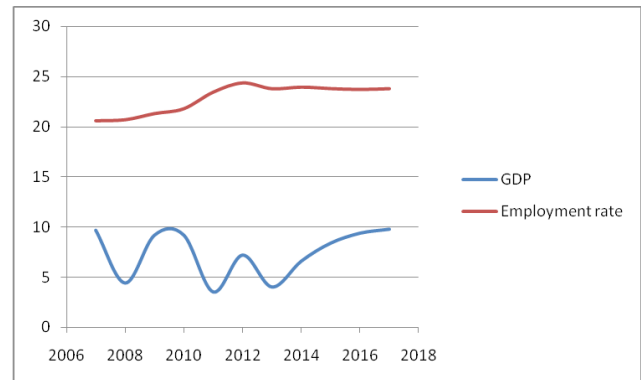


Figure 2: Employment Rate and GDP of Industry Sector

According to figure 3 it can be observed that employment rate was increasing from year 2007 to 2012 still the GDP contribution of the industry is fluctuating. It is also observed that after 2013 the employment rate is decreasing still the GDP contribution is raising. On conducting regression analysis ($P \text{ Value} \geq 0.05$), we find that there is no noteworthy association between the employment rate and GDP therefore we can say that this null hypothesis is failed to reject. This explains that employment is not an important factor which is affecting the GDP contribution of the sector. GDP in industry might have increased due to technological advancement, advance process, quality parameters, rapid expansion and growth.

Employment Rate and GDP contribution in Service Sector

Trend line for employment rate along with the GDP of the industry sector in country is drawn from the year 2007 to 2017.

Table 3: Employment and GDP in Service Sector

Year	GDP	Employment
2007	10.3	25.7
2008	10	26.13
2009	10.5	26.3
2010	9.8	26.68
2011	8.2	27.75
2012	9.7	28.64
2013	7.6	29.55
2014	8.3	30.54
2015	9.4	31.74
2016	9.7	32.84
2017	9.9	33.48

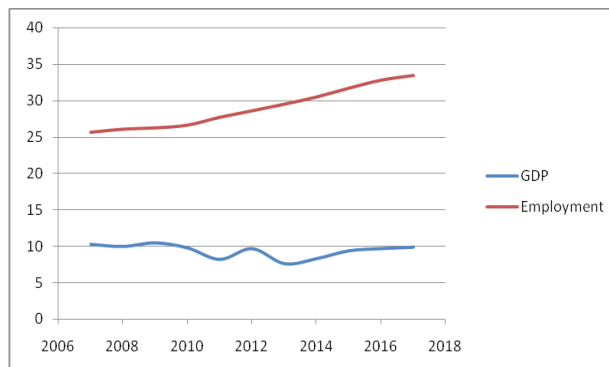


Figure 3: Employment and GDP of Service Sector

Figure 3 explains the trend of GDP and employment, GDP is decreasing the year 2011 and 2013 whereas employment opportunities is continuously increasing and has a remarkable growth after 2013 to 2018. On conducting regression analysis ($P \text{ Value} \leq (0.05)$), we find that there is a noteworthy association between the employment rate and GDP therefore we can say that this null hypothesis is accepted. This explains that employment is not an important factor which is affecting the GDP

contribution of the sector. GDP in industry might have increased due to technological advancement, advance process, quality parameters, rapid expansion and growth.

Conclusion

As per most recent reports released by the World Economic Forum, amongst the largest economy of the world India is on the 7th rank. The International Monetary Fund (IMF) has forecasted and expects that the [Indian economy](#) will be the only economy increasing in size at a rapid rate in the world and anticipated to grow at the rate of 7.4% in the FY 2018.

Agriculture and allied sector encompasses forestry and fishing also. This sector is also recognized as the **primary sector of the economy**. It is sufficiently good to mention that agriculture sector bring forth jobs to around 53% inhabitants of India. This sector is also recognized as the **primary sector of the economy**. The trend line of GDP and employment is shows a wide difference with Employment reduction seen from year 2007 to 2011 and later minor fluctuation up to 2018. It was observed that there is no noteworthy association between the employment rate and GDP. Although with the time the employment in agriculture sector is decreasing in the country still the GDP contribution is increasing. This also means that apart from employment there are other factors like technological advancement, attitude, knowledge, and natural constraints etc which are affecting the productivity of agriculture sector. This shows that employment rate is not directly affecting the productivity in the sector as the requirement of human resource in agriculture sector is less.

Industrial sector includes 'Mining & quarrying', Manufacturing (Registered & Unregistered), Gas, Electricity, Construction and Water supply. This is also recognized as the **secondary sectors of the economy**. In the industrial sector, employment rate was increasing from year 2007 to 2012 still the

GDP contribution of the industry is fluctuating. It is also observed that after 2013 the employment rate is decreasing still the GDP contribution is raising. It was observed and concluded that there is no noteworthy association between the employment rate and GDP. This explains that employment alone is not an important factor which is affecting the GDP contribution of the sector. GDP in industry might have increased due to technological advancement, advance process, quality parameters, rapid expansion and growth.

Services sector includes 'Financial, real estate & professional services, Public Administration, defense and other services, trade, hotels, transport, communication and services related to broadcasting. This sector is also recognized as **tertiary sector of the economy**. In the service sector, GDP is decreasing the year 2011 and 2013 whereas employment opportunities is continuously increasing and has a remarkable growth after 2013 to 2018. It was concluded that there is a noteworthy association between the employment rate and GDP. This explains that employment is an important factor which is affecting the GDP contribution of the service sector with other factors like technological advancement, advance process, quality parameters, rapid expansion and growth, leading to increase in the GDP of this sector in a nation.

Reference:

- Ali2, A. R. (2017). Impact of Unemployment and GDP on Inflation: Imperial study of Pakistan's Economy. *International Journal of Current Research in Multidisciplinary*, 2 (6), 01-10.
- Dr.k.Murali, A. k. (2016). A Critical Review on Unemployment and Economic Growth, Engineering Education and Civil Engineers Career up Graduation in India. *International Research Journal of Engineering and Technology (IRJET)*, 3 (5), 1390-1393.
- Dumitrescu Bogdan Andrei, D. V. (n.d.). THE CORRELATION BETWEEN UNEMPLOYMENT AND REAL GDP GROWTH. A STUDY CASE ON ROMANIA. pp. 317-322.
- Kreishan, F. M. (2011). Economic Growth and Unemployment: An Empirical Analysis. *Journal of Social Sciences*, 7 (2), 228-231.
- Mosikari, T. (2013). The Effect of Unemployment Rate on Gross Domestic Product: Case of South Africa. *Mediterranean Journal of Social Sciences*, 4 (6), 429-434.
- Prasad, R. K. (2016). FDI Impact on Employment Generation and GDP Growth in India. *Asian Journal of Economics and Empirical Research*, 3 (1), 40-48.
- Rubee, D. (2018). Impact of GDP and Inflation on Unemployment Rate: "A Study of Indian Economy in 2011-2018". *International Journal of Management, IT & Engineering*, 8 (3), 329-340.
- Shatha Abdul-Khaliq, T. S. (2014). The Relationship between Unemployment and Economic Growth Rate in Arab Country. *Journal of Economics and Sustainable Development*, 5 (9).
- ULLAH, M. U. (2013). Impact of GDP and Inflation on Unemployment Rate: A Study of Pakistan Economy in 2000-2010. *International Review of Management and Business Research*, 2 (2), 388-400.

Blind Reviewers Comment

This paper justifies its objective very keenly. Author crafted this paper very structured manner. Regression analysis is major part of this paper which clear the picture of current situation very nicely and easily. The literature review gives the clear perspective about the topic. Conclusion of this paper highlight each and every detail perfectly. Over all this paper is easy to understand and open facets of studies.

GJEIS Prevent Plagiarism in Publication

The Editorial Board had used the turnitin plagiarism [<http://www.turnitin.com>] tool to check the originality and further affixed the similarity index which is 8% in this case (See Annexure-I). Thus the reviewers and editors are of view to find it suitable to publish in this Volume-11, Issue-1, Jan-Mar, 2019



Annexure 1

ORIGINALITY REPORT

8%	4%	4%	6%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.scirj.org Internet Source	3%
2	Mosikari, Teboho Jeremiah. "The Effect of Unemployment Rate on Gross Domestic Product: Case of South Africa", Mediterranean Journal of Social Sciences, 2013. Publication	2%

3	Submitted to University of Northumbria at Newcastle Student Paper	2%
4	Arup Mitra. "Insights into Inclusive Growth, Employment and Wellbeing in India", Springer Nature America, Inc, 2013 Publication	1%
5	Submitted to Westminster International University in Tashkent Student Paper	1%

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