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Indian Industrialization: A Paradigm of Jobless Growth?

Dattatreya Mukhopadhyay[1]

Dr. Debasis Mukhopadhyay[2]

[1] *B. A. Economics, ST. Xavier's University, Kolkata, Email Id- mukhopadhyay.dattatreya@gmail.com*

[2] *Associate Professor; Department of Economics Bejoy Narayan Mahavidyalaya; University of Burdwan,West Bengal; India, Email Id- mukhopadhyay.debasis@yahoo.co.in*

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Abstract

The paper seeks to establish a relationship between sector wise employment growth rate and GDP growth rate in the Indian economy. The devoir has been to find out whether employment has grown in the same rate as the GDP. To unearth it, there has been some digging done with tool of correlation analysis and multiple regressions, to entrench the desired relationship between employment and GDP growth, with the variables being growth rate of gross domestic product and sector wise employment growth rate.

From recent studies it has been discovered that India has a fairly stable growth path with the growth rate ranging from 7% to 10% from 2000 to 2016. However, since the same period the Indian economy reportedly clocked less than even 1% of growth in employment with the labour force participation rate being 52.135% in 2016. The employment-unemployment data released by Labor Bureau (EUS 2015) has put the unemployment rate at 5%. Independent estimates also suggested that 2013-2015 period saw the total employment shrinking by 70 lakhs heralding a new 'jobless growth' under the NDA government.

Our studies reveal that even though there has been economic growth in the Indian economy, this growth has not been accompanied by corresponding rise in employment. In a major sector like railways the Pearson correlation coefficient is negative, indicating that there has been a steady decline in employment as the economy grew. Even though the Plantation and private-owned factories show moderately positive correlation coefficient value till 2009, the total number of jobs created in recent days remain deplorably low and far below the required level (8.1 million per year estimated by the World Bank).

Keywords: Economic growth, Employment, Gross Domestic Product, Job Creation, Labor Force Participation Rate
JEL classification- J6, L6-8, O4

1. INTRODUCTION

If it is Industrialization we are to write about, we must have a clear image in our minds, of what it actually is. In today's world the word can act dicey for it seems to have different definitions everywhere.

India began her search for industrial development after independence in 1947. The Industrial Policy Resolution of 1948 summoned the start of the evolution of the Indian Industrial Policy. The revolution not only defined the broad prospects of the policy; it delineated the duties of the state in

industrial development both as an impresario and as an authority in the eyes of people. Successive policy resolutions also reiterated this basic shift in favor of this sector.

The Industrial Policy Resolution of 1956 had given the public sector a strategic role in the economy. It had categorized industries which would be the sole answerability of the state. This distinguishable characteristic of the pre-eminent position of the public sector, envisaged private sector that was co-existing with the state and then attempted to give the policy framework some kind of flexibility. By now we all are familiar with the term "Hindu rate of growth". The term was coined by Indian economist Raj Krishna. It suggested that there was a low growth rate of India, a country with mostly Hindu population which was in a sharp contrast to high growth rates in other Asian countries, especially the East Asian Tigers, which were also newly independent. The economic growth during that period (1950's to 1980's), had stultified dangerously, hence the term. Therefore, the Industrial Policy's initiatives undertaken by the Government since July 1991 have been designed to build on the past industrial achievements and to fasten the process of making Indian industry internationally well enough, enough to make it competitive.

The momentum of these initiatives has been to increase the domestic and external competition through wide application of market mechanisms and facilitating fabrication of dynamic relationships with foreign investors and suppliers of such technology. The process of reform has been continuous since. Yet, it has been in the headlines for the past few years, how India is going back, reliving those not-so-golden days of the dark dawn. In fact, industrialization in India has become a debatable topic all over, considering if it was even done in the right way. To take a side right away is unjust. Although, it is right to say, the neoteric trends in the organizational form of units in the registered manufacturing sector suggest that India's factory sector is not just abnormal but backward to boot. It is now widely recognized that, despite a lengthy history and much asseveration, the pace and level of India's industrial development has been well below the conservative expectations and far short of potential, i.e., it is quite unimpressive. Conventionally, this has been captured in the records that the maximum recorded value of the share of manufacturing value added in GDP has never surpassed 19 per cent in India. In sharp contrast, that figure has been seen to be peaked at above 34 per cent in Brazil, 40 per cent in China, 31 per cent in Korea and 31 per cent in Malaysia. The comparison in terms of employment in industry relative to total employment has been no better, with India recording values below 25 per cent, whereas the figure peaked at 36 per cent in Korea, 34 per cent in Malaysia and 30 per cent in China. Thus, seen in terms of the heterogeneity of economic activity, India has bifurcated from many other erstwhile underdeveloped countries, in as much as the shift away from other activities such as agriculture in terms of shares of value added and employment in favor of manufacturing has been limited.

Such diversification was seen by the famous analyst of economic development, Simon Kuznets as a characteristic feature of modern development. Going by Kuznets' understanding of the structural heterogeneity that should assort with modern development, are, "these changes are an indication of retrogression in the Indian industrialization process." What seems to be astonishing is that this occurred in a period (2004-2010) when manufacturing growth stood up and overall growth accelerated. Combination of which, with the stagnation in the share of manufacturing in GDP at a fairly low level, points to a setback in industrial development. This picture of 'backwardness' is backed up by other evidence. The National Sample Survey Organization (NSSO), for example, adopts a definition of the "informal sector" which recognizes it as constituting of retention and partnership enterprises (not including those run by non-corporate entities such as trusts, cooperatives and non-profit institutions), in the agricultural sector or in non-agriculture-related activities excluding crop production (AGEGC). Now it is safe to say that if not already rendered, India has a Jobless Growth. One may ask why is it happening in the first place, well, In India, growth is accredited to service sector, wherein both employment and wages have seen a rise. Currently as figures say, the largest employing sector in India is the Agriculture sector, employing forty five per cent of the population but contributing only a bare fifteen percent to the GDP, whereas Service sector is the biggest contributor to the GDP but employed to by less than thirty percent. IT and Financial services are riders of service sector growth in the last two decades however both of these sector are not employing widely. Hence it is contributing to the infamous jobless growth in India. The labor–intensive manufacturing sector has not become the engine of growth in India, rather it is the knowledge-

intensive service sector which, along with some segments of capital intensive manufacturing has become to be known as the engines of growth in India. Although these sectors by their nature, are not employment-intensive. Stagnation in manufacturing output, and employment and contraction of labor-intensive segment of the manufacturing sector is due to the excess rigidity in the manufacturing labor market and rigid labor regulations that create disincentives for employers to offer jobs. Also, Industrial Disputes Act has lowered employment in formulated manufacturing by about twenty five percent (World Bank Study) which can be accounted for another cause. There has been stringent employment protection legislation that have pushed employers towards greater capital intensive modes of production, than authorized by existing costs of labor relative to capital.

By all means, the nature of the trade schedule in India is still tilted towards capital-intensive manufacturing. Also, the nature of Indian manufacturing is not employment-friendly. If not all, most of them are automated. They have contributed to growth, but not necessarily to employment. The labor intensity of MSME as seen is four times greater than that of large firms yet they are not treated well in India. They have poor access to credit and they are plagued by many serious problems which has limited there growth potential. All this factual information has lead us to a state we infamously called, the "Jobless Growth".

2. LITERATURE REVIEW

The United Kingdom was the first of the countries to walk through Industrial Renaissance or the Industrial Revolution. The occurrences of this commencement came into force around the 18th Century. Japan however was towards the end of the chronology to have experienced this Fin Des Class (the turn of the century). The nation's of India and China in wake of the rapid Asian Tiger developmental pattern made substantial and credible changes keeping in sight the enormous population-territory size and density along with their dynamic government and Geo political frameworks. India's industrialization stepped it's foot after independence in the 20th century with the goal of creating several specialization poles able to conquer foreign markets. Nehru, the then Prime Minister recorded his views advocating the following "no country can be politically and economically independent unless it is highly industrialized and has developed its resources to the utmost". As mentioned above to pitch in a comparative study. Nehru's ideas about India's development were largely inculcated in free India's first Industrial Policy Resolution adopted by the Constituent Assembly in 1948 where the resolution officially was accepted as the principle of mixed economy. Industries were divided into four main categories. The first category mainly revolved around strategic industries which were made the monopoly of the Government. Within the second category were six industries which included, steel, iron and coal. The Government then decided that all the new units would be started exclusively by itself in the public sector without disrupting the already existing ones in the private sector. 18 industries, including heavy castings of iron and steel, tool steel and ferro -alloys were covered in the third category and the rest of the industries by the fourth. Then Industrialization in its fastest and most hasty forms occurred in the late 20th century across four countries known as the Asian tiger (Hong Kong, Singapore, South Korea and Taiwan)as mentioned above but it was thought that India was not far behind since India was seeing a conspicuous growth when steel industries at Rourkela, Bhilai and Durgapur with initial production capacity of one million ton. Invulnerable and non -volatile governments and schematic structured societies with strategic geolocal locations, heavy foreign investments, a low cost skilled and motivated workforce, a competitive exchange rate, and low custom duties brought about this rate of growth.

Jana Hambrock believes that under the then Prime Minister Indira Gandhi (1966-77), two dominant tilts took place in the role of the country-1) Agriculture was given more attention unlike previous years by the entry of new seeds, popularly know as the HYV (high yield variety), fertilizers, agricultural credit and electrification in the rural areas for basic and small scale manufacturing activities. Thus the green revolution evoked and India was self-sufficient in grain by the last 1970's. 2) This shift further tightened the state's control over every aspect of the economy. Nationalization of the banks, increased restraints on trade, impositions on price over a humongous list of products and finally, congestion of foreign investments. In 1973, commerce in foreign exchanges and foreign investment was governed by the Foreign Exchange and Regulation Act (FERA). This act virtually

blocked completely, the entrée of new technology from foreign countries that was much needed, in the 1970s and 1980s, especially when these involved large capital requirements. After the second World War, most of the industrial functioning nations constructed their economic framework around an inward looking policy. However, the Indian system of state planning went far beyond it. Size being a determinant factor for the regulation by the government, governing the firms categorized into: borrowing, investment, capacity utilization, pricing and distribution. " Even after this, "The development of India into a modern industrialized country is a slow but continuing process." -Jana Hambrock and Sebastian Hauptmann from "Industrialization In India, Jana Hambrock and Sebastian Hauptmann - Socrates". From 1950 to 1980, Industrialization model was went astray which was controlled by the classical Indian state. Although this model met with its end in the 1980's. The average level of the growth rate that prevailed in Asian countries during the 1980s, was met by India as its average growth rate. In fact it was way above than that of the Latin American countries because their economic prospects were damaged severely, as what Mr. Ajit Singh from University of Cambridge wrote in his paper. He then continued that the state itself and its industrialization through this learnt about the successes and failures and the lessons for future utilization.

To make a contrast, a way too harsh conclusion regarding the overall Indian record was drawn from The Economist that read how the hopes of 1947 had been betrayed and despite all of India's advantages and a generous amount of aid from the capitalist West (whose "degenerative" societies it stood against), has recorded growth and progress lesser than any of the other lateral third world countries. This incurred a catapulted cost in human terms. If a question was posed on the discussed phenomenon of the Indian Economy, a brief answer would be this: a abysmal state of the economy has prevailed with the assuming of jobs that the state had no business in taking up. In the paper, "Economic Reforms and Jobless Growth in India in the 1990s" written by B.B Bhattacharya and S. Sakthivel, documented that there has been a mild acceleration in the output growth rate and a cascading downfall in the employment growth in the post-reform period. This is evident not only at the all-India level but also across the states and sectors. There are however some variations among some states. What is more significant is that broad pattern of decline in employment growth is invariant with respect to different measures of employment. There is therefore a clear evidence of a deceleration in employment growth in the 1990s.

Thus when asked about the economy we tend to say, that with a growth in the economy, a climb in the creation of jobs can be observed in turn allowing the income to rise which increases the disposable income, giving impetus to further growth rate which simultaneously creates more employment and jobs. The turn of this circle thus elevates the people out of poverty and thus converts a developing economy into a developed one. The demographic dividend talked about could be sourced from this cycle which is treated as the 'Normal'. But what we are journeying through today is the neo-normal. The growth of the economy is not being supplemented by the creation of jobs. Thus the exodus of people into the job market comes face to face with an uncertain future following which the demographic dividend threatens to turn into a demographic nightmare. A senior journalist by the name of Raghavan Jagannathan, excavated the answers and also served profound solutions that could evade an Indian 'Job-less growth'. Jagannathan's writing is pretty self explanatory as he explains how the statistics of unemployment in India is collected, arranged and segmented once every five years by the Ministry of Labor and Employment (MoLE), essentially from Nation Sample Survey's sample studies conducted. A report states that, that India has seen a rise in employment and wages since India's growth mainly affects the service sector. The figures say otherwise. The biggest employing sector in India is the Agriculture sector with 45% employed out of the population but contributing only 15% to the GDP, when we know that the Service sector is the biggest contributor to the GDP but employs less than 30%. IT and Financial services are drivers of service sector growth in last two decades however both of these sectors do not employ heavily. Thus, contributing to jobless growth in India. During the last decade (2001-11), the growth rate of the labor force (2.23 per cent) was significantly higher than the growth rate of employment (1.4 per cent), which itself was several-fold less than the growth rate of the economy. According to Census 2011, the average growth rate of the economy was 7.7 per cent per annum, when it was only 1.8 per cent for employment. 66th round of the National Sample Survey Office (NSSO) data on employment in 2011 revealed that between 2004-05 and 2009-10, only 1 million jobs were added per year; in a period when the economy

averaged a record 8.43% growth annually. A HDFC Bank report on India's tapering jobs growth says that "employment elasticity" in the economy is now close to zero – for every one-point rise in GDP, jobs grow only 0.15. Fifteen years ago, it was 0.39.

Comparing all other papers from various sources mentioned above and having a personalized view on this matter, through data analysis and statistics, we surely conclude the same.

UPA and NDA eras compared:

Demonetization, Goods and Services Tax, Insolvency and Bankruptcy Code, India rising among its peers in terms of economy, and much more happened during the past five years of the Modi government.

But PM Modi's predecessor, Manmohan Singh, is regarded as a capable economist. India's GDP growth rate in 2010-11, which falls during his second term as the Prime Minister, is the highest recorded, even after the recalibrated GDP data. Recalculated data shows Indian economy growing faster under the Modi government, though. On the question of which of the two Prime Ministers, Narendra Modi or Manmohan Singh, guided the Indian economy better, here is what the numbers reveal:

Jobs

Job creation has been a longstanding challenge for the Modi government despite several initiatives to tackle it. Available data shows that unemployment rate has maintained an upward trend between June 2017 and December 2018. Notably, CMIE started collecting job data extensively only a couple of years back and EPFO payroll data started from September 2017, which means there are no concrete numbers depicting job creation during the Manmohan Singh era.

Gross Domestic Product

Recalculated GDP data shows Indian economy growing 0.6 per cent faster under PM Modi as opposed to time during the UPA-II government, but it is still a long way from attaining double digit growth. Manmohan Singh did achieve this milestone during his tenure, crossing the 10 per cent-mark during 2010-11, followed by a substantial decline in the next fiscal, while recalculated data brought it down to 8.5.

Fiscal Deficit

Numbers show that Modi govt substantially more fiscally prudent. The average fiscal deficit growth rate under PM Modi has been 1.7% lower than what was reported during Manmohan Singh's tenure. This can be attributed to the spike in fiscal deficit during the third year of UPA-II government.

Bad Loans

During the Narendra Modi era, bad loans have remained a thorn in the side of Indian banking industry, something the ruling BJP has openly blamed the Manmohan Singh government for. The fact remains, though, that Non-Performing Assets (NPAs) have skyrocketed 321 per cent between 2014-15, when Modi government came into power, and 2017-18. The total advances, meanwhile, have grown by a little over 12 per cent during this period.

Foreign Portfolio Investment and Foreign Direct Investment

Narendra Modi government was able to bring in 50 per cent more foreign direct investment during only four years of its tenure as compared to the five of UPA-II government under Manmohan Singh. The FDI inflow, which started strong in the initial days of the Modi government, had reached a plateau in its second and third year and taken a downward trend by the fourth year. The FDI numbers for the fifth year have not been released yet. Meanwhile, Indian economy saw 40 per cent more foreign portfolio investment during Singh's second term. However, FPI numbers for the fifth year of Modi government are still awaited. Given the upward trend FPI has maintained since Modi's

second year in office, it will be interesting to see whether it can match the level during the Manmohan Singh government.

Exports and Imports

While goods exports have remained flat under the Modi government, services exports have increased 50 per cent. By its fourth year, the incumbent government has managed to gain some ground in terms of exports as compared to the previous regime. On the other hand,while moderate crude oil prices have helped Narendra Modi keep the import bill under control, it has overstepped the numbers posted by the UPA-II government.

New Projects, Stalled Projects, and Completed Projects

Numbers denote that new project announcements have fallen by 12 per cent under the Modi government, whereas stalled projects have increased 34 per cent. The silver lining is that completed projects have increased 38 per cent under the incumbent government. Weighed down by factors including policy uncertainties and increasing bad loans, the investments have taken a hit across the board during the previous quarter of current fiscal, according to a report by CMIE.

National Debt

There is good news and bad news for the Modi government on the front of national debt. The present regime has reported national debt growing 3% slower as opposed to the Manmohan Singh government from 2009-2014. However, the Modi government is paying 0.3 per cent higher rate of interest.

The quality of India GDP data came into question when GDP growth in FY17 was revised to 8.2%—the highest in any year between FY12 and FY19, despite demonetization GDP growth under Narendra Modi was faster than under Manmohan Singh.

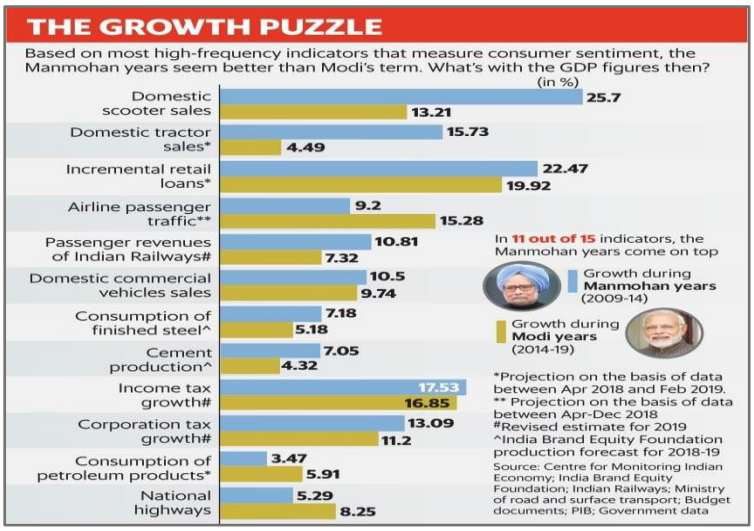
The quality of India's economic data in general, and gross domestic product (GDP) data in particular, has come in for questioning in recent months. Those questions only acquired more urgency in January, when the GDP growth in 2016-17 was revised to 8.2%—the highest in any year between 2011-12 and 2018-19.

In 2016-17, a large section of the informal economy, which forms a significant portion of the Indian economy, was severely hit by demonetization. Hence, the question: how did the economy grow at 8.2% during the year?

Between 2009-10 and 2013-14, the period during which Manmohan Singh was the prime minister, the Indian economy grew by 6.7% per year. Between 2014-15 and 2018-19, the Indian economy is supposed to have grown at 7.5% per year. Narendra Modi has been prime minister during this period (from 26 May 2014 onwards).

Hence, the economic growth during the Modi years has been faster in comparison to the growth during the Manmohan Singh years. The question, though, is: does this pass the basic smell test? One way of figuring this out is to take a look at real-time economic indicators which capture the economic decisions of the average Indian.

Since January 2015, when India adopted a new way of calculating the GDP, the growth figure has not been in line with high-frequency economic indicators that reflect the economic decisions of individuals. Unlike GDP growth, the economic indicators used here, from domestic car sales to steel output, are real numbers (except inflation) and not theoretical constructs. So, if domestic car sales are growing, it reflects robust urban consumer demand. If steel production is growing, it shows a robust car industry which uses a lot of steel, and a better physical infrastructure that can be used by individuals, among other things.



The Indian economy in the 70s and 80s were marked with moderate growth rates of 3 to 4 per cent and registered up to 2 per cent growth in employment (SWI-2018). But markedly the post reform period of the 90s and 2000s clocked less than even 1 per cent of growth in employment corresponding to an economic growth of 7 -8 per cent. This was also a period of a structural transformation with a reduced workforce in agriculture with even the absolute number falling since 2004. Increasingly people were on the lookout for non-farm employment with construction and NREGS supplementing it. In fact, the potential work force in industry and services grew at 14.7 million a year during 2004-12 but the corresponding employment provided within those sectors was hardly 6.5 million a year (Jayan Jose 2019). This was widely characterised as a period of jobless growth and that is why a major chunk of the unemployed, especially the youth, bought Modi's campaign in 2014 Lok Sabha elections of providing 1 to 2.5 crore jobs per year.

RECORD OF MODI GOVT

The employment-unemployment data released by Labour bureau (EUS 2015) has put the rate of unemployment at 5 per cent. Independent estimates also suggested that 2013-15 period saw the total employment shrinking by 70 lakhs heralding a new job loss growth under Modi. The most recent BSE-CMIE data suggested that the rate of unemployment stood at 7.02 per cent in December 2018 and the February 2019 data puts it at 7.2 per cent. The GDP estimates also recorded a significant deceleration from 7.5 per cent in July-September 2017 to 5.7 per cent in April-June 2018. The Niti Ayog vice chairperson Rajiv Kumar's rejection of the job data was grounded on his optimism from the high growth rates. But all the window dressing got exposed after the resignation of the acting chairperson and another member of the National Statistical Commission (NSC) opposing the government decision to delay the findings of the NSSO EUS (employment-unemployment survey) which was finalised and ready for publishing way back in December 2018. This data that leaked out subsequently in the public domain showed alarmingly higher levels of unemployment. According to this, the country's unemployment rate stood at over a four-decade high of 6.1 per cent during 2017 -18, compared to 2.2 per cent in 2011- 12 (see table 1.1) by the usual status approach. The labour force participation rate (the share of population working or willing to work) was 55.9 per cent in 2011 -12, dropped to 49.8 per cent which means half of India's working age population (15 years and above) is not contributing to any economic activity. These numbers along with the high rate of unemployment are certainly a cause of worry in a country where the rural majority doesn't have a choice to remain unemployed in order to feed themselves. The low female labour participation rates in a scenario of shrinking agricultural sector and women not finding enough non-farm employment are fresh concerns.

Year	Labour Force Participation Rate (%)	Rate of Unemployment (%)
National Sample Survey		
2011-12 (NSSO)	55.9	2.2
2017-18* (NSSO)	49.8	6.1
Labour Bureau (EUS)		
2011 (LB-EUS)	52.9	3.8
2012 (LB-EUS)	50.9	4.7
2013 (LB-EUS)	52.5	4.9
2015 (LB-EUS)	50.3	5
Centre for Monitoring Indian Economy		
2018 June (CMIE)		5.7
2018 Dec (CMIE)		7.02
2019 Jan (CMIE)	43.2	7.1
2019 Feb (CMIE)	42.7	7.2

Table 1.1: Key Labor Indicators 2011-18 (various agencies)

Demonetization: Effect on Employment

The deceleration in the economy post demonetization is a fact noted by the low growth rates since then. The employment data from CMIE, a month after demonetization showed 12.7 million job losses. The implementation of GST in July 2017 pushed it even further as the rate of unemployment reached 7.02 per cent by December 2018, with rural India accounting for 84 per cent of the job losses out of a total of 11 million* in 2018 alone. The picture from the leaked out NSSO data also doesn't look otherwise, as according to the current weekly status approach which appears to capture the impact of demonetization and GST better, the unemployment rate stands at 8.9 per cent.

Unemployment Among Educated Youth

The State of Working India report notes that the rate of open unemployment among the youth and higher educated has reached an all time high of 16 per cent. The 2015 Labour Bureau EUS data also suggested that additionally, 13.8 per cent of graduates and 12.6 per cent of postgraduates (or higher) were unemployed, which means three to four times the overall unemployment rate of 3.7 per cent estimated then. The unemployment rates for graduates and above shows the SC/ST/OBC categories way above the general category. The data approved by the NSC shows that the unemployment rate among educated people (the NSSO survey defines a person to be educated if he/she has completed school studies til l at least the secondary level) rose sharply in 2017-18. This was after registering a decline in all categories in 2011 -12 compared to 2004-05 (See table 1.2)

Categories	2004-05	2011-12	2017-18
Rural male	4.4	3.6	10.5
Rural female	15.2	9.7	17.3
Urban male	5.1	4	9.2
Urban female	15.6	10.3	19.8

Table 1.2: Educated Unemployment (in %)

Courtesy : Somesh Jha (Feb 17, 2019, *Business Standard*)

WHAT LED TO THE EMPLOYMENT CRISIS?

i. Agrarian Crisis & Industrial Slowdown

In India, traditionally agriculture has been the mainstay as far as employment is concerned. Compared to the 2000s which showed an uptick in rural wages due to a host of reasons such as construction boom, much better implementation of the NREGA and even more regular monsoons, the next decade from 2011-12 onwards all these factors started turning negative. The construction sector and small industries in the informal sector had to bear the brunt of demonetisation (Nov-2016) and GST implementation (July-2017) respectively. In fact, these factors have added to the decelerating rural

wage growth since November 2014 marking an acute rural distress during this period with real wages turning negative following an increase in inflation. This is at a time when the NDA government was talking about doubling the farm income by 2022. Needless to say, doubling requires 10 -15 per cent consistent growth in the sector for at least five years.

Industrial growth has been poor throughout this decade and the NDA government couldn't do anything to reverse this trend. The Index of Industrial Production (IIP), which measures industrial output growth, has been fluctuating up and down, dipping to 2.6 per cent in 2015 then inching up to 5.2 per cent in 2016, again dropping to 3.5 per cent in 2017 and inching up to 5.2 per cent in 2018. In fact, total factory employment (ASI) increased by just 7.61 lakhs in the first two years taken together (2014-16) of the current government, compared to an increase of 7.36 lakhs in a single year in 2011-12. This period was also marked with a declining wage share in organised as well as unorganised manufacturing. The evidences from states shows that workers were forced to take up multiple informal jobs and work upto 12 hours, much higher than the eight hour working norm for meagre monthly income of even less than Rs 5000.

ii. **Lower allocations to MGNREGS**

The MGNREGS as of now suffers from rationing of jobs as the proportion of applicants who could not get a job has risen to 40 per cent, thus clipping the wings of a demand driven scheme. The budget amount for 2018 -19 was already lower than the 2009-10 amounts in real terms. Added to that, the allocation for 2019 -20 has been reduced by another 1000 crores than the previous year. Moreover, the wages are no longer linked to the minimum wages act and are now lower than statutory minimum wage in many states. The low allocation is reflected in the average person days per household under MGNREGS under the Modi regime, with the year 2016 registering the lowest ever figure of 15.3 days, compared with a maximum of 54 days in 2009 (Sujatha Kundu, 2018). Inordinate delays in payment of wages on account of the paltry compensation have also been cited in many recent studies.

The government schemes like Skill India (Pradhan Mantri Kaushal Vikas Yojana) failed miserably, as out of the 41.3 lakh people trained in three years u nder the programme, just 6.15 lakhs got placements. The much touted Mudra loans also could disburse only an average of Rs 45,000 which obviously means employment opportunities confining within the loan seekers.

iii. **Downsizing of the Govt**

The record of the Modi government in creating jobs under government and public sector was also on the negative for the last four years. The total number of employees in the central government dipped to 32.53 lakhs in 2017 from 33.28 lakhs in 2014, a loss of 75,000 jobs. In over 330 Central Public Sector Enterprises (PSEs) which employed 16.91 lakh persons in 2014 (mainly in mining, steel, oil, heavy and medium engineering and fertilizer sectors), the 2017 figure is 15.24 lakhs, a loss of 1 lakh 67 thousand jobs in three years. The jobs in the public sector banking sector also came down from 9.47 lakhs in 2015 to 9.12 lakhs in 2017, a loss of 35,000 jobs.

The latest data revealed through answers to queries in parliament and reports from various programs and bodies (Subodh Verma, 2019) reveal a staggering 60 lakh vacancies in government posts. These include posts for over 10 lakh elementary and secondary school teachers, nearly two lakh teachers in colleges, universities and IITs/IIMs, over 2.2 lakh doctors and healthcare staff, over 5.38 lakh state police persons and over 5,000 judges in lower courts across the country. Thus, the central government along with the many BJP state governments which were kowtowing this line was on a conscious path of downsizing while applications for government jobs in the central/state sector were heavily over-subscribed. The Indian Railways which advertised vacancies to fill 1 lakh jobs received 2.5 crore applications.

3. DATA AND METHODOLOGY

We examine the relationship between GDP growth rate and sector-wise employment growth rate in India. For our study, we have collected the employment data from the records of the Labor Bureau of India. The data on GDP was collected from the Reserve Bank of India records.

The employment data mainly spans the first decade of the 3nd millennium 2000-2009 in the case of all manufacturing units under the public and private sector, and for other major employers in India, namely- Railways, Banks, Mines and Plantations.

The GDP growth data is mainly a derivative of the total year-wise GDP of India at market prices. The employment data of the manufacturing sector covering the ten-year span from 2000 to 2009 was analyzed with the corresponding GDP growth data from the same time period using the base price of the year 2000. The other sectors of the Indian economy under analysis comprising of Railways, Plantations, Mines and Banks, also have their employment data covering the ten-year span from 2000 to 2009. The corresponding GDP growth data in their case was calculated using the base price of the year 2000.

The employment growth data shows radical variations in the cases of various sectors. In the instance of the mining sector, the data is comparatively less digressed from the mean with the highest employment growth rate being that of 1.36% in 2007 and the minimum being -4.51% in 2008. The deviation is most noticeable in the case of the banking sector with the data rangebeing a whopping 25.67%. The banking sector reveals a maximum employment growth rate of 18.95% in 2009 and a minimum growth rate of -6.72% in 2008. Next comes the employment growth data for the railways. This sector shows negative employment growth rates for the entire ten-year study period. The variation in data is again somewhat less for the railways with the maximum being 0.31% and the minimum being -3.46%. Needless to say, that the sector of railways is probably the most pertinent example that can be quoted to testify the paradigm of jobless growth that the Indian economy has demonstrated in the first decade of the new millennium. After that, we explore the plantation sector, whereupon we come across a few startling results. The plantation sector, by far, has astonishingly withstood the vagaries of the wave of joblessness that ravaged the other sectors. It has recorded positive employment growth rates all throughout the ten-year study period (2000-2009) with the highest being 7.69% in 2007 and the lowest being 2.01% in 2004 – the only sector under our study to do so.

Lastly, we analyzed the manufacturing sector in brief. The range of employment growth data for the manufacturing sector was staggering approximately 50%. The manufacturing sector recorded a maximum employment growth rate of 38.05% in 2004 and a minimum rate of - 22.16% in 2003.

The tool of correlation analysis has been used to establish a link between the two independent variables of GDP growth rate and sector-wise employment growth rate. In the case of each of the sectors, we have estimated the Karl Pearson correlation coefficient. In this regard we initially had to calculate the standard deviation individually for each of the sectors, along with the standard deviation of the entire GDP growth data as a whole. Upon completion we assessed the covariance between the GDP growth data and the employment growth data of all sectors (manufacturing units, railways, mines, plantations and banks) taken one at a time. Finally, we have used the standard formula for correlation coefficient calculation; i.e.

Karl Pearson's Correlation Coefficient = [COVARIANCE (X, Y) / S.D. (X) S.D. (Y)].

Sectors	Correlation Coefficient Value
Public sector manufacturing units	-0.62075
Private sector manufacturing units	0.610675
Railways	-0.91137
Mines	-0.87229
Plantations	0.992319
Banks	0.105778

4. RESULTS AND ANALYSIS: -

We have seen that the most effected sector with a negative correlation is the railways sector with a correlation of (-0.91137), this signifies that the jobless growth is maximum that is with rise in GDP the rate of growth of employment has fallen. Then we have the banking sector with a correlation of (0.105778) this again signifies that as GDP is rising, the rate of growth of employment is not as much as that of GDP growth. In plantations we have a positive correlation (0.992319), which signifies that with rise in GDP the rise in rate of employment is more or less equivalent. For mines we found out that the correlation is (-0.87229) once again it's a negative correlation as GDP rises the rate of employment is falling. Then we have the manufacturing units with private sector having a positive relation of (0.610675) and the public sector having negative correlation (-0.62075).

Next we move on to Multiple linear regression analysis:

Here we make several key assumptions:

- There must be a linear relationship between the outcome variable and the independent variables. Scatter -plots can show whether there is a linear or curvilinear relationship.
- Multivariate Normality–We assume that the residuals are normally distributed.
- No Multicollinearity—It is assumed that the independent variables are not highly correlated with each other. This assumption is tested using Variance Inflation Factor (VIF) values.
- Homoscedasticity–This assumption states that the variance of error terms is similar across the values of the independent variables. A plot of standardized residuals versus predicted values can show whether points are equally distributed across all values of the independent variables.

In this case the GDP is the dependent variable while the sector wise employment is the independent variable.

We check the response of the independent variables on the dependent variable of GDP. Our hypothesis in this case - 'GDP and sector wise employment is associated.'

MAIN DATA TABLE?

GDP	Public	Private	Rail	Mines	Plantations	Banks
17,866	798,000	3,428,000	1,549,385	638,741	347,700	928,000
18,642	2,895,000	4,830,000	1,514,816	599,301	348,700	957,000
19,762	3,165,000	5,365,000	1,475,884	581,880	354,300	931,000
20,483	737,000	4,190,000	1,445,428	572,327	372,770	930,000
22,228	1,019,000	5,783,000	1,424,389	567,911	380,320	907,000
23,878	958,000	6,222,000	1,412,434	559,095	388,050	924,000
26,161	924,000	7,245,000	1,397,610	543,009	397,000	922,000
28,711	1,056,000	6,959,000	1,394,418	550,390	420,000	922,000
31,297	890,000	6,532,000	1,386,123	525,501	433,000	860,000
33,394	742,000	5,747,000	1,337,533	534,077	445,000	1,023,000

Call:

lm(formula = GDP ~ Public + Private + Rail + Mines + Plant + Banks data = X)

Residuals:

1	2	3	4	5	6	7	8	9	10
334.15	-364.93	373.04	-427.63	-80.71	11.97	407.8	-726.46	234.07	238.7

REGRESSION TABLE

Coefficients:				
	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-7.93E+04	3.11E+04	-2.546	0.08424 .
Public	2.52E-04	5.01E-04	0.502	0.65021
Private	4.26E-04	3.84E-04	1.109	0.34827
Rail	2.36E-02	2.66E-02	0.89	0.43908
Mines	-1.76E-02	4.31E-02	-0.409	0.71031
Plantations	1.73E-01	1.82E-02	9.501	0.00247 **
Banks	1.04E-02	1.09E-02	0.953	0.41081

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 678.1 on 3 degrees of freedom Multiple R-squared: 0.9948, Adjusted R-squared: 0.9845
F-statistic: 96.5 on 6 and 3 DF, p-value: 0.001609

Our hypothesis holds only in case of the Plantation Sector (1% significance).

We establish an association between GDP and Employment generation in Plantation which is a positive association which is in conformity with what we find in correlation analysis. The Model fails ie, hypothesis is rejected in case of other sectors.

5. CONCLUSION

Jobless growth is a multi-cause, systemic problem. Tackling each cause individually will backfire. A more effective solution is to develop a synergistic policy matrix. There is an old and wise saying, "If you do not know where you are going, you will end up somewhere else. The number one priority of the Indian government must be much faster generation of more and better jobs. The Indian economy's growth, in terms of gross domestic product (GDP), is the highest in the world at present. However, it is one of the slowest in the world in creating jobs. The International Labor Organization says, in its Future of Work Report, "The unfurling technological revolution is so far-reaching in its labor-replacing potential that it is inherently different from what has been experienced in the past." The solution to India's problem is the need to create more jobs faster. We have seen that with urbanization as there is an increase in GDP, the growth rate of employment is not rising at the same pace for some sectors, it is a very small positive growth and for some sectors there is a negative relation between GDP growth and growth in employment, that is with rise in GDP job opportunities are falling.

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