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## EDITORIAL NOTES

We are feeling great satisfaction that the Journal of Economic & Commerce ***(JEC)*** is successfully completing its 15th year. Earlier we successfully indexed our journal in QLI Database of INSTITUTE FOR STUDIES IN INDUSTRIAL DEVELOPMENT as well as in the UGC list (2018). We are also proud of our Editorial Board for the *Journal of Economics & Commerce* **(*JEC*), *Which*** includes academicians in the fields of Economics and Commerce, who have marks of records of accomplishment in their respective disciplines and also share a burden of referee as per required from time to time. Ever since its inaugural publication in 2010, ***JEC*** has emerged as one of the most respected publications, encompassing both Economics and Commerce. We intend to build on this tradition with our present issue.

Over the years, ***JEC*** has endowed with a platform for the progression of knowledge and the quest of academic excellence. Many prominent scholars from different part of India have published inspiring high quality articles analogous to those in leading journals in the field. Even as maintaining its focus on contemporary developments in the broad areas of Economics and Commerce, the journal is now also pledged to the spreading out of research frontiers further.

Within this orientation the present issue of the journal provides a set of eight articles which includes some special articles case studies on burning issues of economics, commerce and instutional area. In addition to this we have also kept our commitment towards promotion of new contributors and young researchers in the present issue. In the present issue special commentry and a confrence report has been also published.

The Editors welcome submissions of the research papers on vital issues concerning our economy and commerce, **with a token of note that these will strictly be referred before acceptance.**

DAV PG College
Varansi
30th, July, 2024

**Anup Kumar Mishra**
Managing Editor

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# DEMOCRATIC POLITY, CRIME AND CORRUPTION AND ECONOMIC DEVELOPMENT IN INDIA

**Prof. I D Gupta***

## ABSTRACT

*Society and the citizens of India cannot be mute spectators of the phenomenon happening before their eyes of democratic degeneration in the country and ethical degradation in society. The realities affect life and living of all, directly or indirectly. Hence this paper.*

*Persons with criminal records should never be allowed to become Law Makers and Policy Makers for the country. Unfortunately in India in the last few decades the composition of the Parliament is changing from bad to worse owing to entry of large numbers of members with criminal cases, hard-core criminals and mafias, Cine- actors, dancers and dramatists who have gained popularity for their dramas. How far they qualify to become Law Maker and Policy Makers of the country and what could they contribute are the big questions.*

*Another issue is that of corruption. Corruption eats into the very process of development. We find that the new crop of politicians which entered into the Parliament House is mostly stained with criminal records. The sight of frequent disruptions of the Houses, scuffles, throwing of furniture etc. in the Parliament by the opposition members, presents an awful question about the qualification and culture of these members. The story of the Council Houses of many of the States is more alarming. It appears "Democracy has been hijacked" by these elements. That is why the objectives of the Indian Constitution of establishment of an Egalitarian Society, free from poverty and hunger, illiteracy, etc could not be achieved despite 12 Five Year Plans and 10 years after that. The more and more resources are being allocated by the Center and the State governments for poverty alleviation, employment generation, infra-structure development, rural development, Intensive Area Development, development of backward regions etc. but they do not reach its destination and a large part of that are siphoned-off by the bureaucrats, political leaders, middlemen, contractors and the others. It is a leaking bottle which never fills. One of the Prime Ministers of the country in 1980s (Rajiv Gandhi) recognized that only 15 paise out of a rupee reaches the beneficiary. Even one of the Presidents of India (R K Narayanan) in his Independence Day speech hinted at an "unholy alliance among politicians- bureaucrats and some of the important persons in society".*

*The two issues raised in the paper are that of criminalization of politics in India and economic failures on the fronts of unemployment generation, poverty alleviation, price rise, non-inclusive growth and so on.*

***Keywords:*** *Crime, Corruption, Development*

* The author is grateful to Prof. Kiran Barman, Retired H O D Economics, Banaras Hindu University, for her valuable comments on the earlier draft of this paper.

India's 18th.Parliamentary election is over and new government is formed in the Center. Prior to this claims and counterclaims and Election Manifestos of the parties were promising various guarantees to the voters in coming years, if come to power. In the past, governments were charged with various types of scams, corruption, crony capitalism, policy paralysis and failing at economic fronts and so on. Parliamentary proceedings were halted on various issues and the decisions could not be taken on important issues (like GST etc.) before 2014.

In the year 2014 Corruption and Black Money and Good Governance had been the major issues before the electorate. Various guarantees were promised on employment issues (20 million job creation per year), doubling Farmers income within five years, bringing back Black Money from Swiss Banks and unearthing black money from the country and put 15 lakh rupees in each one's account, removing corruption from public machinery, good governance and poverty removal etc. etc. Almost the same agenda continued in 2019 Election and the same party got a full majority this time.

In this election major issues were economic as well as political. The voice against majoritarian dictatorship, authoritarianism, misuse of government agencies to break opposition government in States and harass those in opposition parties and raising voices against government policies, undermining democratic Institutions, favouring a few corporate houses etc. culminated into forming an alliance of 28 opposition parties in the name of The Indian National Developmental Inclusive Alliance (I.N.D.I.A) to defeat the ruling government. The result was that party in power could not get clear majority of 272 seats on its own and an alliance government NDA has again been formed. Economic issues are as formidable as earlier, that of large unemployment particularly educated youth unemployment, rising prices, poverty, hunger, corruption etc. etc.

There are two prominent issues. One why the governments are not able to effectively challenge the economic issues of price rise, unemployment, rising inequality etc; and secondly why the various governments are constantly charged with corruption, Crony Capitalism, Scams and all that. Good Governance and clean and efficient administration is lacking whatever the party comes to power.

In a Less Developed Country (LDC) like India with large economic and social inequality, poverty, hunger, unemployment the basic requirement is that of efficient and clean governance. It has been found by scholars, in India particularly since 1970s, that direct entry of persons with criminal records in politics in sizeable number has had profound impact on governance and economic climate. Criminalization of politics has given rise to Rent-Seeking and Directly Unproductive (DUP) activities which is frustrating the development targets. Its impact lay on investment climate in the country, poor development of infra-structure, and quality of governance. The unholy nexus among corrupt politicians, bureaucrats, industrialists and traders and other influential people in society is vitiating the whole social fabric and economic structure in the country and society.

The paper will attempt to focus on these issues.

1

Quality of Leadership is very important factor for the success of democracy and development and equitable distribution of income and wealth in the country. When the Leaders are visionary and have a dream of development of people and nation they can deliver in positive direction. And contrary to it when they are self-serving they will bring doom to the country. Unfortunately in India new crop of leadership, by and large, is self-serving in the guise of welfare of the people. This trend became prominent after the initiation of planned development of the country in 1951 to my mind. The scarce resources which were demarcated and were going for the poor and downtrodden and development plans were largely usurped by the agencies, the leaders and the bureaucrats and others which were

designated to implement them. The funds allocated by the Center and the State governments for Rural Development, Area Development and Intensive Development programs and Panchayati Raj, Public works (road construction and other infra-structure construction ) etc., a large portion of that was siphoned off and pocketed by the persons involved in them and a very small share of them percolated for the actual purpose. In the sixties of the past century when country was facing severe Food Crisis and galloping inflation and rationing and Public Distribution of food grains and other essential commodities started, it opened a wide field for usurping a share of the funds. Even the offices which were created to distribute Licenses and Permits were infested with Rent-Seeking. Bribery became common. For a favor or getting public services or public goods, money used to exchange hands. Later on *percentage system* in offices emerged for Contractors and others for getting public works contracts. Government agencies and services were infested with corruption and their efficiency came down rapidly. For the failure of Socialism in India and the dream of equitable distribution of income and wealth, this had been the prominent factor to my mind. Even one of the Prime Ministers (Rajiv Gandhi) in the 1980s acknowledged that only 15 paisa of a rupee is going to the actual beneficiary.

The underhand system flourished and a network was created which became organized in the hands of Leaders, Bureaucrats and a few businessmen and important persons in society. A nexus was created. One of the presidents of India in his Independence Day speech lamented of this emerging trend in the country (R K Narayanan). At local levels toughs, ruffians, and mafias flourished under the patronage of some prominent Leader / Minister in the State. Volumes have been written on these subjects by the scholars in India and all over the world on Crime, Corruption and Development. For an Economist the concern pertains to the impact of these mal-practices on the development process of the country, the growth rate of the economy (GDP), the efficiency of the agencies and institutions informed with these purposes, and the overall equity and justice issues.

Notwithstanding, the malice and inefficiency, the country developed in the past 75 years from a poverty ridden poor economy to a strong and robust economy attaining fifth position in the world and heading towards a $ 5 trillion economy in near future. Absolute poverty too declined significantly owing to poverty alleviation measures adopted by the government and the Direct Benefit Transfer (DBT) initiated by the Center with the help of JAM trinity_ Jan Dhan account in Banks, Aadhar identification and use of Mobile phones. These were positive changes which almost eliminated middlemen in transfer of funds to the beneficiaries. Replacing price based subsidies on essential goods plugged the leakages substantially.

Despite of these achievements the country is still facing monumental challenges of corruption, black money, unemployment, poverty and inequality, and non-inclusive growth. How far the quality of governance and quality of leadership of the day is responsible for the failures is the subject of deliberation in this paper.

## 2

A recent Report by the Association of Democratic Reform (ADR) and New Election Watch (NEW) depicts that 40 per cent of the sitting MPs of the 17$^{th}$. Parliament had declared criminal cases against them. Out of them 25 per cent (194) were accused of serious crimes including murder, attempt to murder, kidnapping and crime against women.

The report released in September, 2023 analyses the self-sworn activities of 763 sitting MPs_ out of 776 seats of the Lok Sabha and Rajya Sabha across the country_ that they filed prior to contesting their last elections and subsequent by-elections. Four seats in the Lok Sabha and one in the Rajya Sabha are vacant, while four Rajya Sabha seats from Jammu and Kashmir are undefined.

The report has found that 306 out of 763 (40 %) sitting MPs have declared criminal cases against them. The State wise data reveals: Kerala's 23 out of 29 MPs (79%) have criminal cases, Bihar's 41 out of 56 MPs (73%), Maharashtra's 37 out of 65 MPs (73%), Telangana's 13 out of 24 MPs (54%), Delhi's 5 out of 10 (50 %), Lakshdweep1 out of 1 (100%) MP.

Party wise: Rashtriya Janata Dal, RJD, has the highest percentage of MPs, 6 out of 8 with criminal cases (83%), followed by CPI and CPM 6 out of 8 (75%), Congress (53%) with 43 out of 81, the YSR congress party (YSCRP) with 13 out of 31 MPs (42%), the Trinmool Congress (AITC) with 14 out of36 MPs (39%), the National Congress Party (NCP) 2 out of 8 (25%), the BJP with 139 out of 385 MPs (36%), and the Aam Admi Party (AAP) 27% with 3 out of 11 MPs.

In party wise terms of MPs with serious criminal cases, The RJD leads with 50% or 3 out of 6 MPs having serious criminal cases against them. This is followed by YSRCP 35% with 11 out of 31 MPs, The Congress 32% with 26 out of 81 MPs, the NCP 25% with 2 out of 8 MPs, the CPI (M) also 25% with 2 out of 8 MPs, the AITC 19% with 7 out of 36 MPs and the AAP 9% with 1 out of 11 MPs having serious criminal cases.

The report said that 11 sitting MPs have declared cases relating to murder, 32 MPs have cases relating to attempt to murder and 21 MPs have cases relating to crime against women, of which 4 MPs have declared cases related to rape.

Uttar Pradesh has most MPs with murder, attempt to murder cases. This is followed by Assam, West Bengal and Madhya Pradesh with 2 each and Andhra Pradesh and Maharashtra with 1 each.

Uttar Pradesh also has the highest number of MPs with declared cases of attempt to murder (9). This is followed by West Bengal (8), Bihar (4), Maharashtra (3) Madhya Pradesh and Odisha (2), and 1 each in Andhra Pradesh, Telangana, Lakshadweep and Tamil Nadu.

As regards crime against women West Bengal has highest number of MPs (5), followed by Kerala and Andhra Pradesh with three MPs each, two MPs from Uttar Pradesh, Andhra Pradesh, Maharashtra, Telangana and Odisha, and one each from Rajasthan and Tamil Nadu.

One MP each from Rajasthan, Kerala, Andhra Pradesh and West Bengal has declared cases of rape against them.

The BJP has the highest number of MPs with cases related to murder (7), attempt to murder (24), and crime against women (10).

Out of the four MPs with rape cases against them, two are from the Congress, and one each from BJP and YSRCP.

Earlier the Association for Democratic Reforms (ADR) found that in Lok Sabha 2004 there were 120 MPs out of 543 (22.1%) with criminal cases against them. Among the major parties the BJP had 29 MPs with a criminal record, The Indian National Congress 24, the SP 11, RJD 8, CPI (M) 7, BSP 7, NCP 5 and CPI 2.

The number of serious crimes was 333, with several MPs having multiple cases. If we look at violent crimes like murder, attempt to murder, robbery, dacoity, kidnapping , theft and extortion, other violent crimes like assault using dangerous weapons or causing grievous hurt, the Samajvadi Party (SP) leads with 80cases, followed by BSP 43, BJP 17, INC 16, RJD 9, CPI(M) 5, CPI 1, and NCP 2.

The crimes like cheating, fraud, forgery, giving false oaths to public officials and so on had BSP 23, RJD 22, INC 21, BJP 11, and CPM 6. (Atanu Dey quoted in Crony Capitalism, Manas Dasgupta, page 122).

Comparing yet another time period 2014 versus 2019, there is a 26 per cent rise in MPs with criminal history. In 2014, 185 Lok sabha members, that is, 34 % had criminal charges and 112 MPs had serious

criminal cases against them.

In 2009, 162 (nearly 30%) out of 543 Lok Sabha MPs had criminal charges and 14 % had serious criminal charges against them.

We find that there is a steep rise in the number of MPs in Indian Parliament with criminal cases against them, over time. It has been found by the Association for Democratic Reform that even in the election 2024 sizeable numbers of elected Parliamentarians (38 per cent) have cases against them and there are cases of heinous crime and crime against women on large number of them. This is a matter of grave concern.

3

The data presented above reflects the present scenario of (quality) Indian leadership in the Parliament. During the fifties and sixties there were few and far between cases of criminal's support taken by a few political leaders in winning elections. As time passed by criminals leaving the back seat driving started coming in the frontline to become leaders themselves. As becoming a part of the 'Mananiya' provides safety and immunity from being chased by the police and the law enforcing authorities besides providing status and power. Then their safety becomes the concern of the State and the very police force which was chasing them for criminal activities start providing X-plus and Z plus security to them.

As stated above, in India criminalization of politics began since seventies, as the scholars demarcate, with the emergence of new generation (post Independence) of leadership and downfall of ethics in public life. Elections became costlier and costlier day by day and became out of reach for common man to contest and persons with money and muscle power from different parties started pouring in the election arena. Parties started choosing the winnable candidates irrespective of their past records and sincerity for public work. By seventies and eighties onwards criminals, mafias, tainted student leaders (often rusticated from universities for their nuisance) started coming in large number to contest Local to State to Parliament elections. Democracy began to be hijacked by these elements. Film stars, dramatists, dancers, singers, players, with their popularity in public are considered winnable candidates, and are chosen for MLA and MP posts and they enter these institutions in quite a sizeable number irrespective of their qualifications and leaning for public work and national interest.

The statement that Democracy in India is being hijacked by the criminals and mafias and other self-serving politicians, is substantiated by the sizeable numbers of MPs and MLAs with criminal records and abundance of self-serving leaders. The composition of the Parliament and State Council Houses is constantly changing for the worse to the detriment of future economic growth potential.

In recent years, rising cases of disproportionate assets captured by Enforcement Directorate (ED) and Vigilance Agencies against leaders and bureaucrats are the evidence how in large numbers country's wealth meant for poverty alleviation and development programs particularly rural development and development of the backward regions was constantly siphoned off by these politician and officers and other middlemen. As the allocations rise for distribution so the chances for more and more to be pocketed. And the country remained poor for such a long period of time and development remained concentrated in a few families and class despite 12 Five Year Plans and decade after that.

Yet another point of concern is where from the funds are raised for elections by the parties? Most common form is financing by the corporate houses and others. And there is a system of Quid pro quo. After coming to power the party in government obliges the financers with either tilting the policies in favor of them or change the policy altogether to benefit these houses. This is akin to choosing a less efficient firm before an efficient firm. And this directly affects productivity and production. The

charges against the UPA government were that of Crony Capitalism. The NDA government has also have allegations of favoring a few corporate houses and thereby benefitting them disproportionately to the harm of public interest. This is Monopoly creation through the policies of the government. And Monopolies are exploitative. Rising inequality in India after liberalization is owing to private monopolies creation, in view of the scholars. This is also a factor responsible for Non- Inclusive growth in India despite high GDP growth for long.

Recently it has come to light that the Electoral Bond scheme (introduced in the Finance Bill 2017) is the biggest scam of the time in which companies mostly funded the party in power and got out of the chase of the ED etc. and acquired disproportionate favor from the government. Most of the firms purchased the Bonds after being chased by the ED or Vigilance or Income Tax department. The BJP is the biggest party having encashed the Electoral Bond followed by the Trinmool Congress and Indian National Congress. The Supreme Court of India struck down the scheme as unconstitutional in February 2024.

To quote Atanu Dey "How effectively a nation functions and how successful it is depends on its leaders who make public policy and thus critically determine the outcome. India's failure to develop and achieve its potential is proof positive that its leadership is lacking", (Quoted in Crony Capitalism in India, Manas Dasgupta, 2014, page 121). Under development, poverty and all other ills that plague India are an unavoidable consequence of poor public policies and choices. "One does not have to know criminology to suspect that criminals cannot make good public policy makers….It is not that every single politician in India is a criminal; only that a significant number of them are criminals. But it is unbelievable that one member of the Indian Parliament should be a criminal. That we don't rise in revolt against this outrage shows that we have come to accept it as par for the course and have resigned ourselves to it. Worse it could mean that Indian population is so morally bankrupt that it finds crime so normal that it elects criminals to political power."

Obviously onus goes on the Election Commission of India and the Supreme Court in not debarring persons with criminal allegations and heinous crimes to contest elections. As long as they are found not guilty and cleaned by the courts they should be barred from contesting elections, as is the practice in the developed countries of the world. While the basic eligibility condition for any post of officer (public) appointment in service is to declare that the person has no criminal cases pending against him, then why not this eligibility is there for the politicians who are going to be the law makers and policy makers for the nation. And why the politicians have made provisions for themselves of lifelong pension and other benefits even when they become MP or MLA for a single day? What is their contribution? Is it not a heavy unnecessary fiscal burden on the country's exchequer?

Children of the coming generations will ask these very question from us for which we won't have any answer.

4

Coming to the economic challenges of massive unemployment, rising prices, rising inequality and so on, again the vision of the leaders is an important determinant. Intellectually deficient politicians are not expected to make efficient economic policy decisions. Failing on economic front they make alibis to religious, ethnic and other factors to divert the attentions of the masses.

The development scenario of the country has shown that growth has not been inclusive for the Trickle- Down did not work. In the words of Ex. RBI Governor Subba Rao growth in India Trickled–Up rather than Trickled-Down, escalating inequality. This was more so when the private sector became dominant after liberalization in 1991. Market economy, Laisse z faire, and

privatization are the factors which least bother for *distributive justice*. They work for 'profit maximization'.

Moreover, the nature of India's economic growth post pandemic has been uneven or "K" shaped where the rich have thrived, while the poor continue to struggle. India may be the fifth largest global economy at an aggregate level but on a per person basis, it still languishes at the 136th. Rank in per capita income.

Problem of unemployment in a country arises when in the labour market supply of labour exceeds the demand for labour. Then either the demand is to be raised or the supply of labour is handled, or both of them are taken care of simultaneously. In India with a massive population size of 1.4 billion plus, the labour force participation is around 20 million per year, while the labour absorption is far less. Hence there is a sizeable backlog as well as addition per year in millions. Condition of educated unemployment in India is alarming. No government would be able to handle such an alarming situation and hence they are continuously failing and diverting people's attention to other issues.

Price rise is another tricky challenge which again arises owing to mismatch of demand and supply. Inflation in India is mostly *structural* and hence difficult to be managed either by monetary measures or by fiscal measures, and therefore, it is recurrent. It is often times sectoral, showing a situation of Stagflation. Sometimes it is caused by supply deficiency and at other times it is due to speculative tendencies of the businessmen or middlemen who create *artificial scarcity* from time to time. There are Cartels in the market which manipulate prices to reap out of the way advantage. In the perishable commodities market, like in vegetable market, when the supply exceeds demand the producers throw them on roads or destroy to their bankruptcy. It is a difficult situation for farmers for which they are demanding legal assurance of MSP.

Besides unemployment, inequality and inflation some of the challenges faced by the Indian economy are population density, poor quality of education and health and hunger which need to be addressed in order to make the economy stronger. It is an irony that one of the largest food producers leaves millions hungry. Is it not contradictory that while the government pronounces that absolute poverty has been almost eliminated in the present regime, it is distributing free ration to 800 million persons(obviously below the poverty line). We are at 111th. in Hunger Index out of 125 countries which is a serious situation.

Privatization, laissez faire, and the market economy system are bound to escalate inequality in economy, no one could check it. Keynesian policy of raising demand as an answer to unemployment problem is dated now and has no solution to the massive problem as the capacities of the governments in the poor countries to raise public expenditure is limited and the numbers of the unemployed are very large than it had been in 1930s at the time of the Great Depression. Obviously answer lies in supply side management as well too. Demands have to be legitimized and curtailed not raised as J K Mehta prescribed long back for reducing wants and not raising it. That is the Indian solution to the problem.

Western model of industrial development and Western policy prescriptions for price rise, inequality and unemployment would not work in Indian situation. We will have to chose our own path and abide by our own philosophy of life prescribed by the Indian seers and philosophers. They follow policy of *materialism* and *borrowing*; we follow the practice of "*living within our means*" and saving. In India we have discarded Charvac's philosophy of borrowing and borrowing and keep borrowing and die with borrowing on the head. Our culture is different and superior, Western culture is different. Our culture is to be satisfied with the minimum economic provisioning; they follow the culture of more and more spending and accumulation. We have been taught to be frugal. They are not.

Unfortunately since globalization we have slipped into their shoes to accept loans and borrowings from banks to fulfill our ever increasing demands and become a market for their produce for which these countries are not getting buyers in their own countries as their market is saturated. We have deviated from our own culture of 'not to take loan and refrain from borrowing'. "*Udarvadi sanskriti has brought Udharvadi sanskriti"* in India*,* which is against the tenets of Indian culture and practice. Germany saved herself from global financial crisis of 2008, while the U S and the Western European countries were languishing in severe crisis of the Century, as they were following the culture of saving and not borrowing and borrowing again. This practice saved the nation. This is a disastrous trend.

Further when there is a choice in economy "What to produce, more guns or more butter?" the prudent choice is for more butter. In reality the USA and many of the Western European countries are producing more and more guns and deadly weapons, also they are using their Scientists and Technologists to produce more and more sophisticated and dangerous weapons to kill human beings. And the wars are going on in many of the countries (Russia and Ukraine, Israel and Philistine, for example) depending upon their supply of weapons. And the United Nations is failing to reason with them. The humanity has reached a very dangerous point when at any point the use of Nuclear Bombs and use of AI in the war will finish everything in no time.

To quote eminent Neurosurgeon and Scientist of the U S, Dr. Eben Alexander, "For all of the success of Western civilization, the world has paid a dear price in terms of most crucial component of existence_ our human spirit. The shadow side of high technology_ (writes Dr. Alexander in his book, *Proof of Heaven*, page 152, published in 2011) _ modern warfare and thoughtless homicide and suicide, urban blight, ecological mayhem, cataclysmic climate change, polarization of economic resources_ is bad enough.

We will have to make a choice at the point where to go, to the Western path of Consumerism or our own path of *Spiritual-based Consumerism* and way of life. Gandhi said so and so our seers and scriptures.

In the 21st. Century today, we have to realize and recognize that we are the first in size in population in the world. We are a robust economy heading towards becoming a $5 trillion economy in near future. We need not ask for or borrow solutions from the West or the Western agencies who work for their patrons. We our self are a *Super Power*.

Notwithstanding, what is urgently needed, at present, on economic front is raising quality education, skill development, boosting investment in infra- structure and manufacturing, strengthening agricultural sector and absorbing youth in agricultural processing and marketing and using modern technology in agriculture, development of cooperatives and so on.

On corruption and political reform it is urgently needed to check the entry of persons with criminal cases from contesting elections, either by the Election Commission or by the Supreme Court or any other appropriate agency. There should be an educational qualification and age bar for the politicians to become Member of Parliament and the Council Houses in States; there should be a provision that the offices will not be held more than twice. The agencies like ED, Vigilance, and Tax department should be free and fair in their approach, and should not become a tool in the hands of ruling dispensation to chase opposition. They should follow the 'rule of law 'irrespective of the party in power.

Future of India's economic and overall development will depend on these reforms, honesty and sincerity of people in power and position and clean and transparent governance which is efficient as well.

It is the superior *character* of the people which make a nation great. Men with tainted character and *criminality* can never make a country super.

**REFERENCES**

Gupta, I D, Crime Corruption and Development in Indian Economy, In IEA book Edited by D Narasimha Reddy, Deep and Deep Publications, 2001

Dasgupta Manas, Crony Capitalism, Abhijeet Publications, Delhi, 2014

Report by Association of Democratic Reforms and New Election Watch, September, 2023

Gupta, I D, Corruption and Rent-Seeking in Less Developed Countries, The Indian Journal of Economics, No.328, Vol. LXXXIII, July 2002

Newspapers The Hindu and The Statesman, The Indian Express.

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# IMPACT OF AI ON EMPLOYMENT IN THREE SECTORS OF INDIAN ECONOMY AND ITS SOCIO-ECONOMIC FALLOUT:

**Dr. Akhilesh Kumari***

## ABSTRACT

*India with its 1.43 billion people is now undoubtedly the most populous nation in the world. Out of these 1.43 billion, 68% (or about 970 million people) are in the working age of 15 to 64 years of age. The unemployment rate assessed at 6.6% in 2021-22. As many as a 42% of India's graduates under 25 were seeking jobs in the same period. This study goes through these two basic questions like, does the introduction of AI-embedded technologies like Generative AI threaten to increase this number to catastrophic proportions and what are the steps government is taking for India's unemployed millions (35 million in both 2021 and 2022) while keeping a view of its socio-economic fallout? In a time of global uncertainties and changing power equations as well as realignment of worldwide supply chains, the state of the Indian economy and by extension its ability to provide employment for sustenance to millions of unemployed of working age is an area of pressing concern. The rollout of AI in India is in its initial phases but has significantly affected employment in some sectors of Indian economy on account of its ability to automate several routine jobs. At the same time, it has created new avenues in AI-related job roles. Though AI has targeted routine jobs so far and maximum of them in India are manned by weaker sections of the society. Prevailing inequality in Indian society coupled with automation in blue collar jobs could bring distress in the India's middle and lower middle class. This aspect needs special attention from policy makers.*

***Keywords:*** *: Artificial Intelligence, employment, three sectors of Indian economy, job-loss, socio economic impact.*

## METHODOLOGY AND OBJECTIVE

This article highlights the impact of AI on employment in all three sectors of Indian economy and its impact on society at large. Mainly secondary data is used from the published articles, journals, newspaper and reports. Data is collected from different publication of Govt. of India like Nasscom, Meity and Oxfam reports on inequality, State of Inequality report, Indeed report on blue collar workers along with International Monetary Fund (IMF) reports. The main objectives of my study is-

i) To assess the impact of AI on employment in Indian economy.

ii) To analyse the composition of job losses and measures to tackle it.

iii) To examine the socio-economic impact of job losses.

There are very few studies regarding measurement of socio-economic impact of unemployment generated through AI and its impact on society at large. This is an attempt to decipher and understand the challenges posed by AI on jobs with varying skill needs, starting from low to high, in different sectors.

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## INTRODUCTION

Recent inventions in artificial intelligence (AI), robotics and Internet of- Things ushered a new automation age, where AI-led technologies, robotics and computers are equipped of performing not only the routine jobs but also those tasks which used to be performed by humans only such as those involving human intellect. Thus, AI can have impact on employment in three ways. First, it can help humans in some jobs; second, it can completely replace human in some other job roles and third, it can produce new types of job roles for humans. In this situation, it is essential to understand the level of impact of this technological invention on employment and jobs in India. This study aims to give an overview of the impact of AI on jobs by reviewing the studies done locally and internationally with reference to India.

India's job market has taken a transformation since the arrival of AI in 2019. OpenAI's advent marked a turning point, automating routine jobs and disrupting employment fields like data entry and call centres. Recent empirical data elaborates the deep impact of AI on employment within India. As per a detailed report by the World Economic Forum, it is anticipated that by the year 2025, around 5.1 million jobs in India will be replaced due to the increasing influence of automation and AI related technologies. However, this AI development also brought a plethora of opportunities in data science, engineering, and machine learning, creating a new range of high-skilled jobs. AI has created both disruption and adaptation, with challenges like the digital divide along with social unrest balanced by the potential of AI to revolutionize traditional sectors like agriculture, healthcare, and education.

### 2. Employment scenario in three sectors of Indian economy

As per recent data, three sectors of Indian economy employs workforce in following manner-

| S.No. | Sector | Activities falling in the sector | Percentage of workforce employed |
|---|---|---|---|
| 01. | Primary | Agriculture, Mining and Quarrying | 44.6 |
| 02. | Secondary | Manufacturing, Electricity, Gas & Water supply and Construction | 24.4 |
| 03. | Tertiary | Trade, Transport & storage and Services | 31 |

Table-1

### i) Share of AI related jobs in each sector of economy –

The assimilation of AI into the Indian job market signifies a major shift in employment scenario. As per available data, the share of AI related jobs in three sectors of Indian economy is as follows-

| S.No. | Sector | Percentage of AI related jobs |
|---|---|---|
| 01. | Tertiary | 60 |
| 02. | Secondary | 12 |
| 03. | Primary | Not available |

Table-2

[1] https://www.ris.org.in/policy-briefs

Currently, the demand for Artificial Intelligence (AI) in industry is propelled through a need for automation, enhanced decision-making, and the need to process & analyze the bulk of data. Some of the main industries of three sectors of Indian economy that are presently utilizing AI are as follows[2]:

a. **Healthcare:** AI is being used to analyse medical images, help diagnosis, and develop tailored treatment plans.
b. **Finance:** AI is being utilised in fraud detection, risk assessment, and portfolio management.
c. **Retail:** AI is being utilised to individualise recommendations and get better the customer experience.
d. **Human Resources:** AI is being utilised to facilitate with recruiting, on boarding, and employee retention.
e. **Transportation and Logistics:** AI is being utilised for route optimization, demand forecasting, and autonomous vehicles.
f. **Cyber Security:** AI is being utilised for intrusion detection, threat intelligence, and incident response.
g. **Marketing:** AI is being utilised to predict customer behavior, analyze large amounts of customer data, and optimize advertising campaigns.
h. **Manufacturing:** AI is being utilised for predictive maintenance, process optimization, and quality control.
i. **Energy:** AI is being utilised for predictive maintenance of power plants, smart grid management and solar energy forecasting.
j. **Agriculture:** AI is being used for precision farming, crop monitoring, and yield prediction.

As evident from above data, the major AI generated employment opportunities are in services sector, the major disruptions may also occur in this sector.

**3. Impact of AI on employment opportunities in Indian context**

**i) Positive impact-**

Advocates of AI argue that it is a employment generator, not just a destroyer. AI has the potential to increase productivity and efficiency across different industries, leading to the establishment of new roles that involve human intelligence, creativity, and emotional intelligence—areas where machines presently falling short. For example, the development and maintenance of AI systems need skilled professionals in data science, machine learning, and artificial intelligence. As industries accept AI, the demand for experts in these fields continues to increase. Moreover, AI can intensify human capabilities, equipping workers to concentrate on more complex and strategic jobs while leaving routine tasks to machines.

[2] https://sageuniversity.edu.in/blogs/the-future-of-artificial-intelligence

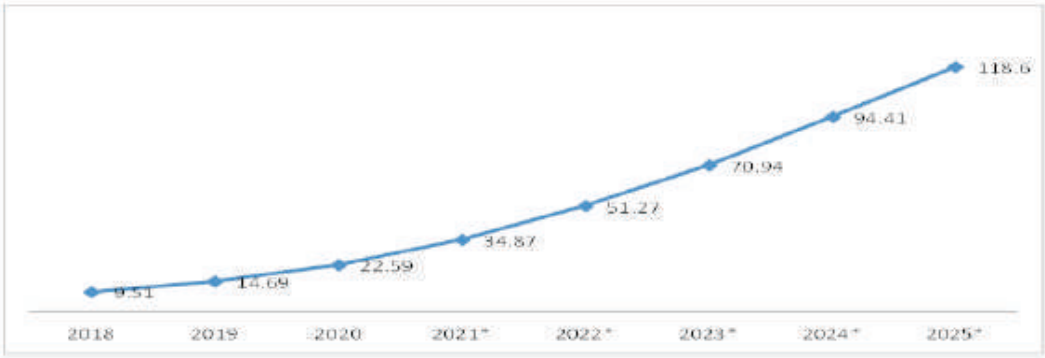



Figure-1 Adoption of AI in India

According to a report by McKinsey & Company, AI is anticipated to create 20-50 million new jobs worldwide by 2030. These new jobs will be in various industries, including healthcare, manufacturing and finance. Some of the new job roles that are evolving as a result of AI include[3] -

AI Trainers and Teachers: These are individuals who will be responsible for training and teaching AI systems. They make sure that AI algorithms are accurate and effective, and they also produce new AI applications and systems.

Data Analysts and Scientists: With the increment in data generated by AI systems, there is an increasing demand for individuals who can analyse and interpret this data. Data analysts and scientists utilise AI tools to analyse data and spot patterns and insights that may help businesses take better decisions.

Human-Machine Teaming Managers: As AI is becoming more integrated into the workplace, there is an increasing need for individuals who can administer the interaction between humans and machines. Human-machine teaming managers make sure that AI systems work effectively with human workers, increasing productivity and efficiency.

AI Ethics and Policy Specialists: As AI becomes more widespread, there is a urgent need for individuals who can deal with the ethical and policy implications of AI. AI ethics and policy specialists make sure that AI systems are produced and used in a responsible and ethical manner.

## ii) Negative impact-

According to NASSCOM, the domestic IT sector gave jobs to around 16 million, of which around 9 million are employed in low-skilled jobs and BPO roles. As per an independent research by Bank of America, which states that there will be a 30% reduction in low-skilled jobs globally due to Robotic Process Automation (RPA) by 2022. While such numbers may differ in due course of time, it is irrefutable fact that automation will have some impact on jobs.

The jobs most likely to see declines are ones that require highly repeatable tasks and pattern recognition and those that require analyzing or processing bulk volumes of structured data. Algorithms are gradually more able to handle jobs that require gathering data, processing paperwork, tracking inventories, or interacting with customers. As a result, they can impact jobs such as data entry clerks, administrative assistants and secretaries, accountants & bookkeepers, financial analysts, manufacturing & warehouse workers, retail salespeople, customer service representatives and drivers. Some blue-collar jobs, such as driving, sales and warehouse management, are also at risk as a

[3] (https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobsskills-and-wages).

combination of advanced robotics and AI enable machines to do physical tasks that they were not able to do earlier.

**iii) Response of Government-**

In a 2024 report by Wheebox, (Impact of AI on the Future of Work, Skilling & Mobility), India has emerged on a global leadership position in AI skill penetration and talent concentration, gaining an impressive score of 3.09. With an established talent pool of 416,000 AI professionals as of August 2023, India is well-postioned to manage the current demand of approximately 629,000, a figure, which is anticipated to be surged to 1 million by 2026.

In India, the overall youth employability has enhanced to 51.25% over the previous year. Major states with large talent pools, Haryana, Maharashtra, Andhra Pradesh, Uttar Pradesh, Kerala, and Telangana have the highest concentration of highly employable youth. Particularly, Haryana leads with 76.47% of examinees scoring 60% and above on the WNET exam. In the age range of 22 to 25 years, Uttar Pradesh comes out with the highest talent concentration at 74.77%, followed closely by Maharashtra at 71.97%. Additionally, the overall employability rate within this age group across the top 10 cities is 63.58%. Among new age industries, which are adopting AI is healthcare, automobile and legal.

The Government considers Artificial Intelligence (AI) to be kinetic enabler for the growth of our digital economy, investments and jobs. The Government has taken various initiatives to expand AI ecosystem and connect the AI opportunities to the youth of the country[4].

I. *The Government has initiated 'Future Skills PRIME' aims for Reskilling/Up-skilling of IT Manpower for Employability in 10 new/emerging technologies. These include AI, Blockchain, Robotics, Big Data & Analytics, IoT, Virtual Reality, Cyber security, Cloud Computing, 3D Printing and Web 3.0.*
II. *The Visvesvaraya PhD Scheme aims to enhance the number of PhDs in Electronics System Design & Manufacturing (ESDM) and IT/IT Enabled Services (IT/ITES) sectors including AI and Emerging Technologies.*
III. *The Government has launched Responsible AI for Youth 2022, on July 30, 2022. The Programme was designed to reach out to students from Government schools on pan India basis and provide them with an opportunity to become part of the skilled workforce in an inclusive manner.*
IV. *The Government has launched 'YUVAi: Youth for Unnati and Vikas with AI'- A National Programme for School Students with the objective of enabling school students from classes 8th to 12th with AI tech and social skills in an inclusive manner. The programme will provide a platform for youth to learn and apply AI skills in 8 thematic areas- Krishi, Aarogya, Shiksha, Paryavaran, Parivahan, Grameen Vikas, Smart Cities and Vidhi aur Nyaay.*
V. *National Education Policy (NEP), 2020 recognises the role and importance of curricular and pedagogical initiatives, including the introduction of contemporary subjects such as Artificial Intelligence (AI) to develop such skills in students at all levels. Central Board of Secondary Education (CBSE) had introduced 'Artificial Intelligence' in its affiliated schools in the year 2019.*
VI. *The Government is implementing a programme for skilling of rural youth for entrepreneurship development through Rural Self Employment and Training Institutes (RSETIs).*

[4] PIB press note on "Impact of Artificial Intelligence" by Ministry of Labour and Employment on Feb 05, 2024.

*VII. Further, the Ministry of Skill Development and Entrepreneurship (MSDE) is implementing the National Apprenticeship Promotion Scheme (NAPS), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Jan Shikshan Sansthan (JSS) Scheme and Craftsman Training Scheme (CTS) through Industrial Training Institutes (ITIs) to enhance the employability of youth.*

*VIII. NITI Aayog had released the 'National Strategy for Artificial Intelligence' (NSAI). NITI Aayog has decided to focus on five sectors that are envisioned to benefit the most from AI in solving societal needs in-*

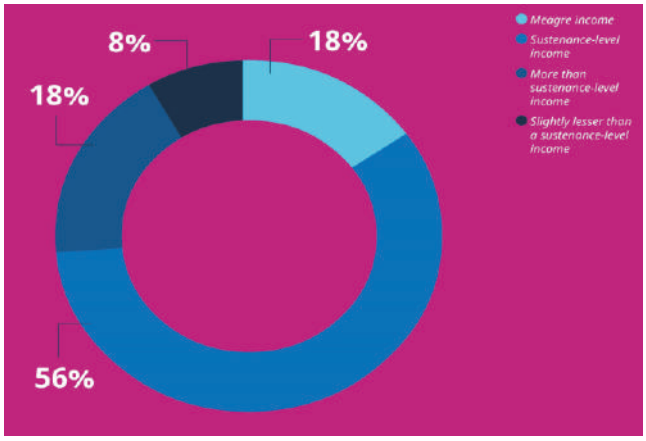
- *Healthcare: increased access and affordability of quality healthcare,*
- *Agriculture: enhanced farmers' income, increased farm productivity and reduction of wastage,*
- *Education: improved access and quality of education,*
- *Smart Cities and Infrastructure: efficient and connectivity for the burgeoning urban population,*
- *Smart Mobility and Transportation: smarter and safer modes of transportation and better traffic and congestion problems.*

**4. Socio-economic impact of AI on society at large**

In a report by the World Economic Forum, it is assessed that 50% of all tasks at work will be automated by machines by the year 2025, compared to 29% in 2021. As per above analysis, blue collar workers in services sector are going to bear the brunt. Since services sector is second most important job provider in Indian economy, it is believed that these (blue collar) employees, who comes from weaker sections (middle and lower middle class) of the society are expected to upskill themselves in coming years, else they will be out of job market.

Since Indian society is unequal in terms of social and economical aspect, the upskilling process may not be same for all affected employees. The employees, who belong to affluent section of the society will adapt to this change quickly and easily but for weaker sections, this development (changing landscape of jobs) will be the end of road. Income disparity in blue-collar jobs is not only an economic issue but also a social one, which can lead to financial instability, limited access to education and healthcare, and hinder social mobility.

A recent survey by Indeed discovered while fair compensation takes paramount importance for those seeking blue-collar employment, but only a meager 18% succeed in achieving such financial stability.




Source: Indeed Survey

As per report of Oxfam and WEF, Inequality Trends in India are as follows-

- Wealth Inequality: India is one of the most unequal countries in the world, with the top 10% of the population holding 77% of the total national wealth. The richest 1% of the Indian population owns 53% of the country's wealth, while the poorer half jostles for a mere 4.1% of national wealth.
- Income inequality: According to the World Inequality Report 2022, India is among the most unequal countries in the world, with the top 10% and top 1% of the population holding 57% and 22% of the total national income respectively. The share of the bottom 50% has gone down to 13%.
- Tax Burden on Poor: Approximately 64% of the total goods and services tax (GST) in the country came from the bottom 50% of the population, while only 4% came from the top 10%.
- Healthcare is Luxury: Many ordinary Indians are not able to access the health care they need. 63 million of them (almost two people every second) are pushed into poverty because of healthcare costs every year.
- Gender Inequality: India was ranked 127 out of 146 countries in the Global Gender Gap Report, 2023, and faces the perennial issue of "missing women" from the workforce – which is a wicked problem.

With this level of inequality, the weaker sections of the society are going to be affected with this process of automation generated through AI.

**5. Way forward-**

India is rapidly moving ahead to meet the demands of its dynamic economy and the changing global landscape. According to experts, the arrival of AI is poised to be the fourth Industrial Revolution, revolutionizing both the services and manufacturing sectors. This change is expected to increase India's infrastructure and contribute to economic growth in the years ahead. Nonetheless, it is likely that certain jobs within specific sectors will vanish within the next 5 to 10 years as a result of AI-driven transformations.

AI will also impact the society at large, where weaker sections of the society are most vulnerable from this upheaval in Indian job market. Government initiatives to address this issue should also include a survey on composition of workers retrenched due to AI and focus must be on weaker sections so that they should be allowed to upskill their capabilities on subsidized rates and on priority basis. Government can also engage industry leaders to address this issue.

The main emphasis should be in education, reskilling, and embracing a mindset of adaptability. Rather than fearing job replacement, individuals and societies must get ready for the changing scenario, leveraging AI to make a future where humans and machines can work together to achieve enormous levels of innovation and productivity. By proactively mitigating the challenges presented by AI adoption through investments in education, skills development, and inclusive growth policies, India can steer the transition toward a better future where AI adds to sustainable economic growth and societal advancement.

**REFERENCES**

https://www.businesstoday.in/india-at-100/story/inclusive-india-2047-empowering-the-demographic-dividend-395359-2023-08-24

Acemoglu, D. & Restrepo, P. (2019), 'The wrong kind of AI? Artificial intelligence and the future of labour demand', Cambridge Journal of Regions, Economy and Society 13(1),

25–35.
Briggs, J., and D. Kodnani. 2023. "The Potentially Large Effects of Artificial Intelligence on Economic Growth." Goldman Sachs - Global Economics Analyst, New York.
Mani, D., Tomar, S., Madan, N. & Bhatia, A. (2020), The Impact of AI on the Indian Labour Market, Technical report, Srini Raju Centre for IT & the Networked Economy, Indian School of Business.
*https://www.livemint.com/ai/artificial-intelligence/ai-in-india-jobs-evolvednot-erased-opportunity-and-reskilling-key-experts-claim 11703326684794.html*
*Cortes, G. M., N. Jaimovich, C. J. Nekarda, and H. E. Siu. 2020. "The Dynamics of Disappearing Routine Jobs: A Flows Approach." Labour Economics 65: 101823.*
*ICRIER. 2020. Implications of AI on the Indian Economy.*
NASSCOM. 2020. *Unlocking Value from Data and AI: The India Opportunity.*
NITI. 2021. *Responsible AI #AIforAll: Approach Document for India Part I: Principles for Responsible AI.* NITI Aayog. Government of India.
https://www.peoplematters.in/news/employment-landscape/blue-collar-workers-wants-fair-pay-but-only-18-get-it-indeed-39009
Kambourov, G., and I. Manovskii. 2009. "Occupational Mobility and Wage Inequality." *Review of Economic Studies* 50: 731–59.
Dao, M. C., D. Mitali, and Z. Koczan. 2019. "Why Is Labour Receiving a Smaller Share of Global Income?" *Economic Policy* 34 (100): 723–59.
https://www.thehindu.com/sci-tech/technology/ai-anxiety-workers-fret-over-uncertain-future/article67157022.ece
State of Inequality report in 2022 by PM Economic Advisory Council.
WEF. 2020. *Future of Jobs Report*. World Economic Forum.

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# EFFECTIVENESS, ASSESSMENT, FINANCIAL ALLOCATION & EXPENDITURE IN REFERENCE TO BIHAR SKILL DEVELOPMENT MISSION (BSDM)

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## ABSTRACT

This research paper delves into a comprehensive analysis of the Bihar Skill Development Mission (BSDM) with a specific focus on evaluating its effectiveness, assessment and scrutinizing the allocation and expenditure of financial resources. Skill development plays a pivotal role in enhancing employability and can foster socio economic development in Bihar. It is imperative to assess the impact and efficiency of BSDM's initiatives in state like Bihar. The study employs secondary data, collected from various reliable sources, including government reports, project data, and online platforms. Data analysis involves descriptive statistics and graphical representation, with Microsoft Excel aiding in visualization. Key findings are presented in tables and charts for easy comprehension and comparison. The study offers valuable insights into the effectiveness of skill development programs in Bihar and sheds light on the allocation and utilization of funds in these initiatives.

***Key Words:*** *Bihar Skill Development Mission (BSDM), Effectiveness Assessment, Financial Allocation, Skill Development, Socio economic Development, Training Programs,*

## 1. INTRODUCTION

In recent years, the concept of skill development has emerged as a pivotal driver of economic growth and individual prosperity, particularly in the context of India's evolving landscape. Skill development programs have garnered significant attention as they aim to bridge the gap between education and employability, equipping individuals with the expertise is a necessary dynamic aspect in job market. This research paper look into the effectiveness of Bihar Skill Development Mission (BSDM) and the allocation and expenditure of resources in its pursuit of enhancing the skills and employability of the population in the state of Bihar.

### 1.1. Why Skill Development is Crucial for Bihar

Bihar, an agrarian state in eastern India, has long grappled with economic challenges, including a high rate of unemployment and underemployment. To address these issues and catalyze socio economic development, skill development has emerged as a critical imperative. Bihar's demographic dividend, characterized by a young and burgeoning population, presents both an opportunity and a challenge. The state must harness the potential of its youth by combining them with skills that are not only relevant but also aligned with the needs of the job market.

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In a state where traditional agriculture has been the primary source of livelihood for many, the diversification of skills is essential to provide alternative avenues of employment. Additionally, Bihar's economic landscape has been evolving, with increasing opportunities in sectors such as information technology, manufacturing, and services. This transformation necessitates a skilled workforce capable of participating and contributing to these emerging sectors.

### 1.2. Understanding Skill Development and Its Benefits

Skill development, in its essence refers to the procedure of enhancing a person's capabilities, understanding and skills to carry out precise responsibilities or jobs effectively. These capabilities can embody some extensive variety of regions, from technical abilities in trades and generation to tender skills like communication and problem-solving. The overarching intention of skill development is to make individuals greater, employable, adaptable and resilient in the face of converting activity needs.

The blessings of skill development are manifold. For individuals, it facilitates extra ability to earn employment possibilities, accelerated earning capacity and improved social mobility. For society, it translates right into efficient and professional personnel, which can empower financial growth, reduce poverty and enhance typical well-beingness. In the context of Bihar, a powerful ability to improve ecosystem can damage the cycle of unemployment and underemployment, offering a pathway to monetary empowerment for its residents.

### 1.3. Skill Development Programs in Bihar

At the coronary heart of Bihar's efforts to enhance ability improvement lies the Bihar Skill Development Mission (BSDM). BSDM serves because the nodal enterprise entrusted with the challenge of skilling the nation's staff. Its number one goal is to create a comprehensive framework that fosters ability development in Bihar, setting up standardized strategies and norms. To obtain this goal, BSDM oversees the implementation of six flagship schemes, some of which get hold of investment from the state authorities, at the same time as others are supported with the aid of the Central government.

Kushal Yuva Programme (KYP): This program is designed to target young individuals in the age group of 15-28 years who have completed at least ten years of education. It aims to provide them with relevant skills for the job market, thereby enhancing their employability.

Recruit-Train-Deploy (RTD) Scheme: The RTD scheme is geared towards addressing industry requirements and equipping the working-age population with the skills necessary for specific job roles, thus facilitating their integration into the workforce.

Recognition of Prior Learning (RPL): Under this scheme, the skills and knowledge already possessed by workers are assessed and formally recognized, allowing individuals to leverage their existing expertise for better employment prospects.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY): BSDM is entrusted with implementing PMKVY 2.0 in Bihar, focusing on specified job roles. This program seeks to enhance the employability of individuals through skill development.

**1.4. Bihar State - Certificate in Financial Accounting (BS-CFA):** The BS-CFA course is tailored to prepare the workforce to navigate the complexities of financial accounting systems, including the Goods and Services Tax (GST), thereby addressing the demands of the evolving financial landscape.

These programs, under the aegis of BSDM, aim to create a skilled and employable workforce in Bihar by aligning skill development with industry needs, ensuring standardization and providing a common platform for industry engagement to facilitate placement across sectors.

This research paper endeavours to assess the effectiveness of these skill development programs in Bihar and scrutinize the allocation and expenditure of financial resources to determine their impact on the state's socio economic landscape. By examining the outcomes of these initiatives, we aim to shed light on their significance in empowering individuals and driving economic growth in Bihar.

Skill development is essential for economic growth and social development in Bihar. The Bihar Skill Development Mission is playing a key role in skilling the state's workforce. The BSDM is implementing a number of flagship schemes that are providing skill training to unemployed youth and school dropouts. These schemes are helping to create a more productive and competitive workforce in Bihar, which will attract investment and boost economic growth.

**Review of Literature**

**Roy, A., Das, B. K., Chandra, G., Das, A. K., & Raman, R. K. (2018).** In this paper state that majority of the farmers were engaged in agriculture as their main occupation, with poultry and goat farming being the most common subsidiary occupations. The effectiveness of the training programs was measured and found to be highly effective according to 48% of the respondents. The training was perceived to have positive impacts on the trainees' knowledge, skills, and entrepreneurial ability in the field of inland fisheries management. Logistic regression analysis showed that socio economic variables such as main occupation, age, land and pond holdings and membership in organizations had a positive and significant relationship with training effectiveness. Overall, the training programs provided to the farmers in Bihar were deemed imperative and had a positive impact on their livelihoods and entrepreneurial capabilities.

**Patil, S., Sohane, R. K., Singh, A. K., & Kumar, D. (2019).** The study focuses on the impact of income source diversification efforts in the tribal sub-plan project in Bihar. It employs a before and after research design to assess project interventions. The findings reveal a significant 23% increase in income from non-farm activities, along with a reduction in food insecurity levels among beneficiary households. Notably, the project has led to enhanced productivity in milk, egg and meat production. This research underscores the importance of promoting additional income generating activities in tribal areas to reduce their overreliance on agriculture for livelihood security. It highlights the potential benefits of income diversification in improving food security and overall well being in these regions.

**Chakravorty, B., & Bedi, A. S. (2019).** This paper evaluate the 'Deen Dayal Upadhayay Grameen Kaushal Yojana' (DDUGKY) in rural Bihar, one of India's poorest states, underscores the scheme's effective targeting of rural youth from economically disadvantaged backgrounds. The analysis revealed that the training program had a significant short-term impact on employment, with a 29% increase in placement rates immediately after training. However, these gains proved to be transient, and within 2-6 months post-training, the employment impact dwindled to zero. Discrimination and inadequate salaries were identified as key factors leading to job exits. While the study does not provide an overly pessimistic view of the scheme, it emphasizes the pressing need for rigorous assessments of government-initiated skills and job training programs, with a focus on both initial job placement and longer-term employment outcomes. The findings suggest that efforts to achieve sustainable employment effects may require a more comprehensive approach beyond training, acknowledging the systemic challenges that can hinder long-term success.

**Jha, A. (2022).** This study examine the skill gap in India is a significant challenge that hinders economic growth and employment opportunities. The lack of alignment between educational institutions and the needs of the job market, as well as the limited awareness among students about

workplace expectations, contribute to the low employability of graduates. Bridging this gap requires collaboration between stakeholders, including educational institutions, government and industry. Measures such as career counseling centers, basic computer and programming education and training institutes for the unorganized sector can help address the skill gap. However, there is a need for improved transparency, efficiency and strictness in skill development initiatives to transform India into a skilled human resource powerhouse.

**Argade, S., Pailan, G. H., Mahapatra, B. K., Dutta, S., Munilkumar, S., Dasgupta, S., ... & XAVIER, K. M. (2023).** This research paper evaluates the impact of skill development training on fish farmers' knowledge and attitude in Bihar, India. The study collected primary data from 250 trainees using feedback forms and mobile phone surveys. The findings show that skill development training had a significant positive impact on the knowledge level of trainees. They also exhibited a favorable attitude towards the training and were potential adopters of the acquired knowledge and skills. The study highlights the importance of skill development training in improving farmers' productivity and income in the aquaculture sector.

## 2. Need for Study

According to a 2022 report by the National Skill Development Corporation (NSDC), the skill gap in Bihar is estimated to be around 1.5 million. This means that there is a shortage of skilled workers in a number of key sectors, including construction, manufacturing, and IT.

The NSDC report also found that only 5% of the workforce in Bihar has received formal skill training. This is significantly lower than the national average of 10%. The Bihar government has set a target of skilling 1 million people by 2025. This is an ambitious target, but it is achievable if the government continues to invest in skill development and work closely with the private sector.

The skill gap in Bihar is a major constraint on economic growth. By investing in skill development, the Bihar government can create a more productive and competitive workforce, which will attract investment and boost economic growth.

## 3. Objective of the Study

This research paper aims to comprehensively analyze the Bihar Skill Development Mission (BSDM), with a specific focus on assessing its effectiveness and scrutinizing the allocation and expenditure of financial resources. The primary objective is to evaluate the impact of skill development programs in Bihar and their role in enhancing employability and socio-economic development in the state. Additionally, the research seeks to provide insights into the allocation and utilization of funds in these programs.

1. Assess the effectiveness of skill development programs under the Bihar Skill Development Mission (BSDM).
2. Examine the impact of these programs on enhancing employability in Bihar.
3. Scrutinize the allocation and expenditure of financial resources within BSDM initiatives.
4. Analyze the socio-economic outcomes of skill development efforts in the state.
5. Provide policy recommendations to enhance the efficiency and impact of skill development programs in Bihar.

## 4. Methodology

The study aims to analyze the Effectiveness Assessment, Financial Allocation & Expenditure of Bihar Skill Development Mission (BSDM) in the Bihar.

**4.1. Data Collection:** The study uses secondary data collected from various sources, including:

Economic Survey, Rural development department, Govt. of Bihar, Jeevika Project, Rural Self Employment Tanning Institute (RSETI), Labour Resource Department, Youtube, Wikipedia, Skill mission Bihar and other website related to skill India.

**4.2. Data Analysis:** The study uses descriptive statistics and graphical representation to analyze the data. The data is presented in tables and charts to facilitate easy understanding and comparison. To visualize the data used Micro soft excel by researcher.

**5. Methodological Limitations:**

The study based on secondary data, Secondary data is up to date till 2021-22. Accuracy of data depends on various sources. To boost Bihar economy, in skill India program, transgender community is also included.. Access to specific data sets and information from government departments and agencies may be limited, which could affect the comprehensiveness of the analysis.

**Result and Discussion with Data Analysis**

The Bihar Skill Development Mission (BSDM) has been overseeing the execution of six distinct flagship schemes, with funding provided by both the State and Central governments.

**6. Physical Progress under Bihar Skill Development Mission (BSDM)**

**Table No. 01**

| Sl. No. | Name of the scheme | No. of centres | Enrolled | Training completed | Ongoing | Certified |
|---|---|---|---|---|---|---|
| 1. | Kushal Yuva Program (KYP) | 1791 | 1678774 | 1258186 | 76064 | 1223345 |
| 2. | Domain Skilling | 658 | 117419 | 106544 | 10875 | 65053 |
| 3. | Recruit Train Deploy (RTD) | 51 | 4350 | 3789 | 561 | 1987 |
| 4. | Recognition of Prior Learning (RPL) | 65 | 5185 | 5155 | 30 | 3012 |
| 5. | PMKVY | 114 | 12364 | 12202 | 0 | 4940 |
| 6. | BS-CFA | 42 | 7615 | 4950 | 985 | 4288 |
| | **Total** | **2721** | **1825707** | **1390826** | **88515** | **1302625** |

**Sources :** Labour Resources Department, Govt. of Bihar

The table No. 01 the table provides data on various skill development programs in Bihar, specifically focusing on the number of centres, enrolment, training completion, ongoing training and certifications. The physical progress of the Bihar Skill Development Mission (BSDM) is a valuable tool for understanding the state's efforts to skill its workforce. The table shows that the BSDM has made significant progress in recent years, with over 1.8 million people enrolled in various schemes and over 1.3 million people completing their training.

First, the KYP is the largest scheme, accounting for over 90% of all enrolments and completed trainings. This suggests that the KYP is playing a vital role in skilling the youth of Bihar.

Second, the Domain Skilling scheme is the second largest scheme, accounting for over 6% of all enrolments and completed trainings. This suggests that the BSDM is also focusing on skilling workers in specific sectors, such as construction and manufacturing.

Third, the RTD and RPL schemes are relatively small, but they play an important role in reaching marginalized populations. The RTD scheme helps to train and place unemployed youth in jobs, while the RPL scheme recognizes the skills and knowledge that people have acquired through informal training or on the job experience.

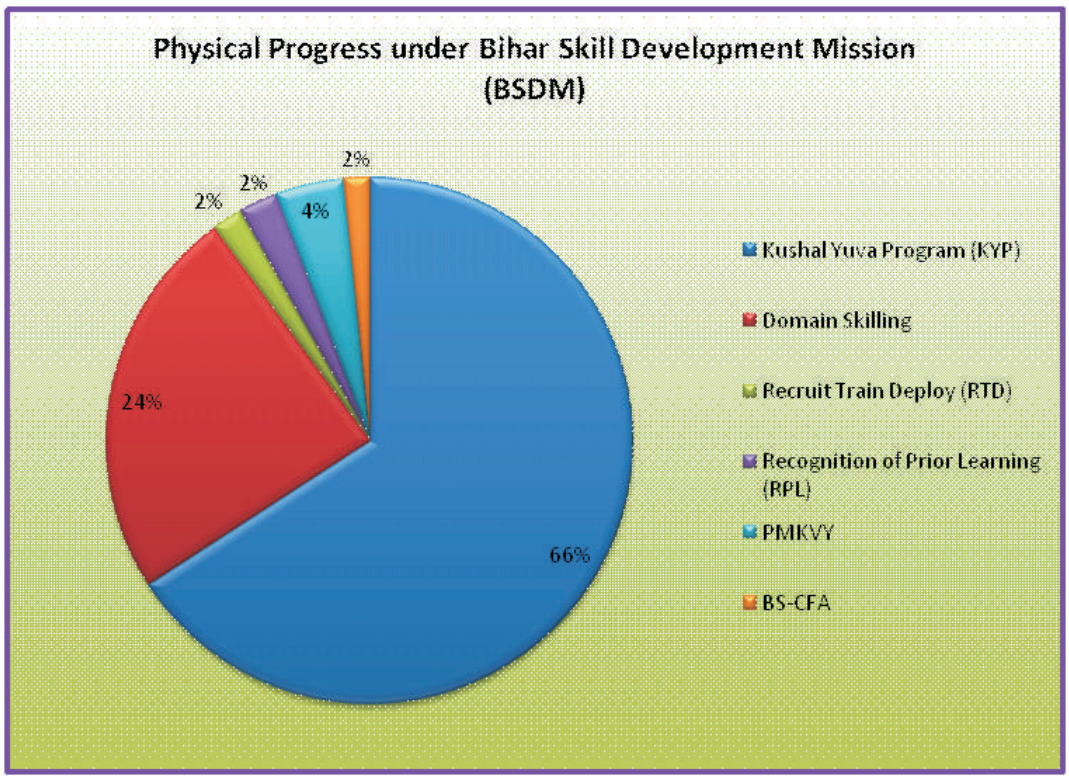
Fourth, the PMKVY scheme has a low certification rate. This suggests that the BSDM may need to

focus more on ensuring that people who complete their training under the PMKVY scheme are certified. This could be done by providing additional support to students and training providers.

The spirit behind the table is to provide a transparent and accountable overview of the BSDM's progress. The table can be used by the BSDM to track its own performance, by the government of Bihar to assess the impact of its investment in skill development and by the public to hold the BSDM accountable.

Overall, the table on the physical progress of the BSDM is a valuable tool for understanding the state's efforts to skill its workforce. The table shows that the BSDM has made significant progress in recent years and it provides a number of important insights into the state's skill development landscape.

*Chart No. 01*




The chart shows the physical progress under the Bihar Skill Development Mission (BSDM), KYP scheme accounts for the largest share of the pie, followed by the Domain Skilling scheme and the PMKVY scheme. The RTD, RPL, and BS-CFA schemes account for a smaller share of the pie.

The chart also shows that the percentage of participants who have completed their training is highest for the KYP scheme, followed by the Domain Skilling scheme and the BS-CFA scheme. The percentage of participants who have completed their training is lowest for the RTD and RPL schemes.

Overall, the chart shows that the BSDM has made significant progress in skilling the workforce of Bihar. However, there is still room for improvement, particularly in terms of ensuring that participants complete their training and receive certification.

**Kushal Yuva Program (KYP):** The KYP is the largest scheme under the BSDM, accounting for over 90% of all enrollments and completed trainings. The KYP is a state-funded scheme that provides

vocational training to unemployed youth in Bihar. The scheme offers a variety of courses in different sectors, including construction, manufacturing, and hospitality.

**Domain Skilling:** The Domain Skilling scheme is the second largest scheme under the BSDM, accounting for over 6% of all enrollments and completed trainings. The Domain Skilling scheme is a centrally funded scheme that provides skill training to workers in specific sectors, such as construction and manufacturing.

**Recruit-Train-Deploy (RTD):** The RTD scheme is a centrally funded scheme that provides skill training to unemployed youth and then places them in jobs. The scheme is implemented in partnership with the private sector.

**Recognition of Prior Learning (RPL):** The RPL scheme is a centrally funded scheme that recognizes the skills and knowledge that people have acquired through informal training or on the job experience. The scheme provides certification for these skills, which can help people to get better jobs.

**Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** The PMKVY is a centrally funded scheme that provides skill training to unemployed youth and school dropouts. The scheme offers a variety of courses in different sectors, including construction, manufacturing, and IT.

**Bihar State - Certificate in Financial Accounting (BS-CFA):** The BS-CFA is a state-funded scheme that provides training in financial accounting to unemployed youth and school dropouts. The scheme is designed to prepare students for jobs in the accounting and finance sector.

The chart on the physical progress of the BSDM is a valuable tool for understanding the state's efforts to skill its workforce. The chart shows that the BSDM has made significant progress in recent years and it provides a number of important insights into the state's skill development landscape.

## 1. Department-wise Budget for Skilling Programmes (2017-18 to 2021-22)

**Table No. 02**

| Sl. No. | Name of the Department | Budget Amount (Rs. crore) | | | | |
|---|---|---|---|---|---|---|
| | | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 |
| 1. | BSDM, Labour Resources Department | 30154.51 | 80971.05 | 51773.29 | 52060.35 | 55800.00 |
| 2. | Department of Health | 19.88 | 5.00 | 5.00 | 1.98 | 0.00 |
| 3. | Department of Home (Prisons and Correctional Services) | NA | 0.25 | 0.50 | 0.50 | 0.50 |
| 4. | Department of Education | NA | 29.31 | 10.00 | 9.54 | 0.00 |
| 5. | Department of Animal and Fisheries Resources | 5.85 | 1.18 | 3.17 | 1.05 | 2.03 |
| 6. | Backward and Extremely Backward Class Welfare Department | NA | 6.00 | 5.00 | 0.00 | 0.00 |
| 7. | Department of Industries | 50.00 | 20.00 | 20.00 | 3.00 | 0.00 |
| 8. | Department of SC/ST Welfare | 15.00 | 17.00 | 4.55 | 21.00 | 25.00 |
| 9. | Department of Agriculture | 12.00 | 12.49 | 6.80 | 6.86 | 12.00 |
| 10. | Department of Information Technology | 20.00 | 3.00 | 17.20 | 10.00 | 10.00 |
| 11. | Department of Urban Development and Housing | 78.99 | 44.45 | 44.04 | 11.43 | 27.51 |
| 12. | Department of Tourism | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| 13. | Department of Rural Development | 216.62 | 304.90 | 433.43 | 579.20 | 281.61 |
| 14. | Department of Social Welfare | 7.50 | 8.25 | 15.00 | 25.00 | 19.11 |
| 15. | Department of Science and Technology | 8.65 | 8.05 | 6.57 | 5.08 | 3.43 |
| 16. | Department of Minority Welfare | 7.00 | 8.00 | 5.00 | 5.00 | 5.00 |
| 17. | PMKVY (CSSM Component) | 36.82 | 0.00 | 0.00 | 0.00 | 0.00 |
| | **Total** | **30633.82** | **81439.93** | **52351.55** | **52741.99** | **56188.19** |

**Sources :** Labour Resources Department, Govt. of Bihar

The table number 02 shows the budget allocation for skill development in Bihar from 2017-18 to 2021-22. The total budget allocation for skill development has increased from Rs. 30633.82 crores in 2017-18 to Rs. 56188.19 crores in 2021-22, representing a growth of 83%.

The Bihar Skill Development Mission (BSDM) has received the largest share of the budget allocation for skill development, with an average allocation of 34% of the total budget over the five-year period. The BSDM is the nodal agency for skill development in Bihar and is responsible for implementing a number of flagship schemes, including the Kushal Yuva Program (KYP) and the Domain Skilling scheme.

The Department of Rural Development has also received a significant share of the budget allocation for skill development, with an average allocation of 29% of the total budget over the five-year period. The Department of Rural Development is responsible for implementing the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), which provides employment to rural households. The MGNREGS also includes a component for skill development, which provides training to rural workers in a variety of skills.

Other departments that have received a share of the budget allocation for skill development include the Department of Health, the Department of Home (Prisons and Correctional Services), the Department of Education, the Department of Animal and Fisheries Resources, the Backward and Extremely Backward Class Welfare Department, the Department of Industries, the Department of SC/ST Welfare, the Department of Agriculture, the Department of Information Technology, the Department of Urban Development and Housing, the Department of Tourism, the Department of Social Welfare, the Department of Science and Technology and the Department of Minority Welfare.

It is worth noting that the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) has not received any budget allocation from the Bihar government since 2017-18. The PMKVY is a centrally-funded scheme that provides skill training to unemployed youth and school dropouts.

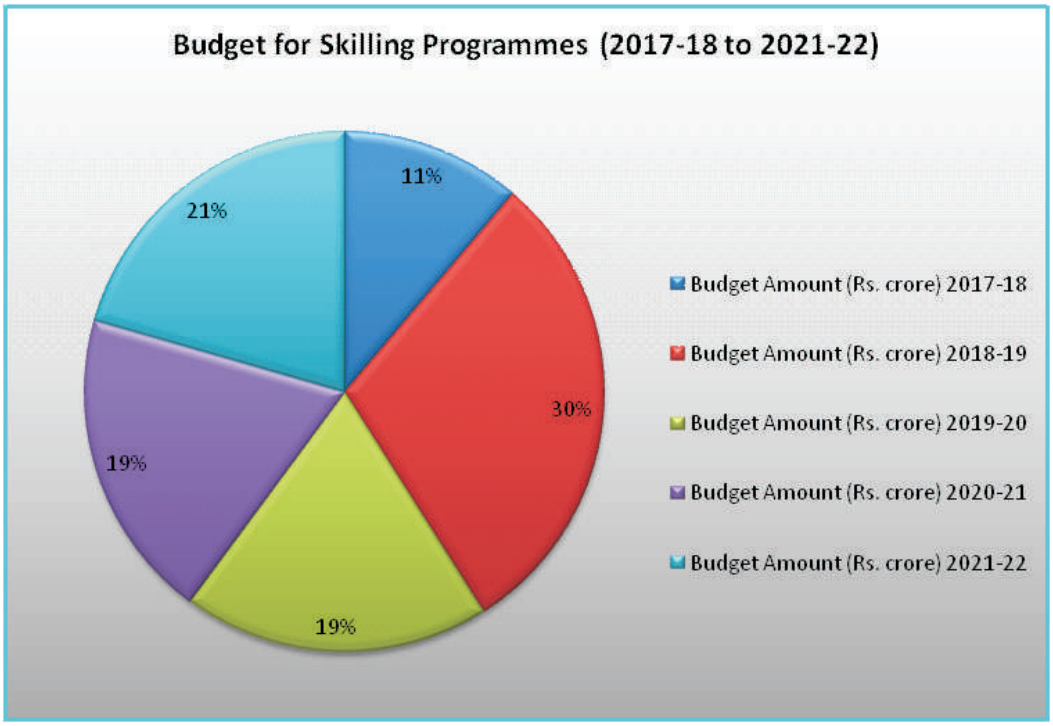
The increase in the budget allocation for skill development in Bihar is a welcome development. Skill development is essential for economic growth and social development. A skilled workforce is more productive and innovative, which leads to higher economic output and prosperity. It also helps to reduce poverty and inequality, as skilled workers are more likely to be employed and earn higher wages.

The Bihar government has made significant progress in skill development in recent years. However, there is still room for improvement. The government should focus on ensuring that the skill development schemes are implemented effectively and efficiently. It should also focus on providing skilling opportunities to all sections of society, including women, minorities and persons with disabilities.

In addition, the Bihar government should work closely with the central government and the private sector to develop a comprehensive skill development strategy. The strategy should focus on identifying the skills that are in demand in the labor market and providing training to workers in those skills. The government should also focus on providing placement assistance to skilled workers. Investment in skill development, the Bihar government can create a more productive and competitive workforce, which will attract investment and boost economic growth.

| Budget Amount (Rs. crore) | | | | |
|---|---|---|---|---|
| 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 |
| 30633.8 | 81439.9 | 52351.6 | 52742 | 56188.2 |

*Chart 02*




The chart number 02 shows the expenditure on skill development in Bihar from 2017-18 to 2021-22. The chart shows that the expenditure on skill development has increased from Rs. 30633.82 crores in 2017-18 to Rs. 56188.19 crores in 2021-22, representing a growth of 83%.

The chart also shows that the highest expenditure on skill development was incurred in 2021-22, followed by 2019-20 and 2020-21. The lowest expenditure on skill development was incurred in 2017-18.

**This increase in expenditure can be attributed to a number of factors, including**

The Bihar government's commitment to skill development. The government has made skill development a priority and has increased the budget allocation for skill development in recent years.

The implementation of new skill development schemes. The government has implemented a number of new skill development schemes in recent years, such as the Kushal Yuva Program (KYP) and the Domain Skilling scheme.

The increase in the demand for skilled workers. The demand for skilled workers is increasing in Bihar as the state's economy is growing. The government is focusing on skilling workers to meet this demand.

The increase in expenditure on skill development has had a positive impact on the state. The number of people who have received skill training has increased significantly in recent years. The government

has also been able to place a large number of skilled workers in jobs.

However, there is still room for improvement. The government needs to focus on ensuring that the skill development schemes are implemented effectively and efficiently. It also needs to focus on providing skilling opportunities to all sections of society, including women, minorities, and persons with disabilities.

The government needs to work closely with the central government and the private sector to develop a comprehensive skill development strategy. The strategy should focus on identifying the skills that are in demand in the labor market and providing training to workers in those skills. The government should also focus on providing placement assistance to skilled workers.

Investment in skill development, the Bihar government can create a more productive and competitive workforce, which will attract investment and boost economic growth.

The increase in expenditure has led to a significant increase in the number of people who have received skill training. In 2017-18, 1.2 million people received skill training in Bihar. This number increased to 1.8 million in 2021-22.

The government has also been able to place a large number of skilled workers in jobs. In 2017-18, 1.1 million skilled workers were placed in jobs in Bihar. This number increased to 1.5 million in 2021-22.

The increase in expenditure has also led to an improvement in the quality of skill training. The government has set up a number of new skill training centers and has partnered with the private sector to provide skill training.

Overall, the increase in expenditure on skill development in Bihar has had a positive impact on the state. The government has made significant progress in skilling its workforce and has been able to place a large number of skilled workers in jobs. However, there is still room for improvement. The government needs to focus on ensuring that the skill development schemes are implemented effectively and efficiently, and that all sections of society have access to skilling opportunities.

## 8. Financial Allocation and Expenditure under Different Schemes for Training (2021-22)

**Table 03**

| Sl. No. | Scheme | Budget (Rs. lakh) | Expenditure (Rs. lakh) | Utilisation Percentage |
|---|---|---|---|---|
| 1. | Modernization of Machines and Equipments of ITIs | 140.00 | 102.25 | 73.0 |
| 2. | Establishment of New ITIs | 66.00 | 56.58 | 85.7 |
| 3. | Bihar Skill Development Mission | 129.30 | 129.30 | 100.0 |
| 4. | Bihar Skill Development Mission (SCSP) | 100.26 | 100.26 | 100.0 |
| 5. | Establishment ofNew Womens ITIs | 16.50 | 13.35 | 80.9 |
| | **Total (A)** | **452.06** | **401.74** | **88.9** |
| 6. | Skill Development Mission for Building Construction | 152.28 | 150.94 | 99.1 |
| 7. | Skill Development Mission for Building Construction (SCSP) | 50.00 | 49.95 | 99.9 |
| | **Total (B)** | **202.28** | **200.89** | **99.3** |
| 8. | Skill Development Mission for Building Construction (Central share) | 30.29 | 0.23 | 0.8 |
| | **Total (C)** | **30.29** | **0.23** | **0.8** |
| | ***Grand Total (A+B+C)*** | ***684.63*** | ***602.86*** | ***88.1*** |

**Sources :** Labour Resources Department, Govt. of Bihar

Table number 03 shows the financial allocation and expenditure under different schemes for training in Bihar in 2021-22. The table shows that the government of Bihar allocated a total of Rs. 684.63 crore for training in 2021-22. Of this, Rs. 452.06

crore was allocated for schemes under the Bihar Skill Development Mission (BSDM), Rs. 202.28 crore was allocated for schemes under the Skill Development Mission for Building Construction and Rs. 30.29 crore was allocated for the Skill Development Mission for Building Construction (Central share).

The table also shows that a total of Rs. 602.86 crore was spent on training in Bihar in 2021-22. This represents an utilization percentage of 88.1%. This is a relatively good utilization percentage, considering that the COVID-19 pandemic had a significant impact on training activities in 2021-22.

The BSDM is the largest scheme for training in Bihar, with a budget allocation of Rs. 452.06 crore in 2021-22. This is over 66% of the total budget allocation for training in Bihar.

The Skill Development Mission for Building Construction is the second largest scheme for training in Bihar, with a budget allocation of Rs. 202.28 crore in 2021-22. This is over 29% of the total budget allocation for training in Bihar.

The utilization percentage for the Skill Development Mission for Building Construction (Central share) was very low in 2021-22, at just 0.8%. This suggests that there is room for improvement in the implementation of this scheme.

**Recommendations**

The government of Bihar should focus on improving the utilization of the Skill Development Mission for Building Construction (Central share) scheme. This can be done by working closely with the central government and the private sector to identify and address the challenges that are preventing the effective implementation of the scheme.

The government should also focus on increasing the participation of women in the training programs offered by the BSDM and the Skill Development Mission for Building Construction. This can be done by providing targeted scholarships and other incentives to women who enroll in these programs.

Overall, the government of Bihar is making significant investments in training. However, there is still room for improvement in the implementation of training schemes and in increasing the participation of women in training programs.

**9. Rural Self-Employment Training Institutes (RSETI)**

The Rural Self Employment Training Institutes (RSETI) are dedicated institutions established in every district of Bihar to provide skill enhancement and training opportunities for rural youth. Within these institutes, Entrepreneurship Development Programs (EDPs) encompass Agricultural, Product, Process and General Programs, aiming to empower rural youth with entrepreneurial skills and knowledge. In addition to EDPs, various skill enhancement and growth programs are offered. JEEVIKA serves as the central agency for supporting RSETIs, which specialize in imparting self employment training across 61 approved trades. Upon completing their training, rural youth receive credit support from banks to initiate their own enterprises. To date, RSETIs have trained a total of 2.54 lakh candidates, with 1.82 lakh successfully settled as of September 2022. In the fiscal year 2021-22, 710 training programs were conducted, benefitting 21.3 thousand candidates. Notably, these training programs exhibit a higher participation rate among women compared to men. Out of the 21.3 thousand trained individuals, 14.4 thousand have gained employment, indicating a commendable success rate of 68 percent.

## 10. Number of Training Programmes, Candidates Trained by RSETIs and Trainees who Received Employment (2017-18 to 2021-22)

**Table No. 04**

| Year | No. of Training Programmes | No. of Candidates Trained | | | | No. of Trainees Receiving Employment |
|---|---|---|---|---|---|---|
| | | Male | Female | Transgender | Total | |
| 2017-18 | 1041 | 11813 | 16596 | 2 | 28411 | 24879 |
| 2018-19 | 925 | 9965 | 16705 | 18 | 26688 | 19277 |
| 2019-20 | 841 | 10300 | 14650 | 11 | 24961 | 18486 |
| 2020-21 | 537 | 6106 | 8762 | 0 | 14868 | 11137 |
| 2021-22 | 710 | 8439 | 12828 | 1 | 21268 | 14378 |
| **Total** | **4054** | **46623** | **69541** | **32** | **116196** | **88157** |

**Source :** Rural Development Department, Govt. of Bihar

Table 04 shows the number of training programs, candidates trained by Rural Self-Employment Training Institutes (RSETIs) and trainees who received employment in Bihar from 2017-18 to 2021-22. The table shows that the number of training programs and the number of candidates trained have decreased over the past five years. However, the number of trainees who received employment has increased over the same period. This suggests that the RSETIs are becoming more effective in placing trainees in jobs.

The number of training programs offered by RSETIs in Bihar has decreased from 1041 in 2017-18 to 710 in 2021-22. The number of candidates trained by RSETIs in Bihar has decreased from 11813 in 2017-18 to 8439 in 2021-22. The number of trainees who received employment after being trained by RSETIs has increased from 16596 in 2017-18 to 12828 in 2021-22. The placement rate for RSETI trainees has increased from 67.9% in 2017-18 to 77.5% in 2021-22.

**Recommendations**

The government of Bihar should focus on increasing the number of training programs offered by RSETIs and the number of candidates trained by RSETIs. This can be done by providing additional funding to RSETIs and by making RSETI training more accessible to the potential candidates.

The government should also focus on improving the placement rate for RSETI trainees. This can be done by working with employers to identify and address the challenges that are preventing RSETI trainees from being placed in jobs.

Overall, the RSETIs in Bihar are making significant progress in skilling and placing rural youth in jobs. However, there is still room for improvement in terms of increasing the number of training programs offered, the number of candidates trained, and the placement rate for trainees.

## 11. Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)

The JEEVIKA is the implementing agency for the DDU-GKY programme, in partnership with different Project Implementing Agencies (PIAs). Altogether, 77 training centres of 68 PIAs have provided skill training and placement facilities to the rural youth. Cumulatively, a total of 71.6 thousand candidates have been trained in different trades, of which 46.2 thousand have been placed in different institutions and Roshni projects.

**Training and Placement Status under DDU-GKY**

| Table 05 | | |
|---|---|---|
| Sl. No. | Particulars | Number (Up to September, 2022) |
| 1 | Number of candidates trained | 71621 |
| 2 | Number of candidates placed | 46229 |

**Source :** Economic Survey 2022-23 (JEEVIKA)

To provide job opportunities to the rural youth for direct placement in companies, Jobs Fairs are organized by the State movement at different places, wherein companies are invited for direct placement. Till date, 1.35 lakh candidates have been placed in different organizations through such Job Fairs.

The Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is a demand driven skill development program that aims to provide rural youth with skills and placements in various industries. The program is implemented by the JEEVIKA, a state owned livelihood mission, in partnership with different Project Implementing Agencies (PIAs).

Table 05 shows the training and placement status under DDU-GKY in Bihar up to September 2022. The table shows that a total of 71621 candidates have been trained under the program, of which 46229 have been placed in different jobs. The placement rate under DDU-GKY in Bihar is 64.6%, which is higher than the national average of 60%.

The Jeevika also organizes Job Fairs at different places in Bihar to provide job opportunities to the rural youth for direct placement in companies. Till date, 1.35 lakh candidates have been placed in different organizations through such Job Fairs.

The DDU-GKY program is playing a vital role in skilling and placing rural youth in Bihar. The program has trained and placed a large number of candidates in various industries. The Jeevika is also organizing Job Fairs to provide job opportunities to the rural youth.

The DDU-GKY program is a good example of how the government of Bihar is taking steps to skill and place its workforce in jobs. The program is demand-driven and focused on providing skills that are in demand in the labour market. The government of Bihar is also working to improve the placement rate for DDU-GKY trainees by organizing Job Fairs and working with employers.

The DDU-GKY program could be replicated in other states to help skill and place rural youth in jobs. The program is well designed and has been successful in Bihar. Other states could learn from the Bihar experience and implement the DDU-GKY program in their own states.

## 12. Suggestions for Future Study

For future research, it is recommended to delve deeper into specific aspects of skill development in Bihar. Exploring the long term socio economic impact of skill development programs on participants and their communities could provide valuable insights. Additionally, conducting comparative studies between different skill development initiatives, including public and private sector involvement, could shed light on best practices and areas for improvement. Furthermore, investigating the role of technology and digital platforms in enhancing skill development accessibility and effectiveness in Bihar could be a promising avenue for research. Lastly, examining the scalability and sustainability of skill development models in the context of Bihar's evolving economic landscape can guide policy formulation and ensure that these initiatives continue to empower the state's youth and contribute to its overall development.

## 13. Conclusion

The comprehensive analysis of the Bihar Skill Development Mission (BSDM) reveals a significant

positive impact on the socio economic landscape of Bihar. The primary objective of this research was to assess the effectiveness of BSDM's skill development programs and scrutinize the allocation and expenditure of financial resources. The findings underscore several key points supported by data:

**13.1. Positive Impact on Employment and Empowerment:** The data demonstrates the commendable effectiveness of BSDM's skill development programs. Over the years, thousands of candidates have enrolled and successfully completed training, leading to improved employability. Notably, a substantial percentage of these candidates have been women, highlighting the program's inclusive nature. Moreover, the inclusion of transgender individuals in the training programs showcases a commitment to diversity and social inclusion.

**13.2. Efficient Resource Utilization:** The utilization percentages of allocated funds reflect efficient financial management within BSDM. These figures suggest that a significant portion of the budget has been effectively utilized, ensuring that resources are optimally allocated to enhance skill development efforts.

**13.3. Role of Partner Agencies:** Collaborative efforts with partner agencies, such as the Rural Self-Employment Training Institutes (RSETI) and Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), have proven instrumental in delivering training and facilitating job placements. This collaborative approach has contributed significantly to the success of skill development initiatives in Bihar.

**13.4. Challenges and Opportunities:** While acknowledging the program's achievements, it is essential to recognize the existing challenges, such as data accuracy and ongoing improvements required for skill development. These challenges provide opportunities for refinement and expansion, ensuring that the programs continue to evolve and meet the changing needs of the state.

The data driven insights derived from this research showcase the effectiveness of BSDM's skill development initiatives in Bihar. They also emphasize the program's commitment to inclusivity by involving women and transgender individuals in the workforce development process.

Looking ahead, ongoing monitoring, evaluation and collaboration with partner agencies will be essential to sustain and further enhance the positive impact of skill development in Bihar. By addressing challenges and leveraging opportunities, BSDM can continue to empower the youth, promote economic growth and foster social progress in the state.

**REFERENCES**

Roy, A., Das, B. K., Chandra, G., Das, A. K., & Raman, R. K. (2018). Knowledge and skill development of Bihar farmers on inland fisheries management: A terminal evaluation. Indian Journal of Fisheries, 65(2), 119-123.

Patil, S., Sohane, R. K., Singh, A. K., & Kumar, D. (2019). Impact of skill development and transfer of production technologies on the socioeconomic status of tribal communities: Case of tribal sub plan in bihar.

Chakravorty, B., & Bedi, A. S. (2019). Skills training and employment outcomes in rural Bihar. The Indian Journal of Labour Economics, 62, 173-199.

Jha, A. (2022). A report on Skill Scenario of Bihar. Available at SSRN 4490380.

Argade, S., Pailan, G. H., Mahapatra, B. K., Dutta, S., Munilkumar, S., Dasgupta, S., ... & XAVIER, K. M. (2023). Impact of skill development trainings on fish farmers' knowledge and attitude: A case study from Bihar, India. Indian J. Fish, 70(1), 119-125.

Estimating the Skill Stock in Bihar. (2019). Retrieved from https://skillsip.nsdcindia.org/sites/default/files/kps-document/Estimating%20the%20 Skill%20Stock%20in%20Bihar.pdf

Government of Bihar. (n.d.). Retrieved October 9, 2023, from state.bihar.gov.in website: https://state.bihar.gov.in/labour/CitizenHome.html

Learner's Feedback about "Kushal Yuva Program"_KYP06060021_Suraj Kumar. (n.d.). Retrieved October 9, 2023, from www.youtube.com website: https://www.youtube.com/watch?v=orcBaKLl1Z0

Request Rejected. (n.d.). Retrieved October 9, 2023, from www.msde.gov.in website: https://www.msde.gov.in/sites/default/files/2023-09/Final%20Skill%20AR%20Eng.pdf

Skill Development and Entrepreneurship National Policy for 2015 AND. (n.d.). Retrieved from https://www.msde.gov.in/sites/default/files/2019-09/National%20Policy%20on%20Skill%20Development%20and%20Entreprenurship%20Final.pdf

vikaspedia Domains. (2018). Retrieved October 9, 2023, from Vikaspedia.in website: https://vikaspedia.in/social-welfare/skill-development/best-practices-on-skill-development/kaushal-yuva-program-in-bihar

Welcome To Bihar Skill Development Mission - Bihar Skill Development Mission. (n.d.). Retrieved October 9, 2023, from skillmissionbihar.org website: https://skillmissionbihar.org/

Wikipedia Contributors. (2019a, March 7). Skill India. Retrieved from Wikipedia website: https://en.wikipedia.org/wiki/Skill_India

Wikipedia Contributors. (2019b, August 11). Ministry of Skill Development and Entrepreneurship. Retrieved August 31, 2019, from Wikipedia website: https://en.wikipedia.org/wiki/Ministry_of_Skill_Development_and_Entrepreneurship

BIHAR SKILL DEVELOPMENT MISSION. (n.d.). Retrieved October 9, 2023, from www.youtube.com website: https://youtu.be/bF-T4tSeS28

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# RURALNON-FARMSECTOR IN INDIA-A GROWING SHARE OF RURALINCOME AND EMPLOYMENT

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## ABSTRACT

*India was an agrarian countryat the time of independence with the primary sector contributing most to both GDP and employment. Over the years, agriculture has become the lowest contributor to GDP but still is burdened with the greatest share of working population. This has led to rural distress, which would have even more cathartic had it not been for the growth of the rural non-farm sector. Both push and pull factors have been responsible for migration towards non-farm sector. As regards push factors, it is overburdened land from population pressure, low productivity, low and uncertain wages, seasonality of work and need to supplement meagre income from farm sector which has led to movement towards jobs which had low skill requirement in non-farm economy. They landed low payingirregular jobs in the informal sector, yet wages were higher ascomparedtothat of an agricultural labourer. On the other hand, those who had greater skills and assets were attracted by the opportunities presented by the non-farm economy. Agricultural productivity has not seen major breakthroughs in recent years leading to stagnation. The landed class with capital moved towards non-farm enterprises or in case they were skilled and highly educated along with technical education they moved towards high paying regular salaried jobs. TheRNFS has supplemented income from farming and provided employment opportunities. These opportunities are not equitable, with the better-off having access to better quality jobs and non-farm enterprises, while those with lower skills, physical and social capital land low quality and less productive jobs. RNFS also differs from gender disparity with lesser number of females moving towards non-farm economy. Government policy should involve imparting skills to the unskilled, credit facilities to the poor who wish to establish enterprises, improved infrastructure and transportation facilities. To improve participation of females, safe working conditions and in-situ facilities along with skilling up is required.*

***Keywords :*** *Non-Farm, Diversification, Poverty, Employment, Equity*

## INTRODUCTION

Overtheyears, since independence, India has moved from an underdeveloped and poor country to become a lower middle-income country. Along with this transition, there has been a shift in sectorial composition with the primary sector receding in importance. But while other present day developed countries took the path of manufacturing sector growing at the expense of agriculture in the initial decades and services sector growing at the expense of manufacturing sector in later years, the same was not true of India. Here the manufacturing sector did not grow fast enough and certainly did not provide jobs to the unskilled and semiskilled labour rendered surplus in the agricultural sector. The

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contribution of agricultural sector to GDP has declined from above 50 percent to less than 20 percent, while the share of manufacturing sector has increased from14 percent to only about 27 percent. The services sector replaced agriculture as the major sector contributing to GDP (increasing contributionfrom 30percent of GDP to about 55 percent to GDP) but it did not absorb surplus labour from the agricultural sector. Services sector either provided high skilled jobs or low paying informal sector jobs. As agriculture remained saddled with about fifty percentage of population with a dwindling share of GDP it led to a piquant situation of over dependence on ever dwindling farms. All these could have led to an immensely distressing situation in rural India, but it has not turned out to be so because of expansion of the ruralnon-farm sector.The condition of rural India would have been even worse had it not been for the contribution of rural nonfarm economy. It would have led to increased inequalities in rural and urban income and distress for the rural poor.

There have been various definitions of RNFS, so the Interim Report of the Study Group on Non-Farm Sector (1992) reviewed the various definitions and broadly defines NFS activity as"all non-agriculturalactivities viz., agricultural processing, household and non household manufacturing, construction, transport, trade and all kinds of services in rural areas and rural towns".It also recommends inclusion of activities such as animal husbandry and fishing practiced on a commercial basis.

Rural Non-farm Sector is not a monolith. It has often been assumed to be a residual or "sponge" sector fed by a secular pauperization of the rural population(Shukla V, 1992), but this may not be always the case. There are two diverse strands which emerge upon a closer look. One segment of farmers moving towards non-farm sector are of coursedistress driven, but there is another segment of rural folk who have moved towards nonfarmsector in search of better opportunities. There is great diversity in the people making such transition, between their skills and opportunities and possibilities open to them.But whatever be the reasons, such movement has prevented an already bad situation from turning worse in rural areas. As the provision of employment in urban areas and hence opportunities for migration to urban areas appears to be limitedin the near future, rural nonfarm sector is bound to increase in importance in the Indian economy. As such it is important to study the factors driving this economy.

## AIMS OF THE STUDY

Rural non-farm sector is continuously increasing inimportance. As such this study aims to study its various aspects:

1.Is transition towards non-farm sector distress driven or is it due to pull of opportunities available?

2. Analysis of the main determinants of Rural Non-Farm Economy.

3.Does income from non-farm sector contributesignificantlyto rural income and poverty decline?

4. How significant is RNFE'scontribution in providing employment to rural sector?

5. Is there a gender bias innon-farm sector employment?

## METHODOLOGY

This research shall be based on secondary data available from various rounds of NSSO survey data, PLFSdata,Employment and Unemployment surveys, NCAER,Economic Surveys, research papers etc.These data will be systemically analysed qualitatively, to gain insights into the rural nonfarm sector, its causality and its effect on other variables.

## GROWING IMPORTANCE OF RURAL NON-FARM SECTOR

The Indian population, despite so many years of independence and progress, remains a predominantly

rural country. It is only about 30 percent urbanized. This is due to both lack of opportunities of employment and alsobecause urban infrastructure has not kept pace with growing demand. The manufacturing sector has not provided employment to unskilled and semiskilled workers. So even those who have uneconomic size of farms and want to move out of farming are forced to stay back in villages. The jobs available in urban centres are predominantly in the informal sector. These are mostly low paying jobs without any social security and often casual in nature.The workers are not provided housing amenities and as such are forced to live in shanty towns or slums without even the basic facilities like running water, sanitation and reliable electricity. The living conditions being so bad, it leads to workers not bringing along their families. It is often the single male who lives and works insuch inhuman conditions and sends back money to family left behind in villages. This leads to socio-cultural problems of the vulnerable i.e. the old, the women and the children left behind.

As urban centres are not in a state to support greater number of immigrants the rural folk who are suffering from disguised unemployment have perforce to stay back in villages. It is the rural non-farm sector which comes to the rescue of such people. The role of rural non-farm sector is crucial both in generating productive employment and alleviating poverty in rural areas because of the limited capacity of the urban sector and near saturation of employment in agriculture sector. The remarkable success of rural industries in China and other East Asian countries has provided strong evidence of the positive role that this sector can play in generating employment and increasing income levels in rural areas (Dev 2018).

Most of the landless agricultural labourers move from farm to non- farm sector as it provides higher wages and unlike agricultural work does not depend on seasonality. A large survey in Tamil Nadu (Jayaranjan 2013) shows that rural non-farm activities draw more rural households, and many employment opportunities are stable with higher wages drawing more educated youngsters (Reddy et. al. 2024 ICRISAT). But not all movement to RNFS is distress driven. There has been increase in self-employment via providing services to rural population and entrepreneurship of various kinds.It therefore becomes necessary to analyze the phenomenon comprehensively in all its dimensions such as the nature of changes in the rural employment structure, diversity of emerging activities, shifts in 'pluriactive' and specialization features, levels of productivity and earnings, and sustainability(Reddy et. al. 2014, ICRISAT). Income from agriculture is being supplemented withincome from RNFE and over the years it's share has been rising steadily. It appears that the non -farm sector is contributing towards both employment and income and hence reduction in poverty.

**REASONS FOR DIVERSIFICATION TOWARDS NON-FARM SECTOR**

There is no unanimity amongst researchers as regards the factors responsible for movement towards non-farm sector. Several of them hold that it is push factors which are responsible while others believe that pull factors are dominant. Actually, different types of households and differently endowed individuals get involved in NFS due to different reasons. In case of well-off farmers with adequate land who can generate surplus via producing and selling agricultural products, diversification into non-farm activities is often in the form of enterprises. They wish to take advantage of increasing income via setting up agro based industries or provision of services required in villages. They move towards NFS due to pull factors. In such cases increase in agricultural productivity leads to increased investible surplus and hence increase in entrepreneurial activity.Vaidyanathan (1986) found significant positive relationship between crop output per head of agricultural production and non-farmemployment while according to Dev (1990) it is agricultural productivity that stimulates RNFE. Similar is the conclusion drawn by Reddy et.al.). Similarly, Hazell and Haggblade(1991),and

Chadha(1994),have found positive linkages between agricultural growth and growth of non-agricultural activities.

In contrast, landless agricultural labourers move towards NFS due to the dire situation they find themselves in. They get low -paid, seasonal and irregular work in agricultural activities and hence are forced to engage in non-farm activities so as to supplement their meagre income. So, their movement towards NFS is due to push factors. In the instance of these agricultural labourers'crop productivity and output may have a negative relationship with their engaging in non-farm activities, because in case of bad crops and low productivity, farmers are unable to pay them well. This leads to low level of wages or no employment forcing them to find work as casual labourers in RNFS. Most of them are unskilled and uneducated and hence find jobs of an irregular nature in informalSector. In case they engage in entrepreneurial activity, it is mostly about providing services which are at the lower rung in terms of skills,productivity and income.

So, in the case of landholder and wealthy class, most often endowed with a higher level of education, the movement is towards higher echelons of RNFS, while the poor landless agricultural labour class having little skill and education,has tosettle for lower rung of jobs and enterprise. The former have lower entry barriers while moving to the more productive segments of RNFS.

**DIVERSITY OF NON-FARM ACTIVITIES**

The non-farm "sector" includes all economic activities in rural areas except agriculture, livestock, fishing and hunting (practisedon a subsistence rather than commercial basis). Since it is defined negatively, as non-agriculture, it is not in any sense a homogeneous sector (Lanjouw 2001). The individuals under this category can be classified under various categoriessuch as wage earners(potters and artisans working fir a wage), self-employed producers (tea shop owners, vendors), producer entrepreneurs (owners of food processing units, master weavers), traders (who supply raw materials and purchase finished goods), and owners of large manufacturing or service business. (Kanitkar A, 1994) also, those who commute to a job in a nearby urban centreare considered to be rural workers.Closeness to or from markets or urban centres also leads to increase in RNFE as people go out to work in nearby cities for work and return to their homes in rural areas.

Rural manufacturing accounts for nearly one-third of India's net domestic product in manufacturing, tiny and small enterprises constitute an overwhelming percentage of rural manufacturing units, agro-based enterprises constitute a bulk of rural manufacturing units, and food processing commands pre-eminence, both in output and employment, among the rural agro based manufacturingILO, 2008). This indicates the nature and significance of rural industrialization.

**DETERMINANTS OF RURAL NON-FARM SECTOR**

Mostoftheeconomists are divided as regards agricultural and non-agricultural factors influencing RNFS. One set of economists believes that increase in agricultural production and productivity through backward and forward linkages leads to growth of RNFS.

Hazell and Haggblade (1991)through their study substantiate the linkage hypothesis, arguing that agricultural growth is the principal factor for growth in the non-agricultural sector.Nachane et al. (1989) also find a strong correlation between agricultural and non-farm growth, in addition to strong forward and backward production linkages. Chadha (1994)concluded that a quickly growing and productive agricultural economy is able to promote well-developed non-agricultural activity within the village itself. However, he concludes that this linkage between the sectors cannot be taken for granted. As the economy develops, the proportion of non-farm incomes increases in poorer households(Coppard, 2001).

Other economists have considered several factors other than agricultural production and productivity which influence RNFS. Bhalla (1993, 1997), Shukla (1991, 1992), emphasize the importance of proximity to urban centres for rural livelihood diversification.Some economists point to the role ofrural infrastructure (Hazell and Haggblade, 1991) for increasing agriculture and RNF linkage the development of transport infrastructure for RNF employment opportunities (Jayaraj (1994)and ruralelectrification(Singh 1994) in helping increase RNFS.

It is possible that opportunity induced migration to RNFS is influenced by agricultural productivity, especiallyin agriculture linked non-farmlinked enterprise, but the same may not be true in case of distress induced migration of agricultural labourer to RNFS which is most likely to be influenced by better infrastructure and proximity to urban centres.

Although rural non-farm sector employment is rising in absolute terms, its growth rate has slackened in recent years. While the level of education and skill training, market wage rates and socio-cultural setups are among the key micro-level factors determining farm–non-farm employment choices of rural folks, at the macro-level, the growth of investment in capital goods, the number of factories, investment in infrastructure development and the growth of the manufacturing sector are crucial for the growth of non-farm sector jobs in India (Pattayat, Parida,2024)

According toDrall and Mandal (2020)education in general and technical education, in particular, access to credit and endowment of social capital, are the major determinants of RNFS employment in India. However, these determinants were not same across the various RNFS sub-sectors. It was found that while education affects participation in wage employment and self-employment, technical education affects participation in wage employment and 'others' only. Also, social capital determines employment in self-employment and wage employment, but does not determine employment under the 'others' category. Other factors that determine RNFS diversification are land and non-land assets, age, and gender of the household head, household size and distance from market.

**CONTRIBUTION OF NON-FARM SECTOR TO EMPLOYMENT IN RURAL ECONOMY**

Agricultural activities used to be the mainstay of employment till 1980, but after that it has sharply declined to 68 percent in 2009-10 from 81percent in 1980-81. (ICRISAT). Contribution of Non-Farm Sector to employment rose from 19 percent in 1983 to22 percent in 1993-1994, and to 32 percent in 2009-10.Non-Farm employment grew at the rate of 3.23 percent in 1983 to 1993-94, at 3.64 percent from 1993-94 to 2004-05 and at 4.03 percent from 1999-2000 to 2009-10. At the sametime employment opportunities continuously declined from agricultural sector,turning negative in the 2000 to 2010 decade. Although the share of manufacturing has declined; still the employment provided by these activities is better than that of construction activities (Wiggins and Hazell, 2008; Rangarajan and Seema, 2014). But a new study by Pattayatet al. (2024) has found that wages paid in construction, mining, quarrying and utility sectors is higher than those paid in manufacturing sector. This implies that rural manufacturing is providing lower productivity jobs as compared to these sectors. It is the rural services sector which provides comparatively higher paid jobs according to their study.

Although regular employment is only about 7percent of total NFSE, about 90 percent of it is provided by non-construction and other services. Non-construction NFE is considered to have better linkages with both farm sector as well as urban activities.

In the services sector, there is significant contribution of public services, for examplein health and education, provision of services and administration by the government. These are part of the regular well-paid jobs in rural non-farm economy with high entry barriers of skills and education. In contrast,

the informal sector services sector which provides simple services like masonry, carpentry, washing etc. have low skill requirement and lower wages as compared to regular salaried class but higher than agricultural labour wages. There are petty shops too which provide simple grocery and food requirements. People take up these activities as a last resort to escape poverty and augment incomeobtained from small sized farms. But there also existnon-farm enterprises like repair and maintenance of motor vehicles and appliances,agricultural implements and lately mobile repair shops which require a certain amount of capital and are taken up by the comparatively better off segment of rural society in order todiversify intonon-agriculturalactivities. These RNFE are dependent on the demand generated in the rest of the rural economy.

The rural agricultural labour moves out from farming to non-farming as he may or may not get full time employment due to the seasonal nature of agricultural activities. In the non-farmsector, he gets higher wages as compared to those in agriculture and allied activities. But as he is unskilled and less educated, he lands jobs in informal sector rather than well paid regular salaried jobs. Whereas, when those of the wealthier class diversify, they are mostly engaged in regular salaried, high-incomejobs. As regards own enterprises there is not enough data to analyse what sort of enterprises are being set up and is there a rich poor divide here as well. Most non-farm units are small with average employment of one or two workers.

**CONTRIBUTION OF NON-FARM SECTOR TO DECLINE OF POVERTY**

In the earlier stages of development, agricultural productivity and earnings from farming were a major contributor to reduction in poverty and inequality. But in recent times it is the rural non-farm sector which has helped decline in poverty. For some time now even in rural areas, sectoral share of agriculture in economy has been declining. It has declined from 72.4 percent in 1970-71 to 39.2 percent in 2011-12while that of manufacturing had increased from 5.9percent to 18.4 percent, of construction from 3.5 percent to 10.5 percent and that of services from 17.1 percent to 27 percent in the same period(Chand R.et. Al,2017). This implies that even in rural areas NFS is greater contributor to Income. (But the generation of employment has not been commensurate with the increase in contribution to rural NDP).

Foster and Rosenzweig (2004) have argued that non-farm expansion has not only been the primedriverof rural incomes but also has been especially pro poor. As per Kumar et. al. (2011), diversification towards rural non-farm sector is critical to reducing poverty in India. A one percent increase in share of rural non- farm employment leads to 0.5 percent reduction in poverty. (Even now a one percent rise in agricultural growth leads to 1 percent reduction in poverty).

Another important link between the non-farm sector and rural poverty occurs via the effect of the non-farm sector on agricultural wage rates. Agricultural labourers are highly represented among the poor in rural India and as a result increases in agricultural wage labour earnings are strongly associated with lower poverty (see Datt and Ravallion, 1998). It has been noted that non-agricultural wages are higher than that for agricultural workers in rural areas (Papola, 1991).Expansion of the non-farm economy appears to have influenced agricultural wages in rural India. This appears to be the effect of expansion of RNFS leading to diversionof agriculturallabour from agriculture to non-agricultural activities resulting in tightness in labour markets and hence increased wages.Although the poor may not directly participate in the non-farm sector, this sector's impact on agricultural wage rates can be considerable, and therefore of indirect importance to poverty reduction.

RNFS may not lead to decline in poverty in the whole nation at the same rate. In fact, wide differences across states may be observed. RavallionandDatt (1996, 1999) show that the effectiveness of non-

farm growth in reducing poverty has varied widely across states, reflectingsystematic differences in initial conditions. In states with low farm productivity, low ruralliving standards relative to urban standards, and poor basic education, the poor have been lessable to participate in the growth of the non-farm sector.

**SIGNIFICANCE OF GENDER IN RURAL NON-FARM SECTOR**

Several studies have pointed out that it is the male youth which is the first to move towards non-farm sector in rural areas, so much so thatsome have termed it as feminization of agriculture.Earlier this segment of population used to remain underemployed or disguised unemployed inagriculture, but due to population pressure resulting in continuous fragmentation of land leading to marginal farmers becoming the dominant segment of Indian agriculture, it has become impossible for them to continue with farming. So, they move towards any RNF activity which certainly provides them better wages aa compared to agricultural labour. This has left the female in the agricultural sector. But though a greater percentage of male is moving out the absolute number of males is still larger than females. As per NSSO data participation of males in agriculture declined from 74 percent in 1993-94 to 59.4 percent in 2011-12 while that of females declined from 86.2 percent in 1993-1994 to 74.9 percent in 2011-12. It isn't that women participation in RNFE has not increased, but it is at a much lower rate as compared to males. Women participation in manufacturing, construction and services increased to 9.8, 6.6 and 8.3 percent in 2011-12 respectively. The figures for males during the same period were 8.2,13.0 and 19.3 respectively. (Dev, 2018). This shows that despite increasing presence of women in RNFS, they are certainly left behind.Pattayat et. al. (2024) have found that gender inequality in employment opportunities against women has not only existed but has increased over time. There has also been a rising wage difference between the two, although this differential reduces in the higher quantiles of wage distribution.

It appears that entry barriers for females in rural non-farm sector are particularly high. This may be due to security concerns along with lower skills and education. MNREGS has certainly increased participation of women in non-farm employment due tobetter in-situ conditions. But it has also resulted in greater casualisation of female labour.As per a study by Lanjouw andShariff (2004) women and scheduled castes(and scheduled tribes) tend to be particularly highly represented in agricultural labouractivities, and commensuratelyunderrepresented in the non-farm sector.Moreover, there has also been a withdrawal of females from labour force in this period. (Chand R. Et al.) As per Kumar etc. (2011), gender has a very significant impact on RNFE, confirming aclear gender divide.

**CONCLUSION AND POLICY IMPLICATIONS**

Ruralnon-farm sector is a highly heterogeneous sector with great diversity in types of occupations ranging from self-employment, ownedenterprises, pettyservices, low end manufacturing, apparel shops, repair works, grocery stores, construction activities, gas and electricity, mining, quarrying,trade, transportation, storage, communications,public services and administration etc. It is a very complex economy indeed. Therefore,any conclusions drawn may not apply to the whole of RNFS.

1.Both push and pull factors are responsible for transition from farming to non-farming activities.

2.The push factors are dominant in the case of agricultural labourers and those with marginal farms having too many claimants on a small piece of inherited fragmented land.Along with uneconomic size of holding, low and uncertain product and productivity, push the marginal farmer and agricultural labourer towards other sources of employment for augmenting meagre income from agriculture. Natural calamities further enhance this process.

3.The above segment of population often belongs to the lowest quantile of rural economy and needs the greatest succour.But sadly, these very people face high entry barriers of being low skilled, low level of education and possessing low level of assets and capital. They mostly move into construction or low level of manufacturing, i.e. insecure, informal, low paying jobs of irregular nature. But they earn higher wages than an agricultural labourer.

4.The pull factors dominate in the case of farmers with sufficient and highly productive land, having savings, capital and assets.They may set up enterprises providing agricultural implements and inputs,food processing plants, storage and warehouses in the initial stages with linkages with agricultural sector.Their children could attain higher education, both technical and non-technical,and avail of opportunities in regular high paid services sector jobs.

5.As regards determinants of RNFS, agriculture production and productivity through various linkagesis important for the segment moving towards RNFS due to pull factors.Higher skills and extend to provide better quality jobs. Hence it is important for the government to provide skill enhancing training to rural youth to make them employable. Setting up of enterprises could be facilitated by providing credit facilities to the poor. Rural infrastructure in terms of roads, electricity, internet connectivity, transportationetc. can lead to manufacturing moving to rural areas in a greater measure.Better connectivity also helps workers who work in nearby urban centres. It also helps the petty trader to sell his wares in towns and return to his village home.

6.The contribution of RNFS to employment has certainly risen in recent decades. It has increased from19 percent in 1983 to 32 percent in 2009-10. In theRNFE, it is construction sector which provides maximum employment. Most of the jobs provided are of low skilled, low paid and low productivity jobs. They are often of irregular and casual nature and mostly without any social security.Services sector in rural areas have provided better quality but meagre jobs. Most of the services sector jobs are in trade, storage, transport and communications along with public services. The manufacturing sector has moved to the rural areas to a significant extent, but without a commensurate increase in employment. Even nowRNFE isnot capable of absorbing all thosewho wish to move out of agriculture.

7.RNFS has helped increase income of the very poor andthat of the well-offtoo.The rural areas distress would be much higher has there not been opportunities provided by the RNFE.It has lifted the lowest quintile out of poverty. It directly augments agricultural income andhas a salutary effect on agricultural wages.

8. There is a clear case of gender bias in access to employment in RNFS. Lesser percentage of females move towards non-farm sector as compared to males and are also discriminated as regardsbring paid lower wages than their male counterpart.But this wage divide declines in the higher quintiles. Entry barriers appear to be higher for females which could be improved by providing relevant skills and education along with a secure environment.

**REFERENCES**

Abraham, V. (2009). Employment Growth in Rural India: Distress-Driven? *Economic and Political Weekly*, *44*(16), 97–104. http://www.jstor.org/stable/40279162

Ajit Kanitkar. (1994). Entrepreneurs and Micro-Enterprises in Rural India. *Economic and Political Weekly*, *29*(9), M25–M30. http://www.jstor.org/stable/4400859

Bhalla, S. (1993) Patterns of Employment Generation, The Indian Journal of Labour Economics, 39(1), pp 1-12.

Bhalla, S. (1993) Test of Some Propositions about the Dynamics of Changes of the Rural

Workforce Structure, The Indian Journal of Labour Economics, 36(3), pp 42839.

Bhalla, S. (1997) The Rise and Fall of Workforce Diversification Process in Rural India, in G K Chadha and Alakh N Sharma (eds), op cit., pp 145-183.

BINSWANGER-MKHIZE, H. P. (2013). The Stunted Structural Transformation of the Indian Economy: Agriculture, Manufacturing and the Rural Non-Farm Sector. *Economic and Political Weekly*, *48*(26/27), 5–13. http://www.jstor.org/stable/23527235

Chadha G. K. (2008), Employment and Poverty in rural India: Which way to go now? *ILO* 2008

Chand, R.& Srivastava, S. & Singh, J. (2017). Changing Structure of Rural Economy of India Implications for Employment and Growth. 10.13140/RG.2.2.17270.09280

CHAND, R., & SRIVASTAVA, S. K. (2014). Changes in the Rural Labour Market and Their Implications for Agriculture. *Economic and Political Weekly*, *49*(10), 47–54. http://www.jstor.org/stable/24479229

D. N. Basu, & S. P. Kashyap. (1992). Rural Non-Agricultural Employment in India: Role of Development Process and Rural-Urban Employment Linkages. *Economic and Political Weekly*, *27*(51/52), A178–A189. http://www.jstor.org/stable/4399243

Datt, G., &Ravallion, M. (1998). Farm productivity and rural poverty in India. *Journal of Development Studies*, *34*(4), 62-85. https://doi.org/10.1080/00220389808422529

Dev S. M., (2018), Farm and Non-Farm Sector Linkages and Future of Agriculture, Indian *Journal of Agricultural Economics* Vol.73, No.1, Jan.-March 2018

Drall, A., Mandal, S.K. Determinants of various modes of rural non-farm sector (RNFS) employment in SAT (semi-arid tropics) and Eastern regions of India: an empirical analysis. Ind. Econ. Rev. 55, 253–282 (2020). https://doi.org/10.1007/s41775-020-00092-4

Foster A. D. (2011). Creating Good Employment Opportunities for the Rural Sector. *ADB Economics Working Paper Series No.271*

Foster, Andrew D & Rosenzweig, Mark R, 2004. "**Agricultural Productivity Growth, Rural Economic Diversity, and Economic Reforms: India, 1970-2000**," Economic Development and Cultural Change, University of Chicago Press, vol. 52(3), pages 509-542, April.

HAZELL, P.B.R and S. HAGGBLADE (1991) Rural Growth Linkages in India, Indian Journal of Agricultural Economics), 46(4), pp 515-29.

JATAV, M., & SEN, S. (2013). Drivers of Non-Farm Employment in Rural India: Evidence from the 2009-10 NSSO Round. *Economic and Political Weekly*, *48*(26/27), 14–21. http://www.jstor.org/stable/23527236

Jayaranjan J. 2013. A Study on the Rural Non-farm Employment in Tamil Nadu (Mimeo). Chennai, India: *Institute of Development Alternatives*.

Jha B. (2005) Rural Non-farm employment in India: A Co-ordinated study, Institute of Economic Growth, University Enclave, Delhi

Kaur A, Arora A. And Singh S. P.(2020): Employment Diversification in Rural India : Nature, Pattern and Determinants**,** https://www.redalyc.org/journal/296/29662605011/html/

Kumar A., Kumar S., Singh D. and Shivjee(2011); Rural Employment Diversification in India : Trends, Determinants and Implications on Poverty; *Agricultural Economics Research Review24(2011)*

Lanjouw P., &Murgai R. (2009). Poverty decline, agricultural wages, and nonfarm employment in rural India: 1983-2004. *Agricultural Economics*, 40(2), 243–263.

Lanjouw, P., & Shariff, A. (2004). Rural Non-Farm Employment in India: Access, Incomes and Poverty Impact. *Economic and Political Weekly*, *39*(40), 4429–4446. http://www.jstor.org/stable/4415616

Nachane D.M.,Sawant S. D. and Achutanhan C.V. (1989), Agriculture and Industry: A Study of Selected Linkages, *Indian Journal of Agricultural Economics*, Vol. XLIV No. 2, April-June 1989

Papola, T.S. (1991), 'Rural Non-Farm Employment: An Assessment of Recent Trends', Monograph, Planning Commission, New Delhi.

Pattayat S. S.& Parida J. K. 2024. "**Drivers of Rural Non-farm Sector Employment in India, 1983â€“2019**," *South Asia Economic Journal*, Institute of Policy Studies of Sri Lanka, vol. 25(1), pages 45-73, March.

Pattayat, S. S., & Parida, J. K. (2024). Drivers of Rural Non-farm Sector Employment in India, 1983–2019. *South Asia Economic Journal*, *25*(1), 45-73. https://doi.org/10.1177/13915614231221649

Rangarajan, C., Seema, and E. M. Vibeesh(2014), 'Developments inthe Workforce between 2009-10 and 2011-12', Economic and Political Weekly, vol. XLIX (23)

Ranjan, S. (2008). Determinants of Rural Non-Farm Employment: Microlevel Evidence from Uttar Pradesh. *Social Scientist*, *36*(5/6), 22–50. http://www.jstor.org/stable/27644277

Ranjan, S. (2009). Growth of Rural Non-Farm Employment in Uttar Pradesh: Reflections from Recent Data. *Economic and Political Weekly*, *44*(4), 63–70. http://www.jstor.org/stable/40278834

Ray, S. (1994). Farm - Non-Farm Interaction in a Labour Surplus Economy. *Economic and Political Weekly*, *29*(53), A171–A174. http://www.jstor.org/stable/4402193

Shukla, V. (1991) Rural Nonfarm Activity - A Regional Model and Its Empirical Application To Maharashtra, Economic And Political Weekly, Vol 26, Iss 45, pp 2587-2595.

Shukla, V. (1992) Rural Nonfarm Employment in India. Issues And Policy, Economic and Political Weekly, Vol 27, Iss 28, pp 1477-1488

SINGH, A.K. (1994) Changes in the Structure of Rural Workforce in Uttar Pradesh: A Temporal and Regional Study, in P. Visaria and R. Basant (eds.) op cit.

Swapna Mukhopadhyay. (1985). Rural Non-Farm Sector in Asia: A Characterisation. *Economic and Political Weekly*, *20*(22), 966–968. http://www.jstor.org/stable/4374473

V. S. Vyas, & George Mathai. (1978). Farm and Non-Farm Employment in Rural Areas: A Perspective for Planning. *Economic and Political Weekly*, *13*(6/7), 333–347. http://www.jstor.org/stable/4366359

Vaidyanathan, A. (1986), 'Labour Use in India: A Study of Spatial and Temporal variations', Economic and Political Weekly, Vol.29, No.50, 10 December.

Vaidyanathan, A. (1994), "Employment Situation, Some Emerging Perspectives", Economic and Political Weekly, Vol. 29, No.50, 10 December.

Vibhooti Shukla. (1992). Rural Non-Farm Employment in India: Issues and Policy. *Economic and Political Weekly*, *27*(28), 1477–1488. http://www.jstor.org/stable/4398633

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# AN ANALYSIS OF RECENT TRENDS IN CRUDE OIL PRICE VOLATILITY

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## ABSTRACT

*Crude oil stands as one of the most vital commodities in the contemporary world and its prices are driven by global supply and demand which make it highly volatile. Perturbations caused by the COVID-19 pandemic, the geopolitical tensions between Ukraine and Russia, and various other unforeseen global events have all exerted substantial impacts on its prices.The crude oil price volatility is a measure of risk in crude oil investment and trade. High crude oil price volatility can be caused by fundamental market conditions (supply and demand imbalance) and speculative surprises by investors in the financial sector where crude oil is an underlying asset in derivatives trading. Such high volatility of oil prices further can cause uncertainty in the economy, which leads to investment delays and economic growth reduction.With high volatility, the year-to-year changes in theprices of crude oil can pose a significantjolt to the economy and affect the process of economic growth of any economy. In this situation, households haveto suddenly pay more for energy costs,having less money available in householdbudgets for other competing demands. Since most sectors of the economy, such as transport, power, and industrial sectors, heavily depend on oil consumption, fluctuations in the price of oil have a detrimental impact on economic growth. With a large share of imports, volatility in theoil prices also amounts to sudden and large shiftsin international trade. In this context, this paper aims to examine the volatility in crude oil spot prices and its effects and to analyse the trend of log returns and squared log returns of crude oil monthly prices. For this, Brent Crude oil monthly prices for a period of thirteen years (2011-2023) are used to model the volatility. The choice of this data is because Brent Crude oil has remained supreme in oil market. The data is obtained from the US Energy Information Administration (EIA) website and the analysis is carried out to find various statistical properties of the data i.e. mean, variance, skewness, kurtosis, log-returns, squared log-returns, heteroscedasticity etc. Existence of volatility from the data is also ascertained.*

***Key Words:*** *Crude oil, Price volatility, Brent crude oil, WTI, Spot prices.*

**JEL Classifications:** C330, E310, E230.

## INTRODUCTION

Undoubtedly, the extensive utilization of crude oil has served as a pivotal catalyst for the exponential growth of the global economy over the past century. The relentless wave of economic globalization has further bolstered the prosperity of the crude oil market.A critical factor governing the consumability of crude oil lies in its refinement or transformation. Consequently, the quality of crude oil is assessed through two primary criteria: density, measured by its API degree, and sulphur content.

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These factors bear a close association with the cost of the refining process and the overall quality and quantity of crude oil production. However, the dynamics of oil prices are influenced not solely by the substance (quality spread) but also by geographical locations (location spread). In the crude oil market, Brent and WTI stand as the benchmarks and serve as the focal points of research in this study.

**CRUDE OIL**

Crude oil, an intricate amalgamation of volatile liquid hydrocarbons primarily composed of carbon and hydrogen, originates from ancient plants and animals, existing in liquid form within natural subterranean reservoirs and retaining its liquidity at atmospheric pressure after passing through surface separating facilities. This complex mixture encompasses organic compounds, heteroatom compounds (including Sulphur, Nitrogen, and Oxygen), hydrocarbons (comprising Carbon and Hydrogen), and a diverse array of metals and organic (such as Nickel, Vanadium, and Iron) and inorganic (such as Sodium ions, Calcium ions, and Chloride ions) elements.Customarily, crude oils are distinguished based on the predominant type of hydrocarbon compound they contain, categorized into paraffins, naphthenes, and aromatics. Paraffins, being the most prevalent hydrocarbons in crude oil, assume paramount significance as they form a crucial component of gasoline (petrol) and are, therefore, highly valued. Naphthenes, while significant in all liquid refinery products, also contribute to the formation of heavy asphalt-like residues during refinery processes. Aromatics, on the other hand, constitute only a minor percentage in most crude oils, with benzene being the most common aromatic compound found, known for its significance in the petrochemical industry as a vital building block.

The physical properties of crude oil exhibit significant variations owing to its diverse constituents and proportions. From colourless to black in appearance, one of the most crucial physical properties is specific gravity, denoting the ratio of a crude oil's weight to that of an equal volume of pure water under standard conditions. The petroleum industry employs the American Petroleum Institute (API) gravity scale, where pure water is arbitrarily assigned an API gravity of 10°. Crude oils with API gravities numerically greater than 10 are considered lighter than water. Based on their API gravity, crude oils can be classified as heavy, medium, and light as follows:

- Heavy: 10-20° API gravity
- Medium: 20-25° API gravity
- Light: Above 25° API gravity

Additionally, crude oil is further categorized as 'sweet' or 'sour' depending on its sulphur content, present either in elemental form or as compounds like hydrogen sulphide. Sweet crudes contain sulphur content of 0.5 percent or less by weight, while sour crudes have sulphur contents of 1 percent or more by weight. Generally, heavier crude oils tend to exhibit higher sulphur content, and during the refining process, excess sulphur is removed to mitigate the release of sulphur oxides, a significant atmospheric pollutant during oil combustion.Being a fossil fuel and non-renewable energy source, crude oil cannot be directly utilized, however, it harbours several valuable constituents. Through the refining process, a barrel of crude oil yields various petroleum products in different proportions, including liquid petroleum gases (LPG), naphtha, and gasoline (50%), diesel fuel, heating oil, jet fuel, and kerosene (40%), and residual fuel oil (10%). Given its indispensability for critical economic activities like, production and transportation, forecasting crude oil prices assumes utmost significance.

## CRUDE OIL PRICE VOLATILITY

'Price volatility' herein referred to as the extent to which prices fluctuate over a specific period, assumes prominence as a crucial indicator of market dynamics. Efficient markets embody prices that duly reflect known existing factors and anticipated future circumstances concerning supply, demand, and any influencing variables. 'High Volatility' characterizes markets with significant price fluctuations over a short span, while 'Low Volatility' typifies markets marked by more stable prices. Notably, the energy markets entail substantial investments, often amounting to hundreds of millions or even billions of dollars. The return on these investments hinges upon the capacity to produce fuels or power and subsequently sell them at viable prices.In recent years, our comprehension of energy price shocks and their ramifications on the economy has undergone a profound transformation. Previously, prevailing literature attributed major crude oil price increases to exogenous factors vis-à-vis OECD economies, often linked to oil supply disruptions triggered by geopolitical disturbances in the Middle East. However, empirical support for this view has proven scarce. Likewise, the notion of OPEC functioning as a cartel exerting control over oil prices has not withstood rigorous scrutiny. Instead, a growing acknowledgment of the significance of shifts in oil demand has emerged, with recent research robustly evidencing the central role played by oil demand shocks in major oil price episodes since the 1970s.

As 'spot oil price volatility reflects the volatility of current as well as future values of oil production, consumption, and inventory demand' (Pindyck, 2004), it holds relevance for various economic agents. Accurate forecasts assume utmost importance for firms heavily reliant on oil prices, such as oil companies contemplating new drilling ventures or long-term investments in refining and transportation infrastructure, airline companies setting airfares based on oil price forecasts, and the automobile industry. Additionally, oil price volatility influences household decisions regarding the acquisition of durable goods (Davis and Kilian, 2011; Kahn, 1986). Finally, forecasts of industry-level and aggregate economic activities are indispensable for entities like policymakers, business economists, and private sector forecasters (Elder and Serletis, 2010; Jo, 2014).

## HISTORICAL OVERVIEW OF CRUDE OIL PRICE RETURNS

Prior to unveiling the empirical study, an insightful historical contextualization of the genesis of the crude oil era spanning more than 150 years assumes paramount significance. The origins of the modern oil industry can be traced back to the seminal year of 1859, when Edwin Drake garnered acclaim as the "Father of the American Petroleum Industry" for his pioneering invention of drilling technology, which successfully extracted commercial quantities of oil from the first well in Titusville, Pennsylvania. During its nascent stages, the primary utility of oil was confined to domestic lighting, serving as a substitute for whale oil.The mid-1950s witnessed remarkable technological advancements that revolutionized the logistics of crude oil, harnessing its high density and relative abundance to the fullest. This transformative breakthrough paved the way for the launch of a large-scale industry, marking the inception of the enduring crude oil era that persists to this day. Modern society now hinges heavily on crude oil to sustain industries, provide thermal energy for buildings, and fuel a vast network of machines transporting goods and people across the globe.

In the annals of 1960, a momentous milestone in the world of crude oil unfolded when Saudi Arabia and other foreign oil-exporting nations orchestrated the establishment of the Organization of Petroleum Exporting Countries (OPEC). The inception of OPEC marked a resolute endeavour to attain enhanced control over their most prized natural resource. This pivotal coalition emerged through a momentous agreement signed between Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela, all

united in their pursuit to elevate the crude oil price, thus amplifying their collective influence in the fiercely competitive crude oil market.The 1970s witnessed a momentous surge in global crude oil prices, largely stemming from geopolitical conflicts that stood as the most pivotal events of the 20th century. In 1973, a seismic event transpired as OPEC executed the Arab oil embargo, famously known as the first oil shock. In response to the United States' decision to support Israel in the Arab-Israeli war, OPEC curtailed oil production, causing oil prices to quadruple in 1974, sending reverberations throughout the global market.Meanwhile, a discernible consequence of the 1973 crisis was the rise of numerous non-OPEC countries, including Mexico, Norway, and the United Kingdom, as self-sustaining oil producers. As these countries made strides in oil production, the global market share of OPEC gradually diminished from 53% in 1973 to 43% in 1980 and eventually to 28% in 1985. The consequential surge in world oil production exerted downward pressure on oil prices, leading to a notable decline.

The second oil shock struck in 1979-1980, propelled by the curtailed crude oil production caused by the Iranian Revolution, which drastically disrupted oil production during the war. As the global supply of crude oil dwindled, oil prices more than doubled between 1978 and 1981, aggravated further by the Iran-Iraq war's impeding effect on oil production.In the early 1980s, a stark contrast unfolded as a consequence of the energy crisis in the preceding decade, which precipitated a discernible decline in consumer demand. This phenomenon, known as the 'oil glut,' engendered a consequent oversupply of crude oil, culminating in a substantial decrease in crude oil prices.

In 1990, the realm of geopolitics interwove with the dynamics of crude oil, as Iraq's invasion of Kuwait disrupted the supply of this precious resource, causing a sharp escalation in oil prices. However, the aftermath of this event saw a swift descent in prices to a low level in 1991, primarily attributable to diminished demand for oil inventories (Kilian, 2008). Subsequent economic events, such as the Asian financial crisis in 1997, further weakened oil prices. Nevertheless, in 1999, a resurgence in demand for oil inventories spurred a noteworthy upturn in oil prices (Kilian and Murphy, 2013). The early 2000s bore witness to yet another confluence of geopolitical events. This time the civil unrest in Venezuela and the second Iraq War, which served as additional impetuses for the revival of the oil market. This surge in oil prices continued unabated until 2008, propelled by escalating global demand and the burgeoning global economy, reaching an unprecedented all-time high price of $145.93 in June 2008.

In 2007, the surge in the depreciation of subprime mortgages quickly rippled into an international banking crisis in 2008, triggering a severe financial upheaval that reverberated worldwide. This consequential financial crisis, in turn, caused a precipitous plunge in oil prices, culminating in a nadir of $30.28 in December of that same year, as the general decline in asset prices curtailed global energy demand, including the demand for crude oil.Subsequently, the trajectory of oil prices embarked on a gradual recovery until 2014, eventually stabilizing at a price surpassing $100. Throughout this period, the intricate interplay of economic factors and geopolitical events exerted profound influence, resulting in the oscillations that shaped the dynamic landscape of crude oil prices.Throughout the course of the 2010s, the oil market once again grappled with an 'oil glut,' catalyzed by a confluence of diverse factors. During the period of 2014–2015, OPEC members consistently exceeded their production ceiling, and China, as the world's largest importer of crude oil, experienced a marked deceleration in economic growth. Simultaneously, in response to record oil prices, the United States witnessed a significant surge in shale oil production, nearly doubling levels from 2008, driven by notable advancements in technology.

Towards the end of 2014, there ensued yet another precipitous drop in oil prices, primarily attributed to the shale oil boom in the United States. A noteworthy observation in this context is that since this decline, oil prices have remained relatively close to the $50 mark. This intriguing stabilization of prices is intricately linked to the dynamics of the shale market. Notably, reports suggest that whenever oil prices dipped below the $50 threshold, shale production became financially unviable and was substantially curtailed, effectively mitigating downward pressure on prices. Conversely, when prices rose above $50, shale production resumed, thereby exerting renewed downward pressure on prices. Consequently, the presence of shale production emerged as a stabilizing force, delineating price fluctuations during this period.In 2016, a culmination of these multifaceted factors contributed to a collapse in oil prices. Despite the surge in supply glut, it failed to align with the anticipated global growth, leading to a significant downturn in prices. Nonetheless, according to BP's 2019 Statistical Review of World Energy, OPEC maintained its pivotal position, accounting for nearly 44% of global oil production and a staggering 81.5% of the world's proven oil reserves in 2018.

Currently, OPEC encompasses an expanded roster of thirteen member nations, augmenting the original five founding countries with the inclusion of Libya, United Arab Emirates, Algeria, Nigeria, Gabon, Angola, Equatorial Guinea, and Congo.On April 20th, 2020, the crude oil market etched a historic milestone for disconcerting reasons, as the West Texas Intermediate (WTI) crude oil price plummeted to an unprecedented negative value of minus $37 per barrel, a momentous occurrence representing the first instance of crude oil entering negative territory. While the temporal scope of this study focuses on the period from 1986 to 2019, it is imperative to acknowledge that the effects of the COVID-19 pandemic wreaked havoc on crude oil prices, inducing the most substantial contraction in its price history.Since geopolitical events played a crucial role in reshaping the dynamics of crude oil prices, during the conflict between Russia and Ukraine, the global crude oil market experienced a meteoric surge, with prices escalating from approximately $76 per barrel at the commencement of January 2022 to surpassing $110 per barrel on March 4, 2022.

The price inflation of crude oil was not solely a consequence of the geopolitical conflict; rather, it had already been exacerbated by heightened demand driven by the resurgence of global economies from the throes of the COVID-19 pandemic, coupled with limited investments in the oil and gas industry.Moreover, beyond its undeniable sway in energy markets and wide acceptance as a financial asset, crude oil exhibits an intriguing tangible dimension, contributing to its unparalleled levels of price volatility. Factors such as future supplies and reserves, geopolitical upheavals, adverse weather conditions, challenges in refinery operations or pipeline disruptions, and global crises all coalesce to engender highly fluctuating price dynamics in the realm of crude oil.

## LITERATURE REVIEW

The existing body of literature on the global market for crude oil remains marked by a lack of unanimity concerning the most appropriate approach for its modelling. A dichotomy emerges within the literature, where one school of thought perceives oil as an asset, its price determined by the dynamics of desired stocks. Under this perspective, forward-looking traders' expectations incite changes in the real price of oil, while alterations in oil inventories act as crucial indicators. In contrast, the other strand of the literature views the price of oil as primarily influenced by exogenous shocks to the flow supply and demand for oil, with limited emphasis on the role of inventories in mitigating oil consumption fluctuations.

**Claudio Morana (2001) &Cyrus Bina and Minh Vo(2007)** have convincingly demonstrated that the time series of crude oil prices exhibit distinctive characteristics, notably including volatility

clustering, fat tail distribution, asymmetry, and mean reversion.

**Doran and Ronn (2008)** corroborates the importance of incorporating the market price of volatility risk when striving to comprehend any biases inherent in the analysis. Their conclusions underscore the negative and substantial influence of the market price of volatility risk on natural gas, crude oil, and heating oil. Moreover, they discern seasonality in the volatility risk premium for natural gas, signifying the relevance of temporal fluctuations when assessing the dynamics of volatility risk in this context.

**Askari and Krichene (2008)** corroborate these findings, emphasizing that the studied period was marked by heightened volatility, significant intensity jumps, and a pronounced upward drift in oil prices. Notably, they establish a cogent linkage between oil price dynamics, the underlying fundamentals of oil markets, and the global economy.

**Lutz Kilian (2009)** astutely acknowledges the criticality of discerning the causal drivers behind oil price fluctuations—unraveling the interplay between demand and supply dynamics. This discernment becomes the linchpin for informed decision-making, guiding actions pertaining to stock prices, dividend yield components, and volatility, each holding sway over essential economic variables like inflation and GDP.

**Degiannakis et al. (2014)** building upon the foundation laid by Kilian (2009), extend the inquiry further, investigating the response of volatility to structural oil market shocks. Their proposition posits that volatility predominantly reacts to unforeseen changes in total demand, shedding light on the relatively limited roles played by supply-side and oil-specific demands in shaping market shocks.

**Demirbas et al. (2017)** in a separate study, conclude that oil price volatility emerges as a result of a nuanced interplay between various invariant and variable factors. Moreover, his investigation unearths the prominent role of supply factors in instigating price declines, underscoring the enduring significance of supply-side dynamics in shaping oil market trajectories.

## OBJECTIVES OF THE STUDY

### Main Objective

- To analyse volatility in crude oil spot prices.

### Specific Objectives

- To analyse the trend of crude oil monthly prices.
- To draw the characteristics of the returns through descriptive statistics of the data.
- To analyse the trend of log returns and squared log returns of crude oil monthly prices.
- To test the normality of data through QQ-Plot of spot prices and log returns.

## DATA AND RESEARCH METHODOLOGY

Brent Crude oil monthly prices for a period of thirteen years (2011-2023) are used to model the volatilityand this data has been chosenas Brent Crude oil has remained supreme in oil market. The data is obtained from the US Energy Information Administration (EIA) website and the analysis is done using the MS Excel.Data analysis is carried out to find various statistical properties of the data i.e. mean, variance, skewness, kurtosis, log-returns, squared log-returns, heteroscedasticity. Existence of volatility from the data is also ascertained.The steps that are followed to model the volatility are as below:

- Analysing historical data to find its properties.
- Testing the normality of the data by QQ-Plot with normal distribution.

## CONCEPTUAL AND THEORETICAL DESCRIPTION

### Crude Oil Spot Pricesand its Drivers

Spot prices refer to the prices which reflect the current market in real-time, while the oil futures market specifies a price and date for a future transaction. As many types of crude oil are produced around the world, variations in quality and location result in price differentialsbetween light-weight, low-sulphur (light-sweet) grades and heavier, higher-sulphur (heavy-sour) crudes that are lower in quality. But because of oil markets are integrated globally, prices tend to move together.Some geopolitical and weather-related events that have the potential to disrupt the flow of oil and petroleum products, may lead to actual disruptions or create uncertainty about future supply or demand, which can lead to higher volatility in prices. Oil price volatility stems from the limited short-term responsiveness or inelasticity of both supply and demand to price fluctuations. In the near-term, both oil production capacity and the equipment that use petroleum products as their main source of energy are relatively fixed. It is challenging to adjust oil production capacity as it takes years or switch to alternative fuels by consumers or enhance fuel efficiency promptly during price hikes.

Several major oil price shocks have occurred due to disrupted production triggered by political events, most notably the Arab Oil Embargo in 1973-74, the Iranian revolution and Iran-Iraq war in the late 1970s and early 1980s, and Persian Gulf War in 1990. More recently, disruptions to supply from political events have been seen in Nigeria, Venezuela, Iraq, Iran, and Libya.In addition, market participants are also assessing the possibility of future disruptions and their potential impacts. For example, if there is plenty of extra production capacity in the market to handle any potential disruptions, the impact on prices would probably be less compared to when there is limited spare capacity. When worries arise about possible disruptions and there is not enough spare capacity to make up for the loss in supply, prices could be higher than expected due to forward-looking actions, incorporating a 'risk premium'. Extreme weatherevents such as hurricanes, cyclones, floods etc. also can disrupt oil supply by halting production and refining processes, leading to a spike in oil prices. Similarly, in extreme cold weather,demand for heating oil rises, causing price hike. Events like refinery outages or pipeline issues can also limit oil and product flows, driving prices up. However, these factors typically have a temporary impact on prices, as they tend to normalize once the issues are resolved and supply returns to normal levels.

### Crude Oil Benchmarks and Price Differentials

In the actual world, there is actually more than one oil price. Crude oil benchmarks are used to provide a price reference for the crude oil market. There are essentially two benchmarks: **West Texas Intermediate (WTI); and Brent Blend (Brent).**

### West Texas Intermediate (WTI)

West Texas Intermediate (WTI), also known as Texas light sweet, represents the benchmark price in the USmarket. It is produced by blending several US local crude oil streams. While drilling for oil takes place in many US states, most of the refineries are located in the Midwest and Gulf Coast regions. For the past three decades, the delivery point for WTI crude oil (also crude contracts) is in Cushing, Oklahoma, which is a major trading hub. Cushing has a large number of intersecting pipelines and storage facilities. It provides convenient access for refiners and suppliers, either inbound or outbound, from or to any location in the US. The advantages of WTI as a benchmark are that it has high liquidity, high trading volume, and high transparency.WTI is the underlying commodity of oil futures contracts traded on the New York Mercantile Exchange (NYMEX), managed and owned by the Chicago Mercantile Exchange (CME) Group.

**Brent Crude Oil**

Brent Crude Oil is the other leading benchmark in the crude oil market worldwide (two-third of all oil traded globally belongs to Brent), although mainly in Europe. One reason for the popularity of Brent is that it is water-borne, which means it is easier to transport than WTI which is land-locked. Brent crude oil is extracted from the North Sea and is also known as 'Brent Blend', 'London Brent', or 'Brent Petroleum'. The main transaction point for Brent is the London-based International Petroleum Exchange, which since 2001 has been a subsidiary of the Intercontinental Exchange (ICE), also based in London. Here, options and futures on oil-related commodities are traded.

**Price Differentials**

There are a number of reasons why the two prices might be different. The first is a difference in the quality (composition) of the crude oil. Specifically, WTI is 'sweeter' (lower sulphur content) and 'lighter' (lower density) than Brent, which means that it is easier to refine and process. The second possible reason for the price difference is the extraction location. Less expensive delivery of the product clearly results in a lower final price. Crude oil extracted from the sea has a clear advantage in transportation over land-based oil which relies on the capacity of pipelines. For this Brent has lower transportation costs than land-based oil such as WTI.Both of the reasons would be expected to give rise to the WTI price being higher than the Brent price, however, for most of the last decade at least, the Brent price has been higher.Another reason for the WTI price being lower is the shale oil boom, which began around 2011. This had the effect of boosting supply in the US, but not in the rest of the world, because of the oil export ban that had been in place since 1977. The oil export ban was lifted in 2015, and unsurprisingly this coincided with a convergence of the two benchmarks.

**GLOBAL CRUDE OIL SUPPLY**

**Crude Oil Supply by OPEC Countries**

Crude oil production by the 'Organization of the Petroleum Exporting Countries' (OPEC) is an important factor that affects oil prices.OPEC was founded on 14 September 1960 in Baghdad, Iraq by the first five members (Iran, Iraq, Kuwait, Saudi Arabia,and Venezuela) as a cartel, which aimed to fix the worldwide supply of oil and its price. Current OPEC membersareAlgeria,Angola, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, the Republic of the Congo, Saudi Arabia, the United Arab Emirates and Venezuela.This organization seeks to actively manage oil production in its member countries by setting production targets. Historically, crude oil prices have seen increases in times when OPEC production targets are reduced. OPEC member countries produce about 30% of the world's crude oil and contribute exports by 60% of the total petroleum traded internationally. Because of this market share, OPEC's actions can, and do, influence international oil prices.

Additionally, all OPEC member nations have been continuously improving technology and enhancing explorations leading to further enhancements to their oil production capacities at reduced operational costs.OPEC spare capacity provides an indicator of the world oil market's ability to respond to potential crises that reduce oil supplies. As a result, oil prices tend to incorporate a rising risk premium when OPEC spare capacity reaches low levels. EIA (US Energy Information Administration) defines spare capacity as the volume of production that can be brought on within 30 days and sustained for at least 90 days. Saudi Arabia, the largest oil producer within OPEC producing more than 10 million barrels a day, and the world's largest oil exporter, historically has had the greatest spare capacity with more than 1.5 – 2.0 million barrels per day on hand for market management.From 2003 through 2008, OPEC's total spare capacity remained near or below 2 million barrels per day (or

less than 3 percent of global supply), which provided very little cushion for fluctuations in supply in a context of rapidly rising demand.

Despite OPEC's efforts to manage production and maintain targeted price levels, oil prices can be affected by member countries' unwillingness to maintain these targets. The behaviour of oil prices depends not only on current supply and demand, but also on projected future supply and demand and estimating them are especially challenging when market conditions are uncertain and are changing rapidly. There can also be significant lags in OPEC production target adjustments in response to market conditions, which also can impact prices. In addition, unexpected outages can reduce OPEC production. The amount of the disruption, how quickly it occurs, and the uncertainty of restoring the output have considerable influence on oil prices.

**Crude Oil Supply by OPEC+ Countries**

In 2016, when oil prices were particularly low, OPEC joined forces with 10 other oil producers to form OPEC+.OPEC+ countries include Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan, and Sudan. One of the members of the expanded group is Russia, which produces more than 10 million barrels a day. Together, OPEC+ countries produce about 40% of the world's crude oil and controls over 50% of global oil supplies.This provides OPEC+ a greater level of influence over the world economy than OPEC countries.OPEC+ remains influential due to three primary factors:

1. An absence of alternative sources equivalent to its dominant position.
2. A lack of economically feasible alternatives to crude oil in the energy sector.
3. The comparatively low-cost price advantage against the relatively high-cost non-OPEC production.

OPEC+ has the economic capability to disrupt or enhance the supply of oil to substantial levels at any time, severely affecting oil prices. For example, the 1973 Arab Oil Embargo by OPEC saw prices quadruple from $3 to $12 per barrel, and more recently, the sudden ramp-up in production by Saudi Arabia in March 2020 led to a sharp decline in the price of oil. On April 20, 2020, following the temporary lack of coordination between Russia and Saudi Arabia added to the lockdown, the front-month May 2020West Texas Intermediate (WTI) crude contract dropped 306%, or $55.90, for the session, to settle at negative $37.63 a barrel on the New York Mercantile Exchange. In 2020, the price of crude oil crashed because of a lack of buyers, as countries went into lockdown, OPEC+ had to boost prices by cutting production dramatically, by more than nine million barrels per day.After Russia invaded Ukraine in 2022, EU countries**stoppedimporting Russian oil transported bysea,**and countries such as the US and UK stopped buying it altogether. Russia is now exporting more crude to countries such as India and China, which are not imposing the Western sanctions against Moscow. However, the G7 group of nations is trying to keep Russia's oil revenueslow**by imposing a price cap of $60 a barrel on the oil that it exports.**

**Crude Oil Supply by Non-OPEC Countries**

Non-OPEC oil producers are crude oil-producing nations outside of the OPEC group and shale oil producers included North America, regions of the former Soviet Union, and the North Sea. These countries outside theOPECcurrently represents about 60% of world oil production. Interestingly, some of the top oil-producing countries are non-OPEC nationsincludes the United States of America, which is the number one producer, as well as Canada and China.Many are net oil importers despite being high producers, which means they have minimal influence on oil prices, but with the discovery of shale oil and shale gas, non-OPEC oil producers, particularly the United States, have enjoyed

increased production and greater market share in recent times.

However, high production levels from non-OPEC members from 2002 to 2004 and in 2010 did not result in price declines and instead brought higher oil prices. This is probably because non-OPEC members did not have sufficient market share to affect the market price of oil. High production from 2014 to 2015, however, did cause prices to declineprobably due to an increase in supply from OPEC producers to counter the threat posed to their hegemony by non-OPEC producers.Producers in non-OPEC countries are generally regarded as price takers, that is, they respond to market prices rather than attempt to influence prices by managing production. As a result, non-OPEC producers tend to produce at or near full capacity and so have little spare capacity. Other things being equal, lower levels of non-OPEC supply tend to put upward pressure on prices by decreasing total global supply and increasing the "call on OPEC." The greater the call on OPEC, the greater is its likely ability to influence prices.

Non-OPEC production usually has a cost disadvantage compared to OPEC production as the production occurs largely in areas that have relatively high finding and production costssuch as the deep-water offshore, and pursued unconventional sources such as oil sands.While increases in non-OPEC supply contribute to lower oil prices, disruptions of non-OPEC production reduce global oil supply and can lead to higher oil prices. These unplanned outages can persist for long periods of time and the uncertainty about when the production will return to markets further adds to price volatility.Oil prices are not only affected by actual non-OPEC production, but also by changes in expectations about future non-OPEC supply. From 2005 through 2008, final production reports for non-OPEC production were consistently lower than forecast expectations. This reduction in anticipated production forced the world to unexpectedly rely more heavily on OPEC crude, drawing down their levels of spare capacity. The downward revisions in expectations of non-OPEC production contributed to upward pressure on oil prices.

**Global Crude Oil Demand**

**Crude Oil Demand in OECD Countries**

TheOrganization of Economic Cooperation and Development (OECD)consists of the United States, much of Europe, and other industrialized countries. At 46% of world oil consumption in 2021, these large economies consume less oil than the non-OECD countries, and have low or declining oil consumption growth. Oil consumption in the OECD countries peaked in 2005, whereas non-OECD consumption rose more than 50% since then. Because of higher vehicle ownership per capita in developed countries, oil use within the OECD transportation sector usually accounts for a larger share of total oil consumption than in non-OECD countries. As well the economic conditions and policies that affect the transport of goods and people have a significant impact on total oil consumption in these countries.

Many OECD countries have higher fuel taxes and policies to improve the fuel economy of new vehicles and increase the use of bio-fuels. This tends to slow the growth in oil consumption even in times of strong economic growth. Furthermore, the economies in OECD countries tend to have larger service sectors relative to manufacturing. As a result, strong economic growth in these countries may not have the same impact on oil consumption as it would in non-OECD countries. OECD countries tend to have fewer subsidies on end-use prices, so changes in market oil prices are often quickly reflected in prices faced by consumers. However, it takes time for people to adjust their transportation routines and for the vehicle stock to turn over and become more energy-efficient in response to price changes.Changes in expected future oil prices also affect consumers' decisions concerning modes of

transportation and vehicle purchases. If prices are expected to remain high or increase in the future, more consumers may decide to purchase more fuel efficient vehicles or use public transportation. Decisions like these help to reduce future oil demand and would tend to moderate expected price increases.

**Crude Oil Demand in Non-OECD Countries**

Oil consumption in developing countries that are not part of the OECD has risen sharply in recent years reflects rapid economic growth. Between 2000 and 2010, non-OECD oil consumption increased more than 40% with the largest growth in China, India, and Saudi Arabia.Current and expected levels of economic growth heavily influence global oil demand and oil prices. Commercial and personal transportation activities as well as many manufacturing processes require large amounts of oil.Developing countries tend to have a greater proportion of their economies in manufacturing industries, which are more energy intensive than service industries. In some non-OECD countries, oil remains an important fuel for power generation. Because of these uses, oil prices tend to rise when economic activity and in turn oil demand is growing strongly. Many non-OECD countries are also experiencing rapid growth in population, which is an additional factor supporting strong oil consumption growth.Vehicle ownership per capita is also highly correlated with rising incomes and economic growth. Furthermore, transportation oil use tends to increase rapidly as expanding economies increase the need to move goods and peoplein non-OECD countries. For these reasons, non-OECD economic growth rates tend to be an important factor affecting oil prices. EIA projects that virtually all the net increase in oil consumption in the next 25 years will come from non-OECD countries.

Although oil use is clearly tied to economic activity, energy policies also significantly affect that relationship. Many developing countries, for example, control or subsidize end-use prices, which inhibits consumer response to market price changes. This reduced demand response to price changes further contributes to the importance of economic growth as a key driver of non-OECD demand and in turn global oil prices.While current oil consumption is primarily related to current economic activity, changes in the outlook for future economic conditions can also have an immediate impact on oil prices. For example, an improvement in the economic outlook would tend to increase the chance that oil markets will tighten in the future, resulting in higher expected future oil prices. This change in expectations would be reflected in higher oil futures prices. This rise in futures prices increases the incentive to hold inventories, which in turn decreases available current supply and tends to raise current prices.

**Role of Inventories in Balancing Demand and Supply of Crude Oil**

Inventories act as the balancing point between supply and demand. During periods when production exceeds consumption, crude oil and petroleum products can be stored for expected future use. In the economic downturn of late 2008 and early 2009, for example, the unexpected drop in world demand led to record crude oil inventories in US and other OECD countries. In contrast, when consumption outstrips current production, supplies can be supplemented by draws on inventories to satisfy the needs of consumers. Given the uncertainty of supply and demand, petroleum inventories are often seen as a precautionary measure.Refineries and storage terminals can store crude oil and/or finished products like motor gasoline, heating oil, and diesel to prepare for seasonal fluctuations, refinery maintenance, or unexpected weather. Some petroleum products, such as heating oil and gasoline, have pronounced seasonal demand variance; inventories rise when consumption is lower and are drawn down when consumption increases. For this reason, inventory levels are most usefully

assessed in relation to prior year levels for the same calendar quarter.

Because inventories can satisfy either current or future demand, their level is sensitive to the relationship between the current price of oil and expectations of future prices. If market expectations indicate a change toward relatively stronger future demand or lower future supply, prices for futures contracts will tend to increase, encouraging inventory builds to satisfy the otherwise tightening future balance. On the other hand, a sharp loss of current production or unexpected increase in current consumption will tend to push up spot prices relative to futures prices and encourage inventory draw downs to meet the current demand.The relationship between prices and inventories allows for effects in either direction. If futures prices rise relative to the current spot level, incentives to store oil (and wait to sell at the higher expected price) will strengthen. Conversely, if market participants notice an increase in crude oil storage, this increase can indicate that current production surpasses current consumption at the prevailing price. Spot prices will likely drop to rebalance demand and supply. This balancing between current and future prices and between supply and demand through inventories is one of the main connections between financial market participants and commercial companies with a physical interest in oil, both of whom engage in futures trading.

**Financial Markets and Crude Oil Prices**

Oil market trading activity in futures markets involves a range of participants with varying motivations, such as oil producers and airlines and play a significant role in influencing oil prices,as these market participants not only buy and sell physical quantities of oil, but also trade contracts for the future delivery of oil and other energy derivatives. For example, an airline may want to buy futures or options in order to avoid the possibility that its future fuel costs will rise above a certain level, while an oil producer may want to sell futures in order to lock in a price for its future output.In recent years, investors have also shown interest in adding energy and other commodities as alternatives to equity and bond investments to diversify their portfolios or to hedge inflation risks. Banks, hedge funds, commodity trading advisors, and other money managers are also active in the market for energy derivatives to try to profit from changes in prices.

**Other Financial Markets**

Prior to 2007, stocks, bonds, and exchange rates showed only infrequent, fleeting correlations to oil futures prices. In contrast, the price of crude oil showed positive correlations with stocks from 2008-2010, negative correlations with the value of the U.S. dollar during most of late-2007 to the present, and more irregular but often negative correlations with bond prices during 2008-2010.

**Stocks**

Stocks have traditionally been the largest investment market. Economic conditions can cause prices for stocks and commodities, including oil, to move higher or lower together. As macroeconomic conditions improve (or worsen), earnings for companies increase (or decrease) and demand for commodities as raw materials rise (or fall) as well.

**Bonds**

As economic conditions improve (or worsen), interest rates on government bonds will tend to rise (or fall). Since bond prices and interest rates move in opposite directions, Government's Treasury bond prices and the price of crude oil would also tend to move in opposite directions in times of significantly changing economic conditions.In addition, bonds, the second-largest investment market, are often viewed as lower-risk investments than stocks, albeit with lower average returns. As investors become worried about future returns in higher risk assets, such as stocks and commodities, they tend to increase allocations to bonds in their portfolios.

**Currencies**

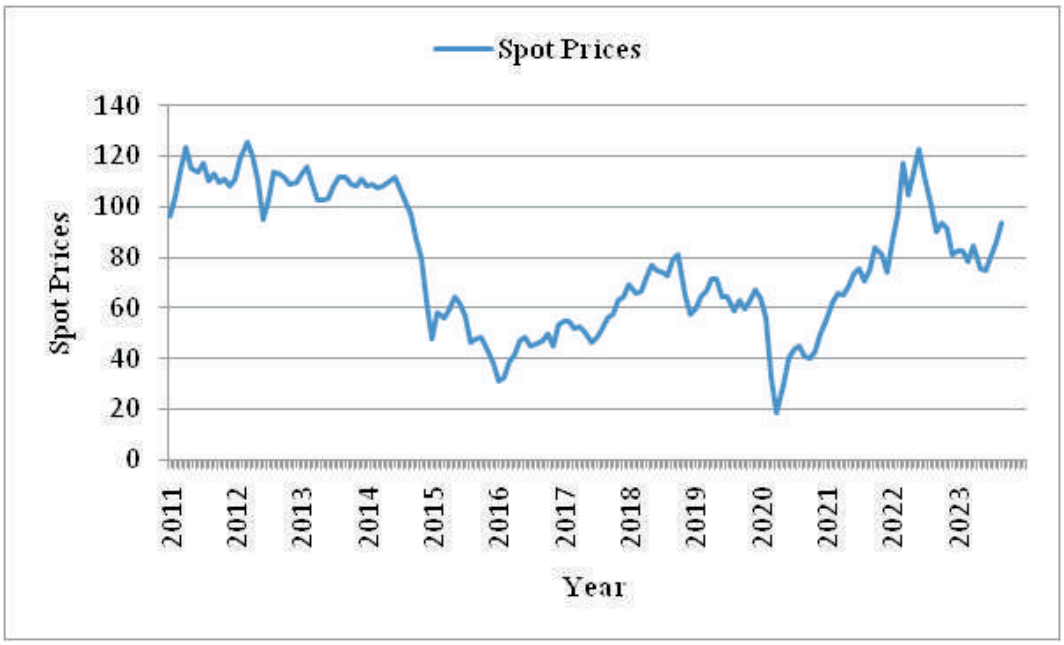
Several hypotheses have been offered that tend to support an inverse relationship between the exchange value of the dollar relative to other currencies and crude oil prices. The first is simply that because oil benchmarks are traditionally priced in U.S. dollars, a depreciation of the dollar decreases the effective price of oil outside the United States. This decreased cost may increase consumers' demand for oil, adding upward pressure to prices.A second potential reason is that U.S. dollar depreciation will decrease the effective profits of non-U.S. producers, when converted into foreign currencies. To counteract this, these countries may target higher dollar prices of oil to maintain real revenue, budget levels, and purchasing power in world markets. Dollar depreciation also reduces the returns on dollar-denominated assets, when measured in foreign currencies, which may increase the attractiveness of foreign investing in commodities like oil. Commodity investment may also become more attractive to U.S. investors as a hedge against inflation if dollar depreciation tends to increase expectations of greater inflation.Finally, a rise in oil prices also expands the U.S. trade imbalance, which can put additional downward pressures on the dollar, again yielding a negative correlation albeit with causation going in the reverse direction.

**DATA ANALYSIS AND INTERPRETATION**

This research involves analysis ofthe volatility in Brent Crude Oil Spot Prices from the year 2011 to 2023.

**Spot Prices**

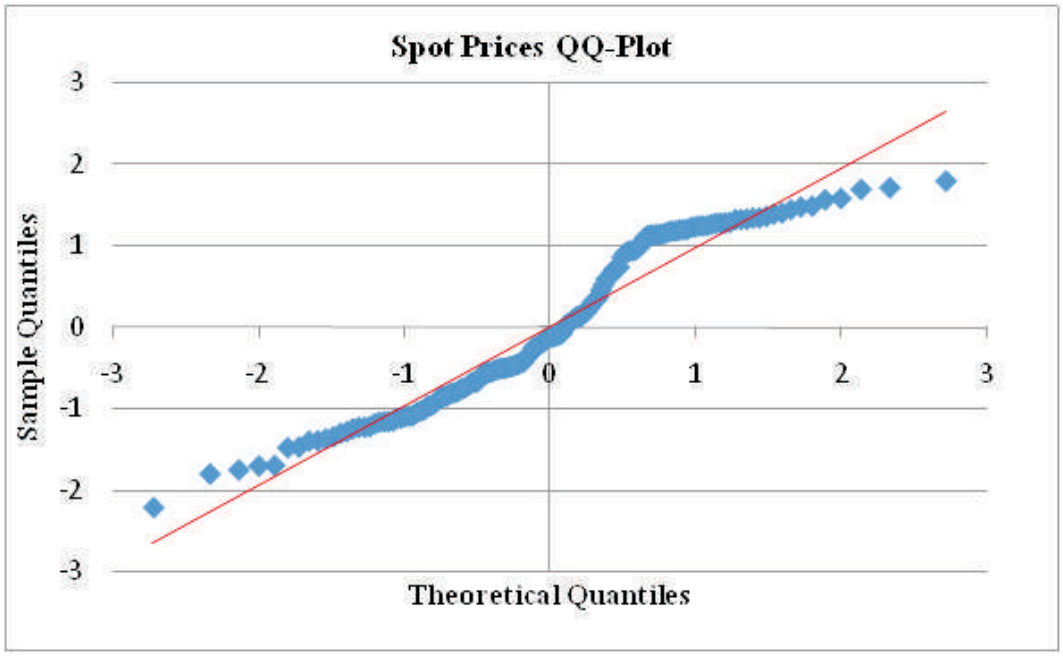
The analysis is done by the use of time series plots and descriptive analysis.The plot for Brent Crude Oil Spot Prices for the period between 2011 and 2023 is as in Figure - 1.




Source: Data of U.S. Energy Information Administration (Appendix A.1)

**Figure - 1: Brent Crude Oil Spot Prices**

From Figure – 1, it can be seen that the spot prices are highly volatile and have had a downward trend from the year 2011 to 2023. It is important to note the high drop in oil prices earlier in the year 2020 which was fueled by the Covid-19 pandemic. This is a good example of how oil prices are affected by other factors in the world. Volatility clustering is also evident from the graph above i.e. prices will rise continuously for a period of time and drop continuously for a period of time. Figure - 2, below is a QQ-plot for the spot prices which shows that the spot prices for the period are not normally distributed.

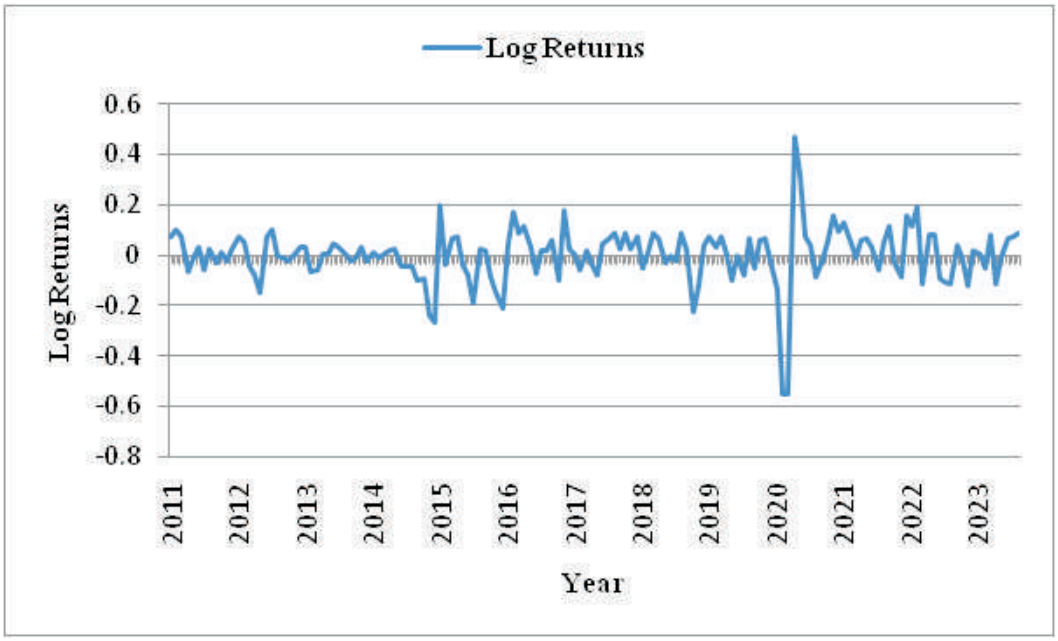



Source: Calculated by researcher on the basis of data of U.S. Energy Information Administration(Appendix A.2)

**Figure - 2: QQ-Plot for Brent Crude Oil Spot Prices**

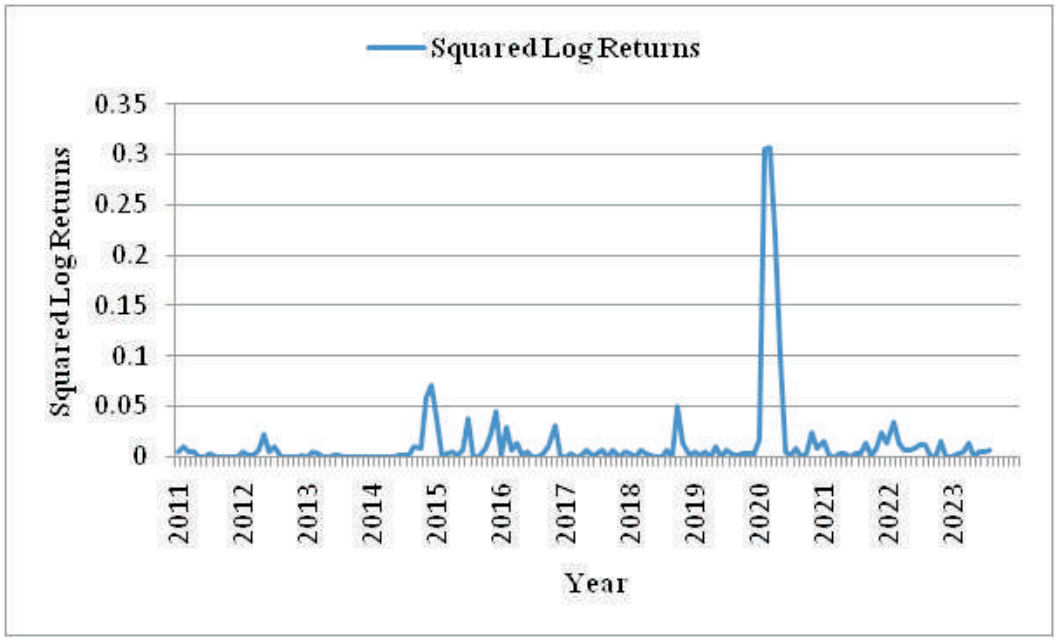
**Returns**

To analyse the volatility of Brent Crude Oil Prices, we use price returns for the same period. Returns can be comparable with each other while prices on the other hand always depend on the previous price. Returns are preferred in analysing volatility because prices are bounded to be non-negative and usually have a unit root, while log-returns can have any value, which makes them easier to model and one can achieve stationarity using log returns. Total 151 Brent Crude Oil monthly price log returns are taken to analyse the volatility of Brent Crude Oil Prices.Time plots are used to determine the observable characteristics of the returns as presented in Figure -3 and Figure - 4, which shows the log returns and squared log returns respectively.




Source: Calculated by researcher on the basis of data of U.S. Energy Information Administration (Appendix A.1)

**Figure - 3: Brent Crude Oil Spot Price Log Returns**




Source: Calculated by researcher on the basis of data of U.S. Energy Information Administration (Appendix A.1)

**Figure - 4: Brent Crude Oil Spot Price Squared Log Returns**

From the plots, it is evident that the financial time series exhibit common features. Variance is not constant throughout the figures, which is the evidence of heteroscedasticity/mean reversion property. Volatility clustering can also be seen from the plots.The descriptive statistics which includes; mean, standard deviation, kurtosis, skewness are utilized so as to describe the returns characteristics as shown in Table - 1.

**Table - 1: Log Returns Descriptive Statistics**

| | |
|---|---|
| Mean | -0.00067 |
| Standard Error | 0.00929 |
| Median | 0.011075 |
| Mode | N/A |
| Standard Deviation | 0.11416 |
| Kurtosis | 0.013033 |
| Skewness | 8.042631 |
| Range | -1.08976 |
| Minimum | 1.023836 |
| Maximum | -0.55479 |
| Sum | 0.469051 |
| Count | -0.10138 |
| Confidence Level (95.0%) | 151 |

Source: Calculated by researcher on the basis of data of U.S. Energy Information Administration (Appendix A.1)

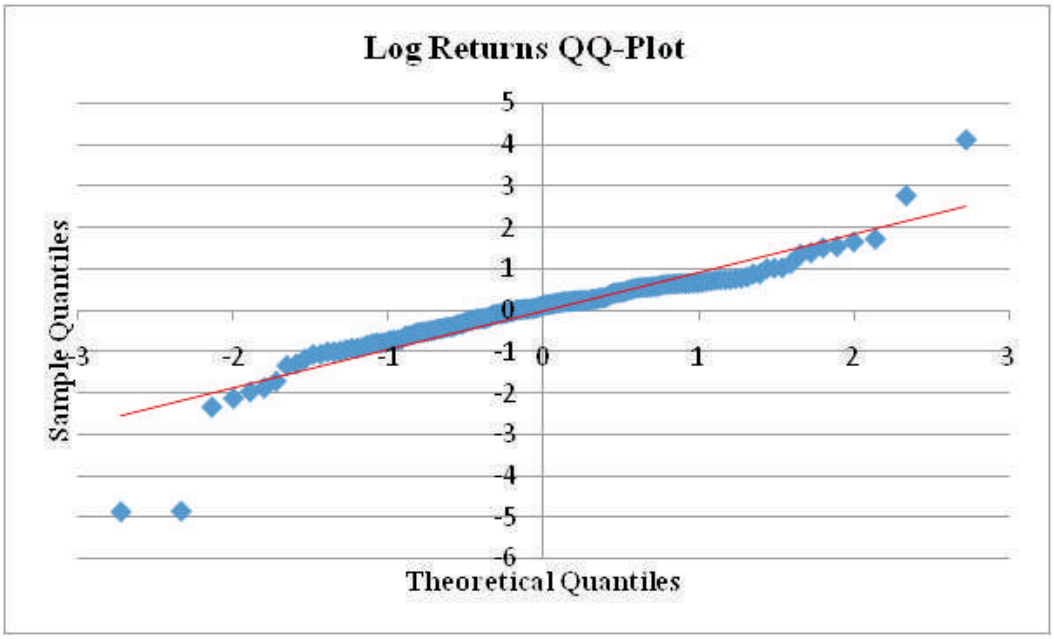
The kurtosis is less than three which indicates that the returns have thin tails and have a uniform distribution. The skewness is not equal to zero which indicates that the returns are not symmetric.

**Testing for Normality**

The normal QQ-plot is used to analyse the distributional properties, that is, to check whether the return series is normally distributed. The normal QQ-plot represents a scatter plot of a given distribution. The greater the departure from this line the greater the evidence against the null hypothesis of being a normal distribution. Figure - 5 shows the log returns QQ-plot for normal distribution.It is clear from the plot that the log returns are relatively normally distributed with some outliers (appear further from the normal line).

$H_0$: Data is normally distributed

$H_1$: Data is not normally distributed




Source: Calculated by researcher on the basis of data of U.S. Energy Information Administration(Appendix A.3)

**Figure - 5: Log Returns QQ-Plot Normal Distribution**

## CONCLUSION

In this research we have analysed that the BrentCrude Oil prices are highly volatile and have a downward trend from the year 2011-2023 as seen from the trend of spot prices. Due to Covid-19, there is a high drop in oil prices in 2020, which shows how geopolitical events affect crude oil prices.From the squared log returns plot, we have analysed that the financial time series exhibit common features. Variance is not constant throughout the figures, which is the evidence of heteroscedasticity / mean reversion property. Volatility clustering can also be seen from the plots.The characteristics of the log returns are describe through descriptive statistics which includes; mean, standard deviation, kurtosis and skewness.QQ-Plot for spot prices shows that the prices for the period are not normally distributed while log returns QQ-Plot for the same period, shows that the log returns are relatively normally distributed with some outliers.

## REFERENCES

Ahmed, R.A., &Shabri, A.B. (2014). Daily crude oil price forecasting model using arima, generalized autoregressive conditional heteroscedastic and support vector machines. *American Journal of Applied Sciences*, 11(3), 425-432, January. Retrieved from:https://doi.org/10.3844/ajassp.2014.

*Askari, H. &Krichene, N. (2008). Oil price dynamics (2002-2006). Energy Economics, Elsevier, 30(5), 2134-2153, September. Retrieved from: https://doi.org/10.1016/j.eneco.2007.12.004*

Bina, C. & Vo, M. (2007). OPEC in the epoch of globalization: An event study of global oil prices. *Global Economy Journal*, February 20. Retrieved from:https://doi.org/10.2202/1524-5861.1236

Box G. E. P., Jenkins, G. M. &Reinsel, G. C. (2007). Time Series Analysis: Forecasting and

Control, 3rd edition, Pearson Education, Delhi.

Davis, L. W. & Killian, L. (2011). Estimating the effect of a gasoline test on carbon emissions. Journal of Applied Econometrics, 26, 1187–1214. Retrieved from: https://doi.org/10.1002/jae.1156

Degiannakis, S. A., Filis, G. &Kizys, R. (2014). The effects of oil price shocks on stock market volatility: Evidence from European data. *The Energy Journal*, 35(1), 35-56. Retrieved from:https://doi.org/10.5547/01956574.35.1.3

Demirbaş, A., Bamufleh, H., Edris, G. & Al-Sasi, B. O. (2017). Biodiesel production from lipids of municipal sewage sludge by direct methanol transesterification. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects.* 39(8), 1-6, March. Retrieved from: https://doi.org/10.1080/15567036.2016.1263259

Doran, J. S. &Ronn, E. I. (2008). Computing the market price of volatility risk in the energy commodity markets. *Journal of Banking & Finance*, 32, 2541-2552. Retrieved from:https://doi.org/10.1016/j.jbankfin.2008.04.003

Dutta, A., Bouri, E. &Roubaud, D. (2020). Modelling the volatility of crude oil returns: Jumps and volatility forecasts.*International Journal of Finance and Economics.26(1), 889-897, July. Retrieved from: https://doi.org/10.1002/ijfe.1826*

EIA (Official Website). What drives crude oil prices: Spot prices. U.S. Energy Information Administration. Retrieved from: https://www.eia.gov/finance/markets/crudeoil/spot_prices.php

Elder, J. &Apostolos, S. (2010). Oil price uncertainty. Journal of Money, Credit and Banking, 42(6), August 19, 1137-1159. Retrieved from: https://doi.org/10.1111/j.1538-4616.2010.00323.x

Engle, R. F. (1982). Autoregressive conditional heteroscedasticity with estimates of the variance of United Kingdom inflation.*Econometrica*, 50(4), 987-1007, July. Retrieved from: https://doi.org/10.2307/1912773

*Engle, R. F. &* Ng, V. K. (1993). Measuring and testing the impact of news on volatility.*TheJournal of Finance*, 48(5), 1749-1778, December. Retrieved from: https://doi.org/10.1111/j.1540-6261.1993.tb05127.x

Gujarati, D. N. (2011). Econometrics by Example. Palgrave Macmillan (UK).

Gujarati, D. N., Porter, D. C.&Gunasekar, S. (2012). Basic Econometrics, 5th Edition, McGraw Hill Education (India).

Jo, S. (2014). The effects of oil price uncertainty on global real economic activity. *Journal of Money, Credit and Banking,* 46(6), September, 1113-1135. Retrieved from: https://www.jstor.org/stable/24499127

Johnston, J. &Dinardo, J. (2014). Econometric Methods, McGraw Hill Publications.

Jung, H. & Park, C. (2011). Stock market reaction to oil price shocks: A comparison between an oil-exporting economy and an oil-importing economy.*Journal of Economic Theory and Econometrics*, 22, 1-29.

Kahn, J. (1986). Gasoline Prices and the Used Automobile Market: A Rational Expectations Asset Price Approach. The Quarterly Journal of Economics, 101(2), May, 323-339. Retrieved from: https://doi.org/10.2307/1891118

Kilian, L. (2008). The economic effects of energy price shocks. *Journal of Economic Literature, American Economic Association,* 46(4), 871-909, December. Retrieved from: https://doi.org/10.1257/jel.46.4.871

Kilian, L. (2009). Not all oil price shocks are alike: Disentangling demand and supply shocks in the crude oil market. *American Economic Review*, 99 (3), 1053-69. Retrieved from:

https://doi.org/10.1257/aer.99.3.1053

Kilian, L. (2010). Oil Price Volatility: Origins and Effects. World Trade Organization Report. Retrieved from: https://www.wto.org/english/res_e/publications_e/wtr10_forum_e/wtr10_kilian_e.htm

Kilian, L. & Murphy, D. P. (2013). The role ofinventories and speculative trading in the global market for crude oil.*Journal of Applied Econometrics,* 29(3), 454-478. April 10. Retrieved from: https://doi.org/10.1002/jae.2322

Morana, C. (2001). A semiparametric approach to short-term oil price forecasting. *Energy Economics, Elsevier*, 23(3), 325-338, May.

Pindyck, R. S. (2004). Volatility and commodity price dynamics. *The Journal of Futures Markets,* 24(11), 1029–1047. Retrieved from: http://www.mit.edu/~rpindyck/Papers/Volatility_Comm_Price.pdf

Rabemananjara, R.&Zakoian, J. M. (1993). Threshold arch models and asymmetries in volatility.*Journal of Applied Econometrics*, 8(1), 31-49, January – March.

Rosnawintang, Tajuddin, Adam, P., Pasrun, Y. P. &Saidi, L. O. (2021). Effects of crude oil prices volatility, the internet and inflation on economic growth in ASEAN-5 countries: A panel autoregressive distributed lag approach. *International Journal of Energy Economics and Policy,* 11(1), 15-21. Retrieved from: https://doi.org/10.32479/ijeep.10395

Saltik, O., Degirmen, S. & Ural, M. (2016). Volatility modelling in crude oil and natural gas prices.*Procedia Economics and Finance*, 38, 476-491.

Yu, Y., Guo, S. & Chang, X. (2021). Oil prices volatility and economic performance during COVID-19 and financial crises of 2007–2008. Resources Policy, December 22. Retrieved from: https://doi.org/10.1016%2Fj.resourpol.2021.102531

Yudong, W., Wub, C. & Yang, L. (2016). Forecasting crude oil market volatility: A Markov switching multifractal volatility approach.*International Journal of Forecasting,* 32, 1-9.

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# A STUDY REGARDING AWARENESS OF FINANCIAL INCLUSION SCHEMES INAYODHYA DISTRICT

**Dhananjay Kumar Jha***

## ABSTRACT

*Financial inclusion leads to inclusive development of rural areas and bring their quality of life at par with the people of urban areas. A vast segment of India's population especially rural households exists on the margins of India's formal financial system. The financial awareness and access of the marginalized sections to the banking services is important for the alleviation of the poverty. Their access to the banking services will contribute a lot to growth and development of our country's economy. This could be made possible through successful implementation of financial inclusion. Financial inclusion is important priority of the country in terms of economic growth and development of society. It enables to reduce the gap between rich and poor. It helps to channelize money flow to the economy. It ensures people who are unable to access financial system so far can access it with easy. This study analyse the awareness of financial inclusion schemes in Ayodhyadistrict of Uttar Pradesh The primary data was collected through well designed questionnaire form a sample size consists of 500 respondents living in selected district. As per the need of study chi square test, percentage used to analyse the data. As a result it was observed that there is significant awareness among the rural area of selective district regarding bank facilities and sachems under Financial Inclusion.*

***Keywords:*** *Financial Inclusion, Financial Inclusion Scheme, Financial literacy, Rural Development, Rural household etc.*

## INTRODUCTION

India is a second largest populated country in the world, where most of people (according to census 2011, 68.8 %) living in rural areas. These rural people are engaged in agriculture and related activities. The people living in rural areas are mostly poor and deprived. They have no any access to the banks. Despite significant changes in financial sustainability, profitability and competitiveness, there are concerns that banks are unable to access essential banking services for large segments of the population, especially the marginalized segments of society. The policy makers have sought to attract large segment of the rural population into the formal banking system.

Financial inclusion is the essence part of inclusive growth in a country like India. Without financial inclusion we cannot think about economic development of any country because a large segment of population remains outside the growth process. According to the census 2011, out of a total 24.67 crore households in the country, 14.48 crore households (58.7%) have had access to banking facilities. Rural households of 16.78 million people, 9.14 million people (54.46%) used banking services. Out of the 7.89 crore urban households, 5.34 million inhabitants (67.68%) used banking service.

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Financial inclusion is an important step towards inclusive growth. It helps in the overall economic development of the country. Financial inclusion is important priority of the policymakers, In terms of economic growth and development of society. It enables to reduce the gap between rich and poor. It helps to channelize money flow to the economy. To overcome these obstacles banking sector has emerged some technological innovations such as ATM, Credit-Debit cards, UPI, Internet banking etc. It ensures people who are unable to access financial system so far can access it with ease.

The financial awareness and access of the poor to the banking services is important for the wellbeing of rural households. Their access to the banking services will contribute a lot to growth and development of our country's economy. This could be made possible through successful implementation of financial inclusion. Financial inclusion stands for deliveries of appropriate financial service at an affordable cost, on timely basis vulnerable groups, such as low-income groups and weaker section those who are deprived from basic banking facilities. Therefore, it is assumed that financial inclusion brings positive changes in people's economic and social conditions.

The present study is an attempt to understand the awareness of Financial Inclusion schemes in Ayodhya district of Uttar Pradesh. This study consists impact of financial inclusion practice among rural household on their socio-economic condition, living standard, awareness level, and other conditions of respondents after opening the account. After all it is suggested that government should take effective measures for increase financial literacy, living standard, Job opportunity, Income generation of all underprivileged section living various blocks and Tehsils in Ayodhya district.

## FINANCIAL INCLUSION

Financial inclusion is the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and Low-income groups at an affordable cost in a fair and transparent manner by banking and financial institutions. **"The Rangarajan Committee Defined:**" financial inclusion as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker section and low-income groups at an affordable cost"

## FINANCIAL INCLUSION IN INDIA:

The concept of financial inclusion evolved with the initialization of Co-operative movement in India during 1904. It got momentum in 1969 when 14 major commercial banks of the country were nationalized and Lead Bank Scheme was introduced shortly thereafter in mid 1970's. large numbers of bank branches were opened across the country even in those areas which were neglected earlier. Poverty in rural areas is a curse need to be eradicated in growing economy and developing India as an economic power.

## REVIEW OF RELATED LITRATURE

**Jeromi (2007)** highlighted the issue of financial exclusion from formal sector and proliferation of informal financial institutions and money lenders in Kerala and invited the attention towards the social, political and economic issues arising out of this situation. **C Rangarajan (2008)** through his committee report emphasized the need to modify the credit and financial services delivery system to achieve greater inclusion. He further suggested that while banks and other financial institutions can also take some efforts on their own to improve the absorptive capacity of the clients, it is equally important for Government at various levels to initiate actions to enhance the earnings capacity of the poorer sections of the society. The two together can bring about the desired change of greater inclusion quickly. **Raghuram G. Rajan (2009)** through hiscommittee on financial sector reforms discussed in Chapter 3 (of report), the issue of financial inclusion and proposes a paradigm shift in the way we see

inclusion. Instead of seeing it as an expanding credit, they urge to see it as expanding access to financial services, such as payments services, savings products, insurance products, and inflation-protected pensions. The Committee advocates a national goal of ensuring in three years that 90 per cent of households, if they so desire, have access to a deposit account and to the payments system, and that government transfers under various schemes be implemented through this system.**Misra (2010**) studied the various models for financial inclusion in different countries. **Malegam (2011)** through his committee report on Microfinance suggested the number of steps to strengthen financial inclusion in the country. **Arulmurugan et. Al. (2013)** tried to study the various efforts for financial inclusion in India whereas Sharma &kukreja (2013) in their study focused on the relevance of financial inclusion in strengthening the India's position in relation to other countries economy. **Krishna kumar&Vijayakumar (2013)** focused in their study on effectiveness of Financial Inclusion products and programs. **Thapar (2013)** in her study concluded that though the banks are complying with RBI norms in terms of opening branches within areas of at least 2000 population, offering no frills account, kissan credit card, simplifying KYC norms, but still a lot of effort is to be put in for financial inclusion progress. **NachiketMor (2014)** as mandated to develop a comprehensive monitoring framework to track the progress of the financial inclusion and deepening efforts on a nationwide basis and suggested many steps to strengthen the process of inclusion**. Singh & Nisha (2014)** in their study established a direct relationship between human development and financial inclusion. They further highlighted the importance of physical infrastructure for connectivity & information and Government policies for financial inclusion.

**OBJECTIVE OF STUDY**

This study has been aimed with following objectives.

1. To study the level of awareness about financial inclusion schemes in selected districts of Uttar Pradesh.
2. To analyse the perception of beneficiaries of financial inclusion schemes in selected districts of Uttar Pradesh
3. To evaluate the availability and accessibility of financial schemes in selected districts of Uttar Pradesh.
4. To study problems and hurdles in accessing the financial scheme from different sources.
5. To provide suggestive measures for effective financial Inclusion in selected districts of Uttar Pradesh

**HYPOTHESES FOR THE STUDY:**

Ho: There is no significant awareness among the rural area of selected district regarding banking facilities and schemes under Financial Inclusion.

H1: There is significant awareness among the rural area of selected district regarding banking facilities and schemes under Financial Inclusion.

**METHODOLOGY**

The present study is based on primary and secondary data both. The primary data was collected through well designed questionnaire form a sample size consists of 500 respondents living five Tehsils namely Sadar, Sohawal, Bikapur, Milkipur and Rudauli. of Ayodhya district. There are 100 respondents from each Tehsil in which 326 respondents are male and 174 respondents are female.These respondents come from rural areas where availability of financial services is less and inaccessible. The sampling unit is a single element or group of elements subject to selection in the sample. For the research in question the sampling units comprises identified groups of rural

households who get benefits from the schemes such as Pradhan Mantri Jan DhanYojana, Atal pension Yojana, PM Suraksha BimaYojana, PM jivanJyotiBimaYojana etc. These sampling units represents the unit of analysis for present study. Secondary data has been gathered through secondary sources ie. Published articles, journals, book, reports of RBI, NABARD, website of Govtinstitutions etc.

**STATISTICAL TOOL**

The collected data has been classified, tabulated and analysed with the help of Statistical tools such as chi square test. The Statistical tools have been used as per the need of study.

**SCOPE OF STUDY**

The study covers the area of financial inclusion programs/schemes offered by government, impact of financial inclusion program on Rural Development in Ayodhya district. The study focused on awareness, accessibility, and delivery of banking services to the rural households under the various schemes of Financial Inclusion. The study emphasised on economic condition, non holding of saving accounts, hurdles faces by rural households to access banking services, types of products and services offered by banks and the gap between the felicitators and beneficiaries.

**Table 1 : DEMOGRAPHIC DESCRIPTION OF THE RESPONDENTS**

| Variables | No of Respondents | Percentage(%) |
|---|---|---|
| Gender | | |
| Male | 326 | 65.20% |
| Female | 174 | 34.80% |
| Total | 500 | 100% |
| **Age** | | |
| Up to 18 Yrs | 5 | 1.00% |
| 18-30 Years | 121 | 24.20% |
| 30-45 Years | 231 | 46.20% |
| 45-60 Years | 135 | 27.00% |
| Above 60 Years | 8 | 1.60% |
| Total | 500 | 100% |
| **Marital Status** | | |
| Single | 118 | 23.60% |
| Married | 382 | 76.40% |
| Total | 500 | 100% |
| **Qualifications** | | |
| Doctorate | 5 | 1.0% |
| P.G | 18 | 3.60% |
| Graduate | 156 | 31.20% |
| Diploma | 12 | 2.40% |
| Higher Secondary | 158 | 31.60% |
| Below Higher Secondary | 140 | 28.00% |
| Illiterate | 11 | 2.20% |
| Total | 500 | 100% |

| | | |
|---|---|---|
| **Occupation** | | |
| Govt Job | 77 | 15.4% |
| Private Job | 91 | 18.20% |
| Self Employed | 98 | 19.60% |
| Housewife | 88 | 17.60% |
| Labour | 95 | 19.00% |
| Student | 8 | 1.60% |
| Others | 43 | 8.60% |
| Total | 500 | 100% |
| **Monthly Income** | | |
| Nil | 25 | 5.0% |
| UptoRs 5000 | 29 | 5.8% |
| Rs 5000-10000 | 75 | 15.00% |
| Rs 10000-15000 | 150 | 30.00% |
| Rs.15000-30000 | 192 | 38.40% |
| Above Rs 30000 | 29 | 5.80% |
| Total | 500 | 100% |

Source: From questionnaire filled by Respondents.

## ANALYSIS AND FINDINGS

**Table 2 : OBSERVED FREQUENCY**

| S. No. | Schemes | NotAware(1) | Aware/Not Availed(2) | Aware/ Availed (3) | Total |
|---|---|---|---|---|---|
| **1** | PradhanMantriJanDhanYojana(PMJDY) | 7 | 97 | 51 | **163** |
| **2** | PradhanMantriJeevanjyotiBimaYojana(PMJJBY) | 9 | 36 | 11 | **56** |
| **3** | Pradhan Mantri Mudra Yojana (PMMY) | 13 | 44 | 21 | **78** |
| **4** | AtalPensionYojana(APY) | 11 | 19 | 18 | **48** |
| **5** | PradhanMantriSuraksha BimaYojana (PMSBY) | 15 | 34 | 12 | **53** |
| **6** | Pradhan MantriVayVandanaYojana (PMVVY) | 23 | 33 | 12 | **68** |
| **7** | SukanyaSamriddhiYojana(SMY) | 9 | 17 | 8 | **34** |
| | **Total** | **87** | **280** | **133** | **500** |

**TABLE 3 EXPECTED FREQUENCY**

| S. No. | Schemes | Not Aware(1) | Aware/NotAvailed(2) | Aware/ Availed (3) | Total |
|---|---|---|---|---|---|
| 1 | PradhanMantriJanDhanYojana(PMJDY) | 9.22 | 91.28 | 43.36 | **163** |
| 2 | PradhanMantriJeevanjyotiBimaYojana(PMJJBY) | 9.74 | 31.36 | 14.9 | **56** |
| 3 | Pradhan Mantri Mudra Yojana (PMMY) | 13.57 | 43.68 | 20.75 | **78** |
| 4 | AtalPensionYojana(APY) | 8.35 | 26.88 | 12.77 | **48** |
| 5 | PradhanMantriSuraksha BimaYojana (PMSBY) | 28.36 | 29.68 | 14.1 | **53** |
| 6 | Pradhan MantriVayVandanaYojana (PMVVY) | 11.83 | 38.08 | 18.09 | **68** |
| 7 | SukanyaSamriddhiYojana(SMY) | 5.92 | 19.04 | 9.04 | **34** |
| | **Total** | **87** | **280** | **133** | **500** |

**TABLE 4: CALCULATION OF CHI-SQUARE TEST**

| S. No. | Schemes | Not Aware(1) | Aware/Not Availed(2) | Aware/Availed (3) | Total |
|---|---|---|---|---|---|
| 1 | PradhanMantriJanDhanYojana(PMJDY) | 0.54 | 0.63 | 0.31 | **1.48** |
| 2 | PradhanMantriJeevanjyotiBimaYojana(PMJJBY) | 0.06 | 0.69 | 1.02 | **1.77** |
| 3 | Pradhan Mantri Mudra Yojana (PMMY) | 0.02 | 0 | 0 | **0.02** |
| 4 | AtalPensionYojana(APY) | 0.84 | 2.31 | 2.14 | **5.29** |
| 5 | PradhanMantriSuraksha BimaYojana (PMSBY) | 6.3 | 0.36 | 1.35 | **8.01** |
| 6 | Pradhan MantriVayVandanaYojana (PMVVY) | 10.5 | 0.68 | 2.05 | **13.23** |
| 7 | SukanyaSamriddhiYojana(SMY) | 1.61 | 0.22 | 0.12 | **1.95** |
| | **Total** | **19.87** | **4.89** | **6.99** | **31.75** |

Calculated Chi-square value=31.75Degree of freedom = (7-1)×(3-1)= 12

## FINDINGS

**Table 5 Chi-Square Tests: Awareness regarding bank facilities and schemes under Financial Inclusion.**

| Chi Square Value | Degree of Freedom | Critical Value | Level of Significance | p-Value | Null Hypothesis |
|---|---|---|---|---|---|
| **31.75** | 12 | 21.02 | 0.05 | 0.0009755 | Rejected |
| **Outcome:**<br>**There is significant awareness among the rural area of selective district regarding bank facilities and sachems under Financial Inclusion.** | | | | | |

The table value of Chi-Square at 5% level of significance for 12 degree of freedom is 21.02, the calculated value of Chi-square which is 31.75.Thus this figure is more than the tabular value. Hence, null hypothesis (H0) rejected and the alternative hypothesis (H1) is accepted. Thus we can say that There is significant awareness among the rural area of selected district regarding bank facilities and schemes under Financial Inclusion.

- The study was found that rural households are much aware about the banking facilities and various financial inclusion schemes But very few households are able to make extensive use of banking facilities, which is a matter of concern.
- It this study we find that mostly people aware about Pradhan Mantri Jan dhanyojna(PMJDY) but very few people aware about Pradhan MantriVayVandanaYojana (PMVVY).
- In pension and security cover scheme Atal Pension Yojana is much popular among rural household.
- Pradhan Mantri Mudra Yojana is a very successful scheme for entrepreneurship in rural areas. Rural population being able to set up startups by availing loans under various categories. Apart from being helpful in rural development, this scheme also encourages self-employment.
- The study reveals that PMJDY is very effective scheme for financial inclusion in ground level. After eight years of successfully implementation, 46.25 crore Jan dhan account open, 1,73,954 crore balance deposited in bank account and 5.31 lakh Bank Mitra delivering banking services. Point should be noted that 63.6% PMJDY account holders from Rural area and 55.2% PMJDY account holders are women.
- It is also found that mainly they have saving account as they require to operate frequently for small withdrawal from bank
- Other schems are also play vital role in financial inclusion in rural areas. With the help of financial mobilization, there is a lot of help in the process of rural development
- In this study we find that government has taken various initiatives for effective financial Inclusion like opening of No frills accounts, relaxation of KYC, Engaging business correspondence, use of ICT, Started SFB etc.

**SUGGESTIONS**

1. Government should enhance the mechanism network for strengthening the financial inclusion of deprived rural population thereby increase socio-economic status and standard of living of the rural population in Ayodhya district
2. Government should organize some camps to create an awareness about various schemes through NGOs or bank Officials so that they can communicate to villagers about the latest schemes through the layman's term.
3. To increase awareness and interest in financial products offered under various schemes of financial inclusion, it is recommended to enhance promotion through electronic or print media in local language with local icons, artists as brand ambassador of the campaign.
4. Financial literacy and awareness about various banking products and services among rural households has been increased through various programmes shows a positive impact on financial inclusion practices in rural areas. Therefore, the Government should take adequate steps by organizing various financial literacy programs in unbanked rural areas to enhance their financial literacy and awareness for banking services in Ayodhya district.

5. Availability of financial infrastructure like banks ATMs within reach (Maybe through the support of technology like internet and Mobile bankings)
6. In order to cater to the basic necessity of the rural respondents, the unemployment problem has been reduced due to the progress of financial inclusion under survey. Therefore, the governments should initiate the employment opportunity and wealth generation to enhance their economic entitlement in Ayodhya district.
7. Proper sanitation facilities, better healthcare facilities, type of dwelling have changed and overall growth has been improved had a significant impact on rural masses. Therefore, it is suggested that government should take measurers to provide employment opportunities, increases their literacy level, generate income for their survival, infrastructure Thereby increases the standard of living of all the vulnerable sections within the various Tehsils in Ayodhya district.

## CONCLUSION

Government has made various initiatives for financial inclusion and Rural Development, the study was found that more than 60 per cent were awareand availed the benefits of these schemes such as Pradhan Mantri Suraksha BimaYojana (PMSBY), Atal Pension Yojana (APY). Pradhan Mantri Jan DhanYojana (PMJDY). Regarding these two schemes such as; SukanyaSamriddhiYojana (SMY) and Pradhan MantriJeevanjyotiBimaYojana (PMJJBY) respondents do not get better benefits. And the process iscomplicatedsothepercentageis most of respondentssaidthatthese financial inclusionschemesarevery helpful forimprovementsintheirsocialandeconomicconditions. 88.5percentfeelthatthesefinancialserviceshaveimprovedtheirfinancialhealthoftheirfamilymembers.

The studywasfound thatdueto theemergenceofIT use of banking services is very convenience. Banks provide various facilities by the help of information technology ie. Internet banking, Mobile bankings,UPI,ATM , Credit-Debit cards etc. Rural people also use these services irrespective of their education.But the study was found thatthe percentage of ruralusers is lessas they donot feel comfortable in net banking anduse of credit cards. Few ofthem aware but not availed and some of them were unaware.

It was found that majority ofthe respondents were aware the benefits and schemes but they did not avail due to the lengthy process of documentations.They are in opinion that they get information from nearby banks on their visits. Some of them they visit only once a month so they lack somewhere in getting the accurate information. With the expansion of financial inclusion, they get information about financial products and facilities through mobile banking, internet banking, SMS etc. Further, the study revealed various challenges such as, high cost, spatial distribution of banking services, non-price barriers, and behavioural aspect in the area of financial inclusion.

## REFERENCES

Jeromi, P.D., (2007). Regulation of Informal Financial Institutions: AStudy of Money Lenders in Kerala. *Reserve Bank of India OccasionalPapers.*28 (1)

Krishnakumar, R &Vijayakumar, L. (2013). The Effectiveness of the Financial Inclusion Products. IRACST–InternationalJournalofCommerce, Business and Management (IJCBM), ISSN: 2319–2828Vol.2, No.6, December2013, pp 457-466.

Kumar Kabir, Merchan Camilo (2013). *What Role Startups Play InFinancialInclusion*?Availableat:http://www.cgap.org/blog/what-role-start-ups-financial-inclusion.

Kumar Pankaj, Golait Ramesh, (2009). Bank Penetration and SHG-

BankLinkageProgramme:ACritique. *ReserveBankofIndiaOccasional Papers*.29(3), pp.1-15

Misra, Udit (2010). *Financial Inclusion Models From Around TheWorld*.Availableat: http://india.forbes.com/article/financial-inclusion/financial-inclusion-models-from-around-the-world/19292/1.

Malegam, Y. H.(2011), Report of the Sub-Committee of the CentralBoard of Directors of Reserve Bank of India to Study Issues andConcernsinthe MFI Sector.

NachiketMor (2014), Report of the Committee on ComprehensiveFinancial Services for Small Business and Low Income Households,*ReserveBank ofIndia.*

PorkodiS,AravazhiD.,(2013).RoleOfMicrofinance&SHGinFinancialInclusion.*Internationaljournalofmarketing,financialservices&managementresearch,*2(3).

Rangarajan,C., Committee (2008), Report of the Committee on Financial Inclusion, Government of India.

RaghuramG.Rajan(2009),"AHundredSmallSteps-ReportoftheCommitteeon FinancialSector Reforms".

Sarma Mandira, PaisJesim, (2009). Financial Inclusion and Development : A Cross Country Analysis. *ICRIER Working Paper.*

Sengupta, Santanu(2009).Speeding FinancialInclusionThrough BC-BFModel: Issues, Challenge&Oppurtunities.

Shah,Ajay.(2010),Report Of The Expert Committee On Harnessing The India Post Network For Financial Inclusion, Government of India.

Sharma Anupama, kukreja Sumita, (2013). An Analytical Study : Relevance of Financial Inclusion For Developing Nations. *ResearchInventy : International Journal Of Engineering And Science,* pp.15-20.

Singh, Ravindra. & Nisha, (2014). Financial Inclusion and EconomicGrowth in India – A Theoretical Framework, International ResearchJournal of Management Sociology and Humanity (IRJMSH), Volume5,Issue 5, online ISSN2277-9809,pp131-138.

Thapar,Ashima,(2013).AstudyOnTheEffectivenessofTheFinancial Inclusion Program in India. *VSRD International Journal OfBusiness&Management*. 3 (6),pp.211-216.

Singh, Bhagirath,& Sharma, M. K. (2018). Socio-Economic Status and Financial Inclusion: A Study ofPratapgarhstofRajasthan.IndianJournalofAccounting,Vol. 50(1),pp. 01-05.

Sanjay, Sakariya, M., & Ruparel, Neelima (2018). Evaluation of Financial inclusion Strategies of banks in India : Reflections from Literature.Towards Excellence : An Indexed Refereed Journal of Higher Education, ISSN No. 0974-035X, Volume10,52-64.

A Study on the Impact of Financial Inclusion Practices on Rural Masses in Varanasi District Shalini Singh, Dr.V.Shunmugasundaram, 2019

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# INDIA'S INFORMAL MIGRATION: UNRAVELED ESSENCE

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**ABSTRACT**

*This paper provides a comprehensive analysis of the informal labor market in developing countries, with a focus on India. It delineates the multifaceted nature of informal work, encompassing both the informal sector and informal workers within the formal sector. The study explores the intricacies of informal employment, including its diverse forms and the challenges faced by informal workers, such as lack of social security, precarious working conditions, and limited access to formal labor protections. Additionally, it delves into the complexities of migration and its implications for informal labor dynamics, highlighting disparities in employment patterns and economic activities between non-migrants and rural-urban migrants. Through empirical analysis employing OLS, IV, and Probit models reveal that migration status significantly impacts employment in the informal sector, with IV estimation indicating a notably higher effect. Education level also positively influences informal sector employment, highlighting the multifaceted nature of migration and educational attainment in shaping labor market outcomes. Also, this paper elucidates key determinants of informal sector employment, including migration status, education, and demographic factors.*

***KEYWORDS :*** *Migration, Employment, Labor Market*

## 1. INTRODUCTION

Most developing countries have a large economic sector known as the informal sector or unorganized sector. Employment in the informal labor market plays an important role in most developing economies. The informal labor market consists mostly of workers in the informal sector and informal workers from the formal sector. The informal labor market constitutes a very large part of the agricultural sector but is also an important part of the urban sector. Labor relations in the formal sector and the informal sector differ from working conditions according to whether workers have national taxes, are entitled to social security or insurance, are temporary or contract workers, and whether or not they are getting at least minimum wages. [1]

According to the National Council of Applied Economic Research, the informal sector- the "unorganized sector"- produces approximately 62% of GDP, 50% of national savings and 40% of national exports (ILO 2002) [2]. In terms of employment, the informal economy is responsible for about 55 percent of the total employment (International Labor Organization 2002). Urban areas (especially large cities) attract many immigrants from rural areas as well as smaller urban villages in the hope of a better life One challenge in assessing the impact of business on informal work is the diversity of the term "informality". The definition of informality has been the subject of competing

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positions, many debates, and repeated changes over the past decades. According to Schneider and Enste (2000), informal activity refers to all economic activities in unregistered businesses, which account for gross domestic product (GDP). [3] Some assess informality by referring to where the activity is conducted, such as in a home or on the street, or by how organized the event is. Those who lack social security benefits such as health insurance and are not protected by labor laws such as at work (ILO and WTO, 2009) are considered informal workers. “Decent Work Resolution on The Informal Economy”: Adopted by the International Labor Conference (ILC) in 2002 (ILO, 2002a). It raised awareness of the need to organize informal workers and stimulated political changes in the international union movement. Informal workers organize themselves in various forms and ways that suit their circumstances. Their organizations grow in quantity and scope, despite the constraints they face.

One challenge in assessing the impact of business on informal work is the diversity of the term "informality". The definition of informality has been the subject of competing positions, many debates, and repeated changes over the past decades. The most recent ILO definition of informality includes many of the above elements and has been frequently cited in the literature. According to this definition, the shadow economy refers to "all salaried work- both self-employed and employed- that is not recognized, regulated or protected by an existing legal or regulatory framework and unpaid work performed as income producing country. enterprise" (ILO and WTO,2009). Based on this criterion, the shadow economy includes:

(1) Informal work in informal enterprises (including employers, employees, self-employed and unpaid family workers) and

(2) Informal work in formal enterprises (including domestic workers) day laborers, temporary or part-time workers, and industrial foreign workers.)

India's labor market is characterized by an informal workforce, with more than 90 percent of India's workforce working as self-employed and informal workers. An alarming trend is the growth of informal work even in the organized sector. Underlining some elusive trends, it is argued that the challenges of informatization are multifaceted and one instrument such as labor reforms alone cannot fully address it. The need of the hour is to create an enabling environment that develops the need for a "formal" culture in the labor market.

Today, the unorganized or informal sector makes up more than 90 percent of the country's labor force, and almost 50 percent of national income is made up of this sector. Since the beginning of liberalization policies in the early 1990s, labor informality has become a problem. Growing competition combined with increased market opportunities and limited resources led to the emergence of a shadow economy. The dominance of the informal sector has led to a situation where the benefits of economic growth are concentrated among the few and a growing proportion of the population lives as the working poor. Although the government has changed its strategy to one of inclusive and sustainable economic growth in the last decade.

## 2. DEFINITIONS OF THE INFORMAL LABOR MARKET

It provides a background for developing an understanding of the organizational forms and relationships most likely to lead to effective and sustainable informal worker organizations. In India, the majority of the workforce is without contracts and unable to meet wage and working conditions requirements as unemployment in the formal and controlled sector in developing nations is not significant (Marjit and Kar) [4]. Low wages weaken workers' savings opportunities. Long-term savings access planning and financial support information are important to the sustainability of old

age. Opportunities and opportunities for self-development and training leading to salary increases must be created for them and career advancement promoted with appropriate policies.

The distinction between the formal and informal sectors as applied to the urban labor market is helpful for the study of income distribution in the urban economy. It ultimately boils down to a theory of individual income distribution which emphasizes "structural factors in explaining. differences in earnings compared to competing explanations for human capital." Low wages, or in other words, should not be explained only by factors affecting the employee's ability to work, but an important part of the story is his position in the institutionally determined part of the labor market. The formal/informal sector dichotomy is by no means the only structural factor affecting the distribution of earnings. Another important difference can be between white-collar workers and salaried workers in the formal sector. However, the informal sector is expected to be an important factor in explaining differences at the lower end of the distribution.

Different types of migration are undergoing reform in India. Although there is permanent migration, the rate of increase in return migration has also been significant, with the number of districts increasing across Indian states over the last two decades (Sengupta 2012) [5]. In India, migration does not work better with the expected mechanism per se, but a search for life limit (Deshingkar 2010) [6] can be a purely seasonal, cyclical, or rural livelihood strategy, not as such as droughts, floods and earthquakes (Rogaly and Coppard 2003) [7]. Slower growth and low income make cities lack alternative livelihood options. However, the absorption of migrants in urban centers without improving conditions for migrants.

Informality in employment and production remains a widespread problem, particularly in developing economies. The coexistence of strict labor market policies with expensive and time-consuming bureaucratic processes and insufficient or incomplete enforcement of rules and regulations increases the attractiveness of informal activity. For producers, informality means non-compliance with government regulations and bureaucratic procedures, which can result in formal penalties if the government is caught lacking significant enforcement (Loayza, 1996 [8]; Sookram and Watson 2008 [9]; Ulyssea, 2010 [10]).

## 3. BACKGROUND INFORMATION RELATED INDIAN INFORMAL LABOR MARKET

The dynamics of informal work and migrant behaviour are complex and multifaceted, often influenced by economic, social, and political factors. Here are some important dynamics to consider:

**Systemic Discrimination in Labor Practices :** Migrant women working in labor-intensive jobs face significant challenges and discrimination. They are often hired as part of a couple, considered as 1.5 labor units, which exacerbates the gender wage gap. These women are typically assigned strenuous tasks for lower wages and are less likely to be hired if they are over 35 years old. They are expected to perform additional unpaid tasks such as site cleaning and tea fetching. Despite working long hours, they receive no extra compensation. Pregnant women are expected to work until delivery without basic facilities or maternity benefits, often returning to work shortly after giving birth.

**Perilous Construction Sites and Housing Hardships :** Challenges in India's construction sector pose serious risks to migrant workers' safety and livelihoods. Despite safety regulations, accidents often go unreported, leaving workers without income or proper medical care. Children are exposed to hazards on site due to the lack of childcare facilities. Scheduled Tribe (ST) migrant families often live in makeshift colonies or on the streets due to inadequate wages and housing options. Daily wage labor leads to high insecurity and difficulty accessing basic amenities like water, sanitation, and healthcare, affecting both single male migrants and families alike.

**DodgingAccountability :** Employers in various sectors obscure employment relations to avoid accountability for labor violations. This includes keeping workers off the books and withholding payslips. Long contracting chains with multiple intermediaries further complicate matters,leaving workers unaware of the principal employer's identity. In Ahmedabad's construction sector, workers may encounter up to seven levels of intermediaries, making it difficult to trace responsibility. Although laws hold principal employers liable for wage payment, workers struggle to access this provision due to one-way record keeping by contractors. Mediation and litigation processes offered by labor departments and courts require formal documentation, disadvantaging workers in the informal sector who lack such records. The burden of proof often falls on workers, and labor courts lack follow-up mechanisms to ensure employers comply with rulings, leaving workers to navigate complex processes to claim their rights.

**Economic Opportunities and Wage Differences :** Informal work often emerges in response to limited formal employment opportunities. Individuals may move to areas where informal work is common in search of income-generating activities, especially if formal job opportunities are weak in the home area. Also, wage differences between regions or countries can encourage informal labor immigration. Individuals can move from low-income areas to higher-income areas in the informal sector, even if this means operating outside the legal framework.

**Networks and social capital :** Informal labor migration is often facilitated by social networks and kinship ties. Immigrants can rely on friends, family, or community connections to find accommodation, work, and support in destination areas.

**Legal and political frame works :** Governmentregulationsandimmigrationpoliciescanshape migration behaviour in the informal sector. Restrictive immigration policies can force immigrants into informal work arrangements when formal employment opportunities are unavailable due to legal barriers.

**Seasonal and cyclical factors :** Seasonal demand for certain jobs, such as agricultural harvest or construction projects, can affect informal labor migration patterns. Migrants may temporarily move to areas where such work is available and return home during off-peak hours.

**Risks and vulnerability:** Informal migrant workers often face precarious working conditions, including a lack of job security, limited access to social protection, and exposure to exploitation. Despite these risks, people may still choose informal migration to improve survival or economic prospects.

**Gender dynamics:** Gender plays an important role in informal labor migration, as men and women often do different jobs and face different challenges. Women may be more likely to move into domestic work or informal nursing roles, while men may dominate industries such as construction or transportation.

## 4. DATA VISUALIZATIONS

This study incorporated the second round of IHDS (Indian Human Development Survey) data, which was conducted during 2011-2012 by the Inter-university Consortium for Political and Social Research, based in Ann Arbor, Michigan, USA. The household survey dataset included responses from 42,152 households across different regions of India, covering demographics such as age, education, marital status, gender, religion, caste, sources of income, asset ownership, migration status, and duration of residence in urban areas. The visual representations of the data are presentedbelow.

The graph 1 illustrates the distribution of employment across various industries, categorized into

formal, informal wage employment, and self-employment. In the Mining & Quarrying sector, there's a significant lean towards self-employment, constituting 70% of the workforce, suggesting a predominance of independent operators. Manufacturing, on the other hand, shows a majority in formal employment, accounting for 59.1%, indicative of structured job roles in factories and plants. The Electricity, Gas, & Water sector is also dominated by formal employment at 66.8%, likely due to the technical and regulatory nature of jobs within this industry. Construction presents a more balanced distribution with informal wage employment at 42.5% and self-employment at 40.4%, reflecting the project-based and often temporary nature of jobs. The Wholesale, Retail & Hotels sector, as well as Transport & Communication, show a mix, with a notable amount of informal wage employment and self-employment, pointing to flexible job arrangements and a substantial number of small business operators. This graph effectively highlights the diversity of employment structures across different sectors, influenced by the nature of work and industry demands.

The figure 2 presents data on the employment structure within different occupational categories: Professional, Executive, Clerk, Sales, Service, and Labourer. It categorizes the data into formal employment, informal wage employment, and self-employment. Professionals show a high rate of self-employment at 55.7%, along with a significant proportion in formal employment (27.9%), suggesting many professionals operate their own practices or businesses while some work within organizational structures. Executives and Clerks predominantly fall under formal employment, 62.5% and 60.3% respectively, indicating typical employment in corporate or structured settings. In Sales and Service categories, there's a balanced mix of employment types, with Sales showing substantial informal wage employment (40.7%) and self-employment (46.2%), reflecting perhaps the flexible nature of sales jobs and independent contracting. Service jobs also show a strong trend towards self-employment (55.2%), likely including roles like personal services and freelance work. Labourers have the highest proportion of self-employment (75.1%), which might include informal gigs or freelance manual labor, and comparatively lower rates of formal (10.8%) and informal wage employment (14.0%). This indicates that many laborers are independently finding work rather than being employed through formal channels or regular wages. Overall, the graph depicts varied employment dynamics across different occupational roles, reflecting how work nature, flexibility, and independence vary significantly across professional fields.

The figure 3 illustrates the employment structure differentiated by migration status: non migrant, rural migrant, and rural-urban migrant. It shows percentages of employment across three categories: formal employment, informal wage employment, and self-employment. For non-migrants, formal employment is most prevalent, accounting for 44.1% of employment, which suggests stability and access to structured job opportunities within their resident locations. Informal wage employment is slightly less, at 42.8%, indicating a significant portion still engages in less regulated job roles. Self-employment is the least common among non-migrants, at 13.1%, possibly reflecting lesser necessity or opportunity to create own businesses in non-migrant settings.Rural migrants show a greater reliance on informal wage employment, which is the highest at 44.4%, possibly due to barriers in accessing formal jobs after moving. Their formal employment sits at 41%, and self-employment is at 14.6%, slightly higher than non-migrants, perhaps due to entrepreneurial initiatives taken in new environments. Rural-urban migrants display the highest rate of self-employment at 40%, double that of their formal employment at 20%, and higher than their informal wage employment at 40%. This suggests that upon moving to urban areas, rural-urban migrants may turn to self-employment as a significant means of livelihood, possibly due to lack of formal employment opportunities or as a way

to capitalize on niche urban markets. This graph effectively demonstrates how migration status influences employment patterns, with rural-urban migrants showing a strong inclination towards self-employment, highlighting perhaps both the challenges and opportunities they encounter in urban settings.

The figure 4 compares the percentage of non-migrants and rural-urban migrants working in various industries: Mining & Quarrying, Manufacturing, Electricity, Gas & Water, Construction, Wholesale, Retail & Hotels, and Transport & Communication. The data reveals a significantly higher percentage of non-migrants in most industries compared to rural-urban migrants. For instance, in Mining & Quarrying, 94.6% of workers are non-migrants, whereas only 5.4% are rural-urban migrants. Similarly, in Manufacturing, non-migrants make up 94.7% of the workforce, with rural-urban migrants at 5.3%. This trend is consistent across other sectors, indicating that non-migrants dominate employment in these industries. The Construction sector shows a slightly higher percentage of rural-urban migrants at 6.5% compared to other industries, yet non-migrants still comprise 93.5% of workers. The Wholesale, Retail & Hotels, and Transport & Communication sectors have the lowest percentages of rural-urban migrants, at 3.0% and 4.1% respectively. This distribution suggests that while rural-urban migration does occur, migrants are significantly underrepresented in formal industry sectors. It reflects potential barriers that rural-urban migrants face in accessing employment in these sectors, possibly due to issues like skill mismatches, discrimination, or lack of social networks. Moreover, the notably lower migrant percentage in high interaction sectors such as retail and transport might highlight specific challenges in sectors that often require more localized knowledge or higher language proficiency.

The figure 5 compares the percentage of non-migrants and rural-urban migrants across various occupational roles: Professional, Executive, Clerk, Sales, Service, and Labourer. The data shows a predominant presence of non-migrants in all occupations, with percentages consistently high and above 96% for each role. Specifically, non-migrants represent 97.6% of Professionals, 98.1% of Executives, and 96.7% of Clerks, suggesting that higher-skilled or administrative positions are largely filled by non-migrants. Similarly, in the Sales and Service sectors, non-migrants make up 97.3% and 98.7% respectively, indicating that these roles, too, are predominantly held by those who have not migrated. The Labourer category shows the highest proportion of rural-urban migrants at 3.2%, though non-migrants still significantly dominate at 96.8%. This trend underscores the challenges rural-urban migrants may face in securing employment in more skilled or established roles, possibly due to limitations in accessing education, training, or professional networks in urban environments. Instead, rural-urban migrants are somewhat more represented in labor-intensive roles, highlighting a potential area where migrants are able to find employment more readily, although still in small numbers.

The figure 6 categorizes income sources between non-migrants and rural-urban migrants, divided into Non-agricultural Labour, Artisan, Business, Profession, and Salaried work. For non-migrants, the predominant income source is salaried work, which accounts for 37.9% of this group. This is followed by business activities at 20%, and artisan work at 2.5%. Non-agricultural labor and professions contribute 2.9% and 1.1% respectively. This suggests that non-migrants are primarily engaged in stable, formal employment sectors or self-employed business ventures. In contrast, rural-urban migrants rely heavily on non-agricultural labor, which makes up 72.2% of their income sources, highlighting a significant dependence on manual or informal labor sectors. Business activities constitute 13.6%, suggesting some engagement in entrepreneurial activities, though much less

compared to non-migrants. Artisan work and petty trade are minor sources at 0.5% each, and professional services are notably low at 1.5%. This distribution illustrates a stark contrast in economic activities between non-migrants and rural-urban migrants. Non-migrants tend to have diversified and potentially more stable sources of income, whereas rural-urban migrants are predominantly in labor-intensive sectors, which may offer less security and benefits. This highlights the economic challenges and limited opportunities that migrants might face in urban environments, pushing them towards more precarious forms of employment.

The figure 7 illustrates the distribution of employment types—formal, informal wage employ ment, and self-employment—across different caste and religious groups: Brahmin, Forward Caste, OBC, Dalit, Adivasi, Muslim, and Christian, Sikh, Jain. The data reveals that among the Brahmins, a significant portion is in formal employment at 38.9%, with a slightly higher percentage in self-employment at 47.3%. This suggests a strong presence in structured job sectors and entrepreneurial activities. Forward Castes and OBCs show similar patterns, with a balanced distribution between formal employment and self-employment, indicating good representation across diverse job sectors.Dalits and Adivasis show a higher inclination towards self-employment, at 53.1% and 56.6% respectively, which might reflect fewer opportunities in formal sectors possibly due to socio-economic barriers, pushing them towards creating their own livelihoods. Informal wage employment is also notably high among these groups, suggesting engagement in less regulated and possibly lower-paying jobs. Muslims show a considerable percentage in self-employment at 48.4%, but also a significant representation in informal wage employment at 29.6%, which might indicate challenges in accessing more stable, formal employment. Christian, Sikh, and Jain communities have a more balanced distribution, with a slight leaning towards formal employment. Overall, the graph illustrates varied employment patterns among different caste and religious groups, with noticeable disparities in access to formal employment and higher proportions of self-employment and informal wage employment among historically marginalized communities. This indicates ongoing challenges in achieving equitable employment opportunities across different social groups.

The figure 8 provides an overview of the reasons for taking loans across various sectors: House Purchase, Business, Medical Expense, Education, and Land Acquisition. It shows the percentage of loans taken for each purpose and splits these by the type of employment of the borrowers: informal wage employment, self-employment, and formal employment. House purchase is the leading reason for taking out loans in the formal sector, with 35.9% of formal employees borrowing for this purpose, compared to lower percentages in informal and self-employed groups at 35.8% and 37.1%, respectively. This suggests that individuals in formal employment are more likely to access loans for stable, long-term investments like housing. Business-related loans are more prevalent among the self-employed at 19.8%, reflecting their need for capital tostartorexpandtheirbusinesses. The figures are some what lower in the in formal(18.3%) and formal (17.2%) sectors. Medical expenses constitute asignificant cause for borrowing acrossall sectors, thoughit is slightly more commo namongthose in informal employment (12.8%), possibly indicating alack of adequate medical insurance or benefits inthesejobs. Education loans are not ably more prevalent in the formal sectorat 12.5%, likely because of greater awareness of and access to educational loan facilities and perhaps a higher prioritization of formal education. Land acquisition loans are least common and havea relatively uniform distribution acrossall employment types, thoughs lightly higher among the self-employed (12.4%), who may be investing in land for business orpersonaluse. Overall, the graph reveal show different employment sectors access loans for various life and business needs, with notice able differences based on the stability and type of their employment.

Figure 1: Distribution of employment across industries.

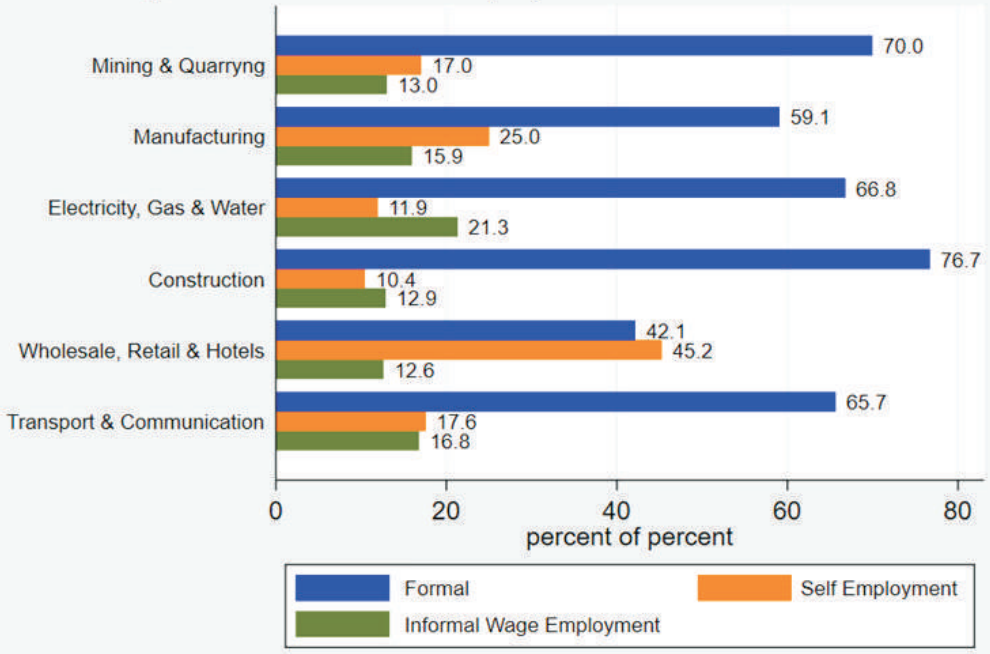



Figure 2: Distribution of households across occupations.

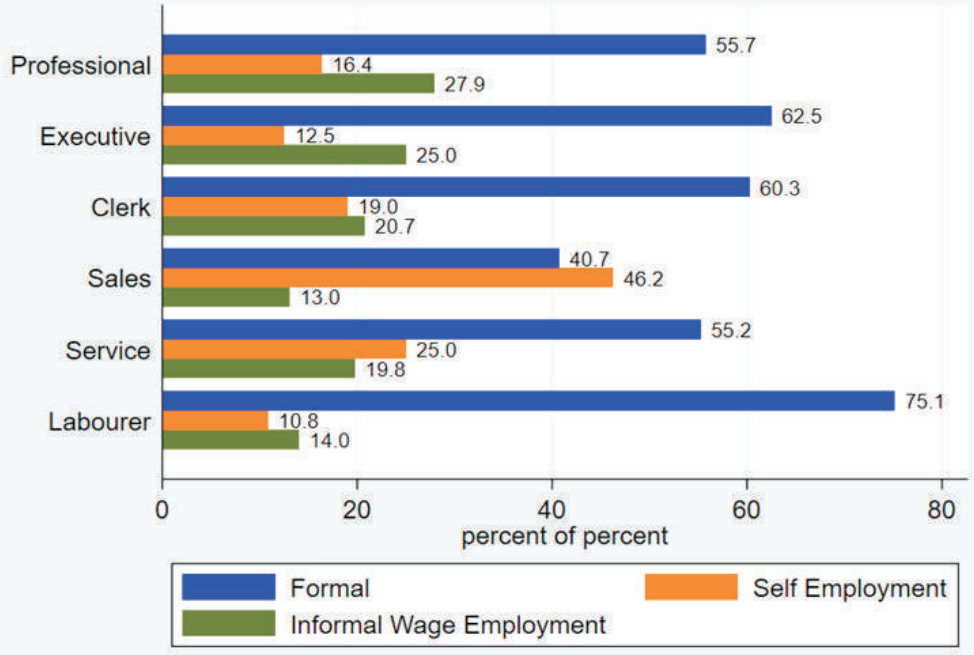


Figure 3: Employment category based on migration status.

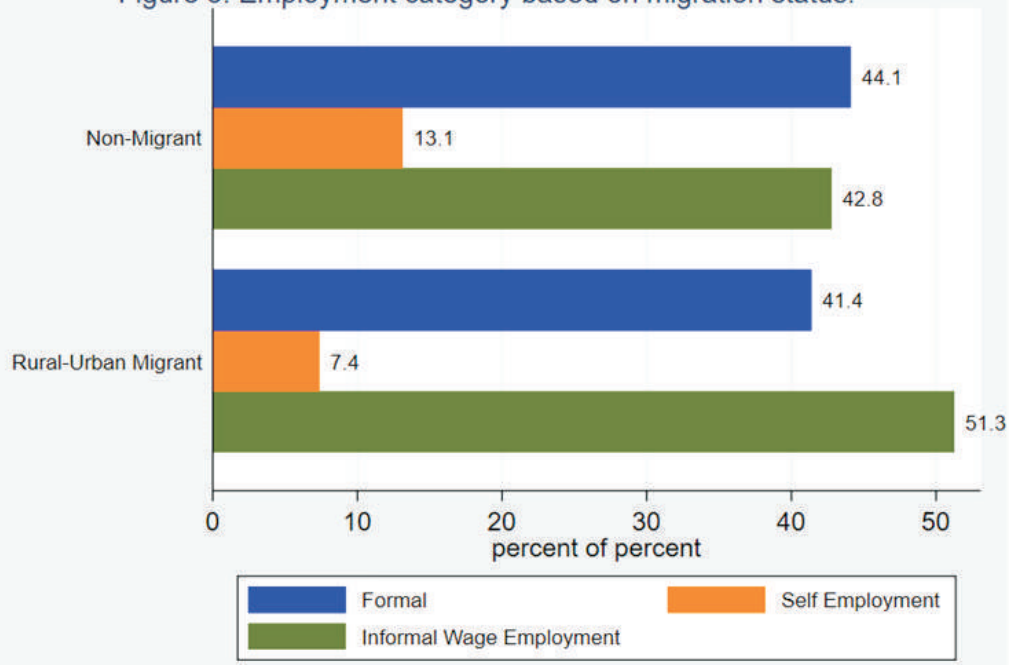



Figure 4: Migrants by industry.

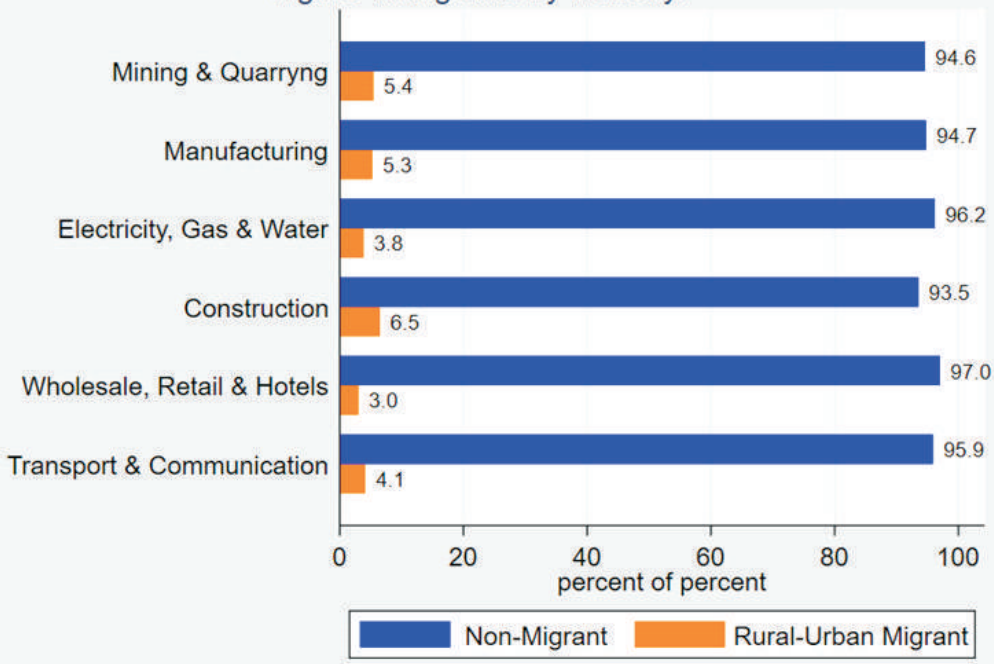


Figure 5: Migrants by occupation.

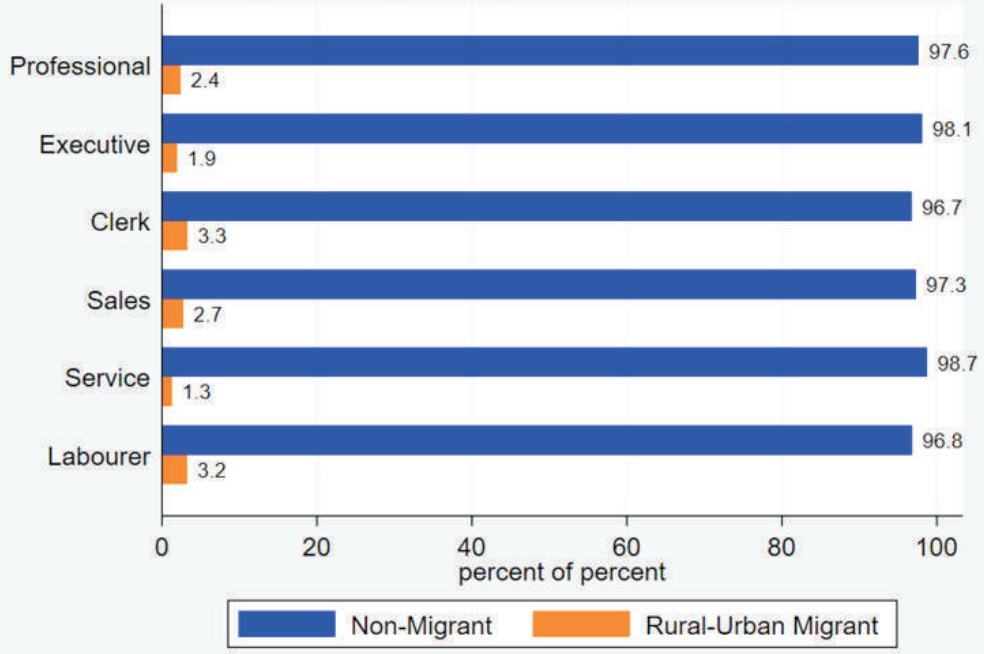
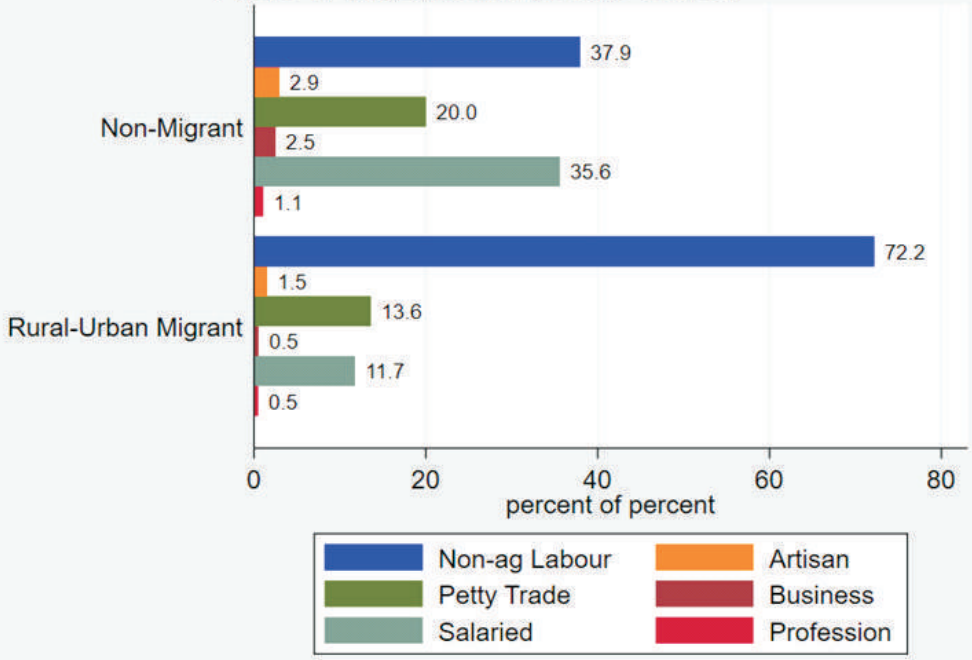



Figure 6: Migrants and income source.



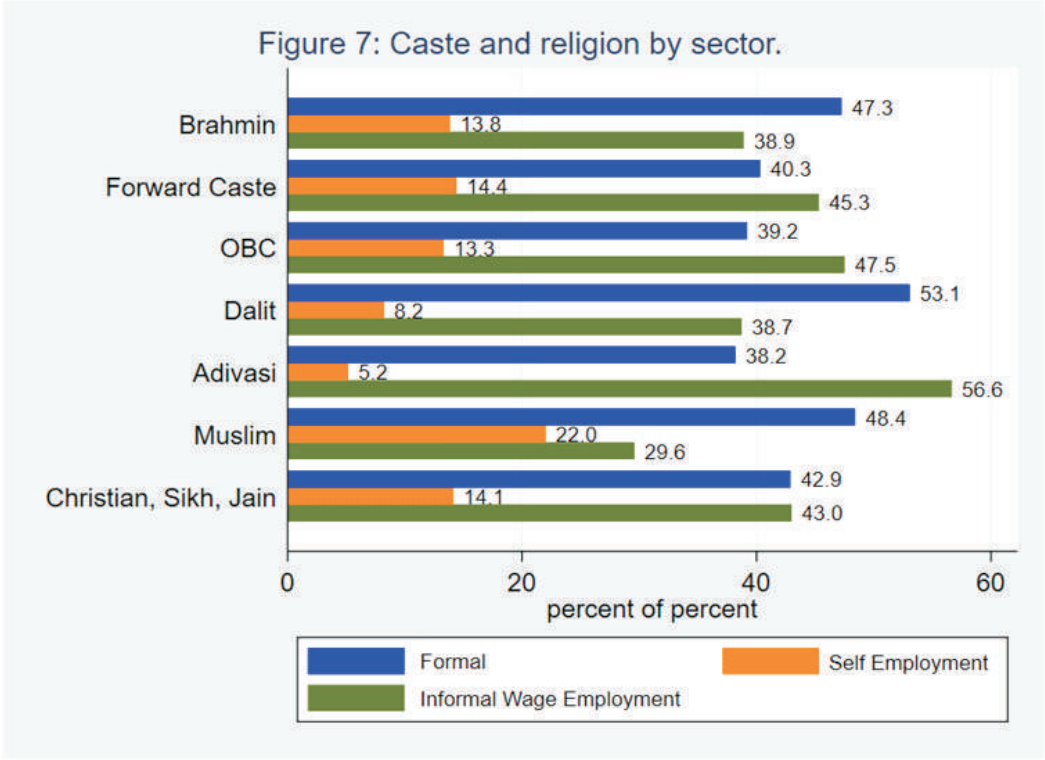


Figure 7: Caste and religion by sector.
Brahmin
Forward Caste
OBC
Dalit
Adivasi
Muslim
Christian, Sikh, Jain
47.3
13.8
38.9
40.3
14.4
45.3
39.2
13.3
47.5
53.1
8.2
38.7
38.2
5.2
56.6
48.4
22.0
29.6
42.9
14.1
43.0
0
20
40
60
percent of percent
Formal
Self Employment
Informal Wage Employment

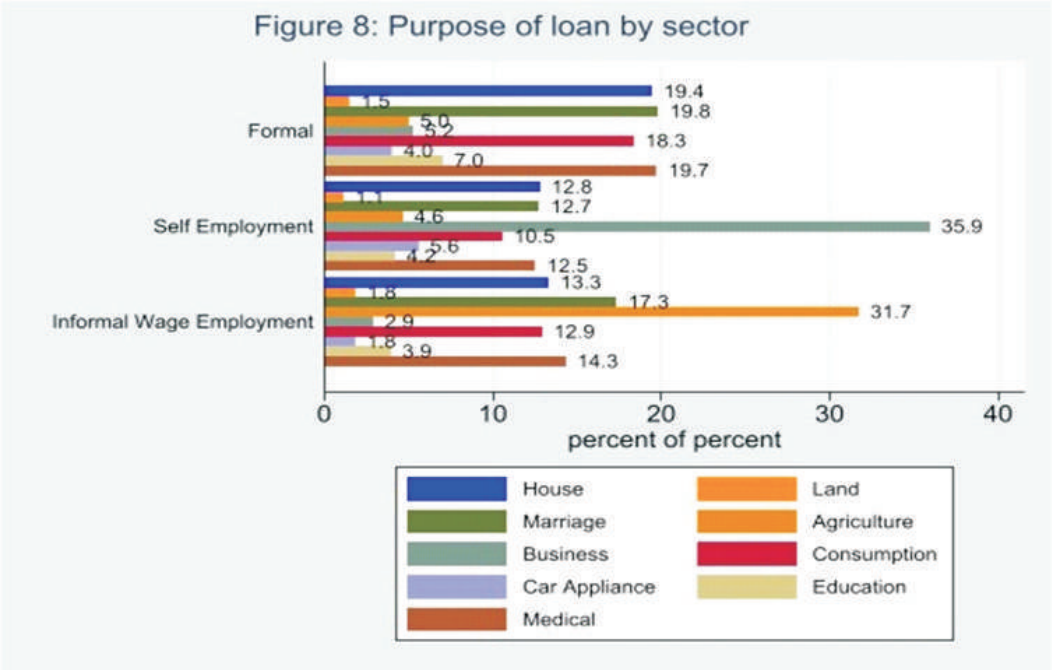


Figure 8: Purpose of loan by sector
Formal
Self Employment
Informal Wage Employment
19.4
1.5
19.8
5.0
5.2
18.3
4.0
7.0
19.7
12.8
1.1
12.7
4.6
35.9
10.5
5.6
4.2
12.5
13.3
1.8
17.3
31.7
2.9
12.9
1.8
3.9
14.3
0
10
20
30
40
percent of percent
House
Land
Marriage
Agriculture
Business
Consumption
Car Appliance
Education
Medical

| | Brahmin | HighCaste | OBC | Dalit | Adivasi | Muslim | Christian,Sikh,Jain | Total |
|---|---|---|---|---|---|---|---|---|
| Professionals | 331 | 333 | 316 | 142 | 55 | 136 | 56 | 1,369 |
| Executive | 26 | 38 | 32 | 31 | 4 | 17 | 12 | 160 |
| Clerk | 225 | 479 | 404 | 266 | 63 | 222 | 53 | 1,712 |
| Sales | 118 | 618 | 688 | 196 | 49 | 514 | 109 | 2,292 |
| Service | 38 | 77 | 100 | 47 | 6 | 40 | 15 | 323 |
| Labourer | 15 | 26 | 70 | 196 | 18 | 36 | 17 | 378 |
| Total | 753 | 1,571 | 1,610 | 878 | 195 | 965 | 262 | 6,234 |

Table 1. Caste and Religion by occupation

The provided table presents the distribution of individuals across different caste and religious groups in various professions with in a population totalling 6234. Across professions, Brahmins and Forward Caste individuals are not ably represented in the Professional and Clerk categories, comprising 331 and 479 individuals respectively in the former and 333 and 618 in the latter. Conversely, Dalit and Adivasi communities are significantly represented in labor-intensive roles, with 196 and 18 individuals respectively in the Laborers category. The OBC category demonstratesavaried distribution with significant representation in various professions such as Clerks (404 individuals), Sales (688 individuals) and Services (100 individuals). Additionally, Muslims are not ably represented in the Sales category with 514 individuals. Christian, Sikh and Jain communities exhibita relatively balanced distribution across various professions, with not able representation in Sales (109 individuals) and Clerks (53 individuals). This data highlights the complex interplay of caste and religious identities with in occupational structures, underscoring disparities in access to certain professions among different social groups.

## 5. ESTIMATION

As our main outcome is the whether the labour is employed in informal sector or not, we studied the impact of migration status on the decision towards employed in informal sector. The reduced form IV approach consists of two stage model as follows:

$$I_{ik}^{*} = \alpha_0 + \alpha_1 M_{jk} + \beta_2 X_{jk} + Y_k^i + e_{jk}^i$$

$$I_{ik}^{*} = \begin{cases} 1, & if\ I_{ik}^{*} < 1_0 \\ 0, & if\ I_{ik}^{*} \geq 1_0 \end{cases}$$

Here, $I_{ik}^{*}$ is the outcome variable i.e. employment decision of individual i in state k. $M_{jk}$ is the variable of migration status of individual j in state k. The reduced form of first stage equation for migration status $M_{jk}$ would be:

$$M_{jk}^{*} = \beta_0 + \beta_1 Z_k + \beta_2 X_{jk} + Y_k^m + e_{jk}^m$$

$$M_{jk} = \begin{cases} M_{jk}, & if M_{jk}^{*} < M_0 \\ 0, & if\ M_{jk}^{*} \geq M_0 \end{cases}$$

Here, Zk is the set of instrumental variables and Xjk is the control variables. The statistical analysis of employment in the informal sector using OLS, IV, and Probit models reveals varying impacts of several predictors such as migration status, education, and demographic factors on the likelihood of informal sector employment.

The OLSEstimation indicates that migration status has a positive effect on informal sector employment of significant positive coefficient 0.139, suggesting that migrants are more likely to engage in this sector. Urban natives are less likely to be employed in the informal sector, as shown by a significant negative coefficient-0.302. Educational achievements, particularly primary and secondary education, positively influence informal employment, indicating that basic educational levels improve the chances of obtaining such employment. Here, we have controlled Educational and caste attributes. The IV Estimation adjusts for potential endogeneity and presents a dramatic increase in the effect of migration status on informal employment of significant positive coefficient 5.049, highlighting a much stronger impact than observed in the OLS model. This suggests that controlling for endogeneity may reveal a more pronounced effect of migration. The coefficients for other variables, such as the number of households and caste, differ from those in the OLS model, suggesting different influences under the IV estimation. In this analysis, we interpret the variable representing debt as an instrumental variable for migration, suggesting that variations in debt levels across regions serve as exogenous shocks that influence migration patterns independently of other factors. Here, we have included Debt variable as the instrument of migration status, as Debt variable satisfy relevance condition through being positive correlated with the dependent variable being employed in informal sector, while it satisfies exogeneity condition also through being uncorrelated with other exogenous variables. Here, We can conclude that having more educational qualification by the household have less and significant coefficient of being employed in informal sector and vice-versa. The Probit Model provides insights into the probability of being employed in the informal sector. Here, migration status again shows a strong positive effect significant coefficient 0.540. Urban natives have a substantially lower probability of informal sector employment, as indicated by the large negative significant coefficient-0.784. The model also highlights that increasing household size marginally increases the likelihood of informal sector employment shows significant coefficient 0.034. Here, we can conclude that lower educational qualification have high probability of being employed in informal sector with high and significant likelihood ratio and vice-versa. While, High caste and religion have more probability of not being employed in informal sector with less and significant likelihood ratio and vice-versa. Each model offers distinct insights, with the Probit model focusing on the probability of employment outcomes, and the IV model addressing potential biases that might distort the OLS results. These models collectively enhance the understanding of the dynamics and determinants of informal sector employment.

| Dependent Variable: Employment at Informal sector | OLS Estimation | IV Estimation | Probit Model |
|---|---|---|---|
| Constant | 0.712*** | 0.385*** | 0.172** |
| | (0.009) | (0.073) | (0.077) |
| Migration Status | 0.139*** | 5.049*** | 0.540*** |
| | (0.017) | (1.025) | (0.066) |
| No of Households | 0.015*** | -0.007 | 0.034*** |
| | (0.002) | (0.006) | (0.007) |
| Urban Native | -0.302*** | -0.024 | -0.784*** |
| | (0.007) | (0.055) | (0.022) |
| Married | -0.002 | -0.024 | 0.002 |
| | (0.007) | (0.055) | (0.022) |
| High Caste | | -0.206*** | -0.388*** |
| | | (0.052) | (0.060) |
| OBC | | -0.075* | -0.224*** |
| | | (0.044) | (0.053) |
| Dalit | | -0.054 | 0.147*** |
| | | (0.048) | (0.053) |
| Adivasi | | -0.223*** | -0.101*** |
| | | (0.061) | (0.057) |
| Muslim | | -0.227*** | -0.167*** |
| | | (0.065) | (0.068) |
| Christian, Sikh, Jain | | -0.054 | 0.207*** |
| | | (0.056) | (0.061) |
| Primary Education | | 0.227*** | 0.622*** |
| | | (0.046) | (0.046) |
| Secondary Education | | 0.185*** | 0.406*** |
| | | (0.049) | (0.058) |
| Matric Completed | | 0.157*** | 0.240*** |
| | | (0.052) | (0.061) |
| Tertiary Education | | 0.076 | 0.133* |
| | | (0.059) | (0.071) |
| $??^2$ | 0.114 | | |
| No of Observations | 16,003 | 15,648 | 15,655 |

Table 2. OLS, IV and Probit Estimates of the probability for Informal Sector Employment
Significance code: *p<0.1, **p<0.05, ***p<0.01

## 6. CONCLUSION

The study reveals the complexity and diversity of informal work arrangements, influenced by factors such as migration status, education levels, and socio-economic backgrounds. Rural-urban migration emerges as a significant driver of informal sector employment, with migrants often facing challenges in accessing formal job opportunities. Moreover, the paper sheds light on the pervasive systemic discrimination and vulnerabilities experienced by informal workers, particularly migrant women, who encounter exploitative labor practices and unsafe working conditions.

Policy implications arise from the findings, emphasizing the need for inclusive and sustainable

economicgrowthstrategies that prioritize the formalization of the labor market. Efforts to enhance social protection, improve working conditions, and promote formal employment opportunities are essential to address the entrenched inequalities and vulnerabilities prevalent in the informal sector. Moreover, recognizing the diverse needs and experiences of different social groups, including marginalized communities and women, is crucial for designing targeted interventions aimed at fostering equitable and inclusive economic development.

The paper contributes to the existing literature by offering insights into the nuanced dynamics of informal labor markets, drawing attention to the multifaceted challenges and opportunities associated with informal work. By employing various estimation techniques, robust analysis of the determinants and impacts of informal sector employment, offering valuable insights for policymakers, researchers, and practitioners seeking to address the complex realities of informal work.By recognizing the contributions and addressing the vulnerabilities of informal workers, policymakers can advance towards building more resilient and equitable economies that benefit all segments of society.

## 7. REFERENCES

A.S. Shonchoy and P. R. Junankar, "The informal labour market in India: transitory or permanent employment for migrants?" IZA J. Labor& Dev. 3, 1–27 (2014).

"International labour organisation report," (2002).

F. Schneider and D. Enste, "Shadow economies around the world size, causes, and consequences," (2000).

S. Marjit and S. Kar, The outsiders: Economic reform and informal labour in a developing economy (Oxford University Press, 2011).

A. S. Chakrabarti and A. Sengupta, "Productivity differences and inter-state migration in the us: A multilateral gravity approach," Econ. Model. 61, 156–168 (2017).

P. Deshingkar, Migration, remote rural areas and chronic poverty in India, vol. 323 (ODI, 2010).

B. Rogaly and D. Coppard, "'they used to go to eat, now they go to earn': The changing meanings of seasonal migration from puruliya district in west bengal, india," J. agrarian change 3, 395–433 (2003).

N. V. Loayza, "The economics of the informal sector: a simple model and some empirical evidence from latinamerica," in Carnegie-Rochester conference series on public policy, vol. 45 (Elsevier, 1996), pp. 129–162.

S. Sookram and P. K. Watson, "Small-business participation in the informal sector of an emerging economy," The J. Dev. Stud. 44, 1531–1553 (2008).

G. Ulyssea, "Regulation of entry, labor market institutions and the informal sector," J. Dev. Econ. 91, 87–99 (2010)

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# THE STRUCTURE AND POTENTIAL OF VOCATIONAL EDUCATION IN THE NATIONAL EDUCATION POLICY 2020

**Chandra Prakash Agrawal * Anshuman Singh****

**ABSTRACT**

*The National Education Policy (NEP) has introduced significant changes in the realm of skill-based vocational courses, with a focus on empowering the youth. The policy emphasizes a holistic approach to education, aiming to bridge the gap between academic knowledge and practical skills. It promotes the integration of vocational training into the mainstream education system, offering students the opportunity to choose skill-based courses alongside traditional subjects. This research paper aims to study the structure of the NEP with special reference to skill based vocational courses. The paper also highlights its direct impact on youth such as higher employability, better skills and better results in terms of what they contribute to any organization. This study is based on using secondary data from official New Education Policy 2020 document as well as government publications, reports, working paper, articles and other open-source databases. This paper will help in better understanding of the direct benefit which can become a source of enabler for the youth in the 21st century*

***Keywords:*** *NEP2020, Skill-based approach, Vocational Training.*

## INTRODUCTION

NEP which is 2020 is seen as a transformative step in Indian education, aiming to equip students with the skills and knowledge necessary to thrive in the 21st century while addressing various issues that have plagued the education system for years. It was a urgent need to revamp the entire education infrastructure and overhaul the bottlenecks that existed which was creating a hurdle for a student to grow academically.

It has not only given a call for a holistic approach which will improve academic excellence but also extracurricular activities and life skills. It will promote flexible and multi-dimensional approach in education.

Its holistic approach underscores the importance of a well-rounded education that goes beyond academic excellence, prioritizing the development of life skills and extracurricular activities. Moreover, the policy's focus on early childhood education, vocational training, and multidisciplinary education empowers students with a versatile skill set that aligns with the dynamic demands of the modern workforce. It also lays a strong emphasis on assessment reforms, equity, inclusion, and technology integration to create a more accessible and equitable education system. NEP 2020 has the potential to transform India's education sector by nurturing well-rounded, critical-thinking individuals ready to meet the challenges of the 21st century.

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## OBJECTIVES OF THE STUDY

This research paper aims to comprehensively analyse the structural components of the National Education Policy (NEP) in relation to skill-based vocational courses and assess its impact on the youth.

## RESEARCH METHODOLOGY

The present study is descriptive in nature and based on the secondary data from different open sources of government publications till date. It also includes facts extracted from various websites and articles from reputed newspaper and journals

## NEP AND SKILL BASED VOCATIONAL COURSES

Quality Higher Education with an utmost focus on skill based vocational courses is a dire need so that capable and competent workforce is facilitated for the 21st century in India.

As per the reports of UNFPA, India enjoys a demographic dividend where 65% of the population is in the working age of 15-59. Hence this necessitates imparting skill-based vocational education. It is expected the working age groups of Indians will rise to approximately 65% by 2036. With over 65% of our country under 35 years of age, more than 1.4 million schools and 10,500 engineering and related institutions, a whopping 39,000 colleges and universities, India enjoys a demographic dividend like no other in the world.

With the launch of the National Education Policy 2020, Vocational education in the 21st century has garnered the required attention which was due for long. The need to prioritize vocational base among the youth is something which is not new but wasfirst mentioned in the NEP of 1986, the need for which was left unrealized and unattended and was thus given a back seat.

The NEP 2020 which is an aspirational document categorically and extensively emphasis the need to overall Vocational Education. The policy insists on giving skill-based vocational education a driver's seat to ensure holistic development.

The 12th Five –Year Plan (2012-2017) estimated that only a very small percentage of the Indian workforce in the age group of 19-24(less than 5%) received formal vocational education, where in countries such as USA the number is 52%, in Germany 75% and South Korea is as high as 96%. These numbers are enough to highlight the urgency of the need to to accelerate the spread of vocational education in India.

## RELEVANCE OF VOCATIONAL EDUCATION

To understand the relevance of vocational education it should be differentiated from theoretical education as the latter only covers theory aspect while vocational training encompasses the required skills along with knowledge needed to carry out various technical trade such as plumbing, cooking, welding etc. It focuses on getting work practically done instead being theoretical –centric in approach.

Vocational Education which is based on occupation and employment is directly related to our youth. It thus becomes essential to impart vocational exposure at early ages in the middle and secondary school so that it starts bearing fruits when the youth is his in higher education phase of study.

According to the policy, by 2025 at least 50% of learners through the school and higher education shall have exposure to vocational education. In this regard many actions plan with targets and timeline have been developed. Adopting the skill-based model of education will help in increase in Gross Enrolment Ratio along with helping Indian youth to be more skilful and self-reliant.

A clear-cut vision to make the youth Atmanirbhar through skill-based education, many vocational subjects and training have been introduced right at the school level. Initiatives like hands-on-training

in vocational skills like carpentry, plumbing, electrical repairing, pottery, embroidery, horticulture have been introduced for the students of middle level to realize the dreams of becoming self-reliant.

Skill based-education is becoming a very popular model of education as it nurtures the present need of employers who expects new employees to have all the practical skills and it also offers greater sustainability. The Policy aims to advocate the practice of vocational skills within the school curriculum so youth can reap the benefits of innovation and greater productivity.

**STRUTURE OF VOCATIONAL COURSES**

Students will be given the opportunity to be flexible in their choice of subjects as this policy makes no division between “arts” and " science". Online vocational courses shall also be promoted through various e-skill learning platforms to ensure the holistic development.

The policy is crucial with regard to recognising the value of practical experience as it permits Higher Education Institutions to grant a certificate upon completion of 1 year in any field which may even include vocational areas.

“Lok Vidya” is an important vocational knowledge developed in India will be accessible to students through integration into vocational education courses. Partnering and collaborating of secondary schools with industries and NGOs to impart practical knowledge will help the youth to adopt skill-oriented techniques in their work.

**IMPACT ASSESSMENT ON YOUTH**

Access to vocational exposure will directly and immensely impact the youth making them employable. It will upgrade their learning experience both at professional and personal level. Skills if taught at school levels will set the stage for youth to be more informed and enabling them to make any professional choices in a better way. This in turn would create more satisfied professionals in long run and would pave way towards powering Aatmanirbhar Bharat through innovation and entrepreneurial skills.

In view to mainstream skills Government of India launched National Skills Qualification framework (NSQF) which allows multiple pathways between vocational education skills, general education and job markets. The credit-based framework will also facilitate mobility across general and vocational education as it clearly states the credit assessment requirements for skills.

Through the set of vocational education and entrepreneurial skills imparted to youth at different stages of education and training will enable a nation of Job-creators and not just job- seekers. This is possible only if an extensive collaboration between corporate industry, academia and government at the village, state and central level is initiated and acted upon. We can channelize the youth energy towards nation building activities by majorly focussing on developing vocational, technical and managerial skills while fostering a culture of innovation and entrepreneurship at the school and university level.

The problem related to vocational education needs to be identified and addressed accordingly. Problems like huge demand –supply gap, lack of adequately trained faculty needs to be course corrected with proper action plans. It is the time when the government should work upon initiatives like skill-mapping and bridging the gap between demand side of industry and supply side of skill-based vocational knowledge.

key points on the impact of the National Education Policy (NEP) 2020 on the youth in relation to skill-based vocational courses:

Enhanced Employability: The emphasis on skill-based vocational courses equips youth with practical skills that make them more employable immediately after completing their education, reducing the unemployment rate.

Entrepreneurial Spirit: NEP 2020 encourages youth to pursue entrepreneurship by providing them with the necessary skills and knowledge, fostering innovation and self-employment.

Reduced Academic Pressure: By introducing vocational courses alongside traditional subjects, the policy offers alternatives for youth who may not excel in conventional academics, reducing academic pressure and stress.

Adaptability to Job Market: The multidisciplinary approach of the policy allows youth to adapt to the changing demands of the job market by acquiring a diverse skill set that can be applied to various professions.

Inclusivity and Global Competitiveness: NEP promotes inclusivity by addressing the skill development needs of a wide range of students, including those from disadvantaged backgrounds, empowering them with employable skills. Skill-based education makes the youth more competitive on a global scale, aligning them with international standards and enhancing their prospects in the global job market.

Critical Thinking and Problem-Solving: Vocational courses often emphasize practical problem-solving, which can enhance the youth's critical thinking skills and ability to tackle real-world challenges.

Reduction in Brain Drain: By providing better opportunities for skill development within India, NEP 2020 can help reduce the "brain drain" phenomenon, where skilled youth seek employment abroad.

Promote Personal Growth: Skill-based education not only prepares youth for employment but also contributes to their personal growth, self-confidence, and self-reliance.

Alignment with Industry 4.0 Needs: The policy ensures that vocational courses are designed in consultation with industry experts, making graduates better prepared to meet the skill requirements of the job market.

## SUGGESTIONS FOR POLICY RECOMMENDATIONS

There is a need to develop a standardized national curriculum for vocational courses and ensure consistent certification standards. This will improve the recognition and transferability of vocational skills across the country. Implementation of robust quality assurance mechanisms to monitor and evaluate the effectiveness of vocational programs should be created. Regular audits and assessments can ensure that courses meet industry standards and requirements.

Ther is a need todevolve stronger ties between educational institutions and industries to align vocational programs with the current and emerging needs of the job market. Industry partnerships can offer internships, on-the-job training, and job placement opportunities to the students to cater the needs.

Vocational courses can become more inclusive in approach if the financial support is provided to low class income students group for availing skill-based courses.

## CONCLUSION

To strengthen vocational education under the National Education Policy, a holistic approach is essential. This entails enhancing career counselling services in schools and colleges, investing in teacher training, and recognizing prior informal learning. Additionally, improving infrastructure and facilities, implementing robust monitoring, and encouraging flexibility in courses are key. Internship programs and global exposure opportunities will provide practical experience and a global perspective. Promoting research and innovation, launching public awareness campaigns, and establishing a long-term evaluation framework are pivotal in ensuring that vocational education aligns with industry needs and positively impacts the youth, contributing to their career development,

economic growth, and societal well-being.

Vocational education acts as a catalyst for any country's employment and economy as a whole. A young workforce equipped with vocational temperament will open new ways for country like India who is seen as “Visva Guru" to become self-sufficient and leveraging youth power.

**REFERENCES**

Chowdhury, K., & Mondal, B. C. Fostering Vocational Education among Students through the Lens of National Education Policy 2020.

Ganie, G. R. (2022). NEP, 2020: CHALLENGES AND POSSIBLE SOLUTIONS OF VOCATIONAL EDUCATION AND TRAINING IN INDIA. *Towards Excellence,* 14(1).

Parvanda, K. (2022). Vocational Education and NEP 2020.

Pathak, R. (2021). NEP 2020: A road map to Vocational Development. ShikshanSanshodhan: *Journal of Arts, Humanities and Social Sciences,* 3(6), 66-69.

Saxena, A. (2021). The glimpse of NEP 2020. Multidisciplinary research, 2, 1.

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**Commentary**

# ECONOMICS VS POLITICS: AN ANALYSIS OF GENERAL ELECTION RESULT 2024

**Anup Kumar Mishra***

## PRELUDE

Ambitious welfare programmes and promises was a central theme in the 2024 general elections. Over the past decade, there has been a sea change in how governments deliver welfare benefits to citizens. Technological advancements and state capacity improvements have allowed both central and state governments to transfer benefits directly to voters, weakening meddlesome middlemen. Unlike the discretionary sops of the past, these rule-based direct transfers are supposed to reduce favouritism and corruption. In doing so, they are widely perceived to have become popular vote winners. Yet, in reality, there is limited hard evidence of schemes translating into votes. This has been also proved from the final result of 2024 general election.

The Bharatiya Janata Party (BJP), holds 240 seats, a plurality in the lower house of parliament (Lok Sabha). The BJP is in power in 13 of India's 29 provinces which possess legislative assemblies, with its allies ruling in an additional six provinces. Yet the new Modi government is weaker than its predecessor, having failed unexpectedly to secure a majority in the Lok Sabha. The BJP lost 63 seats from its previous tally achieved in 2019 (303), falling 32 short of a majority (272 seats). With the support of its coalition partners, which provided an additional 53 seats, it was able to form a coalition government as the National Democratic Alliance (NDA), but it now relies on the support of these partners to govern.

## BASIC CONCEPT

The relationship between beneficiaries of government programs and politics is complex and can lead to several issues:

- **Targeting and Public Support:** Politicians sometimes design benefits to target specific groups they believe will support them in return. This can create resentment among those who aren't eligible or who believe the program is wasteful .
- **Clientelism:** Politicians may use benefits programs to reward loyal voters or punish opponents. This can lead to inefficiency and corruption, as resources are directed based on political gain rather than actual need .
- **Data Privacy:** There can be concerns about how governments collect data on beneficiaries and use it for political purposes. This raises questions about privacy and the potential for manipulation.
- **Policy Feedback:** Beneficiaries may be more likely to vote for politicians who support their programs. This can create a cycle where popular programs continue even if they are inefficient, while unpopular but necessary programs struggle for support .

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**Indian Economy between 2014 to 2023**

The Indian economy underwent a significant transformation between 2014 and 2023:

**Growth**

- **Overall Positive Trajectory:** India maintained a generally positive growth trajectory, with an annual average GDP growth rate hovering around 6-7%. This placed it among the fastest-growing economies globally.
- **Fluctuations:** There were fluctuations throughout this period. The growth rate peaked at around 8-9% in FY 2015-16 but dipped slightly in subsequent years .

**Government Initiatives:**

- **Focus on Reforms:** The government implemented various structural reforms aimed at strengthening the macroeconomic fundamentals .Examples include initiatives like Make in India to boost manufacturing and infrastructure projects.
- **Digital Push:** A significant push towards a digital economy emerged, with programs promoting cashless transactions and digital infrastructure.

**Sectoral Developments:**

- **Service Sector Boom:** The service sector, particularly Information Technology (IT) and financial services, emerged as a major growth driver .
- **Uneven Growth:** Growth across various sectors remained uneven. While agriculture remained a significant employer, its contribution to GDP declined .

## CHALLENGES

Despite the growth, job creation lagged, especially in the formal sector. This remains a key concern. Inflation management posed a challenge at times, with fluctuations impacting household budgets .The story that emerges by looking at some of the key statistics relating to the labour market in India is: from 2017-18 onwards the LFPR has shown an increasing trend and the UR a declining trend. While this appears like a positive development, looking at the numbers more closely, we see signs that are indicative of a deteriorating quality of employment generation. The main driver behind the trend in the aggregate indicators of the labour market is the rise in employment in the self-employed category, which, in turn, has been driven by a rise in unpaid family work subcategory. These tendencies look sharper if we zoom into the subcategories of the youth and the educated youth. Moreover, the self-employed, whose jobs are more precarious in nature and have significantly lower earnings, compared with the categories that can be described as 'good jobs', have seen the highest increase in the number of jobs since 2017–18 without any increase in real earnings. In contrast, those holding the 'good jobs' – the regular wage and salary earners – have seen a decline in the share of total employment in the economy between 2017–18 and 2021–22. There has also not been any real increase in their earnings.

## OVERALL

The period from 2014 to 2023 saw India solidify its position as a major global economic player. However, challenges like job creation and inclusive growth persist.

## COLLATION GOVERNMENT AND REFORM

Coalition rule will require Modi to change his centralised, top-down approach to policymaking and adopt a more conciliatory tone in negotiating with his alliance partners, some of whom hold vastly different ideological views from the BJP.Indian voters have sent a clear message that dealing with the problems of the economy matters more than divisive populist rhetoric.History would suggest otherwise. In July 1991, as India reeled from the end of the Cold War and a balance of payments crisis,

Finance Minister Manmohan Singh, whose political party had 244 members in the Lok Sabha, introduced a historic set of economic reforms that transformed India's economic future and put the country on the path of impressive growth that it has experienced since then. The government during this time, led by Prime Minister Narasimha Rao, is notable not just because the largest party held a similar number of seats to the BJP today but also because it was the second in a string of coalition governments that ruled India for a quarter of a century starting in 1989. These governments were unstable, lasting on average three-and-a-half years instead of the usual term of five. They were chaotic, with various parties pulling ruling coalitions in different directions and holding up progress on key issues over parochial interests.

India's big economic numbers undoubtedly look strong. It is the fastest growing major economy, expanding by 8.4 per cent in the last quarter of 2023, and boasts the world's fifth-largest GDP. On the campaign trail, Prime Minister Modi promised to make India the world's third-largest economy by the end of his third term in 2029. But this impressive scale is built on the aggregation of 1.4 billion people. On a per capita basis, the country remains desperately poor with an average income of about US$2,700. Progress has been made in poverty reduction, but credible estimates of how much are difficult given the lack of reliable statistical data.

Inequality between India's rich and the rest of the population has grown worse in the past decade, due in part to the government's favours to large domestic conglomerates and big business. The richest 1 per cent now hold 40 per cent of the country's wealth, while the bottom 50 per cent hold just 6 per cent. There is no starker demonstration of this disparity than the country's financial centre Mumbai, home both to Mukesh Ambani, Asia's richest man, and Dharavi, the world's third largest slum.

India's impressive economic growth of 8.2 percent in FY2024, a global high, didn't translate into a strong showing for the ruling party in the elections. While they secured more seats than the opposition, it was a significant drop from their previous performance. This raises the question: Does a booming economy always guarantee electoral success?

The answer seems to be no. India has a history of high GDP growth not swinging votes. In 2004, the BJP-led NDA lost despite an almost 8 percent growth rate, and in 2014, the Congress-led UPA lost with growth exceeding 7 percent .The paradox of high economic growth not resulting in more votes for the incumbent government can be explained by various factors. For the current occasion, some of the factors below could have been instrumental.

A high GDP growth powered by sustained public investments, as seen in the case of FY2024 in India, takes time to translate into bread-and-butter factors that decisively sway voters. These include the creation of new jobs and higher incomes. The latter are generated with a time lag and might manifest much after the election is held. In that case, the voters could have missed grasping the virtuous impact of the high growth in terms of actually experiencing its benefits through higher incomes and consumption.

Voters might not have connected good sectoral economic performances to the ability of the incumbent government to deliver high growth. For example, for quite some time now, consumer-facing sectors of the economy have been doing well. These include tourism, hospitality, entertainment, education, transport and healthcare. The beneficiaries of the growth(s) might have attributed the robust conditions to be part of a cyclical upturn and did not attribute a government's 'hand' to the good going.A part of the growth in private consumption was due to sustained public welfare measures taken by the government by providing income support and free food to the poor. This, arguably, should have worked in favour of the government, and it probably has to some extent. However, a couple of other

factors need to be considered here.It is not only the central government that is disbursing welfare benefits. Many state governments are also doing the same. In instances where the central and state governments belong to different parties, such as in Tamil Nadu and West Bengal, the favourable perception of the beneficiary might not necessarily be with the central government. Moreover, several voters receiving welfare support from the central government are unlikely to have been overwhelmed. Many of them are convinced that all parties will provide them with such support in some form or other if voted to power. So 'guarantees' – generously promised during the election by both the BJP and the Congress, as well as the regional parties – might not have cut too much ice in terms of translating into votes.

Finally, many actual beneficiaries of India's high growth, ostensibly those belonging to the high and upper-middle-income urban segments of the population are unlikely to have voted in the election. Voter indifference has been noticeably high in the major metropolises of the country that house these segments. Thus, even if these beneficiaries have been happy with the role of the government in managing the economy, their indifference ensured that their satisfaction did not influence the results.

India is now having a BJP-led coalition government with Prime Minister Narendra Modi at the helm for a third term. The challenge for the government will be to figure out what kind of economics will mean good politics. There might be a temptation to pursue more exhaustive populist policies, especially if the coalition partners demand so for political survival.The government should note that irrespective of the election results, India's growth outlook remains strong and long-term investor perceptions are positive. Eschewing populism and staying the course of market-based policies should be the way forward. Populist economics is bad economics and not necessarily good politics.

India's impressive digital public infrastructure allows the government to reduce discretion in beneficiary selection and transfer benefits directly to citizens. The socioeconomic census data and big data triangulated from multiple sources provide the government with granular, household-level information to frame objective rules and criteria. Near-universal biometric identification via the Aadhaar programme allows the government to confirm that the intended recipient of a programme is the actual beneficiary.

**WAY FORWARD**

After the election result and viewing from the mandate Indian Prime Minister Narendra Modi will need to think hard now about the best path to *Viksit Bharat*, or 'Developed India'. This is the government's centennial goal for the republic, which sets 2047 as the year by which the country will have shaken off its status as an emerging economy.

To get there – to accelerate GDP growth sufficiently to provide jobs, end poverty, create wealth and enhance India's global influence – one basic question needs an answer: should India tilt more towards excellence in manufacturing, or should it devote more effort to developing its services industries? There might be some decent arguments to bias the Indian economy in favour of services. But the reality is that Modi will maintain a fairly uncompromising focus on boosting India's manufacturing prowess. The government's bias towards manufacturing is most evident in the array of subsidies it has put in place to support the sector. At the centre of this is a set of Production-Linked Incentives, which offer a total of $28 billion of subsidies for firms in fourteen sectors as a way of encouraging increases in output. The semiconductor industry has also been on the receiving end of government largesse, for which an additional $10 billion has been made available. Investment in physical infrastructure has been another signal of New Delhi's seriousness in boosting manufacturing: central government capital expenditure has effectively doubled in the past 10 years, from 1.6 per cent of GDP in fiscal year

2015 to 3.2 per cent currently.

## CONCLUDING REMARKS

*A high growth rate of the economy or beneficiaries programs did not lead to a bigger mandate for India's incumbent government. Pressures of running a coalition might force the incoming government to embrace populism, which will be bad economics and not necessarily good politics.* The way to meet growing aspirations is not merely through creation of jobs but rather by the creation of enough 'good' quality jobs. Consequently, rejoicing in the renewed dynamism in the Indian labour market may be a bit premature.

## REFERENCE

https://www.chathamhouse.org/2024/06/achieve-developed-india-modis-new-government-will-prioritize-manufacturing-sector-better-or

https://www.iiss.org/en/online-analysis/online-analysis/2024/06/the-modi-3.0-coalition-government-challenges-and-priorities

https://ddnews.gov.in/en/industry-upbeat-on-modi-3-0-cii-ficci-assocham-expects-reforms-to-continue/

https://www.nbr.org/publication/india-and-the-world-in-modis-third-term/

https://www.isas.nus.edu.sg/papers/indian-election-results-2024-little-impact-of-high-economic-growth/

https://doi.org/10.59425/eabc.1718575200

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## Remarks as Chairperson*

# 64TH ANNUAL CONFERENCE OF THE INDIAN SOCIETY OF LABOUR ECONOMICS

**29-31 March 2024, University of Hyderabad**

**Anup Kumar Mishra****

### 1. Role of Population, Nonrenewable Energy Consumption, Government Expenditure, CO2 Emissions and Inflation for Achieving Sustainable Development Goal-13 in India

**Aqib Mujtaba1 & Pabitra Kumar Jena**

This research examines how various factors affect India's ability to achieve SDG-13 (climate action). They built a complex model to analyze economic, environmental, and social data from 1971 to 2021.

The study identified several key factors influencing climate action:

- Population growth increases energy use and emissions.
- Burning fossil fuels (non-renewable energy) is a major source of emissions.
- Government spending can impact emissions depending on how it's directed (e.g., clean energy vs traditional infrastructure).

Some factors have a dual effect:

- A growing service sector can boost the economy but also raise energy demand if not managed efficiently.
- Agriculture can contribute to emissions, but sustainable practices can lessen them.

Other important factors include money supply (affecting economic growth and energy use), inflation (discouraging investment in clean energy), and CO2 emissions themselves (a direct measure of climate impact).

The research highlights the interconnectedness of these factors. It emphasizes the need for a comprehensive approach that considers all these elements to achieve SDG-13 in India. This can inform policymaking to reduce reliance on fossil fuels, promote clean energy and sustainable practices, and manage population growth and resource use effectively.

### 2. Labour Relations and Labour Process in Platform Capitalism : The Dynamics of Work in Platform-Based Food Delivery in Delhi

**Abhinav Kumar**

This study explores how app-based food delivery platforms (like Swiggy and Zomato) in Delhi are changing the way work is organized and how workers interact with employers.

The research investigates two main questions:

1. How do these platforms impact the way work is done and the balance of power between workers and employers?

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* Anup Kumar Mishra as Chairperson of the technical Session at 64th ISLE Annual Conference

** Professor and Head , Department of Economics, DAV PG College, BHU and EC Member ISLE

2. How has technology changed how food delivery services function for workers?

By looking at both existing research and conducting surveys with delivery workers, the study aims to understand the connection between technology, these platforms, worker relationships, and the overall work process.

In short, the research examines how these platforms are creating a more flexible but also less secure work environment for food delivery workers in Delhi. It explores how these platforms are disrupting traditional work structures and impacting issues like worker classification (independent contractor vs. employee), management by algorithms, work hours, income stability, safety, and the effect on marginalized communities. The study also considers challenges regarding worker rights and how they can collectively advocate for themselves.

**3. PATTERN AND DETERMINANTS OF HOUSEHOLD DEBT IN PUNJAB: AN ANALYSIS BASED ON THE NSS 77TH ROUND**

**Anayat Gill**

This study investigates household debt in Punjab, India, focusing on its prevalence, causes, and potential problems.

Key findings :

- **Debt Prevalence:** Around 29% of households in Punjab have debt, slightly below the national average.
- **Rural vs. Urban Divide:** Debt is significantly higher in rural areas (35%) compared to urban areas (20%).
- **Social Factors:** Religion and social group appear to influence debt levels.

The study highlights the seriousness of household debt in Punjab, particularly in rural areas, where it might be linked to farmer suicides. It emphasizes the need for further research on this topic to inform policy decisions that can help manage debt and promote growth.

**4. The Trend of Employment in The Informal sector in the Agriculture sector of the Indian economy and the Demand for Social security**

**Ram Lakhan Singh and Prof. Mridula Mishra**

This paper discusses the informal sector's role in India's agricultural employment and the need for social security for these workers.

**Key points:**

- The informal sector employs a significant portion of the agricultural workforce in India. (This aligns with hypothesis 1).
- Workers in this sector often lack basic benefits like minimum wage, health insurance, and pensions (supporting hypothesis 2).
- The author argues that the government should develop policies to:
  - Recognize the informal sector's contribution to the economy.
  - Include informal workers in social security programs.
  - Provide economic security, especially during crises like pandemics.

The passage suggests that government initiatives like MNREGA (employment guarantee scheme) and infrastructure development projects can be leveraged to empower informal workers and improve their working conditions.

**5. Manufacturing Output and Employment: An Empirical Analysis**
**Bhashkar Kashyap**

This study examines the relationship between manufacturing output and employment in India.

**Key points:**

- Manufacturing output contributes significantly to India's GDP (13-17%).
- Traditionally, an increase in output is expected to create more jobs and lower unemployment (Okun's Law).
- However, in India, the manufacturing sector employs a relatively small portion of the workforce (11.6%).

**The study investigates this discrepancy through various statistical methods:**

- They find a negative relationship between output and unemployment, similar to Okun's Law.
- Interestingly, they also discover that employment seems to Granger-cause output, meaning a rise in employment might lead to higher output.
- Overall, the study suggests a complex relationship between these factors in India's specific context.

**The study aims to:**

- Develop a theoretical model based on these findings.
- Understand how changes in manufacturing output impact employment and vice versa.

This research can inform policymakers on how to best utilize the manufacturing sector for job creation and economic growth in India.

**6. Welfare Policy and Labour Market Outcomes Among Persons with Disabilities (Pwds) in India: Evidence from the NSS 76th Round**
**Harsh Raj,, Himangshu Kumar and Manikantha Natraj**

This study examines how government programs impact employment opportunities for people with disabilities (PwDs) in India.

- **Background:** India has a large population with disabilities, but many struggle to find work despite recent legislation.
- **Programs Analyzed:**
  - Disability Certificate: Having a certificate (especially for less severe disabilities) increases the likelihood of employment, particularly salaried jobs.
  - Cash Transfer Pension: While not directly increasing employment, the pension reduces out-of-pocket disability expenses. This can be seen as indirectly lessening barriers to employment (conversion handicap).

**Overall, the study suggests that both the disability certificate and cash transfer pension can play a role in improving employment outcomes for PwDs in India.**

**7. UNDERSTANDING THE DYNAMICS OF OCCUPATIONAL STRUCTURE IN NAGALAND**
**Sedevikhonuo Noudi, and Sungtina Jamir**

This study explores Nagaland's occupational structure between 2017-2022, focusing on:

- **Overall Trends:**
  - Most workers (around 43%) are in the primary sector (agriculture, etc.).
  - The tertiary sector (services) employs another 43%, especially in urban areas.

- The secondary sector (manufacturing) is the least represented (around 14%).

- **Rural vs. Urban Differences:**
- Rural areas rely heavily on agriculture (primary sector).
- Urban areas have a larger share of service sector (tertiary) jobs.

- **Gender Differences:**
- More women are employed in the primary sector.
- Men dominate the secondary and tertiary sectors, although female participation in these sectors is slightly increasing.

**Key Findings:**

- Nagaland's industrial sector is underdeveloped.
- The state has an educated young population with potential for job growth.

**Policy Implications:**

- The study suggests Nagaland should focus on:
- Improving and expanding its industrial sector.
- Utilizing technological advancements in all sectors.
- Creating more job opportunities, especially for young people.

**8. India's Labour Market: The Safe Guarding Policies and Shun Protectionism Measures**
**Dr.V.SARAVANAN**

This paper examines challenges and proposes solutions for India's labor market.

**Key areas of focus:**

- **Main Problems:** The study identifies hidden difficulties in finding jobs and secondary issues faced by workers at hazardous workplaces.
- **Migrant Workers:** The paper highlights the crucial role migrant workers play in the Indian labor market.
- **Labor Laws:** It emphasizes the importance of strong labor laws to protect worker rights.
- **Gender Discrimination:** The study acknowledges the existence of gender bias in the job market.

**The paper's objective is to:**

- Analyze these issues and propose solutions for improvement.
- Advocate for reformative policies that safeguard the rights of all laborers, including migrants.

**Overall, the research aims to contribute to a more developed and fair labor market in India.**

**9. PATTERN AND REASONS FOR MIGRATION IN INDIA, WITH SPECIAL FOCUS ON ITS NORTH-EASTERN STATES**
**Hundi Pulu**

This paper discusses migration patterns in India, focusing on a key difference between the national trend and the North-Eastern states.

**Overall Migration Trends:**

- Migration is a common strategy for many Indian households to improve income, education, healthcare, and quality of life.

**National vs. North-Eastern States:**

- **Similarities:**
- In both regions, most female migration is rural-to-rural, primarily for marriage.

- Employment is a major reason for male migration across India.

- **Differences:**
- Nationally, most male migration is urban-to-rural.
- In the North-East, most male migration is rural-to-rural, similar to the female pattern.

**Overall Observation:**

- Migration is a growing trend in India, expected to bring positive changes.

**Key takeaway:** The North-Eastern states have a unique migration pattern where both males and females primarily migrate within rural areas, contrasting with the national trend of males migrating from urban to rural areas.

**10. Employee retention through conflict management strategies in IT organizations**
**Supriya Krishnan**

This paper highlights the high employee turnover rate in the Indian IT industry and emphasizes the importance of retaining key talent.

**Key Points:**

- Traditional HR practices haven't effectively addressed employee retention.
- Reasons for high attrition include:
- Repetitive tasks
- Physical and mental strain
- Limited growth opportunities
- Retaining employees is crucial for long-term success.
- HR can play a proactive role by implementing effective conflict management strategies.

**Recommendations for Reducing Attrition:**

- **Hiring for the long term:** Hire employees with a view towards their long-term potential.
- **Career development:** Provide clear paths for growth, promotions, and regular performance evaluations.
- **Boomerang hiring:** Consider re-hiring former employees who left for positive reasons.
- **Work-life balance:** Promote flexible work arrangements to combat burnout.
- **Workplace wellness:** Invest in employee well-being through fitness programs and a healthy work environment.
- **Hybrid work models:** Offer flexible work options that combine remote and in-office work.

The paper suggests that by focusing on resolving conflicts and implementing these recommendations, IT companies can create a more positive work environment and reduce employee turnover.

**11. India's Economic Growth, Education and Employment: An Economic Analysis**
**Gayatri Gogoi, P**

This paper explores the link between education, employment, and economic growth in India, with a focus on the North Eastern states.

**Key Findings:**

- There's a significant mismatch between the skills employers need and the skills the workforce possesses (educated unemployment).
- Higher education levels are associated with higher per capita income and economic growth.
- Southern states like Kerala show a positive correlation between education and development.

**Recommendations:**

- Focus on improving technical education, particularly for women.
- Ensure new educational institutions have adequate resources to be effective.
- Increase enrollment rates in higher and technical education across all states.
- Learn from successful models like Kerala to improve human development indicators.

**The study emphasizes that a well-educated and technically skilled workforce is crucial for tackling unemployment and promoting economic growth in India.** It highlights the need for strategic investment in education, particularly technical education for women, to bridge the gap between skills and job demands.

**12. Evaluating the impact of Students' Perceptions of Classroom Environment and Teacher Beliefs & Attitudes on student outcome**

**Konika Sehagal**

This study investigates how students' perceptions of their teachers and classroom environment impact their academic performance (measured by math exam scores).

**Data & Methodology:**

- Data comes from a survey of 9th graders in Andhra Pradesh and Telangana, India.
- The survey assessed student perceptions of teacher bias, job satisfaction, self-efficacy, and classroom environment (instructional quality, support).
- Statistical methods were used to identify groups of related survey questions to represent underlying factors (e.g., teacher bias, classroom organization).

**Key Findings:**

- Students' perceptions of their teachers and classroom environment significantly influence their math performance, even after accounting for other factors.
- Interestingly, girls and students from Scheduled Caste (SC) backgrounds tend to perceive their teachers more positively, and this perception is linked to better math performance.
- However, the study cautions that student perceptions may not always reflect actual teacher effectiveness.

**Overall:**

This research suggests that students' perceptions of their learning environment play a crucial role in their academic achievement. It highlights the importance of considering these perceptions when evaluating educational quality.

**13. Micro Level study on Employment Trends amongst Kutch University Students with special reference to Economics Subject**

**Dr Disha Goswami**

This paper discusses the alignment between university education and job market demands in the context of Kutch University, with a focus on economics graduates.

**Key Points:**

- The quality and quantity of graduates need to meet global job market requirements.
- Rapid technological changes make it difficult to predict future skill needs.
- Governments struggle to balance individual student choices with national economic priorities.

**Possible Solutions:**

- **Government intervention:**

- Limit enrollment in saturated fields.
- Offer financial incentives for in-demand fields.

- **Improved information:**
- Provide students with better labor market data.

- **Steering educational institutions:**
- Adjust funding based on programs offered to better align with job market needs.

The study suggests that Kutch University, and India as a whole, might benefit from these strategies to ensure graduates have the skills employers seek.

**14. Agrarian Alchemy: Relevance and Determinants of Farm Incomes in the Indian Context**

**Parkhi Agarwal∗† Supriyo Mondal**

This study explores factors influencing farm incomes in India.

**Key Findings:**

- **Government schemes:** Access to credit (Kisan Credit Card) and soil health knowledge (Soil Health Card) positively impact farm income.
- **Investment:** Higher capital expenditure by farmers leads to long-term income benefits.
- **Risk Management:** Crop insurance (PM Fasal Bima Yojana) is crucial, but associated with lower income due to riskier crops being insured.
- **Land Distribution:** Unequal land ownership hurts marginal farmers' income.
- **Irrigation:** Larger and irrigated landholdings lead to higher income.
- **Social Factors:** Socially excluded groups require support due to low income.
- **State-level variations:** Significant income differences exist within states, requiring further research.

**Overall:** The study highlights the importance of various factors like government support, investment, risk management, land ownership, and social inclusion in improving farm incomes in India. It emphasizes the need for state-specific analysis to understand regional variations.

**15. General Equilibrium approach to evaluate economic growth and welfare policy analysis: Network and meta-analysis in a systematic review.**

**Parthasarathi Sahu1 , Dr. Rishman Jot Kaur Chahal**

This paper examines the use of a General Equilibrium (GE) approach for economic policy analysis.

**Background:**

- Traditional economic policy analysis often uses a partial equilibrium approach, which focuses on a single market or sector.
- GE analysis considers the entire economy and the interconnectedness of different markets.
- There's a growing interest in using GE for policy analysis, but a gap exists regarding income impacts.

**Study Objective:**

- This research aims to systematically review GE models (specifically Computable General

Equilibrium or CGE models) to understand their effectiveness in analyzing income generation from policies.

**Key Findings:**

- CGE studies suggest an average increase of 0.23% in GDP and 0.47% in household income.
- Policy effectiveness can vary by:
  - Policy type
  - Geographic region
  - Model characteristics (static vs. dynamic, multi-country)
- Welfare gains tend to be higher:
  - Over longer simulation periods
  - In multi-country studies
  - When considering increased agricultural productivity
- Allowing substitution between domestic and imported goods might negatively impact income (needs further investigation).

**Overall:**

The study suggests that CGE models are a valuable tool for understanding the income impacts of economic policies, particularly when considering long-term effects and broader economic interactions. It highlights the importance of model characteristics and simulation design in interpreting CGE results.

**16. Gig Workers in India: Navigating Challenges and Government Initiatives in the Dynamic Landscape of Platform Employment**

**Rutvikkumar D Makwana and Virendra Balaji Shahare**

This article discusses challenges and opportunities for gig workers in India.

**Key Points:**

- **Challenges:**
  - Lack of clear regulations and worker rights
  - No social security benefits (pension, health insurance)
  - Difficulty for women to enter the gig workforce safely
- **Government Initiatives Needed:**
  - Clear regulations protecting worker rights
  - Social security programs for gig workers
  - Investment in training and skill development
  - Incentives for companies with good worker welfare practices
- **Role of Labor Unions:**
  - Advocate for worker rights and fair treatment
  - Push for government policies that benefit gig workers

**Overall:**

The gig economy can offer opportunities, but India needs better regulations and support systems to ensure fair treatment and well-being for gig workers. Collaboration between the government, labor unions, and gig worker associations is crucial for a thriving and sustainable gig economy.

## 17. GROWTH OF RURAL EMPLOYMENT IN INDIA
**DHANUNJAYA BANDARI**

This article highlights the importance of rural employment growth in India.

- **Challenges:** Limited job opportunities outside agriculture.
- **Solutions:**
  - **Diversification:** Promote rural industries, handicrafts, and small businesses.
  - **Skill Development:** Train rural youth for market-relevant skills.
  - **Microfinance:** Empower rural entrepreneurs through financial inclusion.
  - **Digitalization:** Leverage technology for e-commerce, digital services, and agri-preneurship.
  - **Migration Management:** Implement policies to ensure rural-to-urban migration benefits both areas.

**Overall:** Expanding rural employment is crucial for India's economic and social development. It requires ongoing efforts from all stakeholders to create a prosperous future for rural India.

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