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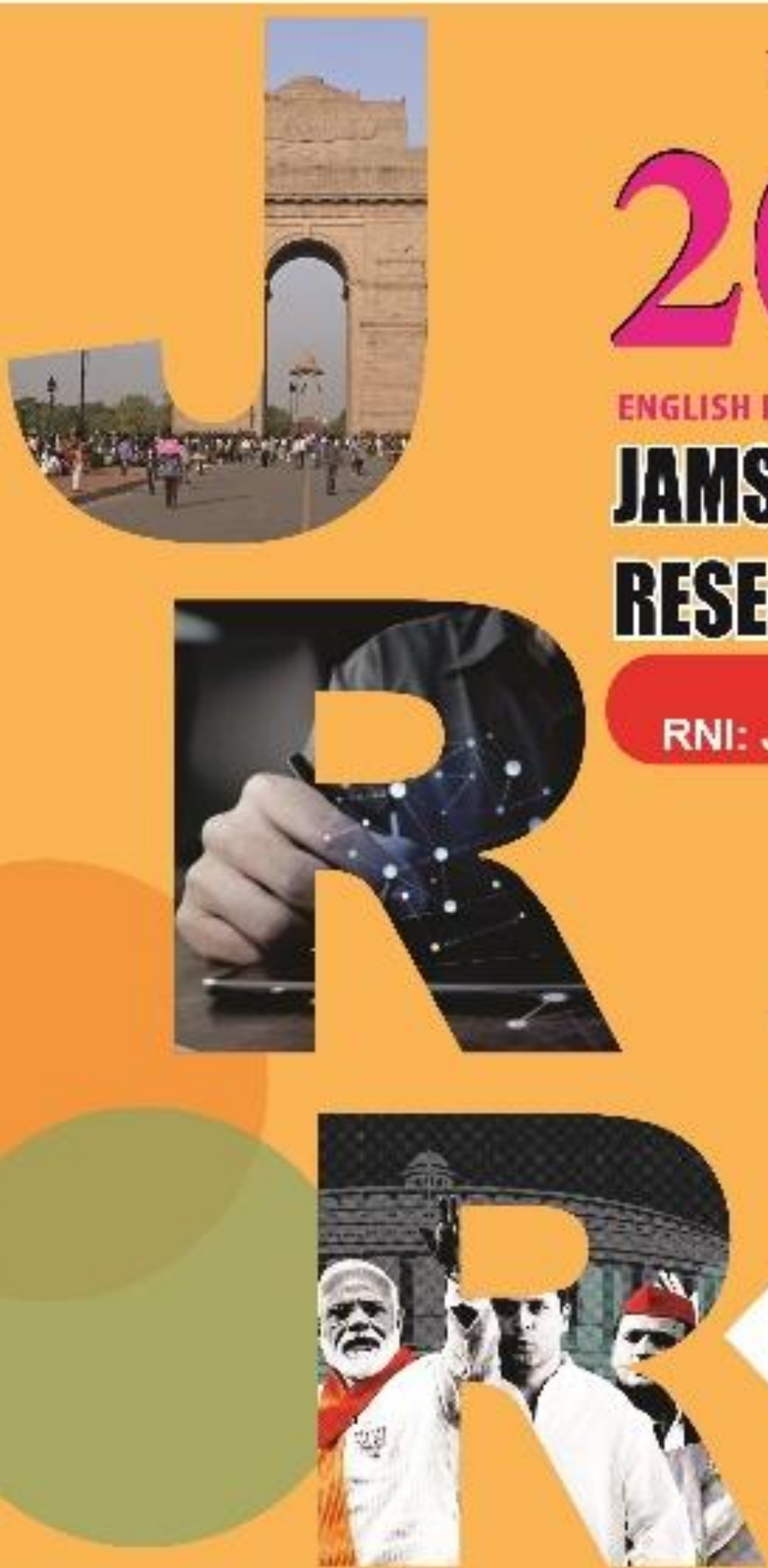

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- **Our aim is to promote knowledge and information through publication that are socially relevant, locally need based, nationally important and globally significant.**
- **The Journal aims to integrate and promote new ideas, concepts and practices, for public welfare and strengthening the civil society.**

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GUIDELINES FOR AUTHORS

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Editorial

Our noble endeavor is to spread the light of education in the society. Hundreds of people sitting in every nook and corner of the country are working through JRR to bring about a meaningful change in the world. They are all unknown faces to us. But these stranger authors are giving identity and identity to this research journal.

Kafka says – You do not need to leave your room. Remain sitting at your table and listen. Do not even listen, simply wait, be quiet, still and solitary. The world will freely offer itself to you to be unmasked, it has no choice, it will roll in ecstasy at your feet.” We understand the fact that how important it is to organize, write and explain for change. An article should be the axe for the frozen sea within us. Our writers and readers are breaking the ice of ignorance in this world.

Like a key to unknown chambers within your own palace. Kafka says, - “like a key to unknown chambers within the castle of one’s own self.” He says, I think we ought to read only the kind of books that wound or stab us. If the book we're reading doesn't wake us up with a blow to the head, what are we reading for? So that it will make us happy, as you write? Good Lord, we would be happy precisely if we had no books, and the kind of books that make us happy are the kind we could write ourselves if we had to. But we need books that affect us like a disaster, that grieve us deeply, like the death of someone we loved more than ourselves, like being banished into forests far from everyone, like a suicide. A book must be the axe for the frozen sea within us.

We can't make you understand. We cannot explain to anyone what is happening inside us. We can't even explain it to ourselves. But when we pen down our curious interpretations, things seem relatively simple to others. Most of us write differently than we speak, we speak differently than we think, we think differently than we ought to think, and so all our literary hard work goes into the deepest darkness. Perhaps that is why Gita says, equality in mind, action, speech will be declared. If there is a conflict between these three, then we will behave like devils. *कर्मणा मनसा वाचा यदभीक्षणं निषेवते। तदेवापहरत्येनं तस्मात् कल्याणमाचरेत् ॥* what we constantly think about in mind, word and deed attracts us. That's why we should always observe auspicious things.

As a writer, our writing must be a meaningful expression of the feelings of the heart. This is the heart of writing and also the ultimate religion.

Dr. M.K Choubey

20 April 2023

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CHALLENGES OF MILLETS REVOLUTION: INDIAN PERSPECTIVE

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Abstract-United Nations General Assembly (UNGA) declared 2023 as the International Year of Millets. It was an Indian initiative. The IYM 2023 celebration is an opportunity for India to promote nutri - cereal millets globally and place them in the world's food map. Millets are some of the earliest cultivated grains, dating back to the prehistoric age. The millet revolution has the potential to be a transformative force in India, offering a healthier, more sustainable and more equitable food system. India is the largest producer of millets in the world. Millets are the future of agriculture. Millets are high in Protein, fibre, essential vitamins, and minerals. They are renowned as a nutritional powerhouse. Millets are gluten-free and have a low glycemic index. They protect us against many vitamin and mineral deficiencies. The renewed focus on millets is seen fuelling a startup revolution and creating new jobs. The millets have been reduced to "orphan crops" over the years, planted largely in marginal areas prone to moisture stress. Promoting millets could help governments save expenditure on health and nutrition. But for the sake of improving India's nutritional intake, let us hope it happens sooner rather than later. Our vision is to bring awareness about our ancient nutritious millet culture through ready to eat food products. Indian can secure a brighter future for its people, in which food is plentiful, nutritious and accessible to all.

Keywords: Millets, Sustainable, Nutritional security, Awareness, Producer

Introduction

Millets popularly called "Mota Anaj" in Hindi, are collective group of small-seeded annual grasses that are grown as grain crops, primarily on marginal land in dry areas of temperate, sub-tropical, and tropical regions. They are one of the ancient foods dating back to the Indus Valley Civilisation, around 3000 BC. They are grown in almost 131 countries today. Currently, millets constitute the traditional food for 59 crore people across Asia and Africa.

In India, millets can be clubbed into major, minor and pseudo categories:

1. **Major Millets:**Sorghum (Jowar), Pearl Millet (Bajra), Finger Millet (Ragi/ Mandua)
2. **Minor Millets:** Foxtail Millet (Kangani/Kakun), Proso Millet (Cheena), Kodo Millet, Barnyard Millet (Sawa/Sanwa/Jhangora), Little Millet (kutki)
3. **Pseudo Millets:** Buck-Wheat (Kuttu) and Amaranath (Chaulai) [1]

Millets have been staple foods for people in Asia and Africa for over 10,000 years. The earliest domesticated millet is the proso millet which was found way back in the Neolithic era over 7,000 years ago. The proso millet originated in China around 3000 to 4000 BC. By the Zhou dynasty, millets were the most Prevalent grain, spreading into northern China and becoming the dominant crop in other regions too. Then came the foxtail millet which, like proso, had a migratory route into Eurasia - we can trace its cultivation to about 6000 BC. Early, Egyptians also grew these 3000 BC, cultivating them in dry conditions, millets becoming a source of subsistence farming strategies. Millets were also grown in Japan and Korea during Japan's Jomon period around

4000 BC. From there, they were mixed into multi-cropping. In the Neolithic era, these became domesticated to give humans an extended growing season as these were suited to all weather conditions. The millet thus became a staple for our ancestors, providing food security.

In India too, the proso millet was the earliest such crop - it is said to date back even to the Pre- Harappan Period or around the first half of the second millennium BC, grown widely in Gujarat, etc. These crops became the most expansive cereals in geographical terms, found from China to Eurasia and Egypt, included in the Roman diet and grown in Japan, Korea, India and the United States. The domestication of sorghum, pearl and finger millets started in Africa some 5,000-6,000 years ago while kodo, little and browntop millets originated here and are called the heritage crops of India.[2]

Kalidasa, in his legendary literary masterpiece 'Abhijnana Shakuntalam,' has sage Kanwa pouring foxtail millet while bidding farewell to Shakuntala in Dushyant's court, which indicates the auspicious nature attributed to this millet. There is mention of Yajur Veda's verses. Sushruta in his Samhita classified cereals as dhanya varga, khudhanya Varga and samidhanya varga where Khudhanya varga included various millets.

'Ragi thandheera,' a composition in Kannada, written by Purandara Dasa highlights the importance of finger millet (ragi) during his times. Another Kannada poet Kanakdasa personified ragi as the weaker sections of society through his metaphoric creation 'Ramadhanya Charithre,' which showed its conflict with the 'mighty' rice and gave a powerful social message. Kautilya's Arthashastra has a mention of various millets and their various properties when soaked or boiled. Ain-i-Akbari, written by Abul Fazl, records millets and their cultivating regions. It is said that Mughal king Jahangir was fond of 'laziza', a form of bajra khichri, mixed with peas, which has its roots in Gujarat.[3] There are many old Indian sayings that highlight the climate resilience of millets. On such saying is,
साँवा साठी साठ दिन, बरखा बरसे रात दिन ।
Even if it rains day and night, Sanwa (Barnyard Millet) and Saathi (a variety of rice) will grown in sixty days.

Millets also find mention in the Krishna-Sudama meeting in Srimad Bhagwat, a religious text, where on return from Dwarka, Sudama is surprised to find his home resplendent.

He reflects that,
कै जुरतो नहीं कोदो सवाँ, प्रभु के परताप तें दारव न भवत ।
Earlier it was difficult for him to even afford grains like Kodo and Sanwa (Barnyard millet) but now they have all kinds of delicacies.

Another folk saying tells us about the ways of consumption of different types of millets.

मड़ुआ मीन, चीन संग दही, अ कोदो के भात, दूध संग सही ।

Finger Millet with fish, Proso millet with curd and Kodo millet rice will best be digested with milk.

Apart from the above references, cultural customs also reflect the prevalence and usage of millets. Millets are used for fasting purposes, songs sung by women during sowing and harvest times mention millets and in many communities, they were also used to bless the bride and groom during marriage ceremonies.[4]

Prime Minister Narendra Modi recently inaugurated a global conference on millets, extolling them as the "door to prosperity" for India's marginal farmers, the "cornerstone of nutrition," and as a potentially ally against "climate change." The United Nations has declared 2023 as the International Year of Millets and Finance Minister Nirmala Sitharaman, in the Budget speech in February 2023, singled them out as "Shree Anna" - roughly translated as the 'best among grains'- adding that the Indian Institute of Millets Research in Hyderabad would be supported as a centre of excellence.

Benefits of Millets -Millets are both eco-friendly and healthier than more commonly consumed grains. They require much less water than rice or wheat, and can be grown in rain - fed areas without irrigation. Belonging to the grass family, millets tend to be more tolerant to drought and extreme weather, and can grow in poor soil and in hilly areas. Millets can be a healthier option to keep lifestyle diseases such as obesity and diabetes at bay. Switching out the regular grains can be especially beneficial in India, which is considered to be the diabetes capital of the world. It is projected that the country will have 69.9 million diabetics by 2025. Indians are also at a high risk of cardiovascular diseases at a young age. Millets are also high in fibre content that is known to improve gut microbiota. They result in satiety faster and keeps people fuller for longer, thereby reducing the amount of food consumed.

They are rich in micronutrients such as iron and zinc, which can help reduce the country's burden of anaemia. The incidence of anaemia increased from 58.6% to 67.1% in children ages 6-9 between the two rounds of the National Family Health Survey in 2015-16 and 2020-21. In women ages 15-49, it increased to 57% from 53.1%.[5] Scientific evidence shows that millets reduce the following:

- Iron deficiency anaemia,
- Risk of type II diabetes,
- BMI and obesity,
- Calcium deficiency, and helps with hyperlipidemia.

Millets are also found to help overcome malnutrition. For instance, iron content per 100 grams of grains in bajra is 6.42 mg, in ragi it's 4.62 mg, wheat has 3.97 mg and rice just to 0.65 mg. There is a renewed interest in millets as the awareness about their health and nutritional benefits has spread in the last decade along with the realisation of consequences of restricting staple food intake to rice and wheat.[6]

What about millets and diabetes?-A 2021 meta-analysis showed that millets may help lower the risk of developing Type 2 diabetes and the HbA1c count in individuals with diabetes. That is because these grains have a lower glycemic index or GI, an index used to score how quickly a food raises blood glucose levels. The lower GI of millets is principally because of their high fibre content. They are absorbed slowly and produce a feeling of satiety earlier than refined grains. Even when added to meals, millets reduce post - meal blood sugar spikes. Long term millet consumption in diabetes lowered fasting and post- meal blood glucose levels by 12 to 15 per cent. There was a reduction in HbA1c level (from 6.65 to 5.67 per cent) among pre-diabetic individuals, who consumed millets for a long period. Minimally processed millets were 30 per cent more effective in lowering GI of a meal compared to millet rice and refine wheat. Millets can also lower cholesterol absorption and hence reduce the risk of heart disease. So, if you have diabetes or want to reduce your chances of developing it, using millets in place of refined wheat or white rice as your meal staple is a great choice.

Jowar contains slowly digestible starch (SDS) which delays carbohydrate absorption. Besides the fibre, vitamin E, phenolic compounds and tannins have anti-oxidant properties. Human studies have shown that jowar-based foods reduce the post-meal spike of blood glucose in diabetes. In addition to the generic properties of millets, bajra may reduce triglycerides too, due to the presence of vitamin B3 (niacin). Ragi contains slowly digestible starch which, like jowar, delays carbohydrate absorption. Besides, Polyphenols in ragi inhibit the enzyme aldose reductase, which could reduce diabetes complications.[7] Millets are gluten-free and perfect substitute for wheat. In general, they contain 7-12 per cent protein, 2-5 percent fat, 65-75 percent carbohydrates and 10-12 percent fibre. It's never easy to change one's staple cereal but this is the high time to give millets a trial on your plate.

On the other hand, it you are going to consume millets in unrestricted amounts, you will lose out on any nutritional gains, Dr. Mithal said. Also the grains should not be polished or processed like rice or wheat - doing so will raise their glycaemic index, and benefits will be lost.

Production and consumption of Millets - Anna Gibbs, who was an intern of Science News, writes in the May 9, 2022 issue that **"**no matter how you slice it, climate change will alter what we eat in the future.**"** Half of all calories consumed by humans come from maize, rice and wheat. We depend on 13 crops for 80%, of our nutritional needs. Their inventories will dwindle as climate change leads to erratic rainfall and weather extremes. There is a need for growing hardier species to help secure our needs, which is why millets are gaining significance.[8]

According to the World Food Programme, there are an estimated 1.2 billion people who consume millet as a part of their diet. Millet production has remained stable over the past few years, with an estimated production of 28 million metric tonnes in 2020. While millet is not a major food crop in the developed world, it plays a vital role in the diets of many people in developing countries. In India millet production has been on the rise in recent years. India is one of the largest producers of millets and Indian farmers have been increasingly planting millet as a drought-resistant crop. The Indian government has also been promoting millet production as part of its National Food Security Mission. Millet production in India is expected to continue to grow in the coming years.

Food security is still a concern for the planet and this is the need of the hour to make millets the food choice for the future. Prime Minister Modi said, **"**Climate Change can also impact food availability. At such a time, a global movement related to millets is an important step, since they are easy to grow, climate resilient and drought resistant.**"** He also said, **"**While institutional mechanisms can encourage production of millets and make it profitable via policy initiatives, individuals can make health-conscious and planet-friendly choices by making millets a part of their diet. There is a need for diversity on the land and on our tables. If agriculture becomes monoculture, it impacts our health and the health of our lands. Millets are a good way to increase agricultural and dietary diversity.**"**

In 2019-20, the total offtake of cereals through the Public Distribution System (PDS) and the Integrated Child Development Scheme (ICDS) and also school meals was around 54 million tonnes. If about 20% of rice and wheat were to be replaced by millet, the state would have to procure 10.8 million tonnes of millet. It would greatly benefit the health of school children in their midday meals.

In 2019-20, the total production of nutri-cereals (earlier called coarse cereals) was 47.7 million tonnes. The bulk of this was maize (28.8 million tonnes), a non-millet crop used mainly as feed (M.S. Swaminathan had suggested that coarse cereals be replaced by nutri- cereals). The production of sorghum (4.8 million tonnes), pearl millet (10.4 million tonnes), and finger millet along with other millets (3.7 million tonnes) put together was 18.9 million tonnes. With this production, the inclusion of millets in the PDS would only be feasible if more than 50% production were procured - an unlikely scenario. Currently, millets are procured in only a few States, and stocks in the central pool are small. In May 2022, central stocks had 33 million tonnes of rice and 31 million tonnes of wheat, but only four lakh tonnes of nutricereals.

The real problems are: first, the decline in the area under millet cultivation, and, second, the low productivity of millets. Over the last decade, the production of sorghum (jowar) has fallen, the production of pearl millet (bajra) has stagnated, and the production of other millets, including finger millet (ragi), has stagnated or declined. The productivity of jowar and bajra has increased, but only marginally. The average yield of jowar was 957 kg per hectare in 2011-12 and 989 kg per hectare in 2019-20. The yield of bajra was 1,079 kg per hectare in 2010-11 and 1,237 kg per hectare in 2017-18.[9]

In the 2022-23, for the current Kharif Marketing Season, the Ministry of Consumer Affairs, Food and Public Distribution had approved a quantity of 13.28 LMT of millets and coarse grain including bajra, jowar, ragi and maize, to be procured from 9 states - Haryana, Karnataka, Maharashtra, Madhya Pradesh, Uttar Pradesh, Gujarat, Uttarakhand, Tamil Nadu and Andhra Pradesh.

Procurement has been so far slow across all the 9 states. For instance, the sources said, of the total procurement target, the government had aimed to procure the highest quantity- 7 LMT (2 LMT jowar and 5 LMT ragi) from Karnataka. Now, the expectation has been lowered to 6 LMT (jowar 1 LMT and ragi 5 LMT). Similarly, from UP, against the approved quantity of 1.5 LMT, the expected procurement is only 0.43 LMT. In Madhya Pradesh, procurement of jowar and bajra is expected to remain at 258 metric tonnes against 1.80 LMT. The situation is no different in Gujarat and Maharashtra. Only 766 metric tonnes of maize and bajra is expected to be procured from Gujarat, against the approved quantity of 30,000 metric tonnes. In

Maharashtra, the combined procurement figure of jowar, bajra, maize and ragi is expected to remain only 1,698 metric tonnes against an approved quantity of 61,075 metric tonnes.[10]

The government has been rallying behind millets, dubbed as 'Shree Anna,' to boost consumption and to make India a global hub for millet crops. In her budget speech, Finance Minister Nirmala Sitharaman said millets have been "an integral part of our food for centuries." The fall in expected procurement target this marketing season could prove to be a challenge.

However, millets aren't the first choice either of consumers or of farmers, aspiration foods. But thanks to the green revolution and National Food Security Act, two third of India's population receives up to 5 kg of wheat or rice per person per month at Rs 2 and Rs 3 kg respectively. The Modi government has, in fact, made the issue of the two fine cereals free of cost from further titling the scales against millets.

Even for the better-off, rolling roties is easier with wheat than millets flour. This is because the gluten proteins, for all their drawbacks, make the wheat dough and elastic. The resultant bread comes light and puffy, which isn't the case with bajra or jowar. For farmers, low per-hectare yields - the national average is roughly 1 tonnes for jowar, 1.5 tonnes for bajra and 1.7 tonnes for ragi, as against 3.5 tonnes for wheat and 4 tonnes for paddy-are disincentive. With access to assured irrigation, they would tend to switch to wheat, sugarcane, or cotton. The Indian Agricultural Research Institute has bred Pusa - 1201, a hybrid bajra that gives an average grain yield of over 2.8 tonnes and potential of 4.5 tonnes per hectare. It matures in 78-80 days and is resistant to downy mildew and blast, both deadly fungus diseases. The grains have 23-14% protein, 55 mg/kg zinc (normal level is 50 mg/kg) and 48 mg/kg zinc (normal: 35 mg/kg).[11]

Initiatives in India-In the Union Budget 2023 announced on February 1, Finance Minister underlined the centre's focus on promoting millets. In essence a humble grain, millets, once the staple of India's diet in the ancient medieval eras, have been constantly outshone as mass-scale adoption of rice and wheat overtook India's food discourse through the modern centuries. While undoing decades - old eating habits is no mean feat, this brings hope to thousands of cultivators, advocates, chefs and experts-alongside underlining the promise of millet exports from India building a billion-dollar export economy.

Bolsters for the homegrown millet economy, however, are not entirely new. In the 2022 Union Budget, Finance Minister spoke about the governments intent to focus on millets. Three key areas were highlighted - enhancing local production, efficient marketing on domestic and global stages, and adding post-harvest value.[12]

"MIIRA" or Millet International Initiative for Research and Awareness will be aimed at coordinating millet research programmes at the international level. While the main G20 Summit will be held on September 9-10, 2023 in New Delhi, sources said India's Presidency year will also see five meetings on agriculture: three of Agriculture Deputies, one of Chief Scientists, and one where the Agriculture Ministers of all G20 countries will gather. "MIIRA will be launched keeping in mind the nutritional value and the climate resilient nature of millets", adding a draft charter of the initiative is ready and will be placed for approval at the first meeting of the Agriculture Deputies from February 13-15 at Indore. According to the sources, MIIRA will aim to connect the millet research organisations across the world while also supporting research on millet crops. Besides setting up a web platform to connect researchers and holding international research conferences, the plan is also to promote millet consumption by raising awareness. For MIIRA to take off, India will contribute the "seed money" while each G20 member will later have to contribute to its budget in the form of a membership fee. The MIIRA secretariat will be in Delhi, the sources said, adding that this will, with India being a major producer of millets, ensure a flow of investment from the country's industry and research bodies.[13]

The Government is also enabling startups for the export promotion of value-added products like noodles, Pasta, breakfast-cereal mix, biscuits, cookies, snacks, and sweets in the Ready to Eat (RTE) and Ready to serve (RTS) categories. For this the Ministry of Commerce has made necessary policy amendments.

The year 2023 has been designated as the International Year of Millets, providing an excellent opportunity for Indian entrepreneurs to enter the global market. More than 500 startups in India are working in the millets value chain, of which 250 startups have been incubated by the ICAR- Indian Institute of Millets Research under RKVY-RAFTAAR. To promote millet consumption, the Government is assisting startup entrepreneurs with recipes and value-added products. More than 66 startups have been given more than Rs. 6.25 crore, while 25 startups have been approved for additional funding.[14]

Many states have included Millet in the National Nutrition Mission and Mid - Day Meal Scheme. Andhra Pradesh Chief Minister launched the programme of serving ragi malt to the students in government and aided schools in the state as part of the midday meal scheme. Rajasthan government is also considering a proposal to include millets in mid-day meals programme for schools and anganwadi centres.

The Indian Army is set to introduce millets flour in the rations of soldiers and has sought the Union government sanction to procure millets flour not exceeding 25% of the authorised entitlement of cereals (rice and wheat flour), in rations for troops commencing from the financial year 2023-24 onwards. Stating that procurement and issue will be based on option exercised and quantity demanded, the statement said three popular varieties of millets flour- bajra, jowar and ragi- will be issued to troops duly considering preference. Millet foods are being introduced through CSD (canteen stores department) canteens as well as dedicated corners being set up in shopping complexes.

As the government promotes the production and consumption of millets - in his Mann Ki Baat address, Prime Minister Narendra Modi said every G20 summit event in India would feature millet dishes - Lok Sabha Speaker Om Birla has sought a special millet menu for Members of Parliament, who will now get to choose from the new menu, besides the old one. The millet dishes will be available in all Parliament canteens and will be delivered to MPs in the Central Hall. The menu has been prepared by ITDC's Montu Saini who was executive chef for five-and-a-half years with Rashtrapati Bhawan, serving during the tenures of both Pranab Mukherjee and Ram Nath Kovind. ITDC has been running Parliament's canteens since 2020.[15]

There are encouraging signs that the government has recognised this: A press release put out by the Ministry of Agriculture at the start of the year mentioned that there would be efforts to involve local restaurants and food bloggers in the national millets campaign. If the year-long efforts help in restoring millets to their proper place in the daily diet of Indians, the government can also consider reviving and promoting the incredible varieties of indigenous rice, wheat and other crops.

Conclusion and suggestions-

The government's push to mark 2023 as an International Year of the Millet - a move backed by over 70 nations at the United Nations - could prove to be a seminal moment. Experts, however, state that it is not just about finding the right marketing but also about survival in the decades to come. An academician and food anthropologist, Mumbai-based Kurush F Dalal says, **"**The rate of growth of food production in India is going down. With that, our population and consumption are going up much faster. Somewhere around 2035, about 12 years from now, these two graphs are postulated to meet. If that happens, researchers warn that this could raise the alarm of food riots in our country by 2050. The only way to stop this is with millets.**"**

The promotion of millet production and consumption will largely benefit India's small and marginal farmers and would encourage them to re-engineer their farming systems and practices, knowledges and food production, consumption and distribution eco-system. To ensure the vision of health for all and nutritional food for all, there is a need to take immediate actions on (a) identification, preservation, sharing and multiplication of quality seeds of millets by the help of community seed cooperatives; (b) creation of incremental and specialised seed cooperatives or seed collectives right at the village level; (c) setting up of small scale seed processing, manufacturing, packaging units; (d) strengthening and expanding seed distribution network, etc.[16]

GOI's is to further position India as a global hub for millets. Right global branding of 'Shree Anna' has the potential to support the country's 2.5 crore farmers whose livelihoods depend on growing millets. India's millet products in international markets will expand this 'millet economy' and provide a new revenue stream for the industry. Consumer companies can engage people by encouraging them to include more millets in their meals. 360-degree marketing initiatives, public relations, advocacy, participation in food festivals, and use of digital channels are some of the key tools to drive this change. The big switch to healthier 'Shree Anna' may take time. But with the power that consumer sector companies yield in influencing change, compounded with Gol's earnest efforts in taking millets from farm to fork, this will only mean a healthier population, environment and economy.[17]

Prime Minister Narendra Modi inaugurated the Global Millets Conference in Pusa, New Delhi, March 18, 2023 and said that coarse grains, locally named Shree Anna, can be a solution for the problem of food and nutritional security faced by the world. "India's G20 presidency is about one Earth, One Family, One Future and this is reflected in the country's advocacy of millets for global sustainable agriculture," the PM said, addressing scientists, international farm organisations, heads of states, representatives and ministers of six countries such as Sri Lanka, Sudan and Guyana. He added, "To make Shree Anna is a global movement, we have worked relentlessly. In 2018, we declared millets as nutri-cereals. To achieve this, we made farmers aware and generated interest in the market." He further said, "India's Millet Mission will become a blessing for 2.5 crore marginal farmers. After independence, this is for the first time that a government is paying attention to the needs of millet-producing farmers." He further added, "In India, millets are primarily grown in 12-13 states. However, in these states, the domestic consumption per person was not more than 2-3 kgs per month. Today, it has increased to 14 kg per month." President of Guyana Mohamed Irfan Ali said: "India has assumed global leadership in promoting the cause of millets and in doing so it is placing its expertise for the use of the rest of the world."

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CHALLENGES AND INITIATIVES FOR TEACHING LEARNING IN PRIMARY EDUCATION DURING COVID-19 PANDEMIC

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Abstract- The present study was conducted on challenges and initiatives taken by the stakeholders during Covid to continue education at primary level in Odisha, India. Survey was conducted on stakeholders such as head teachers, teachers, parents and students about the challenges and initiatives taken during Covid. The sample for the present study consisted of two districts, four blocks, 40 primary schools, 40 head teachers, 80 teachers and 240 parents and 400 Students. Sample for this study was selected by using a random sampling method. Interviews for head teachers, teachers, parents and Focused Group Discussion for students was used as a tool for the data collection. The interview covers all the aspects of teaching learning such as digital gadgets, operational ability, network issues, e-contents, mental health etc. Collected data were analyzed thematically and presented in paragraphs. The study found many challenges such as lack of digital devices, lack of competency, poor network, lack of e-contents, fear of Covid, learning loss etc. faced by stakeholders to continue education during Covid-19. The Government of India and Odisha has taken initiatives such as PM eVidya, DIKSHA, YouTube Channels, Madhu App, WhatsApp groups, development of e-contents, online training to teachers, home visit of teachers, community teaching etc. to facilitate learning. The challenges have implications for the Government to provide necessary digital infrastructure in each and every school. The Government can take initiatives through corporate society to provide mobile networks in every habitation especially in rural and tribal areas.

Keywords: Primary Education, Challenges, Initiatives, Covid, Digital Devices, Online teaching,

Conceptualization of the Problem- The foundation for preparing kids for the future is laid by primary education. For this reason, primary education has been made as a universal right and is required in the majority of nations. At this young age, children's character development begins, which encourages a learning mindset in them. Different commissions and committees on education in India have stressed on the importance of primary education. Kothari Commission (1964-66) has stated that the destiny of India is being shaped in her classroom. It has given the idea of free and compulsory education of children under the common school system to bring different groups together to promote integrated society. The National Policy on Education (1986) and Programme of Action (1992) have laid emphasis on Universalization of Elementary Education (UEE) to achieve the goal of universal access, enrollment and retention. The National Curriculum Framework for School Education (NCFSE) 2000 has emphasized on UEE by providing quality education, growth of children in a multi-dimensional way. The National Curriculum Framework (NCF) 2005 observed that 'the period of elementary education is one of tremendous cognitive development, shaping reason, intellect and social skills as well as the skills and attitude necessary for entering the workplace'. The stress was given by the 12th planning commission to reduce gender and social gap in school enrolment among the students, promote quality education and teachers training for the overall development of the child. The Right of Children to Free and Compulsory Education Act 2009 recommended elementary education in neighborhoods for all children from 6-14 years of age. Accordingly, the Government of India and different states have taken systematic and planned efforts to achieve 100% literacy through free and compulsory education for children from 6 to 14 years. The Covid-19 has a great impact on the learning of younger kinds as schools are closed.

The Covid-19 Pandemic, which could only be foreseen through science fiction, film screenplays, and books, has altered daily life, caused widespread disease and death, and prompted preventive measures like social isolation, incarceration, and school closures (Pacheco, 2020). It has significantly harmed persons who provide important services and those who are unable to work remotely. As Government block borders and airports lie vacant, the Pandemic has become the most visible symbol of both globalization and delocalization. There are no arrivals or departures, nor are there any delays. Nothing was prepared for the changes that had occurred. The global Pandemic has caused havoc on one of the most critical systems: education. Education is certainly important in contributing to the well-being of a country and the development of an individual, but it has been compromised by the rise of Covid-19. It has had a huge impact on the lives of millions of kids (Rodricks, 2021). There have been a number of severe targets that have had to be met since the lockdown was implemented.

Most administrations initially opted to temporarily close schools in order to mitigate the impacts of Covid-19, and then they were opened for some grades, which increased the frequency of infection rates, and then they were closed again (Suresh, 2021).

The outbreak has disrupted time's rhythm and ruined what used to be usual. It is the emergence of an incident that refreshes time, generates major breakages and instabilities, and results in a contingency that becomes a reality. Students' academic performance is being harmed as they struggle to adjust to the new mode of learning due to widespread fear of the Covid-19, administrative confinement, and delays in resuming the traditional routine of education centers (Singh & Quraishi, 2021). Despite schools being closed, students are still attending lessons through other education efforts such as online classrooms, TV programmes and radio programmes. Teachers who are experts in Blackboard, Chalk, books, and classroom instruction are all new to digital education, but they are adjusting and handling it like a pro to benefit students in their current circumstances.

School closures led to substantial learning losses that urgently need to be recovered to prevent lasting impacts on student progression, human capital formation, and livelihoods. Learning gaps is the difference between what a pupil has learned and what they should have learnt at a certain point in their schooling. While some learning gaps could be minor and reasonably easy to close (like when a student is absent from class for one day due to illness), others might be more problematic and cause significant learning losses or academic setbacks. A learning gap, to put it simply, is a discrepancy between what a pupil has actually mastered and what is anticipated at their specific grade level. A student may experience learning gaps in all or part of their curriculum. The education of a pupil builds upon earlier ideas like blocks. We can't keep building if the lowest foundational blocks are missing. A pupil cannot continue to create and understand more complicated concepts if they have learning gaps. Learning gaps has a snowball effect, getting worse as time passes and becoming a bigger issue. For instance, failing to attend elementary school's core reading comprehension sessions would eventually result in difficulties with middle school or high school students. The Covid-19 has widened the learning gaps in all areas of learners' development. The Govt of India and Govt of Odisha had taken different digital initiatives during covid such as DIKSHA ,e-Pathasala, PM eVIDYA, e-Yantra, National Digital Library, e-Gyankosh, NROER, Virtual Labs, Shodhganga, Odisha Shiksha Sanjog group, Madhu App to continue education during Covid. Aside from these digital portals and repositories, numerous online technologies have been used by various schools and institutions throughout Pandemic to efficiently conduct online lessons. Among these online platforms are ZOOM, Google Meet, Skype, Web Conference, WebEx Meet, and others (India TV, 2020). Furthermore, during the Covid crisis, messaging apps like WhatsApp and Telegram helped to encourage remote online education and information exchange.

Need of the Study- The spread of Covid-19 has forced the Government to close the schools and shift teaching learning from offline to online mode. It has been widely reported in different media about the digital divide in rural and urban learners due to many and varied reasons. So, unavailability of digital devices and networks in all areas and sections of children, resulted in poor learning. It is accepted by all researchers and administrators that the Covid has created gaps in holistic learning. At the end of the third wave, the Government opened the schools and wanted to bridge the learning gaps by organizing learning enhancement plans. In this direction, the first step is to identify the learning gaps in children, especially primary school children so that proper initiatives can be taken by the education authority. Few research studies on learning gaps of primary school students and challenges faced by stakeholders during Covid are available, which are discussed in following paragraphs.

Tang (2023) found online learning has affected educators and learners, especially in relation to learning loss among learners. Debbarma & Durai (2021) revealed that there are many reasons that cause educational disruption in the life of students of north-eastern states of India. Students from the north-eastern states of India have been facing a poor network, which leads to poor communication between the teachers and students. Continuous lockdown also causes mental stress to the students. DIKSHA, VidyaDaan, PM e-Vidya, Swayam Prabha TV Channels for open schools and pre-service education, e-textbooks were the Government e-learning initiatives in India that helped in continuing education during Covid-19 was reported by Singh et.al. (2021). Engzell et al. (2020) reported that students learning loss during the lockdown than typical years across all of the three subject areas math, spelling and reading. Losses are up to 60% larger among students from less educated homes. Jain et al. (2020) reveals that students from economically weaker sections of society have become hard to reach, and teachers do not know how to support & how to-reach students who are also severely affected by the pandemic.

The above discussion indicated that learning loss occurred among students across Globe due to Covid in the different areas of learning. All the stakeholders such as head teachers, teachers, educational functionaries, parents, students faced many and varied problems to continue learning during the Covid. Realizing the significance of the learning gaps during Covid, the investigator has conducted this study to find out the learning gaps in primary school children in holistic development and to find out challenges and innovations done by stakeholders for education. The study would be helpful for the educational authority as well as stakeholders of primary education to formulate and implement learning enhancement plans.

Objectives

- To study the challenges faced by head teachers, teachers, parents and students in teaching learning during Covid.
- To find out the initiatives taken by head teachers, teachers, parents and students to continue learning during Covid.

Methodology- The present study was conducted on challenges and initiatives taken by stakeholders during Covid to continue education at primary level in Odisha, India. The investigator used qualitative survey research design. Survey was conducted on stakeholders such as head teachers, teachers, parents and students about the challenges and initiatives taken during Covid.

The sample for the present study consisted of two districts, four blocks, 40 primary schools, 40 head teachers, 80 teachers and 240 parents and 400 Students. Sample for this study was selected by using a random sampling method. Initially, two districts were selected randomly from 30 districts of Odisha, India. Further, two blocks each from both the districts, 10 schools from each block, all head teachers, two teachers, three parents and 10 students from each school were selected randomly.

Interviews for head teachers, teachers, parents and Focused Group Discussion for students were used as a tool for the data collection. The interview covers all the aspects of teaching learning such as digital gadgets, operational ability, network issues, e-contents, mental health etc. Content validity of tools were ensured by taking experts comments during the tool development. Collected data were analyzed thematically and presented in paragraphs.

Challenges Faced by Stakeholders during Covid

Head Teachers: The majority of head teachers responded that kids didn't have digital devices because of their parents' financial disadvantage when questioned about the difficulties they had during the epidemic in terms of access to gadgets, networks, and electricity. Similarly, network access was a significant problem in rural areas. The network disruption left students quite upset and prevented them from taking part in online lectures. Regarding device use, head teachers claimed that they found it challenging to use them because they were unfamiliar with Google Meet and comparable platforms. They added that all of the youngsters were unable to attend class due to issues of a similar nature that affected the classmates.

Head teachers expressed that they relied on district and state authorities, such as Odisha State Education and Programme Authority (OSEPA), for e-content since they lacked expertise of e-content design, production, and transaction. They ran into various problems with video capture, storage, and editing when they tried to develop e-content. Student involvement in the teaching-learning process was incredibly poor. Home visits and community education failed as a result of contamination worries. Going to the village every day in COVID was taxing.

Due to issues like all students being unable to provide their answers online and challenging to evaluate the answer sheet, a comprehensive assessment of the students' performance was not possible during Covid. Even though teachers were known to offer homework, pupils were unable to turn in the completed worksheets. Due to the absence of mobile phones among the students, head teachers also acknowledged that they occasionally experienced issues with telephone contact.When asked about the obstacles head teachers experienced in meeting the requirements/guidelines provided by the government to continue the teaching learning process during Covid, the head teachers stated that while some kids have smartphones, their parents do not allow them to use them. Head teachers also confirmed that teachers, pupils, and parents had some digital incompetence when it came to using the gadgets because they had not previously used the device for teaching and learning purposes.

About reluctance on part of teachers to follow the guidelines of the government, the head teachers opined that following the guidelines of the govt. was too difficult amongst the teacher, because at that time communication with the students was not easy. Some head teachers also pointed out that teachers were not interested in going to the hilly side villages and areas that cutoff from the mainstream.

The majority of head teachers saw some differences in the holistic development of students in both normal and disadvantaged divisions. Some parents in underprivileged areas are even unable to recharge their phones for their children's education. Some head teachers claimed that the children from general sections learned more effective skills and had better physical health than the disadvantaged sections. A sufficient number of head teachers reported that all students can develop holistically—it is not just the case for underprivileged groups.

Attendance of the students was very low in YouTube classes due to unavailability of smart phone and network. Some students were absent due to family problems and some parents were gone to the village due to their loss of jobs in the town. Only 20 % to 30 % of the students were in touch regularly with the teacher.

Teachers: Some teachers had difficulty giving regular instruction through digital mode due to connectivity concerns. Lack of ICT expertise and students' IT abilities were identified as the key challenges during Covid. Some teachers were unable to deliver books due to the containment zone, and others were unable to leave due to police security.

The personal and social developments of students were also strongly affected due to Covid. Students showed loneliness, lost their reasoning ability, found difficulty in handling problems and their creativity was stopped. Lack of cooperation and adjustment skills was the major characteristic among the students. The motor development of the students is also hampered due to no physical exercise and students become lazy and inactive.

For delivering the classes to the students the teachers used to visit the home of the learners and shared e-contents through WhatsApp groups whereas parents and community members were not cooperative. Therefore it was not possible to cover all the students in a stipulated time. The students of the contentment zone were also deprived from the face to face contact with the teachers.

Students' participation was inadequate because they were not attending online classes and there was little opportunity for discussion. Teachers were unable to attend class due to their fear of Covid and the distance between their homes and the learners' homes. Due to lack of understanding among parents, several pupils did not attend online classes.

Parents: In response to the challenges faced by parents for continuing education of children during the pandemic, the majority of parents stated that they had no smartphone. And those who had smartphones had suffered from poor network connection. Some parents opined that they had only one smartphone in the family for which their wards were not able to get the phone during the working time.

With regard to operating digital devices, the maximum number of parents reflected that they had no issues in operating digital devices but however some parents said they had little knowledge to access the devices. The parents also stated that due to school closure their wards were not able to concentrate on their study at home rather they used their maximum time to play with friends.

Some parents opined that their children were unable to follow lessons properly due to unavailability of devices and poor network connection. On the other hand some children participated actively in the teaching learning process. Children were also tried to do self-study, but the doubt remained unclear since reopening of schools. Parents pointed out regarding the behavior of their ward, their wards becoming undisciplined and those who get smart phones becoming addicted to the games like PUBG, Free Fire and social media such as TikTok, Facebook, and YouTube.

The parents in the context of physical and mental wellbeing of their wards reported that the physical health of the wards was hampered due to not doing enough physical exercise, drill, yoga, and balanced diet. Children showed irritated behavior, anger, became sad, lonely, rigid and fear to mingle with family and community members. The parents too observed a lack of adjustment and cooperation skills among their children. Majority of the parents also reported that the motor development skills of their children were affected.

Students: In the discussion of challenges encountered in accessing devices, networks, and electricity, the majority of students responded that they had issues with mobile devices because their family had one smartphone and they had brothers and sisters who also needed the same phone at the same time. Other students stated that, despite having a smartphone, poor network connection and recharging the phone was a major problem owing to their parents' lack of income. With regard to operation of digital devices, more than half of the students answered that they are acquainted with the smart phone but use of smart phone for learning was a major concern for them. While some students said that their parents helped them to use smartphones effectively.

Within the discussion of support given by the teachers and parents during the Covid for learning, half of the students described that both parents and teachers motivated them to continue their learning and tried to fulfill the gap created due to Covid. Teachers were provided community teaching, online teaching as well as home to home visits. Students also said that they get some amount related to mid-day meals, and teachers tried to give books for all the subjects during their home visits. But few students opined that teachers didn’t take classes on Google meet and Zoom and not provided them information timely through WhatsApp or telephonic contacts. Students are also viewed that parents tried to provide facilities as per their ability. Majority of students indicated that their parents’ guide them in learning at morning and evening time.

When students were asked to identify gaps in their overall development, few students reported that physical health suffered due to lack of physical activity, drill, yoga, and a healthy diet. Students also responded that sometimes they felt sadness, loneliness. The majority of students reported that their motor development skills were affected. In response to achieving learning outcomes (reading, writing, math, environmental studies) students said that their doubts were unclear in different subjects and learning outcomes were not achieved properly.

Initiatives by Stakeholders in Teaching Learning during Covid- School created awareness among parents to support the learning of their children. Teachers also tried to learn computer operating, provide alternative learning and mentorship programmes in order to continue the teaching learning process. Teachers too used to go to the home of the individual learner and provide books and notes to each learner, arranged community teaching. School developed e-contents and uploaded it on YouTube and sent it to the learners in the groups. E-content available in DIKSHA and design by state authorities like OSEPA also shared to the students and parents as well.

For teaching in the 2nd phase of Covid, students were called to the temples, club houses and sat at a distance. However student participation was not so high due to the fear of pandemic. The training of teachers was provided vastly through online. Training like NISHTHA, DIKSHA, MadhuApp, and OSEPA also arranged for all the teachers to develop their competencies and skills during the pandemic.

Teachers use different teaching learning materials and PPTs in the online teaching learning process for achieving learning outcomes. The teachers tried to do home visits and telephonic contact with parents to join WhatsApp groups and YouTube classes to increase the attendance of the students. During Covid period initiatives like community teaching, door to door online YouTube class, and creation of Shiksha Sanjog group, community radio and Swayam Prabha television channel were initiated by the Govt. to continue the teaching learning process. The school prepared many e-contents, accessible TLMs and shared them with the beneficiaries such as teachers, students and community members through WhatsApp groups.

For development of physical health, mental wellbeing and socio-personal development the parents motivated kids to do physical exercises at home, spending time with family and friends, painting, cooking and gardening. In order to reduce stress, anxiety and fear among the children the parents tried to make polite behavior towards their wards. Parents provided mobile and other devices to students. Some students said they were asked to watch lessons uploaded on YouTube from their neighbors or peers. For development of health and wellbeing teachers and parents advised the students to take all the precautions for Corona and did physical exercises. For enhancing learning outcomes, the students said that teachers tried to clear doubts through telephonic contacts and extra classes during home visit and community teaching.

Results and Discussion

The study reflected sets of views of head teachers, teachers, parents and students regarding the challenges faced and innovations developed and used during Covid pandemic. Head teachers and teachers faced many challenges such as lack of devices, operational knowledge, and fear of Covid etc. to provide teaching learning during Covid. Further, they need help from district and state authorities such as District Education Officer (DEO) and OSEPA for e-content since they lacked expertise in e-content design, production, and transaction. They ran into various problems with video capture, storage, and editing when they tried to develop e-content. This is supported by Geven & Hassan (2020) who indicated that teachers are facing technical difficulties in using online platforms for delivery of instruction as well as in creating e-content. Students are not taking online teaching seriously and there is low response to assignments assigned to them by teachers online. Parents opined that they faced a lot of problems in their students' teaching and learning process due to poor financial conditions in the Pandemic time due to loss of job. This result is an agreement with Jain et al. (2020) who reported that students from economically weaker sections of society have become hard to reach, and teachers do not know how to support & how to-reach students who are also severely affected by the pandemic.

The study also reveals that initiatives like community teaching, door to door visit, online

YouTube class, creation of Shiksha Sanjog group, community radio and Swayam Prabha television channel etc. were initiated by the Govt. to continue the teaching learning process during the Covid period. The teachers and educational officers used and shared the e-contents available in the DIKSHA app, MadhuApp through WhatsApp groups. This result is an agreement with Mohalik and Sahoo (2021) who indicated that teachers were very passionately arranging and taking online classes, following govt sponsored online programme and applications designed for school education.

Students pointed that physical and mental health suffered due to lack of physical activity, drill, yoga, and a healthy diet and sitting alone at home which is supported by Chaturvedi et al. (2020**)** who reported that the Covid-19 outbreak has made a significant impact on the mental health, education, and daily routine of students. The Covid-19 related interruptions highlight key challenges and provide an opportunity to further evaluate alternative measures in the education sector. The new policies and guidelines in this direction would help mitigate some of the negative effects and prepare educators and students for the future health crisis

Conclusion: The aim of primary education is to facilitate learners in the holistic development of personality. But due to Covid-19 Pandemic, schools were closed for a long time and learning was provided through online and blended mode. This school closure led to learning gaps in cognitive, physical wellbeing, social wellbeing, emotional wellbeing, vocational skills and socio-personal development.

The study found many challenges faced by stakeholders to continue education during Covid-19 for primary school children. The challenges have implications for the Government to provide necessary digital infrastructure in each and every school. The Government can take initiatives through corporate society to provide mobile networks in every habitation especially in rural and tribal areas. One good point emerged from the findings that stakeholders are acquainted with the use of digital devices and applications for learning and teaching. The study has implications for promoting use of digital platforms and designing indigenous/Indian applications for the cause of learning. All the stakeholders can be oriented in the digital initiatives of the Govt. of India as well as Odisha so that it can be fully utilized for teaching and learning. Educational functionaries, head teachers and teachers were continuously engaged during the Covid period to find out ways and means of providing education to school children. The Govt. of Odisha has developed e-contents in Odia language, designed Madhu App & OSEPA App where video contents related to school subjects are available. These applications were very much helpful during Covid period as stakeholders expressed their satisfaction. Since ICT has become an essential resource for teaching learning, it must be provided to all schools. ICT use must continue along with offline classes so that quality education can reach all children. Primary school children can be made familiar with TV channels of NCERT and states so that quality video content can reach to all learners.

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THE ROLE OF GREEN MARKETING STRATEGIES IN CHANGING CONSUMER BEHAVIOR

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Abstract- In the current study, three different types of green marketing techniques are examined in an attempt to help consumers gain a better understanding of the environment, identify green products, and differentiate between conventional and green products. The three marketing strategies addressed by the researcher are "green brands," "green labeling," and "green marketing." This study intends to look into how consumers' purchasing behaviors is affected by green marketing methods. There is a growing concern about the environment among customers. Therefore, companies attempt to target consumers based on their environmental beliefs. The finding is consistent with earlier research on green marketing. The results suggest that green marketing techniques have a favorable effect on consumer behaviour. The primary drawback of this study is that it solely examines the impact of green marketing (branding, labeling, and advertising) on consumer purchases of food commodities.

Keywords- Green marketing, Eco- label, Eco- brand, Green marketing, Buying behaviour, Green-marketing strategies.

Introduction- Concern for environmental well-being has become a large public problem and an important subject of academic research in recent decades, particularly in the United States and Western Europe. This transition sparked a global campaign to safeguard the environment from additional harm caused by rising ecologically harmful human activity. Increasing consumer demand, population growth, and destruction of the environment have led to a situation in which environmental issues influence political, corporate, and academic philosophy (Friedman, 2009). Alwitt and Pitts (1996), noted, an increase in environmental consciousness during the 1970s has resulted in a positive change in consumer behaviour toward green products. This transformation contributed to the beginning of the "green" movement to avoid additional environmental damage. India is also adopting similar methods to protect the environment. Green marketing strategies such as eco-labels, eco-brands, and green advertising help people understand and perceive the features and characteristics of green products, guiding them to buy ecofriendly products. The use of these strategies is critical in influencing consumers' behaviour and urge them to buy environmental friendly products and, as a result, reducing the harmful impact of chemically synthesized products on the environment.

It would be beneficial for green marketers to look into the factors that affect consumer green purchase behavior. Although there are few studies on the effects of green products, Ottman (1998), cited a study of conspicuous and product-specific information (such as use of biodegradable materials and recycling activity) by Roper Starch Worldwide, reveals, that some consumers do not purchase "green" products because of their perceived inferiority. Studying the determinants of consumers' green purchase behavior would benefit green marketers. Although studies on the influence of green examples are lacking, For example, Ottman (1998) shows that some consumers do not buy "green" products because of their perceived inferiority, citing a study of observable and product-specific information (e.g., use of biodegradable materials and recycling behavior) by Roper Starch Worldwide (RSW). In their research on environmental strategy and new product development, Alston and Prince Roberts (1999) concluded that there was a willingness to pay extra for environmental improvement. Therefore, if the market for environmentally sustainable products is to become mainstream, it is critical to examine the elements that influence consumer green product purchasing behaviour.

The use of green marketing strategies in this study is consumer-centered, facilitating customers' understanding of the benefits of green products and assisting them in making green product purchases. Now the concern towards environment is increasing even more businesses are giving more attention to behavioral change and considering the effects of their actions or activities that would have a negative impact on the environment (Polonsky, 1994).

Demand and attitudes for green products are probably inconsistent across various market segments, regions, and cultures (Peattie, K., & Crane, A. (2005). Therefore, it is believed that research on how green marketing strategies affect consumer behaviour in developing Asian markets is important. The papers can also offer businesses some suggestions on how to extend their operations in developing nations like India, as environmental performance has turned into a crucial component for purchase decisions (Peattie et al, 1992). This article aims is to determine whether green marketing strategy, such as eco-labels and eco-brands, have an impact on customer purchase.

Conceptual Framework- The conceptual framework illustrates how the research constructs—green label, green branding, and green-marketing strategies relates to consumer behaviour. The study seeks to comprehend the impact of green marketing strategies on purchasing behaviour. This conceptual paper is based on a review of past studies as well as data collected from the current literature.

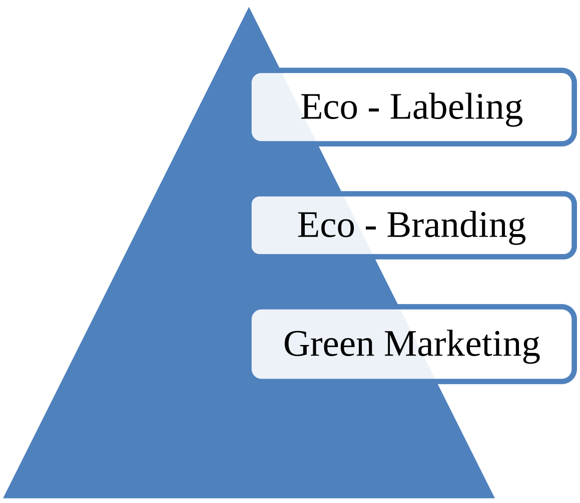


Figure 1 Green Marketing Strategies

Green marketing tools and strategies- Lee (2008) states green marketing is divided into three categories. The initial stage of green marketing arose in the 1980s, when the concept of green marketing introduced to industry for the first time (Peattie and Crane, 2005). Green marketing reached its second stage in the 1990s, and marketers faced a distinct response during this decade (Wong et al., 1996). Marketers gradually learned that consumers' worries and favourable attitudes toward the environment and green products did not transfer into purchasing behaviour (Schrum et al., 1995). Green marketing has moved to a third stage since 2000. It has gained new momentum as a consequence of the use of modern technologies, stronger government regulation, and more global environmental concern. Green marketing, according to Hartmann and Iba'n ez (2006), focuses on the effectiveness of cognitive persuasion strategies and believes that consumers' high degree of involvement in environmental concerns. Ginsberg and Bloom (2004) states that there is no single marketing method that is appropriate for all businesses Rather, methods should vary depending on the market and the level of consumer awareness about the environment. This study considers three green marketing strategies as ways to improve a consumer's knowledge of eco-friendly products. Currently, these methods are utilised to inform consumers in distinguishing between green and conventional products. Eco-branding, eco-labeling, and environmental or "green" advertising are green strategies.

Eco- Labeling- Using eco-labels is one of the most important green marketing strategy. Marketers are increasingly using environmental labels to promote the identification of green products (D'Souza et al., 2006). Labels serve two primary tasks for consumers: the information function, which educates them about intangible product attributes such as product quality, and the value function, which gives value on its own (e.g., prestige). Sammer & Stenhagen (2006) recognise the eco-label as a useful instrument for allocating asymmetric information between vendors and consumers. Similarly, Rex and Baumann (2007) describe eco-labels as a tool for customers to help them make decisions about choosing eco-friendly products and services that also allow them to understand how the products are manufactured. The critical issue is recognizing the impact of eco-labels on consumers and their environmental influences, as well as determining whether customers consider eco-labels in their decision-making. However studies indicates, although some consumers understand the purposes of labels, but this does not lead them to make green purchase decisions (Leire and Thidell, 2005). Eco-labels, according to Nik Abdul Rashid (2009), are appealing tools for informing consumers about the environmental impact of their purchasing decisions. The purpose of launching the eco-label system is to encourage environmental consumerism by aiding consumers in identifying products that are more environmentally desirable than other identical products. Asian countries such as China, Japan, Korea, India, Thailand, Malaysia, and Singapore have all developed their own eco-label schemes. Some of the green brands in India are "Ecomark", "GreenPro", "Indian Organic", "GOTS", and "GoodWeave".

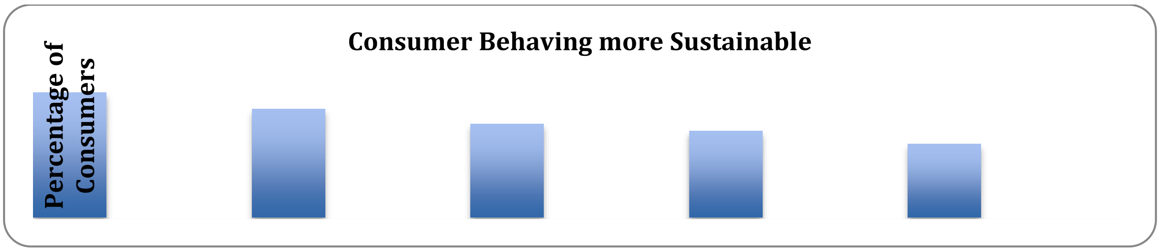
Eco- Branding-The American Marketing Association defines a brand as "a name, term, sign, symbol, or design, or a combination of these, intended to identify and differentiate the goods or services of one seller or group of sellers from those of a competitor." This notion is also applied to eco-branding. An eco-brand is a name, symbol, or design for ecofriendly products. Incorporating eco-brand characteristics can help consumers distinguish products from other non-green products. Consumers will choose to buy eco-friendly alternatives, which have low impact on environment over products having a high environmental impact (Chatterjee, 2009). Environmental labels have a positive impact on a consumer's perception on a brand's environmental performance (Roe et al., 2001). Understanding the impact of brands on customer purchasing decisions is critical for marketers and marketing researchers. Green branding is use to indicate that green products perform equally well as non-green ones but with less environmental impact. Green brands may also be utilised to assist consumers distinguish green brands from other similar brands that performs the same functions. Eco brand play an important role in motivating the consumers to buy eco-friendly products (Hartmann et al., 2005). Thus, consumer will switch to buy environmental friendly and sustainable products because of the benefit they offer. Consumers that identify themselves environmentally responsible prefer to choose green products in their actual purchases to fulfill their emotional demands.

Globally the green movement is at its peak therefore organisation have embraced the environmental advertising as a green strategy for introducing their products to environmentally conscientious consumers. Green advertisements aim to influence customer purchasing behaviour by encouraging them to buy environment friendly products and drawing their attention to the positive effects of their purchases, for both themselves and the environment. With changes in international law and rising consumer awareness, green advertising regained momentum in the 2000s. Accordingly, green advertisements are those that target the requirements and preferences of eco-conscious consumers as well as other stakeholders and incorporate environmental sustainability into their message (Zinkhan and Carlson, 1995). Based on the past studies, it is possible to draw the conclusion that the existence of green advertising can encourage consumers to be able to buy eco-friendly products.

The phenomenal growth of green marketing is emerging as progressive strategy (Taghian, 2005). These buzzwords, such as "biodegradable," "recyclable," and "ozone-safe," are becoming prominent in green advertising. However, every now and then consumer backlash against green advertising promises that create confusion. Some critics point out the ambiguity of phrases used in green advertising, For example, the terms "sustainable," "green," and "environmental" associated with certification programmes and sales efforts in tourist products and destinations are unclear and confusing to consumers (Graci & Dodds, 2008). Green advertising must be legal and in accordance with environmental laws. Nyilasy et al. (2013) argue that ethical green advertising and marketing are favorable to company's success As a result, the marketer introducing the sustainable product must formulate a strategy for communicating their products in appropriate and effective way.

Consumer Behaviour- According to Schiffman and Kanuk, the consumer's interest in purchasing eco-friendly goods stems from his desire to have his needs and wants met by a good or service. Since purchase intention is the first step in the creation of buying behaviour, these intents become crucial to be recognized by marketers. Previous studies have focused on identifying the variables that influence environmental and sustainable purchasing behaviour, such as attitude, knowledge, and value. No one has looked into the use of environment conscious marketing strategy as a determinant to influence customers' green product purchases decision, even though these factors have indeed been identified as significant factors influencing green purchase behaviour. Green marketing initiatives are increasing worldwide, and they have a significant impact on raising customer awareness and encouraging them to buy environment - friendly products (Cohen, 1973). To change customers purchasing behaviour, marketers should highlight ecological awareness in their businesses, their products, and their advertising (Mendleson, 1994). According to a report by the Capegwmini Research Institute, customers are increasingly concerned about sustainability: 79% of consumers are changing their purchasing habits in response to an environmental effects, inclusivity, and social responsibility. Moreover, COVID-19 has raised consumer interest and understanding of sustainable consumption. 67% of consumers says they are more aware of the scarcity of natural capital, and 65% said they will be more careful about the consequences of their overall consumption.

Figure 2: consumer's behaviour towards green products



Source- TheRoundUp.org

Green marketing and customer satisfaction- There are two main approaches to describe customer satisfaction: as an end or as a process. The perceptual, evaluative, and cognitive factors are what lead to satisfaction as a whole. Some examples are - Product satisfaction, satisfaction with the experience of making a purchase and contentment with the performance quality.

Loyalty and customer satisfaction go hand in hand. Attitudinal loyalty is a result of satisfaction. Customer satisfaction can be characterized as an assessment of the results of a specific consumption experience. Because of rising environmental consciousness, many authors think that consumers are highly interested in environmental issues. Studies have demonstrated the importance of environmental awareness and knowledge in shaping consumer environmental attitudes. As a result, businesses that advertise their "green product" or use it in their production process or packaging see an increase in customer satisfaction. Customers like to be associated with eco-friendly businesses and goods.

Discussion and Implications

The primary objective of the paper is to find how green marketing strategies like green label, green brands, and green marketing related to consumers' purchase decision. Consumer behavior is influenced by a variety of factors, but the results show that trust in eco-labels and eco-brands has a positive influence on consumer buying behavior. This suggests that consumer trust in eco-labels and eco-brands influences their actual purchasing behavior. According to the study, green products can be commercially successful if they have a positive image among consumers (Ginsberg and Bloom, 2004). Willingness to buy green products increases with awareness of green brands and the belief that the products are environmentally friendly. This shows that the use of these tools to promote environmentally friendly products is not significant until the element of trust is ingrained in the minds of customers. Therefore, "trust" may influence consumers' decision to buy green products more often. It would be difficult to find a way to get consumers to buy if they do not have trust in eco-labels and eco-brands. Borin & Norm (2011) argue in their study that the presence of an eco-label certifies companies for better environmental management, which ensures the long-term availability of resources and responsibility for a country's sustainable growth. Studies show that customers' understanding and knowledge of eco-brands and their willingness to purchase eco-labeled and eco-branded products is due to their confidence in the benefits of sustainable/green products and their ability to help the environment (Mat Said et al., 2003). Nevertheless, most organic or green products are unknown to them because there is no environmental advertising.

Conclusion

Understanding the effectiveness of green marketing strategy can help government, public, and private entities create and manage green products that would appeal to consumers Since it is now necessary to develop a market for green products, the sector should be held morally accountable for not making false claims. The findings also provide valuable information on the effectiveness of green marketing strategies, which can help private, public, and government organisations develop and design creative green products that will appeal to buyers. Given that it is that right time to create a market for green products, the sector must accept moral responsibility for not exaggerating their claims.

Businesses must adopt a green strategy in every facet of their operations if they want to survive in this market. Customers are willing to spend more for a greener lifestyle because they want to associate themselves with businesses that are environment friendly. Green marketing is therefore more than a tool for environmental protection and marketing plan.

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WORKERS' PARTICIPATION IN MANAGEMENT IN BOKARO STEEL PLANT

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Abstract: Workers' participation in management is an essential ingredient of Industrial democracy. The concept of workers' participation in management is based on Human Relations approach to Management which brought about a new set of values to labour and management. Traditionally the concept of Workers' Participation in Management (WPM) refers to participation of non-managerial employees in the decision-making process of the organization. It is a process by which subordinate employees, either individually or collectively, become involved in one or more aspects of organizational decision making within the enterprises in which they work. It implies mental and emotional involvement of workers in the management of Enterprise. It is considered as a mechanism where workers have a say in the decision. Workers' participation is also known as 'labour participation' or 'employee participation' in management. In Germany it is known as co-determination while in Yugoslavia it is known as self-management. The International Labour Organization has been encouraging member nations to promote the scheme of Workers' Participation in Management. The present study is based on reviewing the position of Workers' participation in management in Bokaro Steel Plant.

Keywords: Workers' Participation in Management, Industrial Democracy, Human Relations, Management, Labour Participation, Employee Participation, Self-Management.

Introduction: Article 43A of the Constitution of India deals with 'Participation of workers in management of industries' and falls under Part IV - Directive Principles of State Policy. The State shall take steps, by suitable legislation or in any other way, to secure the participation of workers in the management of undertakings, establishments or other organisations engaged in any industry.[1] Workers' participation in management helps in managing resistance to change which is inevitable. For the growth and development of industry, changes have to be welcomed; otherwise the organization will stagnate and be left behind. If the need for change is jointly felt by all partners of production its acceptance can be high. Workers' participation in change strategy can facilitate acceptable solutions with a view to secure effective and smooth implementations of decisions. This can also encourage communication at all levels. Since both partners of production are involved in the decision-making there will be fewer chances of distortion and/ or failure in communicating the decision.

Bokaro Steel Plant: Bokaro Steel Plant - the fourth integrated plant in the Public Sector - started taking shape in 1965 in collaboration with the Soviet Union. It was originally incorporated as a limited company on 29th January 1964, and was later merged with SAIL, first as a subsidiary and then as a unit, through the Public Sector Iron & Steel Companies

(Restructuring & Miscellaneous Provisions) Act 1978. The construction work started on 6th April 1968. The Plant is hailed as the country's first Swadeshi Steel Plant, built with maximum indigenous content in terms of equipment, material and know-how. Its first Blast Furnace started on 2nd October 1972 and the first phase of 1.7 MT Ingot steel was completed on 26th February 1978 with the commissioning of the third Blast Furnace. All units of 4 MT stage have already been commissioned and the modernisation taken subsequently has further upgraded this to 4.65 MT of liquid steel. Bokaro is designed to produce flat products like Hot Rolled Coils, Hot Rolled Plates, Hot Rolled Sheets, Cold Rolled Coils, Cold Rolled Sheets, Tin Mill Black Plates (TMBP) and Galvanised Plain and Corrugated (GP/GC) Sheets. Bokaro Steel has provided a strong raw material base for a variety of modern engineering industries including automobile, pipe and tube, LPG cylinder, barrel and drum producing industries. Bokaro Steel values its people as the fulcrum of all organisational activities. The saga of Bokaro Steel is the story of Bokaroans erecting a gigantic plant in the wilderness of Chotanagpur, reaching milestones one after another, staving off stiff challenges in the liberalised era, modernising its facilities and innovating their way to the top of the heap.[2]

Literature Review:

Ian clegg, 1969 says "It implies a situation where workers representatives are, to some extent, involved in the process of management decision making, but where the ultimate power is in the hands of the management".[3]

Iyer Krishna J., it marks the "end of industrial bonded labour". The Constitutional mandate is, therefore, clear that, the management of the enterprises should not be left entirely in the hands of suppliers of capital, but the workers should also be entitled to participate in it because in a socialist pattern of society the enterprise, which is the centre of economic area, should be controlled not only by suppliers of capital but also by labour, The workers, therefore, have a special place in a socialist pattern of society.[4]

Objectives of the Study:

The present study is undertaken with the following objectives:

a) To review the status of workers' participation in management in Bokaro Steel Plant.
b) To review the mentality of employers regarding workers' participation in management.
c) To review the mentality of employees regarding workers' participation in management.

Research Methodology:

The method used in the research is explorative and descriptive. The study is purely based on the information collected from different sources like websites, articles published in reputed national and international journals, newspapers and reputed reference books related to this subject matter.

Workers' Participation in Management in Bokaro Steel Plant:

SAIL is headed by a chairman, who is of the rank of secretary to the Government of India and SAIL has foil time Board of Directors in the corporate office. The Board of Directors of SAIL is comprised of 14 members. The other Directors are part time directors, comprising (a) Government representative (b) chief executive of different plants/units and related to SAIL and (c) one labour representative.

The Board of Directors controls the affairs of the company. All matters pertaining to appointments, personnel policy, expenditure, production plan, sales plan are formulated by the plant and approved by the corporate office before they become operative. Labour representative takes part in the decisions regarding matters related with workers. The Managing Director is the chief executive of the unit and is responsible for implementing all decision and directives of the Board. As Chief Executive, he has powers to carry out the day-to-day work of the plant through a team of senior officers. Matters requiring approval of higher authority (Board level) are briefly given below:

1. Framing of rules and regulations and changes therein relating to recruitment, placement, promotion, deputation and other service

conditions and disciplinary actions in respect of employees of the company.

2. Formulation of wage structure and scales of pay of the employees and any changes there in.

This explains that SAIL has maintained its glorious tradition of building and maintaining a conducive and fulfilling employer-employee relations environment. SAIL has adopted collective bargaining for maintaining the participative culture in the organization. Over the years, collective bargaining has become an integral part of the Company's governance framework and it contributes to responsible management. The Company believes in workers participation and hence recognized unions for non-executive employees exist in all Plants/Units.[5]

Conclusion:

Workers' participation in management has unique motivational power and a great psychological value. By reviewing the concept of workers' participation in management, we have seen that by allowing the participation of employees in the managerial decision, an organisation can foster industrial democracy in the organisation. Through implementing the concept of workers' participation in management an organisation can also promote and develop healthy labour management relations. From the evaluation of the working of existing participative machinery in the Bokaro Steel Plant, it is evident that despite several shortcomings, it has functioned comparatively well. A healthy grievance procedure adds to the success of participative forums in BSP. One of the main reasons behind the satisfactory working of the joint committee is the presence of a strong union.

Findings: Findings of the study are as follows:

I. The Bokaro Steel Plant has well established policies of Workers' Participation in Management and workers. They tend to view the decisions as `their own' and are more enthusiastic in their implementation.

II. The employers of the Bokaro Steel Plant are having positive attitude towards Workers' Participation in Management and strengthening labour-management co-operation and thus helping in maintaining Industrial peace and harmony.

III. The employees of Bokaro Steel Plant are taking benefits of Workers' Participation in Management and They become more willing to take initiative and come out with cost-saving suggestions and growth-oriented ideas.

Suggestions:

Suggestions to the management of Bokaro Steel Plant are as follows:

I. Both parties should have a genuine faith in the system and in each other and be willing to work together. The management must give the participating institution its right place in the managerial organization of the undertaking and implementing the policies of the undertaking. The labor, on the other hand, must also whole heartedly co-operate with the management through its trade unions. The foremen and supervisory cadre must also lend their full support so that the accepted policies could be implemented without any resentment on either side.

II. The attitude and outlook of the parties should be enlightened and impartial so that a free and frank exchange of thoughts and opinions could be possible. Where a right kind of attitude exists and proper atmosphere prevails the process of participation is greatly stimulated.

III. Participation should be real. The issues related to increase in production and productivity, evaluation of costs, development of personnel, and expansion of markets should also be brought under the jurisdiction of the participating bodies. These bodies should meet frequently and their decisions should be timely implemented and strictly adhered to.

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FORMATION OF IDENTITY THROUGH INTERACTION: A STUDY OF DIGITAL BORN TEXTS AS CREATORS OF TRANSMIGRATIVE IDENTITIES

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Abstract-Much thought has been invested in contemplating the validity of digital mediums as being effective in manifold ways in cases such as imparting knowledge and knowledge formation, moulding public as well as private opinions, collecting data and recording it for use in diverse ways etc. Technically, the existence of such mediums and accessibility to them makes it possible for these digital ways or mediums to affect everything or anything that are processed or exchanged through them, like the existence of anything would affect its surrounding or things that come into interaction with it; for example, we may cite the existence of a tree, a river, a human, a dog or even a grain of sand. Interaction is the most vital moment to determine identity. Identity has been meditated deeply by celebrated philosophers like John Locke and Rene Descartes, and this work opens with a reading of their views on identity. In line with this simplified approach, the prime motif of this study is to convey the idea that the interaction between the 'digital text' and the 'physical user' give way towards the formation of a 'transmigrative identity'. This newfound identity is potential enough to be further processed and experienced into various other forms; however, with the application of the *Extended Mind Thesis*, this study attempts to hypothesize that the digital text's 'interactiveness' and the physical user's 'experience' constitute the bridge to a 'transmigrative identity".

Keywords: Thought, digital medium, knowledge, data, existence, transmigrative identity, Extended Mind Thesis, new identity.

Brahma satyam jagat mithya
(The Creator is The Truth. This creation is but appearance.)—Adi Shankaracharya

Clarification of the terms used, Scope, and Limitations of the study-Throughout this study, terms such as 'text', 'user', 'identity', 'transmigration' etc. are used for specific contexts. The term 'text' is used for any digital text, given that it has 'interactive' elements in it. By 'interactive' elements, it is suggested that there is a certain 'immersive' power in it. Now, this 'immersive' text could also be any fictional text. The term 'user' is used to represent the conventional reader whose identity is again a subject to 'transmigration' as a result of their interaction with the 'text'. The term 'transmigration' is used in a non-theological context. The scope of this study is clear. Many works exist on the conception and assumption of the 'user's' identity in the area of Digital Humanities, but no work yet exists in the fashion of this study, that is, hypothesizing a 'transmigrative identity'. Therefore, proposing a 'transmigrative identity' for the digital text's 'user' is the first of its kind work in the area of Digital Humanities. No study can be perpetually incontestable, and this study—open to unforeseen challenges— is perhaps an endeavour in the wilderness of neo-academia to provide a new insight into the world of 'user-text' interaction. The limitations of this study possibly arise out of the inevitable vagueness precipitating through it due to its stillbirth (as what I would prefer to term it), and that might connote to the fact that this could be an incomplete and abridged part of a yet extending work.

(Re) introducing 'The Digital' and 'The Physical'- The concept of the physical can be simply understood in contrast with the non-physical. The physical and the non-physical, both are tethered to their respective identities and by their identities only, we are able to classify them. The physical is 'touched', the non-physical is 'felt'. However, while we observe 'the physical' as contrasting to 'the digital' (which is, of course, an extension to the non-physical), we might require to locate the point where they differ and if they differ, is it this 'differing' where their identities are constructed? Therefore, we are compelled into the same quagmire of Socratic conventions—what is, then, identity?

Identity is a much-debated subject in intellectual spheres. Philosophers and scholars have their views registered on varying propositions regarding the matter, study, and speculation of identity. We may immediately refer to Mr John Locke and Mr Rene Descartes–– two interesting philosophers who have meditated deeply on various aspects of identity. While Mr Locke would argue that identity is formed through various socio-personal requirements, Mr Descartes would propose that identity is a result of the union of the physical, that is, the body, and the metaphysical that is, the soul. We may require a summarization of both these philosophers' ideas in order to proceed further.

Locke associated identity with consciousness, saying that a person is defined by their awareness of their actions. He stated that "I am as much involved in — and as justly accountable for — an action that was done a thousand years ago and is appropriated to me now by this self-consciousness as I am for what I did a moment ago" (118). He added that with regards to that action, the person in the present would become literally the same person as the one in the past as a result of the shared consciousness. The statement has some moral implications, such as the statement that a person cannot be held responsible for actions that they had physically committed but are not conscious of. (Study Corgi). The above ideas are a summarization of Mr Locke's ideas. Here, we may observe that Mr Locke is talking about 'action' and 'consciousness', and this is the point we have to expand throughout our journey(s) centring around identity formation as a result of the interaction between 'the digital' and 'the physical'. As the 'reader' of texts has already become the 'user' of the same, the result/outcome of the interaction has also to find a new outlet. However, in Mr Descartes' views on identity can be yet interesting, as he denies to attribute a direct accountability to the person for their action. Descartes claimed that the soul is fully responsible for thought, actions, and feelings, equating it to the mind. According to Descartes, "it is certain that I, [that is, my mind, by which I am what I am], is entirely and truly distinct from my body, and may exist without it". As such, the soul would leave the body after the latter became unusable, but the absence of the soul would not make the body cease functioning. Descartes claimed that the soul is indivisible and incorruptible, and the various abilities of the mind are different expressions of a single monolithic entity. The concept of the soul as a separate entity that uses the body allowed Descartes to declare life after death possible, as the mind would be able to continue existing after leaving the dead body. (StudyCorgi)

The ideas of Mr Descartes might serve as our base for the claim that a user needs to depart from their existing position/existence in whatever manner, if they need to sustain through any given situation, for example, Mr Descartes uses life and death in relation to assess the perpetual progression of identity. However, no one has ever been able to absolutely decipher in word or action, what identity is, and, most importantly, from where does it come from? Well, scholars might speculate on identity as a result of various socio-personal, theological, or economic etc. factors, and we have already reviewed two such points-of-view in Mr Locke and Mr Descartes.

What is, then, a 'transmigrative identity'?- It must have been a dilemmatic decree of the universe that everything must claim a certain identity— it is very natural for humans to cling to an identity, or switch between/among identities. It would rather be befooling one's own self if one disagrees to consent to a certain identity. If we imagine a courtroom, a trial-place, or a likewise situation, we must at any cost bring in our minds the imagination of two independent entities, representatives of their respective identities; that is, the 'convict' and the 'judge'. Without identity, it is very impossible for the universe to evolve— neither the executioner nor the execution can work, forget about the subject or the subject matter. This position is not to establish the importance of only identity but very much about the necessity of identity in any situation; either we intend to deal with a matter or state, or a matter or state is dealing with us. The universe, whatever it is, assumes an identity and bestows the same to all its components and matters. With the change in modes of exchange in the world, not only in the literary context, but in all contexts ranging from domestic to economic etc., a change is observed in the assertion of identity; hence, identity is subject to evolution and this makes it more dynamic than the thing, creature or subject it clings to.

To speak to the point, let us consider the example of the creation and the reception of any text. This process has two ends and both these ends are tethered to two different realities that are experienced on both these ends independently, irrespective of the designation or the background of either— the first end, where the text is created is conforming to the identity which is peculiar to the 'creator' of the text, and then, the next one being the identity of the 'receiver'. This process basically relies on the mode of interaction, which in the very initial phase gives a new identity to the receiver. The conventional receiver has been either the reader or the audience, but the current reader or audience is the 'user' and this term refers to the interactivity that happens between the text and the receiver. Hence, as Mark Poster puts in his *Postmodern Virtualities* "the phenomenon of communicating at a distance through one's computer, of sending and receiving digitally encoded messages, of being "interactive" has been the most popular application of the Internet." (Poster 541)

However, we are less concerned about the creator as compared to the identity of the user, who would further be the most important determinant factor to support the claim that a new identity is formed in all the situations whenever there is an interaction between the digital text and the receiver/user. As Mr Poster sees how "…being "interactive" has been the most popular application of the Internet…" (Poster 541), we would see that in their *Extended Mind Thesis*, the philosophers Andy Clark and David J. Chalmers claim that the mind is not only limited to the body but it can be also found or be existent in the external environment. They begin this debatable thesis with the first line being a question, which I would rather capture here to develop my own argument for the creation of new identities every time a user comes to interact with a digitally existing text. The question is "Where does the mind stop and the rest of the world begin?" (Clark & Chalmers, EMT). By posing this question, both the philosophers argue that they "…advocate a very different sort of externalism: an active externalism, based on the active role of the environment in driving cognitive processes." (Clark and Chalmers 7). Therefore, it might be understood that the mind doesn't only consist of one specific area or atmosphere, but it can be defined in relation to the matters and elements that exist externally without being essentially something situated within the person's body or head etc. Can this tell us something about the nature of identity which might come into existence once a user interacts with some digital text? Well, till date we don't have a certain term to call that identity with our alphabets, therefore, I propose to call it a 'transmigrated identity'. 'Transmigrated', why?

The Proposal: A Transmigrated Identity-In their interesting work *The Digital Subject: From Narrative Identity to Poetic Identity?*, Serge Bouchardon and Ariane Mayer comment on the ways digital texts work:

…The chapters, the events of life are not successive but accumulative, and appear like different windows of thought at the same time. You do not follow a temporal flow arranged in advance towards an end, you are just stuck in the unknown, your attention is divided between multiple stimuli of texts, images and sounds. Moreover, you can play with the story. It is not written in advance, your gestures and choices expressed by the clicks open up different adventures, so that the journey can draw many new and puzzling roads. (Bouchardon and Mayer)

So, the 'choices expressed by the clicks' is enough to suggest the concept of a 'reader' becoming a 'user' and so on. This concept is in fact an ongoing race of theoretical establishment among neo-academics in order to meet several ends, not limited to the deconstruction of the traditional reader and the mode, that is, 'reading', in contrast with the new reader, that is, the 'user', and the new mode, that is, the 'interaction'.

Since the 'reader' or the 'audience' has already turned into a 'user', what makes this occasion for another level of mystification? But the case is not so, if seen from the point of view of Clark and Chalmers as whatever they propose and argue within their thesis; the formation of such an identity which is not yet exactly identical with the former identity, becomes inevitable. I have used 'transmigrative' or 'transmigrated' identity to suggest that the 'user', along with the text, experiences a different reality which is brought into effect through their interaction; hence, a 'transmigrated identity' is formed. The text settles or leaves grains of its existence in the mind of the user. The user remembers the way the text has been interactive and how they have experienced a difference in feeling about the text or even about their own assumptions once the interaction occurs/repeats again. This is what Clark and Chalmers would call a sort of *coupling with the external environment*— the text is logically existent in the external environment only— thus, putting it under the point titled *Active Externalism*, they profess that "…the human organism is linked with an external entity in a two-way interaction, creating a coupled system that can be seen as a cognitive system in its own right. (Clark & Chalmers 8). This coupled system is a result of the interaction between the user and the text. The 'text', even if it exists 'digitally', and the 'user', even if they exist 'physically', form together a symbiosis of same identities— 'the transmigrated identity'. The form is contained in the system through which the text is processed, and the cognitive faculty of the user is well active while dealing with the content of the text or browsing through it; however, this process of constructing a new identity depends on the nature of the text and the nature of interaction between the text and the user among other points.

This proposal of a 'transmigrative identity' can also benefit from past observation on the experiences of readers. Serge Bouchardon and Ariane Mayer comment that:

'…all along modernity, the literary experience of the reader has been recognized as a way of reading and understanding oneself. The influence of the texts we read on the way we picture ourselves has been highlighted by literary writers themselves: for example, Don Quixote with the knighthood novels he read, Emma Bovary with the romantic sentimental novels that shaped her young years." (Bouchardon & Mayer 3)'

Therefore, it must be clear to a further extent that the formation of this proposed identity happens through the interactive interface that is provided by the digital works, in which not only hypertexts help in asserting the new identity but also connote to the multiple lines of interactions that usually a human being would undertake in life to arrive at a point where they might assume or express their identity. Aesthetics of the physical text is not demeaned or underestimated in this process, but their dependency is culminated and they are provided with an outlook to adopt or choose in order to be instrumental in the formation of an identity. This can be understood through what Bouchardon & Mayer state in their work:

When we talk about identity, we refer to personal identity – even though it may be important as well to question collective identities –, and we will define this personal identity as a representation of oneself through time. This idea of representation can have two different meanings: the inner conception that someone has of herself or himself, but also the external expression of this conception built for other people. Of course, this conception and this expression can differ, a gap can separate how I feel myself and how I show myself, and this gap can be influenced by the varied techniques, devices and designs of identity. This definition of identity allows us to question the ways we shape our identities through social networks, and the processes through which these ways lead us to build ourselves as characters, avatars and profiles. (Bouchardon & Mayer 2)

Moreover, one needs to classify a number of identities emerging out of the process we may term as 'transmigration'. Because, these identities are strands of a vibrant non-physical plane— the 'user', who comes from the physical direction— is either given a chance to assert their own identity as Bouchardon & Mayer observe how we as users build ourselves as characters etc., or forced to cling to a certain identity— given that the interaction takes place with a non-physical direction, the 'user' has but one option to select and that's the 'transmigration'— since a fusion between the 'physical' and the 'digital' is possible through a grotesquely conscious undertaking where physical endeavors have but no role to play. Interestingly, Mr Nietzsche comments in his autobiography *Ecce Homo*, a very remarkable point on the assertion of one's identity. He comments that "To become what one is, one must not have the faintest idea what one is." (ECCE HOMO QUOTES) This is not far from the case of the 'physical' user in relation to the 'digital' text. The user is immersed throughout the journey and the 'text' is what the 'user' ultimately becomes!

The Inference- A 'transmigrative identity' is highly a result of the 'user's' conscious engagement with the 'text'. This view is also dominant in context to the fact that the texts produced in digital literature are 'digital born' and this can help us in furthering the definition of a sort of 'obsessed academic cultivation' in present day literature, across disciplines and genres, dogmas etc. that would assist the '*user*' in asserting a new identity. The same is applicable in case of the '*text*' as well. Given the vastness that the 'digital born' texts cover, further researchers may focus on to survey select number of archives, literary works, cultural documents, movies and video games etc. to verify further the discovery of a 'transmigrative identity' that the 'user' as well as the 'text' attain as a result of the 'text's interactiveness' and the 'user's experience'.

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SAVITRI BAI PHULE'S CONTRIBUTION TO THE FIELD OF EDUCATION FOR WOMEN EDUCATION

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Abstract: The oppression in Indian society manifests passivity in society and hence the need to create human awareness to deal with societal problems and bring equality with social change. Today Indian women are not behind men in any respect. They made their names in history and ruling the hearts of many people because of their education and wisdom. Savitribai Jyotirao Phule was a prominent Indian social reformer, educationist and poet who played an instrumental role in women education and empowerment during the nineteenth century. Counted among few literate women of those times, Savitribai is credited for founding the first girl's school in Pune in Bhide Wada with her husband Jyotirao Phule. She campaigned against untouchability and worked actively in abolishing caste and gender based discrimination. This paper discusses the role of Savitribai Phule in the development of education of the women of India, with special reference to the women of Maharashtra.

Key Words: S*ocial reform, instrumental, educationist, prominent, discrimination, campaigned.*

Introduction: Savitribai Jyoti Rao Phule was a prominent Indian social reformer, educationist and poet who played an instrumental role in women education and empowerment during the nineteenth century. Counted among few literate women of those times, Savitribai is credited for founding the first girl's school in Pune in Bhide Wada with her husband Jyoti Rao Phule.

A leading figure of Maharashtra's social reform movement, she is considered an icon of Dalit Mang caste along with the likes of B. R. Ambedkar and Annabhau Sathe. She campaigned against untouchability and worked actively in abolishing caste and gender-based discrimination. Savitribai was born on January 3, 1831, in Naigaon, in British India in. She worked to abolish the discrimination and unfair treatment of people based on caste and gender. She is regarded as an important figure of the social reform movement in Maharashtra. Governmental records show that Jotirao educated Savitribai at home after their marriage. According to the Education Report for the period 1 May 1851 to 30 April 1852, Jotirao educated his wife at home and trained her to become a teacher. According to a news item that appeared in the Bombay Guardian on 22 November 1851, the responsibility of Savitribaiís further education was taken up by Jotiraoís friends Sakharam Yeshwant Paranjpe and Keshav Shivram Bhavalkar (Joshi).She also conducted many activities in various social fields. Barring a few exceptions, Savitribai Phule fails to find any mention in the history of modern India. Her life and struggle deserve to be appreciated by a wider spectrum and need to be known among all the Indians.

Early Life: Savitribai Phule was born on January 03, 1831, at Naigaon, Maharashtra. She was a child bride to the activist and social reformer Jyoti Rao Phule. The support from her husband led her to read, write and establish India's first school for girls, called Bhide Wada in Pune in the year 1848.Savitribai Phule was married to Jyotirao Phule at the age of 9 years. Savitribai had to face a lot of difficulties in her married life as well as in her later life because she was not educated. She had to face many difficulties as she had to educate her children.
They both believed that education was the only medium for empowering the depressed class and women to stand out equally with the rest of

society. Jyoti Rao went on to become a thinker, writer, social activist and anti-caste social reformer. He is counted among the leading figures of Maharashtra's social reform movement. Savitribai's education started after her marriage. It was her husband who taught her to read and write after he saw her eagerness to learn and educate herself. This historic work was started by Jotirao when he was just 21 years old, while his wife who supported him in every way, was merely 18 years old. Essentially, both Jyotirao and Savitribai recognised that education was one of the central planks through which women and the depressed classes could become empowered and hope to stand on an equal footing with the rest of the society. Essentially, both Jyotirao and Savitribai recognised that education was one of the central planks through which women and the depressed classes could become empowered and hope to stand on an equal footing with the rest of the society.

Women Education & Empowerment:_ The first indigenously run school for girls in Pune (at that time Poona) was started by Jyoti Rao and Savitribai in 1848 when the latter was still in her teens. Although they were ostracized by both family and community for this step, the resolute couple was given shelter by a friend Usman Sheikh and his sister Fatima Sheikh, who also gave the Phule couple a place in their premises to start the school. Savitribai became the first teacher of the school.

On November 16 that year, the British government honoured the Phule family for their contributions in the field of education while Savitribai was named the best teacher. That year she also started the Mahila Seva Mandal with the objective of creating awareness among women regarding their rights, dignity and other social issues. She was successful in organizing a barbers strike in Mumbai and Pune to oppose the prevailing custom of shaving heads of widows. Savitribai and Fatima Sheikh were later joined by Saguna Bai who also eventually became a leader in the education movement. Meanwhile, a night school was also opened by the Phule couple in 1855 for agriculturist and laborers so that they can work in daytime and attend school at night. Jotirao and Savitribai focused on providing girls and boys with education that was vocational and trade-oriented in nature, to make their students self-reliant and capable of independent thought. While Jyotirao advocated widow remarriage, Savitribai worked tirelessly against social evils like child marriage and sati pratha, two of the most sensitive social issues that were gradually weakening the very existence of women. She also made an effort in bringing the child widows into the mainstream by educating and empowering them and advocated for their re-marriage. Phule saw education as the weapon to fight the evils of society. She had to face daily insults, abuse, threats and even physical assault with mud and cow dung. The couple had to leave their family's home as their initiation was going against the society. What started in 1848 as one school with nine girls, became three schools with a strength of around 150 girl students by 1851. She also started a school in 1849 with her friend Fatima Sheikh with whom she graduated from Normal School. Their relationship was based on respect for each other's individual identities, which is why it survived the toughest of times, particularly their failure to conceive a child. Jyotirao was under a lot of pressure from his family to remarry for the sake of an offspring but he stayed committed to Savitribai.

Savitribai was probably one of the first published women in modern India, and was able to develop her own voice and agency at a time when women of all classes were ruthlessly suppressed and lived a sub-human existence. Savitribai was a "Vidya Jyoti" for all those who want to do something in the field of education.

Sabitrbhai Phule and her social contribution: Savitri then went on to become the first woman headmistress of any school in India and the first-ever woman teacher of the country. Her birthday is also observed as Balika Din in Maharashtra. Phule published her thoughts as 'Kavya Phule' in 1854, giving a glimpse of the society during the time. She began teaching a girl's school in Marathwada in Pune alongside Sagunbai who was one of the revolutionary feminists at that time. By 1851, Savitribai Phule and Jotiba were running three different schools in Pune only for girls. The three schools combined had more than 150 girl students enrolled. Savitribai Phule and her husband, social reformer Jyoti Rao Phule started what is believed to be India's first school for girls here 171 years ago. The couple then started a school for girls in Bhide Wada in Pune city in 1848, and she became its first teacher.

The couple had to face tremendous harassment from conservative elements who found the idea of women education repugnant. The couple then started a school for girls in Bhidewada in Pune city in 1848, and she became its first teacher. Unfortunately, Savitribai and Jotirao Phule's success came with much resistance from the local community with conservative views. Kandukuri states that Savitribai often traveled to her school carrying an extra sari because she would be assailed by her conservative opposition with stones, dung, and verbal abuse. The Phule's faced such strong opposition because of the conservative and marginalized caste to which they belonged.Jotirao and Savitribai were running a hostel in their own house, where students from far off places would stay for the purposes of education. A student from Mumbai, Laxman Karadi Jaaya had lived in this hostel and experienced Savitribaiís motherly care and concern. In his memoirs, he has written, I have not seen another woman as kind and loving as Savitribai. She gave us more love than even a mother could.Her husband, fired by modern ideas and a reformist zeal, taught her to read and write. Savitribai took a teachers' training course and became a qualified teacher in 1847. Savitribai led the Satyashodhak movement after Jotiraoís demise, working till the very end. Yeshwant took up a job in the army after completing his medical education. During the course of his work, he had to travel to many foreign countries. She was reforming the society at a time when educating the girl child was unthinkable, in addition to the limping barriers that the caste system imposed on people. Savitribai has put together some very valuable writing. The literature is as follows:

- ❖ Kavya phule- Collection of poems, 1854
- ❖ Jotiraoís Speeches, Edited by Savitribai Phule, 25 December 1856
- ❖ Savitribaiís Letters to Jotirao
- ❖ Speeches of Matoshree Savitribai, 1892
- ❖ Bavankashi Subodh Ratnakar, 1892

She was the only woman leader of 19th-century India who understood the intersectionality of patriarchy and caste and fought hard against it.Savitri Bai Phule is among the pioneers who fought patriarchy and set a trial for other men and women who are continuing their fight against the patriarchal structure that is deeply rooted in our society.: Today women have realized their strength in the 21st century and created their own identity in this world. They Need to know how to fight Savitribai for her rights in society and how to fight against injustice. She is walking shoulder to shoulder with men intellectually. She broke the boundaries of traditional social life and brought women into the light and sound of education, as well as making them aware of the responsibilities and duties in civil society.

Introduction of the Scheme-The Backward Classes Welfare Department of the Government of Telangana started the "Mahatma Jyothiba Phule BC Overseas Vidya Nidhi" for the benefit of the students belonging to Backward Classes in 2016. The India Post has honoured Savitri Bai Phule by releasing a postage stamp in her name on 10th March 1998, marking her birth centenary.The University of Pune has been renamed to Savitri Bai Phule University in 2015. And Google, the search engine has dedicated their google doodle to her in 2017.India recently celebrated the 195th birth anniversary of Mahatma Jyotiba Phule, a social reformer and revolutionary who worked for a just and equal society throughout his life. Meanwhile, a scholarship created in Phule's name in Telangana to help students from Backward Castes/Classe was controversially changed to include students from economically backward/weaker sections (EWS) belonging to the dominant castes in the state.

Hailing from the so-called lowest level of Sudra caste in the thousands-years-old, hierarchical caste practice in Hinduism, Phule had fought against caste discrimination and oppression. Along with his effort to annihilate the cultural practice of 'untouchability'.

Conclusion: She is little known even in academia. Modern India's first woman teacher, a radical exponent of mass and female education, a champion of women's liberation, a pioneer of engaged poetry, a courageous mass leader who took on the forces of caste and patriarchy certainly had her independent identity and contribution. It is indeed a measure of the ruthlessness of elite-controlled knowledge production that a figure as important as Savitribai Phule fails to find any mention in the history of modern India. Savitribai Phule is a name that was closely associated with women education and equal rights. The 19th century saw the beginning of the spread of women education mainly by Savitribai Phule. Not only education, she also helped women and lower cast's peoples to live with their heads held high in the society. She was a social reformer as well as qualified teacher. She was such a woman whose main purpose was to educate the entire human race. Savitribai, and her husband, Jyotirao were a historic couple who worked together for the empowerment of women and the oppressed classes. The couple did not have any biological child, so when Jyotirao was coaxed to remarry, he humbly stated that the defect in having a child may be in myself and not in Savitri. The couple adopted a boy who later on became a medical doctor. They considered it their mission to purge society of the evil practices and do away with the misuse of religion as a tool to subordinate the lower castes.

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A STUDY ON: SUSTAINABLE ENERGY RESOURCE - BIO-GAS, ITS PROPERTIES, PRODUCTION PROCESS & USES

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Abstract: Biogas is competitive, viable, and generally a sustainable energy resource due to abundant supply of cheap feedstocks and availability of a wide range of biogas applications in heating, power generation, fuel, and raw materials for further processing and production of sustainable chemicals including hydrogen, and carbon dioxide and biofuels. This study presents the pathways for use of biogas in the energy transition by application in power generation and production of fuels. Biogas fuel can be used in both spark ignition (petrol) and compression ignition engines (diesel) with varying degrees of modifications on conventional internal combustion engines. Biogas can also be used in fuel cells for direct conversion to electricity and raw material for hydrogen and transport fuel production which is a significant pathway to sustainable energy development. Enriched biogas or biomethane can be containerized or injected to gas supply mains for use as renewable natural gas. Biogas can be used directly for cooking and lighting as well as for power generation Compressed biogas (CBG) and liquid biogas (LBG) can be reversibly made from biomethane for various direct and indirect applications as fuels for transport and power generation. Biogas can be used in processes like combined heat and power generation from biogas (CHP), trigeneration, and compression to Bio-CNG and bio-LPG for cleaned biogas/ biomethane.

The paper introduces biogas production and utilization methods that are suitable for providing continuous operation of existing biogas plants and also for determining the parameters of establishing biogas plants. Biogas production is a well-established technology primarily for the generation of renewable energy and also for the valorization of organic residues. Biogas is the end product of a biological mediated process, the so called anaerobic digestion, in which different microorganisms, follow diverse metabolic pathways to decompose the organic matter. The process has been known since ancient times and was widely applied at domestic households providing heat and power for hundreds of years. Nowadays, the biogas sector is rapidly growing and novel achievements create the foundation for constituting biogas plants as advanced bioenergy factories. In this context, the biogas plants are the basis of a circular economy concept targeting nutrients recycling, reduction of greenhouse gas emissions and bio-refinery purposes.

Keywords: Anaerobic digestion, Biogas, Biowastes, Solid waste, Manure, Industrial waste, biogas production, biogas utilization, energy, environment, waste disposal.

Introduction: Energy is a fundamental requirement for man's comfort and basic needs of everyday life. A vast majority of countries especially developing countries have energy crises with over reliance on fossil fuels. The national energy drivers of all countries globally are energy security, environmental protection, and economic growth. It is predicted that fossil fuel sources like coal, gas, and oil are headed for depletion within the next 10 decades, hence the need for alternative sources of energy.

Additionally, international treaties like Agenda 21 and Kyoto Protocol advocate for a transition to renewable and low carbon sources of energy due to high greenhouse gas emissions associated with fossil fuels and the related climate change caused. Biogas has proved to have significant potential as a renewable energy source for industrial as well as domestic applications and an efficient solution to the global energy crisis. The increasing use of fossil fuels and environmental concerns over greenhouse gas emissions and climate change has generated interest in biogas as an alternative renewable energy resource. Increasing environmental and policy concerns and measures have generated increasing interest in the use of biomass resources as renewable feedstock for electricity generation, fuel production, chemical processing, and hydrogen production. This has been further compounded by depletion of fossil reserves, growing organic waste production, and global warming threats have combined to increase interest in anaerobic digestion and biogas fuel resources. The main application for biogas is electricity generation, thermal applications like cooking, heating, and lighting, and production of biofuels. Over 7000 MW of electric power is generated from biogas annually. Anaerobic degradation or digestion (AD) is a microbial mediated process in which organic carbon is converted, by subsequent oxidations and reductions, to its most oxidized state (CO2), and to its most reduced form (CH4). This biological route is catalysed by a wide range of micro-organisms acting synergistically in the absence of oxygen. It is well known that AD is responsible for carbon recycling in different environments, including wetlands, rice fields, animals' intestines, aquatic sediments and manures. This process is also extensively applied in industrial scale for valorisation of organic residues. Waste and wastewater treatment has become a political priority in several countries. Biowastes, i.e. sludge, manures, agricultural or industrial organic wastes, as well as contaminated soils etc., have been traditionally applied in soils untreated as bio-fertilizers or deposited in landfills or even in worst cases dumped into the environment. However, environmental awareness has introduced strict legislations preventing such practices. This practically means that after stabilizing the bio wastes, by extraction of the energy potential, the remaining residues, can be returned to the agricultural soils providing all the necessary beneficial nutrients and maintaining humus and structure in soils. The main advantages of the industrial AD process rely on the production of a versatile energy carrier and the high degree of organic matter reduction with small increase-in comparison to the aerobic process of the bacterial biomass.

Properties of Biogas: Biogas it's a mixture of gas produced by the microorganisms during the anaerobic fermentation of bio-degradable materials. Anaerobic fermentation is a biochemical process in which particular kinds of bacteria digest biomass in an oxygen-free environment resulting in production of CH4, CO2, H2 and traces of other gases along with decomposed mass. Biogas is a mixture of different components and the composition varies depending upon the characteristics of feed materials, amount of degradation, etc. Biogas predominantly consists of 50 to 70 per cent methane, 30 to 40 per cent carbon dioxide and low amount of other gases. Methane is a combustible gas. The energy content of biogas depends on the amount of methane it contains. Methane content varies from about 50 percent to 70 percent.

Properties of biogas	
Properties	***Range***
Net calorific value (MJ/m3)	20
Air required for combustion (m3 /m3)	5.7
Ignition temperature (0C)	700
Density (kg/m3)	0.94

Composition of biogas	
Name of the gas	***Composition in biogas (%)***
Methane (CH4)	50-70
Carbon dioxide (CO2)	30-40
Hydrogen (H2)	5-10
Nitrogen (N2)	1-2
Water vapour (H2O)	0.3
Hydrogen sulphide (H2S)	Traces

Microbiology of biogas production: The production of biogas from organic material under anaerobic condition involves sequence of microbial reactions. During the process complex organic molecule present in the biomass are broken down to sugar, alcohols, pesticides and amino acids by acid producing bacteria. The resultant products are then used to produce methane by another category of bacteria. The biogas production process involves three stages namely:

a) Hydrolysis
b) Acid formation and
c) Methane formation

The process of degradation of organic material in every step is done by range of bacteria, which are specialized in reduction of intermediate products formed. The different process involved in production of biogas is given in the figure. The efficiency of the digestion depends how far the digestion happens in these three stages. Better the digestion, shorter the retention time and efficient gas production.

- ***Hydrolysis***: The complex organic molecules like fats, starches and proteins which are water insoluble contained in cellulosic biomass are broken down into simple compounds with the help of enzymes secreted by bacteria. This stage is also known as polymer breakdown stage (polymer to monomer). The major end product is glucose which is a simple product.

- ***Acid formation:*** The resultant product (monomers) obtained in hydrolysis stage serve as input for acid formation stage bacteria. Products produced in previous stage are fermented under anaerobic conditions to form different acids. The major products produced at the end of this stage are acetic acid, propionic acid, butyric acid and ethanol.

- ***Methane formation:*** The acetic acid produced in the previous stages is converted into methane and carbon dioxide by a group of microorganism called "Methanogens". In other words, it is process of production of methane by methanogens. They are obligatory anaerobic and very sensitive to environmental changes. Methanogens utilise the intermediate products of the preceding stages and convert them into methane, carbon dioxide, and water. It is these components that make up the majority of the biogas emitted from the system. Methanogenesis is sensitive to both high and low pHs and occurs between pH 6.5 and pH 8. Major reactions occurring in this stage is given below:

$$\underset{\text{(Acetic acid)}}{CH_3COOH} \longrightarrow \underset{\text{(Methane)}}{CH_4} + \underset{\text{(Carbon}}{CO_2}$$

$$\underset{\text{(Ethanol)}}{2CH_3CH_2OH} + \underset{\text{(Carbon}}{CO_2} \longrightarrow \underset{\text{(Methane)}}{CH_4} + \underset{\text{(Acetic acid)}}{2CH_3COOH}$$

$$\underset{\text{(Carbon dioxide)}}{CO_2} + 4H_2 - \underset{\text{(Methane)}}{CH_4} + 2H_2O$$

- ***The process of biogas formation through different stages is depicted in figure.***

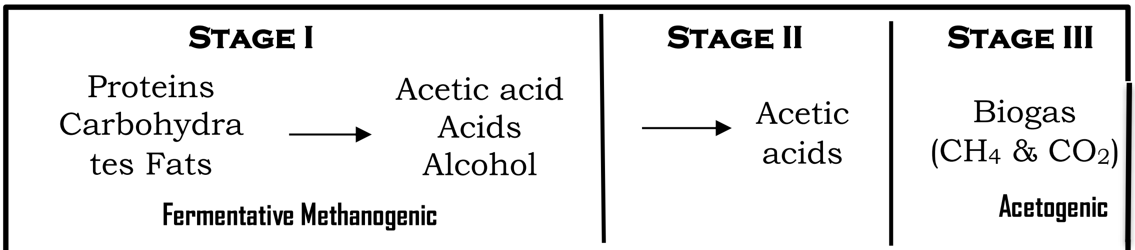


Figure : Stages of biogas formation

Biogas plant and its components :: A physical structure designed to carry out anaerobic digestion of organic materials is called "Biogas plant". Following are the components of biogas plants:

- ***Mixing tank:*** Cow dung is collected from the shed and mixed with the water in equal proportion (1:1) to make a homogenous mixture (slurry) in the mixing tank.
- ***Feed inlet pipe/tank:*** The homogenous slurry is let into the digester through this inlet pipe (KVIC biogas plants)/tank (Janatha biogas plants).
- ***Digester:*** The fed slurry is subjected to anaerobic fermentation with the help of microorganisms inside the digester.
- ***Gas holder:*** As a result of anaerobic fermentation, gas produced is stored in gas holder (Drum in the case of KVIC and in dome in the case of fixed dome biogas plants).
- ***Slurry outlet tank/pipe:*** The digested slurry is let out from the digester through slurry outlet pipe (KVIC biogas plants)/tank (Janatha biogas plants)
- ***Gas outlet pipe:*** Stored gas is released and conveyed through the gas outlet pipe present at the top of gas holder.

Classification of biogas plants: Based on the nature of feeding, biogas plants would be broadly divided into 3 types and they are as follows

a) ***Batch type :*** The organic waste materials to be digested under anaerobic condition are charged only once into a reactor-digester. The feeding is between intervals, the plant is emptied once the process of digestion is complete. Retention time usually varies from 30 to 50 days. The gas production in it is intermittent. These plants are well suited for fibrous materials. This type of plant needs addition of fermented slurry to start the digestion process and it not economical to maintain which are considered to be the major draw backs.

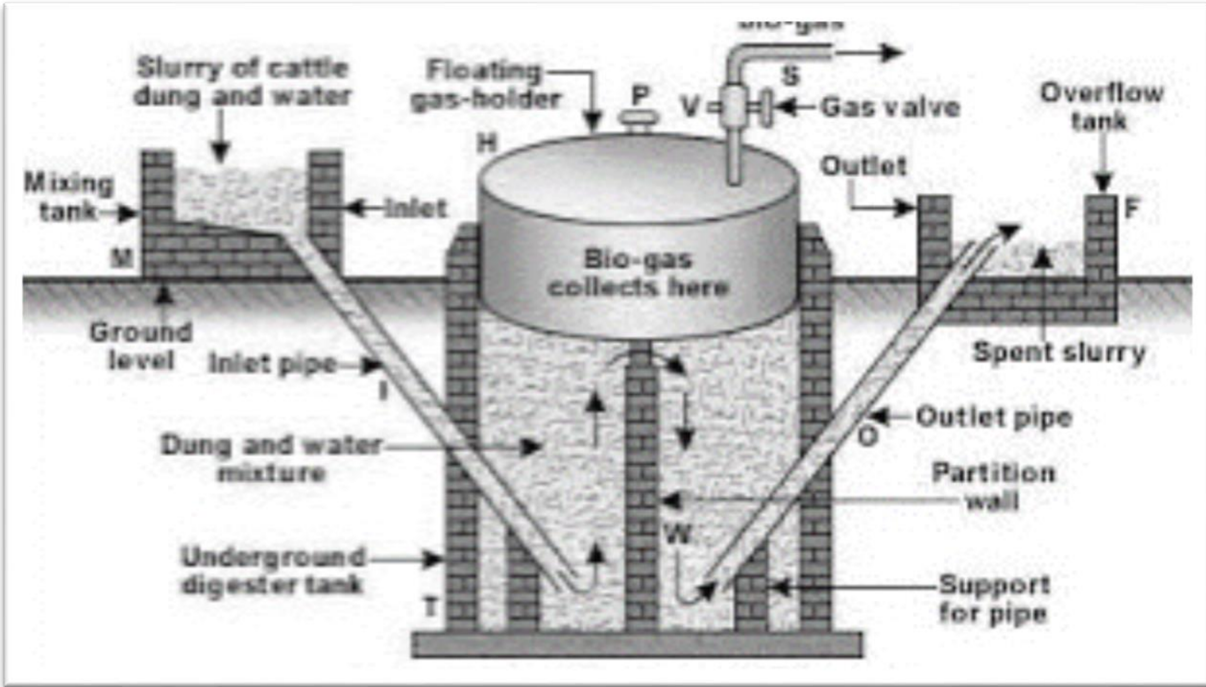
b) ***Semi continuous:*** A predetermined quantity of feed material mixed with water is charged into the digester from one side at specified interval of time; (say once a day) and the digested material (effluent) equivalent to the volume of the feed, flows out of the digester from the other side (outlet).

c) ***Continuous type :*** The feed material is continuously charged to the digester with simultaneous discharge of the digested material (effluent). The main features of this type of plants are continuous gas production, requires small digestion area, lesser period for digestion, less maintenance, etc.

The biogas plants used in the villages are of semi continuous type employing animal dung and other biomass as the feed stock for biogas production. So the classification of semi-continuous type biogas plant is explained below.

i. *Floating drum type – KVIC model*

ii. *Fixed dome type model – Deenbandhu model*



Floating drum type (Constant pressure): In this type of plants digester is made of bricks and is of circular in shape. It is constructed typically underground to lessen the heat loss from the Short-circuiting of digested slurry with the fresh feed. Separate gasholder is fabricated and fixed to store the gas produced during digestion besides acting as an anaerobic seal for the process. As the volume of gas production increases drum starts to rise and if the stored gas is withdrawn the level of drum drops to lower level. Scum formed in the digester can be broken with the help of drum rotation both clockwise and anticlockwise. Central guide frame is provided to hold the gasholder and to allow it to move vertically during gas production. The drum is made up of mild steel and it constitutes around 60 per cent of overall plant costs. Salient features of this type of plants include weight of drum helps to discharge the gas produced at constant pressure, volume of gas storage can be judged visually. Small masonry tanks are constructed for mixing of cow dung, water and to discharge the slurry out of the digester. Concrete pipes are provided to convey the raw and digested slurry in and out of the digester. Gas outlet pipe is provided at top of the drum to let the gas out of drum. KVIC floating drum model is predominantly used in India and fig shows the schematic diagram of it.

plant. Partition wall is constructed (dividing the digester into two parts) for higher size capacity plants to avoid the

Advantages:

a) Higher gas production per cum of the digester volume is achieved.
b) Floating drum has welded braces, which help in breaking the scum by rotation.
c) No problem of gas leakage.
d) Constant gas pressure.

Disadvantages:

a) It has higher cost, as cost is dependent on steel and cement.
b) Heat is lost through the metal gasholder.
c) Gasholder required painting once or twice a year, depending on the humidity of the location.
d) Flexible pipe joining the gasholder to the main gas pipe requires maintenance, as ultraviolet rays in the sun damage it.

Fixed dome biogas plants (Constant volume) : To reduce the cost of biogas plants, researchers has designed fixed dome plants in which dome act as gasholder in place of high cost drum. Gasholder and digester constructed as single unit. The digesters of such plants are completely underground to maintain a perfect environment for anaerobic fermentation to take place besides avoiding cracking of dome due to difference in temperature and moisture. **Janatha Biogas Plants:** Developed exclusively in India completely masonry structure. Provision of Inlet and outlet of raw and digested slurry is constructed in the form of tank. Slurry fed is allowed to undergo anaerobic fermentation in the digester. Gas produced as a result rises up and gets collected in the dome. As the pressure of gas stored in the dome increases, it pushes up the slurry down and causes the slurry level to increase both in inlet and outlet tanks. These levels drop down when the gas in the dome is used up. This displacement provides necessary pressure to push the gas up to the usage point. The pressure coming out of the dome is of variable type as constant in the case of floating drum type. Volume of gas stored in the plant is equal to the total volume of slurry displaced both in inlet and outlet tanks.

Deenbandhu Biogas Plants: One of the outstanding designs of biogas plants in Indian biogas development program is Deenbandhu biogas plant design. It is improved version of Janatha biogas plant model. Action for food production (AFPRO), a voluntary organization based in New Delhi, developed this model in 1984. This is constructed with locally available materials and the plant demand skillful manpower for construction. Important considerations for design modification are reduction in the overall construction cost, elimination of the loss of biogas through inlet chamber and maximum utilization of digester volume to make the operational HRT close to the designed HRT.It is constructed by joining the two spheres of different diameters at their bases, thus reducing the cost of bricks used in construction of digester wall. Bottom part of the plant is a designed as a segment of sphere, whereas the top portion as hemisphere. In this plant feedstock is fed through concrete pipes and the digested slurry is taken out the digester through tank. As a precaution to avoid the entry of slurry through gas outlet pipe, outlet opening is constructed 150 mm lower than the bottom of gas outlet pipe. Gas holding capacity is 33 per cent of total capacity of the plant. Studies proved that the cost of deenbandhu is 30 and 45 per cent less than that of Janatha and KVIC biogas plants.

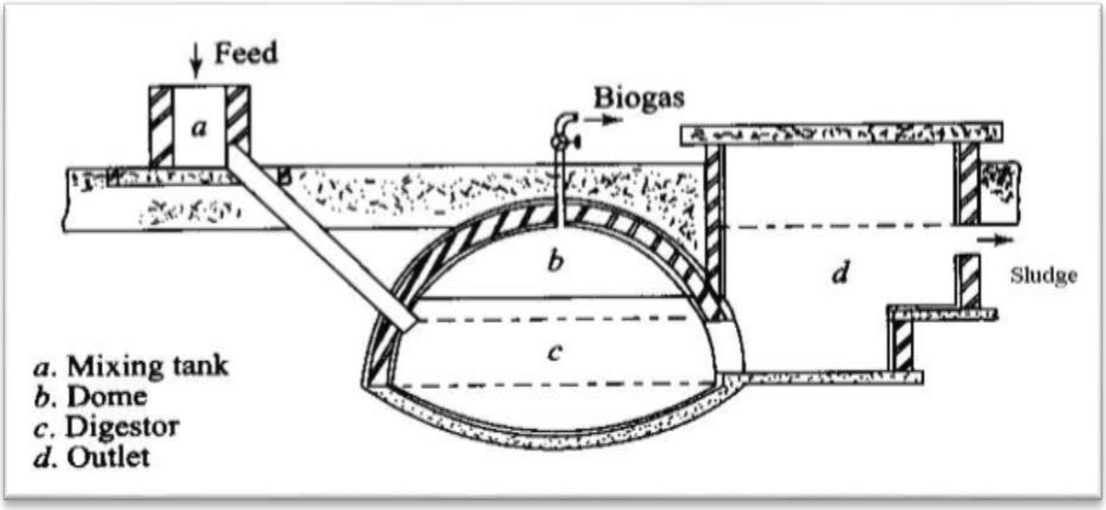
✓ ***Advantages :***

a) It has low cost compare to floating drum type, as it uses only cement and no steel.
b) It has non-corrosion trouble.
c) It this type heat insulation is better as construction is beneath the ground.
d) Temperature will be constant.
e) Cattle and human excreta and long fibrous stalks can be fed.
f) No maintenance.

Disadvantages:

a) This type of plant needs the services of skilled masons, who are rather scarce in rural areas.
b) Gas production per cum of the digester volume is also less.
c) Scum formation is a problem as no stirring arrangement.
d) It has variable gas pressure.

Uses of biogas: Biogas serves as a suitable alternate fuel for satisfying the energy needs of human society. It can be used for production of power, for cooking, lighting, etc. Figure explains the flow chart of different applications of biobiogas.



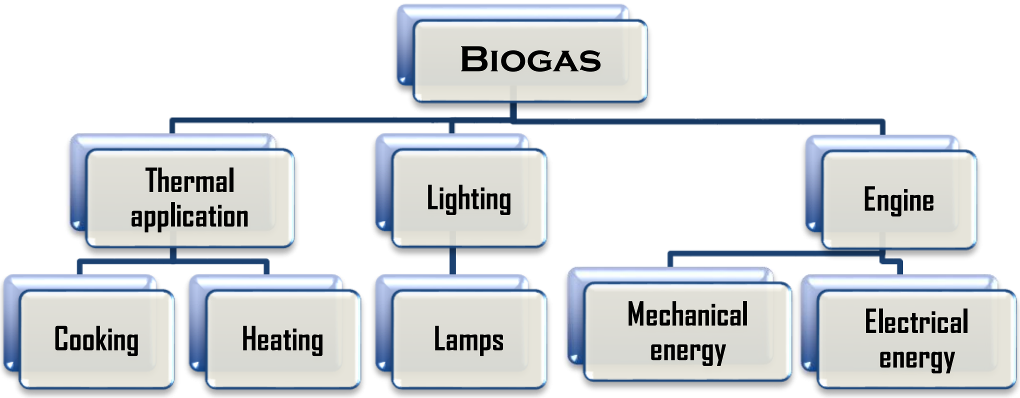


Fig. Applications of biogas

Cooking and lighting: The primary domestic uses of biogas are cooking and lighting. Because biogas has different properties from other commonly used gases, such as propane and butane, and is only available at low pressures (4 - 8 cm water), stoves capable of burning biogas efficiently must be specially designed. Biogas burns with blue flame and without any soot and odour which is considered to be one of the major advantage compared to traditional cooking fuel like firewood and cow dung cake. Biogas Thermal application Lighting Cooking Heating Engine Lamps Mechanical energy Electrical energy Lighting can be provided by means of a gas mantle, or by generating electricity. Biogas mantle lamps consume 2-3 cft per hour having illumination capacity equivalent to 40 W electric bulbs at 220 volts. This application is predominant in rural and unelectrified areas.

Biogas as an Engine Fuel: Biogas can be used as a fuel in stationary and mobile engines, to supply motive power, pump water, drive machinery (e.g., threshers, grinders) or generate electricity. It can be used to operate four stroke diesel and spark ignition engines. Electricity generation using biogas is a commercially available and proven technology. Typical installations use spark-ignited propane engines that have been modified to operate on biogas. Biogas-fueled engines could also be used for other on-farm applications. As discussed below, diesel or gasoline engines can be modified to use biogas. IC engines (typically used for electricity generation) can be converted to burn treated biogas by modifying carburetion to accommodate the lower volumetric heating value of the biogas into the engine and by adjusting the timing on the spark to accommodate the slower flame velocity of biogas ignition systems. When biogas is used to fuel such engines, it may be necessary to reduce the hydrogen sulphide content if it is more than 2 percent otherwise the presence will lead to corrosion of engine parts. In terms of electricity production, small internal combustion engines with generator can be used to produce electricity in the rural areas with clustered dwellings thus promoting decentralized form of electricity avoiding grid losses.

Use of biogas as vehicular fuel: Biogas is suitable as a fuel for most purposes, without processing. If it is to be used to power vehicles, however, the presence of CO2 is unsatisfactory, for a number of reasons. It lowers the power output from the engine, takes up space in the storage cylinders (thereby reducing the range of the vehicle), and it can cause problems of freezing at valves and metering points, where the compressed gas expands, during running, refuelling, as well as in the compression and storage procedure. All, or most, of the CO2 must therefore be removed from the raw biogas, to prepare it for use as fuel for vehicles, in addition to the compression of the gas into high-pressure cylinders, carried by the vehicle.

Uses of bio-digested slurry: The slurry after the digestion will be washed out of the digester which is rich in various plant nutrients such as nitrogen, phosphorous and potash. Well-fermented biogas slurry improves the physical, chemical and biological properties of the soil resulting qualitative as well as quantitative yield of food crops. Slurry from the biogas plant is more than a soil conditioner, which builds good soil texture, provides and releases plant nutrients. Since there are no more parasites and pathogens in the slurry, it is highly recommended for use in farming. The economic value of the slurry shows that investment can be gained back in three to four years' time if slurry is properly used.

The cow dung slurry after digestion inside the digester comes out with following characteristics and has following advantages:

- ✓ When fully digested, effluent is odourless and does not attract insects or flies in the open condition.
- ✓ The effluent repels termites whereas raw dung attracts them and they can harm plants fertilised with farmyard manure (FYM).
- ✓ Effluent used as fertiliser reduces weed growth with about 50%. When FYM is used the undigested weed seeds cause an increased weed growth.
- ✓ It has a greater fertilising value than FYM or fresh dung. The form in which nitrogen available can be easily assimilated by the crops.

Conclusions:

Biogas technology is a promising venture globally mainly because of the existence of mature production technologies and applications as well as promising future technologies. Biogas technology is viable and sustainable due to the abundant supply of cheap feedstocks and availability of a wide range of biogas applications in heating, power generation, use as fuel, and raw material for further processing and production of sustainable chemicals including hydrogen and carbon dioxide and biofuels. The flexibility of biogas production in terms of size from small-scale to large-scale industrial size digesters and a wide range of feasible feedstock allows to produce biogas anywhere globally. Biogas production and use is growing globally and is promising to be a leading economical alternative to produce renewable bioenergy.

Biogas is a versatile fuel as it generates less greenhouse gas emission, it is renewable as it is generated from renewable sources, and its production can be used to treat and reduce the organic waste quantity for disposal while disinfecting pathogens in biomass and has a wide portfolio of energy applications in electricity, heat, and cooling applications. Biogas yield from biomass can be increased by appropriate pre-treatment of the substrate and monitoring of digestion parameters like C/N ratio, temperature, and substrate dilution.

On the environmental sustainability of the energy transition, biogas use reduces global greenhouse gas emissions and the threat of global warming and climate change. Biogas use helps keep the environment clean by preventing harmful environmental and health impact from the huge agricultural wastes available globally. Therefore, biogas provides financial, economic, environmental, and health benefits.
Biogas production process is an established technology for energy generation. However, recent trends open new horizons for exploitation of biogas, expanding its potential applications.

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A STUDY ON IMPACT OF DEMONETIZATION ON BANKING SECTOR WITH REFERENCE TO JAMSHEDPUR CITY

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Abstract
Demonetization is the act of making the existing currency invalid from particular date and that currency cannot be circulated for further transaction and it is replaced by new currency note or coin. The government of India introduced demonetization to curb corruption and fake currency, to disclose black market and to control terrorism. There has been a significant improvement in saving flows to bank branches.

The main aim of this research is to know the effect of demonetization on the banking sector. This report includes the banking industries of various cities. For the report, I have taken into account 13 banks of various cities. A structured question bank was designed and the bank employees were asked to fill that. The questionnaire included issues related to online banking accounts, black money. Governments plan for post demonetization, as well as the individual's preference, for keeping money either at home or at bank. Savings and current accounts were considered as the most highly accounts amongst all. It is believed by employees that cash from black money have been curbed by the authorities. The bank workers had a positive view about the customer's behaviour. By analysing the above stated areas we can strongly believe that, when compared with the last two demonetization, this one have given more positive results and can be termed as the most successful amongst the two, which possesses positive long term impacts. Thus, this paper can further be used for more research work as it contain data of Jamshedpur city banks.

Keywords- Online banking, Jamshedpur, black money, banks, corruption, post demonetization effects

Concept of Demonetization-As we know, the main intention behind this demonetization is to uproot parallel economy and to reap more tax revenue in the country. William Murray of the IMF expressed his opinion last year that "We see salutary benefits from the demonetisation that took place a year ago and there are potential benefits going forward," he also said that "demonetisation did cause some temporary disruptions in economic activity, primarily, private consumption and small businesses due to cash shortages But the effects are dissipating". Demonetization is the act of making the existing currency invalid from particular date and that currency cannot be circulated for further transaction and it is replaced by new currency note or coin. The government of India introduced demonetization to curb corruption and fake currency, to disclose black market and to control terrorism. Our Government put an end to the circulation of Rs 500 and Rs 1000 on 8 November 2016 by redesigning Rs 500 and Rs 2000 notes.

Demonetization induced household to move towards formal channels of savings and created noticeable increase in the number of accounts in Indian banking sector. There has been a significant improvement in saving flows to bank branches.

Demonetization would bring positive effects for banking sector both in short and long term and it also improves tax compliance, brings down inflation, and hinders corruption, checks fake currency. Banks have received huge deposits after demonetization. There are even bigger impacts on rural economy. Ruralites usually deal with landlords and unorganized sector for their financial crisis but due to the implementation of demonetization they also rushed towards banks and started to transact trough banks.

History of Demonetization in India

The first time currency ban was declared on January 12, 1946 by the reserve bank, removing the notes of 1000 and 10000 from the Indian economy. A new design was given to these notes and was given to these notes and was reintroduced in the year 1945. It had note created much public inconvenience.

The second ban was announced on January 16th in the year of 1978 by Mr R Janaki, a senior officer of the RBI. As per his orders notes of 10000, 5000 and 1000 were taken out of the market. A three day period was given to people, for getting their currency exchanged and around 73.1 crores were demonetized. (Knowledge @ Wharton. 2016)

The third and the most recent ban were announced by BJP government led by Mr. Narendra Modi on November 8, 2016 the notes of 500 and 1000 were taken out of the market for the purpose of demonetization. Hospitals, airports, petrol pumps, accepted the notes till November 11, 2016 as per the government orders. (Economics Survey 2016-17, National Informatics Center (2016)).

Literature review- Dr. N. Babitha Thimmaiah and Mr. Brijesh Singh in their reports studied the result of demonetization in terms of Won or Lost. In their study reports, both of them have very efficiently explained the concept of the cashless economy with the reference to woodford. In their reports they , very effectively have shown the impact of demonetization on the areas like, stock, cash rush Market, agriculture, income tax, transportation, railways etc. Till the time there are no evidences of the black money holding in cash but results of various reports indicate that 8% of the black money in held up in the form of cash.

- ❖ As per the Centre for Monitoring the Indian Economy, it is estimated that the transaction cost of demonetization till December 30th 2016, is Rs. 28 lakhs crore. The deputy governor of the reserve bank **Mr. R. Gandhi** believes that 11.5 lakh crore has been deposited in the banks out of the 14.5 lakhs, which states that till the time 3 lakhs crore are unidentified.
- ❖ In November 2016, **Geeta Rani,** had made a research paper showing the impacts of demonetization on the retail markets. In her analysis, she designed a question bank which was filled by around 50 shopkeepers of the area. The result of her survey is stated below. Shopkeepers stated that there was an increase of sales by 20% due to accepting the old notes, but after a certain period they had to switch to Paytm and the cheques, and also increased their credit period. Sales of chocolates, salty snacks, and biscuits are decreased by 50%, 20% and 10% respectively. Gold sale was increased by 70 % on the other hand, sale of durable good fall by 70%. The concluding paragraph of her report stated that demonetization is tragic at present but will surely bear fruits of development in the long run a shift can also be seen in the consumer behaviour as people are moving towards cashless economy.
- ❖ In December 2016 a research was conducted by **Sherline T.I** on Demonetization as a prelude to complete financial inclusion ".with the aim to understand the need of demonetization as a tool of financial inclusion. It mainly stands for providing the monetary services at a low cost to the low income groups of the society.
- ❖ **According to the report of financial inclusion** can give a huge boost to the credit availability and to the saving habits of the individuals. The report assures that this will surely benefit the nation and its government in the long run.

Demonetization would surely limit the cash transaction the real estate, which may lessen the Price of the areas which make it easily cheap, thus general public can easily afford it. Less transaction in the cash will surely help out in curbing the inflations as well.

- In February, 2017 **M. Angel Jasmine Shirley,** in her research paper analyzed the Impact of Demonetization in India". As per her report 50 stock exchanges had got a fall near about 6% on the next day itself, not only this, but the nation felt the shortage of cash in the economy. Lack of cash leads to decrease in the level of production which in turn to decrease of sales. Demonetization has effected the overall trade badly. Due to shortage of cash and resources the export and import of the nation was very badly affected. A major impact was seen on the areas such as real estate, fishing , farming, jewellery, bank deposits , It sector etc. it was a good initiative to capture the black money but it has been felt that the majority of the black money resides in the form of gold, land , real estate etc. people were exposed o much of risk and tensions due to improper implementations of the plans, a lot of time was wasted in standing in lines to get their notes exchanged. Loopholes are to be mended to put these nations on the path of development.
- In December 2016, **Chabi Gupta** analysed the working of payment banks and demonetization. Payment banks can be defined as a niche banking system designed by the reserve bank of the country, providing small saving account and payment facilities to household and small business. After thus, she has over the overall impact of the demonetization move. As per the report by the RBI 500 notes amounted to Rs. 16415 billion and amounted to 47.8% in value whereas 1000 notes were 38.6% in value. Many banks are aiming to design a contact less debit and credit card system, allowing customers to use cards, without swiping it.

Reasons for demonetization in India- There was sudden increase cash deposits of all banks in India , people rushed to banks to exchange currency notes and some of them did not have accounts in banks but due to this new trend they opened new accounts. Government introduced demonetisation to bring possible effects on economic activities and to motivate efficient digital payment system.

REASONS FOR DEMONETIZATION IN INDIA

- Tracks Black Money
- Curbs The Circulation Of Fake Money
- Fights Against Inflation
- Makes Indian Economy Cashless

There is no doubt that, it has helped the government of India to track black money transactions and to pour light on tax evaders. This process has brought unaccounted cash assets bank accounts. Government has also motivated its citizens to go for cashless transactions. Demonetization has also acted as an effective tool to curb money circulation for funding terrorism, gambling and prostitution.

Objectives

The present study is based on the following objectives. They are as follows:

- To study the influence of demonetization on banks operations.
- To find out positive and negative results of post demonetization on bank operations.
- To check the level of awareness, among the customers, about online banking.

Methodology-Research methodology can be defined as the process of gathering the data and information with the aim of doing the research work. It can also include various techniques such as research objectives, methods of sampling and many more. It is one of the major aspects of the research work.

Research Design-Research design states the overall strategy adopted by the researcher where by overall components of the study are set out in the logical way. That effectively presents the problem of the study moreover it constitute the collection, measurement and analysis of the data in the systematic way. For the study of impact of demonetization I had used descriptive research method. Motive behind choosing this tool is that this method is useful in describing the data that analysed through study. Moreover descriptive study can provide you the overall knowledge about the specific sector in an analytical way.

Sample design-Sampling is the tool of selecting the sample from population. Research done over here is by using the convenient sampling method. For the research purpose, I had focused over Jamshedpur city as the area of the sampling.

Collection of Data-Data collection is the most important part of any of the research. Generally primary as well as secondary ways are available for data collection. For this study primary data collection has been used. For that Questionnaire method has been used. For that Questionnaire method has been used by me. Wherein, I personally approached the respondents with the view to gather the information from them.

Sample Size: 100

Data analysis and interpretation

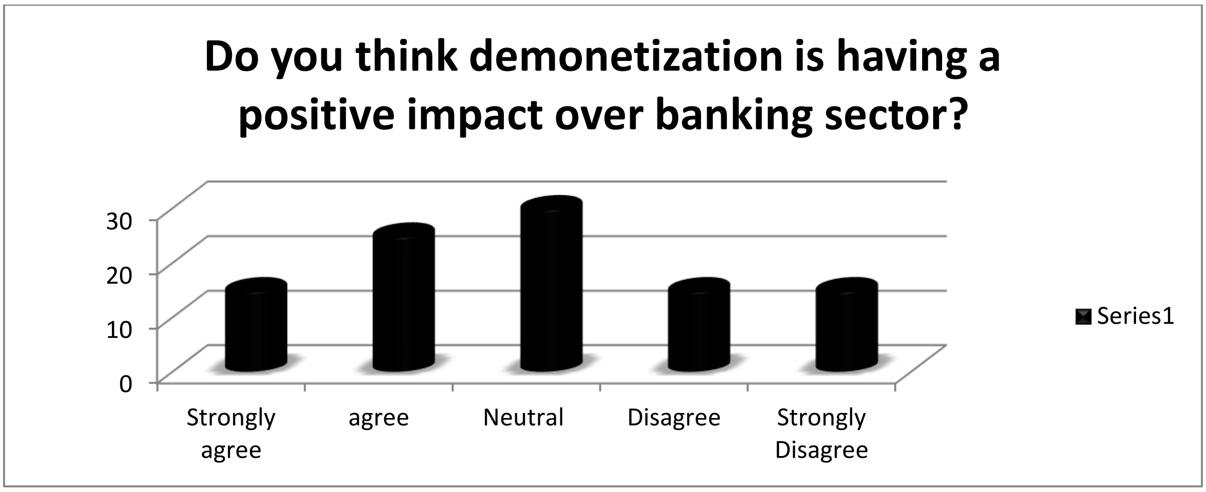
1) Do you think demonetization is having a positive impact over banking sector?

- **Strongly Agree ☐**
- **Agree ☐**
- **Neutral ☐**
- **Disagree ☐**
- **Strongly Disagree ☐**

In response of this question, bank employees had given following responses:

Strongly agree	agree	Neutral	Disagree	Strongly Disagree
15	25	30	15	15

Figure 1: Respondents view regarding the impact of demonetization on banking sector



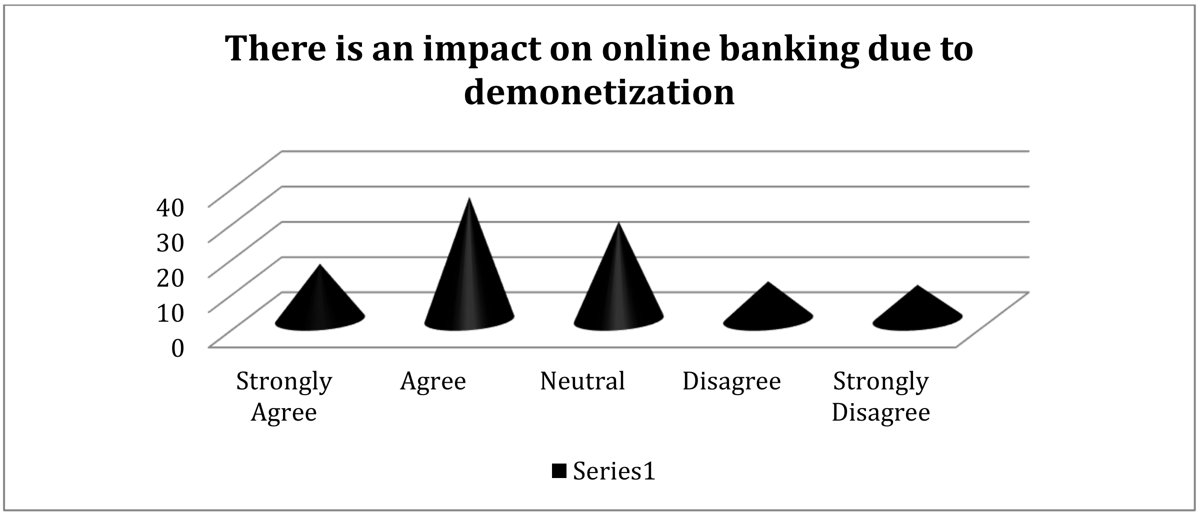
Interpretation: Out of the total employees, 15% are strongly agree. 25% of the employees are agree. 15% of the employees are disagree also 15% of the employees are strongly disagree. Rest are neutral.

2) There is an impact on online banking due to demonetization.

- **Highly agree☐**
- **Agree ☐**
- **Neutral☐**
- **Disagree ☐**
- **Highly disagree☐**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
16	35	28	11	10

Figure 2: Respondents view regarding the impact on online banking due to demonetization



Interpretation: 51% of the employees said that there is positive impact whereas the 21% of the employees said that there is negative impact and rest does not clear themselves.

Findings

I. 40% of the employees are positive about the impact of demonetization over banking sector in Jamshedpur city. Whereas 30% are negative. And the rest are neutral to their views.

II. 51% employees had positive opinion about the impact on online banking. Moreover the employees who were agree or highly agree with increased use of online banking, had given reason that customers are using the mobile app also now to pay money.

I had asked some more questions to the employees, which gave me some more findings mentioned below:

I. In a question where I asked them about highest impacted a/c of bank. 35% employees had opinion about the savings a/c, 30% had about cash deposit and withdrawal a/c and 20%, 8% and 7% respectively for Current a/c, cash credit a/c and other a/c which includes loan a/c.

II. More over in a question of opinion for „Demonetization- a tool for curbing the black money". Almost 52% employees said Yes-demonetization is a good tool for curbing black money. Some of them had explained that Black money is not only in form of cash. It may be in form of property, gold, land etc. If we are purely talking about black money in form of cash, then it may be a good tool.

III. Further I asked about people's behaviour either to keep money at home or bank. Almost 69% employees said that gradually people are now moving towards banks. Further they said so many ladies are there. Who came first time to bank and seen the work of bank and learned cash deposit and all other regular tasks.

Effects of demonetization on bank operations- Demonetization has brought plethora of challenges in additions to the challenges which are already facing by Banks. The influences were short-term and long-term views. In short-term, it disrupted the banks and stressed strongly to carry out bank operations and in long run it helped the banks to pool the deposits without incurring of any cost. Here are four influences of demonetization on Banks.

I. **Increase in Deposits**: Demonetization has increased the deposits in Banks. Unaccounted money in the form of Rs.500 and Rs.1000 were flowing to the Banks and the sizes of deposits have been increased. It helped the banks to grab the deposits and increase their deposits.
II. **Fall in cost of Funds:** Over the past few months, the deposits are increased. It led the banks to keep a major part of deposits in the form of cash deposits. PSU Banks have a lion share (over 70%) of the deposits and biggest gainers of the rise in deposits, leading to lower cost of funds.
III. **Demand for Government Bonds**: After sharp rise in deposits on post demonetization, banks started lending such surplus deposits to the RBI under the reverse repo options. PSU Banks, particularly, deployed excess funds in government bonds. The return on bond investment is likely to add 15 to 20 per cent increase in the earnings of banks.
IV. **Sagginess in Lending**: Lending growth of the banks is considerably less even after demonetization and its impact of growth in the amount of public deposit. Banks have tried to lend the money to the needy group by reducing their interest rates, but it shrunk over the last few months.

Results of post demonetization on bank operations- There are positive and negative results of Post Demonetization on Bank operations. Both have influenced Banks liquidity and profitability and employees too. The following are positive results of demonetization.

I. **Free flow of deposits**: Banks have gained deposits substantially after demonetization which they can invest for improving their liquidity and profitability.
II. **Improved digital Interface**: Improvement in digital tools and equipment to execute bank transactions has avoided cash loss for various reasons like theft, dacoits and misappropriations.
III. **People's surplus at Bank:** cash is an idle asset which does not yield any income unless kept in a bank. So, demonetization made the people to keep their surplus money in a bank to earn some sort of income.
IV. **Increased number of Customers**: Demonetization has influenced public to come and execute transactions with banks. It made even a non-income group people to visit bank and have an account. It increased number of account holders in banks while increasing deposit corpus.

Similarly, Demonetization has brought some operational issues to Banks. It disturbed Banks Employees, Operational Costs and Profitability. The following are negative influences of Demonetization.

- **Cash Reserve Requirement:** 100% CRR on incremental deposits meant that banks did not earn any interest on Rs. 3 Lakh crore of deposits for nearly a fortnight.
- **Waived off ATM Charges:** ATM charges were waived off during banned note exchange and banks incurred a loss of Rs. 20 in every transaction.
- **Waived off Merchant Discount Rate:** Banks incurred loss of 1% discount charges from merchants on using of every card transaction.
- **Non Selling of Loans:** Banks were focused on exchanging currency notes and they were not able to sell any loan products. This made banks to curb their lending activities.
- **Reduced SME's Sale and influence on NPAs**: During demonetization, some SME businesses had seen their sales drop by 50-80% and could default in their instalments to banks. This led the banks

to consider it as NPA and affected its level in banks.

- **Stress on Employees**: Bank Employees were put under pressure and overtime work environment. It depressed them and kept imbalanced life style. Few cases were found where the employees committed suicide due to work pressure.

Suggestions-

Educate everyone about the use of e-wallet and Debit & Credit Cards. Proper classes about the use of ewallet and cards should be taken at each & every office, organization, companies etc. whether private or government. Camps can be held at village levels & city levels at each & every corners. Social workers, panchayat members, municipal corporation members & staff should come forward in explaining the use of digital media for buying commodities in the market.

Give every businessman, who has current account with banks, swipe machine at the earliest possible. Tragedy is many bank branches still do not provide the facility of giving swipe machines to its clients. Immediate steps to be taken by the concerned authorities to equip banks with these machines so that it can be distributed to the traders. Also, proper training should be given to traders about its use.

Conclusion- By seeing the data collected over here, I can say that, this time demonetization has proven somehow more successful as compare to previous two. Wind has been change. People became more conscious about online banking. Bank employees had work continuously without taking day off. Their co-operation matters a lot. Though total black money had not been grabbed by this tool, this tool proves fruitful for at least creating fear in the minds of black money holders. It was compulsory for the Government to take some steps like demonetization to decrease corruption, terrorism, black money etc.

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MOTHER TONGUE AS THE MEDIUM OF INSTRUCTION IN INDIA

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Abstract-Mother tongue as the medium of instructions at developing countries like India often remains a hot debate .One of the factors attributed to poor performance of some indigenous students at universities in India is the use of a second language – mainly English and to some extent Hindi – as the language of instruction at the universities. Consequently, policymakers in some developing countries have introduced, or are debating the idea of introducing, local vernacular languages as the official languages of instruction at their respective universities. Indeed, learning the official language of instruction as a second language is an additional hurdle, which to some extent hinders some students from performing well in their university studies. Thus students whose mother tongue is used as the language of instruction at their universities have an advantage over students whose mother tongue is not the language of instruction at their universities. Policies regarding the medium of instruction at universities have a range of short-term and long-term implications, some of which may be easily overlooked yet they may have far reaching repercussions for current and future generations. In this paper, a repertoire of pertinent issues surrounding the use of vernacular languages at universities is explored. These issues include performance of students, quality of graduates produced in terms of employability, university overall productivity, innovation, university competitiveness in the wake of globalisation, preservation of the vernacular languages and contribution towards national as well as global socio-economic development.

Key Words- Medium of instruction, Vernacular language, English as second language

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Introduction- Many developing countries are grappling with the issue of policy on language of instruction to be used in schools and tertiary colleges. Although English is arguably the most widely used language to the extent that it could be considered to be an international language,1,2 various developing countries have been debating policy changes egarding the use of vernacular languages or lingua franca as the medium of instruction in their educational systems.2-4 In Africa, the main language of instruction used in most educational systems is English1,2,4 followed by French. In general, the former colonial language is the one used as the official language of instruction in the educational systems of African countries. It is a widely accepted fact that language was, and may still be, a barrier to access to education of high quality in some developing countries.

Proficiency in the language of instruction can affect comprehension of content and hence the performance of students in various subjects such as Mathematics 5-7 and Science. Hence the success of students whose mother tongue is not English or French may be compromised when they embark on university education at universities at which English or French is the language of instruction. Consequently, some universities in developing countries are at different stages of introducing local vernacular languages as official languages of instruction in an effort to address the challenge. Indeed, the importance of the mother tongue has been pointed out even in some developed countries 8 ;but developed countries are already economically strong and are generally already more competitive than developing countries in the global village. However, the language policy of university educational systems should not be considered and developed in isolation from other pertinent factors which affect the overall capability of universities to produce competitive graduates of high quality who can effectively contribute towards national and global socio-economic development of marginalized populations. Thus a holistic approach which takes into account the whole repertoire of relevant issues that affect the entire educational system from kindergarten through primary and secondary schools to universities should be considered. The acquisition of proficiency in any language is a learning process that has to be started as early as possible in the development of students. For instance, it has been reported that starting to learn English as early as primary school helps proficiency in the language.

Within that background, policymakers in some formerly colonised developing countries feel obliged to change their national policies so as to make local vernacular languages the official languages of instruction in schools and universities; such a change of policy could be considered to be a demonstration of political independence. However, it is critical to be pragmatic and objectively weigh the potential advantages and disadvantages of any policy change. The potential implications of using vernacular languages as official languages of instruction at universities are discussed in terms of the performance of university students, innovation, employability of graduates produced by universities, ability of universities to compete nationally and globally, ability of universities to contribute towards national and global socio-economic development, chances of previously disadvantaged groups to participate in and benefit from the mainstream economy, choice of a vernacular language, use of local vernacular languages at universities as a 'postponement' of rather than a solution to challenges associated with indigenous students learning an international language and (9) efforts to preserve local vernacular languages. Unpacking pertinent issues Performance of students Performance of students is affected by several factors. The level of comprehension of the language of instruction can negatively affect performance because students may experience difficulties in grasping the underlying basic concepts that are taught in various subjects.

Most developing countries are experiencing increasing levels of unemployment. Would the graduates be employable only in the areas in which their respective vernacular languages are used? Would investors from other parts of the country or the world be attracted to such areas or would they prefer areas in which an international language is used? Retrospectively, would graduates themselves appreciate a policy on the use of vernacular languages as the medium of instruction at universities when they are out in the real world fending for themselves and for their families? University competiveness in the wake of globalisation, Universities are making concerted efforts to attract high calibre students and workforce in order to be competitive nationally and globally. With the best students and workforce, universities can in turn enhance their ability to generate their own funds for research, in addition to attracting research funds from funding organisations. Challenges of choosing one vernacular language out of many In situations in which there is one vernacular language to consider, the choice of the vernacular language for the medium of instruction at a relevant university or universities would be straightforward. However, in reality, there usually is multiple vernacular languages spoken in particular localities or countries in which a university or universities may be located. In such situations, the issue of criteria to be used to determine which of the many vernacular languages to select as the medium of instruction at the particular local universities becomes a challenge.

In contrast, use of an international language as a medium of instruction would promote mixing of people from different ethnic or racial groups that would still have their unique cultures and vernacular languages which do not necessarily have to be preserved through use of vernacular languages as medium of instruction at universities. Although English is a former colonial language, its continued widespread use as an international language in the post-colonial era arguably makes it a relatively 'neutral' language which could minimise the potential risk of ethnic or racial discrimination and 'isolationism' that could be caused by localised use of vernacular languages as the medium of instruction at local universities. It should be emphasised that this does not imply that an international language like English is superior to other languages; it is merely a convenient tool or medium to use as it is already used globally.. Even if the graduates were to become selfemployed entrepreneurs, their business endeavours may be hampered by the limited proficiency in the international language. For instance, business tenders are generally in English. Business proposals are generally in English.

In many homes and communities, parents, grandparents, ordinary members of communities, and community leaders could play a role in keeping their cultures and languages alive. For instance, parents could ensure that their children do not neglect and abandon their vernacular language by using the language in their homes instead of using an international language such as English or French at home. However, people are free to use their language of choice in their homes, and parents may consider an international language to be so important that they would rather help their children to master it by using it at home.
In addition, some youths may prefer using and developing their own pidgin language to their mother language, regardless of the language of instruction used in the educational systems of their country.

Recommendations and concluding remarks;
As policymakers in developing countries consider changing policies in order to make some vernacular languages official languages of instruction at universities, it is critical to take into account a range of pertinent factors and possible long-term implications. A bilingual system that starts with the mother tongue as the main medium of instruction while an international second language is gradually introduced using the mother tongue is ecommended. By the time students get to midprimary school level, they should have mastered the second language to levels that facilitate a transition from the vernacular to the international language as the language of instruction. Thus an international language would be used as a medium of instruction from mid-primary school to university level. Relevant local vernacular languages could be used for instruction purposes from crèche to mid-primary school as a preparatory phase for the introduction of an international language as the medium of instruction all the way to university level. However, if a decision is made to use local vernacular languages as official languages of instruction up to university level, it is recommended that policymakers consider having bilingual systems which include an international language. Policy changes that will introduce vernacular languages as the medium of instruction at university levels may not lead to the desired results. Such policy changes may inadvertently be to the disadvantage of the very indigenous students for whom they are intended to benefit.

Poor performance of university students whose mother tongue is not the language of instruction may not be attributed solely to limited proficiency in the language of instruction because there are other confounding factors such as overall quality of primary and secondary schools attended, quality of teachers, socio-economic status of their families and the type of environment in which the students live and study. In order to enable an evidence-based formulation of policies pertaining to language of instruction in educational systems in developing countries, more empirical research should be conducted, which covers the various pertinent factors – including the views and preferences of stakeholders such as the students themselves, their parents, academics, tertiary education policymakers, politicians, funding organisations, industry and local communities in the vicinity of the universities.

In Indian context the draft proposal of NEP 2020 interestingly proposes much importance on mother tongue as the medium of instruction and also emphasises on employability side of education by means of technical knowledge having sufficient traditional base. Many of India universities already implemented the proposal and rest others preparing to implement early. In future the educational scenario in view of local justification is supposed to be changed.

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CHALLENGES OF THE FRUIT AND VEGETABLE PROCESSING INDUSTRY: A CASE STUDY OF RANCHI DISTRICT OF JHARKHAND

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Abstract- The fruit and vegetable processing industry plays a crucial role in enhancing food security, promoting rural livelihoods, and generating income for farmers. Jharkhand, a state in eastern India, is endowed with fruits and vegetables. The state government has launched several initiatives to promote fruit and vegetable processing, including subsidies, technical assistance, and infrastructure development. However, the industry faces several challenges, including lack of access to finance, inadequate infrastructure, high operating costs, market access issues and low market prices. This research paper examined the challenges of the fruit and vegetable processing industry in the Ranchi district of Jharkhand. The study employs a mixed-methods approach, including a survey of 100 processors and interviews with government officials, industry experts, and farmers. The findings revealed that the fruit and vegetable processing industry in the Ranchi district has considerable potential for growth and development. The study recommends policy interventions that can help address these challenges and promote the sustainable development of the fruit and vegetable processing industry in Ranchi district in particular and Jharkhand in general.

Keywords: Fruit and Vegetable Processing; Challenges; Opportunities; Industry.

Introduction- According to the Ministry of Food Processing Industries in India, the country is the second-largest producer of fruits and vegetables in the world after China. India witnesses nearly 4.6-15.9 percent wastage in fruits and vegetables annually, due to lack of modern harvesting practices and inadequate cold chain infrastructure. Hardly 2-3 percent of the perishable produce is processed to value added products. (CIPHET) The fruit and vegetable processing industry is a vital sector that contributes to food security, rural livelihoods, and economic development. The industry plays a crucial role in reducing post-harvest losses, enhancing shelf life, and increasing the value of agricultural produce. In India, the fruit and vegetable processing industry has been growing rapidly, driven by rising demand for processed foods, changing lifestyles, and urbanization. According to a report by the Indian Council of Agricultural Research (ICAR), the market size of processed fruits and vegetables in India was estimated to be around INR 1,475 billion (US$20.4 billion) in 2020, and it is expected to reach INR 2,275 billion (US$31.5 billion) by 2025, growing at a CAGR of 9.1 percent. The fruit and vegetable processing industry in India has seen significant growth in recent years. According to a report by the Ministry of Food Processing Industries, the sector grew at a CAGR of 7.7 percent from 2013 to 2018 and is expected to continue to grow at a similar rate in the coming years. The industry provides employment opportunities to a large number of people, particularly in rural areas, and has the potential to significantly contribute to the country's GDP. India exports a significant amount of processed fruits and vegetables. As per MoFPI, in 2020-21, India exported processed fruits and vegetables worth US$ 3.34 billion. However, the industry also faces several challenges, including a lack of modern infrastructure, inadequate access to credit, and the high cost of raw materials. In addition, the sector is highly fragmented, with a large number of small and medium-sized enterprises operating in the industry. This fragmentation has led to issues related to quality control and the adoption of modern technologies. In terms of the prospects for the industry in Ranchi District, it is important to note that the district is located in the state of Jharkhand, which is known for its rich natural resources and agricultural potential. The state government has taken several initiatives to promote the food processing industry, including the establishment of food parks and the provision of financial incentives to entrepreneurs. Overall, while the fruit and vegetable processing industry in Ranchi District may face some challenges, it also has significant growth potential. With the right support and investment, the industry could help to create jobs and boost economic growth in the region.

Jharkhand, a state in eastern India, is richly endowed with fruits and vegetables. The state has a diverse agro-climatic condition that enables the cultivation of a variety of fruits and vegetables, including mangoes, litchi, guava, pineapple, tomato, brinjal, and okra. The state government has launched several initiatives to promote fruit and vegetable processing, including subsidies, technical assistance, and infrastructure development. Despite these efforts, the fruit and vegetable processing industry in Jharkhand faces several challenges, including inadequate infrastructure, lack of access to finance, and low market prices. According to the Annual Report 2020-21 of the Ministry of Food Processing Industries (MFPI) of the Government of India, as of 31st March 2021, there were a total of 38 fruit and vegetable processing projects approved in the state of Jharkhand, with a total project cost of approximately INR 91.34 crores. These projects are expected to generate employment opportunities for approximately 10,230 people.The present study aims to examine the status, prospects, and Challenges of the fruit and vegetable processing industry in the Ranchi district of Jharkhand.

Literature Review-The fruit and vegetable processing industry is an important sector that contributes to food security, employment, and income generation. The industry involves various processes, including sorting, grading, washing, cutting, pulping, canning, and packaging. The processed fruits and vegetables can be stored for a longer time, which helps to reduce wastage and enhances the availability of nutritious food throughout the year. The Indian fruit and vegetable processing industry has been growing rapidly in recent years, driven by changing consumer preferences, urbanization, and rising income levels. The industry has immense potential for growth and development, given the large and diverse raw material base, low labor costs, and favorable government policies. The fruit and vegetable processing industry is one of the rapidly growing sectors in the agriculture industry in India. This industry has the potential to generate employment, reduce food wastage and promote the growth of the rural economy. Ranchi district of Jharkhand has the potential to become a major producer of fruits and vegetables, and thus the processing industry can play a significant role in the economic development of the district. This literature review aims to analyze the status, prospects, and Challenges of the fruit and vegetable processing industry in the Ranchi district of Jharkhand.

Status: The fruit and vegetable processing industry in the Ranchi district is at a nascent stage. The district has enormous potential for fruit and vegetable processing, but the current level of processing is low. The majority of fruits and vegetables are sold fresh, and only a small portion of the produce is processed. The number of registered Food Processing Units in Jharkhand is just 240.{Annual Survey of Industries ASI (2018-2019)}[4] According to a report by the National Horticulture Board, the state of Jharkhand has only one fruit and vegetable processing unit, and it is located in the Hazaribagh district.

Prospects- Jharkhand is especially known for its abundance in production of vegetables. It is the **second-largest** producer of peas and the **sixth-largest** producer of tomato in the country. Jharkhand is the only state where **Cauliflower** is produced and exported throughout the year. The state produces a significant amount of french beans, chillis, and, capsicum and the climate here is conducive for high-value crops like broccoli, cauliflower, lettuce, etc. Tomato and potato are produced in abundance which often creates a glut situation leading to the distressed sale and high wastage due to lack of value addition to the surplus product. (Jharkhand Food Processing Industrial Policy, 2015). The fruit and vegetable processing industry has enormous potential for growth in the Ranchi district. The hilly terrain offers several potential areas for watershed development, intensive cropping based on fruit crop and crop diversification. Ranchi is famous for its guava, litchi, mango, strawberry, sapota, custard apple, jackfruit, papaya, bael, brinjal, cabbage, cauliflower, chilli, tomato, peas, beans and okra.

Given the normal average rainfall of over 1000 mm in Jharkhand, the conditions are favorable for growing cash crops like Avocado and dragon fruit which have the potential to give a boost to the local economy. Both these crops are new and expensive in India. As per the Agricultural Research Data Book and Directorate of Agriculture (2018)[24], the percentage share of the total cropped area of horticulture (vegetables) is 10.59 percent in Jharkhand as against the 2.86 percent national average.The production of fruits and vegetables is increasing in the district, which provides an opportunity for the growth of the processing industry. Furthermore, the government of Jharkhand has launched various schemes to promote the growth of the agriculture and processing industries, such as the Mukhyamantri Krishi Ashirwad Yojana and the Deendayal Antyodaya Yojana-National Rural Livelihoods Mission.

Table 1: Area under fruits in Ranchi district during the year 2019-20

The table below shows the area under selected fruits in Ranchi district during the year 2019-20.

Fruit	Acres
Mango	2351.4
Jackfruit	177.8
Guava	129.9
Banana	0.4
Litchi	36.1
Others	204,41

Source: Indiastats (Retrieved on 18.12.22)

The table above shows that mango occupies the largest area under cultivation (2351.4 acres) among all fruits grown in Ranchi district.

Table 6: Area under vegetables in Ranchi district during the period 2019-20

The table below shows the area under selected vegetables in Ranchi district during the year 2019-20.

Vegetable	Acres
Potato	5892
Onion	2137
Peas	2017.6
Ginger	2733
Tomato	1894
Cauliflower	2762
Cabbage	1952
Okra	3603

Source: Indiastats (Retrieved on 18.12.22)

The table shows that potato occupies the largest area under cultivation among all vegetables grown in Ranchi district.

Challenges: The fruit and vegetable processing industry in the Ranchi district faces several challenges that hinder its growth. The lack of infrastructure such as roads, electricity, and water supply, is a significant problem faced by the industry. The lack of proper storage facilities and transport infrastructure leads to high post-harvest losses, which ultimately affects the income of the farmers. The industry also faces a shortage of skilled labour and a lack of access to credit facilities. Thus above mentioned earlier studies highlights that the fruit and vegetable processing industry has the potential to contribute significantly to the economic growth of the Ranchi district. However, several challenges need to be addressed to harness the full potential of the industry. The government needs to take steps to improve infrastructure, provide credit facilities, and promote skill development programs for the growth of the industry. There is also a need for private sector participation to promote the growth of the industry.

Research Objectives:

1. To determine the current status of the fruit and vegetable processing industry in the Ranchi district.
2. To identify the prospects and potential for the growth of the industry in the district.
3. To examine the Challenges and challenges faced by the fruit and vegetable processing industry in the district.
4. To provide recommendations for the sustainable growth of the industry in the district.

Research Questions

The study has aimed to address the following research questions:

1. What is the current status of the fruit and vegetable processing industry in the Ranchi district?
2. What are the prospects and opportunities for the development of the fruit and vegetable processing industry in the Ranchi district?
3. What are the major challenges facing the fruit and vegetable processing industry in the Ranchi district?

Research Design: This research has used a mixed-methods approach, incorporating both qualitative and quantitative data collection and analysis techniques. The study has been conducted in three phases:

Phase 1: Secondary Data Collection: In this phase, secondary data sources have been reviewed to gather information on the fruit and vegetable processing industry in the Ranchi district. These sources have been included government reports, academic articles, and industry reports.

Phase 2: Primary Data Collection: The primary data collection has been done through surveys, interviews, and focus group discussions with key stakeholders involved in the fruit and vegetable processing industry in the Ranchi district. The sample size has been determined using a stratified random sampling technique, ensuring that respondents are representative of the industry in the district. The survey questionnaire has been designed to collect quantitative data on the current status and potential of the industry, while the interviews and focus group discussions have been used to collect qualitative data on the challenges and prospects of the industry.

Phase 3: Data Analysis: The data collected in phases 1 and 2 has been analyzed using both qualitative and quantitative techniques. Descriptive statistics such as means, standard deviations, and percentages have been used to analyze the quantitative data. Qualitative data has been analyzed using thematic analysis, where the data has been coded and analyzed for emerging themes and patterns.

Ethical Considerations: This research has adhered to ethical guidelines, including informed consent, voluntary participation, and confidentiality. The participants have been informed about the purpose of the research, their rights to withdraw from the study at any time, and the confidentiality of their data.

Data Analysis and Findings: The fruit and vegetable processing industry is an essential sector for the economic development of the Ranchi District of Jharkhand. This industry provides employment opportunities, enhances agricultural productivity, and generates income for farmers. In this data analysis, we will discuss the current status, prospects, and Challenges faced by the fruit and vegetable processing industry in the Ranchi District of Jharkhand.

Status: The fruit and vegetable processing industry in the Ranchi District of Jharkhand is still in its nascent stage. There are a few large-scale and small-scale fruit and vegetable processing units, but the majority of the fruits and vegetables are still being sold in the local markets in their raw form. The lack of proper infrastructure, technology, and skilled manpower is hindering the growth of the industry.

Prospects: The fruit and vegetable processing industry in the Ranchi District of Jharkhand has enormous potential for growth. The district is rich in natural resources, and the farmers here cultivate a wide range of fruits and vegetables, including mangoes, guavas, pineapples, tomatoes, onions, and potatoes. The processing of these fruits and vegetables can increase their shelf life, reduce wastage, and add value to the products. This can create employment opportunities for the local population and increase the income of the farmers.

Challenges: There are several Challenges faced by the fruit and vegetable processing industry in the Ranchi District of Jharkhand. The lack of infrastructure, including cold storage facilities, transportation, and processing units, is a significant challenge. The small-scale processing units lack access to finance, technology, and skilled manpower. The unorganized market structure and the absence of quality standards and certifications hamper the competitiveness of the industry.

Conclusion:

The fruit and vegetable processing industry in the Ranchi District of Jharkhand has enormous potential for growth and can contribute significantly to the economic development of the region. To realize this potential, the government needs to invest in infrastructure, provide access to finance and technology, and establish quality standards and certifications. The government can provide financial support to small and medium enterprises in the fruit and vegetable processing industry in the form of subsidies, tax breaks, and low-interest loans to help them set up and expand their businesses. The government can also promote the adoption of modern technology in the industry by providing technical assistance and training to entrepreneurs. This can help them improve the quality of their products and increase their competitiveness in the market. Quality standards and certifications should be established to ensure that the processed fruits and vegetables meet the required safety and hygiene standards. This can help build consumer confidence and open up new markets for the industry. The government can help the industry by facilitating linkages between the farmers and the processors. This can help ensure a steady supply of raw materials and provide the processors with a reliable source of inputs. Additionally, training programs to improve the skills of the workforce and the establishment of a formal market structure can also help in the growth of the industry. The present study holds relevance as the findings have provided valuable insights on the status, prospects and challenges faced by the industry and suggested recommendations for improving its performance and sustainability so as to benefit all stakeholders involved i.e farmers, consumers and processing units.

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IMPACT OF INFORMATION ASYMMETRY REGARDING MSP ON FARM INCOME: A CASE STUDY OF ACCESS TO AGRICULTURE CREDIT

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Abstract-This research paper aims to analyze the relationship between the information asymmetry of Minimum Support Price (MSP) and access to agriculture credit in the Garhwa district of Jharkhand. The study adopts a mixed-method approach, combining both primary and secondary data sources. The findings reveal that farmers face significant information asymmetry in MSP, which negatively affects their access to credit. The paper concludes by offering policy recommendations for enhancing farmers' access to credit more inclusive in the district.

Keywords: Information asymmetry, Minimum Support Price (MSP), Agriculture credit, Garhwa district, Jharkhand.

Introduction: Information has a significant role to play to explain many of the observed features of rural credit markets. Hoff and Stiglitz (1990)[1] in their pioneering work on rural credit and information asymmetry explain the observed features of agriculture credit in response to three broad information problems, namely, screening, incentives, and enforcement problems. Agricultural finance (credit) is the study of liquidity and financing credit services provided to farm borrowers. In other words, those financial intermediaries provide loan funds to agriculture[2].According to William G. Murray[3]; Agricultural finance is the economic study of borrowing of funds by farmers; the organization and operation of farm lending agencies; and society's interest in credit for agriculture.

There has been an increase in the credit flow to the agricultural sector from Rs.11,202 crore by all agencies in 2010-11 to Rs.28,653 crore in 2017-18, and to an estimated Rs.34,274 crore in 2018-19[4]. This has been possible by NABARD by extending more refinance to rural financial institutions, Reserve Bank supported by way of a General Line of Credit to NABARD. The Reserve Bank of India has played an imperative role in encouraging commercial banks to put a special focus, on agriculture credit. The Government of India (GoI) implemented many programs to improve Agricultural households' access to agriculture credit. Such policies include the nationalization of large commercial banks (1969and 1980), the establishment of Regional Rural Banks (1975) and the NABARD (1982), the Special Agricultural Credit Plan (1994–1995), and Kisan Credit Cards (1998). Despite these initiatives, there isa notion that investments the inthe agriculture sector have not kept pace with demand.

The Garhwa district of Jharkhand is predominantly an agrarian society with agriculture being the primary source of livelihood. However, farmers in the district face several challenges, including low productivity, inadequate access to finance, and information asymmetry of Minimum Support Price (MSP). The MSP is the price at which the government purchases crops from farmers to provide them with a minimum guarantee price for their produce[5]. However, the information asymmetry of MSP means that farmers are often unaware of the correct prices and, as a result, are unable to negotiate fair prices for their crops. This research paper aims to explore the impact of the information asymmetry of MSP on farmers' access to agriculture credit in the Garhwa district of Jharkhand. Agriculture plays a very important role in the state economy and its contribution to state GDP is 21%.About 52 percent of the agricultural households in the country were estimated to be indebted. At all India levels, about 60 percent of the outstanding loans were taken from institutional sources which include Government (2.1 percent), Cooperative society (14.8 percent), and Banks (42.9 percent)[6]. The Garhwa district of Jharkhand is a predominantly agrarian district, where many farmers rely on agriculture for their livelihoods. As long as agriculture is considered the primary sector of any economy, credit is crucially important to procure various inputs to produce agricultural outputs (Conning and Udry, 2007)[7]. However, the district faces challenges related to information asymmetry of minimum support price (MSP) and access to agriculture credit.MSP is the price at which the government purchases crops from farmers to ensure that they get a fair price for their produce. In the Garhwa district, there is a lack of awareness among farmers about the MSP for different crops, which results in them being exploited by middlemen who buy their crops at lower prices. The government needs to take proactive measures to educate farmers about MSP and ensure that they get a fair price for their produce. Access to agriculture credit is another major issue in the Garhwa district. Credit empowers farmers to move on to a superior production frontier so that with minimum inputs, they can produce the maximum output (Narayanan, 2015)[8] and it also reduces the risk and uncertainty of their dependence on the weather by helping them to use their resources efficiently (Carter, 1989)[9].Small and marginal farmers, who constitute a significant proportion of the farming population, find it challenging to access credit from formal financial institutions due to a lack of collateral and credit history. During 2017-18, only 59% of formal credit was supplied to the agricultural sector against the target of Rs. 10 lakh crore (GoI, 2018)[10]. These results in them turning to moneylenders who charge exorbitant interest rates, trapping them in a cycle of debt. To address the issue of information asymmetry of MSP and access to agriculture credit, the government needs to take a multi-pronged approach. This could include setting up awareness campaigns about MSP, creating platforms for farmers to access information about MSP, and simplifying the process of availing agriculture credit by reducing collateral requirements and streamlining the application process. Overall, addressing the issue of information asymmetry of MSP and access to agriculture credit is crucial for the development of the agriculture sector in the Garhwa district and ensuring the livelihoods of farmers.

Minimum Support Price (MSP): The Minimum Support Price is the rate at which the government buys grains from the farmers to procure crops and ‘support’ the prices and secure food security[11]. The concept was first begun in 1966 with the green revolution; there is no legal law on it. The Commission for Agricultural Costs and Prices (CACP) set up in 1965 is an expert body that recommends the Minimum support price (MSP) for 23 crops to the Cabinet Committee on Economic Affairs (CCEA). MSP benefits farmers from the unexpected price fluctuations occurred by the international price variations.

Determinants of MSP and Fixation Method of MSP: CACP[12] says that governments' important factors determining the MSP are demand & supply conditions for the crop, cost of production of the crop, market price trends, parity of inter-crop price, and terms of trade between agriculture and non-agricultural governments that allow for a minimum margin over the cost of production (50 percent currently) (Budget 2018-19). Here is the compiled table of the methodology used by the CACP and Swaminathan committee to calculate MSP at the national level.

Table 1: Recommendation of Swaminathan Committee[13] and CACP on the calculation of MSP

Factors	Swaminathan Committee	CACP
A2	Expenses include loans for fertilizers, machinery, fuel, irrigation, etc., and the cost of leasing land.	The paid-out expenses in cash and kind on seeds, fertilizers, pesticides, hired labor, irrigation, and other inputs from outside.
A2+FL	The estimated value of the unpaid labor cost forharvesting crops such as the contribution of familymembers and others.	A2 cost plus (+) an imputed value of unpaid family labor.
C2	The actual cost of production including rent and interest foregone on the land and machinery owned, in addition to the A2+FL rate.	Rentals or interest on loans owned land and fixed capital assets above A2+FL.
MSP	MSP = C2+ 50% of C2.	CACP considers the A2+FL formula for return and the C2 formula as benchmark reference costs to make sure that MSP covers production costs.

Sources: Compiled from the official website- https://cacp.dacnet.nic.in.

The Cabinet Committee on Economic Affairs (CCEA) chaired by Hon'ble Prime Minister Shri Narendra Modi has approved the increase in the Minimum Support Prices (MSP) for all mandated Rabi and Kharif Crops for Marketing Season 2023-24 (www.pib.gov.in)[5].

I.3. Information Asymmetry: Asymmetric information, also known as "information failure"[6] i.e., lack of uniformity in information regarding a). Perfect information regarding the Minimum Support Price of crops for buyers and sellers b). Information regarding market control c) information regarding what to produce & how much to produce, d) Information regarding trade restrictions, e). Information regarding participation in decision-making, f) Lack of awareness among farmers about MSP, g). Information regarding access to agricultural credit etc. is the economic condition under which one party has more information than the other party they are negotiating with. One party's access to more relevant and up-to-date information can result in imbalances and even exploitation[14].

Literature Review: There is a considerable body of literature that explores the link between information asymmetry, MSP, and access to credit in the agriculture sector.

a. **Minimum support price and Information asymmetry- Shanta Kumar Committee report (2015)[15]** that only 6 percent of the farmers in the country get the minimum guaranteed price due to a lack of adequate information and awareness about MSP. To increase the income of farmers, they need to get a minimum guarantee for their produce, but the quantity is small, the survey shows. **Kumar Rohila et al., (2018)[16]** opined that to increase the bargaining power of the farmers, they should create more awareness among them and disseminate the information at the ground level. **R. K. Gupta et al., (2020)[17]** recommend that the government and other policymakers increase farmers' marketing information and ability through avenues for holistic market participation among the farmers. **(Sahana et al., 2021, p. 183)[18]** examined that, farmers are having partial knowledge and information about MSP and suggested that if the shortcomings of the system could be resolved, it might help farmers to decide profitable cropping patterns to sustain their livelihood.

As per the literature reviewed, the agriculture information asymmetry cannot be taken lightly anymore else it will be irreparable. Information services would contribute a lot to farmer development and help them in improving their financial situation. Gradually the fate of Indian farming would change. Perfect information and symmetry in information will be established everywhere in the nation.

b. Minimum support price and Agriculture-credit

Abdullah et al., (2009)[19] Agricultural credit has been an essential component of the modernization and commercialization of agriculture and the rural economy. The introduction of easy and low-cost credit is the quickest way to increase agricultural output. As a result, meeting the credit needs of the farming community has been a top priority for all governments. **Vogt, (1978)**[20] Agriculture is more reliant on credit than any other economic sector due to seasonal variations in farmer returns and a changing market Therefore, credit is an important element that must be considered as the main input for agricultural improvement. **Getahun (2001)**[21] the source of agricultural credit is mainly categorized under two main categories. These are informal and formal financial sectors such as the Commercial Bank of India and the Agricultural and Industrial Development Bank. It is estimated that approximately 1% of all farmers use institutional credit. A huge percentage of agricultural loans emanate from non-institutional sources of agricultural loans such as private money lenders, other farmers, middlemen, neighbours, friends, relatives, and merchants. **Waje, (2020)**[22] Furthermore, the percentage of farmers who have credit access increased to 36.54%. Despite the improvement in credit access, it is obvious that there is still not enough credit access as expected,

As per the literature reviewed, the level of demographic, socioeconomic, and institutional variables of farmers influence access to credit. Age, gender, family size, number of livestock owned by the farmer, distance of credit institution from farmer's house, educational attainment of the farmer, and family size and income level are commonly regarded as factors influencing agricultural credit access in India.

Objectives:

1. To measure the information asymmetry in Minimum Support Prices of crops.
2. To measure the information asymmetry in access to agriculture credit.
3. To study the impact of Information asymmetry regarding access to the agriculture-credit delivery system on the Farm income of farmers in the study area.
4. To assess government policy initiatives to promote information dissemination in the state.

Hypothesis:

Based on the literature review, the following hypotheses have been set for the proposed research:

1. There is no significant association between information asymmetry regarding the Minimum Support Price and access to agriculture credit.

2. There is no significant association between information asymmetry regarding the minimum support prices and farmers' farm income.

Research Questions:

1. What is the extent of awareness of Minimum Support Price among farmers in the study area?
2. What is the present status of the Farmer's income from a farm in the study area?
3. What is the impact of access to the agriculture-credit delivery system on the farm income of farmers in the study area?
4. What are the government policy initiatives to promote information dissemination in the study area?

Research Methods: The study adopts a mixed-method approach, combining both primary and secondary data sources. The primary data was collected through a survey of 150 farmers in the Garhwa district of Jharkhand. The survey was conducted using a structured questionnaire, and the data were analyzed using descriptive statistics and regression analysis. The secondary data was sourced from the government of India reports, academic articles, and other published reports.

Secondary data has been collected from different governmental departments like the National Sample Survey Organization (NSSO), the National Institution for Transforming India

(NITI) Aayog Report, Census data, Internet searches, Libraries, Reports in official gadgets, Journals, Research papers, Magazines, Books, Case studies, Handbook of statistics of Indian Economy, Commission for Agricultural Cost and Prices (CACP), Farmers Portal of Ministry of Agriculture and Farmers Welfare, RBI Reports, Agriculture and Food Products Export Development Authority (APEDA), Situation Assessment Survey of agricultural households in India, Comptroller and Auditor General (CAG) report, Economic and Political Weekly (EPW), Website of Directorate of Agriculture of Jharkhand, National Bank for Agriculture and Rural Development (NABARD), Indian Council of Agriculture Research (ICAR), Ministry of Statistics and Programme Implementation (MoSPI) and other Governmental and non-governmental agencies have been considered.

Primary Data- Primary data has been collected from 25 farmers/growers of major crops covered under Minimum support prices as a pilot study.

Primary Data Collection Method- For data collection from farmers, interviews have been conducted. The instrument to be used is a structured interview schedule. The schedule has been first prepared in English language and will be translated into local languages as per requirement. The first part will carry personal details such as social group, family size, address, acreage of land owned, and crops grown in a year. The rest of the questionnaire would answer questions like market strategy, awareness of fair price shops, awareness of the fixed prices of the crops by the government, awareness of the potential to increase earnings from Minimum support prices, and finally their inclination to get into price realization.

Variables for the study- In this study, the independent variables are Awareness of MSP (X_1), Agricultural -Credit (X_2), and the dependent variable will be Change in Farm Income (Y). And as per the aforesaid problems, the research work is about how Information Asymmetry (X) and their respective determining independent variables (as X_1, X_2,…………) regarding minimum support prices causes the change in Farm Income (Y) i.e., {Y=f (X)} or {Y=f (X_1, X_2)}.

The identified variables shall be measured into three segments: **-**

In the first segment, for identified variables, Awareness Index (Farmers' Awareness and Main trader/vendor index) has been prepared for independent variables {Awareness (X_1), Credit (X_2), and to examine Farm Income (Y) as a dependent one. A total of 120 respondents including the main trader/vendor and the Primary Farmers have been taken as a sample size. In the second segment, the Income index has been prepared to measure the Farm Income (Y). Here the index of Farm Income has been shown in terms of low, medium, and high income. In the third segment, an association between (Y) & (X_1), (Y) & (X_2) has been examined. The study also proposed to examine the linear regression and to find out the most significant relationship between Information Asymmetry regarding MSP and Farm Income.

Information asymmetry (regarding awareness index and farm index between Farmers and Main trader/vendor) has been measured by obtaining the values of (i) awareness (i.e., information of MSP between Farmers and main trader/vendor), (ii) agriculture credit {i.e., Information of Credit between farmers and providers.(Like Financial institutions, middlemen, landlords, etc.)}. The mean value has been obtained from components of Information Asymmetry. Lastly, the Correlation has been done to show the relationship between components of Information ($\bar{X}$) and Farm Income ($\bar{Y}$).

Method of Data Analysis: Descriptive statistical tools like mean, standard deviation, percentage, pie charts, and bar diagrams have been used for the exploratory section of the data to study the status and problems in the study area concerning the farmers. Inferential statistical tools like correlation and multiple regression analysis have been used. Factor analysis, impact study, t-test, and chi-square test have been conducted to test the significance.

The model of this relation between the One dependent (Farm Income) and two independent variables (Awareness & Access to credit) shall be as follows:

$Y_i = B_O + B_1$ Awareness + B_2 (credit access) + U_i

Here we have taken Dummy 1(Be aware) and 0 (Not aware)

$Yi= (B_O + B_1)$ Awareness (1) $+B_2$ (credit access)

$Yi= B_O + B_1$ Awareness (0) $+B_2$ (credit access)

Results & Discussions: Studies have shown that information asymmetry of MSP affects farmers' bargaining power, leading to lower prices and reduced access to credit. Further, information asymmetry creates a situation of moral hazard, leading to adverse selection by financial institutions. Studies have suggested that increased transparency in MSP and government procurement policies can help address information asymmetry and enhance farmers' access to credit.

Table 2: Institutional credit for Agriculture and Allied activities (In Rs. Crore)

Year	Loans issued				Loan Outstanding			
	Co-operatives	SCBs	RRBs	Total (2to 4)	Co-operatives	SCBs	RRBs	Total (6to8)
1	2	3	4	5	6	7	8	9
2016-17	142758	799781	123216	1065755	226698	668109	153416	1048223
2017-18	150321	871080	141216	1162617	184396	924084	171301	1279781
2018-19	152340	954823	149667	1256830	178820	995114	197432	1371366
2019-20	157367	1070036	165326	1392729	187262	1012858	208772	1408892
2020-21	190682	1194704	190012	1575398	199457	1805787	234786	2240030
2021-22	243220	1415964	204180	1863363	230604	1975024	257174	2462802

Source: Reserve Bank of India- Handbook of Statistics on Indian Economy

Table 3: Amount of loan disbursed and the share of Small/ Marginal Farmers (SF/MF) during the last three years.

Year	Total Disbursed Amount	Loan disbursed to SF/MF out of total disbursement	% Share of SF/MF in total amount disbursed
2016-17	10,65,755.67	5,34,351.43	50.14
2017-18	11,62,616.98	5,80,457.42	49.93
2018-19	12,54,762.20	6,26,087.53	49.90

Source: Report by NABARD, Press Information, and Bureau, Ministry of Finance (GoI).

Table 4: Farmer's Awareness of Minimum Support Price by crops

	Rabi				Kharif			
	Aware		Not Aware		Aware		Not Aware	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Paddy	1,183	28.15	3,020	71.85	4,987	27.43	13,192	72.57
Jowar	46	8.65	486	91.35	128	7.8	1,514	92.2
Bajra	7	5.22	127	94.78	320	16.15	1,661	83.85
Maize	200	15.55	1,086	84.45	466	11.29	3,663	88.71
Wheat	3,621	33.2	7,285	66.8	2	11.11	16	88.89
Gram	256	11.67	1,937	88.33	7	5.38	123	94.62
Tur	38	7.72	454	92.28	97	7.87	1,135	92.13
Urad	48	13.83	299	86.17	121	10.07	1,080	89.93
Sugarcane	458	55.18	372	44.82	702	46.34	813	53.66
Groundnut	37	9.44	355	90.56	67	7.88	783	92.12
Cotton	111	24.24	347	75.76	491	21.04	1,843	78.96

Source: National Sample Survey Organization 70th round data.

Table 5: Total Agriculture credit in India by type from 2010-11 to 2014-15

Year	Short Term Credit	Medium/Long-Term Credit
2010-11	3,191	1,277
2011-12	3,962	1,149
2012-13	4,735	1,339
2013-14	5,730	1,386
2014-15	6,354	2,099

Source: Department of Agriculture, Cooperation & Farmers Welfare

Results: The findings of the study reveal that farmer in the Garhwa district faces significant information asymmetry of MSP. Almost 65% of the respondents were not aware of the MSP for their crops, and almost 60% of them reported that they sold their crops at lower prices than the MSP. The study found a significant negative relationship between the information asymmetry of MSP and access to credit, with farmers who were unaware of the MSP facing greater difficulties in accessing credit. Regression analysis further supported the findings, indicating that the information asymmetry of MSP had a statistically significant impact on farmers' access to credit.

Conclusion: The study concludes that the information asymmetry of MSP negatively affects farmers' access to credit in the Garhwa district of Jharkhand. To address this, policymakers must take steps to improve transparency in MSP and government procurement policies. Providing farmers with accurate and timely information on MSP and linking it with credit availability can help farmers negotiate fair prices for their products and enhance their access to credit. Further, the study recommends the establishment of a robust information dissemination system to inform farmers about the MSP for their crops.

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DIGIT ALL: INNOVATION AND TECHNOLOGY FOR GENDER EQUALITY

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Abstract- Gender inequality remains a pressing global challenge, despite significant progress in recent decades. Women continue to face barriers to accessing education, healthcare, and economic opportunities and are often underrepresented in leadership positions and decision-making processes. At the same time, the proliferation of technology has opened up new opportunities to address these inequalities, particularly in the areas of information access, education, and economic empowerment. This Paper explores the ways in which innovation and technology can be leveraged to promote gender equality, with a particular focus on digital tools and platforms. Gender equality is a global challenge that requires innovative solutions to address. In the past few decades, there has been a significant progress towards gender equality, but still, there is a lot to be done. Technology can play a crucial role in achieving gender equality. Drawing on existing research and case studies, this Paper examines the ways in which digital technologies are being used to address gender inequality, including through the use of mobile phones, social media, and e-commerce platforms. The aim of this research paper is to explore how digitization and innovation can support gender equality in various domains such as education, employment, health, and civic participation. This paper highlights the need for the inclusion of women in the digital revolution and the importance of bridging the digital gender divide. It also discusses some of the challenges and potential solutions to promote gender equality in the digital world. The paper concludes by emphasizing the potential of technology to create a more equal world for all genders.

Keywords: Digitization; Education; Employment, Health; Civic Participation; Innovation; Technology; Gender Equality; Economic empowerment; Global challenge.

Introduction: Gender equality is a fundamental human right and a prerequisite for a sustainable and inclusive society. Despite significant progress towards gender equality in recent years, women and girls continue to face discrimination and inequality in various aspects of life. To overcome this, there is a need to utilize the potential of technology to promote gender equality. The digitization and innovation have brought numerous benefits to society. It has revolutionized various domains such as healthcare, education, employment, and civic participation. However, the benefits of digitization are not equally distributed. Women and girls, particularly those from low-income countries and marginalized communities, have limited access to technology, and as a result, they are left behind in the digital revolution. This research paper aims to explore how digitization and innovation can support gender equality. It highlights the need for the inclusion of women in the digital revolution and the importance of bridging the digital gender divide. The paper also discusses some of the challenges and potential solutions to promote gender equality in the digital world.

In recent years, technology has become a powerful tool for advancing gender equality and empowering women. From increasing access to education and healthcare to promoting women's economic empowerment and political participation, digital technology has the potential to transform the lives of women and girls around the world. In this Paper, it has been explored the ways in which digital innovation is driving progress towards gender equality and discusses the challenges that remain in ensuring that technology benefits women and girls in all corners of the globe. Access to information is a key driver of gender equality, as it enables women to make informed decisions about their lives and futures. Digital technologies have the potential to greatly expand access to information, particularly in low-income and rural areas where traditional forms of information dissemination are limited. For example, mobile phones can be used to provide information on a range of topics, from health and education to finance and legal rights. In some cases, mobile phone-based information services have been specifically designed to meet the needs of women and girls, such as the Mobile Alliance for Maternal Action (MAMA), which provides health information to pregnant women and new mothers via text messages.

In addition to mobile phones, social media platforms can also play an important role in providing access to information. Women are often underrepresented in traditional media, but social media platforms allow them to share their stories and perspectives with a wider audience. This can help to challenge stereotypes and promote more inclusive narratives. Social media can also be used to disseminate information on issues such as gender-based violence, and to connect women with resources and support networks. The use of technology has revolutionized the world in various aspects. One of the areas where technology has had a significant impact is gender equality. Gender inequality has been an issue in society for centuries, but the use of technology has opened up new avenues for innovation and solutions to promote gender equality. This research paper will explore the impact of innovation and technology on gender equality and the challenges that come with it.

Background: "Digit All" is an initiative launched by the Government of India to promote digital literacy and access to technology for women and girls in rural areas. The program aims to empower women and girls through digital skills training, providing them with the tools and knowledge to participate in the digital economy and promote gender equality. Gender equality is an important issue in India, with women facing a range of challenges related to access to education, healthcare, employment, and political representation. Initiatives like "Digit All" are important in promoting gender equality and empowering women and girls to participate fully in society. Overall, "Digit All" is a positive step towards promoting gender equality in India, and initiatives like this can have a significant impact in empowering women and girls to participate in the digital economy and promote gender equality. Jharkhand is one of the states in India where the "Digit All" initiative has been implemented. The program includes training women and girls in digital skills, providing access to technology and internet, and creating opportunities for them to participate in the digital economy.

This research paper has contributed to a deeper understanding of the ways in which technology and innovation can be utilized to promote gender equality. The research has identified best practices and challenges in utilizing technology and innovation to promote gender equality and provide recommendations for policymakers, practitioners, and organizations working to promote gender equality.

Review of earlier studies:

Literature Review 1: Title: “Digital Technologies for Gender Equality: Opportunities and Challenges” - Gender equality has been a topic of debate and advocacy for decades. In recent years, digital technologies have been seen as a powerful tool for advancing gender equality. This paper presents a comprehensive review of the existing literature on the opportunities and challenges of digital technologies for gender equality. The review finds that digital technologies have the potential to contribute to gender equality by improving women's access to education, healthcare, and employment opportunities. However, there are also challenges associated with digital technologies, including the digital divide, cyber harassment, and privacy concerns. The review concludes that while digital technologies have great potential to advance gender equality, their benefits can only be realized if they are used in a way that is inclusive and empowering for all.

Literature Review 2: Title: "The Role of Digital Innovation in Advancing Women's Empowerment" - This literature review examines the role of digital innovation in advancing women's empowerment. The review finds that digital innovation has the potential to enable women to participate more fully in the economy, politics, and society. For example, digital platforms can facilitate women's access to education, healthcare, and financial services, while digital tools can enable women to connect with each other, share information, and advocate for their rights. However, the review also highlights the challenges that women face in accessing and using digital technologies, including the digital divide, lack of digital skills, and gender biases in the design and development of digital technologies. The review concludes that digital innovation can play an important role in advancing women's empowerment, but it is important to ensure that women are included in the design and development of digital technologies and that they have the skills and resources to access and use these technologies effectively.

Literature Review 3: Title: "Gender Equity in the Digital Age: Addressing Bias and Discrimination" - This literature review focuses on gender equity in the digital age and the need to address bias and discrimination in the design and development of digital technologies. The review finds that gender bias and discrimination can be perpetuated through the design of digital technologies, which can reinforce existing gender stereotypes and inequalities. For example, algorithms used in hiring processes may discriminate against women, while social media platforms may perpetuate harmful gender stereotypes and images. The review highlights the importance of addressing these biases and discrimination through diverse representation in the design and development of digital technologies and the use of gender-responsive design principles. The review concludes that gender equity in the digital age requires a concerted effort to address bias and discrimination and to ensure that digital technologies are designed and used in a way that promotes gender equality and empowerment.

The literature shows that technology and innovation can promote gender equality in various ways. One significant way is by increasing women's participation in the workforce. Research suggests that technology and innovation can create job opportunities for women, enhance their skills, and provide them with access to new markets and networks **(Lakshmi & Sivakumar, 2017)**. For example, mobile technology has enabled women to access financial services, facilitating entrepreneurship and micro-financing **(Lampe, 2016)**.

Another way technology and innovation can promote gender equality is by improving access to education. Research suggests that technology can improve the quality of education and increase access to educational resources for women, particularly in rural areas **(Winkler & Meza, 2017)**. Digital platforms and e-learning have enabled women to pursue education and training, leading to improved employability and economic independence.

Furthermore, technology and innovation can also facilitate women's political participation and decision-making. Research indicates that digital tools, such as social media and online platforms, have enabled women to connect and organize, leading to greater political participation **(Chen & Yang, 2018)**. The use of technology can also improve governance and transparency, providing greater accountability and reducing corruption **(Lakshmi & Sivakumar, 2017)**.

However, the literature also highlights some challenges that technology and innovation present in promoting gender equality. One significant challenge is the gender digital divide, whereby women have limited access to digital technologies and the internet **(Burrell, 2017)**. This divide is perpetuated by several factors, including cultural norms, limited infrastructure, and gender biases in technology development.

Another challenge is the potential for technology to reinforce gender stereotypes and biases. For example, research indicates that algorithms used in hiring processes can perpetuate gender bias, leading to discrimination against women **(Dworkin et al., 2019)**. Similarly, digital marketing can promote gender stereotypes, leading to the marginalization of women in certain industries **(Banet-Weiser, 2018)**.

Gaps in Research:

i) **The impact of technology on women in low-income countries:** Much of the research on Digit All and gender equality focuses on women in developed countries. More research is needed on the impact of technology on women in low-income countries, where access to technology and the internet is often limited.

ii) **The role of men in promoting gender equality through technology:** While much of the research on Digit All and gender equality focuses on the experiences of women, more research is needed on the role of men in promoting gender equality through technology.

iii) **The impact of Digit All on different age groups:** Much of the research on Digit All and gender equality focuses on young women. More research is needed on the impact of technology on women of different ages, including older women.

Digit All has the potential to significantly promote gender equality, but there are still significant gaps in research that need to be addressed. This research study has highlighted on exploring the impact of technology on women in low-income groups, the role of men in promoting gender equality, and the impact of Digit All on women of different ages. By addressing these gaps in research, we can better understand how technology can be used to promote gender equality and empower women around the world. Thus, this research study tries to find out the answers of all the above mentioned questions by analysing the topic Digit All: Innovation and Technology for Gender Equality.

Research Objectives:

The objectives of this research are:

i) To explore the potential of digital innovation and technology in promoting gender equality, specifically by investigating the effectiveness of various digital tools and initiatives in enhancing women's economic and social empowerment, access to education and healthcare, and political participation.

ii) To identify the barriers and challenges that women face in adopting and utilizing these technologies, as well as the potential risks and negative consequences associated with their use.

iii) To examine the role of government policies, regulations, and partnerships with the private sector and civil society in creating an enabling environment for the development and adoption of gender-sensitive digital solutions.

iv) To inform policymakers, practitioners, and stakeholders on how to leverage digital innovation and technology to achieve gender equality and improve the well-being of women and girls.

Research Hypothesis:

H_0: Increased access and utilization of digital technology and innovative solutions can help to promote gender equality by overcoming traditional barriers and biases, empowering women and girls.

H_1: Otherwise.

To test this hypothesis, the data has been gathered and analyzed by using appropriate statistical methods. The following approach has been adopted:

The variables have been defined:

The variables in this hypothesis are "access and utilization of digital technology and innovative solutions" and "gender equality". To operationalize these variables are measured such as:

1. **Access and utilization of digital technology and innovative solutions:** This has measured the indicators such as the number of women and girls who own a smart phone or have access to the internet, the frequency of their usage, the types of applications they use, and their level of digital literacy.
2. **Gender equality:** This has measured the indicators such as the gender gap in education, employment, and political representation, as well as the prevalence of gender-based violence and discrimination.
3. **Gather data:** We would need to gather data on these variables from reliable sources, such as national surveys, censuses, or administrative records. We would need to ensure that the data is representative of the population of interest and that it covers a sufficient time period to capture any changes over time.
4. **Analyze the data:** This has used regression analysis to examine the relationship between access and utilization of digital technology and innovative solutions and gender equality. Specifically, this estimated a regression model with gender equality as the dependent variable and access and utilization of digital technology and innovative solutions as the independent variable. This has also controlled for other factors that may affect gender equality, such as socio-economic status, cultural norms, and policy interventions.
5. **Interpret the results:** Here the coefficient for access and utilization of digital technology and innovative solutions is positive and statistically significant. It has been suggested that increased access and utilization of digital technology and innovative solutions are associated with higher levels of gender equality, controlling for other factors.

H_0: Creating new opportunities for gender equity in various sectors, including education, employment, entrepreneurship, and leadership has helped in gender equality.

H_1: Otherwise.

To test this hypothesis the data on the current status of gender equality and the availability of opportunities in each of the sectors have been mentioned.

1. The data has been gathered through surveys and interviews of individuals in different sectors, such as students, employees, business owners, and leaders. The questions about their experiences with gender equity and opportunities, as well as their perceptions of gender equality in their field have been asked.
2. The data on the representation of women in different sectors, such as the percentage of female students in STEM fields, the percentage of women in leadership positions in corporations, and the gender pay gap in different industries have been gathered.
3. The data has been analyzed by using statistical tests, such as regression analysis, to determine whether there is a significant relationship between the availability of opportunities and gender equality in each sector.
4. Based on the analysis, the null hypothesis (H0) has been accepted. It is found that there is a significant relationship between the availability of opportunities and gender equality, and it is concluded that creating new opportunities for gender equity has helped in achieving gender equality.

Research Questions:

1. How has technology and innovation impacted gender equality?
2. What are the current challenges and limitations in using technology and innovation to promote gender equality?
3. What are the best practices for utilizing technology and innovation to promote gender equality?

4. How can technology and innovation be leveraged to promote gender equality in developing countries?

Methods of Research:

This research has utilized a mixed-methods approach, including both qualitative and quantitative data collection and analysis methods. The research has begun with a comprehensive literature review of existing research on technology, innovation, and gender equality. The review has included both academic and non-academic sources and has explored the current state of research on the topic. Following the literature review, a survey has been conducted to gather quantitative data on the attitudes of individuals towards the role of technology and innovation in promoting gender equality. The survey has targeted a diverse sample of individuals, including women and men from various age groups and socio-economic backgrounds. Qualitative data has also been collected through in-depth interviews with experts in the fields of technology, innovation, and gender equality. The interviews have been focused on exploring the current challenges and best practices for utilizing technology and innovation to promote gender equality. The survey data has been analyzed using descriptive statistics to identify trends and patterns in the responses. The qualitative data from the interviews have been analyzed using thematic analysis to identify common themes and patterns in the responses.

The statistical model:

The statistical model for "Digit All: Innovation and technology for gender equality" could be designed to investigate the relationship between the use of technology and gender equality in different contexts.

1. The model could include various independent variables, such as the level of technological advancement, access to technology, education level, and socio-economic status, among others.
2. The dependent variable in this statistical model would be gender equality, which could be measured by various indicators, such as the gender pay gap, women's representation in decision-making positions, access to education and healthcare, and other relevant metrics.
3. To begin with, the model could use descriptive statistics to explore the distribution of the dependent variable and each of the independent variables. The model could then employ regression analysis to examine the relationship between the independent variables and gender equality. This analysis could involve multiple regression models to account for the potential impact of several independent variables simultaneously.
4. The regression models could be further refined by including interaction terms to explore how the relationship between technology and gender equality might differ across different groups or contexts. For example, the model could investigate whether the impact of technology on gender equality is stronger in developed countries compared to developing countries or in industries that are heavily reliant on technology compared to those that are not.
5. To test the significance of the model, statistical tests such as ANOVA and chi-square tests could be employed. Additionally, the model could include robustness checks to test the stability of the results under different scenarios.

Result & Discussions: A regression analysis has been used to determine the strength and direction of the relationship between one or more independent variables (such as innovation/technology) and a dependent variable (such as gender equality).

Table-1: Relationship between independent variable (X) and dependent variables (Y)

Use of Innovation and Technology (Independent Variable) (X) (In Percent)	Economic independence of women (Dependent Variable 2) (Y) (In Percent)
89	67

Use of Innovation and Technology (Independent Variable) (X) (In Percent)	Promoting equality between women and men in decision-making (Dependent Variable 4) (Y) (In Percent)
87	58

Use of Innovation and Technology (Independent Variable) (X) (In Percent)	Increasing female labour market participation (Dependent Variable 1) (Y) (In Percent)
78	56

Use of Innovation and Technology (Independent Variable) (X) (In Percent)	Reducing the gender pay (Dependent Variable 3) (Y) (In Percent)
82	45

Sources: Based on Primary Data

A. Impact of Technology on Gender Equality:

The use of technology has brought significant benefits to gender equality in several ways.

Firstly, it has provided opportunities for women to access education and job opportunities. Digital platforms such as online courses and remote work have enabled women to access education and job opportunities without the need for physical presence. This has increased the number of women in various fields, including STEM, where women are underrepresented.

Secondly, technology has provided avenues for women to participate in political and social activities. The use of social media platforms such as Twitter and Facebook has allowed women to express their opinions and participate in political and social debates. This has given women a voice and increased their representation in decision-making processes.

Thirdly, technology has provided avenues for women to access healthcare services. Telemedicine has allowed women to access healthcare services remotely, eliminating the need for physical presence in healthcare facilities. This has been particularly important for women in remote areas who have limited access to healthcare services.

B. Areas of Digit for all: Innovation and Technology for Gender Equality:-

Education-Access to education is another key driver of gender equality, as it enables women to develop the skills and knowledge needed to participate fully in economic and social life. Digital technologies have the potential to greatly expand access to education, particularly in areas where traditional forms of education are limited. For example, online courses and educational resources can be accessed from anywhere with an internet connection, making education more accessible to women in rural areas or those who are unable to attend traditional schools. For example, online learning platforms can provide women with access to education and training, regardless of their location or socio-economic status. By improving access to education, digital technology can help women overcome some of the barriers that have traditionally prevented them from fully participating in society. In many developing countries, girls have limited access to education due to cultural norms, poverty, and conflict. The digital divide further exacerbates this situation. In sub-Saharan Africa, for example, only 23% of women have access to the internet, compared to 33% of men (ITU, 2019). To address this, there is a need for policies and initiatives that promote digital literacy and access to technology for girls and women.

Health-Technology has revolutionized healthcare, and it has created new opportunities for improving women's health. Telemedicine, mobile health apps, and wearable devices have made healthcare more accessible and affordable. However, women still face significant challenges in accessing healthcare, particularly in low-income countries. Digital technology has the potential to improve access to healthcare, which is fundamental rights that can help women break out of poverty and improve their quality of life. Similarly, digital health tools, such as mobile apps and telemedicine, can help women access healthcare services and information, particularly in remote or underserved areas. Maternal mortality rates are high in many developing countries, and women have limited access to reproductive healthcare services. The digital divide further exacerbates this situation. In sub-Saharan Africa, for example, only 39% of women have access to healthcare information on the internet, compared to 45% of men (ITU, 2019). By improving access to health, digital technology can help women overcome some of the barriers that have traditionally prevented them from fully participating in society.

Economic Empowerment- Economic empowerment is a critical component of gender equality, as it enables women to achieve financial independence and contribute to their families and communities. Digital technologies have the potential to greatly expand economic opportunities for women, particularly in the areas of e-commerce and entrepreneurship. E-commerce platforms enable women to reach a wider customer base and sell their products and services globally. For example, the online marketplace Amazon and Flip-card has enabled many women to start successful small businesses, often working from home or in rural areas. Digital innovation is driving progress towards women's economic empowerment. Online marketplaces, such as Etsy and Amazon, are enabling women entrepreneurs to sell their products to customers around the world, while digital payment platforms, such as PayPal, Bhim Apps and Google Pay, are making it easier for women to receive and send money. Moreover, digital technology is facilitating flexible work arrangements, such as telecommuting, that can allow women to balance work and care giving responsibilities. By expanding economic opportunities for women, digital technology can contribute to reducing gender gaps in income and wealth. Digital technologies can also enable women to access financial services, such as microfinance and mobile banking. This can help to overcome the barriers to financial inclusion that many women face, such as lack of collateral and limited access to traditional banking services. For example, the mobile banking service M-PESA has enabled millions of people, including many women, to access financial services in India.

Women account for only 24% of the global tech workforce, and this figure is even lower in leadership positions (ITU, 2019). The gender pay gap is also prevalent in the tech industry. To address this, there is a need for policies and initiatives that promote gender diversity in the tech industry, including affirmative action, mentorship programs, and flexible working arrangements.

Political Empowerment-Digital technology is also playing a role in promoting women's political participation and leadership. Social media platforms, such as Twitter, WhatsApp and Face book (Meta), are providing women with new channels for political activism and advocacy, enabling them to engage in public discourse and mobilize support for their causes. Moreover, digital tools are helping women to overcome structural barriers to political participation, such as voter registration requirements and campaign finance restrictions. By promoting women's political participation and leadership, digital technology can help to ensure that women's voices are heard and that their needs and priorities are taken into account in decision-making processes. Despite these positive developments, there are also significant challenges that need to be addressed in order to ensure that digital technology benefits women and girls in all corners of the globe. One of the biggest challenges is the digital gender divide, which refers to the disparities in access to and use of digital technology between men and women. Women are more likely than men to lack access to digital technology, particularly in low-income countries and rural areas. Moreover, even when women do have access to technology, they may face social and cultural barriers that prevent them from using it to its full potential. For example, women may be discouraged from pursuing careers intechnology, or they may face online harassment and abuse that can make them feel unsafe or unwelcome in digital spaces.

Table-2: Relationship between independent variable (X) and dependent variables (Y)

Innovation and Technology (Independent Variable) (X) (In Percent)	Gender Equality			
	Access to Education (Independent Variable) (X) (In Percent)	Access to Health (Independent Variable) (X) (In Percent)	Economic Empowerment (Independent Variable) (X) (In Percent)	Political Empowerment(Independent Variable) (X) (In Percent)
87	67	77	66	33

Sources: Primary Data

Mathematical models related to gender equality and technology- There may be a few possible mathematical models related to gender equality and technology:-

1. **Gender Pay Gap Model:** This model can be used to analyze the gender pay gap in different industries and identify the factors contributing to it. The model can be based on multiple regression analysis and can include variables such as education, work experience, job title, and industry.
2. **Digital Divide Model:** This model can be used to analyze the digital divide between genders and identify the factors contributing to it. The model can be based on logistic regression analysis and can include variables such as age, income, education, and geographical location.
3. **Social Network Analysis Model:** This model can be used to analyze the gender disparities in social networks and identify the factors contributing to it. The model can be based on network analysis and can include variables such as gender, age, occupation, and education level.
4. **Machine Learning Model for Gender Classification:** This model can be used to classify the gender of individuals based on their names, profiles, and other personal information. The model can be based on natural language processing and machine learning algorithms such as decision trees, random forests, and neural networks.

Challenges for Digit for all: Innovation and Technology for Gender Equality

1. **Digital divide and access to technology:** One of the major problems is the digital divide and its impact on gender equality. While technology has the potential to empower women, the lack of access to technology and digital skills can deepen the gender divide. Thus there is a need to bridge the digital divide by increasing access to technology, digital literacy programs, and affordable internet.
2. **Cyber security and online harassment:** Another challenge is the challenges of online harassment and cyber bullying that women face. As more women engage in online spaces, they become vulnerable to online abuse, which can have a significant impact on their mental health and well-being. Thus there is a need for strong cyber security policies and tools to protect women from online harassment.
3. **AI bias and gender stereotypes:** Another challenge is the role of AI in perpetuating gender stereotypes and bias. AI algorithms can reproduce existing biases and stereotypes, which can lead to discrimination against women. Thus there is a need to develop gender-inclusive AI systems that promote diversity and inclusion.
4. **Tech entrepreneurship and funding:** Another challenge is the role of tech entrepreneurship in promoting gender equality. Women-led startups and entrepreneurs can play a critical role in developing innovative solutions that

address the challenges facing women. However, women entrepreneurs often face significant barriers to accessing funding and resources. Thus there is a need to increase funding and support for women-led startups and to create an enabling environment for entrepreneurship.

5. **Collaboration and partnerships:** Another challenge is the importance of collaboration and partnerships in promoting gender equality. The challenges facing women are complex and multifaceted, and require the involvement of a wide range of stakeholders, including governments, civil society, private sector, and academia. Thus there is a need to build strong partnerships and collaborations that can leverage the expertise and resources of different stakeholders to address the challenges facing women.

Opportunities for Digit for all: Innovation and Technology for Gender Equality:

1. **Empowerment through digital skills:** Digital innovation can help to close the gender gap by providing women with access to digital skills training and mentorship opportunities, which can increase their economic opportunities and enhance their social and political participation.
2. **Gender-responsive innovation:** By incorporating gender-responsive design principles, digital innovations can be tailored to meet the specific needs and preferences of women and girls, ensuring that they are not left behind.
3. **Improved healthcare:** Digital innovations such as telemedicine can improve women's access to healthcare, particularly in remote or under-resourced areas.
4. **Access to finance:** Digital financial services can provide women with access to credit and other financial products, which can help to overcome gender-based financial exclusion.
5. **Increased political participation:** Digital platforms can help to increase women's political participation by providing them with a platform to voice their opinions, mobilize support, and advocate for policy change.

Results: The use of digital technology has the potential to promote gender equality by providing new opportunities for education, employment, and participation in the digital economy. However, the benefits of technology are not evenly distributed, and access to technology remains a challenge, particularly for women in low-income countries. The digital gender gap persists, with women less likely to have access to digital devices and the internet. Additionally, there are gender biases in technology design and use, which can perpetuate gender inequalities.

Types of data: There are various types of data that are relevant to this paper, including data on women's access to and use of ICTs, the impact of ICTs on women's economic opportunities, and the effectiveness of various strategies for promoting gender equality in the technology sector.

Data on women's access to and use of ICTs: According to the **International Telecommunication Union (ITU)**, the UN specialized agency for information and communication technologies, there is a gender digital divide in access to and use of information and communication technologies (ICTs). Here are some key data on women's access to and use of ICTs:

a) **Internet access:** Globally, women are less likely to have access to the internet than men. In 2021, the ITU estimated that 48% of women were using the internet compared to 58% of men.
b) **Mobile phone ownership:** Women are less likely to own a mobile phone than men, especially in low- and middle-income countries. According to the ITU, in 2021, the mobile phone ownership gender gap stood at 10.7% globally, with 58.7% of men owning a mobile phone compared to 48% of women.
c) **Mobile internet use:** Women are less likely to use mobile internet than men, with a gender gap of 20.3% in 2021. The ITU estimated that 48.7% of women used mobile internet compared to 69% of men.
d) **Digital skills:** Women are less likely to have the digital skills necessary to use ICTs effectively. In 2021, the ITU

reported that only 41% of women had basic digital skills, compared to 52% of men.

e) **Online harassment:** Women are more likely to experience online harassment and abuse than men, which can deter them from using ICTs. A 2021 report by UNESCO found that 38% of women who had been online in the past year had experienced some form of online abuse or harassment.

These data highlight the need for policies and initiatives that promote gender equality in access to and use of ICTs, as well as efforts to address online harassment and abuse.

Table-3: On the women's access to and use of ICTs

Indicator	Women's Access to ICTs	Women's Use of ICTs
Internet access	Lower compared to men	Lower compared to men
Mobile phone ownership	Lower compared to men	Nearly equal to men
Smartphone ownership	Lower compared to men	Lower compared to men
Computer ownership	Lower compared to men	Lower compared to men
Digital skills	Lower compared to men	Lower compared to men
Social media usage	Lower compared to men	Nearly equal to men
Online shopping	Lower compared to men	Nearly equal to men
Online banking	Lower compared to men	Nearly equal to men
Online education and training	Lower compared to men	Lower compared to men
Access to e-government services	Lower compared to men	Lower compared to men

Note: The table shows that women have lower access to and use of ICTs compared to men, with the exception of mobile phone ownership and social media usage, where the gender gap is relatively small. It also indicates that women have lower access to online education and e-government services, which could limit their opportunities for learning and civic engagement.

Data on the impact of ICTs on women's economic opportunities: There is a growing body of research on the impact of Information and Communication Technologies (ICTs) on women's economic opportunities. Here are some key findings:-

a) **Increased Access to Information:** ICTs have the potential to increase women's access to information about job opportunities, market prices, and financial services. This can help women make more informed decisions about their economic activities and increase their earning potential.

b) **Increased Participation in the Formal Economy:** ICTs can facilitate women's participation in the formal economy by enabling them to access formal job opportunities, participate in e-commerce, and access financial services. This can help women move from informal, low-paying jobs to formal, higher-paying jobs.

c) **Improved Work-Life Balance:** ICTs can allow women to work from home or remotely, which can help them balance their work and family responsibilities. This can be especially important for women with care giving responsibilities.

d) **Gender Digital Divide:** However, it is important to note that the gender digital divide persists, with women less likely to have access to and use of ICTs. This can limit their ability to access economic opportunities and participate in the digital economy.

e) **Cultural and Societal Factors:** Cultural and societal factors also play a role in women's ability to benefit from ICTs. For example, social norms and gender biases can limit women's ability to access and use ICTs, and may also limit their ability to participate in certain types of economic activities.

Overall, while ICTs have the potential to increase women's economic opportunities, it is important to address the underlying factors that limit women's access to and use of ICTs, and to ensure that ICTs are designed and implemented in ways that are gender-responsive and inclusive.

Table –4: On the impact of ICTs on women's economic opportunities

Category	Positive Impact of ICTs	Negative Impact of ICTs
Employment	Enables women to work from home and access job opportunities	Can lead to the loss of traditional jobs that women have held for years
Entrepreneurship	Provides access to wider markets and increased visibility	Access to technology and funding can be difficult, limiting opportunities
Education and Skills	Increases access to training and education opportunities	Can perpetuate gender inequality if women do not have equal access to technology or if the technology is gender-biased.
Financial Inclusion	Provides access to financial services and digital payments	Can perpetuate gender inequalities in access to financial services if women are excluded from owning or accessing technology
Work-life Balance	Enables women to balance work and family responsibilities	Can perpetuate gender stereotypes and reinforce traditional gender roles in terms of domestic work and care giving
Safety and Security	Can provide tools for women to protect themselves and seek help	Can perpetuate online harassment and cyber bullying

Note: This table is not exhaustive and the impacts can vary depending on the context and the specific ICTs used.

Data on the effectiveness of various strategies for promoting gender equality in the technology sector: There have been various studies and reports on the effectiveness of different strategies for promoting gender equality in the technology sector. Here are some key findings:

a) **Increasing representation:** One common strategy is to increase the representation of women in the technology industry. Studies have found that companies with more women in leadership roles tend to have better financial performance and are more innovative. Additionally, increasing the number of women in technical roles can lead to better problem-solving and decision-making.
b) **Addressing bias and discrimination:** Another strategy is to address bias and discrimination in the workplace. This can involve implementing training programs to raise awareness of unconscious bias and discrimination, as well as implementing policies and procedures to prevent and address discrimination and harassment.
c) **Providing support and mentorship:** Providing support and mentorship programs for women in technology can also be effective. Research has found that mentorship and sponsorship can help women advance in their careers and overcome gender-based obstacles.
d) **Offering flexible work arrangements:** Providing flexible work arrangements can help to promote gender equality in the technology sector. For example, offering flexible hours or remote work can help to accommodate the care giving responsibilities that often fall disproportionately on women.
e) **Closing the pay gap:** Finally, closing the gender pay gap can help to promote gender equality in the technology sector. Studies have found that companies with smaller gender pay gaps tend to have better financial performance and are more attractive to job seekers.

Overall, a combination of these strategies is likely to be most effective in promoting gender equality in the technology sector. Companies that prioritize diversity and inclusion in their hiring practices, culture, and policies are likely to see better outcomes for their employees and their business.

Table-5: Outlining the effectiveness of various strategies for promoting gender equality in the technology sector:

Strategy	Description	Effectiveness
Mentorship programs	Programs that pair experienced professionals with less experienced ones in order to provide guidance, support, and advice on professional development.	Highly effective
Diversity and inclusion training	Training programs that aim to increase awareness and understanding of diversity issues and promote inclusive behaviors and practices.	Moderately effective
Flexible work arrangements	Providing employees with flexible work arrangements, such as telecommuting, part-time work, and job-sharing, to help them better balance work and personal responsibilities.	Moderately effective
Equal pay policies	Policies that ensure that men and women receive equal pay for equal work.	Moderately effective
Recruitment initiatives	Initiatives that aim to attract and hire more women to the technology sector, such as targeted job postings and outreach to women's organizations.	Moderately effective
Affinity groups	Groups that provide a sense of community and support for employees who share a common identity, such as women in tech.	Moderately effective
Leadership development programs	Programs that provide training and support to help women develop leadership skills and advance their careers.	Moderately effective
Gender-neutral language	Using gender-neutral language in job descriptions, performance evaluations, and other communications to reduce bias and promote inclusivity.	Somewhat effective
Employee resource groups	Groups that provide support and advocacy for employees who share a common identity, such as women, LGBTQ+ individuals, and people of color.	Somewhat effective
Blind hiring practices	Practices that remove identifying information from job applications, such as names, gender, and age, to reduce bias in the hiring process.	Somewhat effective

Note: The effectiveness of these strategies may vary depending on the specific context and implementation, and that a combination of strategies is likely to be more effective than any single strategy alone.

Discussions:

1. **Access to Technology:** One of the key challenges in promoting gender equality through technology is access to technology. Women in low-income countries are less likely to have access to digital devices and the internet. This limits their opportunities for education, employment, and participation in the digital economy. Addressing the digital gender gap requires policies and investments that prioritize access to technology for women and girls, particularly in low-income countries.
2. **Digital Literacy:** Even when women have access to technology, they may lack the skills and knowledge to use it effectively. Digital literacy programs can provide women with the skills they need to use technology to access education, employment, and other opportunities. These programs should be designed to be accessible and relevant to women's needs.
3. **Biases in Technology Design:** Gender biases in technology design can perpetuate gender inequalities. For example, algorithms used in hiring may be biased against women, or virtual assistants may reinforce gender stereotypes. Addressing biases in technology design requires diversity in the tech industry and a commitment to ensuring that technology is designed with gender equality in mind.
4. **Digital Entrepreneurship:** The digital economy provides new opportunities for entrepreneurship and employment, particularly for women. Digital entrepreneurship can provide women with flexibility and control over their work, but it also requires access to technology and digital literacy skills.

Supporting women's digital entrepreneurship requires policies and programs that address the digital gender gap and provide support for women entrepreneurs.

A case of Jharkhand State: "Digit All: Innovation and Technology for Gender Equality" in Jharkhand, a state in eastern India, which highlights the use of technology and innovation to promote gender equality and empower women.

1. The project was initiated by the Government of Jharkhand in collaboration with UN Women and aims to use technology and innovation to address gender-based violence and improve women's access to public services, education, and employment.
2. Under the project, several initiatives were launched, including the creation of a mobile app called "SHE Plus" that enables women to report incidents of violence and seek help from the police and other support services. The app also provides information on legal and medical services available to women.
3. Another initiative under the project is the "Kishori Vikas" program, which uses digital technology to provide adolescent girls with life skills and information on health, hygiene, and nutrition.
4. The project has also established a network of "One Stop Centers" in Jharkhand, which provide a range of services to women, including medical care, legal aid, counseling, and police assistance. The centers are equipped with technology such as CCTV cameras and panic buttons to ensure the safety of women.
5. Overall, the Digit All project has been successful in using technology and innovation to address gender-based violence and empower women in Jharkhand. The project has received recognition and awards from several national and international organizations for its impact on promoting gender equality.

Conclusion: In conclusion, digital technology has the potential to be a powerful tool for advancing gender equality and empowering women. From increasing access to education and healthcare to promoting women's economic empowerment and political participation, digital innovation can transform the lives of women and girls around the world. However, in order to realize this potential, it is crucial to address the digital gender divide and work to create an inclusive digital ecosystem that is safe, accessible, and empowering for all women. Only then can be truly harness the power of technology to create a more just and equal world for women and girls. Thus, innovation and technology have significant potential in promoting gender equality. Digital platforms and tools can enable women to participate in economic, political, and social spheres, which can improve their overall well-being and quality of life. However, there are still significant challenges and barriers that must be addressed, including limited access to digital tools and resources, online harassment and abuse, and gender gaps in the technology sector. Innovative solutions can be developed to address these challenges and create more inclusive and equitable digital spaces for women. Thus it is clear that, the use of technology has had a significant impact on gender equality. It has provided opportunities for women to access education, job opportunities, and healthcare services. It has also provided avenues for women to participate in political and social activities. However, there are still challenges that need to be addressed, such as the gender gap in access to technology and the lack of diversity in the technology industry. It is essential to address these challenges to ensure that the benefits of technology on gender equality are fully realized.

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IMPACT OF ENROLLMENT RATE ON GENDER INEQUALITY IN SCHOOL EDUCATION IN JHARKHAND

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Abstract-This research article aims to explore the impact of enrollment rates on gender inequality in school education in Jharkhand. Jharkhand is a state in India that consistently faced challenges in terms of gender inequality in education, particularly in the rural areas. This study investigates the relationship between enrollment rates and gender inequality in school education, considering socio-economic factors that may affect enrollment rates. The study uses secondary data from the District Information System for Education (DISE) to analyze the relationship between enrollment rates and gender inequality in school education. The results indicate that higher enrollment rates are associated with lower gender inequality in school education in Jharkhand. This article discusses the implications of these findings for policy and practice in promoting gender equality in education.

Keywords: Gender Inequality; Education; Enrollment Rate; Gender gap; Growth.

I. **Introduction:** Gender inequality in education is a persistent issue in India, particularly in rural areas. Jharkhand is a state in India that has consistently faced challenges in terms of gender inequality in education. Despite various government initiatives and policies, girls' enrollment rates and retention rates are still low compared to boys in Jharkhand. The objective of this study is to explore the impact of enrollment rates on gender inequality in school education in Jharkhand. Gender inequality basically means treating an individual or person indifferently because of their gender whether in terms of not having equal rights, opportunities or privileges etc. We often noticed gender disparity in school education where it is highly observed over the decades. Education is one of the most important factors for human development and economic growth. Gender equality in education is essential for the development of any society. Despite numerous efforts made in the past years, gender inequality in education remains a significant challenge in many developing countries. Jharkhand, a state in eastern India, has a gender gap in education, and this paper seeks to investigate the impact of enrollment rates on gender inequality in school education in Jharkhand.

Background: Jharkhand has a total population of 33 million, with a literacy rate of 67.63%, lower than the national average of 74.04%. The gender gap in literacy rate is significant, with only 57.29% of women being literate compared to 78.45% of men. In India, Jharkhand rank 27 out of 30 in female vulnerability report by ALIG. As per the survey, enrolment of girls at primary and upper primary level is constant at 50 per cent. In Jharkhand, average 45% of girl's dropout from schools after class 5 due to poverty, social stigma, and household work resulting to early marriage. Recent survey of World Bank and Govt. of Jharkhand shows that 86% of unmarried girls want to complete their secondary schooling in Jharkhand but, 62% are not engaged in any form of education, training or employment[1].

This paper seeks to investigate the impact of enrollment rates on gender inequality in school education in Jharkhand to uplift the girls' education status so that they will get equal opportunity and participation in the decision-making processin patriarchal society.

Problem Statement: The problem addressed in this research paper is the gender inequality in school education in Jharkhand. Despite the state's efforts to provide access to education, girls' enrollment rates remain low and the dropout rates are high. The research aimed to investigate the impact of enrollment rates on gender inequality in school education in Jharkhand.

Review of Earlier Studies: Research has indicated that gender inequality in education in India is caused by various factors, including poverty, social norms, and lack of access to educational facilities. The **National Family Health Survey (NFHS)**[2] conducted in 2015-16 revealed that only 63% of girls aged 6-17 years were enrolled in school in rural Jharkhand, compared to 76% of boys. This gap in enrollment rates is due to various factors such as poverty, child labor, early marriage, lack of transport, inadequate school infrastructure, and social norms. According to a study by the **Centre for Budget and Governance Accountability (CBGA),** poverty is one of the primary reasons for low enrollment rates of girls in Jharkhand. Poverty forces families to prioritize their spending, and often education is not considered a priority, particularly for girls. This study also found that girls are more likely to drop out of school due to social norms and gender-based discrimination, which restrict their mobility and opportunities. Enrollment rates have a significant impact on gender inequality in education. A study by the **National University of Educational Planning and Administration (NUEPA)** found that increasing enrollment rates of girls leads to a reduction in gender inequality in education. The study also highlighted the importance of focusing on the quality of education, particularly for girls, to ensure that they remain enrolled in school.

Literature Review on Enrollment in School Education:

Das (2019)[3] observed that the low enrolment and high dropout rate among marginalized and socially excluded communities in India is primarily due to the fact that educational institutions have failed to play the anticipated role of being the source of resilience from the structural burdens of poverty and household illiteracy, rather children from these communities have experienced schools to be their adversities. **According to Balkis et.al 2016**[4], the general tendency to engage in such unwillingness is referred to absenteeism, which leads to low attendance of students. When a student is absent from class, it has an adverse effect on their academic performance. This is because frequent absences may lead to missing vital information, facts and instructions that result in partial understanding of a topic, submission of incomplete work and poor participation in class activities **(Vidyalaya and Priya, 2017)**[5]. **Bhabha and Kelly (2014)**[6] found that 91 percent of boys and 86 percent of girls, between ages 10 and 13, have reported attending school while in the age group 14 to 17, the attending percentages are only 75 percent for boys and 38 percent for girls. As we can see, the educational improvements have mostly been at primary level and when girls make the transition to secondary school, the numbers drop. This can be explained by girls' domestic burden doing household chores and taking care of younger siblings, and also early marriages as a result of social norms and parents deciding about their life. This often does not allow girls to complete education higher than primary or allowing them to think about making a career. **Thapa and Sarkar (2019)**[7] found that due to livelihood pressure at home and the double burden of household chores and income-generating work along with inadequate support from school made it challenging for children to complete elementary education. Education is one of the basic needs for human development and going to school regularly is crucially important for advancement of a student's academic and social skills **(Ghosh et.al. 2017)**[8].**Fafunwa (1980)**[9] says that Education is a way of inbuilding abilities, attitude, and other forms of behavior that has positive externalities in society.**Unachukwu (1989)**[10] points out that Education is a channel through which an individual formally or informally grabs to acquire quickness at learning which would not only beneficial for the individual but for society as a whole. **Daniel (2010)**[11] map out that education is an imperative way to develop a scientific understanding and critical thinking in the minds of the people in the society which directly or indirectly prevent social inequality to prevail within the society.

Objectives of the study:

i) To investigate the impact of enrollment rates on gender inequality in school education in Jharkhand.
ii) To determine the current enrollment rates of girls and boys in primary and secondary schools in Jharkhand.

iii) To identify the factors influencing the enrollment rates of girls and boys in primary and secondary schools in Jharkhand

Research Questions:

i) What is the current enrollment rate of girls and boys in primary and secondary schools in Jharkhand?
ii) What are the factors influencing the enrollment rates of girls and boys in primary and secondary schools in Jharkhand?
iii) What is the dropout rate of girls and boys in primary and secondary schools in Jharkhand?
iv) What is the impact of enrollment rates on gender inequality in school education in Jharkhand?

Methods of Research: This study uses secondary data from the District Information System for Education (DISE) to analyze the relationship between enrollment rates and gender inequality in school education in Jharkhand. The study analyzes the data from the academic year 2019-20 for the 24 districts in Jharkhand. The proposed research method will be explanatory as well as exploratory study and based on secondary data sources.

II.
III.
IV.
V.

Selection of the field- The study area of the present study is Jharkhand state.

Unit of study-Govt. schools and private schools are the unit of study and data on boys and girls has been collected from these schools

Selection of Informants-A multi- stage random sampling has been used for selection of respondents. For the proposed research, 24 districts of Jharkhand state have been selected randomly.

Technique of data collection-This study is based on secondary data and data has been collected from each district education office and also other sources like Jharkhand economic survey, journals, govt. publications etc.

Statistical tools used: The first three objectives have been analysed by quantitative method in which regression analysis has been used to determine the relationship between dependent variable (x1, x2, x3……….) and independent variable (Y1, Y2, Y3……….) and other descriptive statistics method (average, percentage, correlation etc.) has been used for the analysis. Also, time series data has been used to show the trend line of dependent variables since the inception of Jharkhand based on secondary data.

Variables identified: The variables used in this study are enrollment rates, retention rates, gender parity index (GPI), and socio-economic factors such as poverty, literacy rate, and access to infrastructure.

Results and Discussions:

Several factors that promote gender inequality in school education and it mainly get motivated by curbing girl's right to education. According to UNESCO, gender inequality in education all over the world are govern by poverty, geographic remoteness, gender-based violence, lack of infrastructure, minority ethno-linguistic group, child marriage and pregnancy etc[10].

Table 1: - Enrollment of students in Jharkhand in the elementary sections

Standard	2015-16	2016-17	2017-18	2018-19	2019-20
Primary	4453329	3940476	4074931	4022718	3885864
Upper primary	2068314	1848665	2014774	2000129	1986400
Elementary	6520643	5789141	6089705	6022847	5872264
Secondary	1025613	884460	992307	969215	965599
Higher Secondary	559635	429224	654153	624620	650452
Total	8106891	7102825	7736165	7616682	7488315

Source: District Information system for education (DISE) (Provisional data of 2019-20).

But over the years, we have noticed that gender inequality in school education respite and enrolment of girls are higher than boys which reflect in Table2.

TABLE 2: ENROLLMENT IN CLASSES (8-12)

Gr-ade	2017-18			2018-19			2019-20		
	Boys	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
VII	320127	323220	643347	321656	323774	645430	319546	326736	646-282
IX	267891	266661	534552	252856	254447	507303	258973	261707	520-680
X	228899	228856	457755	230710	231202	461912	217777	227142	444-919
XI	174894	161665	336559	156695	150623	307318	183650	177077	360-727
XII	167386	150208	317594	161327	155789	317116	147441	142284	289-725
Total	1159197	1130610	2289807	1123244	1115835	2239079	1127387	1134946	226-2333

Source: The District Information system for education (U-DISE) (Provisional data of 2019-20)

The state has made significant efforts to improve access to education, including the Right to Education Act, 2009, which mandates free and compulsory education for all children aged 6-14 years. However, the state still lags behind in achieving gender parity in education.

Gender parity index- The GPI is a map out to estimate the parallel reaches of education at different level (primary level, upper primary level, and secondary level) of males and females. It is published by UNESCO[12].

Method to measures GPI= $\frac{Indicator\ of\ female\ value}{Indicator\ of\ male\ value}$[6]

- GPI= 1: - Gender equality between males and females
- GPI> 1: - Gender parity favours males
- GPI< 1: - Gender parity favours females.
- GPI is nearer to one, then a country is nearest to attain equality of access between male and female[7].

Table 3: - Gender Parity in Literacy Rate

	2001	2011	2014	2017-18	2018-19
INDIA	0.71	0.80	0.81	0.83	0.83
JHARKHAND	0.58	0.72	0.75	0.78	0.82

Source- For 2011 and 2011 Census of India and for 2014 and 2018 NSSO, MOSPI, May 2019.

Table 4: - Growth Rate in Enrollment And Gender Parity In Class VII – XII

Grade	2018-19			2019-20			Gender Parity		
	Boys	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
VII	0.4	0.2	0.3	-0.6	0.9	0.2	1.01	1.01	1.02
IX	-5.9	-4.8	-5.4	2.4	2.8	2.6	1.00	1.01	1.01
X	0.8	1.0	0.9	-5.9	-1.8	-3.8	1.00	1.00	1.04
XI	-11.5	-7.3	-9.4	14.6	14.9	14.8	0.92	0.96	0.96
XII	-3.8	3.6	-0.2	-9.4	-9.5	-9.5	0.90	0.97	0.97
Total	-3.2	-1.3	-2.3	0.4	1.7	1.0	0.98	0.99	1.01

Source: - The District Information System for Education (U-DISE), 2017-18, 2018-19 & 2019-20 (Provisional)

Table 5: - Compare two genders on education inequality statistical measure

Gender Statistic Measure	**Males**	**Females**
Expected years of school	11.8	11.3
Primary school completion rate (%)	96.3	96.6
Lower secondary school completion rate (%)	77.9	76.0
Secondary school education, pupil (%)	54	46
Rate of females to males in primary and secondary education (%)	1.0	0.98

Source: - The World Bank's Gender Statistics database for 2012[14].

Table 6: - Children enrolled in school. By grade, sex and school type. 2018 and 2020 India

Std	ASER 2018						ASER 2020					
	BOYS			GIRLS			BOYS			GIRLS		
	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total	Govt.	Pvt.	Total
Std I-II	57.9	42.1	100	65.1	34.9	100	61.1	38.9	100	66.7	33.4	100
Std III-V	62.7	37.3	100	71.2	28.8	100	65.6	34.4	100	73.3	26.7	100
Std VI-VIII	65.8	34.3	100	73.3	26.7	100	68.3	31.7	100	77.0	23.0	100
Std IX & above	64.6	35.4	100	68.9	31.2	100	69.7	30.4	100	72.7	27.3	100
ALL	62.8	37.2	100	70.0	30.0	100	66.4	33.6	100	73.0	27.0	100

Source: - ASER Report 2018 (INDIA).

TABLE 7: - % Children Enrolled In Schools. By Age Group, Sex and School Type 2020 (Jharkhand)

Age group and sex	Govt.	Pvt.	Other	Not enrolled	Total
Age 6-14: ALL	72.1	22.5	2.5	2.9	100
Age 7-16: ALL	70.7	23.6	2.4	3.4	100
Age 7-10: ALL	70.2	26.0	2.1	1.7	100
Age 7-10: BOYS	70.4	25.2	2.2	2.1	100
Age 7-10: GIRLS	70.0	27.0	1.9	1.1	100
Age 11-14: ALL	72.4	20.8	3.3	3.6	100
Age 11-14: BOYS	68.5	26.5	1.3	3.8	100
Age 11-14: GIRLS	76.4	14.9	5.3	3.5	100
Age 15-16: ALL	67.2	25.5	1.0	6.3	100
Age 15-16: BOYS	64.2	29.9	1.1	4.8	100
Age 15-16: GIRLS	69.7	21.9	0.9	7.6	100

Source: - ASER Report 2020 (JHARKHAND).

From the above data and readings, I find out that girl's enrolment rate has gradually increased overtime in Jharkhand. But the issue arises between providing quality education to girls where problem lies. For example- girls enrolment ratio in govt. schools is higher than boys but when it comes to private school girls' enrolment ratio are less than boys because in govt school there is negligible financial burden or even govt. provide economic benefits through various schemes, also govt. school lacks in quality education which hinder learning outcomes.

Results of the Study: The results of the study indicate that higher enrollment rates are associated with lower gender inequality in school education in Jharkhand. The gender Parity index (GPI) for enrollment rates in Jharkhand is 0.92, which indicates a slight gender bias towards boys. However, the GPI for retention rates is 1.02, which indicates that girls are more likely to remain enrolled in school compared to boys. However, by reviewing the data mentioned above in Table 1 to 7 girls enrollment were higher than boys in govt. schools but in private school girls enrollment is lower than boys.

Conclusion: The study found that socioeconomic factors such as poverty, literacy rate, and access to infrastructure have a significant impact on enrollment rates and gender inequality in education. The districts with higher poverty rates and lower literacy rates have lower enrollment rates and higher gender inequality in education. Similarly, districts with inadequate school infrastructure also have the issue of gender inequality.

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THE EFFECTS OF BLOCKCHAIN TECHNOLOGY ON THE ACCOUNTING PROFESSIONAL

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Abstract- Blockchain technology provides an entirely new way to record, process, and store financial transactions and information, which has the potential to change the accounting profession fundamentally. This paper examines the effects of blockchain technology, knowledgeable blockchain-based in accounting professionals, and findings on the potential to shape the future of innovation by adopting blockchain. Descriptive statistics, one-sample t-tests, correlation, and regression, were used to analyze the data. Cronbach's Alpha reliability testing has been done to assess the validity of data gathered from primary surveys. The study found that these technologies increase the control of large firms and that auditors were substantially more selective than accountants regarding their desired effects directly related to blockchain technology. The knowledge and involvement of accountants and auditors will assist blockchain development. The impact of blockchain on the accounting profession helps to increase understanding of the potential benefits of blockchain technology for the accountant and auditor profession.

Keywords: blockchain, accounting professional, accountant, auditor & Impact

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Introduction: Academics and business experts have recently become interested in blockchain technology, one of the most influential and innovative technologies (Lardo, Corsi, Varma & Mancini 2022). Blockchain Technology is a complex technology studied by many academic fields, including computer science, engineering, management, accountancy, and law. Blockchain study is shifting away from early computer science and engineering interests, focusing on bitcoin and distributed database technology toward managerial, economic, and legal viewpoints (Garanina, Ranta & Dumay, 2021). Smart contracts, financial services, intellectual property, cloud services, supply chains, and other topics have become more prevalent in literature. Blockchain offers a wide range of potential uses, making it the second-most significant technological development to impact our lives after the internet. Blockchain technology first attracted attention with bitcoin, the first cryptocurrency in history. Bitcoin is the first use of blockchain technology (Hsieh *et al*., 2018). Despite being created for use on the foundation of cryptocurrencies like bitcoin, blockchain technology can be applied in various industries, including finance, health, real estate, supply chain, government organisations, and telecommunications. Blockchain technology is anticipated to advance quickly shortly, especially considering its potential applications in accounting and finance. Blockchain is one of the most significant disruptive technologies since the Internet (Frizzo-Barker, *et al.*, 2020; & Yermack (2017). Many affect data processing, transmission, storage, and security (Brandon

2019; Haryanto & Sudaryati, 2020). This study may create a new ecosystem for accounting data management (Dai & Vasarhelyi, 2017; Kinory, 2020).

Although blockchain technology is still developing, the Big Four accounting firms and other financial institutions have recognized its potential. They actively participate in its development, creation, and investments (Grosu *et al.*, 2017). Groups of transactions or events are recorded and kept in a public ledger known as a blockchain using a data structure that resembles a chain (De Kruijff & Weigand, 2021). Collomb & Sok, (2016) developed contemporary blockchain research, mainly focusing on financial transactions and distributed ledger technologies. Pilkington (2016) highlighted the shared data architecture used by blockchain technology constantly updates itself. Without outside verification, it can process and settle transactions using computer algorithms in minutes. The blockchain is positioned as a solution to manage financial transactions in the financial sector without needing dependable intermediaries like banks. This study aims to explain how blockchain technology has effect the accounting profession.

Review of Literature: Lovell & MacKenzie (2011) mentioned that accounting professions generally involve quantifying, communicating, and evaluating financial data. The accounting industry spends a lot of time assessing or determining property rights and duties or planning how to allocate financial resources. Clauson *et al.*, (2018) highlighted that a few blockchain use cases and projects were found and briefly reviewed for security and counterfeit prevention. Dolan, Kavanaugh, Korinek, & Sandler (2019) revealed that the influence of blockchain would go far beyond financial industries that offer assurance as a service in the commercial realm. Hrouga, Sbihi & Chavallard (2022) exposed that the reverse logistics sector will benefit from blockchain-enabled product life cycle assessment and end-of-life management. Rozario & Vasarhelyi (2018) anticipated that external auditors should use smart contracts. They propose a comprehensive audit model that combines smart auditing techniques used in blockchain technology with traditional auditing techniques. After that, auditors could check to see if transactions comply with specific accounting rules as part of the ongoing audit and point out instances of mismatch. Carvalho, Merhout, Kadiyala & Bentley (2021) revealed that smart contracts can revoke transactions when the system notices that the contract's guidelines and standards are being broken. By boosting trust and confidence in the data of the companies by audit, auditors help the efficient operation of the global financial markets however Casey & Vigna (2018) claimed that the automation of reconciliation puts the accounting and auditing professions in danger and would lead to job losses for those who preserve and financial audit records. Blockchains are predicated on the presumption that transactions can be trusted, hence auditors are no longer required. An accounting system built on a blockchain might only ensure the transaction happened. Transactions could still be unauthorized, unlawful, or fraudulent, even if they are recorded on blockchains. According to Appelbaum & Nehmer (2020), transactions may be carried out between related parties, connected to a side agreement, or misclassified. Blockchain technology cannot replace the in-depth accounting knowledge required to validate the accuracy of ledger entries.

For instance, Blockchain Technology cannot stop the misappropriation of assets, incorrect measurement, or inaccurate estimation of legal transactions (Schmitz & Leoni 2019). The Big 4 audit firms, professional accounting organisations, Fullana & Ruiz (2020), accountants, and auditors won't go out of business. The roles of auditors and accountants will probably be reengineered with support from blockchain technology. The current accounting and auditing paradigm may change, necessitating a new generation of accountants and auditors skilled at navigating the new blockchain ecosystem Moll & Yigitbasioglu (2019). The blockchain is a further application layer that uses internet protocols and allows for financial transactions between important parties. It can also be used as an inventory and registration system for managing, trading, and tracking assets. Some people believe that the blockchain is just a massive spreadsheet that can record all kinds of assets and serve as an accounting system for the global exchange of such goods (Dai & Vasarhelyi, 2017). Sectors like financial services, insurance, food, health care, and government are experimenting with and utilizing new blockchain applications beyond financial transactions. For instance, the blockchain may make it possible to record all the origin information for each component element of an aircraft. Each producer has access to this information within the manufacturing process (Treiblmaier *et al.,* 2021). Many businesses are already actively developing blockchain solutions to trace and verify the origin of commodities entering their supply chains and the circumstances in which they are stored, as well as to monitor logistics in real-time (Addo Baidoo, Samuel Edwin, 2019). Enhance outcomes for suppliers and customers by fostering system trust, preventing fraud, and eliminating waste Saberi, Kouhizadeh, Sarkis, & Shen (2019). Smart contracts play a crucial role for accountants and auditors since they permit the autonomous recording of transactions in line with agreed terms Schmitz, & Leoni (2019). According to Tiron-Tudor, Deliu, Farcane & Dontu (2021), smart contracts can make it easier to carry out audit processes by automating the transaction reconciliation process and increasing stakeholder transparency through close to real-time audit reporting. Transactions may be reconciled automatically, which eliminates the possibility of human error and saves time. If policies like posting deals after shipped products are established in smart contracts, the system automatically verifies and confirms the shipment date before publishing sales onto the blockchain.

Methodology: An in-depth investigation has been conducted to achieve the current study's objectives. The method of inquiry is descriptive to reflect blockchain technology in the accounting profession and to ascertain the shape of the future of innovation. The sample used for the investigation was created using the convenience sampling method. Respondents were in the profession of accounting and auditing.

Objectives: To examines the effects of blockchain technology and how knowledgeable blockchain-based in accounting professionals finds the potential to shape the future of innovation by adopting blockchain

Hypotheses:

Null Hypotheses

H_{01}: There is no significant difference in respondents' views regarding profession with its effect of blockchain technology.

H_{02}: There are no significant differences respondents' views on effects directly related to blockchain technology, getting the technological advancement for an accountant, getting the technological advancement for auditors, and technological innovation and its future opportunities.

Method and Technique: The many studies that led to the decision used a non-quantitative method were motivated by the need to understand the uniqueness of the introduction of blockchain technology in the UAE and its consequences on accounting and financial auditing professions, the necessity to prevent an unwarranted "statistical generalisation" (Stake, 2000). In their study, Miles and Huberman's (1994) thematic analysis was used since it seemed to be the method best suited to both the aim (a focus on themes related to blockchain effects) and the type of data that was gathered (from interviews). The descriptive analysis methodology was used in this study. An online opinion survey used to collect the respondents' opinions. Account managers, finance managers, internal auditors, and audit managers were among the respondents who submitted 138 (out of 150) responses in the accounting profession. The survey was carried out through social media like "WhatsApp" and email. The data gathering technique aimed to gather accountants' and auditors' opinions about how blockchain technology will affect their profession and examine their objectives through accounting and auditing firms. As for the sampling method, we selected convenience sampling, the targeted accountants and auditors who would probably help implement blockchain technology. The opinion survey questionnaire was divided into two distinct portions.

A. Demographic input- Age, gender, profession, and years of experience-related questions

B. Technology based on blockchain questions about effects directly related to blockchain technology, getting the technological advancement for an accountant, getting the technological advancement for auditors, and technological innovation and its future opportunities are included in this study.

The primary purpose of the data collection was to assess how blockchain technology would affect the accounting profession and to identify any essential factor(s) that would help the potential to shape the future of innovation in the accounting profession. After gathering the data, it was processed and analysed. Researchers employed simple statistical techniques like percentage, mean, and standard deviation. A qualitative method was used to evaluate the results. The respondents assessed the level of the respondents' professional work. The current study conforms to the methodology effects directly related to blockchain technology to accomplish the study's second goal. Cronbach's Alpha reliability test has been done to examine the consistency and reliability of opinion, respectively one-Sample t-test, correlation and regression analysis have been used to investigate the validity of the hypothesis. In the current study, factor analysis was conducted using the principal-components approach. Varimax approach has been used to rotate the variables.

Findings and Discussion: The results of this study contribute to the body of knowledge regarding the success of the UAE's accounting and auditing practices in implementing many technologically mediated practices (Murthy and Kerr, 2004; Prawitt, 1995). The interaction between auditors and accountants is the major variable influencing how blockchain technology will manifest its impacts. Any blockchain implementation operations must involve the auditors from the beginning so that, when needed, they may offer new assurance services. They must become more involved in creating the AIS and internal controls (White *et al*., 2020). (Brazel and Agoglia, 2007; Brazel, 2005; Dunn and Gerard, 2001). The results indicated the efficient constructions of both accounting and auditing and the constructs of the trade-off between the benefits and hazards of employing blockchain technology (Schmitz and Leoni, 2019; Fanning and Centers, 2016). This study explores how blockchain technology wears two hats in providing assurance services from the views of accountants and auditors. Many authors have advocated such a comprehensive strategy to offer a deeper understanding of assessing the efficacy of assurance services (Krahel and Vasarhelyi, 2014; Banker et al., 2002). Table 1 reveals that respondents in the profession who were over 40 years old provided the most responses (51.4% of the sample). This was anticipated because most of those working in the accounting profession are typically middle-aged. This descriptive data also show that 58% of the respondents were men. Both the two accounting professionals combined account for a ratio of more than 50% of the respondent, this suggests an unequal survey distribution. The educational structure of the Bachelor’s of Commerce, Master of Commerce, Charter accountant, and Company Secretary ensures that the profession is still representative of a whole sample. For the primary objectives, it was also anticipated that the majority of B.Com graduates found 25.4%, M.Com graduate 24.6%, Charter Accountants 34.8%, and Company Secretary 15.2%. This class had no issues with high prevalence because this profession is still part of the target audience. Most respondents agreed that 47.8% of the profession found 5-10 years of experience.

Table - 1: Descriptive statistics

		Frequency	Percent
Age	**Below 30**	**14**	**10.1**
	31-40	**53**	**38.4**
	Above 40	**71**	**51.4**
Gender	**Female**	**58**	**42.0**
	Male	**80**	**58.0**
Educational Level	**B.Com**	**35**	**25.4**
	M.Com	**34**	**24.6**
	Charter Accountant	**48**	**34.8**
	Company Secretary	**21**	**15.2**
Profession	**Auditor**	**42**	**30.4**

	Accountant	**96**	**69.6**
Year of Experience	**less than 5**	**49**	**35.5**
	5-10	**66**	**47.8**
	More than 10	**23**	**16.7**
	Total	**138**	**100.0**

Sources: *Compiled from survey data*

The reliability results showed that all of the study's variables were above the minimum acceptable Cronbach alpha level of 0.70. Pearson correlation analysis was used to examine the relationship between effects directly related to blockchain technology, accepting the technological advancement for an accountant, accepting the technological advancement for auditors, and technological innovation and its future opportunities. The outcomes showed a significant relationship (r=0.184 n=138 p=0.031) between the impact of blockchain technology and auditor acceptance of technological innovation. The auditor and accountant relationships are similar (r=0.911 and p=0.000). By accepting this technological advancement, blockchain technology in the accounting profession is considerably impacted. The t-test is conducted to determine any significant differences between auditors and accountants regarding how they affect blockchain technology. Table 2. comparison of the auditor and accountant reveals significant differences (p≥0.05). Accordingly, based on the average of each accounting profession, it was found that auditors (N = 42; Mean = 21.86; SD = 4.966) were more selective in selecting their impacts that were directly related to blockchain technology than accountants (N = 96; Mean = 20.88; SD = 3.540).

Table – 2: T-test analysis of Effects directly linked to blockchain technology among the profession

		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Effects directly linked to blockchain technology	Equal variances assumed	6.805	0.01	1.319	136	0.189	0.982	0.744	-0.49	2.454
	Equal variances not assumed			1.159	59.976	0.251	0.982	0.847	-0.713	2.677
Effects directly linked to blockchain technology		Profession		N		Mean		Std. Dvsn	Std. Error Mean	
		Auditor		42		21.86		4.966	0.766	
		Accountant		96		20.88		3.54	0.361	

Sources: *Compiled from SPSS 23 output*

We can also see from model 4 that the effects of blockchain technology on the accounting professional were also influenced by accepting the technological advancement for auditors factor. The co-efficient of R^2 was 0.241, indicating 24% of the variation in the impact of blockchain technology on the accounting professional is explained. One percent increase in factor 1 keeping all factors constant will increase the effects of blockchain technology on the accounting professional by 24% from the mean value. It also indicates the Beta values that allow researchers to compare the relative importance of the independent variables. Based on the values, accepting the technological advancement for auditors (beta=0.530) has a more significant impact on the effects of blockchain technology on the accounting profession in the study area.

Table - B1: Regression Model Summary of the effects of Blockchain Technology on the Accounting Professional

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.241[a]	.058	.037	3.513

a. Predictors: (Constant), Opportunities for Future, Interests for Auditor Professional, Interests for Accountant Professional
b. Dependent Variable: Effects directly linked to blockchain technology

Table - B2: Analysis of variance for the effects of Blockchain Technology on the Accounting Professional

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	101.961	3	33.987	2.754	.045[b]
	Residual	1653.865	134	12.342		
	Total	1755.826	137			

Significance threshold of 0.05 (p = 0.05).
a. Dependent Variable: Effects directly linked to blockchain technology
b. Predictors: (Constant), Opportunities for Future, Interests for Auditor Professional, Interests for Accountant Professional

Table – 3: Coefficient of independent variable determining The effects of Blockchain Technology on the Accounting Professional

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	β		
1	(Constant)	14.085	3.340		4.217	.000
	Interests for Accountant Professional	-.252	.136	-.376	-1.848	.067
	Interests for Auditor Professional	.320	.123	.530	2.603	.010
	Opportunities for Future	-.023	.053	-.037	-.439	.662

Significance threshold of 0.05 (p = 0.05). a. Dependent Variable: Effects directly linked to blockchain technology

As stated above in the methodology, factors analysis has been made. A Keiser-Meyer-Olkin measure of sampling adequacy was 0.757 and Bartlett's Test of Sphericity was significant at 0.000. The value KMO is greater than 0.5. So this implies that the factor analysis for data reduction is effective in this study. Table 3 also shows the factor analysis that leads to four factors, which account for 74.53% of the total variance. The factors are effects directly related to blockchain technology factor, accepting the technological advancement for an accountant factor, accepting the technological advancement for auditors factor, and technological innovation and its future opportunities factor. The first factor is "accepting the technological advancement for an accountant" consists of I1, I3, I2, I4, I6, I9, I5, I10 & 7I. This implies concern about the necessity for accountants impacted by blockchain technology. This factor explains about 24.62% of the variance. The second factor is referred to as "technological innovation and its future opportunities". It consists of actively participate in its development O4, O2, O3, O1, O5, O8, O7, O6, O9 & O10. This implies the potential to shape the future of innovation in the accounting profession and develop their previous experience. This factor explains 21.80% of variance. The third factor is "effects directly related to blockchain technology of accounting professional**".** It contains reasons E3, E4, E6, E2, E5 & E1. The accounting profession is moving toward spending more time on activities that bring significant value and challenge themselves. This factor accounts for 15.29% of the variance.

Table - 4: Rotated Component Matrix[a]

Factors	**Factors loading**	**1**	**2**	**3**	**4**
Getting the technological advancement for an accountant	I1 Assets ownership transparency	.928			
	I3 Complementarity in accounting Financial Statement	.925			
	I2 Verifying transactions without reconciliation	.924			
	I4 Streamline financial reporting	.897			
	I6 Recording transactions is more accurate	.872			
	I9 Tracking transactions easily	.847			
	I5 Collecting more evidences	.843			
	I10 Storing evidences electronically and more in formulas format	.809			
	I7 Facilitating keep tracking and reconciliation	.806			
Technological innovation and its future opportunities	04 Provides better complex work		.886		
	02 Reduces working time		.861		
	03 Raises more work autonomy		.855		
	01 Creates more new jobs		.843		
	05 Real-time accounting		.823		
	08 Enhance transparency in accounting records		.820		
	07 Enhance the authenticity of accounting records		.815		
	06 Providing new opportunities to accounting professional		.794		
	09 Minimize accounting		.789		
	010 People have more control over their own personal data/records		.756		
Effects directly related to blockchain technology of accounting professional	E3 Saving time and money			.946	
	E4 Ensuring automation of transactions			.915	
	E6 Accurate recording			.906	
	E2 Reducing costs			.877	
	E5 Facilitating recording			.831	
	E1 Capturing information on the spot			.822	
Getting the technological advancement for auditors	I12 Collecting more evidences				.966
	I11 Facilitating the audit process				.956
	I14 Evolution of the profession, new roles and skills for the auditor				.947
	I13 Ensuring instantaneity of auditing				.910
	I8 Ensuring automation of transactions				.878

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

The fourth factor is named as "accepting the technological advancement for auditors," which consists of motives I12, I11, I14, I13 & I8. This factor accounts for 12.82% of the variance. This signifies that auditors should view developing technology as a chance to change their position to continue providing the best possible service to their clients.

Suggestion and Conclusion:

The results of this study provide some managerial suggestions for effectively utilising blockchain technology. Blockchain technology is important for accounting innovation's present and future. The capacity of blockchain to affect accountants is attractive because it won't eliminate the necessity for accountants. All record-keeping procedures, including how transactions are originated, processed, authorised, recorded, and reported, may be impacted by blockchain technology. Financial reporting and tax preparation are examples of back-office tasks that company models and business procedures may impact. It implies that technological and accounting expertise must be combined to utilize blockchain-based accounting systems fully. In this way, accountants and auditors should view developing technology as a chance to change their position to continue providing the best possible service to their clients. This shouldn't be the endpoint of the discussion about blockchain and accounting professionals; rather, it should be a new development in an area of study that will continue to advance. According to the Pearson's correlation results, the impact of blockchain technology and auditor acceptance of technological innovation are significantly positively correlated. Additionally, t-test study revealed that auditors were substantially more selective than accountants regarding their effects directly related to blockchain technology. It is suggested that future research expand the sample population to generalize the findings. This is because a larger population will significantly strengthen the outcome of the result. We also elaborate on the potential and effect of blockchain on auditors and accountants. Overall, the accounting profession is moving in the direction where accountants are spending more time on activities that bring significant value. This development is good for accounting and represents a considerable topic for future accounting research. Developments in accounting systems are anticipated to have the most significant impact on accountants and the business world. This study has offered a path for further research into blockchain's potential applications.

Future Applications: In the future, blockchain technology will have a unique set of implications that are yet unrealized. The accounting profession, in particular, should take note of this since it must be generally sensitive to changes in the business world while always seeking to set itself apart in the highly competitive accounting sector. Accounting professionals need to be forward-thinking to seize the chances that blockchain will present to improve their job experience and the value they bring to clients. Mainly, accountants and auditors must take blockchain's effects on financial statements, audits, and the development of smart contracts. Accounting professionals, businesses, and organisations must carefully analyze these studies because they can shape the future of innovation in the accounting profession. Using BT in accounting can be extremely difficult because accounting professionals are seen as known to accounting professionals. This study includes a good analysis of the potential future effects that these areas may have on accountants.

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AATMANIRBHAR BHARAT AND POST- COVID-19 CHALLENGES IN BUSINESSES INCLUDING MSMES IN INDIA: A STUDY

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Abstract: Aatmanirbhar means self-reliant. It is a mission initiated by the central government under the leadership of Prime Minister in May 2020 to make India a self-reliant nation. The main purpose of lunching this programme was to support the country during Covid-19 pandemic and to open up new avenues of trade, investment and employment in the economy. The unprecedented pandemic Covid-19 has impacted almost all the sectors of economy but the Micro Small and Medium Enterprises (MSMEs) seems to be the worst affected. Due to COVID-19 outbreak and subsequent lockdown, the large scale industries as well as MSMEs have been severely affected. In this paper, an attempt has been made to study the performance of MSMEs in India, the impact of covid-19 on MSME sector and the initiatives taken by the government in Aatmanirbhar Bharat to revive the sector.

Key words: Aatmanirbhar, MSMEs COVID-19, Pandemic

Introduction- Aatmanirbhar Bharat means 'Self Reliant India'-a vision of less dependent to others. The vision has come out at the time of COVID-19 Pandemic in India by the Prime Minister to make India self-dependent through starting production of all essential items locally. On 12th May 2020,the Prime Minister Mr. Narendra Modi announced a stimulus economic package of Rs.20.9 lakh crore (equivalent to 10.3% of India's GDP) for making country independent against the tough competition in the global supply chain and to help in empowering poor, laborers, migrants who have adversely affected by COVID. The unprecedented pandemic Covid-19 has impacted almost all the sectors of economy but the Micro Small and Medium Enterprises (MSMEs) seems to be the worst affected. The large scale industries are highly rely on the supply made by the MSME sector and the MSME sector largely depends on the demand of the large scale industries .So they are interconnected and interdependent. MSMEs are playing an important role in overall economic and social development in India where millions of people are unemployed or underemployed and facing the problems of poverty. MSMEs are providing immediate large- scale employment with lower investment and proves to be a second largest manpower employer after agriculture. It provides employment to over 110 million people and accounts for one third of total manufacturing output and nearly 40% of Indian export. Due to COVID-19 outbreak and subsequent lockdown, the large scale industries as well as MSMEs have been severely affected. So it is the appropriate time to study about the impact of COVID-19 on Businesses including MSMEs in India and the measures taken by the Government to revive the sector under Aatmanirbhar Bharat Abhiyan.

Aatmanirbhar Bharat Abhiyan or Self Reliant India campaign is the vision of new India to fight against COVID-19 Pandemic and to make the country and the citizens independent and self-reliant in all dimensions. It is based on five Pillars-Economy(quantum jumps not incremental changes), Infrastructure(represent modern India), System(i,e, technology driven system), Demography(i,e, vibrant demography with largest democracy) and Demand(i,e, full utilization of power of demand and supply). The Aatmanirbhar Bharat stimulus Package announced by the government consists of five tranches-Businesses including MSMEs, Poor's including farmers, Agriculture, New horizon of Growth, and Govt. Reforms and Enablers. Union Finance Minister Smt. Nirmala Sitharaman presented the details of Aatmanirbhar Bharat Package 1.0 in a series of Press Conferences from 13th May 2020 to 17th May 2020. Subsequently she has announced Aatmanirbhar Bharat Package 2.0 on 12th Oct. and Aatmanirbhar Bharat Package 3.0 on 12th Nov.2020.The objectives behind the announcement is to protect the people worst hit by corona virus pandemic and open up new avenues of trade, investment and employment in the economy. An extensive set of reform and relief measures are being enforced as part of the stimulus package that will help boost equitable growth in Post-Covid India. Improved liberalization policy amendments, relaxed regulations, infrastructure investment, skill development etc. will build a future ready India. Bold reforms across sectors will drive the economy towards self –reliance and it reinforce to become vocal for our local products and make them global.

Micro, Small and Medium Enterprises (MSMEs)-The Small Scale Industries (SSIs) has been renamed as Micro, Small and Medium Enterprises (MSMEs) with the introduction of MSMED Act 2006. This act has classified MSMEs in to two categories- (1) enterprises engaged in the manufacture or production of goods and (2) enterprises engaged in providing or rendering services.A revision in MSME criteria of classification was announced under Aatmanirbhar Bharat Package on 13th May 2020 and its come in to effect from 1st July 2020 as-

a. **Micro Enterprises**-Where the investment in plant and machinery or equipment does not exceed one crore rupees and turnover does not exceed five crore rupees.
b. **Small Enterprises**-Where the investment in plant and machinery or equipment does not exceed ten crore rupees and turnover does not exceed fifty crore rupees.
c. **Medium Enterprises**-Where the investment in plant and machinery or equipment does not exceed fifty crore rupees and turnover does not exceed two hundred and fifty crore rupees.

Table-1: MSMEs Classification (Based on Investment in Plant & Machinery or Equipment)

Classification	**Micro**	**Small**	**Medium**
Mfg. Enterprises*	Investment less than Rs.25 lakh	Investment less than Rs.5 crore	Investment less than Rs.10 crore
Services Enterprises**	Investment less than Rs.10 lakh	Investment less than Rs.2 crore	Investment less than Rs.5 crore

* Investment in Plant and Machinery ** Investment in Equipment Source: As per MSMED Act 2006

Table-2: Revised MSMEs Classification(Based on Investment in Plant&Machinery or Equipment & Annual Turnover)

Classification	**Micro**	**Small**	**Medium**
Manufacturing and Service Enterprises	Investment less than Rs.1 core and Turnover less than Rs.5 crore	Investment less than Rs.10 core and Turnover less than Rs.50 crore	Investment less than Rs.50 core and Turnover less than Rs.250 crore

Source: Ministry of Micro Small and Medium Enterprises, Annual Report 2020-21

Objectives of the Study:

The following are the main objectives of the Study.

- To examine the contribution of the Micro, Small and Medium Enterprises (MSMEs) in Indian economic development.
- To understand the impact of COVID-19 pandemic in Businesses including MSMEs in India.
- To know the preventive measures taken by the Government to revive the

Businesses including MSMEs under Aatmanirbhar Bharat Abhiyan.

Methodology of the study:-This study is based on mainly secondary data. In order to enrich the study, different books, journals, economic survey and annual reports of ministry of MSMEs have been studied. The related websites and articles have been searched as and when required. Editing, classification and tabulation of the data collected from the above mentioned sources have been done as per requirement of the study.

Contribution of MSMEs in Indian Economic Development:- The Small Scale Industrial sector (SSI) has been playing an important role in the Indian economy in terms of employment, production, investment and growth since independence in spite of facing stiff competition from the large scale organizations. During the last decade alone, the small scale sector has progressed from production of simple consumer goods to the manufacture of many sophisticated and precision products like electronics control systems, microwave components, electro-medical equipment, T-V Set etc. There are over 6000 products ranging from traditional to high-tech items which are being manufactured by the MSME sector.

As per the Annual Report (2020-21) of MSMEs, total number of working enterprise in MSME sector was 633.88 lakh in the year 2015-16, of which 324.88 lakhs of working enterprise, accounted for 51% of the total working enterprises in MSME sector are located in rural areas and 309.00 lakh of working enterprises, accounted for 49% are located in urban areas. Out of the total working registered enterprises, the proportion of micro, small and medium enterprises are 99%, 0.52% and 0.01% respectively. It is reported that 31% of MSMEs were found to be engaged in manufacturing activities while 36% were in trade and 33% were in other services. A large number of people from backward classes are involved in MSME activities. According to the social group category, 12.45% of the enterprises were owned by Scheduled Caste entrepreneurs, 4.10% by Scheduled Tribe entrepreneurs and 49.72% by entrepreneurs of other backward classes. So, a large number (66%) of socially backward groups are the owner of MSMEs sector.

Table – 3, Distribution of Enterprises Category Wise

Sector	Micro	Small	Medium	Total	Share(%)
Rural	324.09	0,78	0.01	324.88	51
Urban	306.43	2.53	0.04	309.00	49
All	630.52	3.31	0,05	633.88	100

Source: Ministry of Micro Small and Medium Enterprises, Annual Report 2020-21

In the national sample survey report (73rd round, 2015-16) it is found that MSME's sector has been creating 11.10 crore jobs, out of which 360.41 lakh in Manufacturing 387.18 lakh in Trade and 362.89 lakh in Other services. It comprises 32% in Manufacturing sector, 35% in Trade sector and 33% in other services sector. In area wise it has created 497.78 lakhs employment (45%) in rural area and 612.10 lakh employment (55%) in urban area.

Table – 4, Distribution of Employment in the MSME Sector (in lakh)

Nature of Activity	Rural	Urban	Total Number	Share(%)
Manufacturing	186.56	173.86	360.41	32
Trade	160.64	226.54	387.18	35
Other Services	150.58	211.70	362.30	33
Total	497.78	612.10	1109.89	100
Share(%)	45%	55%		

Source: Ministry of Micro Small and Medium Enterprises, Annual Report 2019-20

The MSME sector has maintained a higher rate of growth (more than10%) as compared to overall industrial sector. These sectors are widening their domain across other sectors of the economy, producing diverse range of products and services to meet demands of domestic as well as global markets. As per the data available with Central statistics Office, M/O Statistics & Programmed Implementation, the contribution of MSME sector in Country's Gross Value Added (GVA) and Gross Domestic Product (GDP) at current prices from 2014-15 to 2018 -19 is as under:-

Table -5, Share of Gross Value Added (GVA) of MSME in all India GDP

Figures in Crores at current prices

Year	**Total MSME GVA**	**Growth (%)**	**Total GVA**	**Share of MSME in GVA (%)**	**All India GDP**	**Share of MSME in all India GDP (%)**
2014-15	3658196	-	11504279	31.80	12467959	29.34
2015-16	4059660	10.97	12574499	32.28	13771874	29.48
2016-17	4502129	10.90	13965200	32.24	15391669	29.25
2017-18	5086493	12.98	15513122	32.79	17098304	29.75
2018-19	5741765	12.88	17139962	33.55	18971237	30.27
Average		**11.93**		**32.53**		**29.62**

Source: Annual Report 2020 – 21.

It is reported that the contribution of manufacturing MSMEs in country's total manufacturing Gross Value of output (GVO) at current prices has also remained significant position of around 33% i.e. one third during the period form 2014- 15 to 2018-19.The average growth rate of total MSME GVA is 11.93% during the period under study. The share of MSMEs in all India GDP is about 30% on average for the same period.

Impact of Covid-19 on Businesses including MSMEs in India:-To control the Covid19 Pandemic, Govt. of India has implemented the strictest lockdowns which started from 25th March 2020.The first phrase of lockdown started on 25th March with a 21 days country wide lockdown. In the second phrase this was extended until 3rd May – with an easing from 20th April in the areas where the spread is under control and subsequently it was extended until 17th May. The fourth Phrase of lockdown was extended till 31st May with considerable easing, especially in the area where the virus is under control. Thereafter several semi lockdowns (unlocks) has announced by the Government. As a result, not only the large scale industries in India are highly affected, MSMEs seems to be the worst affected. The reports published by the CMIE shows that the unemployment rate in India which was less than 7% in the mid-March 2020 went up to 27.11% in the first week of May 2020. At that time, it was about 29% in urban areas and 26% in rural areas .During the phrases of complete lockdown, about 14 crore people become jobless. Thus it had acute negative effects on India's business environment. The pandemic had disrupted manufacturing supply chain and supply curtailed commodity demand. The closure of enterprises due to lockdowns led to a financial impact. It is affected the cash flow of these units. In early phrase of lockdown in March 2020, a FICCI report mentioned that firms were struggling for finance. The reduced cash flow due slowing economic activity had impacted all kinds of payments including wages, salaries, interest, repayment of loans and taxes.

The other challenges faced by MSMEs are the availability of labour. Most migrant labourers works in the MSME units. The lockdown led to reverse migration, leading to disruption in labour availability. The India Ratings report anticipated that the underutilised capacity and costs would increase for the MSMEs due to skilled labour unavailability.

The supply chain disruption is very much affected the MSMEs. In a survey by FICCI, 73% of businesses reported reduced orders and 60% reported supply chain disruptions. The supply chain disruption led to closure of units. The pharmaceutical industry which relies significantly on China for procurement of Active Pharmaceutical Ingredient (API), for manufacturing drugs was affected due to lockdown in China. In this context, it is to be noted that China has established itself as the world's largest exporter since 2009, it accounts for 15% of world's total export. Again China is the second largest importer (after USA) during last 11 years. India has a strong linkage with China in respect of international trade. China contributes more than 15% of India's total import. The COVID-19 showed huge negative impact on Chinese economy leading to disruption of international trade. As a consequence, the India's business sector was also severely affected.

The global Supply-chain disruptions, export and trade services were expected to impact the trade. The Indian Institute of Foreign Trade (IIFT) anticipated that most exports would be affected due to a slump in demand and disruption of supply chain which are integrated across the countries, It was also impacted the MSMEs as it accounts for 40% of total export. The garment export sector was expected to lose 2.5-3 millions jobs due to order cancellations and buyers not clearing dues. The Jewellery industry was also affected due to cancelled or postponed events such as shows, exhibitions, and weddings. Thus the lockdown to prevent the corona virus spread, significantly impacted Businesses including MSMEs. Though many units have started their operations; the impact is still evident now.

However, some positive changes have taken place in post pandemic period-at least two points can be noted. First, the reports published by the National Statistical office under the Ministry of Statistics and Programme Implementation is that the India's Gross Domestic Product (GDP) growth rate which was 6.6% in 2020-21 i.e. in the pandemic period, has become 8.7% in 2021-22 i.e. in the post pandemic period. It is definitely a positive sign in the India's economy. Another is as per CMIE reports, the unemployment rate in India which exceeded 27% in May 2020 in COVID period has gone down significantly in post covid period, in August 2022, the unemployment rate is 8.28%. As MSMEs plays an important role in providing employment and in generating GDP, it will expected that the MSME sector are going to revive and back to the pre- Covid position.

Relief Packages under Aatmanirbhar Bharat Abhiyan-The government of India has taken the following police initiatives to support the MSMEs under Self-Reliant India Movement to manage the shock of Covid- 19 pandemic:-

- **Revised Definition of MSMEs-** 14 years after the introduction of MSMED Act-2006, a revision in MSME criteria of classification was announced under Aatmanirbhar Bharat Package on 13th May 2020.The new definition significantly increased the investment threshold. It removed the distinction in investment between manufacturing and service enterprises and added the criteria of turnover to define the MSMEs. This has been done to be realistic with time and to provide ease of doing business so that more and more MSMEs will come under this category.
- Rs. 3 Lakh Crores Collateral free Automatic Loans to MSMEs- Under the scheme Commercial banks and Non-banking Financial Intermediaries (NBFCs) will provide collateral free loans of four years tenure with no payment dues for twelve months. It is expected that 45 lakh units can resume business activity and safeguard jobs through this scheme. It is reported as on 04.12.2020 that Rs.2, 05,563 crore has been sanctioned to 80, 93,491 borrowers while an amount of Rs.1,58,626 crore has been distributed to 40,49,489 borrowers. Under Antmanirbhar Bharat Package 3.0, the ECLG Scheme has been extended till 31st March 2021and the turnover limit prescribed therein has been removed.

Table 6: Overall Stimulus Provided by Aatmanirbhar Bharat Package 1.0

Sl.No.	Item	Focus Area	Amount(Rs.in Crore)
1	Part1:May 13, 2020	Businesses including MSMEs	5,94,550
2	Part 2: May 14, 2020	Poor, including Migrant and Farmers	3,10,000
3	Part 3: May 15, 2020	Agriculture	1,50,000
4	Part 4: May 16, 2020	New Horizon of Growth	
5	Part 5 May 17, 2020	Govt. Reforms and Enablers	48,100
		Sub Total	11,02,650
6	Earlier Measures	Pradhan Mantri Garib Kalyan Package(PMGKP)	1,92,800
7	RBI Measures	Liquidity Infusion	8,01,603
		Total	20,97,053

Table 7: Stimulus Provided for Business and MSMEs by Announcement in Part-1

Sl.No.	**Key Announcements**	**Amount(Rs in Crore)**	**% of GDP**
1	Emergency W/C Facility for Businesses including MSMEs	3,00,000	1.47
2	Subordinate Debt for Stressed MSMEs	20,000	0.10
3	Fund of Funds for MSMEs	50,000	0.25
4	EPF Support Business & Workers	2,800	0.01
5	Reduction in EPF Rates	6,750	0.03
6	Special Liquidity Scheme for NBFC/HFC/MFIs	30,000	0.15
7	Partial credit Guarantee Scheme 2.0 for Liabilities of NBFC/MFIs	45,000	0.22
8.	Liquidity Injection for DISCOMs	90,000	0.44
9.	Reduction in TDS/TCS Rates	50,000	0.25
	Total	5,94,550	2.91

- **Rs.20,000 Crore Subordinate Debt for Stressed MSMEs**-Under the scheme ,funds are infused for the revival of those MSMEs whose accounts have been stressed(NPA) but units are operational. The scheme is being implemented through Credit Guarantee Trust for MSMEs and the target under the scheme is to guarantee the loans to the tenure of Rs.20, 000 crore. It was expected 2 lakh MSMEs are likely to be benefited.
- **Rs 50,000 crore Equity Infusion for MSMEs through Self Reliant India Fund (Fund of Funds)**-The objective of Self Reliant India Fund (SRI Fund) is address the perennial need of growth capital of MSMEs. It is essential to infuse funds for making growth capital available to MSMEs, so that they are to be more competitive in the global market. Under this scheme, Fund of Funds (FOF), with corpus of Rs. 10,000 crores will be set up .FOF will be operated through mother funds and few daughter funds. This fund structure will help leverage of Rs. 50,000 crore of funds at daughter fund level. It will help to MSMEs in size as well as capacity and will encourage MSMEs to get listed on Stock Exchanges.
- **Disallowed Global Tenders**-Indian MSMEs and other companies have often faced unfair competitions from foreign companies. So that it was announced that Global Tenders will be disallowed in government procurement tenders up to Rs. 200 crores. This will be a step towards Self-Reliant India. This will also help MSMEs to increase their business.
- **Relaxing Tax Returns and Due Dates**-Income tax filing have been extended by 90 days, in case of small tax payers(INR less than 5 million of turnover) ,the late payment of interest for delayed payment of taxes reduced to 9% till June 2020,and filing due dates for GST is extended to 30th June 2020.

- **Other Intervention and Financial Assistance**-During COVID-19, MSMEs faces problems of marketing and liquidity. To solve this it was recommended that e-market linkage for MSMEs to be promoted to act as a replacement for trade fairs and exhibitions. Fintech will be used to enhance transaction based lending using the data generated by the e-market place. The government promised to those receivables from government and central public sector enterprises will be released within 45 days to help firms to manage their cash flows. The government also announced credit facilities for small informal businesses and street vendors- 2% interest subsidy on micro loans for a period of 12 months up to Rs.50, 000 and a special lending programme to street vendors up to Rs.10, 000 to finance their working capital, targeting about 5 million street vendors.

So the government had rolled out multiple remedial measures to ease the Businesses including MSMEs during COVID-19 Pandemic.

Conclusion- MSMEs, the second largest employer in the economy, contributing 30 % of India's GDP and 40% country's total export, have been disrupted due to the unprecedented Covid-19 Pandemic. This pandemic has created an uncertainty almost all the sectors of the world economy including MSMEs. The studies conducted by different organizations proved that this sector has significantly affected. The manufacturing supply chain and supply curtailed commodity demand had severely disrupted. A large number of migrant workers working in this sector have lost their jobs during lockdown ,owing to decline of demand and output, a large number of MSMEs lost their revenue and capital flow. Many units particularly micro and small segments of the sector were forced to extinct from the market due to persistent loss of business.

The measures announced by the central government for the Businesses including MSMEs under Aatmanirbhar Bharat Abhiyan have probably arrived at the right time and with a noble intention of reviving this sector and making them globally competent. The government has taken several measures to protect and restore the MSME sector. It will have a positive impact and form the foundation of future growth. The accelerated clearance of dues under ECGS will provide immediate relief to the MSME sector. The redefined landscape, expanded eligibility and banning of global tenders for government procurement up to Rs.200 crore will be impactful to revive the sector. The Hon'ble Prime Minister has emphasized on implementing structural reforms in land, labour laws, and infrastructure in order to strengthen the 'Make in India' vision and help the country to play a bigger role in the global market. Aatmanirbhar Bharat is an extension of Make in India using the taglines as 'Vocal for Local'. The main objective behind self –reliant India is to make India self-reliant for goods and services of need and make to India a global manufacturing hub. Indian Economy has vast possibilities to accomplish self-reliance but it needs genuine execution of laws build by the government and actual distribution of fund allotted by the government.

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ROLE OF NON-BANKING FINANCIAL COMPANIES IN GDP GROWTH AND SOCIO ECONOMIC DEVELOPMENT OF INDIA

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Abstract-The paper aims to study the Indian non-banking financial institution sector with special focus on their role in transforming socio-economic condition of India. The paper also examines the role NBFCs in life style of bottom of pyramid of Indian populations. The paper also covers the regions behind growth of NFBCs in India and their increasing share in Indian GDP
Key Word: NBFCs, Types of NBFC, Life style, JandhanYojna, Financial Inclusion.

Non-Banking Financial Companies (NBFC) are establishments that provide financial services and banking facilities without meeting the legal definition of a Bank.[1] They are covered under the Banking regulations laid down by the Reserve Bank of India and provide banking services like loans, credit facilities, TFCs, retirement planning, investing and stocking in the money market. However, they are restricted from taking any form of deposits from the general public. These organizations play a crucial role in the economy, offering their services in urban as well as rural areas, mostly granting loans allowing for the growth of new ventures.NBFCs also provide a wide range of monetary advice like chit-reserves and advances. Hence it has become a very important part of our nation's Gross Domestic Product and NBFCs alone count for a 12.5% rise in the Gross Domestic Product of our country. Most people prefer NBFCs over banks as they find them safe, efficient, and quick in assisting with financial requirements. Moreover, there are various loan products available and there is flexibility and transparency in their services.

Types of NBFCs - NBFCs are categorizedin terms of the type of liabilities into Deposit and Non-Deposit accepting NBFCs,non-deposit taking NBFCs by their size into systemically important and other non-deposit holding companies (NBFC-NDSI and NBFC-ND) and,by the kind of activity they conduct.
There are over 2000 NBFCs operating in our country but here's a look at the current top 10 NBFCs in India.

Table 1: Leading NBFCs of India

Name	Year	Sector of operation
Power Finance Corporation Limited	1986	Power sector
Shriram Transport Finance Company Limited	1979	funding commercial and business vehicles

[1]https://vikaspedia.in/social-welfare/financial-inclusion/financial-literacy/non-banking-financial-companies

Bajaj Finance Limited	2007	It offers loans to doctors for career enhancement, home loans, gold loans, individual loans, business, and entrepreneur loans, and is an extremely popular finance company. Apart from these, Bajaj Finserv also provides services like wealth advisory, lending money, and general insurance. It has over 1400 branches across the country with more than 20000 employees.
Mahindra & Mahindra Financial Services Limited	1991	Insurance services and rural housing financial services. It also specializes in offering gold advances, vehicle advances, corporate advances, home credits, working capital advances,
Muthoot Finance Ltd	1888	India's first NBFC tracing its history back to 1888 when it began as a small lender from a village in Kerala. offers foreign exchange services, money transfers, wealth management services, travel, and tourism services. Gold coins are also sold at Muthoot Finance Branches.
HDB Finance Services	2006	It provides secured and unsecured loans, including personal and business loans, doctor's loans, auto loans, gold loans, new to credit loans, enterprise business loans, consumer durables loans, construction equipment loans, new and used car loans, equipment loans, and tractor loans.
Cholamandalam	1978	provider offering all kinds of services like - vehicle finance, home loans, home equity loans, SME loans, investment advisory services, stockbroking, and a host of other financial services to customers
Tata Capital Financial Services Ltd	1978	vehicle finance, home loans, home equity loans, SME loans, investment advisory services, stockbroking, and a host of other financial services to customers
Tata Capital Financial Services Limited	2007	TCFS describes itself as a one-stop financial service provider that caters to the diverse needs of retail, corporate and institutional customers across businesses. It is registered with RBI as 'Systemically Important Non-Deposit Accepting Non-Banking Financial Company (NBFC)'.
L & T Finance Limited	1994	Funding services to different sectors like trade, industry, agriculture, Commercial Vehicle loans, Individual Vehicle loans, and corporate and rural loans.
Aditya Birla Finance Ltd.	1991	It offers precise and customized solutions across a wide range, from corporate finance to commercial mortgage, and from capital markets to structured finance.

Under the leadership of Prime Minister Narendra Modi, unprecedented work has been done in the field of financial inclusion in India. Under Jan DhanYojana, more than 17 crore accounts were opened in banks. Those whose accounts were opened in the banks were villagers. A large number of accounts were also opened for the poor in urban areas. This had a direct effect on the NBFC giving the loan. Now several crore people have become his future customers. 1.5 crore bank accounts were opened on the very day of the inauguration of the scheme.[2] This gave NBFCs an opportunity to expand their business to remote villages. As on 2 October 2014, 5.29 crore accounts have been opened in PMJDY, including 3.12 crore in rural areas and 2.17 crore in urban areas. RuPay cards were issued in 1.78 crore accounts. , Till

[2]https://economictimes.indiatimes.com/news/economy/policy/pm-jan-dhan-yojana-launched-1-5-crore-bank-accounts-opened-in-a-day/articleshow/41093413.cms?from=mdr

January 17, 2018, 30.97 crore accounts have been opened, in which an amount of Rs73689.72 crore has been deposited, Jan DhanYojana is proving to be a milestone in the field of financial inclusion.[3]

The success of Jan DhanYojana gave new expansion to NBFC. As a result, along with the economic prosperity in the lower strata of the society, they started contributing in fulfilling the basic needs of their life. Historically, NBFCs have been an important cornerstone of the Indian financial ecosystem. These institutions act as important financial intermediaries to channelize savings and investments. Especially in those areas where the reach of banks is less. Apart from this, they help in breaking the vicious circle of moneylenders by providing immediate financial assistance to small traders and farmers.

Over the years, NBFCs have evolved due to a drastic change in the regulatory framework for NBFCs in India, which has moved from simplified rules to stricter and comprehensive rules as well as rationalization as per the current Revised NBFC Regulatory Framework. Given these higher levels of regulation, NBFCs have also emerged as the preferred option for meeting credit needs as the lower cost of operations has given these NBFCs an edge over banks.

Financial Access and Supportive Government Schemes

Additionally, NBFCs have gradually become an important mechanism for promoting growth and entrepreneurship due to the launch of government-backed schemes, including the Pradhan Mantri Jan-DhanYojana, which has contributed to a significant increase in the number of bank accounts.

These NBFCs have also been instrumental in reducing and managing the spread of risks during times of financial stress and are increasingly being recognized as complementary services to banks.

NBFCs have become integral to all business services including loans and credit facilities, retirement planning, money markets, underwriting and merger activities. Thus, these companies play an important role in providing credit to the unorganized sector and small borrowers at the local level. Additionally, hire purchase finance is also the largest activity of NBFCs and the rapid growth of NBFCs has gradually blurred the lines between banks and NBFCs, although commercial banks retain importance. These NBFCs facilitate long-term investment and financing, which is challenging for the banking sector, and the growth of NBFCs expands the range of products available to individuals/institutions with the resources to invest.

Opportunities for NBFCs

Ongoing stress in Public Sector Banks (PSUs) due to rising bad loans, decline in lending in rural areas has provided an opportunity for NBFCs to increase presence. The success of these NBFCs vs PSUs can be attributed to product lines, low cost, wide and effective reach, strong risk management capabilities to check and control bad loans, and better understanding of customer's vs banks. The NBFC has seen success in the passenger and commercial vehicle finance sectors as well as growing AUM in the personal loan and housing finance sector. Additionally, improving macro-economic conditions, higher credit penetration, consumption theme and disruptive digital trends have impacted NBFC credit growth. Stress in Public Sector Units (PSUs), underlying credit demand, digital disruption for MSMEs and SMEs as well as increase in consumption and distribution reach and sectors where traditional banks do not lend lead to switch from traditional banks to NBFCs. are the main reasons.

Life Style, Standard of living and NBFCs

Good education, health facilities, good food, and employment opportunities are very important to live a good life. In a country like India where most of the world's poor live. Financial help is very important for the change in their standard of living. Due to lack of money, they are not able to give good education to their children, they are not able to exploit modern resources for economic progress. Apart from this, they also struggle with the lack of

[3]https://www.pib.gov.in/PressReleasePage.aspx?PRID=1854909

capital to start business. Today, mobile phone, vehicle, internet, TV, computer are essential gadgets for everyday life. Organizations like Bajaj Finance provide opportunities to people to buy mobile phones, vehicles, TV fridge, gas stove etc. at zero percent interest. These facilities not only bring changes in the standard of living of the customers, but also provide them convenience in employment and business For example,Bajaj Fin serve offersmultiple types of loans for the customers. These loans may be personal loans business loans etc. they also offer different types of credit cards and EMI cards.

Personal loans cover multiple areas like higher education loans, medical expenses, home expenses, marriage loans etc. Under the education loan customer may get Visa and flight loan, course fee loan, living expanses loan, course material loan etc. they offer loans for buying house, renovation, furniture, repair etc. Similarly they provide marriage loan for decoration, hospitality, outfit and jewelry etc.
They offer business load for working capital, business expansion, machinery purchase, digitalization etc. they offer loans to the doctors for clinic renovation, buying new equipment's etc.

For the convenience of the customers, facilities like insurance, investment and Bajaj Mall are also provided. There is no doubt that these institutions not only inspire people to save, invest, take advantage of insurance, but also provide them excellent opportunities for higher education, business and medical treatment. All these subjects are directly related to the standard of living of the people, and these institutions target with enthusiasm. Traditionally, taking loan in India is not considered good but now slowly this perception is changing and its social and economic benefits are also visible on the society.

In this digital era, the word online is a magical word, around which all human activities have been centered. Today, with the help of digital technology, all the tasks of everyday life are being completed. Online shopping and online payment are just examples. During the Covid pandemic, digital technology deeply affected medicine, education, business, entertainment and food, living style, socializing process etc. Today, companies like Bajaj Fiserv, in every part of the country, provide cheap loans for the purchase of equipment necessary to make the living and lifestyle of the people easy, simple and modern. This is a very important contribution in terms of bringing fundamental changes in the lives of the people of India and integration of the whole of India.

House, vehicle, mobile phone, marriage expenses, loan for starting a new business, etc. if available on time, then people can lead a better life at a younger age. Earlier, when there were no such loan facilities, then people could not build their own house till retirement. But now these things have changed. At the age of 25, you can buy your own flat, enjoy an expensive car, and send your children to study abroad. All these changes have been possible with the expansion of these NBFCs. A customer may not have sufficient funds to maintain the minimum balance, so cannot open an account with a traditional bank

People of low-income category, who find it difficult to get loans from banks, can easily get loans from non-banking financial institutions. People with low credit scores also find it difficult to get credit from banks.So non-banking institutions provide a great alternative. Hedge funds emphasize the potential return on investment risk. The unregulated approach of the non-banking institution allows managers to increase their chances of receiving higher payouts than a bank which would not provide such an opportunity in any case. NBFCs usually process the home loan within 72 hours. NBFCs documentation process is lenient as compared to a bank. Self-employed individuals who do not have salary proof find it easier to apply for a home loan from an NBFC.

But at the same time there are some huge disadvantages with these non-banking financial institutions. Generally their interest rate is generally much higher than the banks. Sometimes they run away with investors' money. They are also accused of cheating and threatening the lenders. They also use illegal methods to recover their debts. Many people also call them the modern avatar of the Mahajans of the ancient times. Their agents often lie to the customers and trap them.

These organizations are accused of promoting consumer culture ,because of them, rural India is being de-cultured and Western civilization is expanding in the society. It is also alleged that by robbing the savings of poor people, they make their ancestral land hostage. They make people indebted by giving them incredible allurements.

But even after these allegations, the positive impact of these financial institutions on economic development and standard of living cannot be denied. Through its activities, NBFCs increase the demand for goods and services , accelerates economic activities, provides new employment opportunities and significantly improves per capita income. Undoubtedly, people who want to live a better life work more and the national income increases.

Loan to MSMEs

NBFCs have also been an integral cornerstone of key financing to MSMEs, and been driven by significant growth in rural, small scale and unbanked sectors. Structural catalysts include a large vibrant startup and entrepreneurial ecosystem which has created NBFC demand and government policy initiatives such as Pradhan MantriYojana and National Rural Financial plan further augmenting the industry. These include, as mentioned earlier in this paper, diversified financial needs of Indian economy driven by growth in lending, credit, and vehicle financing. As a result of these growth drivers, we see that NBFCs have seen bigger balance sheets & increasing public funds. Led by retail-focused players, non-banking financial companies (NBFCs) are likely to close the current fiscal and the next with loan growth of 10-12 per cent and see around 50 basis points improvement in profitability, a report said.

Future-In 2023-24 financial year, according to ICRA Ratings, retail-focused NBFCs are expected to grow 12-14 per cent while the housing finance companies may grow by 10-12 per cent. The forecast is based on the asset quality improvement and the overall pick-up in credit demand. However, microfinance and personal loans, which together constitute a quarter of the Rs 25-lakh crore shadow banking sector, will continue to grow at a high pace. While growth will be broad-based across various sub-sectors, microfinance and personal loans will be leading the growth chart. On the other hand, vehicle financing loans (commercial vehicle finance, passenger vehicle finance), which have remained significantly subdued since FY20, are also expected to report higher growth numbers, following an improvement in the operating environment. Accordingly, the growth outlook for NBFC-HFCs is 10-12 per cent for FY23. Within this, NBFC-retail is expected to grow at 12-14 per cent, while HFCs may grow at 10-12 per cent. For FY24, the growth estimate is pegged at 10-12 per cent, given the uncertain global macroeconomic conditions which may pose some downside risks towards the end of FY23 or early FY24.[4]

On the basis of above study it can be said that the growth of NBFCs in India has scaled substantial progress and has diversified their activities up to a large extent. The NBFCs have now created a passage connecting the less banked customers to the financial services paving the way for inclusive growth and social transformation. The operations of NBFCs in India have evolved over the past few years. Following some of the major causes that influence the expansion of NBFCs in India.

Table 2 Features that makeNBFCs Special

Customized Solution	The working of NBFCs primarily focuses on a specific line of business leading to the development of the NBFC sector. The NBFCs modify their products to suit the requirements of a distinct consumer. It focuses on providing a satisfactory response to the demands. These developments are now leading to the growth of NBFCs in India through better non-standard pricing structure according to the product lines of the client profile and keeping a check on the lending risk.

[4]https://www.outlookindia.com/business/nbfcs-seen-growing-at-10-12-this-fiscal-and-next-news-245231

Optimum use of technology	The NBFCs are customizing their credit assessment models. They are also focusing and streaming their business processes through means of technology. This up-gradation has resulted in an enhanced client experience. NBFCs use data analytics, artificial intelligence, and other cutting-edge technology. These developments help in building strong relationships with their target client segments.
Service to the underserved	NBFCs give priority to the unorganized and under-served portions of the economy. The frequent interaction prepares a carved out niche for the businesses in the NBFC sector. These developments assure last-mile delivery and improvement in client satisfaction.
Arrangements for co-lending	The growth of NBFCs in India has recently formed partnerships with several alternative lenders and commercial banks working on digital platforms. These modifications have led to considerable growth in their target customer base.
Better Connectivity	The NBFCs are now rendering their services to the Tier 2, Tier 3, and Tier 4 markets. They provide loans to the clients through several touchpoints and establish a connected channel experience. The multi-channel facilities of the NBFC sector are accompanied by 24*7 sales and service. These financial institutions have now developed new and innovative ways for the customers.
Better risk management	NBFCs adopt a robust and adaptable risk management model to focus on enhanced governance. They emphasize their lendings to the subprime customers and mitigate the regulator disadvantages as compared to the commercial bank lenders.

Conclusion

The NBFCs of India are unparalleled in terms of accessibility and flexibility in accessing resources. The NBFCs endure even the adverse times due to their combative nature and customized solutions. The NBFC sector is now transforming into a financial supermarket and serves as a one-stop financial destination. NBFCs play an important role as the primary facilitator in the growth journey of the Indian Economy. These Financial institutions have acquired an ever-evolving role in the economy and need better policies to allow them to grow and safeguard the interests of the investors.the NBFCs shall be able to provide deposits, loans, and investment services to the clients. These developments may take place due to the successful collaborations between the NBFC and the payment banks, bill payment providers, and other such financial service providers. The growth of NBFCs in India can also exploit digital consumer data to provide better services in the current digital environment. The NBFCs should lookout for new ways to serve the clients in a better manner and build long-term relationships.

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ANCIENT TO MODERN ERA IN THE LIGHT OF EDUCATION

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Abstract-Education is a platform in which the every young generation is trained and makes their future perfectly. During Ancient to Modern Education, every student was trained by the knowledgeable teachers in such as manners that they can survive and live in that era. During Ancient period the aims of education teaching learning process, curriculum, methods of teaching was teacher oriented and tradition based. But Modern Education system is quite different; it is more students oriented education and also skill, technology based education. Both the type of education has their own importance. During Ancient Period, two systems of education Vedic and Buddhist were developed. During Ancient times people used to live a life very simple and they are doing their work with devotion. Modern Education System that is in the Twenty-First Century, the era of science, innovation, technology and inclusive education. Day by Day our needs, expectation have changed. So technology helps to work every people more effective and active in their life. Both the education system is importance to social life.

Keywords: Ancient Period, Modern Period, Modern Education, Development, Technology

Introduction-Education is both the act of teaching knowledge to others and the act of receiving knowledge from someone else.

"Education is the manifestation of divine perfection already existing in man"- Vivekananda

During the Ancient period, Vedic and Buddhist-two systems of education were developed. The education was mostly imparted in Ashrams, Gurukuls, Temples, houses. During that period gurus and their shishyas lived together and helping each other in day to day life. Takshashila, Nalanda University was the famous university in this period. Modern period of education is signified by many developments. During this periods thought the system of education was more developed in urban area rather than rural area. Have introduced in every school, college and university. Education has divided in different stages such as preprimary, primary, secondary, higher secondary in this period. During this period many subjects such as arts, science, computer etc. At this different stage of education the development of students happens in different ways, education develop at different levels in different eras.

Ancient Education- During the ancient period, Vedic and Buddhist-the two system of education were developed. During the Vedic system Sanskrit was the medium of language and Buddhist system were Pali. The ancient education focused on humility, truthfulness, discipline, self-reliance and respecting all creations to the students. This period all people used to live simple life and doing their work with devotion and hard work. Ancient period education mostly focused on the enrichment of culture, development, personality, and cultivation of noble ideals.

In Ancient India Formal and Informal both ways of education system existed. This period education was imparted in temple, home, tols, pathshalas and gurukuls. Gurukul also known as ashrams, It was the residential places of learning. Hundreds of students used to learn together in Gurukuls. During the early Vedic Period-Women too had access to education. Gargi, Apala, Lopamudra, Viswambhara, Maitreyi were the most prominent women Vedic Scholars. During that period the gurus and their shishyas lived together and helped each other in day to day life. Students lived away from their homes for years together after that they achieved their goals. Gurukul was also the places were the every students achieved discipline and proper rituals, spiritual values and also enriched their inner dimensions of the personality.

Vedic Education-The main aim of Vedic education was to attain salvation through education. The teacher teaches the student in Gurukulas and Ashrams. The students and teachers follow the principle of simple living but high thinking. Education helped in observance of celibacy, control over sense and purity of life.

Feature of Vedic Education

- Free education in Ancient India
- No state control on education
- High status of teacher
- Character formation and personality development

Aims of Vedic Education

- Self-realization
- Education for character building
- All round development of personality
- Fulfillment of social responsibility

Curriculum of Vedic Education

At the Lower Stage-The children learn the letters of the alphabet at home. After that they mainly learn phonology and implies mainly grammer. Then they learn elementary grammer, elementary arithmetic and prosody. **At the Upper Stage-**The children learn spiritual learning or para-vidya. Wordly learning or apara-vidya. The various forms of educational institution were in Vedic Education such as-1.Gurukulas 2.Parishads 3.Sammelan

Methods of teaching in Vedic Education-Old Teaching, Question-Answer method, Use of Illustration, examples, sutras, stories. maxims. **Educational Institution-**An Ancient Period-Gurukul was the home town of teachers where students come after completing their initiation ceremony and learn until the completion of their study. **Brahmanic Education-**The Brahmanic system of education was an ancient system of education in Ancient India. It was based on Vedic tradition. The main objective of the educational system was to make the students self-reliant.

Aims of Brahmanic Education- Main aims of Brahmanic Education were all round development of the human lives. It included the physical, mental and spiritual development of human life. It focused on formation of character, individual development, and knowledge of social and civil life and preservation of national culture. **Curriculum of Brahmanic Education** The Brahmanic Period, the curriculum of the educational system was focused to learn Vedic mantras, knowledge of religious rituals like 'Karamkanda' 'Havan' and 'Yajna'.In Brahmanic education was essentially religious and spiritual in character. The curriculum consisted of vedas, History, Puranas, Grammer, Mathematics, Brahma Vidya, Astronomy, Dance, Music etc.

Methods of teaching in Brahmanic Education-During the post-Vedic period hearing, thinking and meditation were the three principle psychological methods of instruction. In Brahmanic education the art of writing had developed in the Brahman age. discussion, conference, painting, debates was the method of teaching consisted repetition by the pupils.

Educational Institution-Ashrams or hermitages were the other learning centers where students from various parts of the country used to come and learn from saints and sages. Agraharas was an institution of Brahmins in villages where they used to teach.

Buddhist Education- Buddhist system of education was monastic. The history of education in Buddha period is inter-related with the history of monasteries and vihara because there were no independent educational institution or centers.

Aims of Buddhist Education

- Formation of character of the students.
- Buddhist education was all round development of child's personality.
- The aim of Buddhist education is to attain wisdom.

Curriculum of Buddhist Education- The Buddhist Education system was one of the first to introduce an organized curriculum with two levels of education namely-Primary and Secondary. The major subjects in the curriculum of the Buddhist Education system:-

- Teachings of the Buddha
- Ayurveda and Surgery
- Arts and crafts.
- Spinning, Painting, Weaving, cloth printing
- Tailoring

There are two types of education-

1.**Elementary Education-** Elementary Education was religious in nature, It education up to age of 1 2 years students received instructions in reading, writing, arithmetic and religion. Thorough learning of grammar, logic, science of reasoning, philosophy, arts and crafts, medicine. 2. **Higher Education-** Buddhist Education emphasized both practical aspects and theoretical,theology,metaphysics,philosophy,sanskrit,astronomy,astrology,medicine,law,politics,administration,tantrik philosophy. **Methods of Teaching in Buddhist Education-** In Buddhist Education the teaching and learning methods used include debate, discussion, lecture, speech hearing, question-answer, deliberation **Educational Institution-**Vihara were the educational institutions founded by Buddhists where the students were taught the subjects related to Buddhism and philosophy.

Islamic Education-Education has played a central role in Islamic since the beginnings of the religion, owing in part to the centrality of scripture and its study in the Islamic tradition. Before the modern era, education would begin at a young age with study of Arabic and the Quran.

Aims of Islamic Education-Islamic is a very dynamic and practical religion which is totally different from other religions of the world. Islam wants a very active and dynamic person in the social order.

- The basic aim of Islamic Education is to enable a Muslim to have basic information in order to live an honorable life.
- Propagation of Islam
- Spread of Islamic knowledge among Muslim.
- Propagation of shariyat
- Achievement of material well-being
- Preservation and spread of Islamic culture.

Curriculum of Islamic Education- The Islamic Curriculum can also be defined as the total sum of experiences, knowledge, and skills provided by an Islamic educational institution to its learners, with a view to developing them physically, mentally, spiritually, and emotionally. Some co-curricular activities such literary challenges, science exhibitions, Islamic studies quiz, debates, speeches, competitions, music, arts etc. included in Islamic Education.

Method of Teaching In Islamic Education- Generally method of teaching in Islamic Education-are using questionnaires, group discussions, student-teacher discussions, reciting verses from the Quran, demonstrations, motivation, memorizing in groups and practice in their teaching.

Educational Institutions- Maktabs-Maktabs were the center of the primary education for the children of general people. **Madrasas-**After completing the primary education in Maktabs, the students were sent to the Madarsas for higher education.

In Ancient Period to Modern Period different committees and Commission has influenced in educational system. There are Charles Wood Despatch, Hunter Commission, Sargent Plan, Curzon’s educational policy, National Education Movement,Wardha Scheme of Education, Radhakrishnan Commission, Mudaliar Commission, Kothari Commission, National Policy on Education, Programme of Action, Missionary Educational Activities, Serampore Trio, Charter Act, Macaulay’s Minute, Downward Filtration Theory, Bentinck’s Resolution, Adam’s Report etc.

Modern Education-The Modern Education was introduced during the British empire. In the 1830s Lord Thomas Babington Macaulay introduced the English language. The main aim of modern education of the British was to spread Christianity. In the twenty-first century as time passed education started to develop and entered into the modern-era that is in the 21st century. The era of science, technology and innovation. Science, technology, the industrial sector is increasing day by day in the modern era. Modern Education primarily focuses on thinking, imaging; visualizing. Modern Education includes latest study materials, and current statistics, current affairs. Modern

Education is known as the growth or potential change that entered the education sector.

Aims of Modern Education-The objective of modern education was to inculcate values in students such as equality, secularism, education for all and environmental protection.

Characteristics of Modern Education

- Learner-Centred Education
- Activity-based
- Integrative in Nature
- Resource-based

Day by Day as technology is increasing the education sector is also following the trend of technology by teaching the students through online lectures and massive open online course (MOOC).women’s education is giving more importance in this time and the government has launched many programs to encourage women’s education. Various electronic gadgets like projectors, LED, and computers, are used to teach the students in the modern era.

Curriculum of Modern Education-The Curriculum of a student is divided into three sections-Primary, Secondary and Graduation and after that P.G Level. In Primary Education students are taught subject like history, geography, math, science, Hindi and Marathi At the early stages students were taught alphabets, poem, recitation, word formation etc. different prayers-The National Anthem is also in the school, different sports and extracurricular activities are also included in the curriculum. In Secondary Education students are given choices to choose from science and commerce. After Secondary Education students were given entry to the universities through some entrance examination. According to their marks scored in entrance examination they are admitted to the universities. People were assessed based on semester exam or in sem-exam.

Methods of Teaching- Students mostly learn concepts through online platforms like YouTube, Coursera, Google Classroom, Google meet etc. Teacher teach to all the students in the classroom by discussion method, conversation, ICT based method and also using chalk and duster. During class hours, doubts are solved through discussion, debates etc. People were assessed based on mid-sem written exams and practical exams to check their practical knowledge.

Educational Institution-At Present total no of schools in India -15, 09,126 and Total no of colleges across India from 2015 to 2020 -42,343.Number of Universities across India 2015 to 2020-993.Now as of 26 November 2022 total no of University in India-1070.Higher Educational Institution:-Indian Institution of Technology-It is one of the greatest universities in India for higher education like undergraduate, postgraduate and many more streams. There is a total of 23 IIT Colleges in India, every year lakhs on students compete to take admissions in these IIT,JEE-mains and JEE-Mains and JEE advance are the two entrance examinations to take admission in these IITS, according to the All India Rank (AIR) and marks students are allotted IIT’S. Due to its high level of educational teaching and curriculum. IIT is famous all round the world. The other top universities are Birla Institute of Technology and science (BITS), National Institute of Technology (NIT), Indian Institute of Science (ITSC).Modern Education system develops by different ways, with different subjects included in this education system. At present Inclusive Education is also an important part of the modern time of education. One of the expected benefits of inclusive education is that students with special needs learn to live with their peers with typical development in inclusive education. In the Modern period of education system developed by New Educational Policy NEP 2020.The NEP 2020 or The National Education Policy of India 2020 which was started by the union cabinet of India on 29th July 2020.This new policy replaces the previous National Policy on Education 1986.The policy is a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India. Previous academic structure was 10+2. According to Current Educational Policy school education have modified with a new pedagogical and curricular restructuring of 5+3+3+4.According to National Education Policy 2020-Currently age group of 3 to 6 year children are not covered in the 10+2 structure as class 1 begins at age 6. In the new 5+3+3+4 structure, a strong base of Early Childhood Care and Education (ECCE) from age 3 is also included, which is aimed at promoting better overall learning, development and well-being.

Conclusion

Ancient Education is teacher centered. This education was more focused on theoretical sessions. An Ancient Period the education system was one way. Discussion and two -way knowledge spread weren't on trend. Modern Education is learn based, learn centered. In this period education is more focused on the students and not the teacher. Modern Education is multi-way. Students are encouraged and gain knowledge from different sources in this periods. In the Modern Era, Industries and Technology are increasing day by day. Modern education is focused on women’s empowerment. This education covers multiple subject options. Modern education has focused on different subjects. This education is basically technology based. It is more flexible and simplified for every student. Our current education system also needs to be upgraded. Our government has to provide such an education system which will bring all round development in students and make them future-ready and also teach them to live in any critical situation.

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DIGITAL INDIA: CHALLENGES, OPPORTUNITIES AND SOCIAL DIVIDE

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Abstract- The process of digitalisation in India was largely started in 2015. The main objective of this program was to connect the entire population of India with the worldwide information and digital revolution. And, also to connect Indians with each other through digital technology. Internet and mobile phones were used extensively in this process. Through digitalisation, the government endeavored to get access to the last person living even in the remotest countryside. Result of digitalization was overwhelming as government schemes and their benefits started reaching the common people directly. The role of an intermediary between the government and the beneficiary ended. Due to which corruption started to stop. Now the government fund started reaching the beneficiary's bank account directly. The benefits were not limited to this only, but online education, online entertainment, online booking online business, online buying and selling, online transactions etc., deeply affected the economic and social nature of India.

But, the phenomenon of digitalization also gave rise to many new problems. In India, the gap between the educated and the less educated, the rich and the poor, the capable and the disabled increased. The villages and cities of India became more and more distant from each other. Those who did not have expensive phones and internet facility could not be a part of this revolution. Those who were illiterate and unskilled started falling behind. The unavailability of internet, slow speed, and high cost in rural areas have closed all avenues of development for the poor, deprived and uneducated people. This process of digitalization also affected the urban class a lot. Mobile phone addiction has become prevalent among youth and children. Young immature children are becoming victims of soft porn. Incidents of fraud and blackmailing have started becoming common. Cases of depression, loneliness, insomnia, and many other similar serious mental diseases have expanded. Due to mobile phones, people are socially getting away from each other. Family balance has been affected. There has been a tremendous increase in the incidents of online fraud. Incidents of online crime are increasing continuously. The advantages, disadvantages and social impact of digitalization in India have been discussed in detail in this research paper. The necessary data for this has been obtained from various secondary sources.

Key Words: Digital India campaign, Digital technology, benefits, Challenges, digital divide

1. **Introduction-**Digital describes electronic technology that generates, stores, and processes data in terms of two states: positive and non-positive. Positive is expressed or represented by the number 1 and non-positive by the number 0. Thus, data transmitted or stored with digital technology is expressed as a string of 0's and 1's. Digital currency (Bitcoin), DSLR, digital watch are examples of all digital.

1.1 Digital India is a campaign launched by the Government of India in 2015 to ensure the Government's services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or making the country digitally empowered in the field of technology.[5]This is a kind of flagship program under which efforts are being made to make India digital, the purpose of this Digital India program is to know about electronic and digital means to every people of India. To make India aware and make India strong in the digital sector, under this program, people of every region of India have to be connected with the Internet. Under this program, different types of digital facilities were made available in different rural areas, for which Through the medium, the people of the rural area have also started understanding about the digital facilities and are using more and more digital facilities, which is reducing the chances of corruption, reducing the use of paper and this makes the people of rural areas Also knowing about digital facilities.

This is one of the most effective programs of India till date, under this, every citizen of India is now knowing about digital facilities and is also using that facility like less educated people of rural areas in today's time. People are also using mobile banking and are also knowing about digital ID proof.

1.2 Focus Areas:

Digital India Program focuses on digital empowerment of citizens which are as follows-

a) Universal Digital Literacy
b) All Digital Resources Universally Accessible
c) All government documents/certificates available on the cloud
d) Availability of Digital Resources/Services in Indian Languages
e) Collaborative Digital Platform for Participatory Governance
f) Portability of all entitlements of individuals through cloud

1.3 Programs of Digital India Campaign

Following programs are the part of Digital India initiative

i. BharatNet Programme: The BharatNet program or project aims at providing accessible and high-speed broadband at affordable rates to citizens and institutions in remote areas of India by the central government with the participation of the states and the private sector. Under this, so far more than 2.5 lakh gram panchayats have been connected through optical fiber.
ii. National Digital Literacy Mission (NDLM): The National Digital Literacy Mission has been started recently. The objective of this program is to make at least one person digitally literate in every household in India.
iii. National Digital Communication Policy-2018: The objective of this policy is to provide universal accessible and high-speed broadband connectivity at the speed of 50 Mbps to every citizen of India. In addition, the policy also aims to establish a National Digital Grid by setting up a National Fiber Authority.
iv. National Education Policy-2020: In this also the goals of structural changes in the Indian education system have been kept to increase digital literacy.

1.4 Some Latest Initiatives-

i. The Prime Minister, Shri Narendra Modi in his address on the occasion of 74th Independence Day, said that every village of the country will be connected with optical fiber cable in the coming 1000 days.
ii. Andaman and Nicobar Islands have been connected with sea level cable for better internet service. Along with this we will now connect Lakshadweep with cable.
iii. A tender has been finalized for providing such connectivity in 354 villages in strategic, remote and border areas and 144 villages in other priority areas of Bihar, Rajasthan, Uttarakhand, Himachal Pradesh and Gujarat, Jammu & Kashmir and It is being implemented in the Union Territories of Ladakh. These villages have been strategically selected to cover the border area connectivity on mobile. After commissioning in these villages, there

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[5] *Prakash, Amit. "Digital India needs to go local". The Hindu. Retrieved 26 September 2022.*

will be no villages in the Union Territories of J&K, Ladakh for mobile onnectivity where mobile connectivity will not be available.

iv. DoT is working on providing mobile connectivity to villages in 24 Aspirational Districts of Bihar, Uttar Pradesh, Rajasthan and Madhya Pradesh and also to 7287 villages of remaining 44 Aspirational Districts in Chhattisgarh, Odisha, Jharkhand, Andhra Pradesh will be covered for which the process of obtaining government approval is underway.

v. BSNL has launched 'Bharat Air Fiber Services' as a part of Digital India initiatives of Government of India and aims to provide wireless connectivity within 20 km radius from BSNL location.

2. Benefits Digitalisation

Digital India campaign positively affected the lives of millions of people of India and provided ease in their personal, social, economic and professional activities. Process of digitalization in India is fascinated by increasing usages of internet and mobile phone. As of 31 December 2018, India had a population of 130 crore people (1.3 billion), 123 crore (1.23 billion) Aadhaar digital biometric identity cards, 121 crore (1.21 billion) mobile phones, 44.6 crore (446 million) smartphones, 56 crore (560 million) internet users up from 481 million people [6](35% of the country's total population) in December 2017, and 51 per cent growth in e-commerce.[7]

Today digital India provides UMANG (Unified Mobile Application for New-age Governance). It is a Government of India all-in-one single unified secure multi-channel multi-platform multi-lingual multi-service freeware mobile app for accessing over 1,200 central and state government services in multiple Indian languages over Android, iOS, Windows and USSD (feature phone) devices, including services such as AADHAAR, DigiLocker, Bharat Bill Payment System, PAN EPFO services, PMKVY services, AICTE, CBSE, tax and fee or utilities bills payments, education, job search, tax, business, health, agriculture, travel, Indian railway tickets bookings, birth certificates, e-District, e-Panchayat, police clearance, passport, other utility services from private companies and much more.[8]

eSign framework allows citizens to digitally sign a document online using Aadhaar authentication. Swachh Bharat Mission (SBM) Mobile app is being used by people and Government organisations for achieving the goals of Swachh Bharat Mission. eHospital application provides important services such as online registration, payment of fees and appointment, online diagnostic reports, enquiring availability of blood online, etc. Digital attendance, to keep a record of the attendance of Government employees on a real-time basis. Digital Literacy mission covers six crore rural households.[9] Digital Locker facility helps citizens to digitally store their important documents like PAN card, Passport, mark sheets and degree certificates. Digital Locker will provide secure access to Government-issued documents.

3. Major Challenges

There are many hurdles in the way of its successful implementation of Digital India, like digital illiteracy, poor infrastructure, low internet speed, lack of coordination among various departments, issues related to taxation etc. Excessive and uncontrolled use of digital media say social media leads to addiction, cyberbullying, anxiety, depression etc. It affects not only social and physical but also mental health, which is hampered due to excessive and uncontrolled use of digitization. Digitization is the use of digital technologies to handle data of different nature for different

[6] "The Internet and Mobile Association of India". *www.iamai.in*. Archived from the original on 27 June 2018. Retrieved 3 October 2022.
[7] Govt will soon make Aadhaar-driving licence linking mandatory: Mr. Ravi Shankar Prasad, Indian Express, 7 October 2022.
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purposes. It has negative impact on small scale industries as big industries (Ex. Online retailing) have adapted to the changing scenario but small scale industries(Ex. Small shopkeepers) are finding it difficult to accept it and get used to digitization.

4. Digital Divide

The digital divide refers to economic and social inequality in relation to the use and impact of the Internet and other digital technologies. With the popularity and spread of digital technology, the digital divide widens the disparity in access to information among people.[10]

Rural India is facing a lack of essential information due to the digital divide, which further strengthens the vicious cycle of poverty, deprivation and backwardness. In addition, it also increases social inequality. Today society is also being divided on digital basis. Recently the National Statistical Organization (NSO) has released its report on the status of Digital Divide in India. The survey on household social consumption related to education is part of the NSO's75 round of Sample Survey. The report shows that *with the onset of unprecedented technological and digital advances in today's time, India witnesses a widening inequality between the digital haves and have-nots.* [11]

The report states that[12]

i. In India, only one in ten households have a computer (desktop, laptop or tablet).
ii. Nearly a quarter of all households in India have internet access, which is accessed through a fixed or mobile network.
iii. Most of these Internet-enabled homes in India are located in cities. While 42% of the total households in the cities have internet access, only 15% of the total households in the rural area are connected to the internet.
iv. The national capital Delhi has the highest internet access, with about 55% of the households having internet access. Apart from Delhi, Himachal Pradesh and Kerala are the only states where more than half the households have internet.
v. The situation in Odisha is quite worrying in terms of internet, with only one in ten households having internet here.
vi. There are ten other states with less than 20% internet penetration, including software hubs such as Karnataka and Tamil Nadu.
vii. NSO has told in the report that the main factor of digital divide in the country is economic condition.
viii. At the national level, the state of Kerala shows the lowest digital divide while Assam has the highest.
ix. The NSO report suggests that 20% of Indians above the age of 5 years have basic digital literacy, while it is 40% in the critical age group of 15 to 29 years.

4.1 Reasons for the digital divide in India

- There is wide variation in tele-density (i.e. density of telecom facilities) in different regions of the country which causes massive digital divide.
- In the case of some eastern states, the attitude of the telecom service providers is not favorable. There are different reasons for this. There is also lack of infrastructure like availability of electricity and apathy towards business opportunities.
- Even today there is no basic facility like electricity in remote areas of India. The convenience of electricity is the main reason for the digital divide, because people are unable to use electronic devices like mobiles, computers etc. due to lack of electricity. That is why even telecom companies do not invest here, because

10 https://www.techtarget.com/whatis/definition/digital-divide

11 https://www.thehindu.com/news/national/nso-report-shows-stark-digital-divide-affects-education/article32554222.ece

12 https://www.thehindu.com/news/national/nso-report-shows-stark-digital-divide-affects-education/article32554222.ece

they do not get the required number of customers.

- Internet connectivity is very weak in rural areas of India.
- As stated in the NSO report, income inequality among different sections has also increased the digital divide in India. The condition of internet access among the poor is quite worrying. They have severe shortage of electronic resources like mobiles, computers etc. A large part of the income of low-income people goes towards meeting their basic needs. They see technology as a luxury.
- Gender inequality in India has also played its part in widening the digital divide. Here even today girls or women do not have the freedom to use digital resources like boys or men.
- The level and quality of education has a significant impact on the digital divide. The state of education in India is still in a very weak condition, which is playing a major role in widening the digital divide.
- The quality of education in India is very poor, where emphasis is still on traditional courses, which lack digital education. Thus the lack of digital literacy is also increasing the digital divide.
- There is a lack of infrastructure and teachers etc. to promote digital education in India.
- In India, the use of the Internet or electronic devices is still not ensured in a regional language other than English, which limits the use of the Internet among people educated in the regional language.
- India's geographical location also plays its role in the digital divide. It is relatively easier to build digital infrastructure in plain areas than in hilly areas.

4.3 Impact of digital divide

On one hand, while the level and quality of education increases the digital divide, on the other hand, due to the digital divide in a society, the education sector there is very negatively affected. Thus both education and the digital divide affect each other in a vice-versa form. Between 2020-2021 the whole country was battling the Covid-19 pandemic and schools were closed due to the lockdown. In this situation some students studied through online classes. But due to the high situation of digital divide in India, most of the students failed to take advantage of online classes. The lockdown was imposed due to the Covid-19 epidemic increased the sales of those companies and shopkeepers who were digitally empowered. But on the other hand, the digitally disabled and street vendors faced very serious livelihood problems.

Conclusion and Suggestions.

a) How to make digital technology accessible to more and more people to reduce the digital divide and increase digital awareness in rural areas? How to increase the adoption of digital technology among rural women and people from underprivileged society to bridge the digital gap in rural areas.
b) How to increase internet speed in rural areas?
c) How to stop online fraud?
d) How to reduce internet addiction in children, youth and others?
e) How to control pornographic material spreading through internet?
f) How to block spy apps on internet?
g) How to make the cost of internet and android mobile phones affordable to the poor in the country,
h) It has been found that very few are able to take advantage of the digitally supported schemes made available by the government for farmers, laborers, small entrepreneurs, businessmen, students and common people etc. Making these schemes of the government successful, is a big challenge.

Suggestions

In order to meet the above mentioned challenges, following suggestions might be useful.

a) Mobile phone and internet facilities should be made available in rural areas at affordable rates

b) E-portal and Jan Suvidha Kendra should be opened in every Gram Panchayat of the country.
c) Digital literacy program should be run for villagers, farmers, laborers, women and youth
d) Strict laws should be made to stop online fraud and people should be made aware of it.
e) Increase Legal Control on Porn Sites
f) Conduct special campaigns in schools, colleges to raise awareness among youth about the dangers of excessive use of social media, online games etc.
g) School managements and parents should co-ordinate in a systematic manner to reduce mobile phone addiction in educational institutions, especially among children below 12 Special cell should be made for counseling of children in schools.
h) Awareness should be spread in rural areas about online education, business, and govt. schemes.
i) People should be motivated with the help of new media and traditional media for publicity of various schemes of the government.
j) Digital literacy should be included in the curriculum in all schools in the country.
k) Government should take initiatives to control the spread of rumors, fake news, hate speeches, social and religious intolerance, fanatic views, anti-women activities terrorism, and anti-national and anti- social activities.

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CHANGING MEDIA HABIT IN INDIA

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Abstract- Changing Media Habit is a study related to the habit shown in the different age groups. The study is to find out the likes and dislikes of different segments based on age. We move to different places and adopt different habits and we change our habits according to our needs and preferences. We generally like to do such thing which keeps us updated with each other. How we are changing our lifestyle according to our needs and standard of living is the main objective of the research. The present research study has surveyed 100 people of different ages between 15-40 years. The samples are been segregated on the base of the 1st segment of the sample between 15-25 years and the 2nd segment of the sample between 26-40years. Male and female opinions were taken to get the real picture of the present scenario.The study found how media have changed the lifestyle of the common people. We have developed ourselves to a great extent that other countries have yet to reach with the interchanging and updating ourselves with changes in media, fashion, and technology. These developments have been possible due to the media adaptability of people in our country.

Keywords: Media, information, revolution, communication, lifestyle.

INTRODUCTION-

Media in India was initiated in the late 1700s with print media started in 1780, and radio broadcasting initiated in 1927. It's a long run of changing habits that have gradually changed from time to time. People who were readers of newspapers adapted a change with the introduction of radio and the screening of Auguste and Louis Lumière moving pictures in Bombay initiated in the July of 1895 is among the oldest and largest media in the world. As from the secondary data, the country consumed 99 million newspaper copies 2007making it the second-largest market in the world for newspapers. By 2009, India had 81,000,000 Internet users comprising 7.0% of the country's population, and 7,570,000 people in India also had access to broadband Internet 2009 making it the 12th largest country in the world in terms of broadband Internet users. As of 2009 India is among the 4th largest television broadcast stations in the world with nearly 1,400 stations. So it is implicit that media use is at a watershed moment around the world. When there was only the availability of newspapers, the use of newspapers was at its peak stage. With the introduction of radio, the use of newspapers became less interesting and used to get the news through radio. With the introduction of radio illiterate people can also get the news. It was a great achievement for the whole nation. After the introduction of radio people could only use it to receive the news in the audio form of a message. But with the introduction of television, a new revolution came and people now accepted the new change of an audio-visual gadget called television. With the change, people have updated themselves. From the past survey, it was found that the use of television was more in respect than the use of newspapers and radio. As we see rank-wise then television comes first, the newspaper second, and then people like to use the radio.

Introduction of computer and internet services make it a source of all information. It enables one person to communicate with other people sitting far away from other countries. It also helped to build good relationships with other countries and thus helped the development of our nation. With the change in technology, the common man who was not much aware of the other thing going on within the country or in other countries can easily get information.

Media in Indian Habits- With the advancement of technology in the last 50 years, media influence has grown remarkably in India. India's media space started its journey with the telegraph. Then the era of radio began. With the passing of time newspapers, magazines, and television entered the Indian media space. Nowadays, we live in a society that depends on information and communication to keep moving in the right direction and do our daily activities like work, entertainment, health care, education, personal relationships, traveling, and anything else that we have to do. In our daily life in most cases, we make our decisions based on the information that we have from different media along with information from our co-workers, friends, family members, financial reports, etc. Media educates us about important things. Truly speaking, in our daily life media works as an authority to give us news, entertainment, and education.

Today we are using different media to meet different requirement. People have changed their habits as per requirement. Previously people were using Doordarshan and Radio for the information and entertainment, but as the new media have been introduced the scenario have been changed. Analysis have given a picture of different age people using different media as per their like and requirement. If we see media reach then we can see media have also changed since few years. A gradually rise have been noticed and the change have been welcomed by the generation.

Without wasting much time on further queries, common people believe that the things shown in the different media are true in that state only. On the basis of the things we observe in the television or print media, we go for any decision. We buy what we are told to be good. After watching thousands of advertisements on TV, in newspapers, or in magazines we make our buying decisions based on what we saw to be a product we can trust. We also base our decision on what everyone else that we know is buying. Their decisions are also based on the media. The effect of mass media on teenagers is such that they purchase those products that their favorite celebrities advertise and are acceptable by society.

The Indian media started with the development of the press, with a prime focus on propagating news and on the views about contemporary events. During the British period, James Augustan Hicky brought out the first newspaper, Bengal Gazette. The year was 1780 and in the era of freedom struggle, Indian Press was first used to propagate nationalist ideologies. Eminent leaders like Mahatma Gandhi; Bal Gangadhar Tilak brought out newspapers and thus ennobled the history of Indian media. This scenario continued throughout the independence period, primarily preoccupied with bringing out political issues to the forth.

The post-independence period saw a change. In fact, Indian Press was becoming more and more commercial and competitive in approach, sharply deviating from its idealistic approach of the pre-independence era. Especially the early 90s were remarkable in the field of Indian media. It has been observed that during those years economic and financial policy issues were getting due importance, primarily, because of the economic liberalization that took place. A broad spectrum includes entertainment, culture, and sports found the place. The press has been captured by huge business motives, largely depending on revenues from the advertisements. Another remarkable development is the growth of leading Hindi and regional language newspapers, sufficing the demands of all sections of people in various regions like Andhra Pradesh, Gujarat, Punjab, and West Bengal, etc. Ultimately it increased circulation to a great extent. The whole scenario of Indian media changed with the introduction of electronic media, namely Radio and Television. Films were already there in the scenes, entertaining the audiences to the heart’s content. Radio broadcasting commenced in 1927 and was labeled as a suitable and cheap medium to reach a large number of people, especially those residing in remote regions. Some of the important programs are distance education, social services like health, and hygiene, and special programs for military personnel, farmers, etc. Very recently, the opening of FM channels introduced new entertaining programs thus increasing the popularity of Radio in leaps and bounds, even in the urban areas.

Television made its beginning in the country as a modest pilot project in September 1959. Thus began the audio-visual era in Indian media. Doordarshan, the National Television Service in India, started operating through transmitters of varying powers to make available television signals for over eighty-seven percent of India`s population. Initially, television was started for the purpose of developing communication as a vehicle of social change and national cohesion by upholding progressive values and also involving the whole community in free dialogue. The Satellite Instructional Television Experiment (SITE) was introduced in 1975 with the noble aim of promoting special educational programs in 2400 villages in six Indian states. In spite of the noble initiatives of the initial years, television gradually steered away from its goal and charted its program mainly to entertain the audiences.

The Gulf war coverage by CNN in the year 1991 was a defining moment at the beginning of a new era in television broadcasting in India, which ushered in far-reaching changes. Thus the Indian media reached its zenith with the coming of cable television. Five new channels belonging to the Hong Kong-based STAR TV gave Indians a fresh breath of life. MTV, STAR Plus, BBC, Prime Sports, and STAR Chinese Channel were the 5 channels. Zee TV was the first privately owned Indian channel to broadcast over cable. By 2001-2003, other international channels such as Nickelodeon, Cartoon Network, VH1, Disney, and Toon Disney came to India. In 2003 news channels flourished in the Indian subcontinent. Indian media space is an image of diversity and is reflected in the whole identity of Indian tradition and cultural scenario.

Objective of the study- The objective of this research study is to find out what changes have taken in the media habits of common people based on age differences. An attempt has been made to find out which media is most liked by the different age groups. There are several media that we access to get information and engage ourselves in different activities. This study is to find out the most suitable media for different age groups, viz., less than 25 years of age and above 25 years of age. Its objective is not confined to a single aspect but it has different dimensions. The present study tries to find out what habits both generations possess in uying decision process. It is also related to the choice of media preference they like to choose for getting news updates. This study will benefit different industries such as Airline, Tour and Tourism, Telecom Services, FMCG, Automobile, and Banking companies in targeting their customer.

Research methodology- The study followed the sample survey method and to collect data from the sample structured and non-disguised questionnaire had been designed. Stratified Random Sampling process had been adopted. The survey was administered sample survey as because in the personal survey the response rate is good and the information is comparatively accurate. Even though it is time consuming and costly, but the quality and quantity of information from this kind of survey is good.

FINDINGS &ANALYISIS-From the analysis of the data collected from the survey, it was evident that most people like watching Television (TV). People of different age groups like to watch television as it is the source of all the required information to them. As per the survey, television has changed the lifestyle and habits, and thinking direction of people of all age groups. It was found that 100% of people are viewers of television. It was seen that the people who watch television watch Hindi television more than channels in other languages. Bengali channel stood in the second position and after these two channels, they like to watch English channels.

Radio has again taken a “U” turn in the lifestyle. The trend of listening radio has again entered the lifestyle of all age groups of people. The comeback of radio in the general lifestyle is due to the FM radio station which has joined the life of a common man and helps them to stay connected with the daily updates and keep them entertained round the clock. In cities where the frequency of radio channels is good, people in those areas mostly prefer FM rather than listening to music on their personal musical station. Different types of programs are running and now people participate in those programs via their phone and sometimes they win some exciting gift.

Table 1: Media Habit of the respondents

UNDER 25 YEARS				
Media	Time spent on an average out of 24 hours	No. of channels mentioned		
		Bengali	English	Hindi
Television	2.36	35	24	45
RANK		2	3	1
Radio	0.92	38	2	45
RANK		2	3	1
Newspaper	0.14	42	44	4
RANK		2	1	3
Magazine	0.05	6	28	8
RANK		3	1	2
ABOVE 25 YEARS				
Media	Time spent on an average out of 24 hours	No. of channels mentioned		
		Bengali	English	Hindi
T.V	2.68	36	24	37
RANK		2	3	1
Radio	0.72	46	6	48
RANK		2	3	1
Newspaper	0.23	26	40	19
RANK		2	1	3
Magazine	0.32	16	22	12
RANK		2	1	3

From the analysis of data, it was found that in the Midnapore district, the people who listen to radio mostly prefer listening to Hindi radio stations and then they prefer listening to Bengali radio channels and after that, they prefer listening to English radio stations.

Newspaper takes a vital place in the life of a common person who wants to get himself more updated in the busy changing environment. From the analysis of the data collected, it was found that the youngsters below the age of 25 years and above the age of 25 years both the generation people preferred to read English newspapers as their first preferred newspaper. Then they prefer to read Bengali newspapers and then they prefer to read Hindi newspapers.

Magazines are the source of information from which an individual can gather information related to their issue. In general life, people read magazines in their free time. The magazine has given a new dimension to look into the matter more closely and more deeply. Magazine provides deep stories and some fact that is not published in the normal newspaper. It can be related to education, medical facilities, company products, new inventions, new fashions, Bollywood, Hollywood, the invention of new gadgets, getting a suggestion from experts and doctors, etc.

From the survey it was found that for the youngsters below the age of 25 years English magazines are mostly preferred. Hindi Magazines stood in the 2nd position and Bengali magazines are in the last position. And the preference of above 25 years of age is English, Bengali, and Hindi.

So from the above discussion, it was found that people are using a different mode of media and trying to be updated with the changes occurring in society. There is a rise in the use of media and people are adopting the changes.

Table 2: Data Regarding Internet Accession

Age	Average time spent(In minutes)	Education	Music	SNS
Under 25 years	48	23.2	8.4	16.4
Above 25 years	52.4	28	8.2	16.2

From the analysis of data collected, it was found that the respondents below 25 years spends an average time of only 48 minutes. They divide their time as they spend an average of 23.2 minutes on educational sites and 8.4 minutes on musical sites and 16.4 on SNS sites. Internet accession habit in the age group of above 25 years, it was found that they spend an average time of 52.4 minutes daily on internet accession. It can be divided in the following ways at an average. They spend 28 minutes on educational sites & 8.2 minutes on musical sites and 16.2 minutes on SNS sites. So it is clear from the analysis that the young generation below 25 years of age is using fewer internets than that of the age above 25 years.

Table 3: Frequently used Social Networking Website

Name of SNS	**Twitter**	**Orkut**	**Myspace**	**Facebook**	**Hi-5**	**Yahoo**	**Hotmail**	**Rediff**	**Gmail**
No. of Response	36	76	20	44	28	32	28	28	60
Rank	4	1	7	3	6	5	6	6	2

The most frequently used social networking sites are Orkut, Gmail, Facebook, Twitter, Yahoo, Rediffmail, Hotmail, Hi-5, MySpace. Now people are more and more engaged in using fastest mode of communication and for long duration in minimum cost. Above mentioned websites now allow individual to contact their friend and near ones with the fastest and in minimum cost. So a people sitting in other country or in any place can easily communicate their near and dear one with these websites. Before people use to send postal letters to communicate their near and dear one who live far from them, but due to the change of media people can communicate their near ones easily and quickly. With this it can be seen that with gradual change in the media space the habits and the way of communication have also changed. A change have been noticed that people who were using letter are now preferring email and SNS websites to communicate their friends and near ones.

Table 4: Music Habits of the Respondents

MUSIC			
Name of websites	You-Tube	Movies	Songs.Pk
Response	19	5	35

Listening to music is not new to us, but the way of listening to music has been changed before we were dependent on the radio station and have to wait for a certain hour. But due to the changes now we can get instant music and even can send musical greetings to our friends and relatives. Some of the musical websites even give the advantage to download free song which has been released recently. We can download newly released movies from some of the websites without paying any cost. YouTube allows us to see newly released videos. A great change in the habits and use of media has been noticed during the last few years. From the collected data it was observed that youngsters below 25 years are frequently using song sites to get newly released movies and album songs. From the survey 70% of youngsters use songs.pk, 38% use YouTube, and 10% use movies website for getting musical songs and movies. In earlier days people use to wait for audio and video cassettes to come on the market but now people use the internet to get musical albums and videos. The Internet has tremendously changed the life of this group of people.

Table 5: Media Use for Educational Purpose

Name of websites	Wikipedia	Answer	Google	MbA.notes	Scribd	Amazon	About
RESPONSES	20	14	36	18	10	6	12
RANK	2	4	1	3	6	7	5

As far as the educational purpose is concerned website is the demand of younger generation as because with its use one can get as much information within a short time that cannot be possible anywhere, even not in the library. Before people use to have a habit of getting information from the library but now they are using websites for the information. This change have took place because one can get information quickly by accessing internet and complete their work in less time which they use to complete in more time. From the data collected it was found that the people who are using websites for the educational purpose use some common sites. It can be seen as according to their preference 36% Google, 20% Wikipedia, 18% www.MBAnotes.com, 14% Answer.com, 12% About, 10%Scribd, 6% Amazon. All the websites mentioned above are placed as per their preference and are commonly used by youngsters for getting information.

Table 6: Social Network Site Habit

Name Of SNS	Twitter	Orkut	Myspace	Facebook	Hi-5	Yahoo	Hotmail	Rediff	Gmail
Responses	12	22	6	12	6	12	6	18	30
Rank	4	2	5	4	5	4	5	3	1

People above 25 years of age are more familiar than youngsters and regularly they use websites for their work purpose. Before it was not so familiar among them but as per the need they have modified themselves. Now they are more comfortable with this media. They are using different sites for gathering information, updating themselves according to the changes that occur, and running their business more efficiently. They communicate with different people located in different countries. Now they are not sticking to one place or market they are using the information related to market demand, market price, tax rate, etc. for the growth of their business. Different media are now used by them to keep them self in touch with their nearest one and even with their client they prefer some of the common website which are generally used by different class people. Now the industrialist and the common man use the same website for their daily updates and for communicating their friends.As per their preference we can state their likes in percentage as 60% Gmail, 44% Orkut, 36% rediffmail, 24% Yahoo, Facebook and Twitter, 12% MySpace, Hotmail, and Hi-5. Use of social networking website are seen among the celebrities and more and more engaged in this to keep in touch with their friends. Now very few people use postal letters to communicate their friend and relatives as because these are time taking and most of the time the letters not reaches in time and the work gets hampered.

Table 7: Music Habit of the Respondents

Names of Websites	You-Tube	Movies	Songs.Pk
Responses	39	14	46

As far as the music is concerned it is liked by all the age group. Though different people like different types of music, but love for music is common in all. Now in the modern days people above the age of 25 years are engaged in lots of work and other activities but they takes out few time for relaxing their mood and in those time they love to listen music as music is a best medium of reducing stress.

From the survey, it was found that people above the age of 25 years prefer to browse a few common sites such as YouTube, movie websites, and songs.pk From the data collected from the above 25 years of age people the fact came as under 46% songs.pk, 39%% YouTube and 14% of movies websites are used by this age group people. So it is seen that people who used to use the old fashion media are now using the fastest mode of media and getting their needs fulfilled in a short time.

Table 8: Use of Media for Educational Purpose

websites	Wikipedia	Answer.com	Google	Mba.notes	Scribed	Amazon	About
Responses	12	16	35	12	8	10	6
Rank	3	2	1	3	5	4	6

People who are more than the age of 25 are more or less engaged in their work and other daily routine activities. So to stay more active and more updated with the change in their surrounding they have to use different websites. By using the internet one can get new articles, and news updates that affect the business and also help them out in their way of working habits. Now from the analysis of data which has been collected by the survey, it is clear that for getting updates and information regarding any type of educational purpose people are using these websites. These websites are arranges sequence as per preference 35% www.Google.com, 16% www.Answer.com, 12% www.Wikipedia.com, 12% www.Mbanotes.com, 10% www.Amazon.com, 8% www.scribd.com and 6% www.about.com. Now a day's library has come just at the click of a mouse and there is no limitation on books. There used to be limitations on books as per need and books used to come on demand and it used to take weeks to come in this process, and the work gets hampered. but due to this modern media, the work has got speed and all books are used and purchased as we go to those websites and click those books the book come directly to our home via home delivery and even we can purchase soft copies instantly by paying them amount online. So we can see how media have interchanged habits. Media has helped us in our day-to-day life.

Table 9: Respondents use to read magazine/ newspaper/story book while watching TV or listening to Radio

Age Group	Under 25 Years		Above 25 Years	
OPTION	YES	NO	YES	NO
RESPONSES	36	14	26	24
%	72%	28%	52%	48%

The finding gives a picture that 72% of people in the age group of under 25 years watch television and 28% do not read while watching television. Now-a-days people are so busy that they want to utilize their free time while watching television or listening to music reading magazines or reading newspapers. If we see the result of the analysis above the age of 25 years it was found that 52% of people like to read magazines and newspapers and the rest 48% don't like to read anything while watching television.

Table 10: Respondents use to listen to radio or music while accessing internet

Age group	Under 25 years		Above 25 years	
Option	YES	NO	YES	NO
Responses	18	32	16	34
%	36%	64%	32%	68%

It was found that 64% of people do not listen to the radio and 36% of people listen to music while accessing the internet. And in the people above the age of 25 years, it was found that 68% people don't listen to music and 32% listen to music while using the internet.

Table 11: Media Choice to contact near and dear one (Below and above 25 years)

RANK	PREFERENCE
1	MOBILE
2	E-MAIL
3	LETTER
4	FAX

From the analysis of data it was found that all the respondents below 25 years of age use different modes and it is totally different from those media which was used by our forefather were using. These changes have been seen due to the introduction of modern media and have helped us in communicating with our near and dear one quickly. From the data analysis, it is found that the young generation communicates with their near ones by mobile, email, letters, and Fax. If we see the result separately then the picture can be seen rank wise mobile comes first, Email comes second, the letter comes third and fax comes forth. The same thing is seen among the respondents of the age of above 25 years. Due to the quickest effort of communication, every generation uses this modern media. From the analysis, it is clear that as the technology upgraded and updated from time to time people also update themselves accordingly. If we see the result of the analysis above the age of 25 years it was found that 52% of people like to read magazines and newspapers and the rest 48% don't like to read anything while watching television.

Table 12: Media Preference for general news updates

Below 25					
Media	T.V	Radio	Newspaper	Magazine	Internet
Rank	1	3	2	5	4
Above 25					
Media	T.V	Radio	Newspaper	Magazine	Internet
Rank	1	4	2	5	3

From the analysis, it was found that the respondents in the age group of below 25 years like to watch TV for regular News updates and then they prefer newspapers and then Radio and then the Internet, and then magazines. In the newspaper, people can read the matter but in the TV they can see the whole matter live. Nowadays people are so busy that they want to do all the work very quickly. Even with a busy schedule, we take out some time for reading newspapers and listening radio. People in the age group below 25 years listen to the radio for news updates. Accessing the internet is now common for youngsters they spend time accessing and during accessing they gather much information from websites. As youngsters gather information from different sources so they prefer less reading magazins for news updates. The same habits have been noticed in people above the age of 25 years of age only the difference is that they prefer more internets to the listening radio. So from the data analysis, it was found that they prefer TV first, newspapers second, the Internet third, Radio fourth, and Magazines fifth media for getting news updates.

Table 13: Influence of Media in changing the habits and culture

Based on age group	Below 25 yrs.			Above 25 yrs.		
Options	Yes	NA/NDA	No	Yes	NA/NDA	No
Responses	26	8	16	30	6	14

From the analysis, it was found that due to the changing culture and habits, people have changed themselves and are now accustomed to using different media. Before people were only using one-two modes of media for information. But with the change they are using several modes of media as per their need and capacity of using it. If we see the data collected from the survey it was found that out of 50 below youngsters, 26 people gave their opinion that the changing way of habit and culture has affected the lives of individuals in using different media as per their requirement and 16 people disagree with this statement and 8 people have neither agreed and nor disagree. It is seen that media have affected the general life of the common man.

From the analysis of 50 people above the age of 25 years, it was found from their opinion that 30 people agree with the statement and 14 people disagree and 6 people neither agree nor disagree.

Table 14: Best mode of media for offering news or creating awareness of any product

Data for below 25 years of age				
Media	Electronic	FMCG	Education	Service
TV	3	14	5	3
NEWSPAPER	10	5	7	8
RADIO	4	6	4	5
WEBSITE	8	0	6	7
SNS	0	0	3	2
Data for above 25 years of age				
Media	Electronic	FMCG	Education	Service
TV	9	11	7	4
NEWSPAPER	7	8	8	8
RADIO	5	6	3	3
WEBSITE	4	0	5	7
SNS	0	0	2	3

Table 15: Best media to get information about services:

Airlines/ Hospitality:					
Media	T.V	Internet	Magazine	Radio	Others/Agent
Below 25 yrs.	79	43	95	108	50
Rank	3	1	4	5	2
Above 25 yrs.	80	52	93	102	48
Rank	3	4	2	1	5
Tour and Tourism:					
Below 25 yrs.	58	44	98	118	57
Rank	3	1	4	5	2

Above 25 yrs.	56	45	100	113	61
Rank	2	1	4	5	3
Telecom services:					
Media	36	103	93	59	84
Below 25 yrs.	01	05	04	02	03
Rank	34	105	97	59	80
Above 25 yrs.	01	05	04	02	03
Rank					
Banking					
Below 25 yrs.	34	50	92	86	115
Rank	01	02	04	03	05
Above 25 yrs.	33	53	91	85	114
Rank	01	02	04	03	05

From the analysis of data it was found that in the case of airlines or hospitality services people are more interested in collecting information from the following common media. It can be ranked as per their preference internet is liked by below 25 years age people as they are more user of internet, but the above age people give first preference to visit agent. The second choices of youngster are agent and the above age people second preference is internet. Then both the generation like to use the same source of media for getting information. They share the same opinion that they will check out on the basis of television advertisement as their preference. In the fourth and fifth preference they will look for magazine and radio respectively.

To get information regarding travel and tourism people rank the Internet first, second, they go to agents, third they recall the advertisement of the different companies given on the television. If they are unsatisfied with that, they will look for the different magazine and radio advertisements. Different people have different way of thinking, as people's age increase preference differs from the youngster and they prefer to think slightly differently from the youngster. If we see from the point of view of above-age people then we will notice a difference in the choice of gathering and getting information regarding tours and tourism they like to prefer the internet as the first choice, second, they move to get information from television then they look forward toward the agent and then they wise to look sometime in magazine and radio advertisement. So, it can be seen that different people have different points of view before there were only a few modes of media to get the information like going to an agent or having to get information from those who have taken a prior tour from the same service provider. But now everyone can get information from different sources and get the best service according to their affordability.

Telecom service is the fastest-growing industry in the world. We can see its advertisement on television and even listen to the radio. With several features and benefits telecom companies are providing different offers. Nowadays when we go for buying a connection from any telecom company we have to think first about which plan and whose service is the best. From the analysis, I have found that people below and above the age of 25 years have the same sequence of choosing the telecom service connection. The sequence is mentioned rank-wise first television, the second is radio advertisement, third agent or shop, fourth magazine and fifth is from the internet. People come to know through the television and after that gather information from different sources. The use of telecom services has been recently increased in India, and people of different ages have welcomed the change and adopted the changing trend. A great change can be seen in the past. Now the telephone which was within the reach of some people in the villages and towns, now it has been so much popular that everyone can benefit.

As the trend of technology have improved day by day people are using their less effort and try to get more information by their least amount of effort. Before people use to visit to different bank and collect detail. But now people use internet to check the interest rate and standard of the bank, then they decided open their account in that bank or not.

Table 16: Best media to get information about Goods

FMCG:					
Media	T.V	Internet	Magazine	Radio	Others/Agent
Below 25 yrs.	32	111	95	61	76
Rank	01	05	04	02	03
Above 25 yrs.	34	106	94	59	82
Rank	01	05	04	02	03
Automobile					
Below 25 yrs.	34	100	94	67	80
Rank.	01	05	04	02	03
Above 25 yrs.	34	91	96	82	73
Rank	01	04	05	02	03

To get information regarding these good several companies gives their advertisement on television and also gives advertisement in several media. From the survey of 50 people below and above the age of 25 years, it was found that they possess the same way of getting the information and analyzing the information. Their preference is ranked according to their responses television comes first, then radio, then information from an agent, then in the fourth choice they look for a magazine and if they are interested to get the information then they may search the internet for the product.From the survey, it was found that people above the age of 25 years use to get information regarding automobiles from television advertisements. Moreover, they listen to the radio they get information about different automobile companies. Most often they use to visit the dealer or automobile agent and gather information. But youngsters use to collect information from the magazine and then they use it to search more on the Internet.

Table 17: Paired comparison of mass media as source of reliable information regarding the daily needs of life

Media	Under 25 yrs	Above 25 yrs.
	Rank	Rank
Television	5	5
Radio	3	4
Newspaper	4	3
Magazine	2	2
Internet	1	1

As depicted in Table 17, the paired comparison of different media as sources of reliable information regarding the daily needs of life yields the Internet in the first position followed by magazines for both the age group. For both the age group television holds the last position. For the age group under 25 years radio and newspapers holds the 3rd and 4th position and for the age group above 25 years, the case is just the reverse.

Different cultural programs are broadcasted on different channels. With the help of media, one can easily communicate with their family and friends. We come to know how our parent was in the past and what we are now. If there would be no media we can never see our past life. So media have not only changed the way of living but have also integrated the life of individuals.

Conclusion

The present study observed that television, the internet, Radio, and Print Media have a great role in changing the lifestyle of the common people. For the person living in a rural area or in an urban area, it is found that in both regions the behaviors of a common man have developed. in the recent few years, a great change has been noticed. People are not only dependent on one mode of information but they also want to get the information more quickly and instantly. Media is now acting as a powerful source of information. Print media occupies great attention in a common life of an individual. Not only the information is limited to print media but it has others wings too for spreading the news all over. From the above analysis, it is found that now a day's media cannot fulfill the requirement of the great mass. One has to think in a broader sense for getting attention. I have found that youngster is users of technology and are using modern gazettes. They are a frequent user of all media. They don't depend on only one source of information. From the analysis, it is clear that they want to handle the quickest mode of media for getting updates and being in touch with their friends and near ones. Youngster uses more internet media for getting several services and information. Newspaper is preferred by the youngster but they less prefer magazine. But if we see the above 25 years of age people then we will find a slight difference in the habits of consuming media in their daily life. Television, radio, the internet, newspaper, and magazine are used by these age people. They use newspapers, television, and radio for getting news and other information. These people even use Social networking sites (SNS). From the research, it is clear that people want to use such type of media in their daily life which will connect them to the outer lifestyle. Those media which cannot fulfill these demands it will be thrown out. Youngster uses Internet media for getting information regarding admission to different colleges and university. Before people were using only a few modes of media for getting information, but due to the improvement in technology different types of media are used. There has been a gradual change in the habits of people belonging to different cultures. With the changing culture, people adopted different media and now they are frequent users of it. If we see the use of television in the past and the use of television in the present we will notice that a great has taken place in the use of it in daily life. Before going outside a common man always check the news update if he cannot read the newspaper. People have developed their habits according to time and place. They have understood the benefits of media in their daily life. From the analysis, we have seen that most people are a user of mobile phones. Day by day the number of mobile users is increasing and in the same way the reach of telecom media will grow. If we see the finding then we will come to know about the decrease in the usage rate of print media. Now people are engaged in a lot of activities that they get less time to read newspapers and magazines. From the analysis of data collected to find which media will be best for advertising the airline, it was found from the analysis that people use to get this type of information from the internet and agent who can provide them sufficient amount of information regarding the subject. I have tried to find out the best mode for giving advertisements for the tour and tourism it was found from the analysis that people follow different sources of media to get the information. But it was also found the best media among all these is the Internet. This is the choice of the present generation. If we look toward another industry like telecom then we will find television is the best mode of communication media to get the attention of the mass. In the present scenario, we have seen that most of the telecom companies are introducing their offering through visual media and then they are moving toward audio media. The most important industry related to our daily life is the FMCG industry. Media plays a vital role in the promotional activities of FMCG companies' products. Visual and audio-visual media help it to grow its customer. Television is used to spread messages related to product benefits. Companies use different benefits to convey the message. By seeing this advertisement people get attracted toward the product and go for buying. Thus from the above conclusion, it is clear that media have a vital role in changing the habit of the common man. Through the advertisement, people get the information and thus they change their habit of using their regular product and go for buying a new one. So from the above discussion, it was found media plays a vital role in changing the habits of all generations of people.

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SOME THOUGHTS OF INDO-BANGLADESH ECONOMIC CO-OPERATION

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Abstract: India and Bangladesh are two neighboring independent country and also a part of the Indian subcontinent. There had a long common cultural, economic and political history. However, since the participation of India in 1947 Bangladesh became a part of Pakistan and Liberation war of 1971, Bangladesh gained its independence and established relations with India. Now both countries recognize the importance good relations, regional and security and South Asian economic integration. But Bangladesh's major problems in bilateral relations with India stem from a number of irritants ranging from water disputes, un-democratic lands, exchange of enclaves, frequent border killings, trade complications, using Bangladesh as a market for Indian narcotics, push-in of the Indian minorities into Bangladesh territory, non-compliance by India with major treaty provisions and finally lack of commitment from the Indian side to address these issues through goodwill and friendship. Economics has played a significant role in the bilateral relations between India and Bangladesh. The economic relations between the two countries have been multifaceted, embracing trade transactions, credit arrangements, joint ventures, transit facilities and transport development. These relations have continued and expanded even in situations of adverse political relations. This is mainly because of the operation of objective factors like geographical proximity common language, similarity of consumption pattern common development needs and experience and commonality of the inherited infrastructure. Closer economic ties benefit both countries and have an overall stabilizing effect on the political relations between them. On the other hand, economic relations are influenced by the climate of political relations.

Keywords: Prospects, Problem, India, Bangladesh, Economics

India and Bangladesh are two neighboring independent country and also a part of the Indian subcontinent. There had a long common cultural, economic and political history. However, since the participation of India in 1947 Bangladesh became a part of Pakistan and Liberation war of 1971, Bangladesh gained its independence and established relations with India. Now both countries recognize the importance good relations, regional and security and South Asian economic integration. But Bangladesh's major problems in bilateral relations with India stem from a number of irritants ranging from water disputes, un-democratic lands, exchange of enclaves, frequent border killings, trade complications, using Bangladesh as a market for Indian narcotics, push-in of the Indian minorities into Bangladesh territory, non-compliance by India with major treaty provisions and finally lack of commitment from the Indian side to address these issues through goodwill and friendship. Though trade between India and Bangladesh forms only a small part [1]of their total trade, enhancing bilateral trade is of high importance to both countries. For India, increase in trade with Bangladesh would help to address many concerns of economic isolation of its backward north-eastern states and generate new market opportunities for small-scale producers from the impoverished hinterlands of eastern states. For Bangladesh, wider areas of cooperation, investment and allied development opportunities will be thrown open with greater trade openness with India. Moreover, both India and Bangladesh have long-standing commitments toward regional economic cooperation in South Asia, of which their bilateral trade is a significant part.

Economics has played a significant role in the bilateral relations between India and

Bangladesh. The economic relations between the two countries have been multifaceted, embracing trade transactions, credit arrangements, joint ventures, transit facilities and transport development.[2] These relations have continued and expanded even in situations of adverse political relations. This is mainly because of the operation of objective factors like geographical proximity common language, similarity of consumption pattern common development needs and experience **and commonality of the inherited infrastructure. Closer economic ties benefit both countries and** have an overall stabilizing effect on the political relations between them. On the other hand, economic relations are influenced by the climate of political relations. Because of the asymmetric size and strength of the two countries, political relations cast a deeper shadow on economic ties than would be the case otherwise. An eminent Bangladesh economist, Neural Islam, who was the Deputy Chairman of the Bangladesh Planning Commission, has put it very succinctly. "Indo-Bangladesh relations are therefore, likely to hold out greater prospects if they are anchored within the broader framework of political and strategic relation-ship."[3]

Indo-Bangladesh economic relations have been affected by the legacy of history. Bangladesh, after all, was a part of Pakistan for more than two decades when Pakistan had fought two wars with India. History has not ceased casting its long shadow. The mindset and preconceptions inherited from the past linger on in both countries. Moreover, in the past independence period, the ebb and flow in political relation-ship have affected economic relations as well.[4] In inter-country relation-ships all over the world, economic and political relations are intertwined. There is no reason to expect an exception in this case. Close or strong economic relation-ship including trade and economic cooperation between countries, have often been propelled by the prevailing close political relations or by a desire to strengthen future political relations. Those who suggest that economic cooperation, irrespective of the current state of political relations, forges or leads over time to strong political relations do not have history on their side.[5] The problem is that economic cooperation is not initiated in a significant way in a political vacuum in which there is a lack of trust. It is conceivable that the political closeness that provides the first impulse or the initial incentive for economic cooperation gets in its turn further strengthened or reinforced through economic cooperation. Indo-Bangladesh economic relations therefore are likely to hold out better prospects, if there are anchored within a broader framework of political and strategic relation-ship.

One domination aspect of Indo-Bangladesh bilateral economic cooperation is the asymmetrical relation-ship between a small country and a big neighbor. This is not, however, unique to the case of Indo-Bangladesh relations. There are other examples around the world such as economic relations of Nigeria, Brazil and the USA with their smaller and economically weaker neighbors.[6] The Indian economy is not only much larger and more diversified but also is more advanced in industry, services, science and technology. The asymmetry in economic size and population has implications for the way in which the distribution of possible gains from economic cooperation is evaluated by the trading patterns. However, while India's in relation to her economy as a whole may be limited, it could be sizeable if it is judged in relation to economy of the neighboring states of Bangladesh. That is West Bengal and the north-eastern states of India. How far this consideration influences India's negotiations with Bangladesh depends upon how much the interests of the neighboring states of Bangladesh weigh in the external policy priorities of the central government of India.

In the gamut of economy, trade transactions have played a special role. This has emerged as a dynamic factor in recent years, particularly after 1982 when Bangladesh embarked upon the path of liberalization. India has been the major beneficiary of the trade relations between the two countries .[7] Bangladesh is one of the most important markets for India's exports. For the past several decades, it has been the largest export market for India in the SAARC region. During 1985-90, the growth rate of Bangladesh's trade with India was higher than that with the world and SAARC countries as a whole. During the period 1988-89 to 1992-93, whereas India's total exports increased by 164 percent, the increase in exports to Bangladesh were 293 percent. In 1995, India jumped to the first position among exporters to Bangladesh, with China being a distant second. India maintained the first rank until 2005-2006 after which it was overtaken by China. China has remained in that position until now. In 2011-12, India's total exports to Bangladesh reached the level of 5.84 billion dollars.[8] To this should be added the substantial volume of illegal exports which, according to some estimates, are as high as legal exports, and the sizeable amount of trade in services for which estimates are not available. Thus India's total earnings from trade with Bangladesh, both legal and illegal and in goods and services may very well be in the range of 14 to 15 billion dollars per annum. This makes Bangladesh one of the most important export markets for India in the world.

The economic reforms introduced by Bangladesh in 1982 and by India in 1991 have inevitably brought about changes in the nature and forms of economic interaction between the two countries. For one thing, the state is now playing a far diminished role in economic cooperation which now rests more and more with private enterprises.[9] However, the private enterprises of the two countries, on account of the burden of their past suspicious attitudes towards each other and the lure of the markets of developed countries, have not responded adequately to the opportunities opened up by the process of liberalization. Moreover, since the trade liberalization in both the countries pro-ceded on an MFN basis, the stronger economic partner, that is, India, gained more from it than the weaker one, that is, Bangladesh.

A major initiative taken by India in this direction was its announcement, during the Bangladesh Prime Minister's visit to India in January 2010, of the extension of a credit of one billion dollars to Bangladesh. It was the single largest amount of credit extended by India to any country. It has been granted under very soft terms and conditions with 1.7 per cent rate of interest 20 years of maturity and five years of grace period.[10] A good proportion of this credit, amounting to about 200 million dollars, is in the form of grants. The projects identified for being financed under this line of credit are mostly in the sector of transport infrastructure. If the facilities for connectivity, granted by Bangladesh during Prime Minister Sheikh Hasina's visit to India in 2010, become available, India would develop a huge stake in the railway, roadway and revering infrastructures of Bangladesh. Given this stake, the renovation and expansion of these infrastructures would be equivalent to the expansion and modernization of India's own infrastructure. Surely, in the context of the provision, in India's 12th Five Year Plan, to invest one trillion dollars for the development of infrastructure within the Indian territory during the Plan period, an amount of one billion dollars, committed for the development of transport infrastructure in Bangladesh, is too meagre.[11] If the transit facilities promised by Bangladesh are finally operationalised and if they are to have their full impact on the flow of Indian goods through Bangladesh's territory, India would require to invest much larger resources, at least in the range of five to ten billion dollars, and that too mostly in the form of grants, for the development of the transport infrastructure in Bangladesh.

India can be a very important source of foreign direct investment (FDI) for Bangladesh, thereby contributing to the expansion of its export capacity as well as to the growth of its economy. The Bangladesh Government claims that it maintains one of the most liberal regimes in the developing world for foreign investment. In spite of this, the overall flow of FDI into Bangladesh remains at a very low level as compared to the inflow of FDI into several other developing countries.[12] It is mainly because foreign investors do not feel very secure in investing in Bangladesh. Indian investors are particularly apprehensive on this account. There exist various issues related to regulations, infrastructure and trade services which hamper trade between the two countries. Gross inefficiency in the existing trade systems and infrastructure of India and Bangladesh, has encouraged and nurtured informal trade, which is estimated to be as huge as half the volume of formal trade. Because per unit trade cost (including transportation, warehousing, testing and documentation) is rather high, traders adopt the informal mode of trading. There is large portion of people who are involved in such activities, varying from small children, women to cattle.[13]

Scarcity and incompetence of infrastructure is another bottleneck which hampers smooth formal trade. Lack of warehousing facilities, parking, cold storage and prolonged documentation procedures results in time wastage, hence becomes very costly. Along with that trade services are also not up to the mark at the LCSs of India and Bangladesh, which if adequate may help in reducing the trade cost. Inadequate banking facilities, absence of fuel stations, unavailability of labour due to labour strikes, harassment of truck driver because of language barrier, etc. are the reason which affects the volume of trade between the two countries.[14] Irregularity in the administration regimes, disparities in service delivery between the LCSs along the border, difference in working hours and days, non-availability of authorised officials, etc. also delays and affect trade related activities. But it may be pertinent to mention here that such interruptions and deferrals in the timely trade procedures, results in the opportunities for the local economy. Such postponements have helped the local businesses to flourish to a great extent. Potential to raise bilateral trade relations between Bangladesh and India is huge as can be estimated from various factors. From the above discussion we can conclude that if the mentioned problems get solved, bilateral trade can touch high heights.[15]

Conclusion:

By improving trade infrastructure and services through progressive reforms, both countries are found to gain enormously. Bilateral trade in about 60 high potential commodities, which match export capacity and import demand in each other's markets, could raise trade volume by about US$1.2bn per annum, which is more than 20 percent of the current volume of bilateral trade. To enhance trade both countries have initiated several measures.[16] Some of the important steps taken were the introduction of the joint working group and other joint study groups which work on resolving issues related to border crossings, standards harmonisation, etc. Although actions have been taken, there still exist a need for accelerating the pace of these committees, introduction of other high level study groups and introduction of various bilateral, regional or sub-regional agreements. Additionally, introduction of more border hats is required to enhance socio-economic benefits, arising for the local economy. This could be an alternative solution to the existing hurdles in the trade system. Such measures can especially benefit the North Eastern Region of India and Bangladesh. In addition to this, the bilateral motor vehicle agreement and an agreement on mutual recognition of standards between India and Bangladesh, both of which are under negotiation, can prove to be beneficial, offering substantial boost to the current bilateral trade scenario.[17]

Opening up of trade further by giving duty-free access to Bangladesh's exports is one important way of bringing about closer economic ties that could help in tackling other bilateral issues. Politically, Bangladesh remains a very important country to India and its potential of becoming an important trade and investment partner in the future could be initiated by exchanges and dialogue between prominent members of civil society in the two countries. Finally, for SAFTA to be really effective it has to offer much more than what other competing regional arrangements are offering to countries like Bangladesh. It should also pave the way for greater regional cooperation in vital areas like energy, infrastructure, human development and poverty alleviation.

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ROLE OF NBFCS IN CHANGING THE LIFESTYLE OF REMOTE VILLAGES OF JHARKHAND- CHALLENGES AND OPPORTUNITIES AHEAD

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Abstract- A Non-Banking Financial Company (NBFC) is a company registered under the Companies Act, 1956 engaged in the business of loans and advances, acquisition of ares/stocks/bonds/debentures/securities issued by Government or local authority or other marketable securities of a like nature, leasing, hire-purchase, insurance business, chit business but does not include any institution whose principal business is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property. A non-banking institution which is a company and has principal business of receiving deposits under any scheme or arrangement in one lump sum or in installments by way of contributions or in any other manner, is also a non-banking financial company (Residuary non-banking company). Microfinance companies, as the name suggests, are financial institutions that provide finances to low-income groups, where the finance requirement is lesser as compared to other sectors of the society. Microfinance Institutions (MFIs), ie small financial institutions, which have provided loan facilities to more than six crore families in the last few years, will play an important role in India's economic growth. A joint report by consultancy firm PwC and the Association of Microfinance Institutions of India states that there has been a sea change in the FFI sector from February 2017 to June 2022. In states like Jharkhand where poverty is high, these institutions provide loans to the poor at affordable rates for business and purchase of daily consumer goods.
In this research paper, the positive changes brought by their financial institutions in the lives of the people of rural Jharkhand have been discussed. Along with this, major anomalies and challenges have also been discussed. ***The paper also explained the impact of non-banking financial institutions on the lifestyle of rural people of Jharkhand, (with special reference to State Capital Ranchi and its surrounding rural outskirts)***

Keywords- NBFCs, MFCs, Jharkhand, Rural Customer, Loan, life style , attitude of villages, social and economic changes, challenges.

Banks and non-banking financial institutions offer loans to common people to spend on household items like TV, Fridge, mobile phones and many other similar products.
It is a matter for us to understand that no one wants to work without 'want' and without physical and mental work, capital cannot be created. I explain this process in another way, if your stomach is full, then you can sleep peacefully. But worrying about your tomorrow's food will not let you sleep but motivate you to plan for next day work.

As a father, husband or head of the household, you want to see your children and wife happy. As the head of the family, seeing them happy can be an important source of your happiness. To get this pleasure, you satisfy their demands – by way of buying a car, a motorcycle, a flat, television, laptop or Android mobile phone.

Android mobile phones are another such thing in today's era, for which you need to spend more money to buy. In such a situation, you go to a loan providing company and try to buy it with its help. ***You and your family's happiness and the joy you feel towards their family is the inspiration around which this whole business flourishes. In many rural areas of Jharkhand, the trend of purchasing consumer goods through loans is developing rapidly. But it is still in its initial stages.***

We can also relate it to the process of urbanization in rural Jharkhand. The way the attraction towards urban lifestyle has increased in all the villages of India and the world, you can directly see its effect in the rural areas of Jharkhand. Now the rural customers want to live life like urban people and want to keep electronics gadgets in their homes to copy the lifestyle of urban people. It may be a kind of imitation process, but it is also a reality or necessity which you cannot ignore. Indeed, the gap between urban and rural areas in terms of lifestyle is reducing rapidly. And, financial institutions have a huge contribution in promoting this process. We can see the speed with which Non-Banking Financial Institutions are expanding in rural areas.

During the course of my research work I observed that one of the major reasons for this is that their customers in rural areas can mortgage their land to the banks and non-banking financial institutions, operating in rural areas. Tribal people are usually very simple and honest, doing business with them is not very risky for these agencies. On the contrary, in urban areas many times customers fool these agencies through fake documents.

But, there are many such problems in rural areas which have become very difficult for these agencies to counter. For example, loan is not considered a normal transaction in rural areas, people prefer to take loan from bank or any person under great compulsion- especially on the occasion of daughter's marriage, death or illness etc.

I observed that people in rural areas of Jharkhand consider loans as socially wrong. People who take loans are considered low in the society. If a person wants to buy a motorcycle by taking a loan from the bank in our villages, then he does not tell anyone about the loan. In our villages, motorcycle, TV, fridge etc. are status symbols. These are displayed in the form of social status.

Table1- villager's opinion about NBFCs in rural outskirts of Jharkhand

Statement		**YES**
I.	Do you prefer to take loan from the non-banking financial companies (NBFCs) for the purchase of household items?	7%
II.	Have you ever taken a loan from any NFBCs for the purchase of household items?	3%
III.	Do loan companies commit hooliganism at the time of recovery?	70%
IV.	Will you ever take a loan from any NFBC for the purchase of household items in future?	10%
V.	Are their interest rate affordable?	10%
VI.	Do they give complete information while giving loan?	3%
Sample Size-200, Area- Ranchi District, Jharkhand		

The above table clearly shows that the NBFCs will have work hard to win the trust of rural customers of Jharkhand. As per my survey findings, only 7 percent rural customer of Jharkhand prefer to take loan from the non-banking financial companies (NBFCs) for the purchase of household items. Only 3% respondents opined that they had taken a loan from any NFBCs for the purchase of household items. 70 percent respondents believed that loan proving companies commit hooliganism at the time of recovery. Only 10% respondents confirmed that they will take loan from any NFBC for the purchase of household items in future. Only 10% percent respondents believed that their interest rest is affordable. As per my survey findings only 3% respondents opined that loan providing companies give complete information at the time of giving loan.

Above table clearly show that rural customers are not much accustomed to loans from NBFCs and They have many reservations in their minds about the loan.

In such a situation, if someone wants to buy all these things by taking a loan from the bank, then the society does not give importance to it. Sometimes they are even made fun of. For this reason, people in rural areas do the work of taking loans secretly and do not let anyone know about it. In India as well as in all the countries of the world, the stories of the cruelty of moneylenders are famous. Many films have been made and plays have also been written on this subject. Hundreds of incidents of enslaving people, capturing their wives and children, brutally beating them, socially harassing them and taking possession of houses, livestock, land and other immovable properties still give us goosebumps.

In such a situation, anyone who has seen or heard about the orgy of moneylenders, refrains from taking unnecessary loans. In India, the government has completely banned the illegal moneylenders. But, still the atrocities on the borrowers do not reduce. Non-government agencies that do loan business often hire recovery goons, who illegally collect loans from people by threatening them. This is a normal process and more or less everyone knows about it and also indirectly accepts its necessity.

In spite of all these shortcomings, the financier agencies are bringing radical changes in the standard of living of the people. Today even the poorest of the poor man has an Android phone, the cost of which ranges from ₹15,000 to ₹50,000. He can never have so much money together. But, with the help of these financial agencies, they are using this type of mobile phone.

Mobile phone is not merely a thing of entertainment or hobby in India. Rather, it is a very important means of meeting business, economic, social, political, cultural and personal needs. Dialogue has a big contribution in the stream of development that is taking place in India. To reach the last person of the society, the government has used Android phone. Android phone is the medium of development process, ithout which today's rural India cannot be imagined.

Whether it is a matter of direct delivery of government grants to the people, there is a need to communicate directly with the farmers and the poor, to know about their experiences, their problems and advice, mobile phones have emerged as an important medium.

Apart from this, Android phone has emerged as an important medium to solve the problem of law and order, roads, bridges, farms, schools etc. in rural areas. Android phones have helped in taking banking to remote rural areas. And the contribution of non-banking financial agencies in all this cannot be forgotten. The reason for this is that the poor man buys that phone with the help of these agencies. And gradually with the help of that phone he increases his income. For that poor man, things like social status, luxury, and show off are not as important as livelihood and basic facilities of living.

Important information related to education, health, nutrition, training is being sent to rural areas with the help of mobile phones by the state and central governments. A villager is directly sending his produce to the markets of the world with the help of phone.

If we go to the rural areas of Jharkhand, there are visions of severe poverty, starvation and malnutrition. At many places the situation is so dire that any sensitive person would be distressed. It is very important that in rural areas, especially in remote rural areas of Jharkhand, youth should be made aware of education and employment before buying luxury items like motorcycles, cars.

If they do not have employment, then they will buy a motorcycle by selling the land of their forefathers. In this way, not only will the land of their ancestors go out of their hands, but their cultural identity and their connection with the land will also end. While working in tribal-dominated areas, non-banking financial companies should keep in mind that they should be aware of the social values of these areas and positively affect the lifestyle of tribes. Many times the agents of these agencies grab the lands of the rural tribal youths by showing them a verdant garden of very expensive phones and expensive vehicles, and when the poor youths are unable to repay their loans, they get their lands auctioned. In this way, we see how tribal youth get separated from their land, cultural identity, their village and their roots by falling in the trap of these loan agencies.

As a researcher it is very important for me to look at those aspects which have not been discussed till date. When we study the activities of non-banking financial institutions in tribal-dominated states, apart from their socio-economic impact, we need to make a study on their cultural ecosystem as well.

Since the beginning, tribal society has been dependent on forests and other natural resources for its needs. Jharkhand's forests, mountains, rivers, waterfalls and its fertile soil have been fulfilling their needs. But the activities of moneylenders, non-banking financial agencies have always been affecting their lives in a dangerous way here. We remember the Dharti Aba Brisa Munda who is considered the God of Jharkhand. We also remember the movement done by him against the moneylenders. In the British Raj, the moneylenders had started usurping the land of the poor tribal in exchange for small loans. As a reaction to which a huge mass movement had spread in the entire Kolhan region. After learning from this incident, the then British government had put a complete shape on the activities of the moneylenders in this entire Kolhan region and punished them as well.

Many people believe that today once again in the rural areas of Jharkhand these moneylenders are misleading the youth in the form of organized loan companies and giving loans by mortgaging their land, farm, house, livestock, gold ornaments etc. And, gradually when are going to their lands. It needs to be noted that profit does not mean 'greed' and no profit should be so big that it destroys thousands of years of kinship and connection of poor tribal with their water, forest and land. Tribes are human beings dependent on natural resources since the beginning. Any major change in their natural life style could be big setback.

Jharkhand's mountains, forests, rivers, fertile land is able to meet their needs, but modern society has affected their standard of living and the consumerist culture is slowly making a home in their mind, so they are also moving towards urbanization. Slowly getting attracted. It is an important product of globalization, it is a process. Which can be slowed down but cannot be stopped.

That's why it is necessary that the people living in the forests of India should be gradually brought on the main road. But, all this should happen gradually and under natural process. Otherwise the situation would be like if you put an illiterate tribal from a remote rural area in an aeroplane, and leave him alone on the streets of London.

Conclusion

NFBCs in India are bringing a paradigm shift in the lives of people. They not only fulfill their financial needs but also provide them opportunities to lead a better life in the society. Banks do this work in urban areas but in rural areas this work is done through NFBCs. These NFBCs agents have access to illiterate people of remote villages of Jharkhand. They are able to communicate with these villagers in their language and understand their financial needs. With the help of these institutions, villagers can buy things related to their business and lifestyle. Due to government control, now these institutions cannot charge arbitrary interest from these villagers. They cannot even forcibly occupy the land of the poor. Practically, now these institutions are molding themselves according to the rural needs of the state. If you go to the rural areas of Jharkhand, you will find an abundance of motorcycles, four wheelers, mobile phones, TVs, fridges bought on loan.

The countryside of Jharkhand is developing into a huge market for consumer goods. But to take full advantage of this, NBFCs will need to bring more humanity in its activities. Serious efforts will have to be made to win the trust of the villagers. They will have to make even more efforts to make their business socially acceptable. There will be a need to rationalize the interest rates.

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PESA ACT 1996: A GROUND REPORT

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Abstract: (With the passing of 73rd Constitutional Amendment in 1993, the Panchayati Raj Institutions secured constitutional status but this amendment did not apply to Scheduled Areas under Article 244 of the Constitutions. The Panchayat Extension to Scheduled Areas Act (PESA Act.) 1996 envisages the establishment of village Panchayat as self-governing institution. The basic provision of the PESA is aimed at facilitating participatory democracy in tribal areas by empowering the Gram Sabha to manage and control its own resources. The Gram Sabhas are given special functional powers and responsibilities to ensure effective participation of tribal communities in their own development in harmony with their culture so as to preserve/conserve their traditional rights over natural resources including land, water, forest, minerals and bestow ownership rights of Gram Sabha over Minor Forest Produces.

The key findings of the paper show that in the scheduled areas, the enactment of the PESA Act. has been emerged as an important landmark for making Panchayat effective and inclusive. The Gram Sabhas have emerged as one of the most important grassroots institutions.)

Key Words: Gram Sabha, PESA Act., Tribal Communities, Political Participation.

Introduction: Tribal people are living all parts of India having their own distinct culture, traditions and customs. They always lead a very simple life and try to cater their needs within their own living areas. Tribals are ethnic group, geographically isolated or semi-isolated and they are living in a particular territory, having distinct social, economic and cultural practices. Generally, the tribals are lover of nature and they earn their livelihood by hunting, cultivation of land and as well as collecting minor forest produce such as mahul flowers, gum, wood, kendu-leaf, sal-leaf and other forest produces. They believe in barter system of economy by which they exchange their commodity with their own society and happily lead a very satisfied life. It is observed that now-a-days, most of the tribal sell their own collected forest produce in the nearby towns and purchased their own essential commodities. They also involve in manual labour in the nearby urban areas with a very cheaper rate to maintain their day to day life. The tribal are list concerned about their savings for own social security. They always remain as marginalized.

It has been observed from past that tribals are exploited in different period of time. Since colonial period to until today they are struggling hard for their own bread and butter. Under the colonial master the tribals were given some sort of employment in casual periodical works on daily wage basis in various departments like forest and Public Works Departments. But, after passing of Land Occupation Laws, Laws for regulations of money-lending and prevention of alienation of tribal land the lives of the tribal became more complicated. The uneven distribution of land was started from British period and the British Government took the ownership of agricultural and forest land in their own hands by depriving the tribals. The educated upper caste people by dint of their farsightedness entered into the British Administration with high posts of employment opportunities. Gradually, they pleased the British authority and grabbed land and became well to do people in the society leaving the tribal people far back. But, the tribal people who always believed in shifting cultivation for centuries with a firm belief in their customary practices remained as labourers.

The tribal resentment culminated into strong protest movement for their own rights. So many prominent struggles like the Chhotnagpur Tribal Revolt (1807-08), the Munda Rebellion (1832,1867-90), the Kolha Rebellion (1831-32), the Santhal Rebellion (1885-86), the Rampa Rebellion (1879-90) and the Madrri Kalo Revolt (1898) under the leadership of the great leaders like Kanu, Sindhu Murmu and Birsamunda who dedicated their life for the larger interest of the tribal communities.

Objectives of this Research Paper: The core objectives of this research paper are to highlight how the PESA Act. is working in the scheduled areas of Odisha and in what extend it is providing adequate opportunities to Tribal communities in participation and decision making power in Panchayati Raj. With this back drop, the present research paper, further, attempts to examine the role of Gram Sabha in the functioning of PESA Act. in scheduled areas of Odisha in respect of;

1. Control over money-lending,
2. Matters of prohibition or regulation or restriction of the sale and consumption of intoxicants,
3. Ownership of minor forest produce (MFP),
4. Land transfer,
5. Regulation of village market.

Post-Independent Constitutional Development and Tribal Communities: After independence, the Government of India gave top priority for the upliftment of the tribal communities and set national agenda for the rights of the tribals. Both the union and state governments initiated a number of plans and policies to bring a radical changes in the socio-economic conditions of these primitive communities. Our constitution also directs the state to safeguard and promote the interest of scheduled tribes. Under Article 46 of the Directive Principles of State Policy, the state shall promote with special care, the educational and economic interests of the weaker sections of the people, and in particular, the scheduled castes and the scheduled tribes, and shall protect them from social injustice and all forms of exploitation. A number of provisions have been laid down for the growth and development of the tribals which includes:

a) A minister shall remain incharge of tribal affairs in the states like Bihar, Odisha, and Madhya Pradesh.

b) Special powers are given to the Governor of a state in the fifrth scheduled of the constitution, who is required to submit an annual report to the President of India on the administration of Scheduled Area of the state.

c) The Governor, by notification, can direct any Act. of Parliament not to be applicable to the scheduled area or shall be applicable with due modification as he may specify with due approval of President of India. Besides, he will have powers to make regulations prohibiting and restricting transfer of land by scheduled tribes in scheduled area.

d) Further, the constitution also provides for transfer of funds to states out of the Consolidated Fund of India for development work leading to welfare of scheduled tribes under Article 275 of the constitution.

e) It has been clearly mentioned in the Article 339 of the Indian Constitution that the overall control of union government over administration of scheduled areas and welfare of scheduled tribes.

f) The President of India is empowered, by order, declare any area/areas to be scheduled areas and can scheduled such areas or increase or decrease or cease such areas by order made on his behalf.

Brief Profile of Tribals in Odisha: Odisha is situated on the eastern coast of India and it lies in the tropical zone from 17.49N to 22.34N latitude and from 81.27E to 87.29E longitude having a land area of 1, 55,707 Sq.Km. Its boarders are adjoined with West Bengal in North-East, Bihar in the North, Madhya Pradesh in the West and Andhra Pradesh in the South and the Bay of Bengal in the East. The state of Odisha is the ninth largest state by area in India and eleventh largest by population. In ancient period Odisha was popular in the name of Kalinga, Utkal or Odradesha whose existence was believed to have flourished over two thousand years ago. Odisha emerged as an autonomous political and geographical entity in 1936. The state possesses a rich cultural and natural wealth with beautifully built temples, colorful handicrafts, intricately hand-woven fabrics, and breath taking tourist spots. The Jagannath Temple of Puri, the Sun Temple of Konark, the Lingaraj temple of Bhubaneswar, the Barabati fort of Cuttack are the places of ancient archaeological importance in India. Odisha is a state having abundant natural resources having forest, river, ocean, and mining with a huge number of tribal communities. The population of Scheduled Tribes (ST) and Scheduled Castes (SC) in the state is 9590756 and 7188463 respectively. The ST population constitutes 22.84% of the total population of the state and 9.19 % of the total tribal population (104281034)

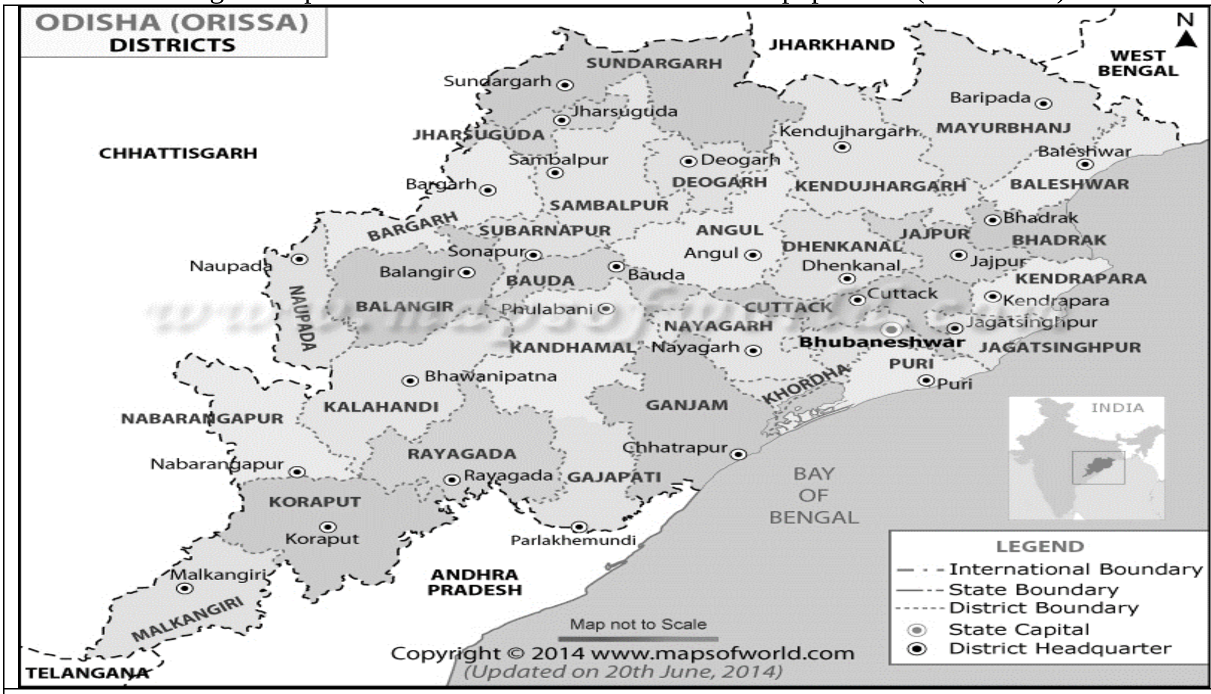

Fig. () - Map of Odisha.

of the country. The SC population constitutes 17.1% of the state and 3.6% of the total SC population of the country. Looking into the Development Index, the Hon'ble President of India, during 1956 declared 62 different tribal communities of Odisha as Scheduled Tribes out of which 13 are considered as Primitive Tribal Groups recognized as particularly Vulnerable Tribal Groups (PVTG) for special treatment. Further, the Scheduled Tribes in Odisha speak as many as 74 dialects.

The PESA Act. 1996: Scheduled areas in India are constituted by taking the tribal population. The tribal people are governed by themselves with the natural resources surrounded in their living areas and they always pay respect to their own ancient tradition, customs and culture. But it has been observed that with the advancement of the modern age their institutions of self-governance are eliminating from the society. Hence, there is a great challenge that how the tribals join hands in the national mainstream without neglecting their own age old traditions and customs and without hampering their socio-economic milieu.

The passage of 73rd Amendment Act. in 1992 marks a new era in the federal democratic set up of the country and provides constitutional status to Panchayati Raj Institution. This Act came into force in April, 1993 and accordingly all the state governments amended the laws relating to local self-government. This Constitutional Amendment has greatly contributed to the political participation of women and marginalized communities in the rural society. However, the 73rd Amendment Act. was not applicable to the Scheduled Areas and excluded from the purview of the Act. As per the provisions laid down in the Article 243M (4)(2), Parliament may by law extend the provisions of Panchayat to the Scheduled Areas, subject to such exception and modifications as may be specified in such a law. Hence, all over India there was a great hue and cry among the tribal people. Just to bring out an amicable solution to this problem, the Central Government constituted a Committee on 10th June, 1994 under the chairmanship of Sri Dillip Singh Bhuria, the then Member of Parliament to suggest salient features of Panchayat laws to be extended to the scheduled areas of the country. The committee, after discussing the issues emanating from the terms of references and considering various aspects of the subjects, submitted its report in January, 1995. The parliament enacted PESA (The Provision of Panchayat Extension to the Scheduled Areas Act.), in 1996 in conformity with the traditional tribal practice of local governance to cover that Scheduled Areas. It becomes a very powerful law so far as the development of tribes is concerned. This law also provided an opportunity to protect their tradition and custom. Further, this Act gives enormous power to Gram Sabha to work as autonomous body to take decision to monitor forest products, minerals, etc. This Act was implemented in nine states like, Andhra Pradesh, Chhatishgarh, Gujrat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, and Maharashtra.

Salient Features of PESA Act. :PESA is a very unique Act. which gives ample opportunities to tribal people to participate in the grassroot level politics. The essential features of this Act. are :

(1) The laws must be formulated in the Panchayats for the Fifth Scheduled Areas shall be in agreement with the customary law, social and religious practices and traditional management practice of the community resources of its inhabitants.

(2) Under PESA Act. the Gram Panchayat has been entrusted to carry out most important works for the progress and prosperity of the tribal communities, which includes:

(i) Mandatory Powers of Gram Sabha:
- a. Management of Community Resources,
- b. Approval of all plans/projects
- c. Identification of beneficiaries
- d. Issue certificate of utilization of funds

(ii) Discretionary Powers to Gram Sabha or the Panchayat at appropriate level:
- e. Priority mandatory recommendation for acquisition of land and rehabilitation and reconstruction in scheduled areas.
- f. Prior mandatory recommendation for grant of prospective license or lease for mining minor minerals.
- g. Prior mandatory recommendation for grant of concession for exploitation of minor minerals by auctioin.

(iii) Mandatory Powers to Panchayat at appropriate level:
- h. Planning and management of minor water bodies

(iv) Power to Gram Sabha and Panchayat at appropriate level:
- i. Ownership of minor forest produce
- j. Control over money lending
- k. Manage and regulate village markets
- l. Control over manufacture, sale and consumption of intoxicants, and
- m. Prevent land alienation and restore alienated lands
- n. Control over institutions and functionaries in all social sectors
- o. To control local plans and resources for such plans including tribal sub plans.

Implementation of PESA Act in Odisha: The Ground Report- The parliament of India passed the Bhuria Committee report by a thumping majority of votes and this Act was implemented in 24th December, 1996 all over India. Accordingly, the then Odisha government also followed this Act. with later and spirit and the Odisha Gram Panchayat Act 1964, and Odisha Zilla Parishad Act 1991 gave due regards to all the provisions of the PESA Act. In Odisha the PESA Act was covered total seven districts including Mayurbhanj, Sundargarh, Koraput, malkangiri, Rayagada, Nowarangpur, and Kandhamal in full and Keonjhar, Gajapati, kalahandi, Balasore, Sambalpur and Ganjam in part spread over 1966 Gram Panchayas in 118 Blocks in full and 3 Blocks in part. Accordingly, 24734 Wards out of 87542Wards, 1966 office of Sarpanch out 6234, 1965 offfice of Panchayat Samiti Member out of 6233 and 256 Members of Zilla parishad out of 854 come under the Scheduled Area. Elections to these offices were conducted as per the provisions of the PESA Act.

The Government of Odisha is strictly following the PESA Act. to provide a better governance to the tribal communities in ensuring control over natural resources, granting licences for minor minerals and their exploitation and acquisition of land by government for development projects which proposed to enforce Gram Sabha. Further, the reservation of seats is also provided to Scheduled Tribe people in Scheduled Areas and it has been done in proportionate to their population.

A Report on Ground Realities:

As per the PESA Act. the five most important issues like, Money Lending, Consumption of Intoxicants, Minor Forest Produce, Land Transfer and Village Market must be ensured properly for the larger interest of the tribal communities.

A. **Money Lending:** The Odisha (Scheduled Areas) Money Lender's Regulation 1967 has been amended by the Odisha (Scheduled Areas) Money-Lenders (Amendment) Regulation, 2000 (Regulation 1 of 2001). This amended act strictly states that no money lender shall advance loan to any person belonging to a scheduled tribe, except on the prior recommendation there of the concerned Gram Panchayat accorded with the concurrence of the Gram Sasan. If a money lender wants to advance a loan to any scheduled tribe people he must send a proposal to concerned Gram panchayat for its permission. The concerned Gram Panchayat going through this proposal must inform the money lender within 45 days of its acceptance. If the Gram Panchayat fails to communicate its own recommendation with the stipulated period it would be presumed that the Gram Panchayat has accorded its willingness to carry forward this proposal. If it refuses to accord required recommendation, it must communicate the reason there of in writing, to the money-lender (Section 7-A).

The ground level situation reveals that though the maximum tribal people are illiterate and not wellversed with the rules regulating money lending and the role of Panchayat under PESA Act. It has been observed that money lenders are doing this business in verbal understanding among their friends and relatives. People are getting loans in the form of cash and kind (paddy). In both the cases they have to pay a long sum amount of interest. A number of SHGs have been formed in the scheduled areas and people are also getting loan from it. Some people are also advancing loan from Co-Operative Societies to purchase fertilizers and manures. The study finds that PESA Act. could not abolish the role of money lender in toto in the scheduled areas and personal loaning is still in force.

B. **Consumption of Intoxicants:** The tribal people are fond of liquor which is made of with their forest products. Generally, they use this liquor at night to relief their physical labour rendered during day time. The PESA Act. provides that there must be licensing liquor shop in the scheduled areas to provide liquor to the people.

The Government of Odisha has amended the Bihar-Odisha Excise Act 1915 in 1999 (Act 2 of 1999). In this Act it has been categorically mentioned that no license could be granted in the scheduled areas for manufacture, possession or sale, or any exclusive privilege for manufacture or sale, of any intoxicant, except with the prior approval of the concerned Gram Panchayat accorded with the concurrence of the Gram Sasan. In this context it is mandatory that before granting any license for the above purpose the competent authority must refer this proposal to the concerned Gram Panchayat for its decision within a period of thirty days of receipt of such application. However, if the Gram Panchayat fails to take an appropriate decision in this regard, it shall be deemed that concerned Gram Panchayat has expressed its willingness for the proposal.

The field study report reveals that very often the Gram Sabha is summoned to have a prolonged discussion on opening of liquor shop. It has been observed that the educated tribals are not in favour of opening of any liquor shop where as resolution is sometimes passed against people's opinion. The Panchayat authority also put pressure on ward members to sign such resolutions. Further, the ward members are blindly put their signature in the resolution as almost of them are unaware of the PESA Act thoroughly. Some Sarpanchs also intentionally delay the consent letter of the Panchayat for which the proposal of opening the license liquor shop is automatically rejected. It is a matter of great surprised that in some areas illegal liquor shops are opened with the knowledge of Sarpanchs and licensed liquor shops are opened without the knowledge of the people. The panchayat authority may be biased by the liquor-license applicants by getting some monetary benefits. The main finding of the study is that the elected representatives of the scheduled areas must be wel-conversent with the PESA Act. so that the real implementation of the Act. can be successful.

C. **Minor Forest Produce:** The tribals are the lover of the nature and they live in the forest areas. They always depend on forest produces for their livelihood. As per Odisha Gram Panchayat Minor Forest Produce Administration Rules, 2002, Panchayats are to regulate collection and trading of Minor Forest Produce vide Gazette Notification No. 2091, dated 15.11.2002. The Gram panchayats entrusted to overall responsibilities to regulate collection and sale of 69 items of Minor Forest Produces. This legal provisions will certainly facilitates the sellers to ensure payment of fair price. This system will also provide a better marketing network for trading in minor forest produce. Further, these legal provisions will reduce the monopoly of the middle men in minor forest produce and it would considerably check the exploitation.

   The real grassroots situations in the scheduled areas are quite different. It has been observed that most of the people are completely ignorant about the Minor Forest Produce rules. There is no mandatory provision for the registration of traders in the concerned Gram Panchayat. The traders are freely moving in the scheduled areas and it is their monopoly to fix the price of the commodities. The people have no idea that the prices would be fixed by the Gram Panchayat uniformly and thereby they easily accept the traders' price while selling their goods. In most of the cases the traders' get advantage in getting goods from the innocent tribal people in a cheaper price and get huge profit on it. People never follow the price list fixed by the Gram Panchayats which is display in the office of the Gram Panchayat. So far as the registration of traders is concerned the Gram panchayat has little role to play. The Gram Panchayat simply collects rupees one hundred from the traders as registration fee and never monitor the activities of the traders in procurement of minor forest produce in the panchayat areas. Further, the panchayat functionaries argue that they cannot do more than this work as they have no scope with appropriate power to control the minor forest produce trade.

D. **Land Transfer:** From the colonial period the tribal communities are demanding that they must have complete rights on their land. Their land should not be transferred to other non-tribal communities for other reasons. Looking into all the aspects, the PESA Act put emphasis to prevent alienation of land and restore unlawfully alienated land of scheduled tribes. Under Odisha Scheduled Area Transfer of Immovable Property (OSATIP), Regulation 2 of 1956, the tribal land can not be transferred to non-tribal people. But it is a matter of great regret that the same is found in the scheduled area and the tribals are deprived from their own land. Looking into the veracity of the situations, the law has been amended in 2000 wherein adequate provisions are made so that the ST lands cannot be transferred to non-STs. Hence, the land transfer from tribal to non-tribal has been stopped since 2002 by amending 1956 regulation.

E. Village market: The PESA Act clearly directs the Gram panchayat for the management of village market. In the scheduled areas the markets are found in each and every Gram Panchayats. It is observed that the markets are regulated directly either by Panchayats or by Panchayats through auction or by cooperative society.

Remedial Measures: In order to bring a reform in the scheduled areas to provide a better governance to tribal communities through PESA Act., the following pertinent issues must carefully be addressed.

i. The panchayat functionaries must have a through knowledge about the PESA Act. The government must arrange extensive training and awareness programmes at block and Gram Panchayat level to have a broader knowledge regarding the Act.
ii. The Panchayat functionaries must identify the illegal money lenders and for their illegal works they must be punished legally.
iii. So far as the opening of liquor shop is concerned the local leaders must be vigilant and their views must be taken into account while giving permission to do so.
iv. The Gram Panchayat must be given adequate power to deal with the illegal traders' activities in Gram Panchayat.
v. Tribal has to be trained in managing and selling the forest product.

Conclusion:

The Government's efforts to uplift the tribal communities through PESA Act. is a very nice initiatives but it requires a holistic effort for its implementation. A strict vigilance is required for its stakeholders as well as the government for its successful implementation. Certainly, this Act. can overcome the multiple problems of the tribal communities in a bigger way and they can able to participate in the grassroot governance without any hesitation. PESA Act. is emerging as a powerful instrument for the larger participation and decision making power of tribal particularly in Panchayati Raj administration in the scheduled areas.

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PERCEPTION OF MANUFACTURERS AND RETAILERS TOWARDS GST

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Abstract- GST- Goods and Service Tax introduced in India on 1st July, 2017 with purpose of unifying the Indirect Tax System which was complicated because several taxes were imposed before 1st July, 2017. GST simplify the Indirect Taxation System. After completion of 4 years, implementation of GST, where it stands in achieving its objectives and how retailers and manufacturer perceive on GST. Present Study is aimed to evaluate the perception of Retailers & Manufacturers and find out the today's position of GST where it stands in the mind of the retailers and manufacturers and how they analysed the GST according to their interest. This study compares the functioning of the study of GST when it is implemented with considering their vision with the present scenario of the GST and getting their suggestions and queries related to the administration of GST. This research had conducted in particularly area of district Jind, Haryana and total 101 GST registered respondents were selected on the basis of their business type which are retailing and manufacturing. The result shows that about 80% of the respondents were satisfied with the currently administration of GST yet they expect some more things from the government to make the GST more effective and efficiently working which benefits to the retailers and manufacturers as well as to the consumer who is the final step of this type of value addition taxation system, through which he doesn't feel the burden of paying taxes.This study also found some issues which arise after experiencing the GST for 4 years, and the government, should take some necessary actions to these issues and made the GST profitable for all the persons who is linked with it.

Keywords- Indirect Tax, GST, Retailers and Manufacturers, Perception, ITC

Concept of GST-Goods and Service Tax, an important and historical decision made by the Central Government of India for improving the Indirect Taxation System in India. GST was imposed in India on 1st July 2017, by the Central Government of India under the leadership of Prime Minister Sh. Narender Modi. GST was a huge decision to make. After implementation of GST, in India there will be a push towards the Ease of doing business, transparency in the Indirect Taxation system, to curb the corruption and the black money supplies which affect the Indian tax collection and economy as well and promote the business persons to operate their business with honesty. GST was firstly introduced by France in 1954. And now more than 160 countries had adopted GST. In India, the formation and implementation of GST had a history and a long time India awaited for getting its indirect taxation system less complicated and easy to understand or less effort to pay the taxes. In2000, Sh. Atal Bihari Vajpayee was suggested to adopt the GST. An Empowered Committee (EC) was formed which was headed by Asim Das Gupta (who headed the committee till 2011). At that time, Representative from States and Central were requested to examine the ample aspects of GST proposal and give their reports on the threshold, taxation of inter-states and taxation on services. In 2004, a task force was formed headed by Sh. Vijay Kelkar (who was the advisor of the Finance Ministry of India), indicated that the existing taxation system has various issues which can be solved by GST. Vijay Kelkar also suggests single GST rates of 10%.In2005-2006 budget session, the finance minister of that time Sh. P.Chidambram stated that the long term goals of the Government was to implement a uniform GST structure across the country that cover the whole producing and distribution channels. In 2009, the finance minister of that time Sh. Pranab Mukherjee announced the basic skeleton of GST. In 2011, the Congress government brings the GST as 115th Constitution amendment bill in the Parliament but the opposition opposed the bill. So the bill was sent to standing committee for detailed examination. In December 2014 the bill was introduced in Lok Sabha, after becoming the Sh. Narender Modi as Prime Minister, as 122nd constitution amendment and passed in May 2015. In May2015 the bill was presented in Rajya Sabha. And there was a joint committee was made with the members of Rajya Sabha& Lok Sabha. The Selected Committee submitted their report on 22nd July 2015.In August 2016Rajya Sabha passed the bill.In September 2016 after rectification by number of State Legislatures and assent of the President, the Constitutional amendment was notified as Constitution (101st Amendment) Act 2016.In March 2017, GST Council approved the GST. Lok Sabha passed the bill on 29th March, 2017 and Rajya Sabha passed the bill on 6th April, 2017. On 1st July 2017, the GST was enacted as the new indirect taxation system. Because in India, there was ample indirect taxes were imposed by the government [Indirect Taxes like- Custom Duty, Central Excise Duty, Service Tax, VAT (Value Added Tax), Central Sales tax, Local Body Tax (Entry Tax / Octroi etc.)]. A lot of number of taxes created difficulties to the domestic manufacturer and service providers & New Foreign Companies which is to be entered in India Market. India's indirect taxation system was complicated for exercising. After introducing GST, there was a vision to make India 'One Tax, One Nation'. GST implementation in India will boost the ease of doing business (which was 77th rank in 2017 and in 2020 the position was improved to 63rd rank –World Bank).In GST, there are several taxes were included from the previous taxation system in One Tax which some of them are following-

TABLE-1 -Taxes imposed and collected by Central and State Government in India

TAX	Taxable event in pre-GST regime	Rate(till 1st July 2017)	Imposed by	Collected by
Central Excise	Manufacturer of Goods	14%-16%	Central Govt	Central Govt
Service Tax	Provision of Services	15%	Central Govt	Central Govt
Customs Duty	Import of Goods	5%,15%,25%,35%, 45%	Central Govt	Central Govt
Central Sales Tax	Inter-state Sale of Goods	2%	Central Govt	Central Govt
Sales Tax/VAT	Intra-state sale of goods	12%-15%	Central Govt	Central Govt

Source- (Nayyar A. and Singh I., 2018)

In GST, there taxes are divided among various tax slabs which are- Nil, 5%, 12%, 18%, 28% for different types of products and services. All the previous taxes which are mentioned above merged in one tax. "Presently the tax is at two points i.e., when the product moves out from factory and other at the retail outlet.*"* **Rupa(2017)**

TABLE-2 (Tax Rates)

Different Rate	Inter-State Supply	Intra-State Supply	
	IGST	CGST	SGST/UGST
Schedule-I	5%	2.5%	2.5%
Schedule-II	12%	5%	5%
Schedule-III	18%	9%	9%
Schedule-IV	28%	14%	14%

Source- **https://cleartax.in**

GSTR (GST Return Filing)–A GST return is a document containing details of all income/sales and/or expense/purchase which a taxpayer (every GSTIN) is required to file with the tax administrative authorities. This is used by tax authorities to calculate net tax liability. An individual can register himself under section 22 of CGST ACT 2017.An individual who have registered in GST allowed to file his GSTR in following position-

1. Purchase of Raw materials.
2. Sales of Finished Products.
3. Input Tax Credit (which is paid at the time of purchase of materials which is used in finished products).
4.

Input Tax Credit- Input tax credit means that tax which you had been already paid for purchase of raw materials (inputs). It means it deducts that amount of taxes which the assessee had paid and to pay the remaining amount of taxes.

Conditions to claim Input Tax Credit-Input tax credit can be claimed after fulfilling some conditions which are –

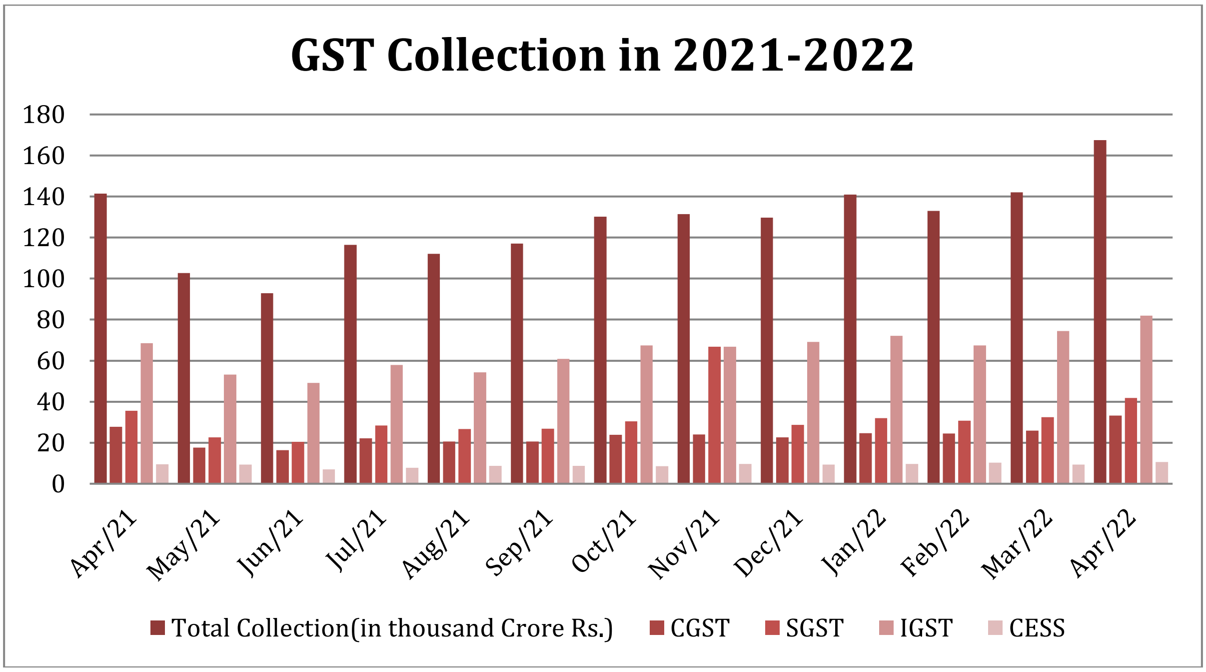
The dealer should be in possession of Tax invoices of the goods & services and he should have confirmed that the goods & services have received.The returns must be filed by the assessee.The taxes have been paid by the supplier which the government has imposed on him on the goods which he supplied.When the goods have been received by the assessee then he can claim the ITC. If the assessee has claimed the depreciation on Capital Goods then no ITC will allowed to him.

The Central Government had a vision to curb the tax avoidance with the Input tax credit. But in fact some trades have found some ways to evade the tax in fraudulent manners. There is total Rs. 37.48 thousand crores of bogus ITC had claimed between 2018-2019 and 2020-2021 which is 1.06% of the total GST collection in these years.

Documents required to claim Input tax credit-There are various documents through which ITC can be claimed. Invoices which are issued by a supplier of goods or services or both. Invoices which are issued by recipient along with the proof of the payment of taxes.A debit note issued by supplier. Revised Invoice. After increasing the tax evasion cases now the GST Council has decided to physical verify the GST registered firms and collect the information accordingly. In case of any frauds, it is easy to access the transactions and by whom the transactions are made and to whom the transactions are made.

Reverse Charge Mechanism (RCM)-When a supplier of goods/services is liable to pay the taxes to the government, is called **Forward Charge Mechanism (FCM)**. But when the recipient/buyer of goods/services are liable to pay the taxes to the government, is called **Reverse Charge Mechanism (RCM).** Normally FCM levy on the registered seller but RCM can be levy on purchasing of goods/services by the unregistered recipients. These goods/services are notified in Notification NO. 4/2017 regarding goods and Notification NO. 13/2017-CT regarding services, dated June 28, 2017.

Composition Scheme- Composition Scheme is an alternative method of levy of GST to give benefits to the small traders whose turnover is low and giving them lower compliance. Traders in specified goods who have turnover upto Rs.1,50,00,000 per annum can choose composition scheme of payment of tax @ 1% (CGST-0.5%+ SGST/UGST-0.5%).And some specific states have the the limit for the turnover of Rs.75 lakhs. And these specific states are Arunachal Pradesh, Maipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Uttrakhand. Anyone who takes benefits of Composition Scheme should aware about some disadvantages of this scheme. That person who is enjoying the benefits of Composition Scheme is not allowed for Input Tax Credit. Under this scheme that seller can't recover composition tax from their buyers. The Composition Scheme user can't trade in inter-state. Thus it means it restricted the business geographically.



Source- https://pib.gov.in

Review of Literature-

Maji and Giri (2016) studied with some tax professionals and explained the GST is better indirect taxation system from the previous taxation system which is not going to affect the revenue shares of the State and most of the houses wanted to implement GST as soon as possible. And the uniform structure of the GST will help to ease of doing business and give the multiple benefits to Indian economy with positive effect economic growth, share market etc. Lourdunathan and Xavier (2017) studied on Goods and Services Tax Prospectus and Challenges and used the secondary data in their research and concluded that GST will bring "*One Nation and One Tax Market*". There is also relief provided to the producers and consumers to setting-off the input tax credit, service tax and the several taxes. And the main challenge to implement the GST was the demonetization, because the demonetization had a huge impact on economy and several experts stated that the time of the implement GST was not suitable for the Indian economy. Rupa (2017)studied 'GST in India: An Overview' and found that after the implementation of GST there would be an easiness to commence the business, because the procedure for registration in GST is centralized and standardized which was typical before GST. GST will make a boost to the countrywide IT-network and prepare an infrastructure to curb the scams and corruption. In this research paper, a problem has raised in regards of states that they have fear of losing a part of their revenue. Barhate (2017)studied the trader perception in rural areas with a questionnaire of having some problems with regarding the pre GST taxation system. And this paper has a conclusion that the pre GST taxation system had so many complications regarding tax policy, tax rates and reforms and after implementing GST there will be a growth in revenue of the rural traders. It gave them macro benefits for the long time. Banik and Das (2017)studied the impact and challenges of GST in India by analyzing the secondary source of data and as a result it shows the salient features of GST after implementation in India. And it also included GST basic structure just like- Administrative Structure, Tax Structure in simplify manner. Nayyar and Singh (2018) made an analysis on 'A Comprehensive Analysis of Goods and Service Tax (GST) in India' – in which they studied GST in an ambient way & secondary source of data is used and indicates that implementation of GST will show an positive effect on various sectors like- manufacturing, service, telecom, automobile and small SMEs with their research. In this paper there is a brief analysis why GST is important to traders, Government and the consumers. This paper also shows the functioning of GST on product/services how it is levy when it reaches to the final consumer and compared the GST with the old indirect taxation system and conclude that it is how much effective to reduce the tax burden on the final consumers. With the advantages their also focused on challenges like- Tax management and technology infrastructure, taxes rates. Dilip and Vinoth *et al* (2018) studied the consumer awareness and adoption of GST with the primary data collected by the interview schedule in COIMBTORE and secondary data both. The factors – cost and charges, impact on economy and awareness and adoption makes an effect on the consumer buying decision significantly. In this paper they suggested the government to boost the awareness program to rural areas regarding GST. Rathi and Sreeraj (2018) studied on consumer perception on GST with the primary data which is collected by a questionnaire and secondary data which is collected by the books and websites. And concluded that the age, gender, education level and income level doesn't affect the customer's perception on GST and the customers have the positive attitude towards GST. Nandal and Diksha (2018)studied the perception of traders and manufacturers towards GST and collected the primary data from field survey with the help of questionnaire and founded that 73% of their respondents are satisfied with the implementation of GST as indirect taxation. This paper concluded that the GST is beneficial for the long term and transformed the Indian economy as a common economic market. GST will boost the 'MAKE IN INDIA' and 'EASE OF DOING' programs. John and Dauchy *et al* (2018) studied the impact on tobacco products after implementation of GST in India and concluded that after implementation of GST the tax burden on tobacco products has increased by 22% which was 16% in the pre-GST years. In their research there is a finding also arise which is that the consumer start consuming the tobacco products less than before GST era and the impact is differ from state because each state levy different types of compensation cess which also makes the difference in the price of tobacco state to state. Sharma and Sharma (2018)studied the impact on automobile sectors of India after implementing the GST in India. In this paper there is a comparison in PRE-GST rates and POST GST rates of various automobile products and concluded that after implementing the GST there was a hike in prices of goods in Automobile Industry. The prices of goods are not costlier for the consumer but as well as for the manufacturer also. Dalaien and Kasasbeh (2018) studied the impact assessment of Goods and Service Tax on Business and survey was made on the Producer's perception and collected the data by well designed questionnaire from Aligarh, Mathura and Agra. This research paper concluded that the overall burden of tax on goods has reduced and the time of delivery of goods has also decreased because now there is free movement of goods without spending a lot of time at borders of state and also with the less paper work. Ramkumar (2018) studied the perception of Customers on GST and the data is collected by a survey made in Chennai City. The researcher took the participant using FMCG products and concluded that the four tier GST tax rates are made with the taking the interest of the customers in consideration. Vincent (2019)studied the perception of Consumers on GST and data is collected by a survey made in Bangalore city and concluded that the consumers are well aware about GST and they can compare that now they are paying the less tax from the previous taxation system and now the government earns more revenue. Babu (2019) studied the consumer's perception towards GST rates in India and the data is collected by the secondary source of data from newspaper, reputed journals, research studies, books and websites. And in this paper they compared the GST rates with the tax rates on goods before GST (i.e-VAT). And with his studies we find out that the GST rates have made the necessary products costly than the earlier tax system and the exemptions should given in GST to necessary products. Shukla and Kumar (2019)studied the role of trust of online Goods and Service Tax Filing in India and use the primary data collected by the North India Small and Medium sized Enterprises. We concluded that initially implementation of GSTN will be difficult to the small enterprises in filling the returns, understanding the input tax credit system and the composition scheme. But after acceptance of GSTN will be play the significant role. Deb and Debnath *et al* (2020) studied GST perceptions and use primary data collected by the interview method and secondary data is collected by the e-journals, business newspapers and relevant websites. In this paper we conclude that the GST makes a significantly effects to curb the inflation and to evade the tax evasion practices and makes the necessity goods cheaper. And GST provides the structure through dealing with indirect taxation system will be easy. Manjunathan and Afza *et al* (2020)studied the impact of GST on performance of Manufacturing and Service Sector in Bengaluru and data is collected by the primary sources. They analyzed the data in various dimensions and concluded that transparency, problems and benefits dimensions have the positive effect on company performance and clarity, impact and timing dimensions have the negative impact on the company performance. They suggested that the government should revise the GST in more effective manner. Mukherjee (2020) studied on the fiscal transfer between the Central government and State governments with the data provided by the by GST government websites and resulted that there is shortfall in revenue collection of states year by year. With this paper the researcher stress on the defiance of revenue shortfall of States government and he concluded that if there is deficiency in revenue of state government by GST after 2022, it may build up the public debt that will be harmful for state finances which cause to increase in tax rates and non tax revenue. This paper suggested that there will be reduction in the wasteful expenditures to achieve fiscal sustainability. Sharma and Indapurkar (2020)studied the awareness of Small traders, Retailers and shopkeepers and understanding the perception of them towards GST with the help of a questionnaire and collected the data from the areas of West, South and North Delhi. And find out that the government does not help in spreading any kind of awareness about GST to the small traders and their primary source of getting the information about GST is from newspapers, online websites. Yet these traders are convenient to fill the returns with the help of experts (like-CA etc.).We concluded that the government has to take the serious decision in spreading the awareness in small traders about GST. Murari and Chettri (2020) studied the micro, small and medium enterprise in Sikkim and collected the data by primary sources and concluded that the various variables like-procedural & compliance impact, business operations, transparency, business expansion and operational cost perceived a significant impact on manufacturing sector. And the main focus on the policy makers of the GST and suggested that policymakers should fulfill the need and importance of training and awareness activities related to GST.Roy *et al* (2020) studied the consolidated recommendations to change GST patterns fir managing the impact of Covid-19 and collected the secondary data with the qualitative and quantitative data both. And find out that the SME’s manufacturing and retailers from rural and urban both have a large impact on scaling down the operations and lower the demand and supply disruption in the Covid-19 lockdown. And recommend the changes to the government to overcome the impact from lockdown like- extended the dates of the GSTR filing, reduce the tax on raw materials so that manufacture will scale up the business operations. Gopu and Ravikumar (2021)in their article ‘A Study on Collection, Composition And Business-Wise Contribution of GST in India’ - studied the collection in India from 2017-2021 collected from published sources by PIB periodically which shows us that there was an annual growth in the revenue by indirect tax, except in the Corona era (specially the lockdown period in which there were less trade all over India). In this research, the business wise contribution of GST also studied and concluded that Public Limited Company had a large part of the GST collection even they had lower percentage of overall registration in GST.

Research Methodology of the Study-The study is descriptive in nature as well as analytical in nature. This study aims to find perception, attitude and apprehensions of retailers and manufacturers after implementation of GST. For the purpose of the study the primary and secondary data is used. The respondents have been experiencing the GST for 4 years. And now their perception and attitude towards GST have been developed properly and what the effect GST gave to their operations of their businesses. Sampling Technique- For the purpose of the study there are 101 retailers and manufacturers from Jind district of Haryana were selected i.e by applying the convenience sampling technique. In this sample there were differentiate type of retailers and manufacturers are mixed i.e-business types, sales volume, turnover etc.,Primary Data-The primary data is collected by a well-structured questionnaire was made and the questions are chosen from the various journals and some questions are selected in respective of the objective of this research. And the respondents were asked to give their responses on questionnaire with 22 questions.

All the questions were made on the Likert scale and the respondents have to give their responses from the 5 points of the Likert scale with closely ended options starting from strongly agree(1) to strongly disagree(5) . Secondary Data-The secondary data is collected from the various journals, newspapers, official sites, commercial sites and press releases and expert opinion have also been explored. Objectives of the Study- The main objective of this study is to know the perception towards GST of retailers and manufacturers after experiencing it for 4years.

Data Analysis-The data which is collected by the survey is processed in IBM SPSS (Statistical Package for Social Science). And the responses of the respondents converted into numerical form by giving them likert scale 5 points ranking (1- Strongly Agree, 2- Agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree). The descriptive statics is used and mean and standard deviation of data is analysed. And the suggestions made by the respondents and the analysis made on the questions are also included in this study.

The following tables shows the mean and standard deviation of the responses drawn by the SPSS software –

TABLE-4 (Mean and S.D of tables)

S. no.	Statements	N	Mean	Std. Deviation
1	Is the Process of registration in GST is Complicated?	101	4.10891089	1.008969673
2	Is Goods and Services taxation system is easy to understand?	101	2.07920792	0.890877863
3	Do you think that GST brings easiness in filling the return in the Indirect Taxation system?	101	1.9009901	0.911097695
4	Do you think that Government has supported you in transition to GST?	101	2.51485149	1.145546694
5	GST has reduced the cascading effect of taxation?	101	1.76237624	0.58563666
6	Do you think that GST curbs the tax evasion?	101	2.99009901	1.35273833
7	GST has reduced the time in delivery of Goods?	101	2.07920792	0.716703123
8	GST has reduced the material costs?	101	2.00990099	0.768050122
9	Is GST improved the transparency in the indirect taxation System?	101	1.91089109	0.801236668
10	Preparation of bills after GST implementation has become a difficult task?	101	3.74257426	1.016400171
11	Is it difficult to claim the input tax credit?	101	3.54455446	1.109276814
12	Is Composition Scheme beneficial to you?	101	2.34653465	0.853646807
13	Do you think that after implementation of GST the prices of goods and services have increased?	101	2.63366337	1.017081828
14	Does GST increase the accounting record maintenance work of traders?	101	2.98019802	1.122320792
15	GST has increased the burden on Businessman?	101	3.37623762	0.957616679

16	Does GST facilitate the ease in compliance in comparison to the previous indirect tax regime?	101	2.01980198	0.734577403
17	Is GST transformed the Indian economy as a common market?	101	2.14851485	0.726445299
18	After 4 years do you think that the government motto of GST of GST 'One Nation and One Tax' was only a illusion?	101	3.46534653	0.878229542
19	GST improved the profitability of your business?	101	1.91089109	0.58479073
20	Is GST affects your business?	101	2.77227723	0.858850256
21	After experiencing 4 years of GST, IS it really reduce the taxes?	101	2.07920792	0.757405681
22	Are you satisfied with the central Government in Governance of GST?	101	2.316832	0.859426

The responses shows us that the respondents had perceived the diversified thoughts about the GST which can be the according to their business types and their experiences with the GST administrations. For some respondents the implementation of GST came out as an opportunity and for some respondents it made their businesses difficult. After 4 years the respondents are fully aware about the GST and had the knowledge about the GST, how it administrates the indirect taxation. As the responses shows us that now the time all the manufacturers and retailers are fully aware and registered with and accepted the GST as an effective indirect taxation system. The respondents also seems that implementation of GST reduces the cost of the materials and the time of reaching the materials to them which helps them to improve their productivity in manufacturing the goods and brings the finished goods to the market which makes them to meet the instant supply of the goods. The respondents are very happy to gets the transparency in the indirect taxation system which reduces the bribery system which makes the supply of the raw materials and the finished goods from one state to another states. The whose consignment value if exceeding 50000 Rs., have to make the E- way bills on the common portal and furnish the information about goods in part A of Form GST EWB-01. The respondents found that the claiming the input tax credit is easy but there is a fault in the system because there are a large number to credit the fake input tax which losses the revenue of the indirect tax to the government and the government have to make a system which curbs the bogus input tax credit. The respondents also responses in favor to the composition scheme which benefits to the small retailers and manufacturers. And the responses shoes us that the implementation of GST doesn't increased the burden of the preparation of bills and maintaining the accounts and the records of their businesses, with the help of the GST it is easy to keeps all the information in GSTR-1. The response shows usthat the profitability of the businesses has improved. The response also shows us that the respondents are impressed and satisfied with the administration of the GST by the central government.

Conclusion- The study has attempted to assess the perception of the retailers and manufacturers on the GST after experiencing as an indirect taxation system for 4 years and to find out that how these registered persons are satisfied with GST. With the help of the survey it has collected primary data from 101 respondents who are registered with GSTN. It has been found that that most of the respondents were agree that GST is beneficial for them also it will benefit them for long run. In the long run it is also expected to reduce the tax burden of GST on common man. It has made the Indian economy as a common market. GST also increase the managerial activity which benefits the GST registered persons due to maintaining a proper record of accounts.GST has implemented in an effective and efficient way which will gain the revenue of both Central and States through widening of tax base and making an improvement in tax compliances.

After 4 years of experiencing GST now a majority of retailers and manufacturers are fully aware and have fully knowledge of functioning and administrating of GST. In this research we found out that most of respondent gets the knowledge of GST by advertisement and awareness programs made by the government and experts persons like- CA's, tax experts etc. who helped in filing their regular returns.

After experiencing of GST for 4 years, now retailers and manufacturers in India can give their opinion about their experience of GST. The respondents are very satisfied with the implementation of GST as Indirect taxation system because GST brings a convenient way of taxation to them. With the unified taxation system which helps in reducing of cascading taxation effect and the digitally network of GST provides them more transparency between the tax payers and tax authorities. About 82% of the respondents are agreed that with the implementation of GST their time in delivery of goods has reduced because there is no time is taken in the inter states transition of the goods and services with the proper documents of tax paid. And about 83% of the respondents are agreed with the reduction in their material costs after the paying the tax in GST. About 63% of the respondents are agreeing that they don't find any difficulty in taking the credit of their Inputs and around 63% of the respondents are agreeing after implementation of new indirect taxation they don't find any type of burden.

Now the respondents can make the comparison between the previous indirect taxation system and the current taxation system (Goods and Service Tax). They found GST as the best alternative of the previous taxation system because the previous taxation system has the diversified taxes and it made the respondents more uncomfortable at that time, but now GST has the unified taxation system that makes the respondents very comfortable and having an easiness in paying their one taxes which they levy- CGST,SGST,IGST. Around 84% of the respondents are agreed on that the GST facilitate the ease in compliance in comparison to the previous indirect tax regime. And around 88% of the respondents are agreed on that GST improves the profitably of their business from the previous taxation system. And 81% of the respondents are agreed that the GST has reduces the taxes of their products and services are provided by them. And around 68% of the respondents are satisfied with the central government in governing the GST and make amendments and change rules time to time for the benefits of the consumers, retailers and manufacturers and as well as for the government. This study also suggests that there will some improvements made by the finance ministry of India to stop the tax evasions which are practicing on a large scale. In recent there is a decision is made to verify the GST registered businesses physically by the authority to gets the full evidence of any fraudulent transaction made by them or claim the fake input tax credits. Overall we can say that retailers and manufacturers of India have made a positive perception towards GST. And they also perceived that GST will be beneficially for them for the long run and also increase their productivity which helps in making the Indian economy strong and works for the common market and common taxes.

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