

Department of Commerce, Gargi College

Entrepreneurship Compendium

Entrepreneurship • Creativity • Culture



Preface

Entrepreneurship: A word known by many; but, its essence by a relatively few. It is the process of identifying opportunities in the environment & bringing about a change in the conventional way of thinking. It is the ability to see possibilities, make decisions in the face of uncertainty, and manage numerous activities to transform an idea into a successful product that creates profits.

The virtual precincts of Gargi College resounded with triumph and jubilation, as The Commerce Association hosted its first-ever PAN-India, Paper Presentation Competition under the Entrepreneurship Conclave on October 29, 2021. The theme for the conclave was Entrepreneurship, Culture & Creativity.

The Competition witnessed registrations of more than 150 teams belonging from both undergraduate and postgraduate backgrounds from varied colleges. The participants were provided with an out-and-out platform to get a finger on the pulse of the corporate industry and to make the most of it by presenting their proficient research papers related to various topics in the fields of Entrepreneurship.

The Book: Entrepreneurship Compendium has published incredible and original research ideas of the participants which displayed their undying thirst for knowledge, whilst showcasing their immense interest and the astonishing amount of effort put into each of their papers. This book celebrates not only the art of innovation, ideation, and implementation, but also helps in engaging the students to further develop their research skills and foster their ability to think from a global paradigm.

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01

Fin-trepreneurs – Exploring Avenues through Evolution, Revolution and Co-opetition



By Gauraang Phadke* and Suhrud Joshi**

Abstract

Sustained growth of financial markets is a necessary condition for the growth of other sectors. The nature and role of financial markets has changed massively in the past two decades. In a world that is fast-paced and risky, tech products offer a reasonable speed of transaction together with auto-checks for risk. This has created plenty of opportunities for fin-trepreneurs. Internet and digital adoption have taken off across India. This, together with the smartphone revolution, events such as demonetization and the Covid pandemic and an emerging ecosystem of Startup India, incubators, accelerators and venture funds has created an environment ripe for fin-trepreneurship.

Whilst fintech products (based on blockchain, AI, big data) do serve as embedded products that help the financial markets to carry out transactions quicker and in a low-risk environment, some fintech start-ups have stepped out of an 'embedded' role in order to grow into a business segment itself. The former can be called as evolutionary start-ups, the latter (Paytm, PhonePe) are revolutionary ones. In the future, fintechs can survive only if they take a co-opetitive approach. They will have to cooperate and at the same time compete for space with not only financial institutions and banks, but also with agritech, healthtech and edutech start-ups. They will have to design complementary products and price those competitively. The stage is set. Let the battle begin.

Introduction

Necessity is the mother of invention. The world today is moving forward at a high pace. The backbone of this fast-moving world is finance. Sustained growth of financial markets is a necessary condition for the growth of other sectors. The nature and role of financial markets has changed massively in the past two decades. From 2000, wherein banks dominated the world of finance, we have come a long way with stocks, bonds, commodity markets and futures and options thereon ruling the financial markets today. New financial market segments and new financial products have created a

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need for flexibility in the regulatory regime of finance. Concurrently, technology products have been applied on almost all major segments in the economy, including financial markets. The latest update in financial markets is, unarguably, fintech.

Fintech is a combination of two words, Finance and Technology. Fintech focuses on bringing technology into different sectors of finance. From being an update in the financial sector, fintech has become a huge sector itself. Entrepreneurs have seen this opportunity and many fintech start-ups have been making waves in this sector. The old financial machinery of the world has become a bit rusty. Fintech can be thought of the grease that can lead to well-oiled machinery. Fintech solves problems of financial sector through use of technology. Start-ups operating in this segment are basically tech start-ups. They use tech solutions to solve existing problems.

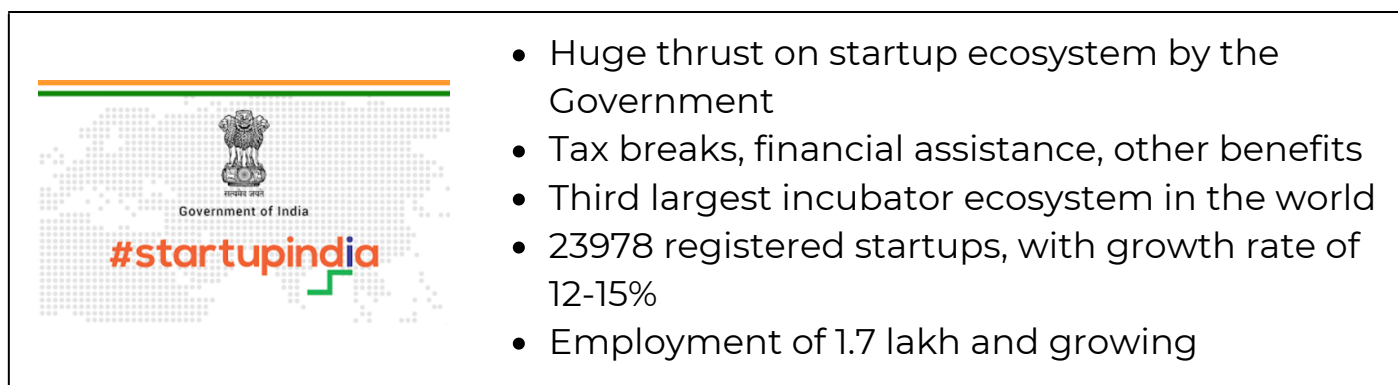
But fintech start-ups are also emerging, not just to oil the existing financial machinery, but also to disrupt the machinery altogether! Such start-ups do not just offer tech products, they change the nature of the basic business itself! In the paper, we take a deeper look at both 'evolutionary' and 'revolutionary' start-ups. We also hint that the upcoming era will go beyond the realm of merely revolutionary start-ups – only start-ups that take a 'co-opetitive' approach will be able to rule the markets. The paper is organized as follows. Section 1 introduces the topic. We offer data insights on fintech start-ups in India in Section 2. Section 3 traces the journey of the finance sector in India from financial intermediation to fintech. Section 4 contains the main idea in the paper. It focuses on how Fintech has changed over, time. The section speaks about Evolution, Revolution and Co- opetition of fintech. It also contains a caselet of Arya Collateral, an Agri-FinTech company. Section 5 outlines the drivers of entrepreneurship in fintech. Section 6 takes creative liberty to highlight potential areas of fintech application in other emerging areas such as education, health and rural areas. Section 7 concludes

Data Insights

The current era can be called a golden era of start-ups. The start-up revolution in India seems to have started after the global recession of 2008.

- According to StartUp India (n.d.), India has the third largest ecosystem of start-ups in the world, with a consistent y-o-y growth of 12-15%. There are 23978 start-ups in India, which create jobs for about 1.7 lakh people in the country. The site is silent on the exact number of start-ups in the fintech space.






Figure 1: Highlights of StartUp India



Source: startupindia.gov.in

- Most reports peg the number of fintech start-ups in India between 1200 to 2000.
- According to a report by RBSA (2021), 1216 new fintech start-ups were founded between 2010 and 2015. The Medici Start-up report (2020) states that there are over 2000 start-ups in India which operate in Fintech.
- There have been a lot of upcoming start-up incubators in India. According to Tech Bullion, the top 10 incubators of India are: Start Tank, Oracle Startup Cloud Accelerator, Microsoft Ventures, Startup Village, GSF India, Kyron, Rainmatter, 10000 start-ups, Barclays and Yes Bank.
- According to Shah (2020), Ministry of Electronics and Information Technology (MeitY) and the FinTech Meetup have kickstarted India's biggest FinTech accelerator programme, India FinTech Accelerator 2020.
- The most aggressive Venture Capital (VC) funds in the fintech space are Sequoia, 500 Startups, Ribbit Capital, Accel and Global Founder's Capital (GFC). See Table 1

Table 1: Venture Capitalist Firms and Fintech Startups Funded

S.No	Venture Capitalist Firms	Fintech Start-ups Funded
1		BankBazaar, BharatPe, Capital Float, Citrus Pay, Cred, Finova Capital
2		PayPal, Credit Karma, WePay, Stripe
3		Capital Float, FamPay, Mamo Pay
4		Uni
5		FamPay

Source: Various newspaper reports

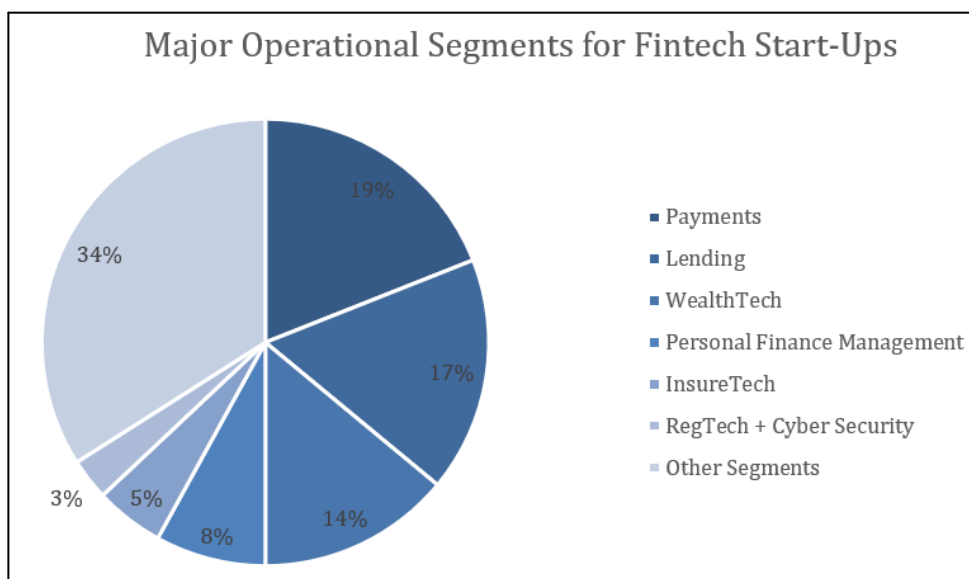
- Highest fintech funding by geography seems concentrated in the datahubs of India, namely Mumbai, Delhi, Bengaluru and Hyderabad. See Table 2. Reasons for fintech taking off in big cities include mobile penetration, availability of talent pools, and availability of incubators as well as VCs. However, as tier I cities get saturated. tier II cities are also fast developing as fintech hubs.
- As per the RBSA(2021), the major segments in which fintech start-ups have been operative are payments (RazorPay, Paytm), lending (Lendingkart, Instamojo), wealth tech (Zerodha, Upstox), personal finance (Kuvera), insure tech (Policybazaar), reg tech and cyber security and others. See Figure 2.

Table 2: Fintech Startups In India

S.No	City	No. Of Fintech Startups
1	Mumbai	475
2	Delhi	451
3	Bengaluru	393
4	Hyderabad	134

Source: Flanders (2020)

Figure 2: Major Operational Segments for Fintech Start-ups



Source: RBSA (2021)

- A good number of Indian fintech start-ups have achieved unicorn status (valuation of over \$1 billion). The top 5 unicorns in the fintech space in India are Paytm, Phonepe, Pine Labs, Policy Bazaar and Cred. See Box 1 for details.

Box 1: Top 5 Unicorn Fintech Start-ups in India



Founded in 2010 by Vijayshekhar Sharma, Paytm is a digital wallet platform using which one can transfer cash through online banking.

One97 Mobility Fund is the top investor in Paytm, which has received total funding of \$3.54 billion through four rounds of investments. Paytm has done 19 investments and notably, 3 exits. Exits by Paytm include Abhibus, Tapchief and Little. Paytm received unicorn status in 2017



Pine Labs is the pioneer of smart Point of Sale platforms using cloud data. Founded by Lokvir Kapoor, Pine Labs has received funding of about \$838.2 million.



PolicyBazaar was founded in June 2008 by Yash Dahiya. It started as an insurance policy comparing website. It became popular because insurance companies lacked transparency. It has over time diversified its operations. Now it also sells insurance policies along with comparing them. They claim to process 25 percent of India's life insurance. PolicyBazaar has received a funding of about \$766.6 million. Falcon Edge Capital is the lead investor in PolicyBazaar.



Cred was founded in 2018. Currently Cred has nearly 5.9 million users and functions around 20 per cent of credit payments in India. Cred has caught attention of people through innovative ads such as "Indira Nagar ka gunda" and the one starring cricketers from the 1990s. Cred also signed a three-year contract with IPL. Cred allowed its members to donate Cred coins (rewards) to oxygen-supplying companies during the peak period of COVID-19, making it a recognized brand with good customer engagement. Cred has received funding of \$471.2 million. Lead investor in Cred is Tiger Global and Falcon Edge Capital. Cred has received series D funding after launching its IPO.



PhonePe was founded by Sameer Nigam and Rahul Chari in 2015. It was based on Unified Payments Interface (UPI). PhonePe can be easily used for daily transactions such as phone recharge, utility bills, etc. PhonePe also like Paytm achieved unicorn status in 2017. PhonePe has been acquired by Amazon. Total funding received by PhonePe is \$1.7 billion. Tiger Global and Tencent are major investors in PhonePe.

Fin-Intermediation to Fin-Tech

Why do banks exist? Banks are financial intermediaries which derive their existence from information asymmetries between agents in financial markets. Banks are the entities that bring savers and investors together. Saver has the money in the form of deposits, whereas the industrial sector needs money. However, neither of the two know of either the availability or the requirements of the other player, thereby creating 'information asymmetry'. The amount of money each individual saver has is very less as compared to the size of loan required by the industries. This is called 'size asymmetry'. In order to overcome this problem, there exists the banking sector. Banks pool the resources of many such savers and give this amount to the industries. This reduces the transaction costs in the industry. Thus, the *raison d'être* for existence of banks is in three reasons-

- Information asymmetries are lowered
- Transaction costs are lowered
- Reduces risk of savers by performing due diligence

However, banks have also been plagued by issues and challenges in their operative space. In a report written by Gnanmote (2018) for Infosys, banks suffer from the following issues:

- High regulation
- High operating costs
- Poor visualisation of traditional business lines
- Averting risk propositions
- Low involvement of customers in centre of operations
- Low investment in ideas and innovations

Most importantly, what one must understand is that a person today has not only a physical presence within banks but also a virtual presence outside banks. This virtual presence of people is recorded by the data companies. Data is power! Data profiles help the data companies to understand preferences, habits, shopping traits, risk profiles and lot more about their customers. Hence, these companies understand their customers better and can customize financial products for them.

Welcome to the world of fintech! Fintech companies initially evolved as companies that could layer banking solutions with smart transactions. However, later, fintech has severed its image as an add-on solutions provider and has become an independent solutions provider. Tracing the journey of the finance sector from banks to fintech solutions providers, one may say that the sector has gone through phases of evolution and revolution and is currently witnessing a phase of co-opetition.

Evolution, Revolution and Co-Opetition

Evolution

Stage 1 of fintech development is that of evolution. Fintech initially came as an assistive force for the banking sector. It gave data to the banks and helped them attract more customers across all of banking verticals –savings, payment, lending, risk management, advisory services. Big data insights, coupled with massive surges in Machine Learning (ML) and Artificial Intelligence (AI) protocols enabled banks to create savings products for customers at differential interest rates, depending on the age, income and other demographics of the customers. Payments were scheduled and executed digitally. Risk scores of customers (retail and institutional) could now be generated by analysing data. This enabled banks to design customized risk-return products for customers. Merchant banking and investment banking took a huge leap forward as data enabled banks to move into advisory roles. By studying the behaviour of major players within industry segments such as automobiles, finance, textiles, steel etc., banks could now predict broad movements within sectors and advise their clients to take exposure to the sectors depending on the current income and risk-bearing capabilities of their clients. One may call this evolutionary phase of start-ups as one in which embedded fintech products made their debut.

Table 3: Major verticals and technologies used in embedded finance products

S.No	Vertical	Technology Used
1	Savings	Artificial intelligence, Machine learning
2	Payment	Digital wallets, payment platforms
3	Lending	Blockchain
4	Risk management	Big data, Cryptography
5	Advisory	Predictive analysis using big data

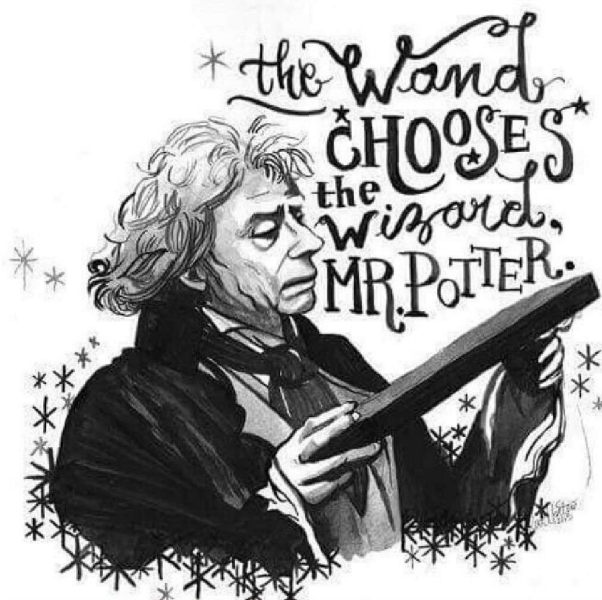
Source: Author Compilation

Embedded finance products enabled banks to enhance their revenue models, reduce costs and risk exposure and move towards data-based banking. Fintech start-ups offering embedded products helped banks develop further whereas banking clients helped fintechs to develop a better understanding of the financial markets and evolve with the banks. This was the evolutionary stage of fintechs.

Revolution

“The wand chooses the wizard, Mr. Potter!” says Ollivander, the wand maker, in Harry Potter and the Sorcerer’s Stone. The world of fintech is like this world of magic in one respect- Data chooses the customer! Whilst fintech start-ups have been garnering, collating and crunching huge databases, it is data that enables

Figure 3: Philosophy of Revolution – Wand chooses the Wizard, Data chooses the Customer



Source: pinterest.com

them to choose customers and grow with them. The fintechs lend money to only those customers who have low risk credentials. Thus, the scenario has entirely reversed. Fintechs, with access to huge data, have been supporting low risk clients, whereas high risk proposals are evaluated by banks. As the fintech start-ups started getting better exposure to the way financial markets function and better control over data of their customers, some of them started moving out of embedded systems into independent platforms. Fintechs in the lending sector started providing finance by evolving into payment banks themselves. This is precisely how Paytm was born. Paytm (Pay Through Mobile) is a digital platform that allows users

to pay for online services. To begin with, the app only allowed consumers to pay for a limited number of utilities – phone bills is a case in point. However, the start-up has now massively expanded its scope of operations. Whether it is paying for online shopping or whether it is transferring funds from one bank to another or whether it is receiving cash back offers, Paytm is at the forefront of the payment system, revolutionizing the payment experience of the customers. Similar kind of a trajectory was shown by PayPal or Mobikwik, another 2 start-ups in the payments space.

These start-ups are representative of Stage 2 of fintech development – one may want to label it as the revolutionary stage of fintech, wherein fintechs established themselves as an independent business entity.

Co-opetition

What we are currently witnessing may be called as the beginning of Stage 3 of fintech development. Fintech start-ups lead a cooperative existence with banks as well as other start-up verticals and at the same time, also nurture a strong level of competition with banks and other start-ups. There is an exciting spate of opportunities wherein fintech start-ups pair with other verticals such as edutech, agritech or health-tech. We have already stated that the internet and smart phone penetration growth rates are higher in rural India. These trends, together with the fact that many districts and talukas remain underbanked even today within rural India, offer exciting opportunities for fintech start-ups to get into a partnership with say, agritech start-ups. This co-opetitive existence is best explained through a caselet approach. In the following caselet, we profile Arya Collateral, which is an agritech start-up, but now has moved into financial services through a company called as Aryadhan.

Caselet: Arya Collateral and Aryadhan

An entrepreneur is a person who attracts business, takes care of it and is willing to take risks for it. Who does this better describe than a farmer?

Farming is a key enterprise which has been neglected even though it is very important. In India, 58 per cent of the people of the Indian economy rely on agricultural practices. But it hardly contributes to 14 per cent of India's GDP. There are many reasons for this failure. The major problem for this failure is the lack of funding. The farmer is constantly under pressure from the banks and money lenders to repay their debts. Another problem they face is the lack of storage to store their harvest. Due to these storage problems the farmers must immediately sell the goods even if at a low price. These problems have been observed and this is where the agri-start-ups have come into the picture.

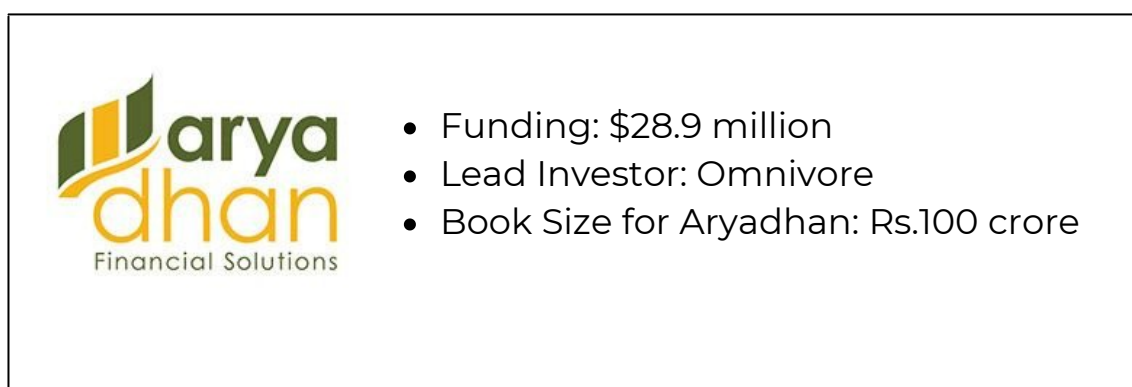
Arya Collateral was originally just a warehousing company. They used to store the goods of farmers and used to get the rent after farmer sold the goods. After farmers stored goods, they got a warehousing receipt. The farmers could get loans from banks by keeping this warehousing receipt as collateral. It eventually hit the company that there should be their own financing arm that could provide loans to the farmers. Thus, Aryadhan, a financing start-up was created for offering fintech solutions.

Arya Collateral offers farmers a warehouse to temporarily store goods. The basic idea behind this is that the farmers can take out their produce and sell it in the market

once the prices are correct.

This however becomes slightly complex as Finance is involved in this. Would Arya Collateral offer farmers warehouse for free? If not, then why would the farmers store their produce? So, what Arya Collateral does is that it offers the farmers who have stored their produce in their warehouse a warehousing receipt. This receipt is a confirmation that a product of a given amount is with the farmer. The farmer takes the required loan from the banks against this receipt. This loan helps him to keep running even in the off season. To cut out the middleman is a very popular phrase these days. This is exactly what Arya Collateral did. Through launching Aryadhan, Arya Collateral has eliminated the need for a financial sector middleman (such as a bank!). Aryadhan, a financing arm of Arya Collateral was started. Aryadhan started providing loans to the farmers. Who would go to the banks when one could get loans exactly where he stored goods! So instead of going to the bank, farmers can get their loans from a single place. When the crop prices go high the farmers sell all their stock and pay interest on loan from Aryadhan and on goods stored in warehouse. Now there also remains the risk that the prices of goods don't rise. In this situation there would be a huge loss to the farmers. This problem has also been solved by Arya as they also brought their insurance arm into the picture.

Figure 4: Details of Arya Collateral and Aryadhan



Source: Crunchbase

What drives Entrepreneurship in Fintech?

Having understood the journey of fintech start-ups, we now venture into understanding the drivers of entrepreneurship in fintech. Who are the entrepreneurs who head fintech ventures? And what are precisely the factors that spurred them into fintech ventures?

Across the world, entrepreneurship in fintech seems to have been led by following drivers:

Episodes of financial crises

The bursting of the dotcom bubble in 2000:

Dotcom bubble occurred in the period between 1995-2000. The technological infrastructure was constantly getting upgraded in that period. This fascinated the people as it was so easy to access the internet. Random companies started joining the suffix of (Dotcom) which excited the people even further. People invested in these companies solely on the premise of marketing and ignored the data of those

companies. After 1998 these companies declared bankruptcy and there was a chaos in the world. The dotcom bubble could be said to be the failure of regulatory mechanisms of Securities Exchange Commission (SEC). As the bubble burst, Americans lost confidence in the SEC and this was where foundation of fintechs was laid.

Subprime crisis in 2008:

After the subprime crisis in 2008, people of America lost confidence in the banking system. Investment in fintech went from \$930 million in 2008 to \$12 billion in 2014.

Low interest rate regimes

In a world of the last 2 decades plagued by the dotcom bubble, the subprime crisis, the Greek crisis, the Brexit and the Covid contagion, most Central banks have taken a dovish stance and have kept interest rates on the lower side. This has been a major dampener and the liquidity has started moving in circles outside the banks. People are always interested in investing in some other ideas outside the banks. Fintech offers many such opportunities for the people and this may be a driver of fintech growth.

The Incubation Ecosystem

The number of incubators in India have grown by 15 times in the last two decades from 2000-2020. India now has a grand total of 500 and emerging incubators, private as well as public ones. Start-ups approach an incubator with just a raw product idea. Incubators help them refine that idea and build an MVP (Minimum Viable Product). The outcome being chased is an innovation, one that survives and sustains much after the incubation period. This systematic process and following of the code of conduct, has been the major reason that the success rate of companies that go through incubation process has increased significantly in the past two decades.

Penetration of digital adoption and smartphones

Digital adoption has risen furiously in India in the past one decade. According to Kantar 'ICUBE 2020' report published by the Internet and Mobile Association of India (IAMAI), the number of internet users in urban India grew at 4 per cent whereas those in rural India grew at 13 per cent. The total active internet population stood at 62.2 crores in 2020 and is estimated to reach 90 crore users by 2025. The penetration of smartphones is the key driver of fintech growth. The ICEA report claims that smartphone penetration in rural India has risen from 9 per cent in 2015 to 25 per cent in 2018. The fintech growth would not have been possible without people carrying smartphones. This was an essential foundation and has provided huge opportunity to entrepreneurs in fintech sector. Now we can perform any financial task by sitting at home with just an appropriate app. As smartphone penetration has risen, so has the number of fintechs. This trend points to the number of fintech opportunities in rural India, a point which we will revisit later in the paper.

Regulation support

In India, the demonetisation episode, Goods and Service Tax (GST), Unified Payments (UPI), and the StartUp India campaign have given rise to a new cadre of fintechs. Regulation support has been a key aspect in supporting fintech growth within the country. In India, Startup India is an initiative taken for regulation of fintechs by the Government of India. It was announced in 2015. Startup India also gives any information related to start-ups even including the list of Indian start-ups. This initiative focuses on three things:

- Simplification
- Handholding
- Funding support and incentives

Such regulations are boosting the fintech growth and it is a factor which encourages entrepreneurship in this sector.

Demonetization in India

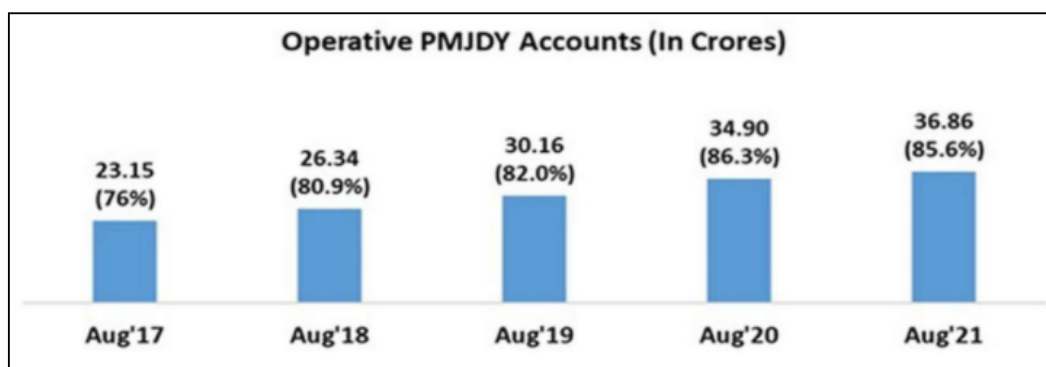
In 2016, government of India announced that Rs 500 and Rs 1000 notes would be banned and new Rs 2000 and Rs 500 notes would be introduced. This created a chaos in India because there was an urgency among people to exchange notes. This whole phenomenon ushered India towards cashless transactions. The existing cashless payment gateway apps such as Paytm gained momentum. Just the year after demonetisation, Paytm became a unicorn. Even after the notes were fully exchanged and the economy stabilised, people did not abandon such apps. They realised the ease with which they could now make transactions. During demonetisation, the demand for PoS machines grew by 43 percent. India since then is slowly but steadily moving towards becoming a cashless and transparent economy.

Launch of Pradhan Mantri Jan Dhan Yojana (PMJDY):

The PMJDY scheme aimed at financial inclusion in India. After the implementation of the scheme, 36.86 crore beneficiaries have a bank account. This was crucial for the fintech sector, as more financial inclusion makes more data available for the fintechs. More bank accounts made it easy for the cashless payment gateway apps such as PhonePe and Paytm. Rupay cards have been given to beneficiaries.

It also brought more money into the economy and hence boosted the growth of fintechs to a certain extent.

Figure 5: Operative PMJDY Accounts



Source: www.vajiramias.com

Covid Pandemic in 2020

The news about the corona virus spreading in China hit the world in January 2020. The FinTech sector was already on its growth trajectory when this news hit. Nobody anticipated it but the situation got so bad that it led to a global crisis. Economies declared lockdowns. The world came to a stand-still. This may be very bad for the majority, but it was a golden opportunity for fintechs who were managing all the cashless transactions. People could make monetary transactions very easily using the digital wallets and hence companies like Paytm and PhonePe saw tremendous growth. According to the economic times, Paytm saw a 3.5 times growth amidst the pandemic. PhonePe saw a growth of 50 per cent among new customers. The demand for PoS machines too grew by 43 per cent. In other words, the pandemic too has been a driver of growth for the FinTech companies.

Creative Ideas for Coopetition - Fintech in GramTech, ShikshaTech and Swasthya Tech

In this section, we outline the areas in which we feel fintech will push its horizons and seek out co-opetitive solutions with other segments.

Fintech in GramTech

Back to the Villages was the clarion call given by Mahatma Gandhi during the freedom struggle. 75 years post-independence, this call applies perfectly to the world of fintechs in India. Earlier in the paper, we have made a case that it is rural internet and smartphone penetration that has shown much higher rates than those seen in urban areas. Combining simple issues and challenges in rural India with a fintech will see huge opportunities unfold in the world of fintech.

Small packet, big dhamaka in insurance

Rural India is rife with risks. A farmer traveling on a 2-wheeler to pick up his child from school runs the risk of the 2-wheeler breaking down due to potholes. There are currently no insurance products that hedge this risk. Get in an insurance designer (actuarial space) together with a tech provider who can trace the movement of the 2 wheeler that is insured (mobility space) and create a premium collection, payment and redressal platform (fintech space), and you have a roaring fintech application!

Apply the same to all those little problems in rural India wherein there is lack of insurance coverage. Snake bites, scorpion bites affecting humans. The same bites affecting animals. Bring in a bit of animal wearables such as cattle fitbits, throw in a slice of Mediclaim, design a financial platform to bring all players together, and you can see why this space is ripe for fintech intervention. The Bill Bharo movement

Many villagers are unaware about how to use technology to pay bills for utilities. Some fintech entrepreneurs have found this opening and have founded start-ups like Nayaseva, Bankit and Jai Kisan in the rural India. Nayaseva is has a very interesting idea. Nayaseva does the job of bringing technology to their doorstep. Nayaseva pays

the bills for villagers by coming to their homes. This creates jobs in the villages as well as enables villagers to pay bills comfortably.

Awaaz de kahaan hain – Voice Services

Farmers have typically stayed away from formal sources of finance such as banks. Reason? They find the paperwork too daunting. It is intimidating for most farmers to walk into a bank, meet a 'posh' official who lists out a number of papers (Adhar, PAN, 7/12 extract etc.) which the farmers have to carry with them to the bank for availing of a loan. On one hand, it is extremely important to bring farmers into the fold of formal institutional finance. On the other, they are shy of a physical interface with an official. Solution? Voice services! All that is needed is that a farmer install an app which will, with voice services in local language and dialect, run him through the list of papers that is required to be filed. If the farmer requests for additional info, a scheduled call with an operator will be facilitated by the app. The app will also facilitate video verification of all the documents that the farmer collects at home, before he heads out to the bank.

Fintech in Shiksha Tech

Another field which the Fintechs can enter is Edutech. Education has taken a great leap forward in the recent years with popular online coaching classes such as BYJU's, Unacademy, etc. Due to this revolution, people can have access to education from anywhere in the world. On the other hand, instances of students taking education loans is also rising. However, banks only give the education loan based on the income profile of the loanee. If Byju's data can reveal the scores of the student, then the banks will have a higher chance of decoding the potential income that the student may get in the future. Banks will be able to design an education loan product integrated with the scores of the student.

Fintech in SwasthyaTech

Yes! There is also an opportunity/need for a FinTech solution in the health sector. Here is how the idea may be potentially implemented. There are a lot of diabetic patients in the world. Data suggests that about 9.3 per cent people in the world have diabetes. Diabetes is just one of the health concerns the world faces. There is the problem of blood pressure, cancer and now even the coronavirus. Recently online pharmaceutical companies such as 1Mg, Pharmeasy have started emerging. These companies should record the expenses of people on tablets, insulin, etc. An optimal life insurance policy can be estimated, and annual premium thereon can be calculated. If the person is expected to spend Rs 5000 on the policy per month but can spare only Rs 2000, the rest of the amount can be paid by tying up the beneficiary with charity funds or Government health schemes. Such a fintech product will help all stakeholders – patients, doctors, CSR funds and insurers – to engage in a more meaningful interaction with each other.

Conclusion

Fintechs are changing the world of finance. They have moved from being evolutionary companies to being revolutionary entities. As we go ahead, fintech start-ups will be able to survive and grow if they focus on co-opetitive strategies, in which they cooperate with different start-ups to deliver competitive solutions for financial markets.

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02

GREEN ENTREPRENEURS

The Flag Bearers of the Green World



By Arpita Dixit and Ria Bharti*

Abstract

Encouragement of pro-environmental behaviour within society has become crucial in view of the approaching green economy. Through this research paper we have shed light on numerous areas of green and environmental entrepreneurship, emphasising their importance and impact on society as a whole. We've also shown a peek of what our society may become if we had the appropriate information on sustainable enterprises. In a nutshell, we've highlighted the journey we've already taken and the road we still have ahead of us to make the world a better place to live.

1. Introduction

"The future will be green, or not at all."

-Jonathon Porritt

Over the last few years, the global environmental catastrophe has gotten dramatically worse. Individually, we are hard-wired to grow and innovate. Unfortunately, we had a huge impact on the ecosystem. Now is the time for change, and instead of generating additional issues, we must start delivering answers. And what better place to begin than in the world of business? After all, the majority of environmental changes occurred to help industry. The notion of green entrepreneurship has arisen in recent years and looks to be gaining in popularity.

Studies on "green entrepreneurship" began around the turn of the century. It's also known as "eco-entrepreneurship", "ecological entrepreneurship" (3), and "sustainopreneurship". The expanding body of literature on the subject, on the other hand, focuses not on the "green" concept itself, but on defining it in a way that is widely accepted, therefore diminishing its fundamental goal — environmental preservation. Dean and McMullen describe it as a process of defining and discovering economic possibilities in order for the failures in ecological aspects to be fixed.

To sum up, Green entrepreneurship is defined as an economic activity whose products, services, manufacturing techniques, or organisational structure have a favorable impact on the environment. This could be done by:

- Providing products or services that cause a shift in the consumer's behaviour, therefore decreasing the negative impact on the environment;
- Aligning the company's ecological and economic objectives;
- Introducing new ecological solutions to challenges relating to product and service production and use;
- Developing business concepts that, when put into practice, might contribute to longterm economic growth;
- Identifying new business opportunities that are related to societal demand and new ways of life.

A Green Entrepreneur is someone who begins an entrepreneurial enterprise that is designed to be environmentally friendly, and all of the goods and processes that result from that company are likewise environmentally friendly from the start. By offering green products and services, promoting greener manufacturing processes, increasing demand for green products and services, and creating green jobs, green entrepreneurs serve as a powerhouse for beginning and maintaining a green economy.

Green entrepreneurship extends beyond limited technology-based aspects of doing business, stemming mostly from a degree of technological innovation such as pollution reduction, clean production methods, and resource efficiency. It has the potential to promote a culture of lifecycle thinking and green innovation at the societal level. Green entrepreneurs achieve this by generating a shift in people's thoughts toward greener thinking, as well as increased demand for green products and services, so strengthening the twin effects of employment creation and environmental betterment

There is also a concept of panacea hypothesis that describes the unstated assumption that "green, clean, and low-carbon entrepreneurs will somehow cure most of what ails aging industrial economies." This idea of societal transformation through entrepreneurship is often seen as more prescriptive than descriptive, and maybe too optimistic. But as said by Howard Zinn, "We don't have to engage in grand, heroic actions to participate in change. Small acts, when multiplied by millions of people, can transform the world". So, the Panacea Hypothesis might be true if all entrepreneurs chose to light the flame of sustainability.

2. What drives Environmental entrepreneurship?

"Being a good human being is good business."

— Paul Hawken, environmentalist, entrepreneur and writer

The growing public pressure on environmental issues stimulates the growth of green business, in which environmental problems are recognised and adopted in addition to monetary value production. In a broader socioeconomic context, corporations are the largest consumers of various resources and, as a result, the largest producers of negative environmental effects through waste and pollution. The Porter hypothesis argued strongly that environmental and economic values are not conflicting, but promoting the competitiveness of companies. Thus, they must act as a pioneer in the transition towards a sustainable and green entrepreneurial trend.

Although capturing value and maximising profit is a basic goal of any firm, the manner and process by which this value is created is determined by an entrepreneur's personality. Some entrepreneurs choose linear growth and expansion, which entails increasing production and product sales volume in the market while also requiring more resources. Other entrepreneurs are considering the implementation of new business models that are resource-efficient, ecologically beneficial, and long-term. Sustainability or green values will be equal to the generation of financial value in future business models, according to Sadovska and coauthors. Because new business risks associated with environmental and climate change concerns will emerge in the future, the OECD has reaffirmed that entrepreneurs will need to adapt their processes, techniques, and values, as well as consider environmental values considerably more.

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2. Sustainable Development Goals for Green Entrepreneurs

“The United Nations established the Sustainable Development Objectives (SDGs), also known as the Global Goals, in 2015 as a global appeal to rescue the planet and to empower companies throughout the globe to set goals and measure progress. Take Action, Track Progress, Transform the World is their motto, and they realise that actions in one area have an impact on results in others, and that development must achieve a balance of social, economic, and environmental sustainability.

Goal number 6,7,11,12,13,14 and 15 are the goals that can help small green entrepreneurs to take their first step towards a sustainable world.

3.1. Clean water and sanitation (GOAL 6).

“Ensure availability and sustainable management of water and sanitation for all.”

Despite significant progress in providing access to safe drinking water and sanitation, billions of people, particularly in rural regions, still lack these essential services. Water resource management and access to safe water and sanitation are critical for unlocking economic growth and productivity, as well as providing tremendous leverage for existing health and education investments. The COVID-19 pandemic has highlighted the crucial role of sanitation, hygiene, and adequate access to clean water in disease prevention and control. Water purification and water quality standards can be ensured by protecting and restoring water-related ecosystems and biodiversity.

CASE STUDY: Amana Katu

AK rainwater systems for households and agriculture, built by at-risk youth who receive entrepreneurial education and revenue generating, and marketed through an ecommerce web app with a 5-for-1 social business model, provide universal and sustainable access to drinking water in the Amazon. Water in the Amazon is a paradox: while having more rainfall and freshwater than the rest of the world, approximately 10 million people in the Brazilian Amazon lack access to safe drinking water. Despite this, Brazilian agriculture consumes 7,28 trillion litres of water per year, with about half (3 trillion litres) wasted due to unsustainable agricultural methods and irrigation infrastructure. Amana Katu (AK) is separated into three sectors with a multidisciplinary team: Community, Partnerships, and Innovation, utilising the skills and abilities of each undergraduate student on its team. AK is a social enterprise that collaborates with at-risk youth from the regional community organisations Movimento República de Emas (MRE) and EEEFM Cidade de Emaus in the low-income Bengui neighbourhood of Belém, Brazil, to design and sell cost-effective, innovative products that promote sustainable water use in urban homes and agriculture. The pure rainwater collection mini-systems have been adapted for usage in urban dwellings and slums, as well as isolated riverside settlements with limited space, to collect, purify, store, and consume rainwater.

3.2. Affordable and clean energy (GOAL 7).

“Ensure access to affordable, reliable, sustainable and modern energy to all”

Human and economic progress are hampered by a lack of access to energy suppliers and transformation systems. In poorer countries, access to power has begun to increase, energy efficiency is improving, and renewable energy is making significant progress in the electricity industry. However, more focused effort is required to increase 3 billion people's access to clean and safe cooking fuels and technologies, as well as to extend renewable energy use beyond the power sector. Climate change mitigation and disaster risk reduction are aided by greater energy efficiency and renewable energy utilisation. Maintaining and protecting ecosystems allows for the use and development of hydropower and bioenergy sources.

CASE STUDY: Fuergy

This private company, based in Slovakia, was established in February 2018 and bills itself as the Airbnb of clean and renewable energy. BrAln is a proprietary hardware device and artificial intelligence (AI) software developed by the firm. This gadget is designed to "optimise energy consumption and maximise (the) efficiency of renewable energy sources," according to the firm. According to the website of Fuergy, consumers who utilise brAln can save money on their energy bills. This is accomplished through collaborative consumption or by consumers and businesses pooling renewable energy. To make the most efficient use of energy consumption, Fuergy's unique technology connects to Internet of Things (IoT) devices, such as smart appliances. The company makes money by selling Fuergy devices, which include Fuergy Business, Fuergy Home, and Fuergy Lite. These devices all rely on current power systems. Fees are also collected from energy savings generated by the company's New Energy Ecosystem

3.3. Sustainable cities and communities(GOAL 11)

"Make cities, and human settlements inclusive, safe, resilient and sustainable"

Cities and metropolitan areas, which account for around 60% of global GDP, are economic development engines. They do, however, account for more than 70% of global carbon emissions and 60% of resource use. Urbanization has been accompanied by increasing environmental pressures and increased demand for essential services, infrastructure, jobs, land, and affordable housing to date. Building urban resilience is crucial for minimising personal, social, and economic losses, as well as environmental protection and disaster risk and climate change mitigation. In resource efficient cities, higher production and innovation are linked with lower costs and less environmental effects, allowing for more opportunities. for more consumer options and sustainable lives.

CASE STUDY: Eat Cup

A Hyderabad-based business has produced cups that may be eaten after drinking cold or hot beverages, in response to rising demand for environmentally friendly goods for serving and packing food and beverages. The product, which is made from natural grains, is totally edible and can contain a variety of liquids, according to the manufacturer. The device, known as the 'Eat Cup,' was introduced by a Hyderabad-based private limited business with the goal of minimising the use of other throwaway alternatives that either need tree chopping or are detrimental to the human body.

"Eat Cup is manufactured from natural grain products and presents a realistic alternative to both plastic and paper cups, and is a step forward in decreasing their negative ecological impact and large carbon footprint," says Ashok Kumar, Executive Director of the company that makes these cups.

3.4. Responsible consumption and production (GOAL 12)

“Ensure sustainable consumption and production patterns”

One of the greatest global challenges is to reconcile environmental sustainability with economic growth and welfare by decoupling environmental degradation from economic growth and accomplishing more with less. Resource decoupling and effect decoupling are essential to support sustainable consumption and production patterns and to achieve the transition to a greener and more socially inclusive global economy. Sustainable consumption and production can also help to alleviate poverty and accelerate the transition to a low-carbon, green economy. The COVID-19 pandemic provides an opportunity for governments to develop recovery plans that will reverse present trends and shift consumption and production patterns toward a more sustainable future.

CASE STUDY: Olive

Online shopping is more popular than ever before, which, regrettably, can lead to a rise in waste and emissions. Olive has taken the lead in creating a more environmentally friendly online shopping experience by partnering with brands like Goop, Anthropologie, and Adidas to offer a single delivery option that includes all of the brands listed rather than mailing things individually. Nate Faust (who previously co-founded Jet) started the company with the purpose of reducing the amount of single-use packaging connected with online orders while simultaneously providing a superior customer experience.

3.5. Climate Action (GOAL 13)

“Take urgent action to combat climate change and its impacts”

2019 was the second warmest year on record, and it marked the end of the warmest decade on record (2010-2019). Climate change affects every country on every continent. It is destabilising national economies and endangering people's lives. Weather patterns are shifting, sea levels are increasing, and extreme weather is getting more often.

Although travel limitations and economic slowdowns caused by the COVID-19 pandemic are expected to reduce greenhouse gas emissions by roughly 6% in 2020, this improvement is only temporary. Both the epidemic and the climate disaster require immediate action to save lives and livelihoods.

CASE STUDY: Joro

People all throughout the world are concerned about climate change, and many are looking for practical ways to green their own lives. Sanchali Pal launched Joro, a digital business that developed an app that allows consumers to track their everyday expenditures and look for more sustainable alternatives. While Joro is still a small app, it is committed to expanding in order to equip more individuals with easy-to-use tools for committing to climate action.

3.6. Life below water (GOAL 14)

“Conserve and sustainably use the oceans, seas and marine resources for sustainable development”

Careful management of this crucial global resource is required for a sustainable future. Coastal waters, on the other hand, are currently deteriorating due to pollution, and ocean acidification is wreaking havoc on ecosystems and species. This has a negative impact on small-scale fisheries. Our ocean's protection must remain a major priority. People's and the environment's health are both dependent on marine biodiversity. Marine protected zones must be actively managed and well-resourced, and laws must be enacted to prevent overfishing, marine pollution, and ocean acidification.

CASE STUDY: Algenesis

Plastic pollution of our oceans, land, and air is well-known. Algenesis, a green firm created by Dr. Stephen Mayfield in 2016, is working to change that. Algenesis creates 100% biodegradable plastic from algae using their patented Soleic™ process. This substance is not only renewable, but it is also a high-performance material that can compete with the plastics we now use. The company now makes footwear and surfboard hard material, but it plans to grow to include a variety of products to reduce the usage of wasteful plastics.

3.7. Life on land (GOAL 15)

“Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”

Nature is necessary for human survival because it produces oxygen, regulates weather patterns, pollinates crops, and supplies food, feed, and fibre. It is, however, becoming increasingly strained. Around 75% of the earth's surface has been impacted by human activities, restricting wildlife and environment to ever-smaller swathes of territory. Humancaused deforestation and desertification, as well as climate change, pose significant barriers to sustainable development and have harmed the lives and livelihoods of millions of people Goal 15 focuses on sustainable forest management, reducing and reversing land and natural habitat deterioration, effectively combating desertification, and halting biodiversity loss. All of these programmes are targeted at ensuring that future generations benefit from the benefits of land-based ecosystems, such as sustainable livelihoods.

CASE STUDY: Resíduos de Valor

Resduos de Valor works in the Rio Paranaba community, teaching disadvantaged people how to manufacture handcrafted soap from leftover cooking oil. The project aims to reduce improper cooking oil disposal while also emphasising the importance of environmental preservation and instilling a widespread culture in the local

community that includes a passion for manual labour, artisanal vegetable soap production, and the use of cooking oil as a primary raw material.

The oil is gathered in an ecoponto, a location designed to collect oil that is thrown in bottles and located in a strategic location throughout the city, from donations provided by businesses and residents. After being collected, the oil is transported to a production facility where skilled workers create a high-quality, low-cost soap. To keep the initiative self-sufficient and produce cash for the members, all of the production is sold and the profits are distributed.

4. Green Entrepreneurship & Technology

Technological eco-innovation is a concept that has recently arisen to contribute to sustainable development. It involves the creation of environmentally-driven goods (for example, green technology) and processes (e.g. energy efficient processes). The term is used to describe innovative technological products and processes that significantly reduce environmental impacts while also responding to consumer needs and providing business value, drawing on the concept of 'eco-innovation' (Fussler & James 1996) Although the word eco-innovation is frequently linked with renewable energy, the transition to a green economy requires much more than technological eco-innovation.

4.1. Case Study: BluSmart Mobility

In June 2019, BluSmart Mobility, a Gensol Group firm, developed a new ride-hailing mobility ecosystem that leverages more environmentally friendly battery electric technology. The ride-hailing platform was created with the purpose of transforming Indian cities by providing totally electric, sustainable, efficient, affordable, and dependable transportation solutions. BluSmart's vehicle ownership model, in addition to being different in terms of alternative fuels compared to other shared mobility services, also helps to address the issue of drivers being unable to afford monthly electric car instalments.

It has already completed 5 million clean kilometres by using its vehicles on BluSmart and other platforms. In the cities and suburbs of Delhi and Mumbai, the firm presently operates a fleet of more than 300 electric vehicles and has established more than 200 charging stations.

The ride-hailing industry provides a unique chance to incorporate electric vehicles and take use of their numerous advantages. BluSmart is a pioneer in this field, having launched India's first all-electric car ride-hailing fleet. In comparison to traditional ride-hailing fleets, it is fundamentally re-imagining the vehicle-ownership paradigm, eliminating the burden of vehicle ownership from drivers while staying asset-light by leasing EVs from leasing/financial partners/investors.

BluSmart's initial success highlights that integration of EVs in ride hailing fleets is both technically and commercially viable. The commercial case for EV adoption in ride-hailing will only become stronger as technology improves, more car alternatives

become available, and charging infrastructure becomes more widely available. With further commercial action from other ride-hailing businesses and a favourable legislative climate, EVs will soon begin to replace ICE cars in ride-hailing fleets, resulting in significant cost savings and reductions in carbon emissions.

5. Financing Green Entrepreneurs

As people of the society are becoming more concerned about the depletion of natural resources, organizations have started performing their corporate social responsibilities. They've begun to alter their working methods in order to increase the amount of greenery and decrease the environmental effect of their operations. Green Banking has evolved as a new financial phenomenon that focuses on environmentally and socially responsible investing. Green banking, also known as ethical banking, aims to protect the environment by reducing the carbon footprint of banking operations. Green Banking has begun prioritising loans to industries that are already green or are making efforts to become green. The goal of going green is to save energy and use biodegradable materials.

Consumers, banks, industry, and the economy all benefit from the notion of Green Banking. Consumers will benefit from the change to Green Banking because additional deposit and loan products will be available via online and mobile banking. It also means reduced interest rates for Green Mortgages and better deposit rates for Green Deposits and Green Savings Accounts. Adoption of Green Banking services by banks results in paperless banking, energy savings, and other benefits. This is a bank-led initiative to encourage the greening of sectors through the responsible use of Green Mortgages.

Green entrepreneurs now have access to a variety of banking services, including green financial products such as Green Bonds, Green Deposits, Green credit cards, and Green mortgages and loans, which can help them fund their business.

6. When does it pay to be green?

It is a quite known fact that the environmentally friendly products are expensive and less feasible to buy and manufacture respectively. However, the present markets are still brimming with the Green Entrepreneurship and eco-innovation enthusiasm. Let's take a look at what the real prizes are for entrepreneurs who go green.

- Innovative Market Niches: A firm may become more competitive by introducing new green goods or services that appeal to an emerging trend or niche market. Promoting your environmentally friendly practises will help you stand out from the crowd and attract new consumers who want to acquire products and services from a company that cares about the environment.
- Employee Motivation: Companies that care about the environment are increasingly appealing to job seekers. Employees who work for companies that encourage sustainability are more likely to feel that their boss cares about them and are happier in their careers. According to a recent study, millennials and Generation Z are more worried about the environment than any other generation. This implies they give preference to companies that prioritise sustainability.

- Increased Efficiency: Utility costs can be saved by improving energy efficiency. By creatively repurposing old materials, less money is spent on new stock to produce goods. Streamlining personnel or freight transportation saves both the environment and money. Although implementing green corporate practices might cost a little money at first, it saves a lot of money in the long run.

6.1. Case Study: Patagonia

Patagonia is a billion dollar American clothing brand that sells environmentally friendly outdoor gear and apparel. It was formed in 1973 by Yvon Chouinard and has always placed a strong emphasis on ethical and environmental issues. In addition to earnings, the company aims to change public opinions about the environment.

Patagonia arose from its founder's love in outdoor activities, namely a desire to produce gear suitable for rock and alpine climbing. However, whether you're looking for ski equipment, climbing apparel, or wetsuits, it now caters to all types of outdoor activities.

Some steps taken by Patagonia which makes it a Global trend setter:

- Patagonia committed 1% of its sales or 10% of its profits — whichever was higher — to environmental initiatives calling it “a self-imposed earth tax.” And they've been doing it since 1986.
- It revised its operations by switching from conventional to organic cotton — costing them 300% more relative to the year prior — and even sharing their findings with larger brands like Nike to educate them on the fashion industry's environmental impact.
- These efforts are all traceable using the interactive map on their website, where you can trace each step in the supply chain for the product you've purchased from them.
- They don't claim to be 100 percent sustainable on their website. Instead, they reveal the product's flaws and explain how they plan to address them.
- In 2005, Patagonia created the Common Threads Initiative, which encourages customers to reduce waste by partnering with eBay to create a second-hand market for Patagonia products. If clients opted to keep their purchases, the company offered assistance with damaged clothing repairs through their repair facility.

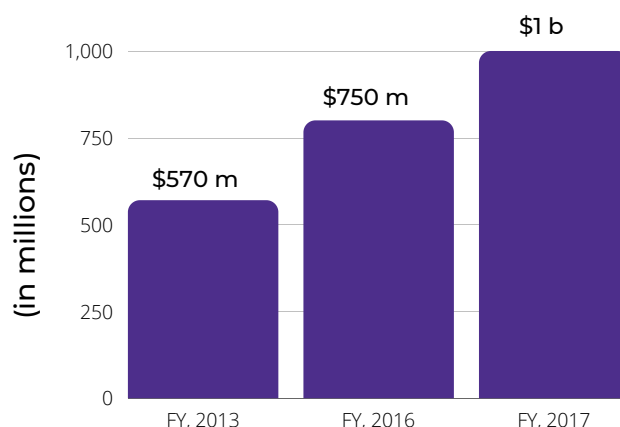


Chart 1: Increasing revenue of Patagonia (year 2013-2017)

7. Green Incentives

Developing a green business market necessitates regulations that assist enterprises in making or saving money from environmental compliance. To support the launch and growth of startups in India, the Indian government has devised a variety of start-up plans and start-up funds.

Sustainable Finance Scheme: Small Industries Development Bank of India (SIDBI)

SIDBI has launched the Sustainable Finance Scheme, which would fund sustainable development projects that contribute to energy efficiency and cleaner manufacturing but are not covered by international or bilateral lines of credit. All projects promoting sustainable development, such as renewable energy projects

Objectives Of the Scheme

The following are the main goals of the Sustainable Finance Scheme.

- According to the definition laid down by the MSMED Act 2006, new/ existing MSME units would be eligible for assistance under the scheme.
- Existing units must have a satisfactory track record of the past performance and sound financial position and should not be in default to institutions/ banks
- The units should have a minimum credit rating of investment grade or its equivalent according to the internal credit rating model.
- Renewable energy projects such as solar power plants, wind energy generators, mini hydel power projects, biomass gasifier power plants, etc. for captive/ non-captive use
- Any potential CP investments that include waste management

Suitable assistance to OEMs that manufacture energy efficient/ cleaner production/ green machinery/ equipment. Additionally, the OEM must be an MSME or supply a significant number of MSMEs with its products.

GRIHA - Green Rated Integrated Habitat Assessment (Version 3.1)

The GRIHA grading system applies to new commercial, institutional, and residential buildings with a variety of functions. GRIHA is a five-star rating system developed by TERI (The Energy and Resources Institute) and MNRE as an indigenous building rating system, specifically to address and assess non-air conditioned or partially air conditioned buildings. It was endorsed by the Ministry of New and Renewable Energy (MNRE) of the Government of India on November 1, 2007. GRIHA is a rating system for buildings in India that takes into account national environmental issues, regional climatic conditions, and indigenous solutions.

GRIHA certification system can be applied for built up area between 2500Sq.m and 1,50,000 Sq.m. It is a guiding and performance oriented system where points are earned for meeting the design and performance intent of the criteria. GRIHA emphasizes on “cost effective” strategies for making green buildings and emphasizes on integrated design approach.

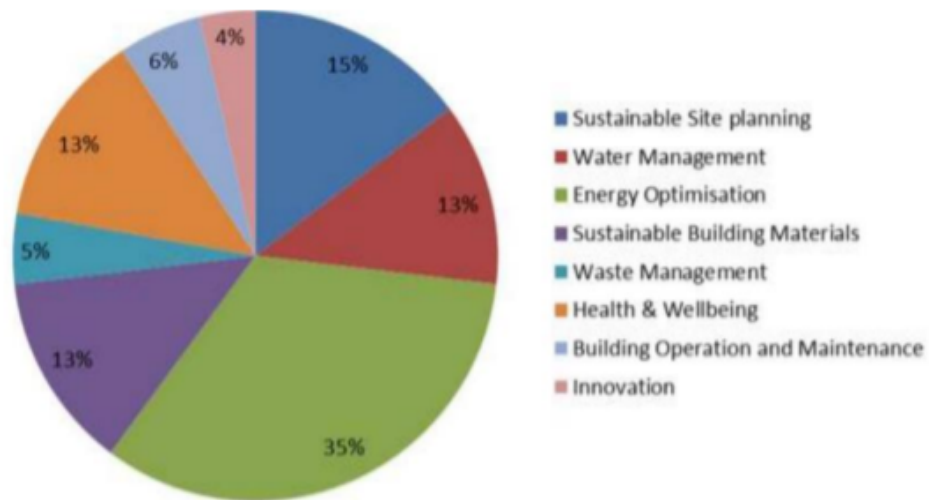


Chart 2: Building grading system by GRIHA

7.1. IGBC - Green New Buildings Rating System®

The IGBC Green New Buildings Rating System® is a voluntary, consensus-based rating system for new buildings that is based on existing materials and technologies' availability. The objective of IGBC Green New Buildings rating system is to help in designing environment friendly buildings, through architectural program, water efficiency, effective handling of waste, energy efficiency, sustainable buildings, and focus on occupant comfort & well-being. The rating system is designed primarily for new buildings, both for airconditioned and non-air conditioned buildings which are either occupied by owner or Tenant such as IT parks, banks, shopping malls, hotels, hospitals, airports, stadiums, convention centres, educational institutions (colleges, universities), libraries, museums, etc

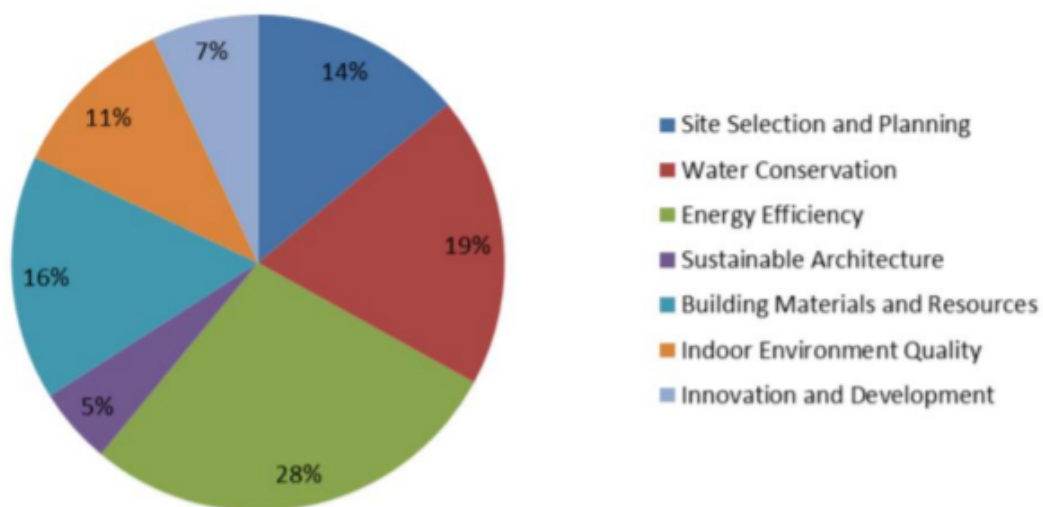


Chart 3: Building rating system by IGBC

7.2. TABLE 1: Some Start-up schemes by the Indian Government are:

SCHEME NAME	OBJECTIVE O THE SCHEME	FISCAL AID
NATIONAL CLEAN ENERGY FUND(NCEF) REFINANCE	The scheme aims to reactivate the existing Biomass Power and Small Hydro Power projects by lowering the cost of capital for these projects by refinancing at concessional interest rates using money from the National Clean Energy Fund (NCEF)	REDA would refinance funds received from NCEF to scheduled commercial banks and financial institutions (including IREDA). The maximum refinancing amount per project is INR 15 Cr.
SCALE-UP SUPPORT TO ESTABLISHING INCUBATION CENTRES	The scheme for scale-up support to building incubation centres aims to fundamentally alter the country's startup ecosystem by upgrading current incubation centres to world-class levels.	A grant-in-aid of INR 10 Cr will be made available in two annual instalments of INR 5 Cr each.
SCALE-UP SUPPORT TO ESTABLISHING INCUBATION CENTRES	The bridge loan against MNRE Capital Subsidy will be available to MNRE Accredited Channel Partners (ACP), State Nodal Agencies (SNA) and other stake holders for claims against purchase and installation of Solar Water Heating System (SWHS) as approved by MNRE	The projects will get up to 80% of the existing pending eligible capital subsidy claim, as verified by the IREDA with a minimum loan assistance of INR 20 Lakhs.
IREDA SCHEME FOR DISCOUNTING ENERGY BILLS	The Ministry of Commerce and Industry in association with Indian Renewable Energy Development Agency Limited (IREDA) has developed the scheme for discounting of energy bills. Under this scheme, all IREDA borrowers who are selling energy to the state will be provided with maximum bill discounting facility of Rs.20 crores against the invoice.	Upto 75% of the invoice value pending for maximum six months from the date of application subject to a maximum bill discounting facility of INR 20 Cr. The minimum amount of transaction covering a set of bills shall not be less than INR 1 Cr.

8. Effect of green entrepreneurship on society

An entrepreneur is a person who reforms and transforms the production pattern by developing innovation or, more broadly, an untested technological process for producing a new commodity or producing it in a novel way, establishing a new source of materials or a new outlet for products, or establishing a new industry. By providing green products and services, presenting greener production processes, increasing demand for them, and creating green employment, green entrepreneurs provide the foundation for starting and maintaining a green economy.

They gain a foothold in the market by substituting traditional or conventional items. The goal of a green entrepreneur is to not only provide customers with green products or services, but also to raise public awareness about the environment. As a result, the concept of "green entrepreneurship" stems from a mix of entrepreneurship's core characteristics - creativity, risk, a fresh new company idea, and the social and ecological participation of people who conduct business.

The environmental entrepreneurs may change or establish institutions to support environmental degradation reduction incentives. The job of an environmental entrepreneur might thus be broadened to include institutional entrepreneurs in addition to the creation of new markets, goods, and services. Future studies might investigate how environmental entrepreneurs' actions contribute to legislative or socio-cultural institutional change, whether purposefully or unintentionally.

In recent years, green entrepreneurs have played an increasingly important role in the country's economic development, as well as being regarded as the driving force behind changes in consumer behaviour. They are also praised for launching, innovating, implementing, and emerging new ideas, as well as their quick responses to these changes.

ENVIRONMENTAL	ECONOMIC	SOCIAL
Preservation of natural resources	Reduced Costs and increased resource efficiency	The use of a green branding strategy might help you improve your reputation.
Enhancement of sustainability principles in the supply chain	Minimising business risks and associated losses	The use of local resources produces jobs for the people who live in the area.
Compliance of eco-friendly regulatory requirements	Increased profitability and competitiveness	Customers who are satisfied and return, as well as longterm connections.

Increased awareness regarding environmental challenges	High turnover through new revenue streams	Improvement of dynamic innovation capacities
Reduction in ecological footprint and positive impact on environment	Simplification of production by removing unnecessary components or packaging	Employee health and safety have improved.

Benefits of a “Green Business”

9. Educating the market

In light of the upcoming green transition, encouraging pro-environmental behaviour among business students is critical. Nonetheless, in order to lessen environmental impact, education and awareness-raising are critical aspects in creating pro-environmental behaviour among entrepreneurs and society as a whole. Because of the rapidly changing socioeconomic environment, ageing labour force, migration, digital technological advancements, and a sustainable development path, education and training programmes must address these rapidly changing needs of youth and adults in order to improve their skills in entrepreneurship and life sciences.

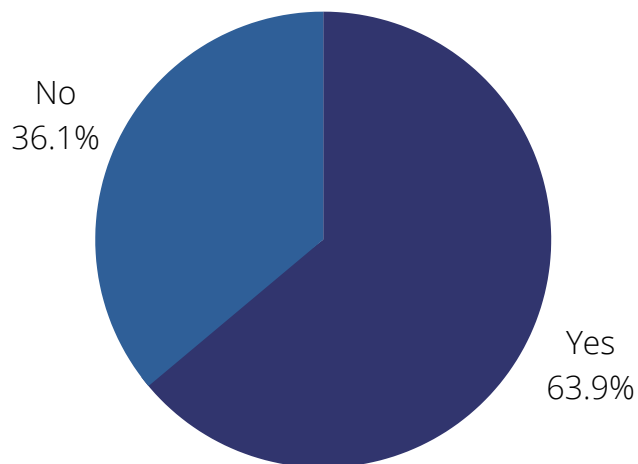
One of the goals of entrepreneurship education is to foster a sustainable attitude in students so that they may generate new green company concepts that are both practicable and financially successful. Sustainability thinking, system analyses, consumer needs identification, initiating a change engagement, stakeholder analyses and mapping, both strategic and operational decision making, building openness and trust, sharing objectives, and balancing interests are all necessary competencies in entrepreneurship study programmes. There is a need of common set of competencies necessary for starting a business and developing a green business. Concerns about the environment and associated information are crucial in developing a green business attitude.

Entrepreneurship education is increasingly focusing on society's broader social and environmental obligations. Business schools have recently made strides in training students to be tomorrow's leaders by providing them with sustainable skills and knowledge. For the transition to sustainable development, the necessity of environmental knowledge and concerns at the university level was underlined.

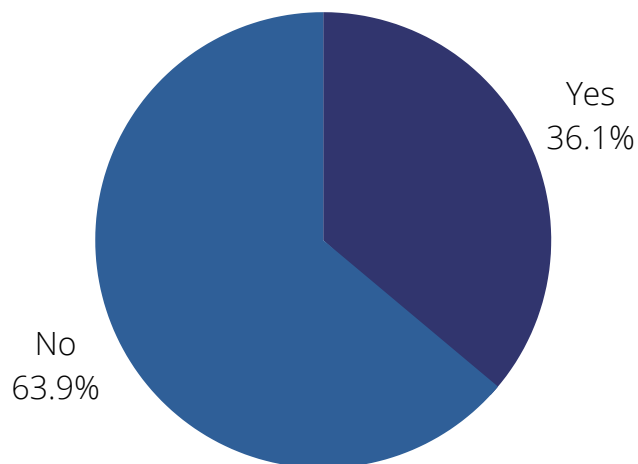
10. Primary Data Research

We conducted a survey among Generation Z to learn about their perspectives on Green and environmental entrepreneurship. This allowed us to determine whether or not the aspiring entrepreneurs were aware of the concept and, if given the opportunity, whether or not they would be interested in establishing a green business. This also assisted us in determining if green products have a viable market and customers.

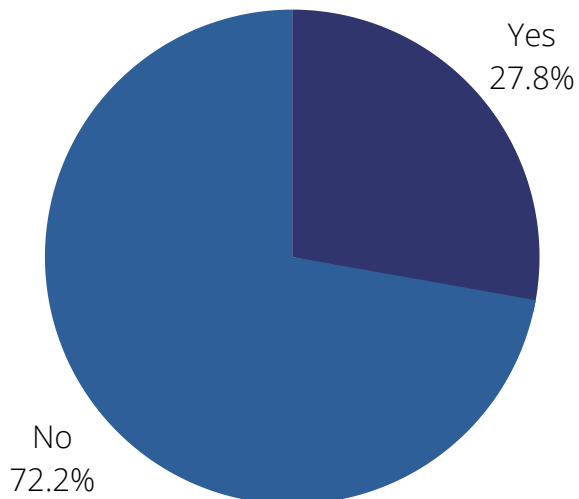
Are you familiar with the concept of Green Entrepreneurship?



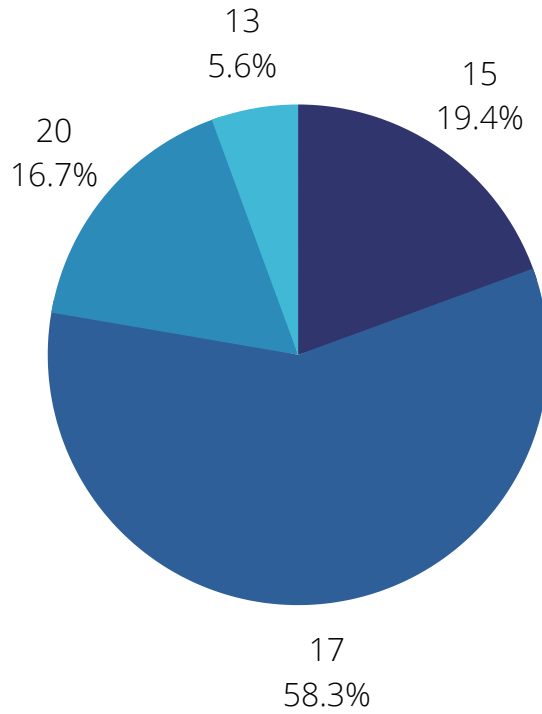
Do you believe that green entrepreneurship is just about planting & protecting trees?



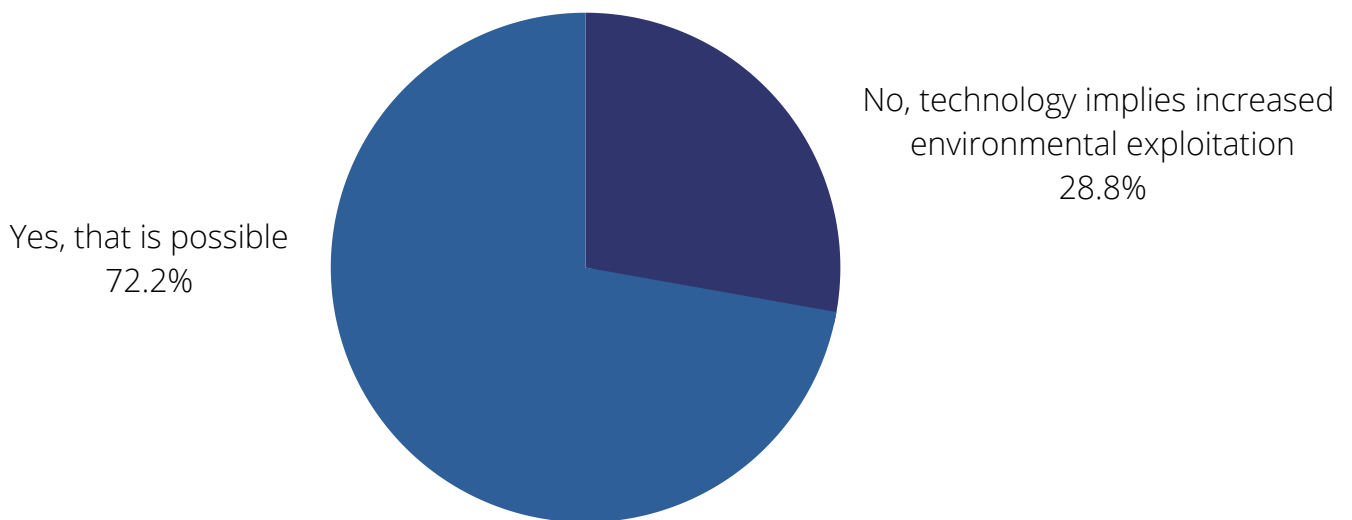
Do you think that being a green startup results in lower profits?



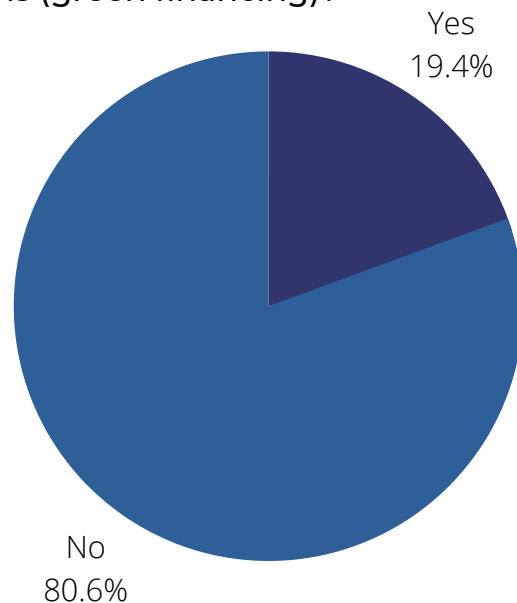
In your knowledge, how many Social Development Goals has the UN established?



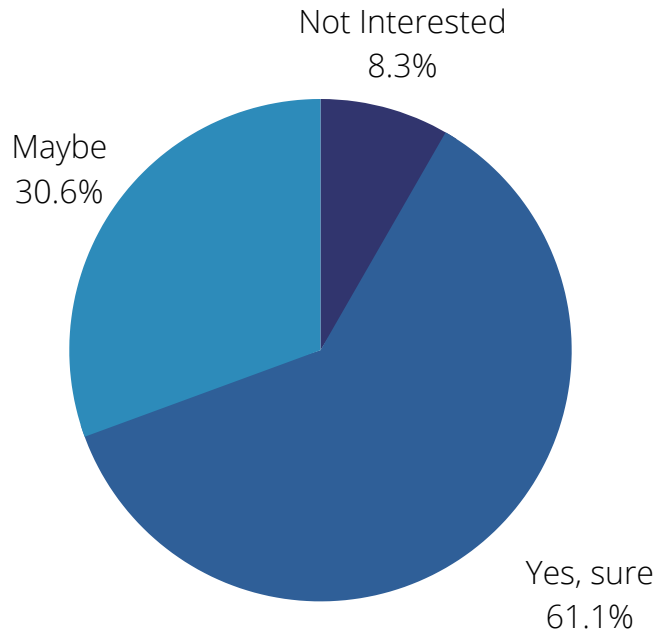
Do you believe that the technological improvements will lead to a greener world?



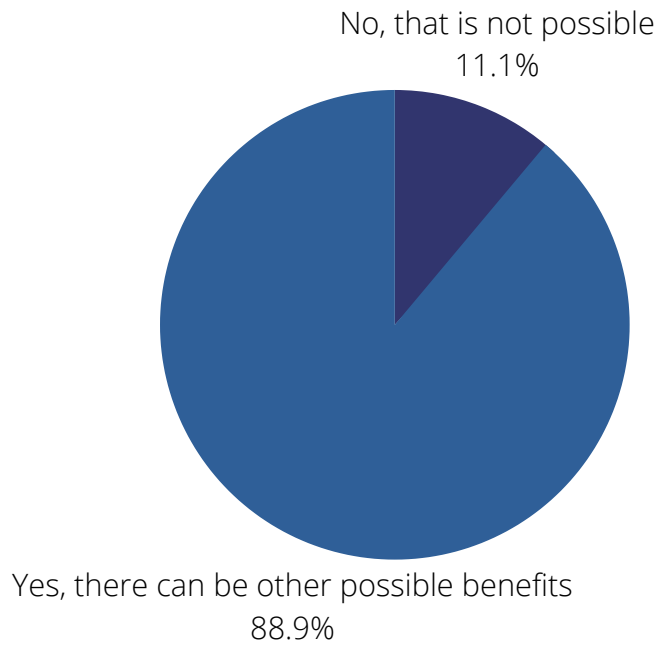
Do you know anything about green bonds, Green Deposits, Green Credit Cards, and Green Mortgages and loans (green financing)?



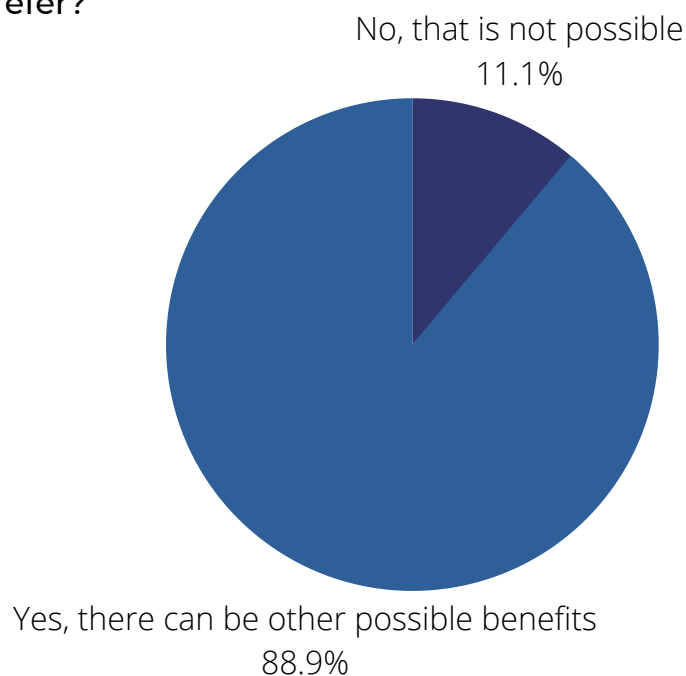
If not would be you interested in learning more about it (Green Financing)?



Do you believe that a green business is beneficial in ways other than saving the environment?

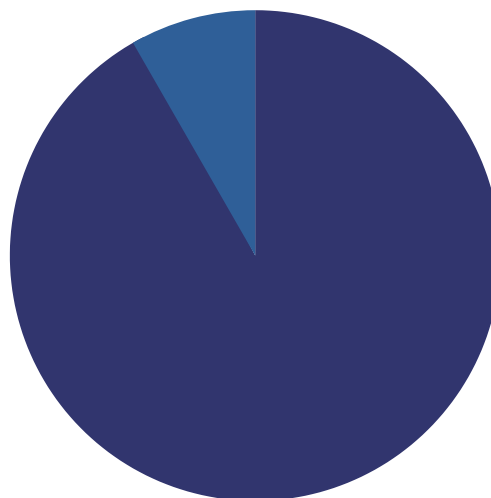


What would you prefer?



If you ever decide to start your own business , will you focus on creating a profitable eco-friendly product or a profitable but non eco-friendly product?

A profitable non-eco-friendly product
8.3%



A profitable eco-friendly product
91.7%

The survey URL is provided below:

<https://bit.ly/3BrITij>

This survey's sample consists of Delhi University students. We learned from this research that around 63.9% of individuals are aware of the concept of green entrepreneurship and wish to follow it as a business. However, it is clear that even in the twenty-first century, students are still uninformed of how to earn profits in a way that does not harm the environment. Even though Environmental Studies is a required course at DU, students have little understanding of the SDGs. This demonstrates the importance of practical understanding regarding green living, as theoretical knowledge is insufficient.

It is also clear that the youth is concerned about learning and understanding more about it. If given the necessary information, abilities, and a vision for how their enterprise can influence society, there is a good possibility that there will be a large number of green companies in the future. As a result, proper knowledge and mentality are critical for the future of green entrepreneurship.

11. Conclusion

Through our research, we examined a variety of factors of green entrepreneurship, including education, money, importance, and government incentives, and we came to the conclusion that green entrepreneurship is not only doable, but also necessary. The green business mindset is a complicated concept, but it will become increasingly crucial in everyday decisions at all levels of business, including homes, driving up demand for green and circular economy education, as well as the development of necessary skills and talents.

As new generations of customers, particularly the Y and Z generations, enter the market as customers, green values will become increasingly significant. Companies will be more motivated to adapt their operating principles towards a green and circular economy as new generations expect a green value proposition from them. . Emerging technology breakthroughs will play a vital role in sustainable growth in order to preserve a long-term balance between the technosphere and the environment, hence the interaction between green and digital economies should be actively supported.

Lastly it can be said that

“We don’t have to engage in grand, heroic actions to participate in change. Small acts, when multiplied by millions of people, can transform the world.” -Howard Zinn

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03

Finance, Operations Management & Entrepreneurship



By Pasupula Priyanka*

Abstract

Entrepreneurship is a long-run game. The decisions taken by an entrepreneur not only impact his/her personal or professional life but also the lives of employees, customers associated with the company, and the growth of the company. It is very important to have a clear vision and great passion for business, taking the right moves at right time is very important. These qualities of an entrepreneur help to convert innovative ideas to successful businesses. An entrepreneur needs to have great management skills, especially great finance management skills. Most of the companies do not fail because of bad ideas, they fail because of the poor financial management system and miscommunications within the team. So, managing finance is really important for the company to survive in the market. There is a structured approach to tackle these challenges and emerging technologies like Artificial Intelligence, Machine Learning, Robotic Process Automation (RPA), Big data and other related technologies helping entrepreneurs to take wise decisions. Although there are a lot of resources and approachable solutions for every problem, always mindset of the entrepreneur impacts the company's growth in the long run. The diverse, open-minded, and versatile nature of the entrepreneur helps the company and team to see great heights.

Introduction

What is Finance?

In simple terms, we can define managing money is known as Finance. Finance plays a huge role in our daily life. In our daily life, we do a lot of finance-related activities like Banking, Investing, saving, forecasting, borrowing, buying. This is not just a case in the daily life of a normal person. Finance Management plays a huge role in the organization's success.

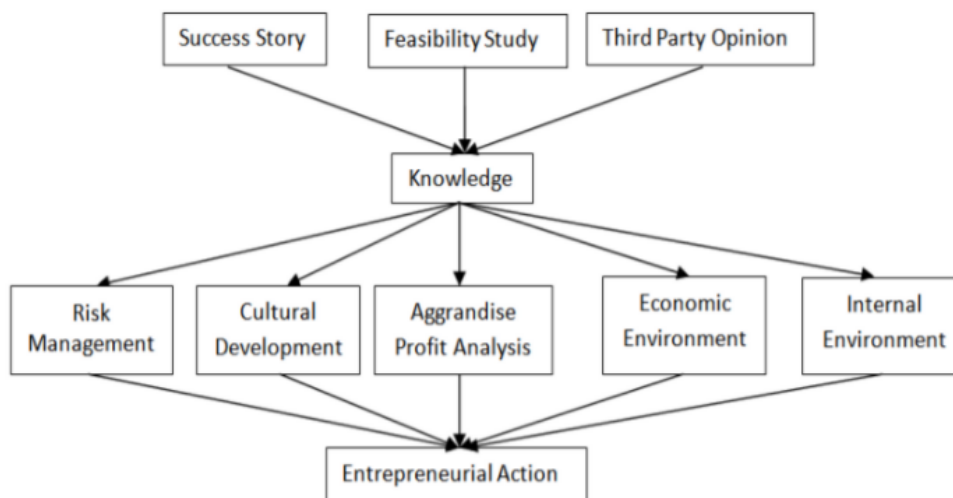
Today, all of the successful organizations have great financial management disciplines which are designed and implemented by the entrepreneurs (I e, Business leaders). Depending on the organization's goals and aspirations, the entrepreneur(s) needs to

manage the money and invest them in the right places of improvement in an organization. While dealing with the initial finance sources of the organization (I e, funding), entrepreneur(s) face a lot of challenges. The major problem is predicting “Uncertainty situations in the future.” There might be many situations related to financial management in the future that might keep the company in a financial crisis.

Proper planning of available financial sources allows entrepreneurs to scale the profits and keep the venture running with profits. In the growing technological era, there are many ways to manage the organization’s finances and helps entrepreneurs with smart decision making. Although there are a lot of funding options available for a start-up, there is also a lot of young talent is ready to work for start-ups and strong and secured technologies backing start-ups. But at the end of the day, the entrepreneur mindset decides the future of any start-up. Taking the right decisions and making smart moves keeping the future of employees and the company growth in mind is very important.

Although there are many challenges in managing finance, operations, team, and maintaining a high spirit of entrepreneurship. But the keen passion and discipline of an entrepreneur can make innovative Products/Services for the customers.

Psychology of a Successful Entrepreneur:



figure(I) illustration of an entrepreneurial action plan

- The entrepreneurs always try to look for business opportunities in the given problem statement. This is a very important quality for a successful entrepreneur. Every successful organization’s business leader always tries to make realistic assumptions of the available resources and they try to improve the possible outcomes. Also, a successful entrepreneur mindset is ready to take risks and able to control mental stress and depression. They were always prepared to take challenges and bounce back immediately.
- The most important quality of an entrepreneur is “Flexible and open-minded”. Flexible and open-minded thinking helps entrepreneurs to understand team problems and to avoid miscommunications while managing the team. It also helps

entrepreneur helps in adapting his/her mindset to any risk (or) challenge.

- The “Vision” of the entrepreneur should be about the business idea. Without having a proper vision in the entrepreneur’s brain, it would be very much difficult for the organization to attract customers.

The “Versatile Nature” of an entrepreneur is very important in any business. It helps both team and entrepreneur to approach different available solutions if any problem arises. This quality of an entrepreneur creates a challenging workspace for the teammates.

The entrepreneur must have extraordinary business skills. Start-up or running an organization is all about taking risks and decision making. Business skills helps him/her to take right decisions to avoid failure.

The entrepreneur should be self-motivated and passionate, because starting a business is not easy. For that an entrepreneur need to take a huge risk. There are lot of difficulties and challenges in the entrepreneur path. To tackle all those, entrepreneur need to passionate enough and self-motivated.

An entrepreneur must able to wear different hats according to situation and challenge.

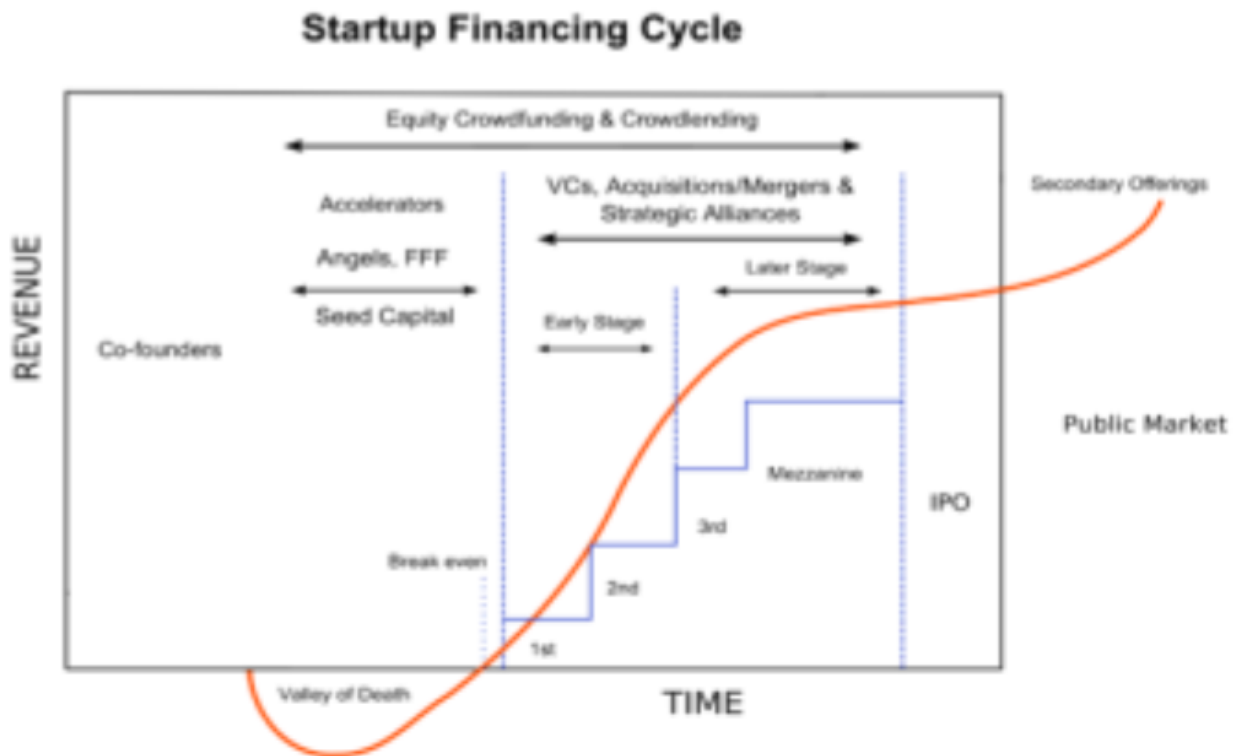
The motivational factors for any entrepreneur are,

- (I) Self-determination of the business idea.
- (II) Risk management and realistic expectations
- (III) Skilled team
- (IV) building stable market
- (V) Daily learning from the workspace
- (VI) Technical knowledge
- (VII) Business Background
- (VIII) Art of Networking

Stages of Venture Financing:

Businesses often need capital to operate. Every start-up or organization has to go through different stages of fundraising rounds to sustain itself in the market. Often entrepreneurs fail to because of the inability to raise the funds. So, for an entrepreneur to convert innovative ideas into a practical application it is very important to have clarity on the business idea and the ability to gain investors’ trust by producing better results every day.

The stages of raising funds are categorized into 5 different stages. Every stage gives better financial resources for the organization and the success rate in passing through these stages is relatively very less for organizations. The five stages are self-funding, seed-capital, Venture (Series A, Series B, Series C), Mezzanine finance, IPO (Initial public offering).



The above diagram showing the financing cycle of a start-up.

Self-funding:

In the budding stage of a start-up idea, there is a need to invest capital from the entrepreneur's pocket. In this stage to raise the capital from the investor, the entrepreneur needs a prototype or perfect business plan. So, for raising funds in further rounds this stage is very important the budding business model.

Self-funding is very important if the start-up needs investment in very earlier stages. Then the next round of raising funds is Seed-capital.

Seed-Capital:

Seed funding is the preliminary stage of raising funds. This stage is very important as it gives the right direction for the business model. These funds can be used in understanding market behavior, customer preferences and mainly help to improve the product/service. Most of the early-stage entrepreneurs raise seed funds through family, mentors, loans, or in participating in the competitions.

Venture:

When the company's product/service is ready for the market. Then venture capital comes into the entrepreneur's view. This stage further involves multiple rounds: Series A, Series B, Series C.

Series A:

The funds raised in this round were used for product/service marketing. It is an equity-based funding round. At this stage, start-ups formulate a market strategy for their Product/Service. These funds are used to create Brand credibility, helping businesses grow and help to enter new markets. The valuation of the organization in series A

fundraising includes how well the team can utilize the available financial resources to earn profits and the progress of the organization made through seed funding.

Series B:

When a business enters the Series B round funding. It portrays that the product/service was successfully implemented its Market strategy and entered the market. Series B round funding is also equity-based funding round. This round of fundraising also indicates the customers are using the Product/Service of the company. These round funds are utilized for hiring more staff and also to improve the infrastructure of the company.

Series C:

After Series B, an organization can raise as many rounds of funds as possible. There is no limit to it. Fundraising at this stage is very important for both the owners and the investors because more investment rounds mean more the release of business equity. Strictly speaking, at this stage organizations are no longer start-ups, they are well established. Series C funding indicates that the organization's products/services have good demand in the market. Organizations utilize series c funding for entering new markets, acquisitions of other companies, Research & development. In series C, Investors have low risk as the organization is well established.

Mezzanine Finance:

When the organization has a clean track record of generating profits, clean credit history, and the company have a plan for an IPO. Then organization is eligible to avail of the Mezzanine finance. Under this kind of funding option, the money borrowed by the organization has to be repaid to lenders from the revenue generated. Lenders also earn interest on the money as per the applicable rate. When the organization cannot pay the money back in the predefined period, then the lender has a right to convert a portion loan amount into equity. It is very much easy for a company to avail this kind of finance.

IPO:

When a company decides to raise the funds from the Public including common people and any other financial institution by selling organization shares. Then this process is known as IPO (Initial public offering). An organization doesn't have to disclose its financial statements to the public. But when the organization chooses to go for public investment, then an organization must disclose its financial statements publicly. An IPO is a huge step for a private organization, as it gives chance to the organization to raise huge funds through public investments. This gives a great ability to improve the growth and market expansion.

Financial Planning

Financial Planning is very important for any entrepreneur before starting any venture. It is a process of setting financial goals like raising funds, estimating capital requirements, and other long-term & short-term finance requirements.

Objectives:

Capital Requirements: An entrepreneur needs to estimate the long-term and short-term requirements of the venture. This mainly includes venture operations expenses.

Capital Structure: Once the capital requirements are made. The next important thing for an entrepreneur is understanding capital structure. It mainly includes decisions related to the debt-to-equity ratio (D/E) both short term and long term.

Structuring financial policies related to cashflows, borrowing, lending, etc.

Importance of financial planning:

1. The financial plan ensures adequate funds in the venture.
2. Financial planning ensures the cash flow balance (i.e, It gives a reasonable balance between inflow and outflow of funds.)
3. A good financial plan helps in making good growth and expansion of the venture. It helps the venture in long-run survival.
4. Financial planning reduces uncertainty situations which can be a hindrance to venture growth.

A finance manager helps the organization to utilize the available financial resources in the best possible way to achieve great profit.

There is a report created by CB Insights on “The top 12 reasons start-ups fail”. The report was based on analyzing 111 companies since 2018.

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In that report, it is mentioned that most start-ups fail due to a lack of financial planning. In the report, it is stated that 38% of start-ups fail because of fewer financial resources available and being unable to raise funds.



Top reasons start-ups fail (CNB Insights Report)

Finance & Operations planning in different stages of a start-up:

To run a successful organization, financial planning is very important, for that entrepreneur needs to have a clear vision for his/her business model and realistic financial goals. The *Havard Business Review* (HBR) article published 5 stages of financial & operations plans, I have drawn insightful conclusions mixed with my personal opinions on every stage.

<i>Stage</i>	<i>Needs</i>	<i>Plan</i>
1) Survival	Burn-rate Monitoring	Cash Flow Projection
2) Early Revenue	Revenue Forecasting	Marketing / Sales Funnel
3) Early Growth	Cost Planning	High-Level Budget
4) Growth	Decentralization	Operational Plans
5) Scale	Real-Time Iteration	Dynamic Planning

Stages of finance and operations management.

(I) Start-up Survival:

Survival in the market for an early-stage start-up is very important. People often think that start-ups fail because of bad ideas, but that's doesn't true. Most of the Products/Services in the current market are not unique there are many types of them. For example, Consider soaps. There are different kinds of soaps available in the market, people in the market don't purchase only one brand. Based on their choice of living, they do purchase different brands. So, assuming start-ups fail because of bad ideas (or) already existing similar products/services in the market is wrong.

For an early-stage start-up, they might face non-profits (or) most of the time loss of financial resources. But to have enough financial resources is very important. They might gain profits later, but understanding customers and product/service improvement are very important in the initial stages. This helps organizations to survive in the market in the long run.

(ii) Early-stage revenue:

At this stage, the organization gains the first few customers and it is a great confidence-boosting factor for the organization as it started gaining revenue. At this stage, an entrepreneur can utilize the revenue in improving product/service quality by hiring good talent. But this stage is also crucial because the decisions taken at this stage impact future of the organization.

An entrepreneur needs to estimate customer acquisition costs, monthly recurring revenue (MRR), and how sales cycles working. If the entrepreneur can estimate the above-mentioned things realistically and rightly. Then this would help the organization to sustain itself in the market.

(iii) Growth in the Revenue:

Once the customers start using the products/services, then company survival would not be much difficult as it has enough financial resources. At this stage, the entrepreneur needs to take balanced decisions. Let's consider an example, an

organization has a very good engineering team and producing the product without any bugs and your marketing team is not performing efficiently. This situation can be vice-versa.

An entrepreneur (i.e, business leader) needs to know where to improve the team performance to deliver a great product/service to the customers to gain their trust. So, Resource allocation (i.e, revenue allocation) at the right places helps in organization growth. Revenue growth gives freedom to entrepreneurs to improvise the product/service.

(iv) Operational Plans:

After passing through all the above-mentioned three stages successfully. The organization is in profits (Since it is generating revenue). Now, it is very important to structure the operational plans. Now, at this stage, every department of the organization needs to know their responsibilities and day-to-day activities. Preparing and implementing it with the team is very crucial for the company to see heights.

It is not just designing a plan and give it team to follow it. It is very important as an entrepreneur (I e, Business leader) to motivate the team to follow it with discipline.

(V) Scaling

Once everything started working as expected, Now the start-up is not in the early stage. It is well established. Customers are regularly using products/services. Team working efficiently to reach the market needs. At this point, taking big moves is very important.

An entrepreneur needs to plan to enter new markets, targeting new customers. Introducing new categories in the products. Overall, there are some huge steps to the company's growth. At this point, the organization has enough financial resources. They can invest resources research and development team to produce great results

Although, I have categorized finance management into five stages, maintaining consistency is a must thing at every stage. A Forbes article states that 90% of the start-ups fail. That means 9 out of 10 start-ups fail. There are many reasons for this, but the clear vision and constant for an entrepreneur and his/her team are very important in long run.

Concept of Bootstrapping Finance:

Raising funds is not always an option for entrepreneurs to use financial resources. There is another method, to run a start-up without funds is Bootstrapping Finance. Bootstrapping Finance is a situation in which an entrepreneur starts a company with his/her own money. It kind of finance doesn't need investors to invest the money. Bootstrapping finance allows an entrepreneur to have more control over the business rather than having control of investors in his company. Some of the organizations take pre-orders for their products/services and utilize the profits for the organization's growth and this process continues.

The upside of bootstrapping finance is the entrepreneur has more control over the business operations. The downside of bootstrapping finance is, there can be financial risks for the entrepreneur. Furthermore, sometimes bootstrapping finance cannot be

able to provide enough financial resources for the organization's operations. There are many companies in the business history seen great milestones through bootstrapping and on the downside there are also companies closed because they are unable to sustain the operating expenses of the product/service.

There are so many companies running successfully like Oracle Corp. (ORCL), Facebook Inc. (FB), Dell Computer (DELL), Coca Cola Co. (KO), Microsoft Corp. (MSFT), eBay Inc. (E bay) are few examples of the bootstrapped enterprise.

Valuation Theory:

With the help of fundamentals in valuation theory, concepts such as risk/return relationship. These basic concepts help entrepreneurs to set realistic financial goals. Most organizations use spreadsheets to record cashflows and finance-related activities. In the initial stages of the start-ups, it may take a lot of time for the managers to record this day - to - day finance activities as there is less manpower in the organization, and most of the cases organizations cannot afford to use good technology to automate the process as it has limited resources.

Finance literature has some pre-defined working-capital techniques to save the time of the managers and to improve their operating efficiency.

Technology In Finance:

Every day, we are witnesses to the evolution of Technology in businesses. Technology completely changed the way of operation and delivering the products/services to its customers. Finance also has been part of this evaluation and it leads to the buzzing word called "Fintech". It has become more and more popular these days. Nowadays, most companies are getting digitalized and that led to massive growth in finance using technology.

Managing finance is a very important and essential sector for any organization. Organizations, need to keep up-to-date information about the company day to day expenses, this helps the entrepreneurs (i.e, business leaders of the company) to take important decisions for the organization's growth. The finance information available in the organizations is huge, so, the company must adopt solutions through technology. This helps organizations to take complete advantage of solutions provided by technology.

The major disadvantage of the kind of technologies is small companies or start-ups cannot afford the talent until unless the founding team has technical knowledge or they raise high capital in the funding rounds.



Figure (IV) Emerging Fintech technologies.

The emerging technologies used by fintech are Artificial Intelligence (AI), Machine Learning (ML), robotic process automation (RPA), big data, Data Analytics, and blockchain.

1. AI-driven chatbots used by banks and other financial institutions help them to understand customers and solve their problems soon. There are many AI-driven tools available for Fintech customers to understand customer spending habits, and it also allows financial institutions to know their clients in better possible ways. According to the business insider study, they stated that by the year 2023, 80% of financial institutions and banks will get aware of the potential benefits of AI. It is also estimated that by the year 2023, the cost savings of banks through AI applications are \$447 billion.

2. Machine learning is also a part of Artificial Intelligence (AI). Machine Learning uses the statistical model for predictions. By using machine learning algorithms, organizations can detect fraud and eliminate it, used in portfolios management, Algorithmic trading, and underwriting loans. According to Forbes, 70% of the companies using ML models and algorithms to detect fraud, managing activities, and cash flow events.

3. Robotic Process Automation (RPA) is a part of Artificial Intelligence (AI) technology application used in automated repetitive processes of organizations. Robotic Process Automation (RPA) helps the organization to automate the process like accounts payable and accounts receivable more efficiently than manually entering the process.

4. Big data is an emerging technology in fintech companies. It helps financial institutions and banks to predict market changes and client behavior. It helps organizations to create new strategies for the clients and it also helps in fraud detection. Big data also created a significant influence on economical modeling and analysis.

5. Financial institutions and banks are data-driven organizations. Data Analytics technology helps them to make better decisions to avoid uncertain situations. It helps the organization to manage risk and regulations. It also helps in (I) Better Product/service design (II) Marketing (III) Digital transformations (IV) Creating more business and opportunities and employment opportunities for the youth (V) Strong Commitment towards customers and clients (VI) Increasing success rate in decisions taken by the leaders of the organization. So, these are some major advantages of Data Analytics in organizations.

6. Blockchain technology took security in financial institutions and banks to the next level. The decentralized nature of blockchain helped banks and financial institutions to eliminate the third parties to execute transactions. The records are generated by blockchain technology are permanent and irreversible. This nature of blockchain reduces fraud and errors.

Conclusions:

1. Entrepreneurs should be versatile, driven nature and, open-minded to adapt to new challenges.

2. An entrepreneur needs to take risks and challenges by keeping the company's growth and employees future in mind.

3. Managing Finance is very important for an entrepreneur to operate company's day to day activities and it also helps in the company's growth
4. Booming technologies helping industry leaders to take valuable decisions for an organization's growth.
5. Constant determination and discipline help an entrepreneur to achieve business success.
6. There may be already a product/service already present in the market. That might match with the entrepreneur's business model. But presenting it in a better way to the customers can assure start-up success. So, there is nothing called a bad and good idea. It is just about executing and delivering adequately.
7. There are many predetermined ways in the finance literature to approach the problems, but at the end of the day thinking practically according to situations and taking decisions can be good for both team and company's growth.
8. Operating and scaling are very important for an organization once it starts producing revenue.

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04

E-WASTE MANAGEMENT: AN ENTREPRENEURIAL OPPORTUNITY?



By Sanskriti Pal*, Srishti Jasuja*, Tanya Jain*

Abstract

India is a country that generates a lot of e-waste. However, e-waste is not futile and it can be made valuable too. The main theme of the paper is to search for entrepreneurial opportunities available in India which can make it a growing hub of e-waste management. A SWOT analysis of e-waste management hints at the opportunities available to take the much-required job to entrepreneurs discusses the factors conducive in the Indian setting and the scope and potential of entrepreneurship to exploit technological opportunities available in e-waste management. The paper tries to explore entrepreneurial opportunities in private sectors enterprises, public sector enterprises, or a partnership of both public and private i.e. PPP mode, available to profitably take up the brimming industry of e-waste management which is not new to India but certainly not well exploited, with the help of existing examples of some Indian start-ups, big firms, etc. It also gives a model and guides on what goes into starting an e-waste management unit. The Government of India has also taken several initiatives to encourage entrepreneurs to take up e-waste management, these are also discussed in brief. E-wastes though hazardous to the environment and health cannot be considered trash. These e-wastes in return for recycling offer some valuable resources such as noble and precious metals. The paper discusses the opportunities available in metal extraction from e-waste. Future scope again highlights the fact that e-waste can be made useful and cites ways to make it useful, which certainly involves dealing with the current limitations that the Indian business environment and market is currently faced with.

Introduction

Electronic waste or e-waste refers to all the discarded electrical or electronic devices and equipment. E-waste, often referred to as the fastest growing solid waste stream, is rapidly amplifying the global threat which cannot be denied due to the ever-growing global economy and rising use of e-products.

A study states that a human generates around 30 kilograms of e-waste in his lifetime which adulterates the environment and creates big vulnerability to the entire human race. Each year, around 50 million metric tons of e-waste are generated globally with an average of more than 6 kg per person. There are nearly 1000 dissimilar constituents under e-waste which fall under hazardous and non-hazardous categories. E-waste management has proven to be unbelievably challenging as even the industrialized nations which have well-established e-waste management systems are struggling with its complex nature which has added challenges to the already existing waste management crisis. The article analyses the ways available for the new entrepreneurs to start technology-oriented enterprises and studies the technological opportunities available in India for starting e-waste processing enterprises.

SWOT ANALYSIS FOR STARTING E-WASTE MANAGEMENT

It involves specifying and identifying the internal and external factors which prove to be favourable and unfavourable to the e-waste business.

Strengths:

- Unlimited supplies of e-waste are available for closed-loop processing by reuse or recycling.*
- Many products are developed by Original Equipment Manufacturers with materials alternative to the ones declared unacceptable by RoHS.*
- Many companies are changing their designs and adding materials identification to make dismantling easier at e-waste facilities.*

Weakness:

- Government regulation has been uncoordinated at the national and regional levels.*
- Addition of unnecessary cost due to different compliance requirements from country to country and state to state.*
- Consumers are not provided effective incentives to reuse or recycle WEEE.*
- E-waste management companies are not certified/audited by the third parties that their business processes comply and are appropriate.*

Opportunities:

- Utilization of the framework of an existing international organization to mandate the implementation of the minimal global requirements for e-waste management.*
- Emerging information technology and frequent changes in the advancement bring the e-waste available for continuous input for processing.*
- Incentives and tax exemption for waste recycling.*

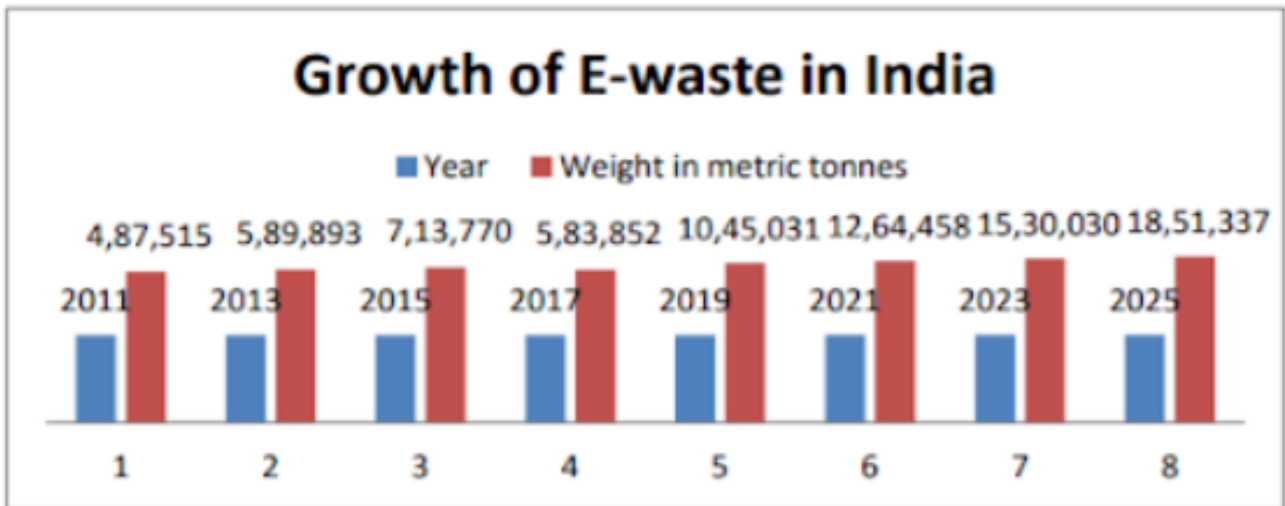
Threats:

- Scarce resources or political will to enforce government and treaty requirements, including financial and legal penalties for non-compliance.*
- Inadequate capital investments in processing equipment and training in both industrialized and developing countries.*

E-WASTE STATUS IN INDIA

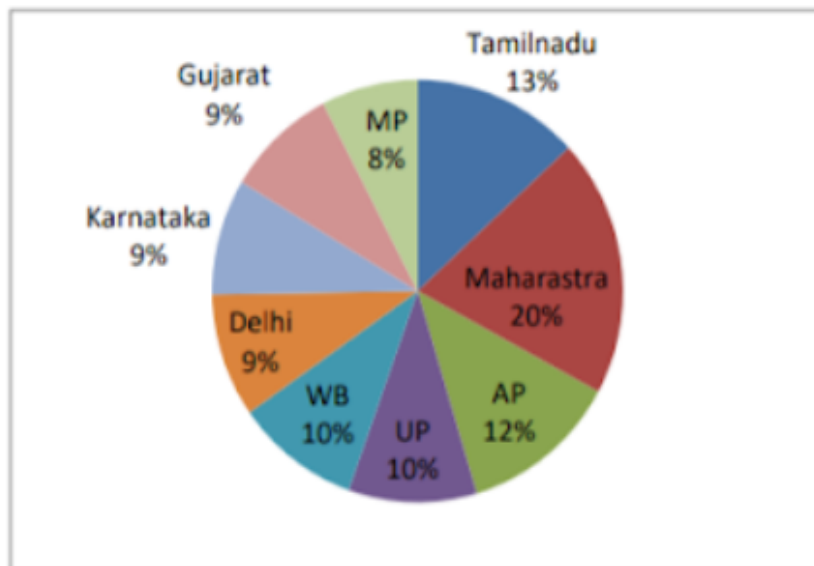
The chart given below shows the steady growth of e-waste generation in India. This is due to the large and rapid communication, innovation, and growth of the mobile and information sectors.

CHART 1 INFOGRAPHIC RETROSPECT OF E-WASTE GENERATION IN INDIA



As per the Ministry of Information and Forest, the reports of 2012 states that the e-waste generation in India has increased up to 8 times in the last seven years making India the second-largest e-waste developer in Asia. The major contribution of around 60% of e-waste has been generated by 75 cities and about 75% of total e-waste is generated by 10 states namely Maharashtra, Tamil Nadu, Uttar Pradesh, Delhi, West Bengal, Andhra Pradesh, Karnataka, Gujarat, Madhya Pradesh, and Punjab. Out of the total e-waste generated in the country, only 5% is recycled and about 40% of obsolete computers and electronics products decay in homes and warehouses.

CHART 2 E- WASTE GENERATION IN TOP TEN STATES OF INDIA



NEED OF STUDY

WHY IS E-WASTE BEING RECYCLED?

As electronic devices are becoming cheaper and more widely available, the need to recycle electronic waste is growing. E-waste is more than just electronic gadgets and includes anything that plugs into a PowerPoint or even runs on batteries and has reached the end of its useful life.

The rapid growth in technology has seen a significant increase in E-waste, driven by consumers constantly replacing their old mobile phones, laptops, and other gadgets for the latest products in the market.

According to a survey by Sustainability Victoria, a Victorian government agency, E-waste is growing three times faster than the rate of standard municipal waste. Recycling E-waste is the best solution to tackle this escalating waste problem.

IMPORTANCE OF E-WASTE MANAGEMENT

The key reasons to recycle E-waste are:

- It prevents toxic hazards

E-waste contains hazardous substances such as lead, mercury, and cadmium which can contaminate the environment if not disposed of responsibly. These toxic materials can cause problems, even in small amounts leading to serious diseases as seen with the Minamata disaster.

- It allows us to recycle and reuse materials

E-waste is full of precious metals and materials such as nickel, zinc, iron, aluminium, and copper can all be recovered from E-waste when it is recycled. Recycling such material and putting them back to new products, reduces our dependence on new products.

- Reduction in greenhouse gas emissions

Using recycled material will also help to reduce greenhouse gas emissions and carbon footprint produced while manufacturing a new product.

- Reusing is the solution

Discarded electronic devices can also be refurbished and donated for a worthy cause as “reuse” is an important component of keeping materials out of the waste stream.

SCOPE OF ENTREPRENEURSHIP IN E-WASTE MANAGEMENT

Young entrepreneurs who want to invest in low-cost business opportunities, the services industry is brimming with one-of-its-kind concepts that offer lucrative business deals to its prospective franchisees. Nowadays, the concept of such E-waste recycling is well accepted in the market as this industry has a lot of potentials.

According to the International Finance Corporation (IFC), the electronic waste sector has the potential to create 4.5 lakh direct jobs by the year 2025 and another 1.8 lakh allied jobs in sectors of transportation and manufacturing. Every year, approximately 50 million tonnes of electronic gadgets are discarded which surprisingly weighs more than all of the commercial airliners ever made. Considering it in terms of material value, this is worth 62.5 billion dollars, which is more than the GDP of most countries. Less than 20 percent of it is being recycled formally. Instead, millions of men and women worldwide work informally to collect, repair, refurbish, dismantle, recycle and dispose of e-waste, much of it done in working conditions harmful to both health and the environment. There is a need for better e-waste strategies and green standards as well as closer collaboration between governments, employers, and unions to make the circular economy work for both people and the planet.

OBJECTIVE

- To determine the future impact of e-waste management on business opportunities such as start-ups
- To analyse how entrepreneurship can address the issue of e-waste generation
- Adoption of global technological tools (actual and potential) in the disposal of e-waste

RESEARCH METHODOLOGY

We have collected data from various secondary data sources which include official websites of enterprises and government departments. Our study is based on various articles collected from newspapers and different websites, reports, surveys, and graphs.

E-WASTE MANAGEMENT: A COMPARATIVE STUDY OF DIFFERENT SECTORS

1. PUBLIC SECTOR

The E-Waste (Management) Rule was rolled out in 2016 by the Ministry of Environment, Forest, and Climate Change to reduce the production of e-waste and increase its reuse and recycling. The study says that under these E-Waste Rules, EPR has been introduced by the Government which makes producers liable to collect 30% - 70% of the e-waste they produce.

The E-Waste Management Rules, 2016 were amended in March 2018 by the government to effectively implement the environmentally sound management of e-waste in India. The amendment in the Rules revised the collection targets for the producers under EPR with effect from October 1, 2017.

The use of the principle of EPR for the management of e-waste can be seen across many countries and its relative effectiveness and success have also been demonstrated in EU countries. While the producers are responsible for e-waste management (EPR), consumers, retailers, municipalities, state governments, NGOs, Self-Help Groups (SHGs), local collection agencies such as extracarbon.com, and other bodies can play an appropriate role in the facilitation and creation of an infrastructure to make e-waste management and recycling success.

Currently, Design for Environment (DfE) is emerging as a new method to solve environmental pollution. DfE principle in the product design is a process to reduce the environmental impact of products being put into the market.

The Indian government with the Union Ministry for MSMEs launched a scheme in February 2020 offering Rs 15 lakh and incubator support for aspiring entrepreneurs who have innovative solutions in focus areas like water and waste management. According to a statement given by the ministry, many start-ups, MSMEs, students, and technocrats submitted their applications of innovative solutions to get financial support which was screened to source business solutions for a 'New India'. The ministry also said that the selected ideas would be funded up to Rs 15 lakh per approved idea.

The Government of India has created a facility for extracting metals from circuit boards which can be availed by the small players with a minimum requirement of 100 such boards. This opens an opportunity for start-ups. The business of extracting precious metals from e-waste is expected to grow to USD 6 billion by the year 2030 which will create a big business opportunity for India. A Centre of Excellence for E-waste has also been created by the Government of India and now, the Government is working with industry to develop appropriate policies and low-cost technologies for recycling procedures. 50 SMEs joined the Government for this initiative, under the Technology Transfer initiative.

E-waste management is on the verge of becoming an industry sector and to comprehend its potential prospects, the Indian Government and Industry need to work together to create awareness among people, remove bottlenecks, and unleash the opportunities by addressing the gaps in the legislation.

2. PRIVATE SECTOR

The Indian e-waste management market growth is likely to grow at a CAGR of 14.25% in terms of revenue, and 8.24% in terms of volume, during the forecast period from 2021-2026. The increasing government initiatives, growing awareness, and environmental concerns are fueling the growth of this market.

The growing middle-class population and the increasing technology penetration have made India one of the world's largest electronics markets. It is also one of the most abundant e-waste generators and used electronics. Most of the e-waste now lands in the capital cities, out of which the majority reaches hundreds of small undocumented shops. The challenges faced are massive, with the increasing push for high sustainability. Scrap collection has an intrinsic role to play in the informal economy and unregulated trade.

Further, in 2019-20, India's e-waste generation was seen to rise by 32% than that of 2017-18. This included 21 types of electrical and electronic equipment mentioned in the E-Waste Management Rules of 2016. Furthermore, the government has put forth several provisions for the e-waste generated. These measures include assigning responsibility to Pollution Control Committees (PCCs) and State Pollution Control Boards (SPCBs). Such factors are the driving forces of demand for the market.

E-Parisaraa Private Limited, E-waste Recyclers India, Eco Recycling Limited (ECORECO), Hi-Tech Recycling India Private Limited, Ultrust Solutions Private Limited, Earth Sense Recycle, Sims Recycling Solutions India, Ramky Enviro Engineers, Tech Logic E-waste Recyclers, etc. are leading the organized e-waste management market in India.

Successful start-ups such as Eco Centric, Inside, Attero and Bin Bag have also played an important part to dispose of E-waste by collaborating with various recyclers across India.

The e-waste management market now is offering tremendous opportunities, however, managing the continuous generation of e-waste is a big challenge for the country. Proper e-waste management is required in the country which can be done by developing infrastructure, increasing awareness, and strict legislation regarding e-waste collection along with imports and proper recycling facilities. Metro cities of India form a considerable market share in the generation of e-waste and recycling of generated e-waste.

Given below is a list of the top 5 successful units that deal with E-waste management

1. Adatte E-waste management

Praveen kumar Sundararaju & Abhimanyu Ajay Mehra, Co-Founders

A comprehensive e-Waste management unit that processes the entire hazardous printed circuit boards waste within India in an eco-friendly way

2. Attero

Nitin Gupta, Co-Founder

India's only end-to-end e-Waste recycler and metal extraction company that has also developed a disruptive technology with low capacity eco- friendly recycling plants for processing E-waste

3. Bao Bab Clean Tech

Vinod Shenoy, Founder

An E-waste management venture which provides solutions that maximize the value recovery for clients while providing environmentally responsible processes along with managing liability of the IT assets

4. Cerebra Technologies Limited

V. Rangnathan, Managing Director

The company has one of the largest e-Waste facilities in India, and offers repair, refurbishment and reuse of all electronic and electrical equipment.

5. E-incarnation recycling

Gaurav Mardia, Founder & MD

Uses the best available environmentally sound technologies to mitigate the hazardous effects of improper treatment and disposal of E-waste, ensuring protection of the environment

3. PPP (PUBLIC-PRIVATE PARTNERSHIP)

PPPs (Public-Private Partnerships) are contractual arrangements between the public sector and a private sector party for the private delivery of public infrastructure services or other basic services.

The public sector through implements waste management policies and ensures coordination amongst stakeholders but it lacks in maintaining costs and competency. The private sector on the other side already holds a well-established collection network (especially the unorganized sector) and competent technical skills and efficiency. Investigations of the authors showed that the existence of an informal but entrepreneurial SME-based infrastructure permits a profitable e-waste management business. But the informal sector lacks skills and technologies and manages hazardous material without any regard to occupational health and safety (OH&S) requirements and in an environmentally harmful manner. Thus, here PPP emerges as a viable option to exploit the technological opportunities in e-waste management.

The Ministry of Environment & Forest (MoEF) has implemented a scheme to provide financial assistance for the setting up of treatment, disposal, and storage facilities for hazardous and integrated recycling facilities for e-waste on the public-private partnership (PPP) model.

Also, the Ministry of Electronics and Information Technology (MeitY) has informed that to make the e-waste recycling R&D processes commercially viable along with, the effort would be made to explore the possibility to set up eco-park under PPP by providing infrastructure, training tools, etc. and by bringing the together formal and informal sector.

Also, the presence of valuable resources such as copper, silver, gold, and platinum present in e-waste makes the industry attractive to recycle e-waste for private sectors with less budget or start-ups to partner with the government.

MeitY has even expressed its willingness to help local companies to utilize the indigenous technologies for recycling printed circuit boards developed by it in various research endeavours. These technologies are even less expensive alternatives to the imported technologies.

SANSHODHAN- AN E-WASTE EXCHANGE:

Launched in 2018, Sanshodhan: an e-waste exchange is a start-up partnered with the State Government of Telangana.

It is a digital platform available for corporates and society to directly transfer their e-waste to government-authorized technically competent e-waste recyclers. E-waste Exchange is based on the latest information technologies (IT) and seeks to foster environmental sustainability in the e-waste management sector in India through its e-waste free smart cities model and circular economy model.

E-Waste Exchange has designed and developed RE-CIRCULATE, a unique standard for use by government departments and businesses to achieve responsible production and consumption of electronic and electrical products in line with SDG 12 (responsible consumption and production) while contributing to SDG 11 (sustainable cities and communities) and SDG 13 (climate action).

PUBLIC-PRIVATE PARTNERSHIP LAUNCHED BY SAMOA FOR E-WASTE MANAGEMENT:

The Ministry of Natural Resources and Environment of Samoa launched a partnership with Samoa Stationery and Books and HP New Zealand to minimize the impacts of e-waste. The Partnership will enable users to safely dispose of HP ink toners and cartridges through a collection and shipping program paid for by HP New Zealand.

Also, organizations such as GIZ have developed alternative business models in guiding the informal sector association towards authorization. These business models promote a city-wide collection system feeding the manual dismantling facility and a strategy towards the best available technology facilities to yield higher revenue from printed circuit boards. By replacing the traditional wet chemical leaching process for the recovery of gold with the export to integrated smelters and refineries, safer practices and a higher revenue per unit of e-waste collected are generated.

METAL EXTRACTION FROM E-WASTE

E-wastes though hazardous to the environment and health cannot be considered trash. These e-wastes in return for recycling offer some valuable resources such as noble and precious metals (Copper, Gold, Silver, Lead, etc.). Instances of recovery of heavy and precious metals from PCB of mobile phones and computers have been taken in the following table

TABLE 2: Recovery of heavy and precious metals from PCB of mobile phones

No	REAGENTS	RECOVERY METHOD	PERCENTAGE RECOVERY	REFERENCE
1	Aqua regia	Hydrometallurgy Electro winning	92.0(Cu)	Angela et al., 2011
2	HCl	Ion Exchange Process	95.0(Au)	Kim et al., 2011
3	Sulfuric Acid +Hydrogen peroxide	Supercritical Extraction	83.1(Cu)	Calgaro et al., 2015
4	Acid Thiourea	Adsorption (CPT gel)	80.0(Cu)	Gurung et al., 2013
5	Cyanide generating Bacteria	Bioleaching	11.31(Au)	Tran et al., 2011
6	Sodium thio Sulphate+ Ammonium hydroxide & Copper sulphate	Hydrometallurgy	15.0(Au) 03.0(Ag)	Petter et al., 2014

Recovery of precious metals from e-waste requires technology-intensive recovery methods, mainly three namely Hydrometallurgy, Pyrometallurgy, and Bio recovery. Therefore, worldwide there are only five global recyclers that extract precious metals from e-waste material. Also, currently no solution is available in India as the metal recovery plant and infrastructure requires huge investment and consistent inflow of raw material. Currently, the precious metals e-waste is exported to refineries outside India for the recovery of metals such as gold, palladium, platinum, tantalum, etc. These metals are present in great volumes in e-waste and if recovered, can translate into big earnings.

According to the UN World Economic Forum's report in 2019, One e-waste recycler in China produces more cobalt than what the country mines in one year. Also, recycled metals are 2-10 times more energy-efficient than metals smelted in virgin ore. Thus, various business opportunities are available through metals recovery and the methods for better improvement in waste management in India. As studies reveal India is also a large importer of e-waste.

CASE STUDY: NAMO E-WASTE

Namo e-waste, launched in 2016, is a Haryana-based start-up that is such an entrepreneurial venture that will be exploiting the first-mover advantage in the market of metal extraction from e-waste soon.

Currently, it extracts non-valuable metals of around 3400 metric tonnes per annum.

Its Revenue has surged from ₹ 30 lakh in 2015-16 to Rs 450 lakh in 2017-18.

It claims to have recycled over 6000 metric tonnes of e-waste in the last 30 months.

As the technology for this requires huge funding and resources, it is looking for potential investors and other types of alliances in terms of providing technology and collection of e-waste. Thus, it has partnered with some big enterprises such as Samsung for the same.

The proposed investment will be about \$3 million. And it will be importing this technology from Europe. It will be based on extracting metals through incineration and electrolysis methods. The entire process would be controlled and there would be no harmful emissions from the process

Currently, Nammo has 90% of its business coming from the B2B sector. It works with 17 exclusive collection partners across India and buys e-waste material for its recycling plant in Faridabad, Haryana.

CHALLENGES TO E-WASTE MANAGEMENT

- **LACK OF AWARENESS**

This is one of the obstacles to better E-waste management. Despite recycling E-waste becoming more important day by day, some of the companies and even citizens have forgotten their responsibility to dispose of the toxic materials found in the electronics that are damaging the environment. The easiest solution would be to call for governments to work together with equipment manufacturers and raise awareness about the importance of working with responsible electronic recyclers.

- **LACK OF INFRASTRUCTURE**

There is a bridging gap between present recycling and collection facilities along with the quantum of E-waste that is being generated.

No collection and take-back mechanisms are in place. There is a lack of recycling facilities. Although a lot of E-waste guidelines provide several technologies for recycling and processing different components of waste, the waste management units mainly focus on metal recovery and less on the components of the waste.

- **HEALTH HAZARDS**

E-waste contains over 1,000 toxic materials which lead to contamination of water and soil. Exposure to such toxic substances can also cause serious liver, kidney, and neurological disorders. Due to lack of awareness the health of the workers and the environment is at great risk.

- **INADEQUATE REGULATORY DESIGN AND ENFORCEMENT**

There is a lack of laws that deal with E-waste management and ineffective implementation of existing regulations relating to transboundary movement of hazardous waste and recyclables. The regulations should specify, elaborate standards and processes for dismantlers, collectors, recyclers, and bulk consumers. It is also required that the agencies enforce compliance with specific standards.

- **MISMANAGEMENT IN THE MARKET FOR END-OF-LIFE PRODUCTS**

Despite the massive increase in the volume of e-waste generated every year, there is very little investment by large-scale industrial infrastructure for recovery and recycling. Employing effective recycling technologies may require significant upfront capital expenditures which cannot be justified for private entities in the absence of certainty enough quantities of E-waste to be recycled.

- **ENVIRONMENTALLY UNSUSTAINABLE INFORMAL SECTOR PRACTICES**

Most of the formal facilities are operating below the approved capacities because of the inability to source enough waste. The lack of awareness regarding e-waste and the costs of returning such equipment to the formal sector is reducing the willingness of households and consumers which makes the informal sector attractive. The informal sector provides livelihood to millions of people but on the other hand, the sector's waste management practices pose serious environmental and health hazards to workers themselves as well as to the larger public.

HOW TO START YOUR OWN E-WASTE MANAGEMENT UNIT?

The sales of electronic devices are increasing rapidly due to an increase in purchasing power and disposable income. The pandemic has further accelerated the demand for electronic devices as the world has entered into a digital era that is considered as “new normal”. This accelerated demand for electronic products results in a rapid increase in the amount of e-waste produced. The growth in the sale of electronic equipment in the coming years would generate a profitable economic environment for the e-waste recycling business model.

Investment

A proper and well-defined plan can make the e-waste recycling business model profitable in no time but to start an e-waste recycling company, significant capital investment is needed. To begin with, money needs to be invested to get licenses. You will also need a dump yard and a place to run your company.

A rough estimate of the plant cost is given below: E-Waste Recycling Plant costs around ₹ 700,000 – ₹ 800,000 and the area required for setting up an e-waste recycling plant: 1000 sq. ft – 1500 sq. ft (93 sq. m – 139 sq. m) Some operational expenses include logistics expenses, marketing expenses, expenses for utilization of electricity and water, cost of scrap, human resources cost, spares and consumables, contingency expenses, etc.

Business Model

To start the business and make it a success, it is important to create an effective E-Waste Recycling. The total activity can be divided into several phases in terms of the process including gathering devices, processing scrap, and receiving payment in return for the components.

There are two types of operations:

1. Franchisee-based: Waste management plant as a franchise unit which is of an already established e-waste management company
2. Self-owned: Waste management plant by buying the waste from various sources.

A franchisee-based unit could benefit from some of the parent company's infrastructure but the entrepreneurs bear the whole investment in Self-Owned Business operations. A business unit is capable of generating revenue to the tune of 6.0-7.5 million rupees per month by processing at least 500kg e-waste per day under the self-owned model.

Licenses and Permissions

To start an e-waste recycling business, a diverse range of government permissions and licenses are needed. Some of the most common steps which need to be followed to set up an e-waste recycling business are given below:

- Registration at the Udyog Aadhaar MSME status is required to begin your e-waste recycling business.
- To start an e-waste business, permission is required from the state PCB, and to apply for its approval, submission of several statutory documents is needed.
- If you wish to import e-scrap as part of your e-waste recycling business plan, you will need the necessary approval from the Ministry of the Environment.
- An extensive protocol will also be provided by the Central Excise and Customs Board.

Steps for starting an E-Waste Recycling Business in India

Step 1. Check the online marketplace and the established e-waste recycling company websites to get knowledge of their style of operation.

Step 2. Create a brand name, a logo, and a catchline which are mandatory these days for operating a business successfully.

Step 3. Register your business after obtaining the necessary licenses and permissions.

Step 4. Check the availability of commercial electricity and water and you must have a dumping yard. It is advisable to secure the space for the e-waste management unit in an industrial area.

Step 5. An E-waste Recycling Business Model needs to be prepared, after which you can create your company website where you can also offer an instant quote facility for the devices.

Step 6. Determine the territory in which your business will operate which is very crucial when you collect the devices from the consumers. This will enable your consumers to know in which specific city your service is available.

Step 7. No business can be successful without an effective marketing plan, so craft a marketing plan carefully and engage in digital advertising.

Step 8. Procurement of the essential equipment and tools for the operation is required to run the business efficiently.

Step 9. Employees need to be hired for the processing, admin operation, pickup, and delivery facility, and marketing.

Step 10. E-waste recycling is considered to be a heavily detail-oriented business and, therefore, you must have an integrated system for better monitoring and control of your business.

CONCLUSION

FUTURE SCOPE- HOW CAN THE E-WASTE GENERATED BE USEFUL?

1. RECYCLING OF E-WASTE CONSERVES NATURAL RESOURCES

Recycling helps to recover valuable materials from old electronics that can be used to make new products. As a result, this saves energy, reduces pollution, reduces greenhouse gas emissions, and saves natural resources by extracting fewer raw materials from the earth.

2. PROTECTION OF THE ENVIRONMENT

E-waste recycling provides proper handling and management of toxic chemical substances like mercury, lead, and cadmium contained in the e-waste stream.

3. CREATION OF JOBS

E-waste recycling helps to create new jobs for professional recyclers and creates a secondary market for recycled materials.

4. SAVES LANDFILLS

E-waste recycling saves unnecessary dumps and landfills. Many valuable metals such as copper, gold, silver, and palladium can also be recovered.

COPPER: Copper is highly durable, long-lasting, and can be used in all applications of life. Copper is used extensively in all electronics as it is an excellent conductor. On average, electronic circuit boards contain about 20% of copper.

GOLD: Gold has a lot of uses aside from its traditional monetary and symbolic value. It's used in all electronics due to its high durability, good conductivity, high-temperature resistance, and corrosion resistance.

SILVER: In addition to being used for jewellery, silver is used in manufacturing electrical and electronics industries in many applications like batteries, mobile phones, and computers.

PALLADIUM: Palladium was discovered in 1802 and is one of the six platinum group metals. Palladium is used in the jewellery, electronics, and automotive industries.

RECOMMENDATIONS OF STUDY

- The government should focus on 'technology transfer initiative' to facilitate the entrepreneurs to take up e-waste management since one of the gravest challenges of the industry is the high cost and non-availability of technology to treat e-waste.
- Make each step of the process profitable for entrepreneurs like efficient collection drives to be organized for systematic collection and segregation of e-waste etc.
- Separate departments for e-waste management required in organizations, companies and government entities given the huge quantitative impact of the problem.
- A well processed analysis required of how much e-waste is generated and associated with each type of industry and how can it be made useful on-site.

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05

Development Beyond Gender Disparities: A Paradigm



By Samridh Aggarwal* and Palak Gupta*

Abstract

This paper aims to identify the patterns between Economic development and Gender equality amidst a selected sample of countries ranging through diverse income groups. The research focuses on the use of concrete statistical tools and a comparative analysis through its two case studies. The Case Studies attempt to answer the ubiquitous question: does female participation in entrepreneurship and in labor force relate to more per capita income? (per capita income/GDP has been chosen as a measure of economic growth). The answer to the question is approached by analyzing the two types of economies: developing economy and developed economy by correlating the secondary data from the Global Entrepreneurship Monitor's (GEM) total entrepreneurship activity (% female participation of age group 18-64) and the World bank data related to the per capita income as well as the ILO statistical data, in order to examine the relation reported by the mentioned international organisations. After assembling the data of Per Capita Income and Total Early-Stage Entrepreneurship Activity % of females we perceive the correlation between two indices of developed economies and developing economies. We discern from the correlation that the correlation of per capita income and TEA % of females is divergent in developed and developing economies.

Developed nations indicate the positive correlation between the indices which interprets that female participation in entrepreneurship is related to the per capita income of the nation, whereas developing economies indicate the negative correlation between two variables thus, further adding substance to our assumption. In the instance of developed economies this occurrence is indicative of the well-established infrastructure that is provided for by the respective countries and the modern ideology that is perceived by its people regarding promotion of businesses as well as regard for an increase in participation of both genders in the labor force.

Whereas, the case of developing or patriarchal mind set countries represent no positive correlation which implies that the existence of poor infrastructure and accentuates the need to promote higher participation of women in the economy and provide them infrastructure, incentives and the better socio-economic market for the same to ultimately get a positive correlation between the indices and to maximize their economic potential.

Introduction

Economic development has been a major agenda and a matter of concern for all governing bodies throughout the modern century. However, most countries have failed to recognize the catalyst to accelerate their equation with economic prosperity. This paper delves into the inherent risk-averseness and the underlying patriarchal mindset of societies which is not only archaic but also a constraint in their path to fully achieve their economy's potential. The primary topics covered under this paper include the major reasons for various developing and underdeveloped societies' affinity to be risk averse and discourage entrepreneurship and also their conventional mind set of subconsciously promoting single gender employment.

In our research the countries taken into account are [developing economies] India, China, Colombia and [developed economies] Canada, Germany, Finland. In our research we will study the relation between the Per Capita Income, Percentage of female participation in labor force & Total Early Stage Entrepreneurial activity % of females of developing economies and developed economies.

We will also show the reason for the relation between indices. The indices used in the case study include:

- GDP per capita (current US\$)
- Total Early-Stage Entrepreneurial Activity (% female)
- Percentage of female participation in labor force (ILO model)

To check whether the rise in female participation in entrepreneurship and labor force leads to economic growth we have used the approach of Pearson Coefficient Correlation.

Approach used:

Women have already shown the crucial role in other fields like sports, political, medical and engineering, social and educational service, technical and non-technical. In the recent years, they have been entering into the entrepreneurship, in which they are doing extremely well and even in domain of the economies they have exceeded their male counterparts. To check whether the more female participation in enterprises also leads to Per Capita Income of the economy we used the approach of Pearson Coefficient Correlation.

Pearson Coefficient Correlation also known as Pearson's r , the Pearson product-moment correlation, the bivariate correlation, or colloquially simply as the correlation coefficient- is a measure of linear correlation between two sets of data.

Formula used for the same is:

$$n \frac{(\sum x y) - (\sum x) (\sum y)}{n} \sqrt{\{(\sum x^2) - (\sum x)^2\} \{(\sum y^2) - (\sum y)^2\}}$$

Correlating Aspects

A highly diverse sample has been selected to conduct the research.

Developing Countries:

Selected countries under the criterion of Developing nations are India, China (officially The People's Republic of China) and Colombia. India is the world's largest democracy and has its roots in South Asia. Women in India now participate fully in fields such as science and technology, business enterprises etc. China is the world's most populous country and if female labor force participation is used as a measure of gender equality, China would be one of the most egalitarian country in the world.

Colombia is a country located in the region of South America. Women's Rights in Colombia have been gingerly developing since the early 20th century(Women's participation in the labor force of the nation is 60%).

Developed Countries:

Selected countries under the criterion of Developed nations are Canada, Germany (officially, Federal Republic of Germany) and the Finland. Canada is a nation in the region of north America. It's among the least corrupt nations in the world, with a tremendously globalized economy. Germany has a social market economy with a significant skilled labor force, a low level of double-dealing and a high level of innovation. Women labor force in the nation is 73% and also the literacy rate of women over 25% with secondary education is 96.4%.

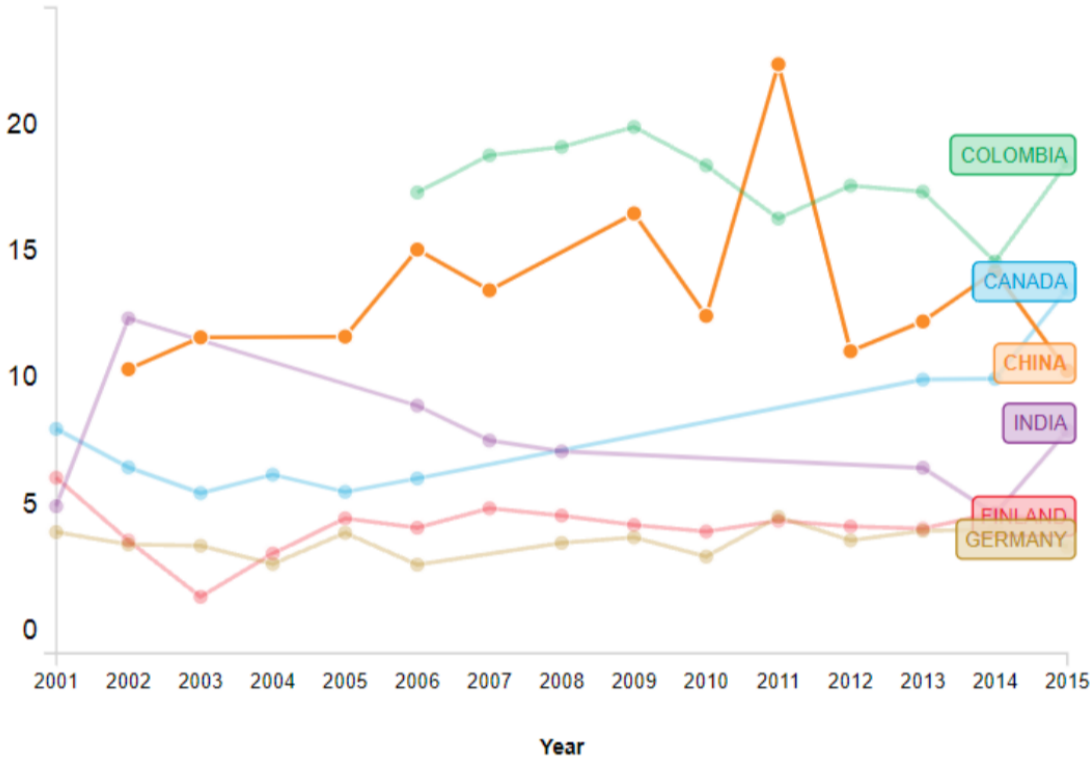
Finland is a Nordic country. It has the highest concentration of cooperative relative to its population. Finnish women are much more demonstrative and affable than the men and often command three or four languages. The position of Finnish women in society and business is well respected and lofty to that of women in most other cultures.

We have compiled the input data regarding the respective country's Total Early Stage Entrepreneurial activity % female (18-64) and represented it in **Table I** {Total early stage entrepreneurial activity % females for all selected countries}

Total Early stage Entrepreneurial activity % female (18-64)						
	COLOMBIA	CHINA	INDIA	CANADA	GERMANY	FINLAND
2006	17.30%	15.04%	8.87%	5.99%	2.48%	4.04%
2007	18.77%	13.43%	7.49%	--*	--*	4.81%
2008	19.10%	--*	7.06%	--*	3.44%	4.52%
2009	19.89%	16.47%	--*	--*	3.66%	4.15%
2010	18.37%	12.42%	--*	--*	2.90%	3.89%
2011	16.27%	22.37%	--*	--*	4.47%	4.32%
2012	17.57%	11.02%	--*	--*	3.54%	4.09%
2013	17.33%	12.20%	6.41%	9.90%	3.92	4.01%
2014	14.57%	14.18%	4.58%	9.93%	9.37	4.63%
2015	18.49%	10.25%	7.88	13.48%	3.29	4.20%

All countries show diverse numbers however one common theme can be easily identified i.e. all countries except India and China have had increments of in their TEA %. This is a positive sign and this will prove out handy later in the research. Colombia has incremented from 17.30% in 2006 to 18.40% by the end of the decade whereas Canada has had a change from 5.99% to a great rise of 13.48%, Germany has had a minuscule rise from its initial 2.48% to 3.29% and Finland has had an even minute increment from 4.04% to 4.20%. Contrary to these the south Asian countries of china have degraded under this parameter. China has lowered down by approx. 5% i.e. from 15.04% to 10.25% and India has come down from 8.87% to roughly 7.88%. These inferences can also be drawn from Figure 1. {Total early stage entrepreneurial activity % females for all selected countries. The inputs for Labor Force Participation Rate, female (ILO model) can be reviewed from Table II {Labor Force Participation Rate, female (ILO model) for all selected countries}

Figure 1.



Labour Force Participation Rate, female(ILO model)

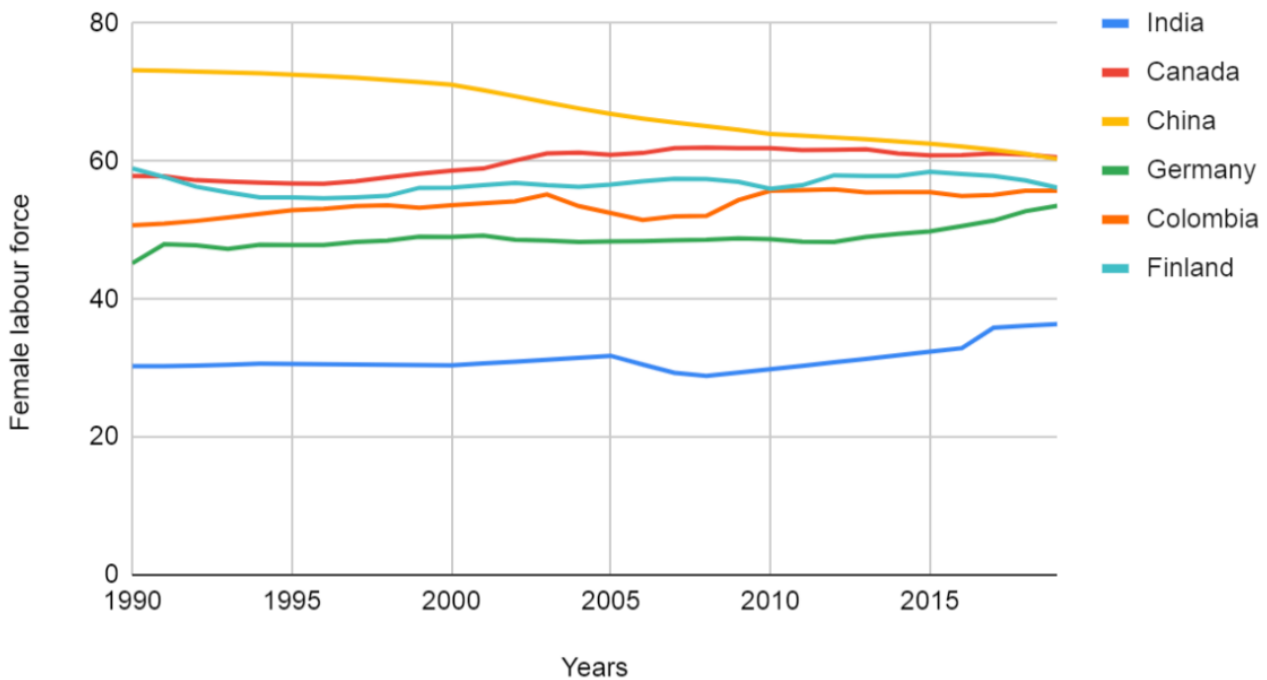
	COLOMBIA	CHINA	INDIA	CANADA	GERMANY	FINLAND
1990	50.71	73.24	30.27	57.88	45.21	58.98
1991	50.95	73.13	30.3	57.85	47.96	57.72
1992	51.35	73.02	30.37	57.25	47.8	56.32
1993	51.84	72.91	30.48	57.06	47.31	55.49
1994	52.39	72.77	30.64	56.89	47.88	54.78
1995	52.9	72.6	30.61	56.8	47.84	54.75
1996	53.11	72.38	30.56	56.76	47.84	54.65
1997	53.5	72.13	30.52	57.09	48.3	54.78
1998	53.63	71.83	30.48	57.69	48.51	54.99
1999	53.28	71.5	30.45	58.2	49.05	56.15
2000	53.63	71.13	30.41	58.65	49.04	56.19
2001	53.9	70.33	30.67	58.95	49.21	56.53
2002	54.2	69.45	30.94	60.12	48.61	56.86
2003	55.19	68.54	31.22	61.14	48.5	56.53
2004	53.5	67.67	31.5	61.26	48.3	56.31
2005	52.51	66.89	31.79	60.94	48.37	56.62
2006	51.5	66.2	30.52	61.21	48.44	57.09
2007	52	65.63	29.3	61.91	48.55	57.47
2008	52.11	65.12	28.87	62.01	48.61	57.44
2009	54.38	64.59	29.36	61.91	48.81	57.02
2010	55.73	63.98	29.85	61.9	48.72	56.03

2011	55.82	63.73	30.34	61.65	48.35	56.53
2012	55.95	63.47	30.84	61.67	48.29	57.97
2013	55.51	63.2	31.34	61.75	49.03	57.87
2014	55.52	62.9	31.85	61.16	49.47	57.89
2015	55.54	62.55	32.37	60.85	49.85	58.48
2016	54.95	62.14	32.88	60.91	50.59	58.16
2017	55.12	61.66	35.86	61.15	51.4	57.89
2018	55.74	61.12	36.15	60.98	52.77	57.22
2019	55.73	60.36	36.37	60.57	53.56	56.19

We can clearly notice that most of the countries have had similar levels or a good growth from the initial count except for China wherein there has been a rapid drop of 12%. In Finland it has been roughly similar whereas other countries have shown an increment of about 5-7% respectively. This can further be verified from the graphical representation in Figure 2 {Labor Force Participation Rate, female (ILO model) for all selected countries}

Figure 2.

Labour force, female participation %



Labour Force Participation Rate, female (ILO model) for all selected countries.

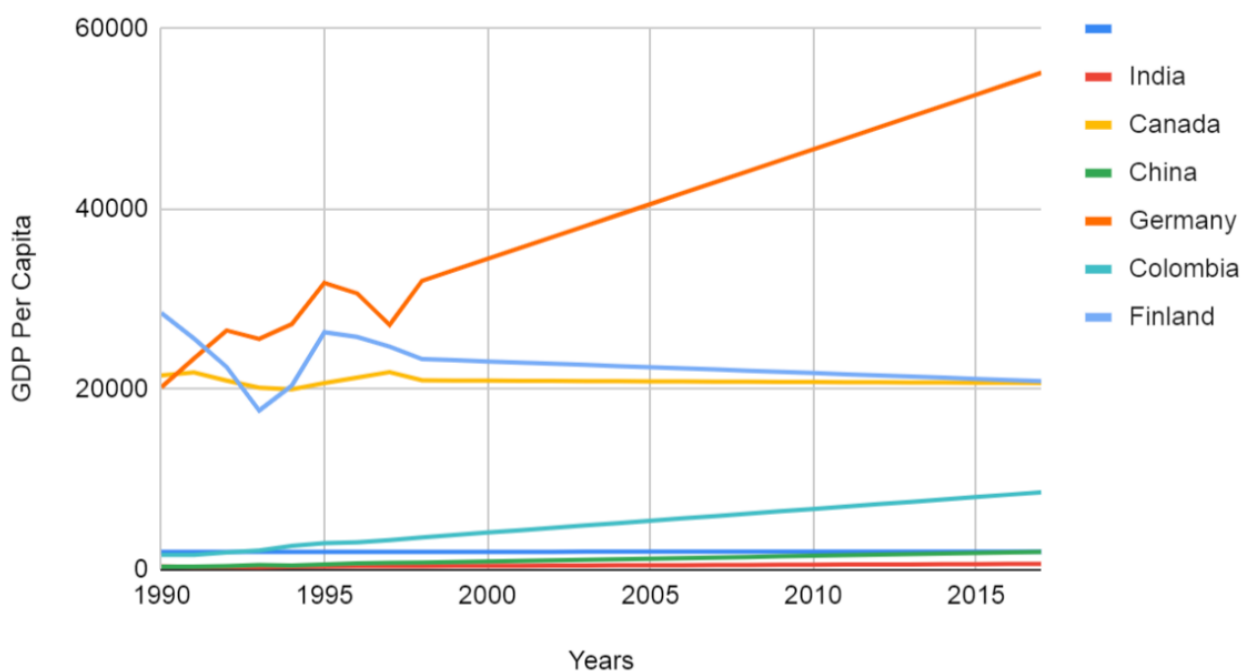
Table III {Nominal GDP Per Capita (Current US\$) for all selected countries} further elaborates on the common link between all indices and the measure for economic growth i.e. GDP Per Capita (current USD). Figure 3 {Nominal GDP Per Capita (Current US\$) for all selected countries} is the graphical representation of the data collected and the occurrence of changes in it. A clear surge in all the economies' per capita GDP has been noted.

GDP Per Capita(Current US\$)						
	COLOMBIA	CHINA	INDIA	CANADA	GERMANY	FINLAND
1990	1,642	347	374	21,572	20,249	28,490
1991	1,663	357	308	21,886	23,453	25,647
1992	1,929	420	323	20,985	26,538	22,496
1993	2,146	521	306	20,210	25,603	17,662
1994	2,648	469	352	20,025	27,234	20,429
1995	2,948	604	380	20,707	31,830	26,348
1996	3,047	703	407	21,326	30,664	25,833
1997	3,302	775	423	21,930	27,171	24,760
1998	3,002	821	421	21,047	27,528	26,074
1999	2,597	865	450	22,341	26,984	26,242
2000	2,463	951	451	24,297	23,925	24,380
2001	2,390	1,045	459	23,860	23,870	25,001
2002	2,355	1,141	479	24,279	25,460	27,008
2003	2,247	1,282	556	28,339	30,669	32,962
2004	2,746	1,500	639	32,177	34,535	37,816
2005	3,395	1,751	727	36,440	35,020	39,147
2006	3,727	2,095	814	40,559	36,894	41,309
2007	4,695	2,691	1,047	44,717	42,300	48,590
2008	5,456	3,447	1,020	46,774	46,368	53,898
2009	5,168	3,813	1,121	40,991	42,339	47,542
2010	6,295	4,500	1,384	47,627	42,380	46,647

2011	7,275	5,561	1,458	52,286	46,698	51,264
2012	7,958	6,307	1,444	52,744	43,883	47,851
2013	8,109	7,073	1,450	52,709	46,299	50,006
2014	7,999	7,694	1,574	51,021	48,036	50,435
2015	6,089	8,085	1,606	43,626	41,107	42,867
2016	5,800	8,120	1,732	42,383	42,124	43,866
2017	6,327	8,823	1,981	45,192	44,537	46,437
2018	6,705	9,920	1,997	46,532	47,832	50,083
2019	6,419	10,243	2,099	46,400	46,473	48,749

Figure 3.

GDP Per Capita (Current US\$)



Nominal GDP Per Capita (Current US\$) for all selected countries.

China and India which were once at a similar level have risen to different extents with China leading the path to stand at roughly 5 times the per capita income of India in 2019.

Colombia has multiplied its per capita GDP to roughly 5 times its initial value. Canada, Germany and Finland all show a good growth roughly doubling their per capita GDPs from ~22,500USD TO ~45,000USD. Further these variables have been correlated to check the relation between the Per Capita Income & Total Early Stage Entrepreneurial activity % of females & Participation of Females in Labor force of developing economies (which include India, China, Colombia) and also of developed economies (which consist of Canada, Germany, Finland).

Analysis of the Data

After assembling the data of Per Capita Income, Total Early-Stage Entrepreneurship Activity % of females and Participation of females in Workforce (ILO model) we perceive the correlation between two indices of developed economies and developing economies. We discern from the correlation that the correlation of per capita income and TEA % of females and that between per capita income and Participation of females in Workforce is divergent in developed and developing economies.

Developing Countries:

Developing economies indicate the negative correlation between per capita income and TEA % of females. In the instance of developing economies, Colombia indicates very weak and negative relation of -0.56 which definitely shows that women entrepreneurs don't contribute in the per capita of its economy, also China has the weak and negative association of -0.28 which don't show any relation between these two variables and the same relation between female participation in entrepreneurship and Per Capita Income is in India with a weak and negative correlation of -0.17. Developing economies also tend to showcase a positive correlation between per capita income and participation of females in Labor force. Colombia showcases a high correlation of 0.74 whereas India also follows it with a good positive correlation of 0.67.

China has not been considered under this particular calculation owing to the China's complicated employment structures (such as its 996 work culture that promotes 72hr work weeks). Considering it might hinder the results. Both the above mentioned results can be understood better using Table IV {Results of analyzing the data for developing economies selected}.

Table IV

DEVELOPING ECONOMIES		
COUNTRIES	CORRELATION	
	GDP per capita & % of female labor force.	GDP per capita & % of female participation in TEA
COLOMBIA	0.74	-0.56
CHINA	--*	-0.28
INDIA	0.67	-0.17

Results of analyzing the data for developing economies selected.

**It has not been calculated owing to the China's complicated employment structures (such as its 996 work culture that promotes 72hr work weeks). Considering it would hinder the results.*

Developed Countries:

Developed nations indicate the positive correlation between the two indices which interpret that female participation in entrepreneurship is related to the per capita income of the nation. In the instance of developed economies, Canada shows a very strong and positive correlation of 0.945 which is pretty good to show that women entrepreneurs' contribution to the economy is totally related to each other, also Germany shows the correlation of 0.65 which is too a strong and positive association between these two variables and Finland shows the correlation of 0.47 which is absolutely not bad but shows a moderate relation. Developed economies also tend to showcase a positive correlation between per capita income and participation of females in Labor force. Canada showcases a high correlation of 0.88 whereas Germany and Finland also follow it with a good positive correlation of 0.59 and 0.56 respectively.

Both the above mentioned results can be understood better using Table V {Results of analyzing the data for developed economies selected}.

Table V

DEVELOPED ECONOMIES		
COUNTRIES	CORRELATION	
	GDP per capita & % of female labour	GDP per capita & % of female TEA
CANADA	0.88	0.94
GERMANY	0.59	0.67
FINLAND	0.56	0.45

Results of analyzing the data for developed economies selected.

Results:

As we interpret from the data, In the case of developing economies, we noticed a negative relationship between the two variables.

In Colombia, according to the report "El Progreso de las mujeres en Colombia 2018 de la ONU", which reports on assaulting, studies have shown that "every one woman of three has been maltreated by her current or previous partner", which shows how important it is for women to be self-sufficient and bold. Entrepreneurship could serve as a weapon to make a more tranquil society with more balanced family roles. But we also know for a woman it is not easy to be an entrepreneur as there are also many social expectations, if a woman is an entrepreneur it is also expected from her to give equal time at home. In China, there is no reason that there will be positive relation knowing to the fact there is gender discrimination, no workplace environment for females and also the looks discrimination which don't give chances to women with the creative and innovative business ideas. Women are more likely to get low-level job than the opposite gender. Also, in many places women are not allowed to live individually which one or another way stops them from being self-independent women. In India the main cause for the negative correlation is lack of female literacy rate. Women needs to be better organised to be successful in the entrepreneurship..

The lack of female literacy is responsible for all the domestic chores and also they have to ask permission from their family to trade fairs or for training. There is a lack of infrastructure and it is not difficult for them to find a proper market for their products but also they don't have proper training, even if they want to grow in enterprises. Also the patriarchal mind set further worsens the situation.

Developed countries have a positive correlation between the TEA % of female and Per Capita Income. Canada has a strong and positive relation which should be as women entrepreneurship is steadily increasing in Canada. There are many nations in which women don't get proper social environment for the entrepreneurship but in Canada, women have benefit from being a part of strong business environment, social and political firmness, and approach to education, to help them initiate and scale-up their company. By the growth in the number of women entrepreneurs, it comes up with an estimated potential \$150 billion GDP growth. Germany, be it entrepreneurship or scientific research, women play a significant role in the nation's industry. The VdU (the association of German Women) has been active in campaigning for female entrepreneurship, raising the women for leadership positions, better rights for women in the market, and also a strong association of work and family for both the genders which plays a major role in the growth of women's success..Thus, we could interpret all these rationales resulting in the strong correlation of GDP per capita and % female participation in entrepreneurship. Finland is the third country in our research of developed nations which too has a positive relation between the two variables. To get success in business, though, a woman needs more than society provides to her, she must have the right dedication and a range of thinking both with a good innovative idea for the business. Also the business laws are same for both the gender, thus no doubt all this results in a positive correlation in the developed countries. The positive correlation between the per capita income and the participation of females in the labor force (ILO Model) indicate that more the quantity of women working and gender neutral opportunities more will be the economic prosperity as both are highly linked, interconnected and directly proportional.

Discretionary Solutions

Since data has been analyzed and a significant set of results obtained there are various discretionary solutions to this constraint some of which are already being implemented in developing economies who are wisely trying to replicate the developed economies' model of economic growth to remove the barrier of gender disparity. The primary reason noticed amidst many developing nations who are failing to prosper is the low rate of female participation in the economy, [be it by the means of entrepreneurial ventures or by the means of securing a job]. And this is directly linked to their need for taking care of the kids after marriage. According to various surveys a batch of MBA students diverse in nature with around 50:50 sex ratio is no longer found to be so when checked as per their employment status after a decade as the female ratio starts declining and after another decade it might even change to 80:20 where the latter represents women. An easy solution for this can be learnt from China. School hours can be made conducive to working hours as this would eliminate the need for women to sit at home and indulge in low skill tasks such as handling kids or cooking while their potential skillset might be much larger such as managing a company/ auditing files/ scientific research.

Moreover, when both genders work in a household not only they attain more income but they also tend to generate more jobs. Two working people can higher around 5-7 people for low skill tasks such as cooking/cleaning etc. So, ultimately they aren't only contributing to the economy by the means of their earning but also by the means of generating employment for other people in both scenarios (women pursuing entrepreneurial ventures: more women indulging in employment at other people's startups). Another basic solution can be the implementation of a set of incentives by the government. We have derived that even though the total early stage entrepreneurial activity is persistent in developing countries it does not correlate to the growth of per capita income and this is primarily because those ventures tend to fail thus not yielding the presumed results.

However, if there are a set of incentives provided such as government facilitated training programs, subsidies and other monetary benefits etc. this can easily increase the chances of the ventures being successful.

The provision of excellent governmental and private childcare facilities will also prove to be a game changer in this situation. Not only people will be able to work carefree and also retain the benefits in the solution mention before (implementation of incentives), this move will create additional employment will help people generate more skills and also increase the overall spending ultimately increasing the GDP of the country thus another way for economic

prosperity. All these discretionary solutions along with a change in the extremist and radically patriarchic mind set of the people can result in not only a rise in a country's economic prosperity but also in their emotional quotient as well as overall notion of equity throughout all generations.

Concluding Remarks

The primary problem that acts as a constraint is not the lack of jobs or opportunities but the paucity of skill matched work as even though women are working in developing countries most of them aren't doing what their potential should be able to do rather, they are engaging in work that is lower to the skill they possess, For example : an MBA graduate might be working in an MNC or starting her own venture in a developed country whereas in a developing one she might be handling kids at home or working part time owing to homely duties which forbids her from maximizing her potential.

Various measures that have been suggested to amplify the fore stated need are: provision of incentives which even though add up to government expenditure will provide exponential monetary benefits in the long run. Also there is a high need to make school hours conducive to working hours as this measure eliminates the pressure of managing kids and lets them escape from societies' so called matriarchal responsibility which in a fair society should be equally shared by both parents. And another major step can be provision of excellent private and government regulated child care facilities.

According to our study the countries that have implemented such measures are now the developed ones whereas the ones in denial of these are still developing even though all the countries mentioned did not have a tremendous gap in their per capita income in the early 1960's unlike today.

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06

CONTEMPORARY ISSUES IN WOMEN ENTREPRENEURSHIP WITH REGARD TO RECONSTRUCTION OF SOCIAL STRUCTURE IN INDIA



By Bhavya Saluja*, Karuna Aggarwal* and Manomita Das*

Abstract

An entrepreneur is a person who has an enterprising quality with an eye on prospects and a mysterious vision, commercial insight, and above all, a person who is eager to take risks because of the exploratory skill within, the same holds true for women also. However, women have to go a long way to achieve equal rights and position as men because traditions are deeply rooted in Indian society where the sociological setup has been a male-dominated one. Women are the world's most underutilized resource. Despite the emerging number of women-led businesses and a noteworthy increase of initiatives, policies, and resources mapped out to encourage and expand women's entrepreneurship, the gender gap and other problems in entrepreneurship still persist. The purpose of this empirical study is addressed to find out various motivating and de-motivating internal and external factors, initiatives taken by govt and checking their implications. An attempt to study the impact of covid-19 on women entrepreneurs has also been made with the objective of analyzing the various social and economic obstacles faced by the female entrepreneurs and suggesting remedial measures to eliminate and reduce such hurdles which will help in accelerating the economic development of women and society. This study is based

Introduction

In the modern era, when women are showing their capabilities in various walks of life, the entrepreneurial classes of women are playing an increasingly prominent role in various sectors of industrial growth and economic development. Entrepreneurship amongst women is a relatively new phenomenon, which is progressively changing

with the increasing sensitivity of the roles, responsibilities, and economic position of women in society in general, and family in particular. At the same time, it is also believed that their challenges are colossal and complex. For women entrepreneurs, starting and functioning a business involves significant risks and difficulties, because in India social environment for women has constantly lived as subsidiary to men. There have been noticeable changes in the socio-psycho-culture and economic norms of our society due to liberalized policy of the government of India, increase in education levels of women, and increased social awareness in respect of the role women play in society. It has now been recognized that to promote self-employment and to reduce the incidence of poverty, some drastic efforts have to be made to accelerate the self-employment of women in various sectors.

Objective

- To identify the reason for women's involvement in entrepreneurial actions.
- To analyse and critically examine the problems faced by women entrepreneurs.
- To highlight the factors influencing women entrepreneurs.
- To study the impact of covid 19 on women's entrepreneurship.
- To highlight the need for women entrepreneurs in the economic and social development of India.

Review of Literature

Women Entrepreneurship is an area of study wherein many research scholars have shown immense interest for the past several years. The impact of COVID-19 on entrepreneurship has been subjected to many theoretical and empirical studies both in advance and developing countries. Considering this fact, the importance of studying the effect of covid 19 on women entrepreneurs in rural and urban areas becomes very significant. Existing literature found diverse results in these regards.

Papisetty Rama & Mohana Rao (2004), found that labour movement, insufficient infrastructure, lack of electricity, and retard understanding of debtors were the prominent issues faced by women entrepreneurs. [R1](#)

Damwad (2007), analyses the initiatives & problems faced in countries like Denmark, Finland, Norway, Iceland & Sweden towards women entrepreneurship. It considerably identifies some obstacles like financing, lack of data & skills in professional life, markets & entrepreneurial activity, the work-life balance including lack of growth, and most significantly women as other groups are heterogeneous. The study collates early-stage entrepreneurial activity among Nordic countries with an equivalent of the USA. [R2](#)

Singh (2008), explains the factors that influence the ingress of women in entrepreneurship. He recommended some measures to increase women's

participation in entrepreneurship. The study advises cooperation among women-related ministry, economic ministry & social & welfare development ministry of the govt of India. R3

Lall&Sahai (2008), did a study of multi-dimensional subjects & challenges of women entrepreneurship closed corporations. Samples from women entrepreneurs working within the populated area of Lucknow are used for this study. It also explains the business owner's characteristics as self-perception Entrepreneurial intensity, self-esteem, an operational problem for plans for growth & expansion. R4

Badshahi korma, Sabharwal, and Terrell (2011) analyse the performance gap between male and female entrepreneurs, the literature on female entrepreneurship brought out clearly that if the gender differential exists it would imply that countries are not fully utilizing their human and physical capital and that the reflections on the country's growth potential a negative. R5

Kalpana Koneru (2017), studies the concept of women entrepreneurs and the reason for the slow progress of women entrepreneurship in India, suggestions for their growth, and a case study of a women entrepreneur of Ludhiana. For this research, the author has used secondary sources of data. R6

Elina samantray and JS Tomar (2018), study the diverse perspectives on the relation between Gender and entrepreneurship and provides policy decision recommendations. Authors evaluated and differentiated various research studies done on entrepreneurship and ladies' entrepreneurship. The research study is based on economic census data, former reports of the NSSO, and other Global reports. R7

Vembly colaco and Dr. V. Basil Hans, (2018), studies the roles and challenges of women entrepreneurs particularly in urban India, used secondary sources of data for the study and concluded that there are no significant differences in property ownership by females in the rural and urban setup of India. R8

Neha Tiwari (2017), studies profiles in dynamics of women entrepreneurship in India through research available on Google Scholar, EBSCO, and ProQuest. She analyzes different literature reviews in this domain. And concludes that the economic participation of women is very limited in India and mainly concentrated in five states- Tamil Nadu, Kerala, Andhra Pradesh, West Bengal, and Maharashtra. R9

Sanjeev Parashar (2018), identified barriers that impede women's progress as entrepreneurs and assessed the factors that motivate them to take up entrepreneurship also recommended a few propositions that could be further tested. R10

The available works of literature are broadly conceptual with a focus on women’s participation in entrepreneurship, their economic impact, difficulties faced by them, policy suggestions, and mainly based on existing literature or secondary data. There is hardly any study that explains the intricate detail of the topic with primary and secondary data. Our study in addition to all these also covers the impact of covid-19 on women entrepreneurs.

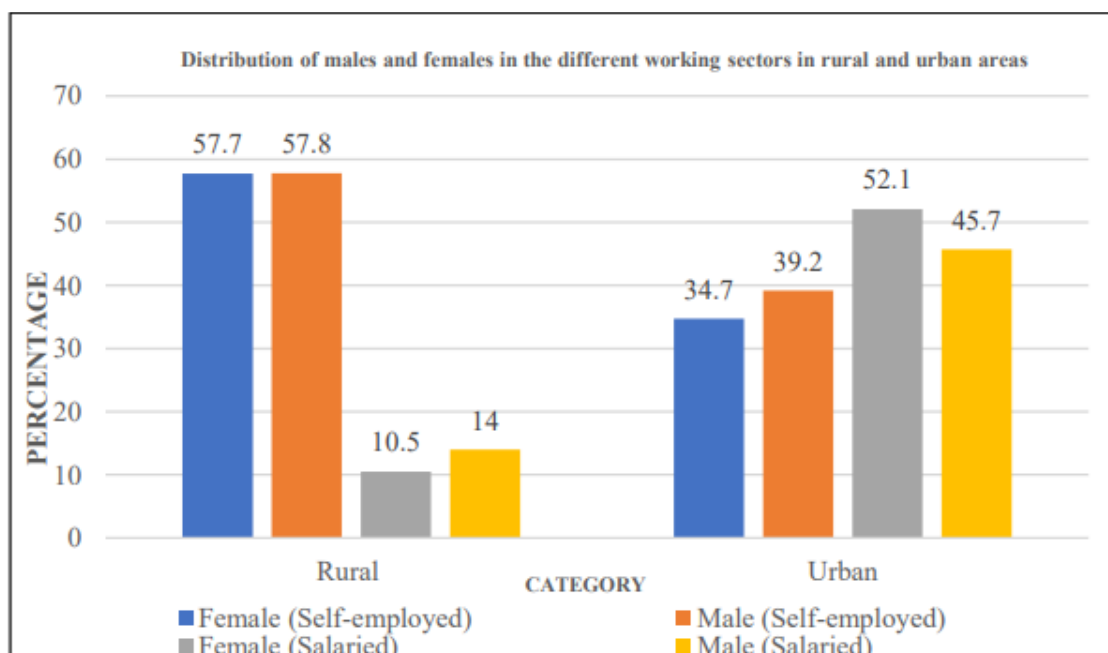
Methodology

We’ve used secondary data to evaluate the employment contribution of different genders in different work sectors in rural and urban areas. This data is collected from the official website of MOSPI (Ministry of statistics and program implementation). After analysing secondary data, we used the primary data to know the reason behind the shortcomings of the former and reach a concrete conclusion.

Distribution of males and females in the different working sectors in rural and urban areas. [R11](#)

Category	Female (Self-employed)	Male (Self-employed)	Female (Salaried)	Male (Salaried)
Rural	57.7	57.8	10.5	14
Urban	34.7	39.2	52.1	45.7

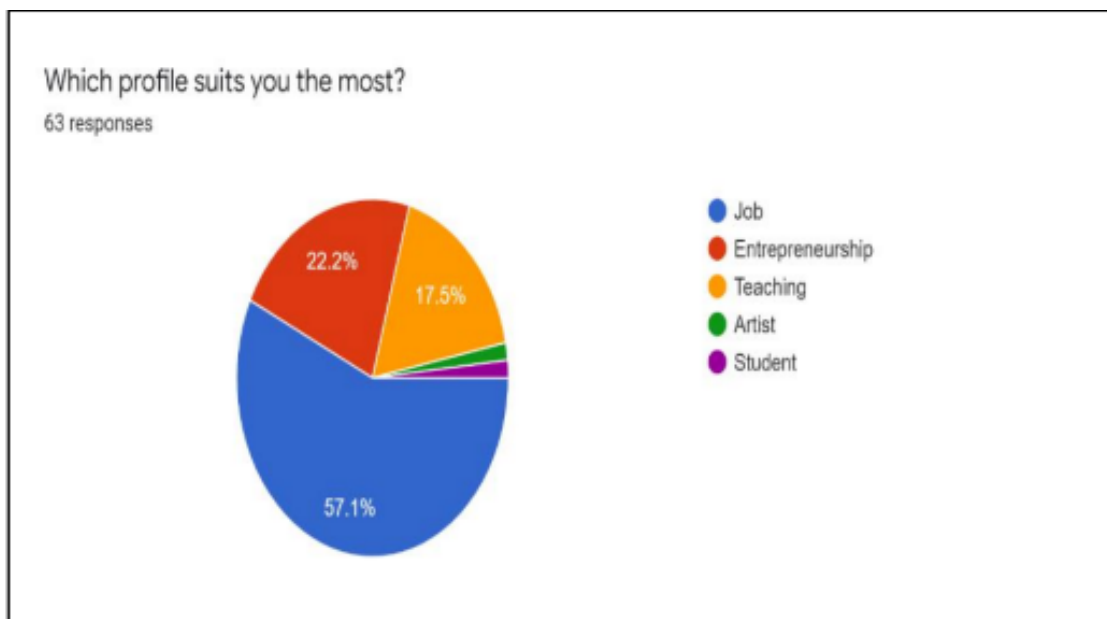
Chart 1



From the above table and graph, it can be deduced that people of rural areas are comparatively more engaged in self-employment than urban people, especially women. In urban areas usually, it's men who undertake entrepreneurship and women prefer salaried work. While doing research we came across various reports and articles that showed women in rural areas are more occupied with handicrafts, stitching, pottery, etc. To know the reason behind the low involvement of women in entrepreneurship in urban areas and the challenges faced by urban and rural women in starting and running their ventures we conducted a primary survey.

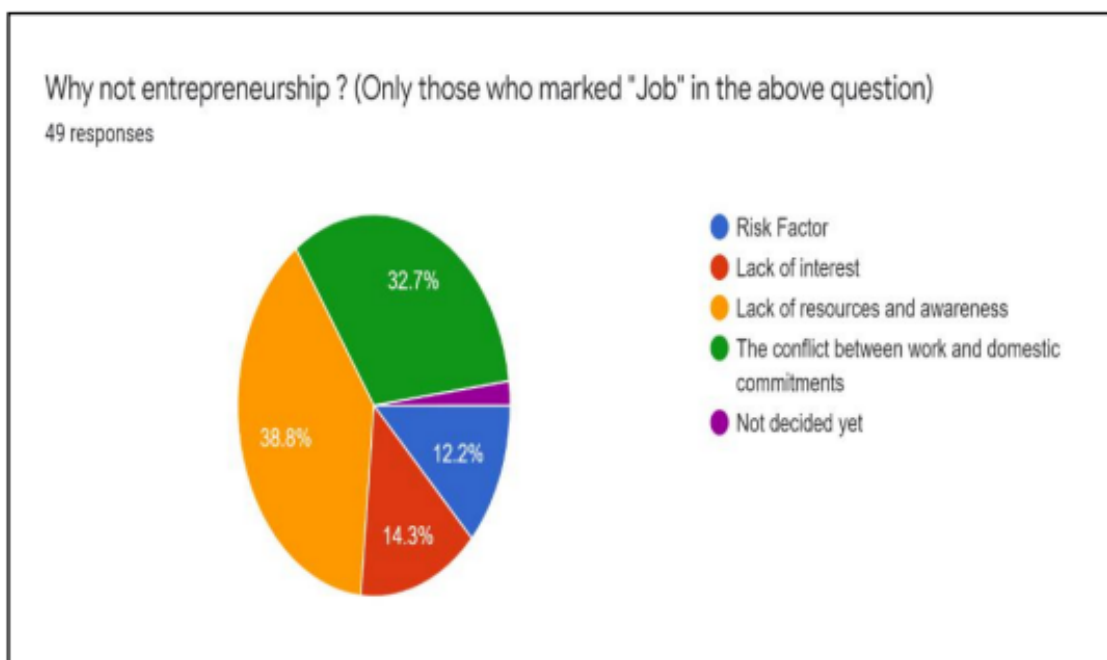
We analysed 57% of women among 63 women generally prefer 'Job' over 'Entrepreneurship'.

Chart 2



While surveying we found the following reason why they don't choose entrepreneurship.

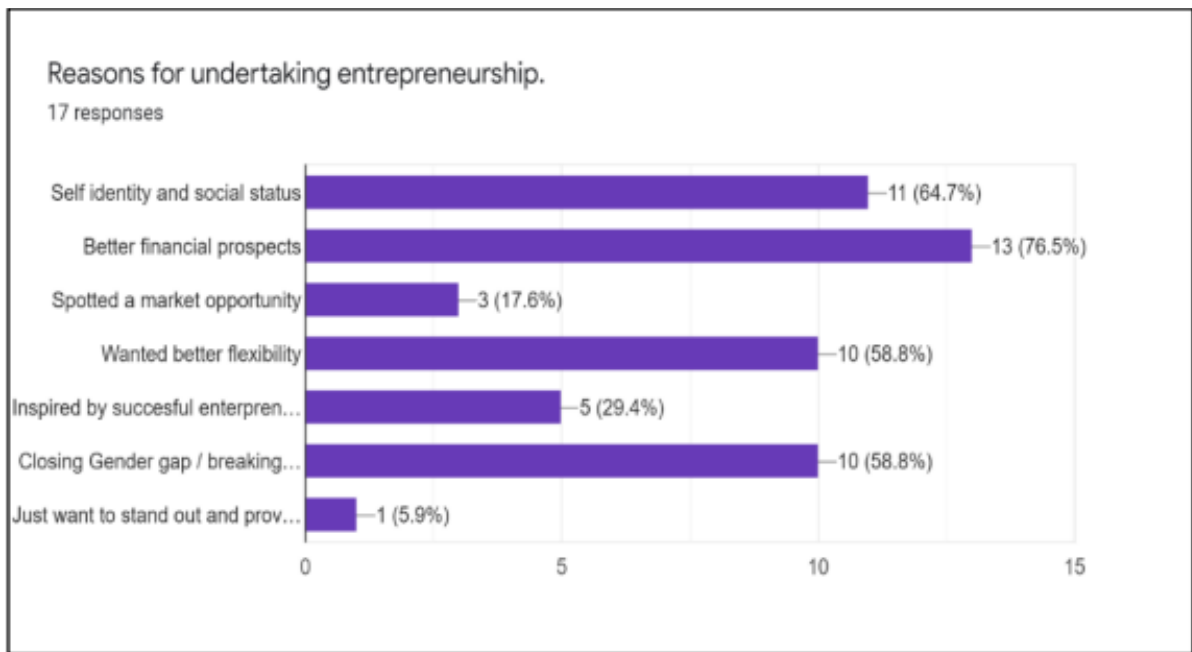
Chart 3



Thus, on the basis of collected data, it can be concluded that most of the respondents stated that they have a lack of resources and awareness to know more about entrepreneurship opportunities and have a vague idea on how can they turn their ideas into reality, followed by the problems in managing the professional and household life as traditionally it's considered woman's duty to look after the household chores irrespective of the profession she's pursuing. 13% of the women of our survey also felt a job is more secured as it has comparatively low risk while 14.3% of women don't have an interest in entrepreneurship.

However, from our survey, we found that almost 23% of the respondents have shown interest in entrepreneurship. Better financial position and self-identity were highlighted as the pivotal reasons for opting for entrepreneurship followed by greater flexibility and breaking stereotypes.

Chart 4



While living in a patriarchal society from ancient times it becomes pivotal to know if in the contemporary world also women face gender discrimination.

Even in the 21st-century women face gender-related issues in both personal as well as professional life. Around 65% of the women surveyed have responded that these discriminations hold them back from running their business despite having all the necessary skills, talent, and resilience.

Chart 5

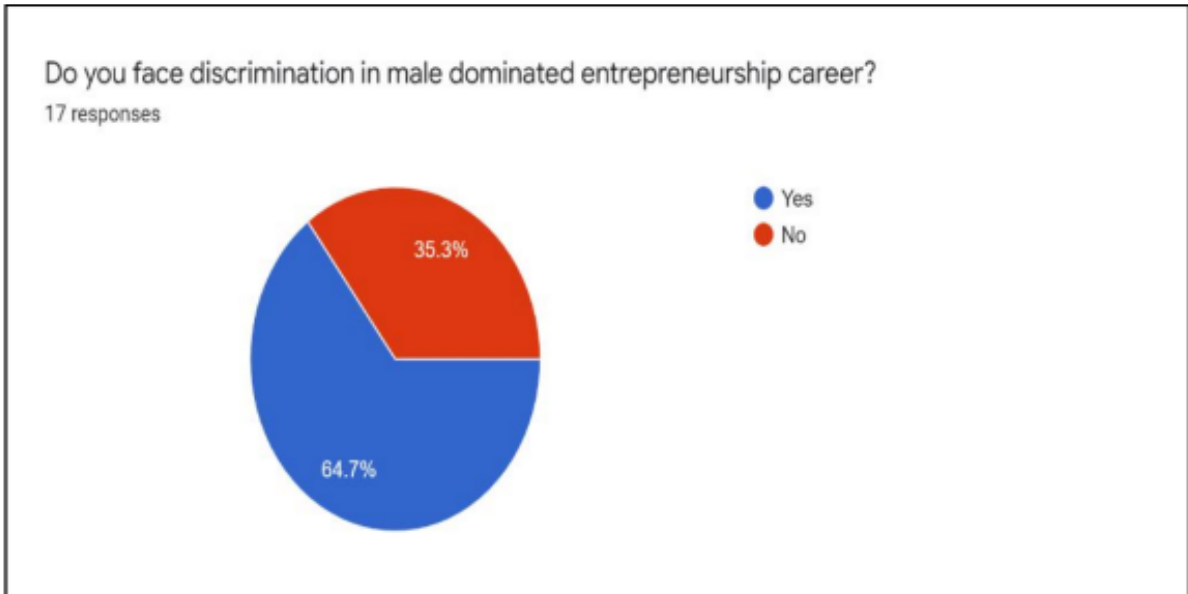
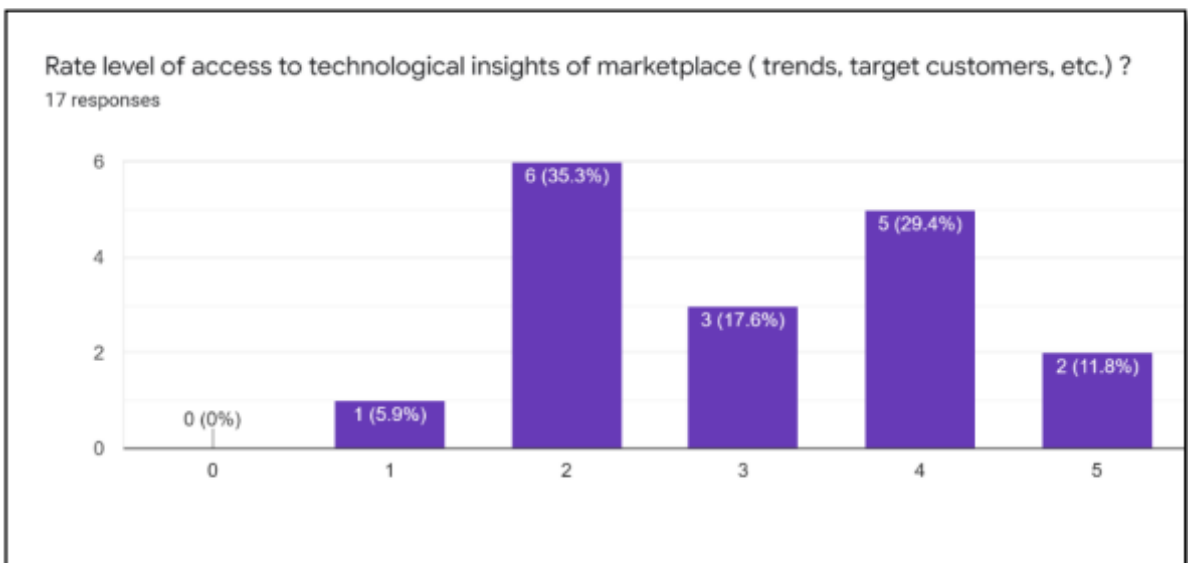


Chart 6

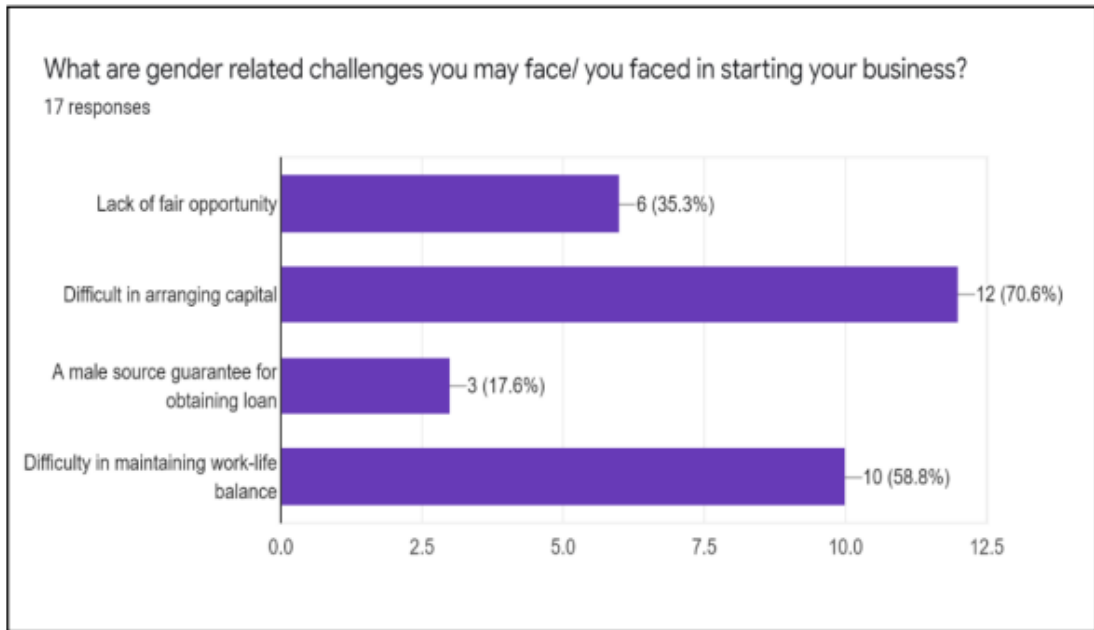


Owing to various hindrances, women in our country are refrained from obtaining knowledge on various business-related aspects such as business development, financial and managerial expertise, etc. Around 35% of women surveyed rated their technical skills 2/5, this is a major concern as lack of these skills poses huge challenges while running the business.

The problems and constraints experienced by women entrepreneurs have resulted in restricting the expansion of women's entrepreneurship. According to our survey the major barriers encountered by women entrepreneurs are:

Chart 7

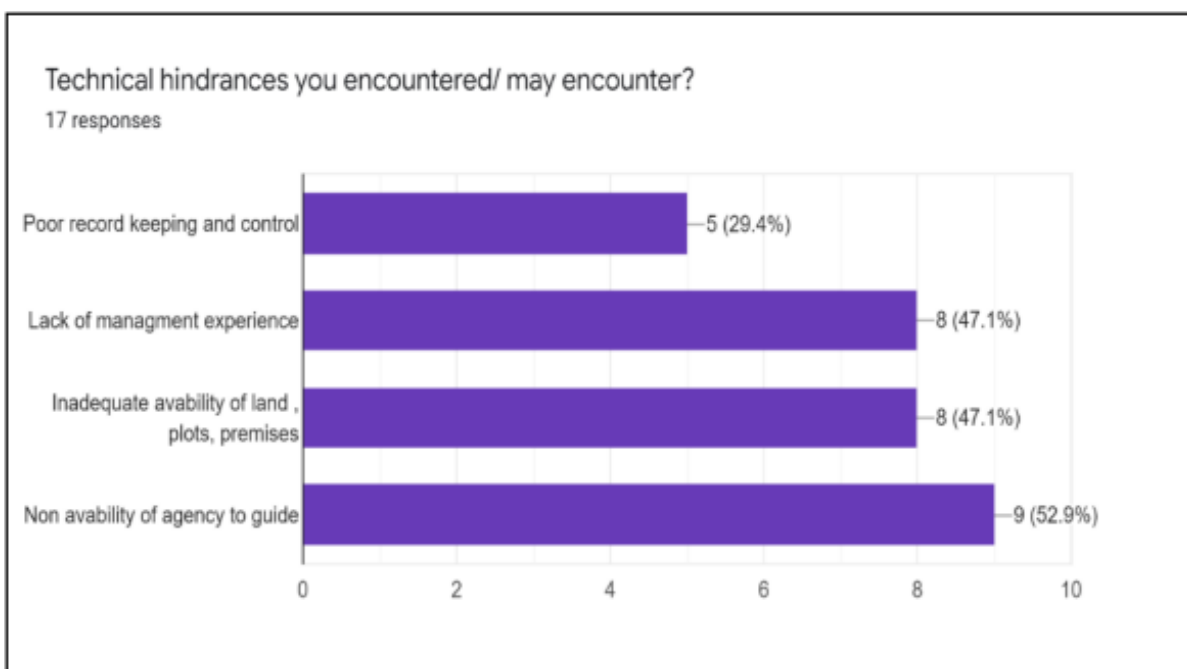
1. Gender-related issues:



On the basis of the above data, it can be deduced that access to finance is one of the most common challenges that women entrepreneurs face as they are impeded by the dearth of rights over properties, self-identity, and the requirement of husbands confirmation in many cases. Followed by difficulty in maintaining work-life balance as their family obligations also bar them from becoming successful entrepreneurs, male chauvinism is still prevalent in many parts of the country. In a male-dominated society, women are not treated equally to men that strip equal opportunities from them and acts as a barrier to their entry into the business.

2. Technical hindrances:

Chart 8

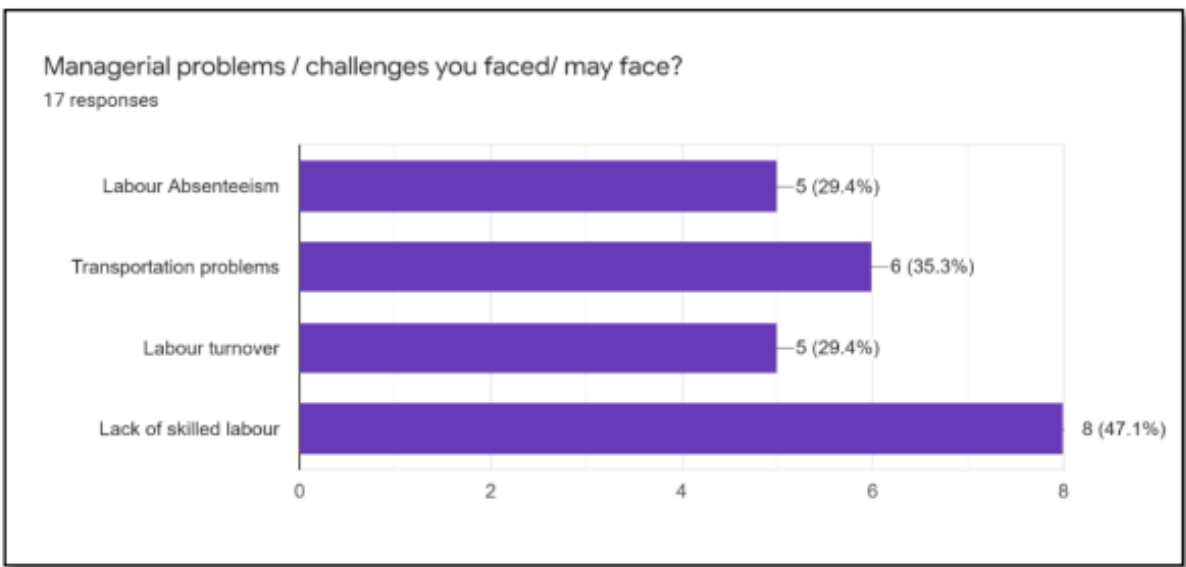


Women in India lead a protected life. They are even less educated, economically not stable nor self-dependent, because of this 52.9% of women in our survey are less aware of the resources from where they can procure guidance and 47.1% of women encounter difficulty in procuring fixed assets and lack managerial skills which in turn lead to poor record-keeping and control which consecutively reduces their risk appetite.

3. Managerial issues:

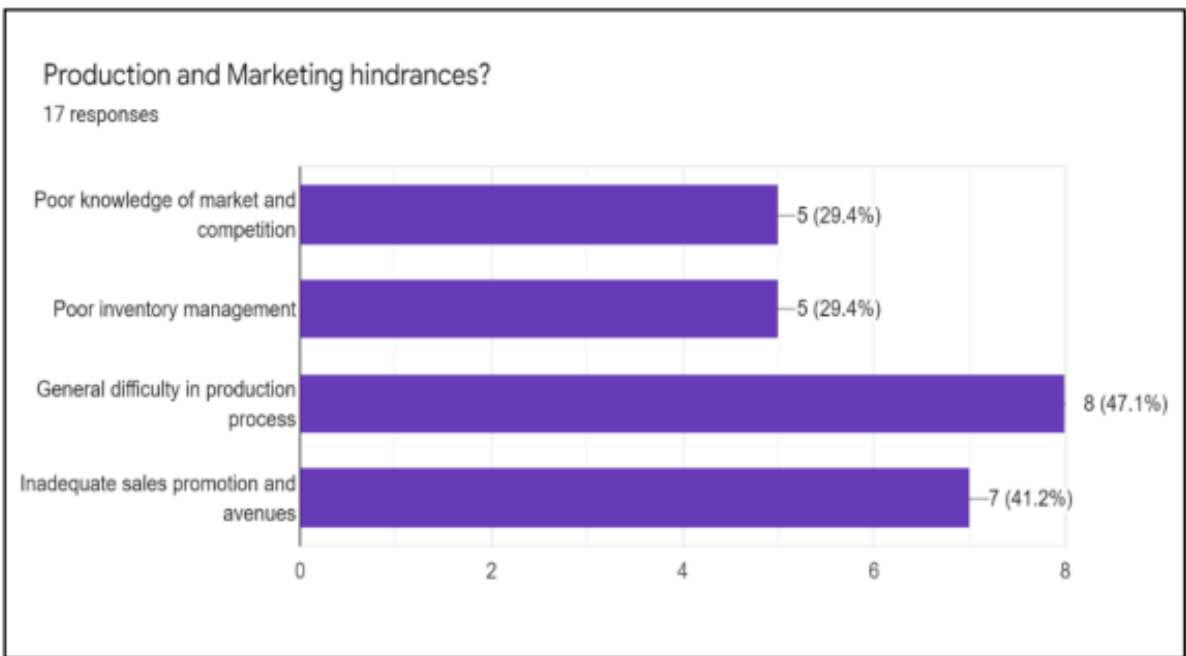
Most of the women have a lack of skilled labour as due to lack of capital they can't deploy a more skilled workforce followed by transportation problems, labour absenteeism, and turnover which in turn lead to liquidation of their business.

Chart 9



4. Production and marketing hindrances:

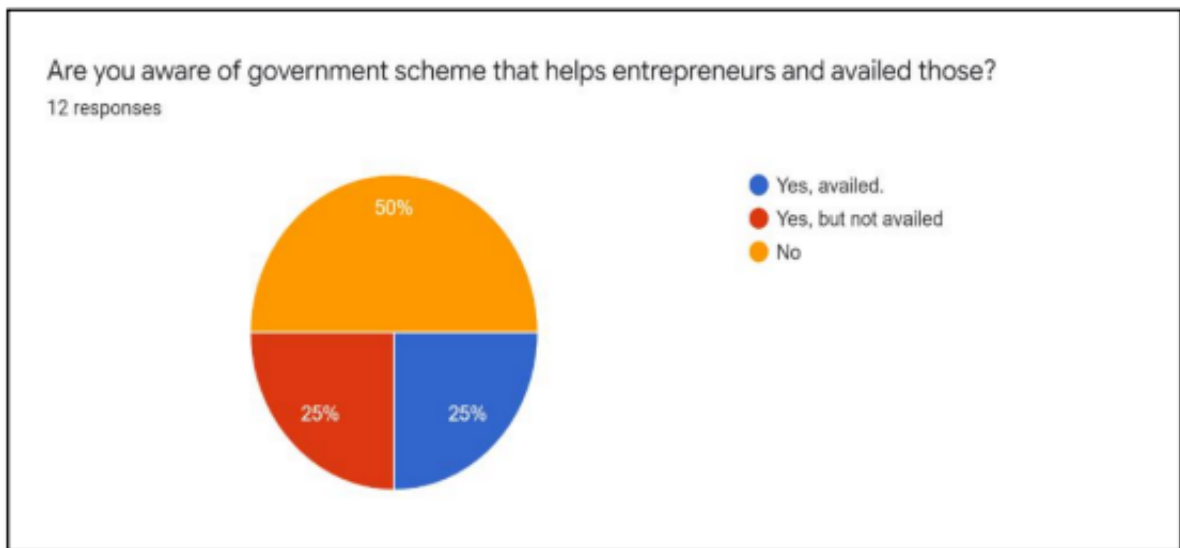
Chart 10



Women-controlled businesses are often small and it is not always easy for them to access the information they need regarding technology, training, innovative schemes, concessions, alternative markets, etc. We've analysed that these factors impose the problem in the production process, inadequate promotional avenues, and poor inventory management.

In India, various programs like Entrepreneurship Development Programmes (EDPs) have been organised by the Micro, Small & Medium Enterprises development organizations, various State Small Industries Development Corporations, the Nationalised banks, etc. to assist potential women entrepreneurs, who may not have access to business education and skills. Thanks to the Government of India, who has initiated over 27 schemes for women entrepreneurs operated by several of its departments and ministries. But, are these women aware of these schemes and able to access them?

Chart 11



From our survey, we evaluated that there's a lack of awareness among women about financial assistance in the form of incentives, loans, schemes, etc provided by the government and different institutions. Thus, entrepreneurs in rural and backward areas are unable to get the benefit of many of these genuine attempts made to provide assistance to future female entrepreneurs by the Indian government. It's high time to educate women in these areas.

Apart from the above-discussed problems one of the pivotal factors that slowed down the whole economy and impacted the women entrepreneurs is Covid-19. Covid-19 has crunched the world economy and put the world in jeopardy.

Through our primary source, articles, and news available we also tried to analyse how Covid-19 has impacted the existing and potential women entrepreneurs:

Negative impacts:

Chart 12

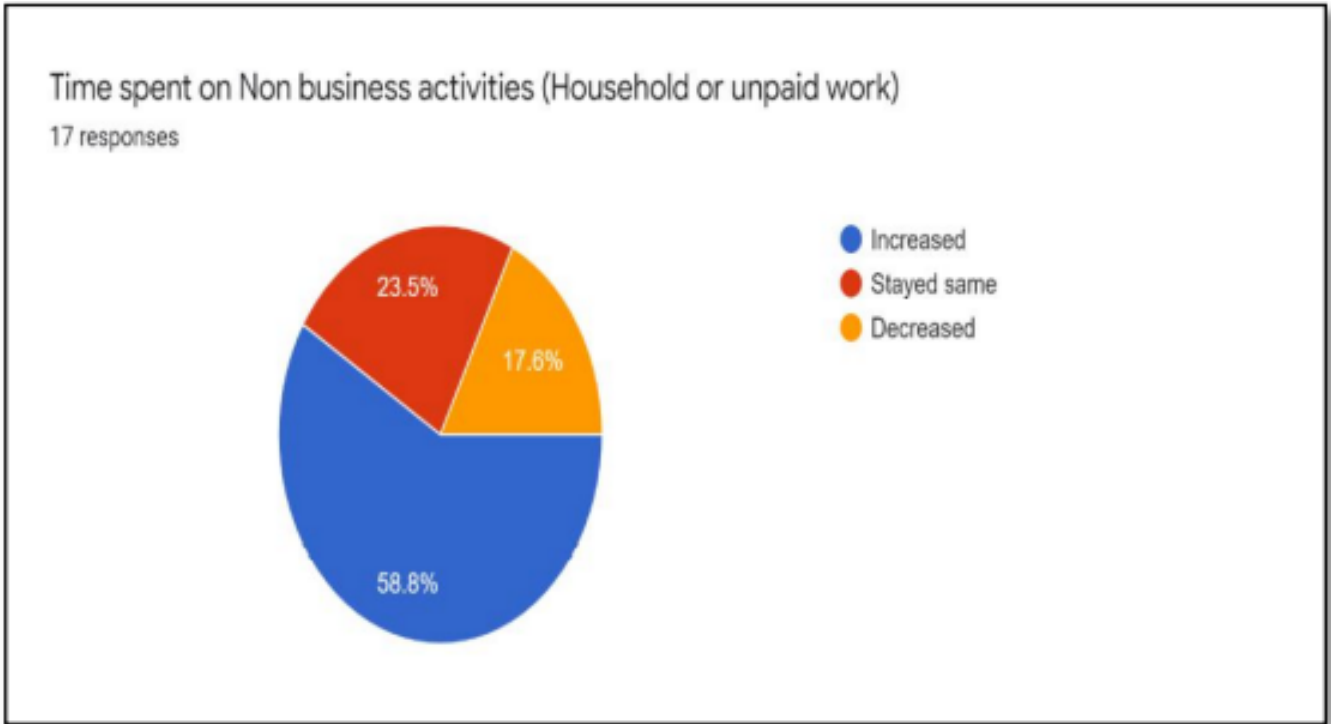
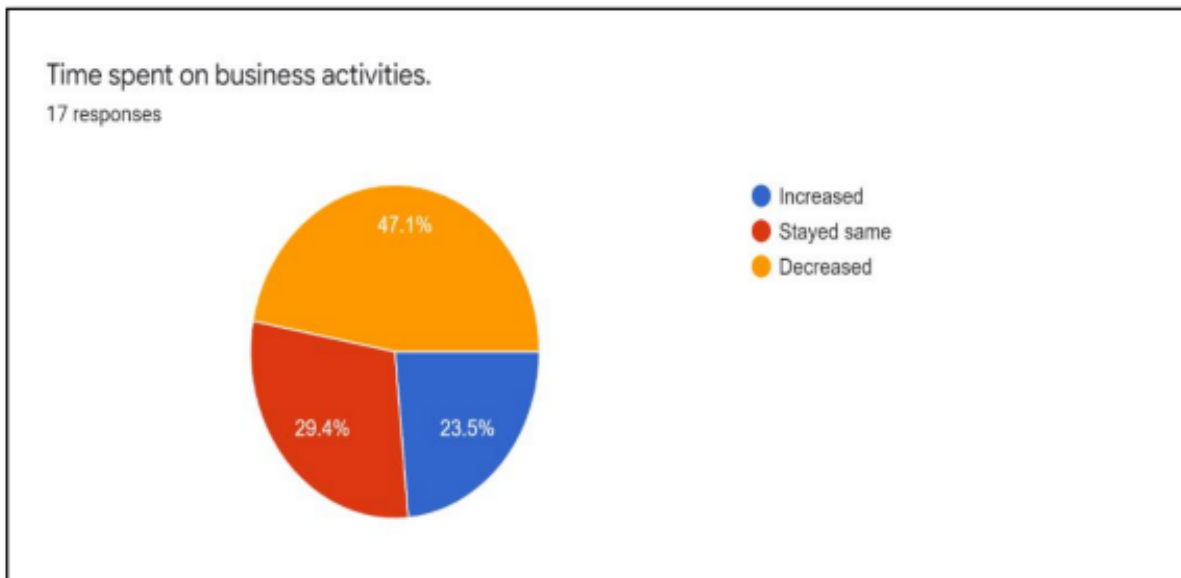


Chart 13



Although digitalisation of work has proved as a positive change for many people who could avoid commutation and performed their work with greater flexibility, it can also bring new challenges for female entrepreneurs. Women have to perform binary roles during these tough times, over 58% of total women surveyed have reported that their domestic workload and household conflicts have increased during the crises. This has been the main reason cited by most of the women for a drop in their productivity level and distraction from their business. 47.1% of the women surveyed stated that home care responsibilities acted as the major obstacle in running their business.

Change in average monthly income:

Chart 14

(a) Before pandemic (Covid-19)

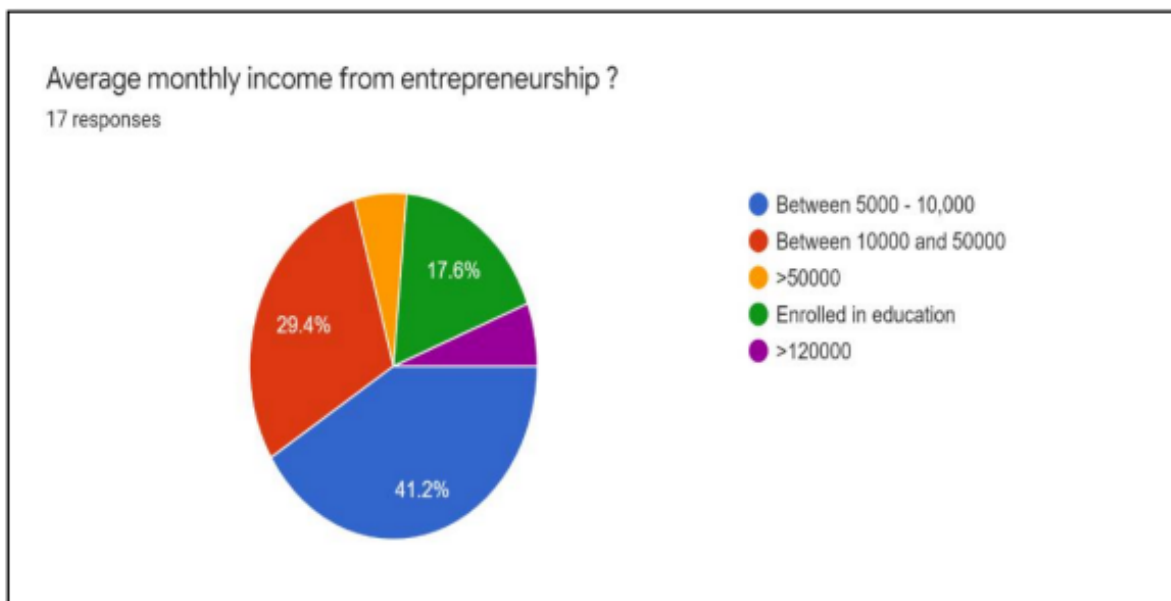
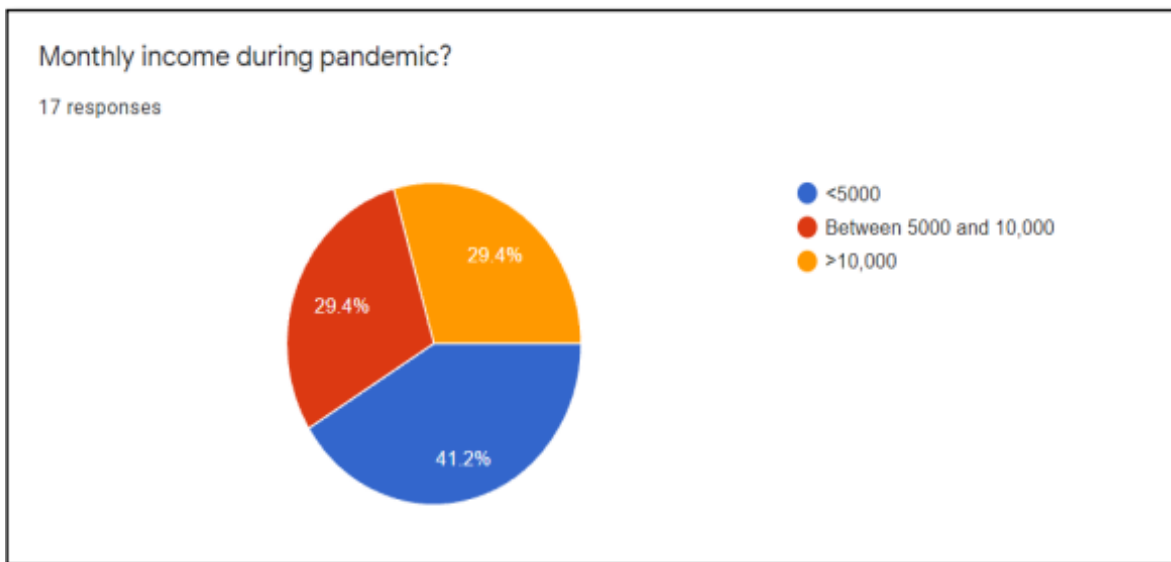


Chart 15

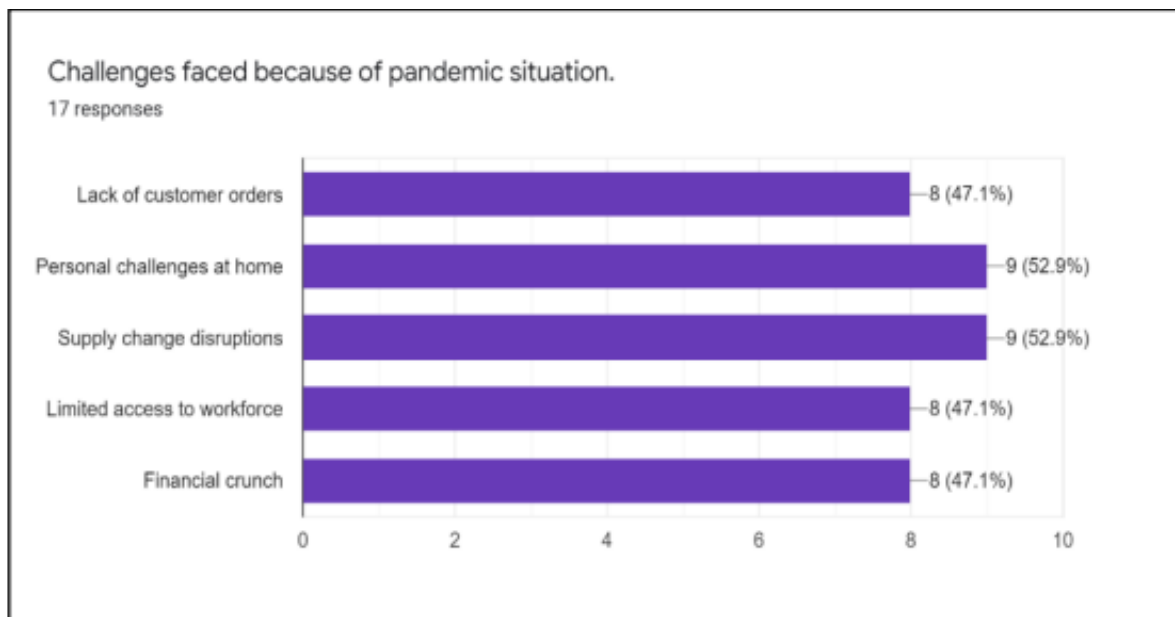
(a) During pandemic (Covid-19)



Covid-19 pandemic had a very negative impact on the revenue of women-owned businesses. Over 41% of women entrepreneurs have cited a massive decline in revenue from their business. During the pandemic, their monthly income came down to less than Rs. 5000 while the income generated during ordinary situations ranges from Rs.5000 and above, stated by over 41% of the women surveyed. We can also deduce that around 30% of the women-owned enterprises were generating revenue of Rs.10,000 and above in the normal situation which has also seen a significant decline, reported by almost 29% of the respondents.

Additional challenges the female entrepreneurs faced due to pandemic:

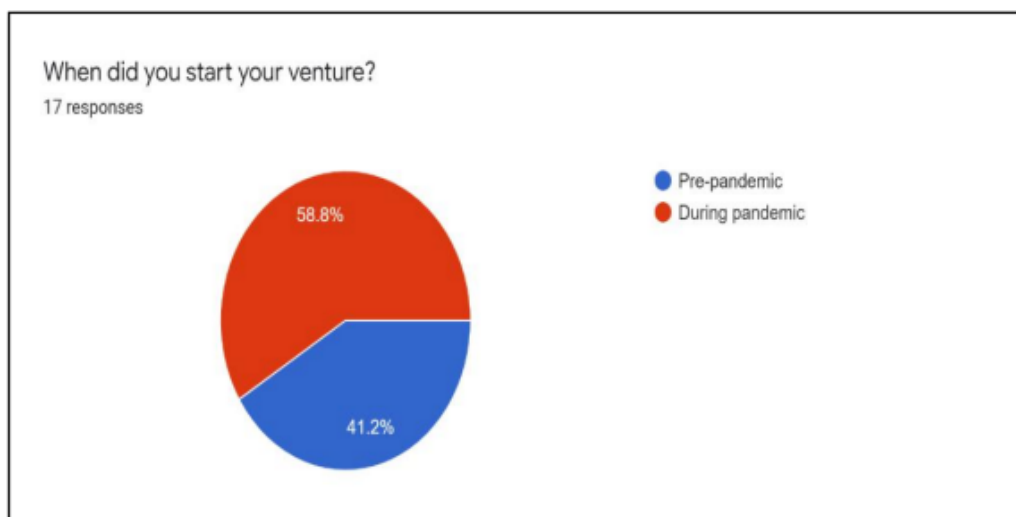
Chart 16



Supply change disruptions and personal challenges at home have been the main obstacles during the pandemic. Over 52% of the female respondents stated that due to a number of restrictions, immobility of resources, and halt in the supply mechanism, their business was impacted drastically. Followed by the muted customer orders and lack of financial resources Covid-19 has hit various businesses drastically in terms of changing demand patterns, increased expenses, growth constraints, lack of workforce, etc. Many businesses had experienced a cash flow crunch due to decreased orders and pending payments and have to incur extra expenses on the safety and security of their workforce, huge losses and increasing expenses led to the liquidation of few businesses.

Positive impact:

Chart 17



Many start-ups might not stand the test of this critical time, but pandemic has given rise to more entrepreneurial activity. Some of the new-born entrepreneurs and start-ups grabbed the first-mover advantage, took the full benefit of a coming opportunity, and have shown a good growth amidst the pandemic. 58.8 % of women in our survey have initiated their own venture and shifted to the different business models.

Women make a significant contribution to the socio-economic development of the country by way of supporting the people to earn money and make a contribution to family income, and by supplying basic goods and services for local consumption. However, this contribution is not fully recognised or understood.

Need for women entrepreneurs and their contribution towards economic development:

1. Economic Contributors:

- **Capital Formation:** Entrepreneurs utilise the savings of the people through issuing securities. Investing public savings in business will result in the efficient utilization of national resources. This leads to an increase in the rate of capital formation, which is crucial for expeditious economic growth.

- **Improvement in Per capita Income:** women entrepreneurs transfer idle resources like land, labour, and capital into national revenue in the form of goods and services. They help in raising the country's net national product and per capita which are the prime criteria for computing economic growth.

- **Generation of employment:** Women entrepreneurs are playing a pivotal role in creating employment opportunities both directly and indirectly. By setting up small scale ventures, they offer occupation to people.

2. Social Contributors:

- **Balanced Regional Development:** Women entrepreneurs eliminate regional disparities in economic advancement. They set up industries in low-key areas to avail the resources, concessions, and subsidies offered by the government.

- **Improvement in living standards:** With the setting up of small-scale ventures, limiting the scarcity of necessary commodities and introducing new products can be achieved. Women entrepreneurs in India produce a variety of goods on a wide scale and offer them at low rates, which consequently helps in improving the standard of life.

- **Innovation:** Innovation is the key to entrepreneurship. It implies the commercial application of an invention. As an innovator, the entrepreneur assumes the role of a pioneer and an industry leader. Entrepreneurs have put up many innovations in

making new products and in pre-existing products and services. All these have ensued in economic growth by way of creating employment, more remuneration, etc.

➤ Role Model: Mostly all of us have people who we look up to as positive examples. With the appearance of women entrepreneurs who take on the authority to motivate and inspire young women, the duty of a role model has increased significantly.

With successful women entrepreneurs like Sheryl Sandberg, Indra Nooyi, etc, motivating and influencing women around the world to follow and take the wheel in their hands.

Limitations:

The caveat of our study is that there's no authentic source available to know the real impact in statistical terms of Covid-19 on women entrepreneurs. That's why we conducted the primary survey but our survey is limited to 63 respondents. We've deduced our research on the basis of their responses. Also, the increment in the rate of women entrepreneurs is not available on government sites as the data has not been updated since 2016 hence, on the basis of our survey we tried reading the sentiments of our respondents and concluded the increase in female participation in entrepreneurship.

Findings:

➤ Low ability to bear risk: Most of the women prefer jobs over entrepreneurial activities because it provides security to their career, they underestimate their risk-bearing capacities. Therefore, various programs should be conducted, so that women could get to know their risk appetite.

➤ Lack of awareness and family support: Women faces problem in collecting and managing resources such as assets, mankind and business materials. They are not able to understand the marketing and financial needs because of a lack of education, technically unsound, and being professionally unqualified and in addition to that sometimes their family members make them feel guilty of neglecting household duties in the pursuit of their business obligations. Cultural traditions pose several hurdles for women when they aspire to run their own business.

➤ Negligence by the financial institutions: Banks and financial institutions act as the only option left for small and medium-size firm operators in developing countries to meet their demand for finance as they find borrowing from the capital market an uphill task. But these banks and financial institutions are hesitant to provide loans to women entrepreneurs owing to their traditional mindset. They think that this may become the cause of nonperforming assets in the future.

- Lack of technical skills: Women require training facilities to understand and run entrepreneurship in a good sense. Many a time women are deprived of such facilities which act as a major obstacle in enhancing their skills and knowledge.
- Lack of awareness of government schemes: Various government programs and schemes provide financial and technical help to women's businesses in the form of incentives, loans, schemes, etc. of which women entrepreneurs are not still aware which hinders the development of their business.
- Covid-19 impact: Covid-19 has adversely impacted women entrepreneurs in India. It worsened the situation of female entrepreneurs as they have to spare more time in taking care of their family which leads to ignorance of important areas at work. It becomes difficult for them to maintain strict boundaries between work and home life. Followed by new problems at work due to low network and finance.
- Positive findings: Despite the challenges women are facing in entrepreneurship it's elated to watch them pursuing entrepreneurship to become financially independent, creating their

own identity, and breaking the traditional stereotypical norms. Even the unprecedented covid-19 didn't stop them as after losing a job they rejuvenated their strength and initiated their start-up. Women are always ready to tackle the obstacles in their route as few females in our survey mentioned how they overcome the challenges they faced:

They formed a group of those females who are facing problems, identified each other's strengths and weaknesses, and supported each other.

Indulged in sales promotion avenues and registered for various courses which provided them the knowledge regarding financial literacy and business-related situations that eventually helped them in maintaining a balance between personal and professional life.

Few of the women highlighted 'Self-motivation' as their mantra. By enhancing their network, hiring more skilled workers, and reaching out to people who can guide them effectively.

Suggestions

Righteous endeavour from all areas is required in the progress of women entrepreneurs and their greater participation in entrepreneurial activities. Entrepreneurship chiefly implies governing one's life and activities, and women entrepreneurs need to be given conviction, independence, and vigour to come out of their anomaly. The following measures are suggested to empower women to seize various opportunities and face challenges in business.

- Access to monitoring courses and training facilities: In order to assist women entrepreneurs, different monitoring courses and training facilities should be provided so that females could get access to such programs and enhance their skills and

knowledge. This allows females to grow at a personal as well as the professional levels which ultimately leads to the overall socio-economic development of our country.

➤ Support from financial institutions: Women in the business should be offered soft loans & subsidies for assisting them into business activities. Financial institutions should allocate more working capital succour both for small-scale enterprises and large-scale enterprises. At the same time, it becomes important for women to be aware of the schemes and facilities offered by various financial institutions to incentivize women.

➤ Establishment of women support groups to increase their networking: Support groups should be formed that could provide females a safe place, where women could showcase their skills, meet other females having the same aspirations, and move forward. These support groups can prove to be the best place where women can build strong contacts and networks by sharing their thoughts and ideas. Women entrepreneurs would feel more confident when their ideas would be appreciated by their role models. Various networking and entrepreneurial events should be organized for women that could help them to learn and grow.

➤ Strike a balance between personal and professional life/ Family support: Family support becomes essential in order to overcome the major obstacles in the path of women entrepreneurs. Women must be encouraged and supported by their families in following their aspirations. At the same time, male counterparts or other members of the family should also assist women entrepreneurs in the work whenever and wherever possible. This will help female entrepreneurs in managing their workloads.

➤ Awareness about government initiatives: Government plays a crucial role in encouraging women participation in economic growth and development. To achieve this objective, our government has already initiated various programs but the most unfortunate thing is that most of our female entrepreneurs are unaware of such initiatives. However, a constructive solution to this problem would be conducting various awareness programs where women could come easily and gain something valuable which consequently would enable them to run their business smoothly and comfortably.

➤ Learning the ability to adapt to the post-COVID-19 environment: Although COVID-19 has posed various challenges for women entrepreneurs in India, women must confront all these challenges with full courage and resilience so that they could accelerate themselves towards recovery. Acquisition of new skills, adoption of new technology, and redesigning of the business model as per the changed requirements are some of the ways that could be adopted in order to survive this pandemic.

Conclusion:

The research papers considered various challenges faced by women entrepreneurs. These incorporate balance between career and family, male-dominated society, socio

-cultural hurdles, lack of marketing and entrepreneurial skills, dearth of financial assistance, technical knowledge, self-confidence as well as mobility constraints. Now women are trying to subdue the social constructs and trying to build a way to their imagination, creativity, and entrepreneurship.

Although there is a significant rise in women's entrepreneurship but compared to their male counterparts their share is still less. Through our survey, we came across a startling fact that more than 56.3% of women surveyed started their venture during the covid 19 pandemic, something to be optimistic in the grim situation. At this phase, effective steps are required to provide orientation, entrepreneurial awareness, and skill development programs to women.

Through this paper, we analysed that the development of women entrepreneurship is an exigent outlook in India. It is also found that Indian women are oblivious and impotent in availing the opportunities provided by the government and other agencies for the evolution of women's entrepreneurship.

Despite these challenges, the government of India is continuously introducing various schemes and policies to help women. Yet, there is a need for improvement in initiatives and contributions which could be taken into deliberation for evolution and development of women as an entrepreneur by providing them with distinctive training facilities for developing their comprehension, talents, and expertise. We have always viewed that a smart woman can pick up a job any day, but if she becomes an entrepreneur, she can provide a livelihood to at least 10 more women!! Women having adequate education and qualification should be encouraged to start up their business, rather than been reliant on wage employment outlets.

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07

Ecopreneurship: A Win-Win Situation



By Priyanshi Agarwal*, Shubhi Goel* and
Vaishnavi Singhal**

Abstract

Change is a common phenomenon that can occur in a cyclic pattern or in a seemingly random order. Customers' needs, wants, requests, tests, and preferences differ according to the same approach. Consumers are becoming increasingly open to eco-friendly or green products as their awareness of environmental issues grows. As a result, this consumer preference leads to the growth of the green market. It is a growing industry that offers numerous opportunities in fields such as green design, green supply chain, green production, and many more.

The anti-environmental behaviour has little or no respect for the well-being of flora and fauna. As a result, the primary goal of this paper is to evaluate, explore, and synthesise existing viewpoints in the field in order to clarify key concepts in the context of green entrepreneurship. We also identified the need to properly outline the steps leading to the practise of green entrepreneurship as a deviation from traditional business practises. In terms of the findings, the paper identified new trends in green entrepreneurship and the need to define several key topics including CSR, diverse sustainable company models, the green entrepreneurship decision-making process. The paper was concluded by recent developments around the globe, government adopted environmental policies, and the impact of covid-19. Resources are scarce and we must meet the demands of people.

Green entrepreneurship is the only option for them to keep their promises of providing efficient and safe operations while also being environmentally and socially responsible.

Introduction

“Why are we not reducing our emissions? Why are they, in fact, still increasing? Are we knowingly causing a mass extinction? Are we evil? No, of course not. People keep doing what they do because the vast majority doesn’t have a clue about the consequences of our everyday life. And they don’t know the rapid changes required.”

- Greta Thunberg

.Every day, new company leaders inspire consumers and community members, increasing the bar on sustainability and demonstrating to the public that sustainability is no longer a fringe movement, but rather something we are all involved in and that is actually good business. In the business world, Eco-friendly behavior is becoming more popular. Despite this, many corporations have continued to engage in “business as usual” methods, which prioritize profit maximization over all other social advantages. Such anti-environmental behavior has little or no respect for the well-being of Mother Nature.

As a result, the primary goal of this research is to evaluate, explore, and synthesize the ways of ensuring a sustainable Environment and Green Entrepreneurship.

What is green and environmental entrepreneurship?

“Green entrepreneurship is the practice of consciously addressing an environmental or social issues through the implementation of speculative entrepreneurial notions that have a net beneficial impact on the natural environment while remaining financially viable.”

“A Green Entrepreneur (Ecopreneur) is a person who pursues commercial goals while keeping society's long-term development and progress in mind. Green entrepreneurs are true change agents, demonstrating to others how sustainability can be considered even when profit maximization is a top priority.”

Successful sustainable development satisfies current requirements without jeopardizing the needs of future generations. Entrepreneurship has a key role in shaping domestic industries, systems, and networks as a driving force for institutional growth. However, the degree of impact exerted on the overall sector is conditional and heterogeneous around the world due to systemic pressures and institutional variations.

Table 1 shows the definitions given by various Authors.

Table 1 : Definitions by different authors

Term	Definition	Author
Green entrepreneurship	'The process that consists of individual innovators who see their business as embracing environmental values as a core component of their identity and as aiding in their competitive advantage in the marketplace'	Allen & Malin (2008)
Ecological sustainable entrepreneurship	'The process of identifying, evaluating and seizing entrepreneurial opportunities that minimize a venture's impact on the natural environment and therefore create benefits for society as a whole and for local communities'	Gast et al. (2017)
Environmental entrepreneurship	'The process of discovering, evaluating, and exploiting economic opportunities that are present in environmentally relevant market failures'	Dean & McMullen (2007)

Importance

The most pressing challenges of today are environmental protection and ensuring that future generations inherit a clean environment. Green innovation has remained an elitist term reserved for large, well-established firms as a tool for corporate social responsibility and reputation enhancement. Green entrepreneurship is grabbing the attention of the newer generation, and government and public institutions are playing a beneficial role in supporting environmental concerns, thanks to changing consumer behaviour and increasing improvements in education, income, and other social indexes. Because resources are finite, the world must discover ways to get there in a way that does not deplete natural resources or jeopardise mankind's survival on this planet. *Figure 1 shows the sustainable economy model*. As a result, this paper aims to bridge the gap between environmentally conscious customers and green businesses who can help bring much-needed environmental protection and conservation to the forefront.

Entrepreneurs who are environmentally conscious are essential for economic development. They can make a substantial contribution to the reduction of unemployment, poverty, and environmental difficulties, and they are more likely than other types of business owners to engage in environmentally friendly practises and obligations. They may help the green economy by offering environmentally friendly products and services, as well as clean technology support. Environmental protection is one of the most serious issues of our time. As a result, promoting green entrepreneurs is vital in order to increase their numbers

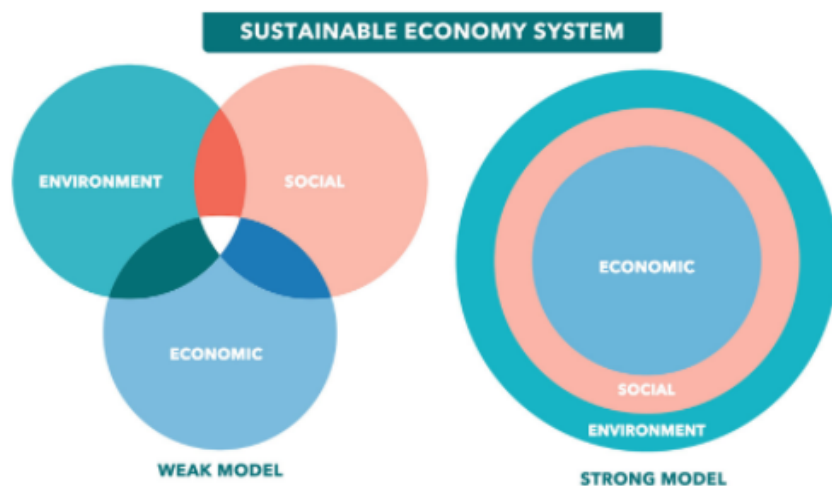


Figure 1 : The sustainable economy model

Conventional V/S Green Entrepreneurship

Basis of Differentiation	Conventional Entrepreneurship	Green Entrepreneurship
Definition	It is the ability and willingness to create, organise, and run a business enterprise, including all of its uncertainties, in order to profit.	It is defined as individuals who invested in green business processes to earn profit as well as serving society through protecting the environment.
Factors affecting socio-economic environment	In conventional entrepreneurship the main and often sole driver is on the monetary worth creation.	In green entrepreneurship the economic aspect is considered as a means to achieving along with social and environmental factors.
Aim	Traditional entrepreneurs tend to have an economic goal; they are self-interested, and profits are paramount,	Social entrepreneurs are primarily concerned with 'people today' and social welfare, and sustainable entrepreneurs are concerned with a 'triple bottom line.'

Table 2 : Difference between Conventional & Green Entrepreneurship

Corporate Social Responsibility (CSR) :

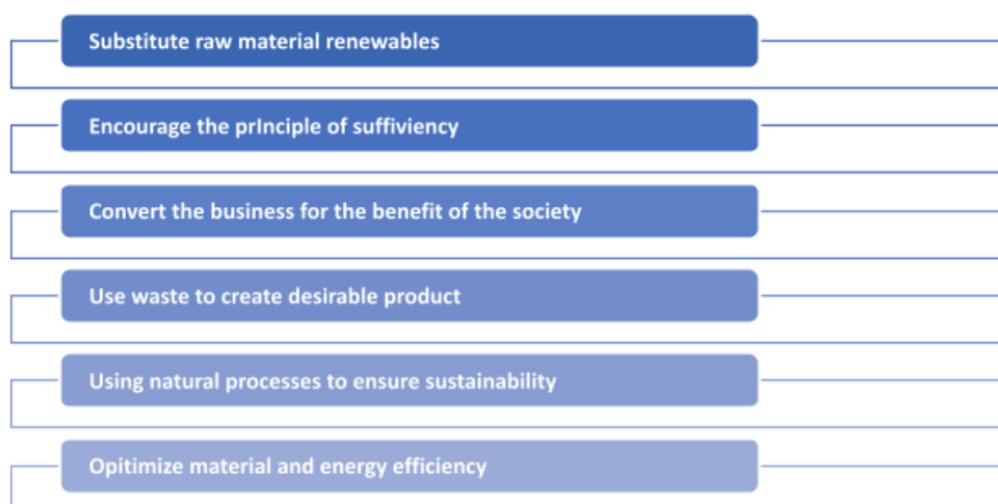
The transition of corporate social responsibility laid the groundwork for the transformation of traditional entrepreneurship to a more social and environmentally conscious corporate environment that we know today. CSR is defined as a company's ongoing commitment to act ethically and contribute to economic progress while also enhancing the lives of its employees and their families, as well as the community and the environment. Research by McWilliams & Siegel (2000) showed that customers, suppliers, employees, governments, and shareholders encourage firms more and more to undertake additional investments in CSR. Because businesses have a responsibility to their stakeholders from three perspectives: economically, environmentally, and socially, CSR can assist firms in reducing their environmental emissions.

However, the factors that make an ecopreneur, in addition to the financial performance, is that Climate change is an unavoidable challenge that the world is facing in the twenty-first century. It has become the responsibility of both developed and developing economies to develop long-term solutions to the crisis.

Green and sustainable business models:

Green and sustainable business concepts are essential for establishing eco-friendly, long-term enterprises. Businesses must develop novel concepts and business models in order to meet the sustainability standards, rather than simply patching up existing non-sustainable solutions. Companies generate a rebound effect when their energy efficiency improves while their production and sales increase as a result of increased affordability. This indicates that, while corporations are improving their eco-design and eco-efficiency, they are not necessarily reducing their resource usage, and the products have a negative influence on the environment as a result of increased sales and demand on the markets. Green businesses should concentrate on developing products that are more durable and repairable, so that revenue is generated from sources other than product sales.

Genuinely feasible and green business models need to consider the full life-pattern of the items they are producing, including the end-of-life stage. While improving another reasonable and green business model, organizations can focus, for instance, on these particular viewpoints to make esteem in new ways and perhaps expand the item life and maintainability of the item. The chart below shows some innovative ideas to initiate green business.



Role of Green Entrepreneurs in Different Sectors :

1. Fashion Industry

Fashion Industry is considered one of the most polluting industries in the world and has a disastrous impact on the environment. Untreated hazardous effluent from textile manufacturers is thrown directly into rivers in most countries where clothes are made. Toxic chemicals such as lead, mercury, and arsenic, among others, can be found in wastewater. These are extremely dangerous to marine life and the welfare of the millions of people who live along the rivers' banks. The pollution eventually makes its way to the sea, where it travels around the world. The fashion industry consumes a lot of water. In 2015, the fashion sector consumed around 79 billion metric cubes of water, and a single t-shirt consumes approximately 2700 litres of water, which is equivalent to the amount of water consumed by most humans in three years. A real-life example in this arena is portrayed by KRITI TULA, the co-founder of DOODLAGE.

The waste at Doodlage studio in Lado Sarai area in Southwest Delhi is valuable. A clothing brand and design house Doodlage is a room full of waste material that can be turned into something of use. The belief is simple: they don't require any more clothing. They adhere to a mindset that contradicts traditional notions of quick fashion and which this design house takes great pride in. The problem in the fashion industry starts from the fact that it's based on the linear models. Today about 73% of garment wastages go into landfills because there is lack of ways of reusing the fabrics and the garments that they are currently working with. So at least 73% of it is based on Take, Make and Waste economy which means one create more and more fresh fabrics and make garments out of it and sell those garments and then eventually ends up in landfills.

This dilemma led Kriti Tula to the problem of textile waste in India and the creation of a design house that would be rooted in consciously making fashion pieces out of wasted textiles or in other words upcycling. The waste that is produced out of already manufactured clothes is again reused to make bags, purses and other accessories. Left over waste is again used in making journals and diaries.

There is so much already that has been produced and that exists. It is time that we start thinking about using what is already produced there.

2. Green Construction

With the surge in construction activities, its negative impact on the environment is inevitable. Some People try to deny that the climate is changing and that their businesses have no environmental impact. In reality, the construction industry is responsible for 23% of air pollution, 40% of drinking water pollution, & 50% of landfill garbage. These numbers are alarming. A real-life example in this arena is portrayed by VEENA SAHAJWALLA, the Director of the UNSW SM@RT Centre for Sustainable Materials Research and Technology in Australia. Famously known as the "Waste Queen", She is transforming the way in which they manage waste not just in Australia, but across the world. She sees waste as an opportunity. To her waste is really one of those untapped resources, just waiting to be harnessed. Twenty years ago, she invented a cost-effective way to recycle tyres into the steel making process and saved millions of tyres from going into landfill.

Now she has invented a new product that combines the textiles from old clothes with glass and turns them into a product for the building industry. Plastics and other waste material that is destined for the landfills is used as a building block for making new materials, for new manufacturing products and new circular economies.

She is leading a team of about 30 passionate scientists and engineers at the Smart Centre in Australia, who are working in the space of waste recycling. Veena developed an idea of Green Steel by using waste plastic bottles to replace coke in the process of making steel. She also implemented the idea of using tyres which is a really good source of carbon as a substitute of coal and can be used in electric arc furnace steelmaking to make green steel. She also developed a process that used e waste plastics and reprocessed them to produce 3D printing filament from them. She also experimented with a variety of waste materials, and one of the most promising out of it was the combination of problematic waste glass and combining that with waste textiles to create green ceramics and furniture with the help of Micro Industry. In addition to glass, they also use jute bags to make furniture.

A micro factory is a collection of units that can convert a range of waste resources into new products. In a mini factory, they blended glasses, linens, and other refuse to create a hard green ceramic.

3. Community - Based Tourism

Conventional tourism that is unregulated poses a threat to many natural regions across the world. It can put a lot of strain on an area, resulting in things like soil erosion, increased pollution, discharges into the sea, loss of natural habitat, greater pressure on endangered species, and increased vulnerability to forest fires. It frequently places a pressure on water supplies, and can push local residents to compete for access to scarce resources. A real-life example in this arena is portrayed by ANTARA CHATTERJEE, the founder of LITTLE LOCAL.

Its objective is to change the way India spends vacations and introduced the concept of volunteering while vacationing. The main notion is that travellers will enjoy community-based tourism since it is a combination of cultures and traditional rituals, as well as providing a sense of belonging. The journey is centred on community needs and environmental conservation, as well as community gain.

4. Green Energy

Although electricity is a generally clean and safe kind of energy when used, its generation and transmission have an environmental impact. Almost all types of electric power plants have an environmental impact, although some have a greater impact than others. A real-life example in this arena is portrayed by VISHAL KHALDE, the founder and director of XEON WASTE MANAGERS PVT. LTD. XWM was founded in 2013 with the purpose and vision of providing environmentally friendly and cutting-edge waste management solutions. The XWM is a group of internationally recognized experts in the field of organic waste treatment. They've worked on a number of other small and medium-sized biogas projects and have a combined experience of more than 25 years, having installed 43 Energy Bins. The organic waste is composed in a canopy and is processed through an energy bin where the procedure of fermentation is followed. The waste is then collected in biogas storage and separator.

Through the biogas storage plant, the waste is converted into electrical and thermal energy. Also, the separator splits the material into solid and liquid manure which is used by farmers as fertilizers for fertility of soil and enhanced quality of crops.

5. Green Food

Agriculture occupies half of the world's liveable land. One-quarter of the world's greenhouse gas emissions come from food production and approximately 26% of worldwide GHG emissions are attributed to food. A real-life example in this arena is portrayed by Santosh Kaveri, who grew up in the small village of Shedbal, India, worked on his family's farm before and after school to help support his family. He joined the Deshpande Foundation's Leaders Accelerating Development (LEAD) Program in college and began developing practical solutions for small-scale farmers. A water-efficient, no-electricity carrot cleaning equipment that is assisting hundreds of farmers in ten villages, as well as a bullock cart brake system that reduces stress on farmers and their oxen, are among them. In 2013 and 2014, Kaveri received the Best Leader award for his carrot cleaning equipment and other innovative efforts.

6. Green Water

Wastewater treatment plant (WWTP) effluents are known to be major point sources for micropollutant discharge into the water cycle. This is because municipal WWTPs were primarily designed to remove specific matter and nutrients, but the removal of micropollutants was not a high priority in the past. A real-life example in this arena is portrayed by VANITA PRASAD, Founder of Baroda-based start-up REVY Environmental solutions. She began working on research about microbial consortia, which can treat wastewater while recovering nutrients and energy. The entrepreneur was able to collect 650 distinct bacteria that are essential for the efficient decomposition of any biological material into methane, which can be used as biogas. Vanita's study focuses on using anaerobic digestion, a natural method of cleaning biodegradable waste, to cleanse water.

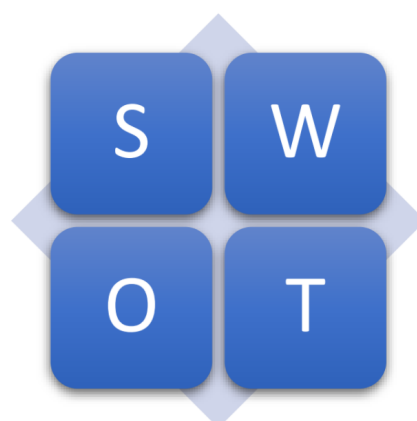
Environmental changes escalate the demand for green products and services :

Environmental degradation has stemmed from rapid economic growth and western consumption practices. The massive expansion in global consumer use of goods and services has resulted in global warming, increasing environmental pollution, and a reduction in flora and fauna. Green products and services are in high demand as a result of these changes in the environment. The consumer and capital markets for green products, services, and businesses have grown rapidly during the previous decade. Green consumer behavior opens up opportunities for businesses to target green market niches. Green entrepreneurs that create green products and introduce green innovations into the marketplace can help the market grow green. In the past, most policies aimed at green growth and focused on identifying technological innovations that reduced, for example, human impact on the environment and climate change, as well as biodiversity loss.

However, policymakers have paid less attention to green technology commercialization and green entrepreneurship. The public's shift toward green purchasing coincides with a recent uptick in environmental speech and activity. People are becoming more aware of the urgency of the situation. They estimate that one million species are on the verge of extinction. Forests, grasslands, and other key ecosystems are rapidly disappearing, according to them. Rising seas, toxic pollution, out-of-control wildfires, and new contagious diseases are more than just images of some far-away catastrophe splattered over our television screens and it is high time that we should contribute towards green economy and ecology at our end. The graph shows the consumer behavior towards socio-envio friendly business practices.



SWOT Analysis :



1. Strengths

- **Avoid Added Costs:**

Every year, proposed law raises the bar for organisations and enterprises to operate in a more environmentally friendly manner. Being proactive in developing a "green" business will not only help in improving brand image and attract a rising market of environmentally conscious customers, but it will also save money by avoiding the additional expenditures that come with unsustainable and wasteful practises.

- **Reputation Enhancement:**

As more and more well-known companies throughout the world go green, the prospect of going green becomes even more appealing. Being an ecologically conscious company has even become a prestige symbol. People think of sustainability as a plus, and businesses with green principles are keen to promote them. Going green demonstrates to the rest of the world that the business is concerned about more than just making money. One can take advantage of this when promoting their company and building their brand identity.

- **Green Marketing Awareness:**

When a company goes green, it gives customers the impression that it is a reliable company. The most valuable type of advertising is word-of-mouth, and green firms cannot buy that kind of PR. This not only strengthens a firm's existing consumer base, but also expands it: people who may never have heard of the company may be interested in one that is environmentally conscious.

2. Weakness

- **Not enough capital allocations to support green initiatives:**

Companies frequently lack the internal channels to achieve long-term projects. The problem stems from lower capital allocations for this reason. Inside corporations, for example, decision-makers disregard the necessity of decreasing vulnerability to energy price volatility and the environmental implications of internal processes because they believe the costs associated with similar decisions are too high.

- **Customer Retaliation:**

Companies may make deceptive claims about their products' environmental friendliness, either purposefully or unintentionally, a practise known as "greenwashing." Even naturally-derived ingredients contain chemical components, therefore a product that claims to have "no added chemicals" may be attacked for its choice of language. If people discover that a corporation is involved in greenwashing, the company's credibility may be harmed.

3. Opportunities

- **New Jobs:**

Due to the low entry-level requirements for young people in many sectors and their general high interest in creative business solutions and sustainability considerations, green entrepreneurship can play an important role in the battle against youth unemployment. Furthermore, the formation of new businesses allows for equitable access to both men and women and is not limited to urban areas with typically higher job chances. Green entrepreneurship can also create new job prospects for individuals who are laid off as a result of the transition to a greener economic model.

- **New Trade Opportunities**

Companies can differentiate their products and enter new markets as a result. Greenness can be integrated into a company's operations in a variety of ways and to varying degrees. Others shift manufacturing and consumption patterns across the value chain, while others employ greener inputs or sell greener products and services.

- **Impact on employee morale:**

Going green isn't just good for the environment; it's also good for business. Working for a green company makes employees feel safer. Employee participation in company-wide green programmes improves morale. Employees have the impression that their health is taken care of and that they are not disposable. Employees don't want to leave a place that makes them feel like they're part of a caring work community, so this is an excellent strategy to limit turnover.

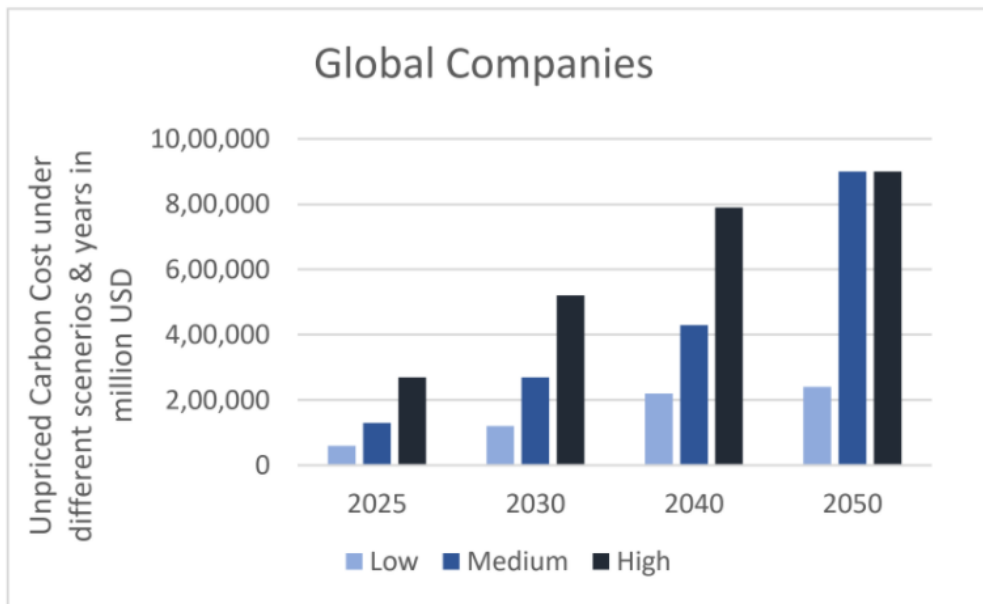
4. Threats

- **Influence of external forces involved cannot be controlled:**

The different challenges provided by external forces are uncontrollable and can have a significant impact on green entrepreneurs' businesses. The COVID 19 Pandemic created market disruption and inactivity, which had a negative impact on firms.

- **Government Influence:**

Different government policies, laws, and regulations can have a significant impact on green entrepreneurs. Demonetization, which was imposed by the Indian government, had an adverse influence on enterprises.



Graph II Threats posed by different companies

How can policy makers promote green business?

Developing a green business market necessitates regulations that assist enterprises in making or saving money from environmental compliance. Green market leaders have emerged from high-and upper-middle-income countries that have emphasised the environment through policy improvements. Companies are increasingly seeing possibilities to invest in the process and efficiency improvements, cost reductions, and product quality enhancements. Governments can put in place a mix of policies and regulations that are strict enough to assure compliance, predictable enough to attract long-term investments, and flexible enough to adapt to changing conditions, particularly new technologies. To facilitate structural and behavioural change among producers and consumers, policies that are both economy-wide and sector-specific are essential. Policies and regulatory instruments can be broken down into three major categories :

- “Command-and-control” approaches, such as technology and pollution standards- These are often thought to be rigid and unfriendly to business. Some, however, believe that regulatory measures can aid in the promotion of innovation and the creation of a competitive environment.
- Market-based instruments, such as green taxes, tradable permits, and payment for ecosystem services- This method is thought to be adaptable, efficient, and effective. It can achieve environmental goals at the lowest possible cost, easing the trade-off between economic growth and better environmental quality. However, there is pessimism in developing nations about the potential effectiveness and replicability of market-based mechanisms.
- Start-up Capital: The economy has a major constraint in terms of entrepreneurship, which is a lack of financial support and the absence of mortgage-free loans. Many new entrepreneurs are deterred from stepping into unknown terrain because of this stumbling block. Mechanisms such as venture funding, angel investors, and subsidized and easy-to-obtain credit facilities must be improved to bring a larger section of the population on board.

- Entrepreneurial Education- Adequate entrepreneurship education at the school, college, and district centre levels can give the right motivation for developing not only a conducive environment for entrepreneurship for young minds, but also convey knowledge about numerous techniques to improve the situation. Education can also help start-ups obtain social acceptance by overcoming societal compulsions associated with "employment" and "placement."

It is crucial to consider the government's position in a broader context. Removing perverse/distorting subsidies, pricing resources at the appropriate amount, and green procurement, for example, are all key steps. Furthermore, solutions must address structural problems, such as unclear goals, a lack of accountability, and inadequate communication and coordination between the public and private sectors. These limit the availability of technology and knowledge, making green business innovation less efficient. It's also crucial to know which types of businesses should be targeted by policies. Green business innovation has primarily been adopted by larger corporations in Asia and elsewhere. While some small businesses are innovative, policymakers must continue to focus on aiding small and medium businesses (SMEs) in changing their business models.

India's National Action Plan on Climate Change:

The action plan lays out a series of initiatives that will help India achieve both development and climate change-related goals at the same time. A variety of actions are included in the National Action Plan on Climate Change (NAPCC). It focuses on the following eight missions.

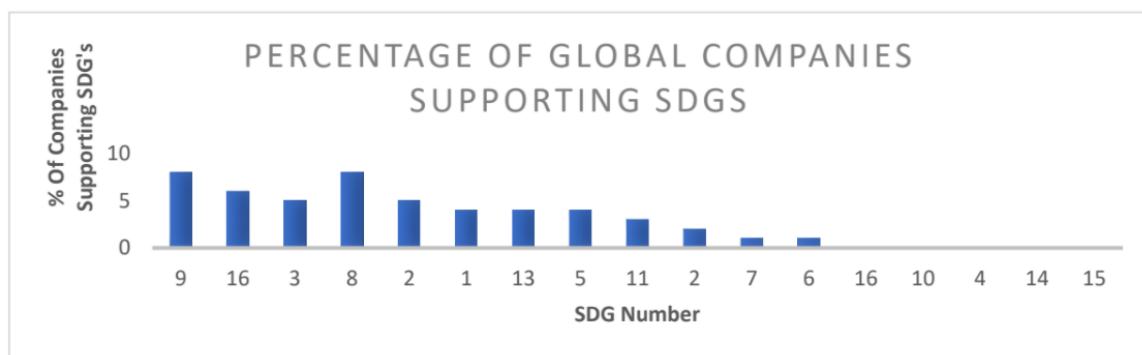
National Solar Mission	The NAPCC proposes legislation requiring specific power consumption reductions in strong and powerful industries, as well as a framework for businesses to exchange energy-saving certificates, as well as funding for public-private partnerships to reduce emissions through demand-side management initiatives in municipal, building, and agricultural sectors, among other things.
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National Mission for Enhanced Energy Efficiency	The NAPCC aims to enhance energy consumption as a fundamental element of urban planning by utilizing existing Energy Conservation Building Code, boosting the regulation of automotive fuel economy standards, and using cost - based initiatives to boost the acquisition of powerful engines and incentives for using public transit.
National Mission on Sustainable Habitat	The NAPCC also aims to replant 6 million hectares of neglected forest regions, bringing India's forest area from 23 percent to 33 percent.
National Water Mission	The NAPCC sets the target of a 20% increased water use optimization via pricing and other ways to meet water crisis due to climate change.
Green India Mission	The NAPCC's mission is to assist agriculture in adapting to changing climate by producing climate-resilient crops, increasing weather insurance options, and modifying farming practises.
National Mission for Sustainable Agriculture	The strategy predicts a new Climate Science Research Fund, enhanced climate modelling, and huge international collaboration to get a better grasp of climate science, impacts, and problems.
National Mission on Strategic Knowledge for Climate Change	The strategy anticipates a new Climate Science Research Fund, improved climate modelling, and increased international collaboration to achieve a better grasp of climate science, impacts, and problems.

Table 3 : India's National Action Plan on Climate Change

Recent developments around the world :

- The VTR was designed and built for the US DOE by GE Hitachi Nuclear Energy and TerraPower in January 2020. This partnership brings together a talented group of engineers and scientists with extensive experience in sodium reactor technology.
- Salesforce released Sustainability Cloud, a carbon accounting platform for organisations, in September 2019. Salesforce's Sustainability Cloud allows companies to measure, analyse, and report on reliable environmental data in order to cut carbon emissions.
- The Watson Decision Platform for Agriculture was announced by IBM in May 2019. To provide farmers with insights on harvesting, spraying, planting, and ploughing, the platform blends AI, predictive analytics, IoT sensors, and weather data.
- GE Renewable Energy announced the opening of a Remote Operation Center (ROC) in Barcelona, Spain, in April 2019. This will serve as a regional hub for digital innovation, promoting more agile development and integration across the company's ROCs around the world.
- Enablon announced a partnership with OSIsoft in June 2018, allowing firms to use OSIsoft's PI System in Enablon's EHS, Operational Risk, and Sustainability software platform to harness real-time data from assets, machines, and IoT devices.



Graph III Global Companies Supporting SDG's

According to the Business and Sustainable Development Commission, putting the SDGs at the heart of the world's economic strategy could unlock US\$12 trillion in opportunities and 380 million jobs a year by 2030.

The impact of Covid-19 on the green tech and sustainability market:

COVID-19 has both positive and negative market consequences, as carbon emissions have decreased globally as a result of the lockdown. The reduction in emissions due to COVID-19 is a short-term benefit; however, as industries re-start and firms seek to recoup some of their financial losses in the first quarter of the year, carbon emissions will rise dramatically. COVID-19 has wreaked havoc on recycling efforts all over the world. It has impacted various companies' revenues, and once the lockdown is lifted, companies will turn their attention to operations in order to recoup their losses; this may lead to a shift away from green technologies in order to avoid further costs.

Conclusion

Thus, the potential for green entrepreneurship is gradually expanding, and the environment sector is ready to take the lead in terms of job creation and revenue generation. The youth is aware of developing prospects in the environment industry and are committed to economic development in the most sustainable way possible, incorporating environmental, social, and ethical values into their green initiatives. In order to preserve a balance between the environment and the economy, the government can also support businesses by enforcing restrictions and providing subsidies in the green business sector. To capitalise on the increased motivation of the youthful population, an appropriate ecosystem must be in place that includes entrepreneurial, training, technology, financial support, tax holiday benefits, and concessions, among other things. An intentional focus on adopting a green economy must be developed for the growth of green firms that will improve the economy's resilience and the natural bio system's resilience. Green entrepreneurship is the greatest long-term answer to the world's growing ecological imbalances and rapid depletion of natural resources. They provide a vital contribution not just by providing jobs and revenue, but also by acting as change agents, harbingers of innovation and new ideas, and catalysts for adapting new technology in a flexible and sustainable manner. The future belongs to the new generation, which will inherit limited natural resources and is thus dedicated to meeting population growth through efficient and effective resource utilisation while being environmentally and socially responsible.

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08

Study of Social and Community Entrepreneurship in India and Consumers' Perception towards Social Enterprises



By Ananya Singla*, Harshita Joshi*, Shagun Malik**

Abstract

Solutions provided by social entrepreneurs are innovative, remarkable and environmentally friendly. Cost-effectiveness is additionally an immense thought. The most rewarding feeling to a social business is how you can have an impact on society. Social entrepreneurs are individuals with innovative solutions to society's most pressing and daunting social problems. The need for and significance of social entrepreneurs is imbued with multiplicity of justifications. Business entrepreneurs change the face of business, social entrepreneurs act as the change agents for society, seizing opportunities others miss and improving systems, inventing new approaches, and creating solutions to change society for the better.

This paper considers both the "social" and the "entrepreneurship" elements. This study helped us to critically review the concept of social and community entrepreneurship in India. The study encompasses the impact of social entrepreneurship on unprivileged communities, investors and other stakeholders of social enterprises. Analysis on Consumers and various other stakeholders' perception about social entrepreneurship is also studied.

Introduction

Social entrepreneurship is all about recognizing the social problems and achieving a social change by employing entrepreneurial principles, processes and operations. It has gained popularity with progressive technology-driven and socially responsible leaders worldwide, especially among the millennials. Given the exponential growth of social innovation and entrepreneurship in India in the recent years, it has inspired a genuine development of interest in the field, and a mindset where social innovators and entrepreneurs firmly believe they can make the impossible possible.

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According to a **Forbes Article (2018)**, “The Rise of the Social Enterprise: A New Paradigm for Business” businesses today are entering a whole new paradigm for management: one which considers a business less as a “company” and more as an “institution,” integrated into the social fabric of society.

According to a **Deloitte Human Capital Trends 2018**, entitled “The Rise of the Social Enterprise”, 67% of employees prefer to work for socially responsible companies and 55% of consumers will pay extra for products sold by companies committed to positive social impact. According to the report, a study of 22,000 investment professionals found that 78% have increased their investments in socially focused firms.

Limitations of the Study

- Scope of the study is limited to PAN India.
- It was a challenge for us to access the consumers aged 50-60 and get responses from them.
- As college students, we had time constraints.

Review of Literature

Literature review plays a significant role in any study and provides important insights into previous research papers. There has been a surge of research interest in social entrepreneurship over the past decade. This chapter presents a review of study covering topics such as meaning of social and community entrepreneurship, consumers’ perception towards social enterprises, importance of social entrepreneurship for the growth of an economy and brief summary of literature review. Some significant and accessible researches have been studied and mentioned here for the purpose of literature review.

Tripda Rawal (2018) in her research “A study of Social Entrepreneurship in India” examines that Social Entrepreneurship can change the face of society in India. In India especially social entrepreneurship has better prospects as the social problems are at full swing here. She further highlights that social entrepreneurship is a unique combination of entrepreneurial traits and philanthropy.

Balasundram Maniam, Jared Enge , Geetha Subramaniam (2018) in their research paper “Examining the Significance and Impact of Social Entrepreneurship” concluded that social entrepreneurship is a phenomenon that has generated significant interest recently in the business context. Further they analysed that social entrepreneurship introduces an effective means to addressing societal concerns, and has left an indelible impact on the way businesses can operate.

Farhana Ferdousi (2017) in his study “Understanding Consumer Behavior toward Social Enterprise Products” concluded that consumers feel that social enterprises will contribute to sustainable development and ethical market development. Moreover, as people are now more aware about the product quality, safety, and the growing capacity of dual career couple family to spend more on safe and quality products, social businesses can easily target those consumers who are ready to spend more for ethically and eco- logically produced products.

CONCEPT OF ENTREPRENEURSHIP AND ENTREPRENEUR

According to Investopedia.com, an entrepreneur is an individual who creates a new business, bearing most of the risks and enjoying most of the rewards and the process of setting up a business is known as entrepreneurship.

Entrepreneurship is the driving force behind economic growth; economic development is directly related to the prevailing force of entrepreneurship. A flourishing economy owes its success to entrepreneurship. There is one thing that is common to all developed nations throughout the world: entrepreneurship. The development of the economy depends completely on the growth of entrepreneurship, and the more entrepreneurship grows, the more infrastructure and all the indicators of development grow. Globally, governments have understood and stressed the importance of entrepreneurship very quickly. In most countries, governments have begun laying the groundwork and developing the infrastructure necessary for entrepreneurship to flourish. India has also made tremendous efforts to advocate for entrepreneurship and develop it at a global level.

CONCEPT OF SOCIAL ENTREPRENEURSHIP

Social entrepreneurship refers to a special type of initiative that is both social and economic in nature.

Social entrepreneurship is an important tributary of entrepreneurship, because it goes beyond philanthropy to affect diverse social changes and upliftment of developing nations.

As part of the government's ongoing efforts to tackle social injustices and create an ideal society, social entrepreneurship has been encouraged to a great extent. Social entrepreneurs identify a social problem and organize, create, and manage initiatives to resolve it. Generally, the goals and results of entrepreneurs are measured by profit or return but on the flip side Social entrepreneurs measure their success in terms of what they're doing for society."

From the definition of Social Entrepreneurship, we can extract that, it refers to the process of identifying and resolving a social problem using entrepreneurial principles. People who are known as social entrepreneurs are the ones who undertake it. It is far more important to bring positive changes to society rather than make individual profits.

Social businesses are characterized by their focus on social innovations to solve prevailing social problems. Social enterprises are based on social entrepreneurship and cannot be quantified. Social Entrepreneurship is the act of creating value for society. Innovative, motivated for solving social issues, resourceful, and results-driven, social entrepreneurs excel.

DEFINITION OF IMPACT INVESTING

According to Investopedia.com, Impact investing is a general investment strategy that seeks to generate financial returns while also creating a positive social or environmental impact. Investors who follow impact investing consider a company's commitment to corporate social responsibility or the duty to positively serve society as a whole.

OBJECTIVES OF THE STUDY

CONTRIBUTION OF SOCIAL ENTREPRENEURSHIP IN INDIA:

Our first objective is to study contribution made by social entrepreneurship in India. In nations that are facing developmental challenges, social entrepreneurship is most relevant. Developing nations like India face social challenges and face issues related to social development. The social inequalities prevalent in India can be resolved through social entrepreneurship. A number of startups and new ventures have come into existence in recent years that cater to the social needs of the society while simultaneously earning a profit. Economic entrepreneurship differs from social entrepreneurship in this regard because the nature of profit is all that matters. Economic entrepreneurship has a smaller scope in India than social entrepreneurship. It becomes important in the Indian context, as most products and services are primarily aimed at the wealthy and people with low income are disadvantaged because of insufficient resources.

By providing them with goods and services at their terms and conditions, social entrepreneurship takes care of this deprived section of the market. Fulfilling such society needs can also be difficult because of no or little profits in the beginning. Governments and other factors have played a significant role in various examples of people choosing social entrepreneurship over economic entrepreneurship. Social entrepreneurship becomes very relevant wherever there are wide societal gaps and inequalities persist, such as in India. According to *The Economic Times*, Social impact investing can bridge the huge divide between prosperous & underserved India.

IMPACT OF SOCIAL ENTERPRISES ON COMMUNITY DEVELOPMENT:

Our second objective to investigate the extent of impact of social and community entrepreneurship on the development of the unprivileged communities.

Since India has more than 21% of its population under poverty line and due to the pandemic the rate increased further. It's high time for our country to start in Social Enterprises because these Enterprises played a significant role during the pandemic.

Today, many socio-economic problems surround communities that are associated with community development. Social entrepreneurship has taken a pioneering role in tackling these problems in poor communities.

Whether they are individuals or charitable organizations, social entrepreneurs are recognized as a powerful change agent for developing communities. Social entrepreneurship acts as a bridge between businesses and traditional business. Besides transforming the market, the influence of social entrepreneurs is becoming more important for the world to overcome social challenges and provide sustainable and effective social innovation solutions.

CONSUMERS' PERCEPTION TOWARDS SOCIAL ENTERPRISES:

Our third objective is to study the consumers' perception towards social enterprises. On the following topics, research analysis has been provided:

- To examine consumers' prior knowledge about social enterprise products;
- To investigate their perception and attitude toward social enterprise products;
- To examine behavioral intention to buy social enterprise products; and
- To assess their actual buying behavior toward social enterprise products.

METHODOLOGY

SOURCE OF DATA: Our source of data is both primary and secondary. Our primary source of data is the questionnaire survey and our secondary sources consisted of various research papers, reputed journals and publications.

STUDY AREA: The study was conducted across various states in India. However, primarily respondents belonged to North Indian States such as Delhi, Haryana, Uttar Pradesh etc.

RESEARCH POPULATION AND SAMPLE SIZE: The population of our study comprises both male and female and age groups ranging from 13-60. The sample size of the questionnaire was 85.

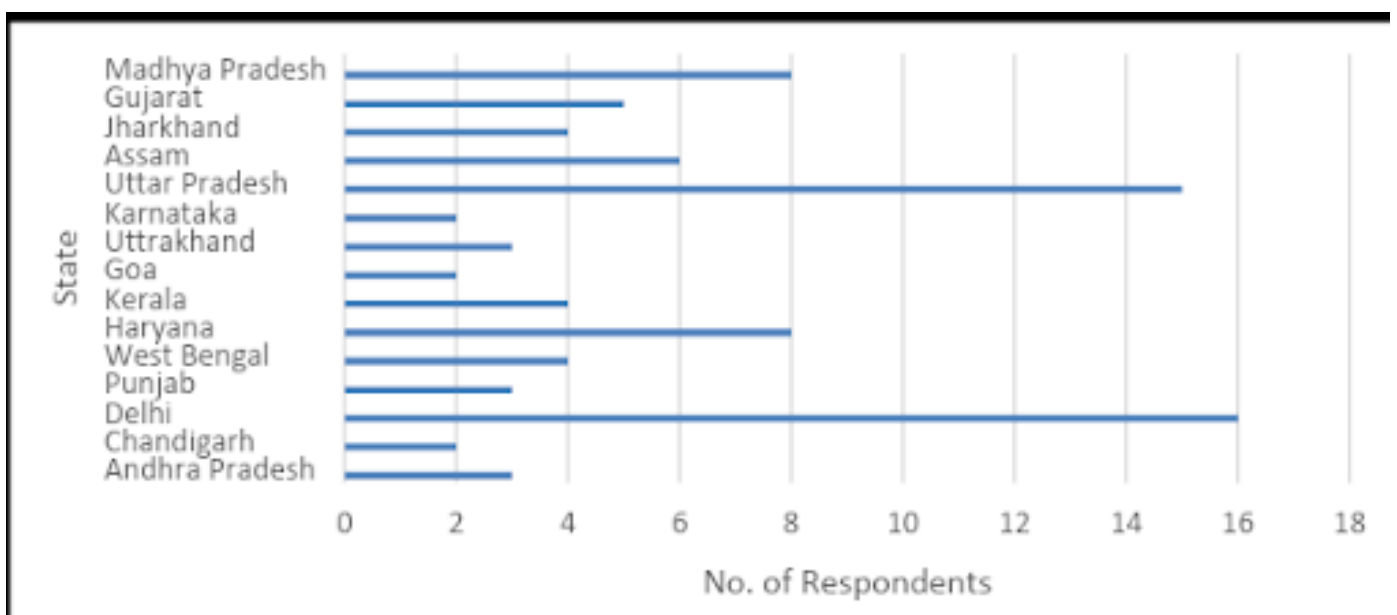
DATA COLLECTION TECHNIQUE: In gathering data, a questionnaire in the form of a google form was circulated across various online platforms such as WhatsApp and LinkedIn.

DATA ANALYSIS

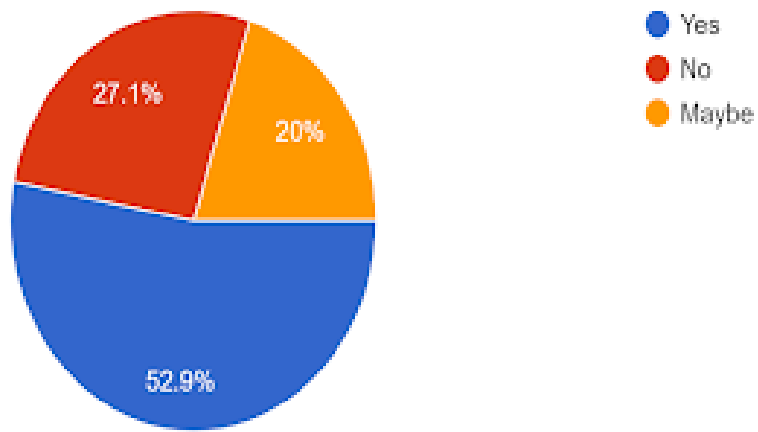
- **GENDER OF RESPONDENTS:** Out of 85 respondents, 65 respondents (76.5%) were Female and 20 respondents (23.5%) were Male.



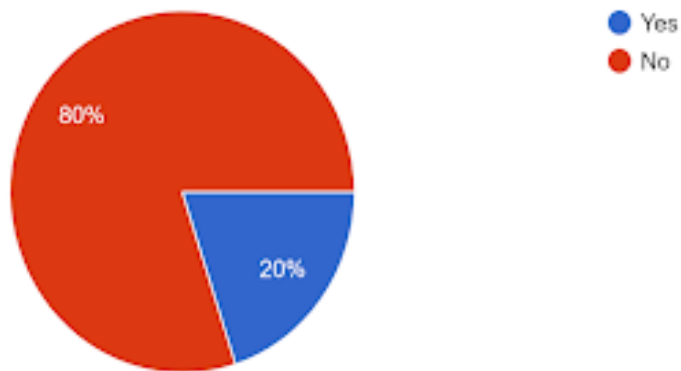
- **STATE WISE DISTRIBUTION OF RESPONDENTS:** The following was the distribution of respondents in the given states: 15 in Uttar Pradesh, 8 in Haryana, 16 in Delhi, and 46 in Others.



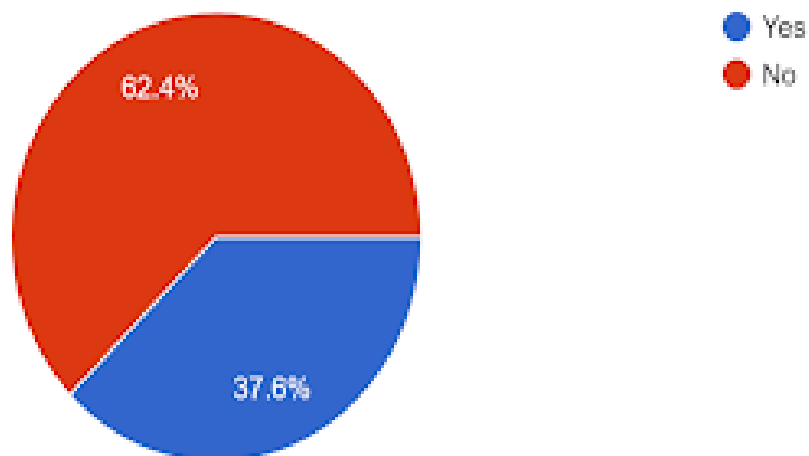
- Are you aware as to what social and community entrepreneurship is?



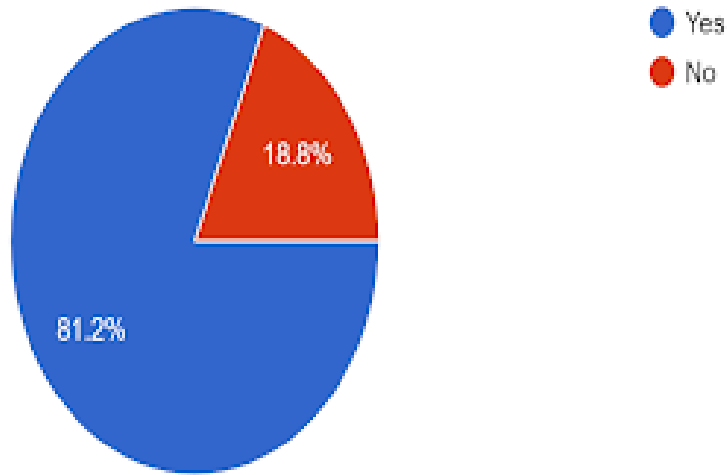
- Have you made a purchase of a good/service from a social organization?



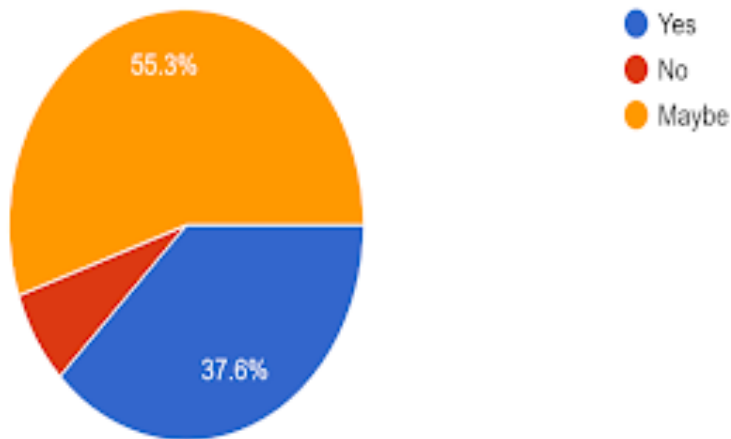
- Are social enterprise products easily accessible to you?



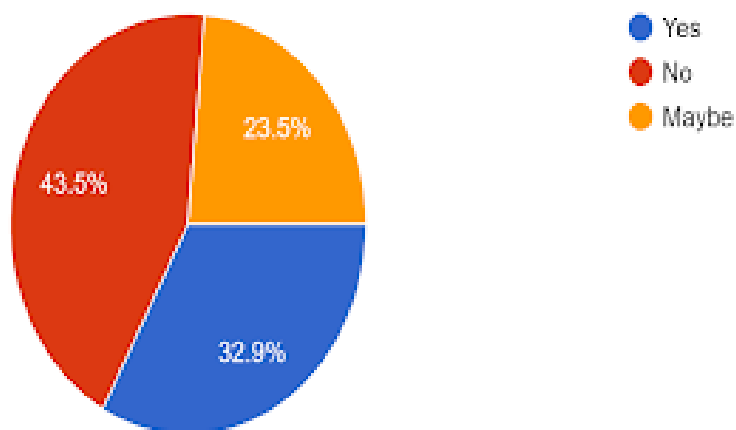
- Does trust factor increase if you are buying from a social organization?



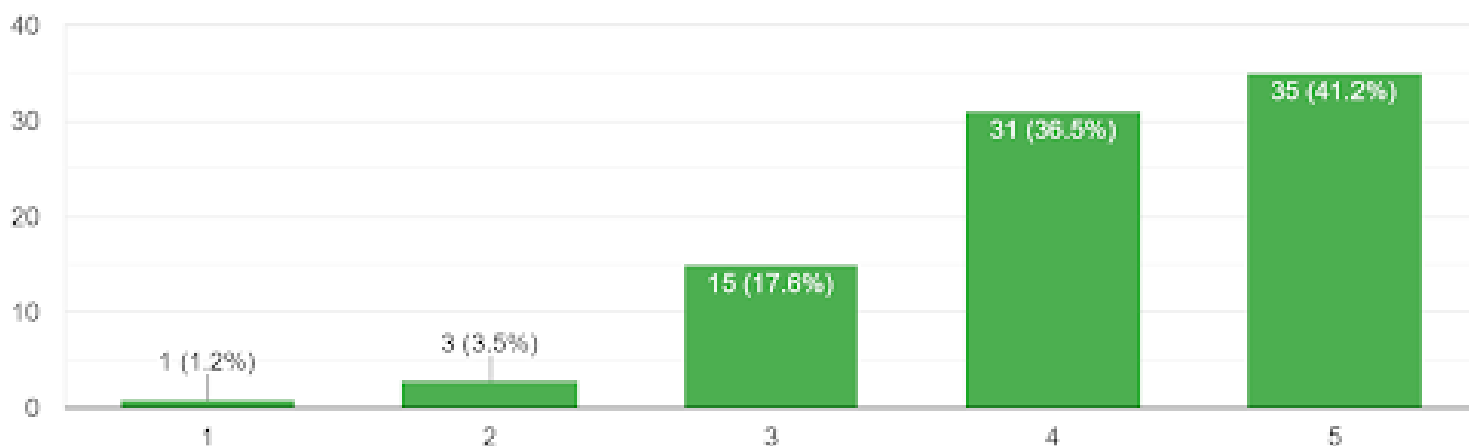
- Do you feel that the quality of social enterprise products is at par with the quality of other products in the market?



- Do you specifically ask for products sold by social enterprises while shopping?



- If the product offerings of a corporate organization and a social organization are same then how likely are you to purchase the product/service from social organization than corporate organization? (1 being the lowest, 5 being the highest)



RESULTS AND SUMMARY

- In the survey it was found that 52.9% of the respondents are aware about what social and community entrepreneurship is while 27.1% of the respondents are completely unaware as to what social and community entrepreneurship is and the rest 20% respondents have partial idea about social entrepreneurship. Respondents who fall in the age group of 18-25 years have much more clear idea about social entrepreneurship as compared to other age groups.
- 20% of the sample size have made a purchase from a social enterprise in the past. Whereas, majority of the respondents which is 80% of the respondents have not made a purchase from a social enterprise. The major reason analyzed from the survey for the non-purchase is unawareness about social enterprises and lack of such enterprises in and around the area of their residence.
- 57.6% of the respondents would prefer online mode to purchase products from the social enterprise. Whereas, 42.4% of the respondents prefer offline channels to purchase the products from such enterprises.
- 77.7% of the respondents were at the higher extreme and stated that they would buy social product over other products available in the market. Whereas, 4.7% are on the lower extreme points.
- 37.6% of the sample size responded positively and stated that the product quality of social enterprise is at par with the quality of the products from corporate enterprises. 7.1% of the respondents feel that the product quality is not at par with the products in the market. 55.3% of the respondents have partial opinion about the above statement.
- 81.2% people's trust factor increases by buying from social enterprise.
- 37.6% of the respondents have easy access to social enterprises.

CONCLUSION

• RESPONSIBILITIES AND ROLES OF SOCIAL ENTREPRENEURS IN INDIA

India and similar societies are the best places for social entrepreneurship to thrive and grow. Due to the minimization of social inequalities in developed societies, social entrepreneurship is limited. Social inequalities are largest in underdeveloped, developing, and least developed countries. In social entrepreneurship, entrepreneurs play a crucial role in the advancement of social issues. While entrepreneurs tend to have a high level of responsibility by nature, they also have an essential role in social advancement. It is only people who are selfless and who use their entrepreneurial talents and management expertise to benefit society and avoid self-interest that can produce social value, social gains, and social changes. We call such people social entrepreneurs. Social entrepreneurs have the following roles and responsibilities in Indian society.

1. Developing a unique product/service aimed at the upliftment of society is what social entrepreneurs are capable of doing. It is their responsibility to identify the social problems that affect the entire society rather than a specific group. Determining the appropriate social issues/problems is crucial.
2. There are certain problems which social entrepreneurs face in India due to the mindset of those who do not want to change their ways. Societal change is a direct result of the social entrepreneurship movement.

• ASSESSING THE CHALLENGES FOUND IN THE SOCIAL ENTREPRENEURSHIP SECTOR IN INDIA

As with other areas of entrepreneurship, social entrepreneurship faces challenges. There are a variety of challenges, but every challenge is manageable. In some ways, social entrepreneurship is fundamentally different from economic entrepreneurship, so are its challenges.

The social entrepreneurship sector in India in particular faces many challenges. In contrast to other nations and regions that have made social entrepreneurship a mission, India faces several obstacles to its growth. Social entrepreneurs face tremendous challenges, and all of them are quite different. These challenges have more to do with the mindset of people as this field is still not considered worthy. Some of the major challenges faced by Social Entrepreneurs are:

1. In India, social entrepreneurship is mostly confused with social work. As a result, it finds it hard to differentiate itself as an entity in the country. This becomes the first challenge social entrepreneurs face.
2. Next, the problem of creativity faces social entrepreneurs in thinking up new and effective ways of improving society as well as earning profits. It is very difficult to integrate these two factors, particularly in India.

3. A major challenge for entrepreneurship in India remains the absence of adequate sources of funding. Social entrepreneurs often struggle to get financial assistance from established financial institutions due to their unique products and services. Due to this situation, social entrepreneurship is underdeveloped in India to a large extent.

4. Social enterprises face an exceptional challenge of shortage of skilled/dedicated workforce. With social entrepreneurship, this becomes somewhat difficult since most people go into jobs to receive a handsome salary and benefits. Rather than focus on personal gains or benefits, social entrepreneurship is all about achieving social gains. When a company's working conditions are like this, it is hard to find people to work on their team.

5. Setting and communicating the values is a critical challenge in social entrepreneurship. It is very common for values to vary from society to society according to their unique needs. Nevertheless, social entrepreneurs need to establish a common set of values that can be communicated easily.

6. By creating opportunities that are positive and substantial to individuals, the social entrepreneur strives most strongly to lift people a of increases from where they currently stand. Both individuals and society as a whole must be catered to in this process. Social entrepreneurship presents a very different set of challenges than traditional business models.

7. Due to social entrepreneurs' deep concerns about society, they may adopt an unethical, less ethical approach at times to conducting their business. There are very few cases of challenge in India, but some extreme cases do exist. The ethical paradigm shifts between societies.

RECOMMENDATIONS

We recommend the following measures which can be undertaken:

Challenge Resistant Measures:

With time the changing dynamics of society, social entrepreneurship is no doubt subject to new challenges. The prevailing (above-mentioned) challenges require social entrepreneurs to pay attention to tiny details. There are some more challenges that social entrepreneurs face besides those listed above, despite the list not being complete. Taking advantage of social entrepreneurship in India, it is important to understand the challenges it faces. To address the prevailing challenges of social entrepreneurship in India, a few steps/measures can be practiced:

- A framework of specialized institutions for promoting social entrepreneurship, including training and development institutions, must be established by the government. The concept of social entrepreneurship should be incorporated in institutions that specialize in economic entrepreneurship.
- A course/subject relating to social entrepreneurship could be included in the curriculum of a higher education institution as a way of spreading awareness about the subject.

- Social entrepreneurship needs to be made more mainstream, so the public does not confuse it with social work. Other means can be implemented to do this, such as social media and the media.
- Infrastructure and basic facilities are essential for supporting social entrepreneurship in the federal, state, and local government. As a result of these facilities, more people will become social entrepreneurs, thus multiplying the number of social entrepreneurs.
- It is important to organize social entrepreneurship programs from time to time, just as entrepreneurs are required to organize entrepreneurship programs. Social entrepreneurs will be more motivated if such an organization is provided.
- Social entrepreneurs should be publicly rewarded for their exceptional/distinct contributions to society on prestigious and appropriate platforms from time to time.
- Social entrepreneurship financing-If the funding question is resolved, then the maximum level of challenges social entrepreneurs will face can be managed correctly.

SCOPE FOR FURTHER RESEARCH

Due to time constraints, the sample size is restricted to the people who fall in the age group of 18-35 years. Therefore, the sample size can be expanded to study the impact of social entrepreneurship on a large scale. In our research, we have covered the perspective of consumers and various other stakeholders of social and community enterprises. Social entrepreneurs' stances can also be further studied in detail from different perspectives. Each factor can be studied in detail to find out the intensity of the impact of social entrepreneurship on the Indian economy.

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09

Decoding the Zoho Model: A Case Study on Mitigating the Unemployment Crisis through Social-Entrepreneurship



By Harjas Kaur*, Sakshi Singh*, and Sphurti Srivastava*

Abstract

This research is an empirical attempt to understand how a social-entrepreneurship venture, situated in a remote village of a small district in Tamil Nadu, is disrupting the conventional education system and job market dynamics by providing a stipend to rural underprivileged kids to learn practical industry skills, thus helping them secure high-paying professional jobs. It also aims to evaluate whether this model is a scalable solution to India's unemployment woes? The Indian education system suffers from a lot of problems. However, the biggest issue is its outdated curriculum which fails to equip its beneficiaries with practical industry skills, thus rendering them unemployable. This problem was recognised by Sridhar Vembu, who launched the Zoho school of learning in 2004 to create educated and employable engineers. Zoho schools pay its students a nominal stipend during their 2 year training period and employ them once they have completed the programme. Most of the students of this school belong to rural underprivileged families as Sridhar Vembu believes that village economy is the key to the development of any country. This research paper is an attempt to study the Zoho model in detail to analyze what made it successful and to see whether this model is scalable. As a part of our research, a primary survey was conducted with a sample size of 150 people. Moreover, secondary data was also used in our analysis to arrive at the conclusions.

Introduction

In ordinary or common sense, unemployment refers to a situation in which a person is not gainfully employed in a productive activity and thereby does not earn or work. Unemployment can be both voluntary as well as involuntary. However, in our paper we will focus on involuntary unemployment. Involuntary unemployment refers to a situation in which an able bodied person who has the ability to work and is willing to work at the prevailing wage rate is unable to find work which may yield him some regular income.

Data published by CMIE shows that as of October 2021, the unemployment rate in India is 6.7%. The magnitude of unemployment is higher in the urban areas (8.3%) as compared to rural areas (6.0%). There are various causes of unemployment, however we will focus on our education system as a major cause of unemployment. The quality of human capital of a country is determined by its quality of education. The quality of education in terms of its content is fairly poor and less relevant to the needs of the country. The curriculum places a lot of emphasis on general education as compared to technical and vocational education. It produces more generalists such as clerks, lower-level executives and government servants rather than technocrats. In 2016, Bihar's education minister Ashok Chaudhari said that India is producing an army of unemployable youth from its educational institutions. He also said that 50% Indian graduates do not have the required skills to do any professional job. Employment accessibility report conducted by aspiring minds in 2019 revealed some important insights-

- 80% of engineering graduates are unemployable for any job in the industry.
- Only 3.84% engineering graduates have the technical, cognitive and linguistic skills required for jobs in the software industry.
- Only 1.7% of engineering graduates have the skills needed to work in new age jobs.

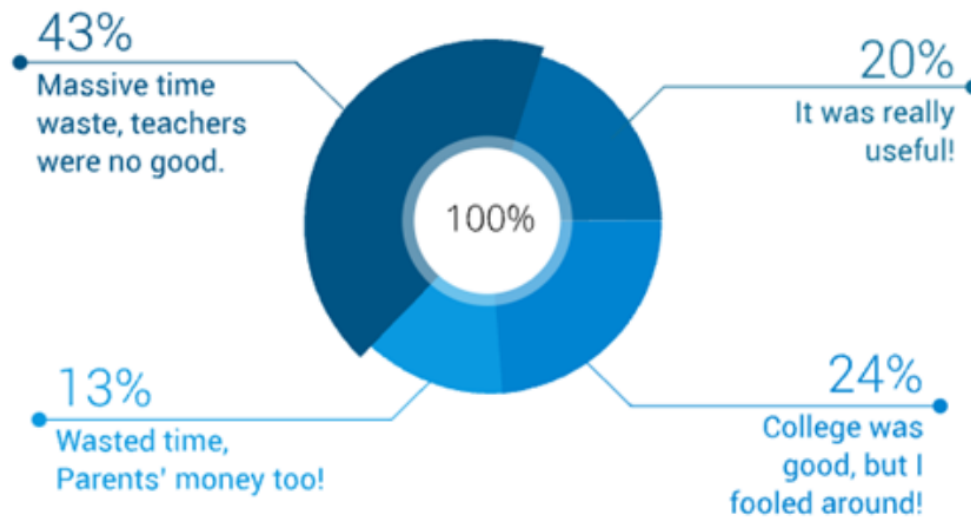
The survey gives an insight to a major problem faced by our country considering that India has 6,214 engineering and technology institutions which take 2.9 million students every year out of which around 1.5 million engineers look for placements every year.

According to Varun Aggarwal (Aspiring Minds Chief Technology Officer and co-founder) the reason behind this is lack of faculty talking about industry application of concepts in class. The outdated higher education curriculum in India also serves as a major obstacle to students in getting a job.

Another study conducted by ASSOCHAM found that barring top twenty IIM's, 93% of business school graduates lacked the necessary skills to be gainfully employed and earned between 8000-10000 per month. This represents a grim situation considering on average students spend between 3 lacs to 5 lacs on their MBA degree and the fact that there are approximately 5,500 B-Schools in India. The study further states that campus recruitment in B-Schools has declined by 45%. The reason for such downfall is the poor education quality and economic slowdown. ASSOCHAM noted that in Tier-2 and Tier-3 colleges students were not being provided with hands-on training. The syllabus in most B-Schools is outdated and does not prepare the students for emerging global business perspectives.

The study conducted by ASSOCHAM concluded that the quality of higher education across disciplines was poor and did not prepare the students for the corporate world.

The Zoho School of learning established under Zoho Corporation understood this problem. They undertook a survey in 2004 to understand 'How useful was college' the results of which are shown below:



Source: Zoho School

Based on the findings of this survey they concluded that the skills that were most important for the job were learnt while on the job. Keeping these things in mind, Sridhar Vembu, founder of Zoho Corporation established the Zoho School of learning. The main characteristics of Zoho school are-

- Providing students with practical exposure to actual work.
- Providing opportunities to learn and work with IT professionals.
- A dynamic syllabus structure which matches with the current needs of the IT industry.
- Focusing on improving the communication skills of students and not just grammar.
- A highly qualified faculty consisting of expert teachers who are active practitioners too.
- Providing stipends to students during training periods.
- Providing high speed internet along with an AC classroom.

The Zoho School of learning proved to be highly successful. The school started with just 6 students in its 1st year and has groomed over 800 software professionals who are now serving as employees in Zoho corporation. Zoho schools provide students with contextual learning. Students discover the beauty of learning through practical rather than a dump of dry theory. The school also provides students with a plethora of guest lectures from practicing professionals from Zoho Corporation to ensure that they stay abreast with current IT trends. Experiential learning makes all the difference.

Unemployment is one of the most pressing social issues plaguing our economy ever since the Independence of our nation. While this problem stems from a host of grave causes like unequal distribution of resources, slow-economic growth, population boom, caste-based discrimination, income inequalities, lack of adequate infrastructure, decreasing budget allocation and investment to education sector, the root cause of unemployment can be deemed as the mismatch between skills taught in educational institutions and skills required in the work-field.

Literature Review

In the decades following Independence, extensive research has been undertaken to document the enormity of the unemployment crisis and the need for introducing a skill-based curriculum in our educational institutions.

According to the International Labour Organisation (ILO), youth unemployment and underemployment is prevalent around the world because young people lack skills, work experience, job search abilities and the financial resources to find employment (United Nations, 2003; ILO, 2006; Matsumoto et al., 2012). In developing countries like India, this situation is exacerbated by poverty and the competitive pressures that result from a rapidly growing labour force. Moreover, the inadequacy of social protection schemes and active labour market policies means that young people in such economies have little support outside their family and friends. Globally, young people are, therefore, more likely to be unemployed or employed on more precarious contracts or in the informal sector. (Mitra & Verick, 2013, 30)

ILO has said in its recent report that the unemployment scenario in India over the last two years has been showing a rising trend. Going by ILO's latest estimates, the jobless rate could be 3.8 per cent this year. Every 6th person in the world is an Indian and every 3rd poor person in the world is also an Indian. The statistics speak about the gravity of the problem of unemployment and poverty with demand and immediate.

Given all the literature about the unemployment crisis in India stemming from the gap between skills taught and skills required, in this paper we have attempted to identify the viability of an alternative apprentice-based learning model of education as a solution to this issue. In a similar vein, we have tried to understand why skill development is the need of the hour and the importance of establishing a scalable model to ensure the same.

Skills and knowledge are key drivers of macro economic growth and socioeconomic stability. Appropriate policies for skill development occupy a dominant place in the development of the economy. According to the five year plan, India has set aggressive goals for faster and sustainable economic growth of the nation. With the demographic dividend, India needs to impart adequate skills to its workforce. Skill development has emerged as a national priority. Low employability of graduates is one of the major problems in India.

Only a small proportion of Indian graduates are considered employable. Placement outcomes also drop significantly as we move away from the top institutes. (Sharma, 2015, 3) Reaping the benefits of demographic profile looks more of a fantasy than reality due to the quantity and quality gap in terms of skilled workforce in India. It is estimated that India will face a demand of 500 million skilled workers by 2022. But India is still struggling with the supply of skilled workforce as presently only 2% of the total workforce in India have undergone skills training.

According to the Government of India estimates, 93% of workforce employment is in the unorganized or informal sector, which is not supported by a structured skill development system. No training on employable skills is being given to young people who can provide them with employment opportunities as per current education system. Workers in the unorganized sector are often skilled informally or on-the-job. The information channels and skill development process are not understood or not clear. India's labor force constitutes a high number of labor force with outdated skills. The pace at which the economy is growing and the rate of growth that is expected, the challenge will only increase further as more than 3/4th of new job opportunities are expected to be skill based. The loss of employment and wages during the skill training program also acts as a disincentive to skill acquisition. (Kanchan & Varshney, 2015, 7). Presently 80% of the workforce in India (rural and urban) doesn't possess any identifiable and marketable skills. Therefore, bridging this gap through various skill development initiatives could make India the global hub for skilled manpower, and also result in a surplus of skilled manpower of approximately 47 million (FICCI).

In Indian education, a student's marks define the outcome and not the skill. The Indian Education system is concentrated more on the marks that a student has acquired rather than giving importance to the skill or competency that has been built. Rather than training the student and imparting long lasting knowledge, the education system is fixated on the student's retention and rote learning abilities. (Jain, 2020., 12)

All the research conducted before on this subject underscores the need of creating a sustainable skill-development based learning model but fails to offer solutions outside of policy changes or state an existing highly-successful alternative education model as an example. Through this paper, we have attempted to address the same.

Objectives of Study

- To underline the social-entrepreneurial model of Zoho School of Learning
- Understanding how Zoho has been recognizing and resourcefully pursuing opportunities to create social value
- Highlighting why India's youth is not industry-ready and analyzing how Zoho's model of learning is solving India's involuntary unemployment crisis

Research Question

The central aim of this research paper is to evaluate and analyse the following question- How is the Zoho Corporation revolutionising the education system using a social-entrepreneurship model and is this model an answer to India's involuntary unemployment crisis?

Methodology

A survey was conducted as a part of this research to support the findings. To gather information regarding the student perception w.r.t. The efficacy of Indian education to produce industry-ready candidates, an online survey was conducted during the months of September and October for which a google form was used as a medium for collection of primary data. It was divided into 3 parts and consisted of 18 questions. Part 1 included questions relating to general information about the respondents, the area of their study and their employment status. Part 2 included questions enquiring about their personal experience with the Indian education system and the value it has added to their lives w.r.t. skills acquired, enhanced employability and technical quotient. The sample size for the survey was 150 people studying and working in different sectors and areas of study.

Survey Analysis

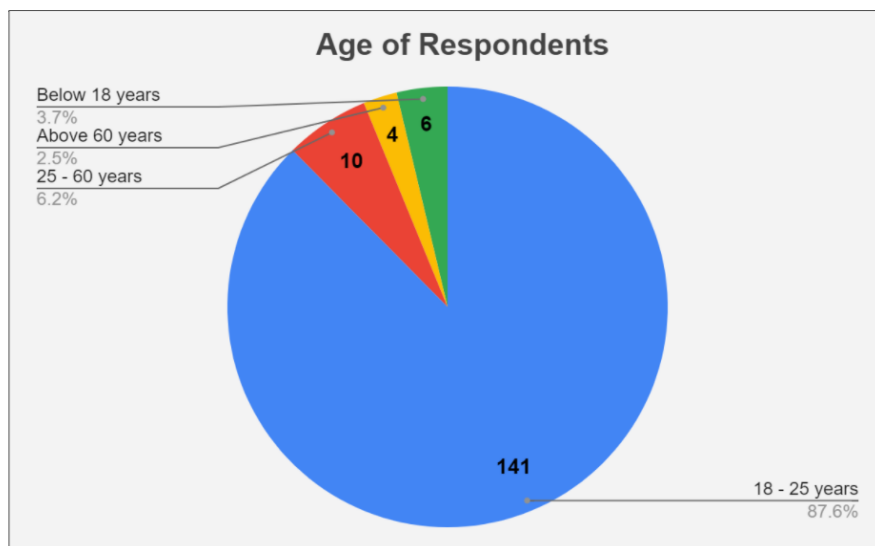
I. RESPONDENTS' DEMOGRAPHICS

A. *AGE OF RESPONDENTS*

The survey was circulated amongst people of various age groups. The responses received reveal that the majority of responses were from middle- aged people or people belonging to the 18-25 age group. The following graph highlights the age of respondents which is also represented by the table below:

TABLE 1: AGE OF RESPONDENTS

	NUMBER	PERCENTAGE
Below 18 years	6	3.7%
18-25 years	141	87.6%
25-60 years	10	6.2%
Above 60 years	4	2.5%

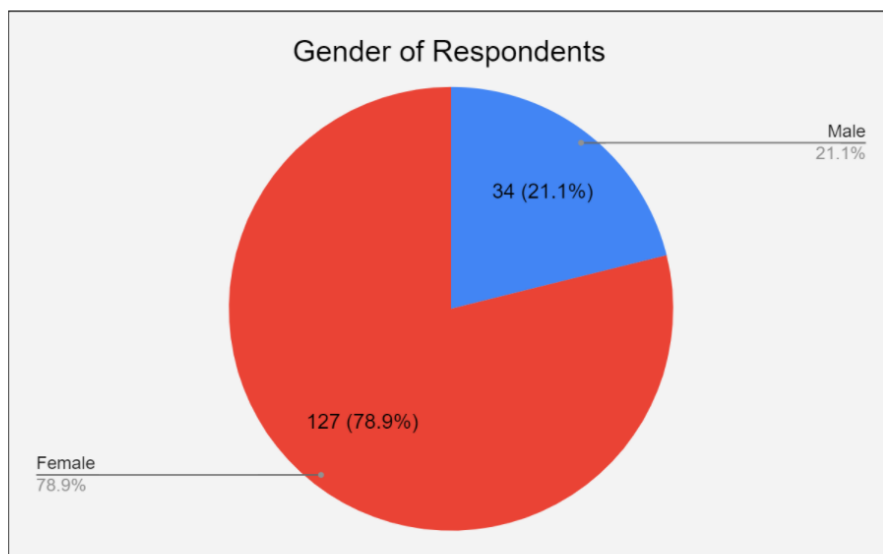


B. GENDER OF RESPONDENTS

The survey was circulated amongst people of various genders. The responses received reveal that the majority of responses were from females. The following chart highlights the gender of respondents which is also represented by the table below:

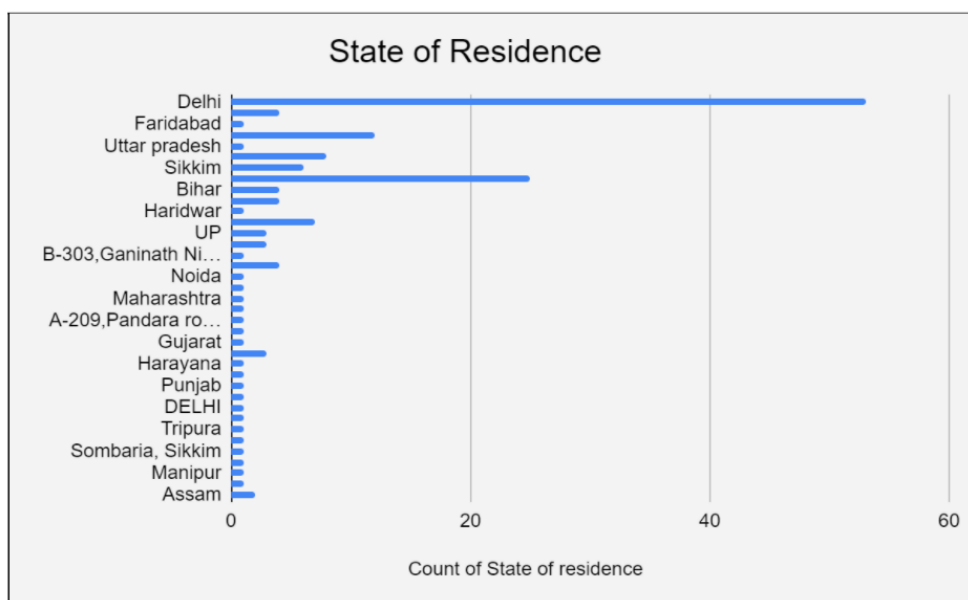
TABLE 2: GENDER OF RESPONDENTS

	NUMBER	PERCENTAGE
Male	34	21.1%
Female	127	78.9%
Prefer not to say	0	0%



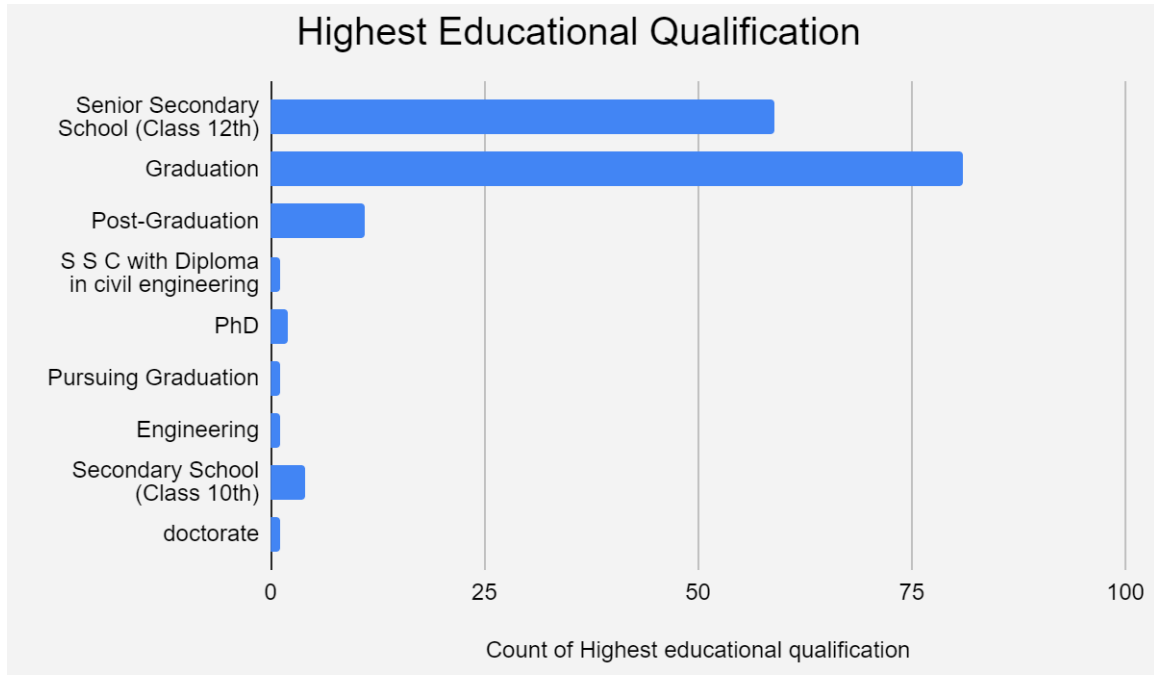
C. STATE OF RESIDENCE

As the survey aimed to determine pan-India perception, responses were received from people residing in various states. Upon analyzing the responses, it can be established that the majority of responses were from North-India.



D. HIGHEST EDUCATIONAL QUALIFICATION

Since the respondents were majorly from the age-group of 18-25 years, the highest qualification received by most of them was a graduation degree. The following chart highlights the highest educational qualifications of the respondents which is also represented by the table below:

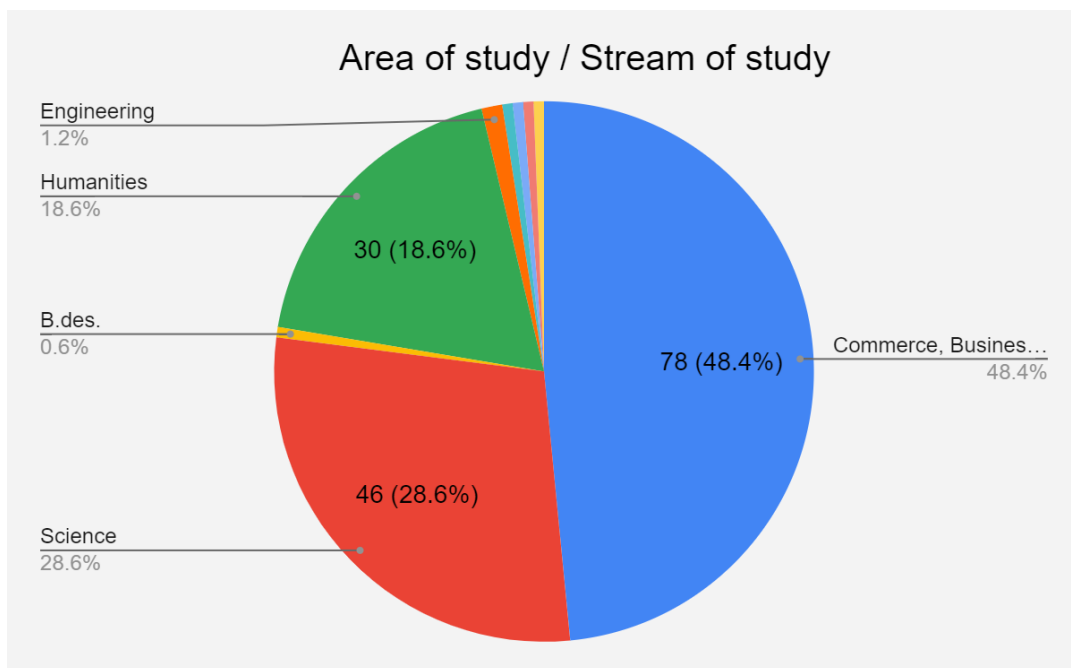


E. AREA OF STUDY

As the survey aimed to determine pan-India perception across different streams and fields of study, responses were received from people pursuing different courses and degrees. Upon analyzing the responses, it can be established that the majority of responses were from students of Commerce, Business and Accounting fields. The following chart highlights the area of study of the respondents which is also represented by the table below:

TABLE 3: AREA OF STUDY

	NUMBER	PERCENTAGE
Commerce, Business, Accounting	78	48.4%
Science	46	28.6%
Humanities	30	18.6%
Engineering	2	1.2%
Bachelors of Designing	1	0.6%
Computer science	1	0.6%
Legal Education	1	0.6%
Arts	1	0.6%
Pharmacy	1	0.6%

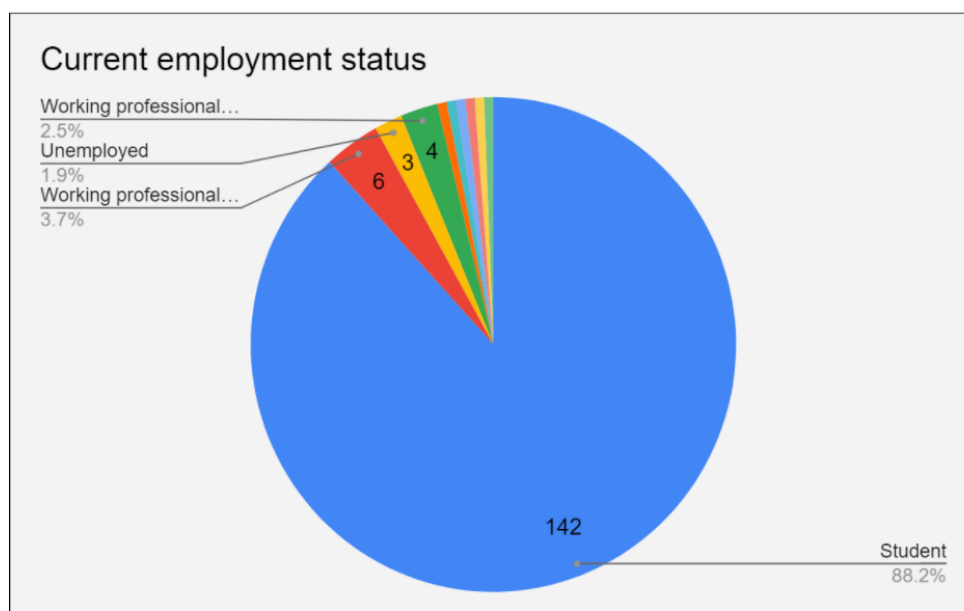


F. CURRENT EMPLOYMENT STATUS

The survey was circulated amongst people of various age groups thus all the respondents were from different classes of employment. The responses received reveal that the majority of responses were students. The following chart highlights the gender of respondents which is also represented by the table below:

TABLE 4: EMPLOYMENT STATUS

	NUMBER	PERCENTAGE
Student	142	88.2%
Working professional (Public sector)	4	2.5%
Working professional (Private sector)	6	3.7%
Running a start-up/business venture	1	0.6%
Unemployed	3	1.9%
Others	5	3.10%

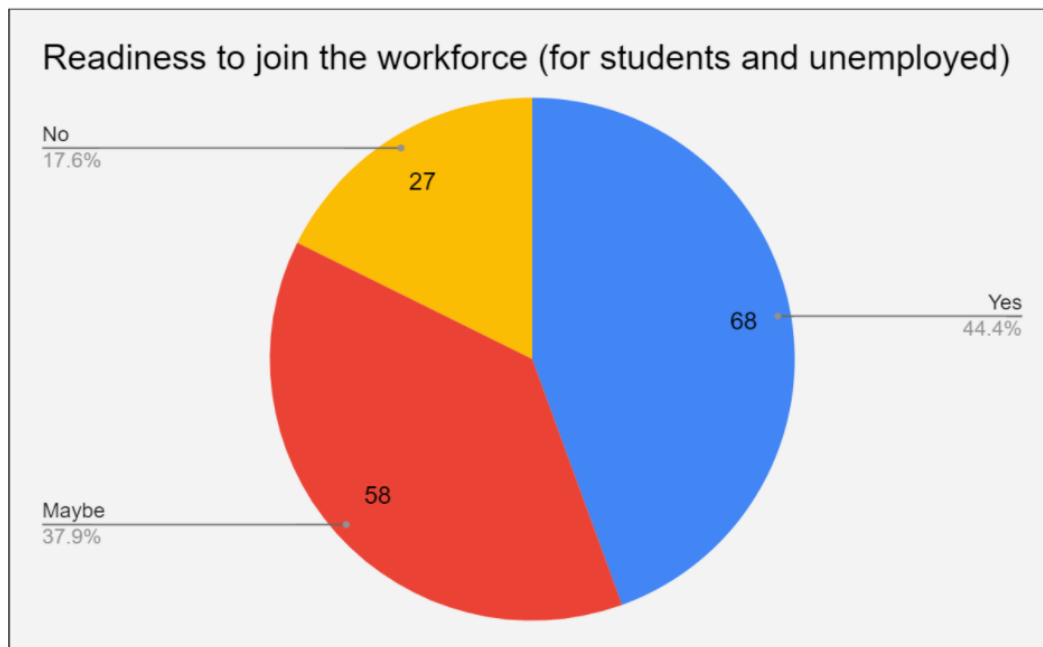


G. READINESS TO JOIN THE WORKFORCE (ONLY FOR STUDENT/UNEMPLOYED)

The responses received reveal that the majority of responses were students, however most of the population (youth) is not job-ready. The following chart highlights the gender of respondents which is also represented by the table below:

TABLE 5: READINESS TO JOIN THE WORKFORCE

	NUMBER	PERCENTAGE
Yes	68	44.4%
No	27	17.6%
Maybe	58	37.9%



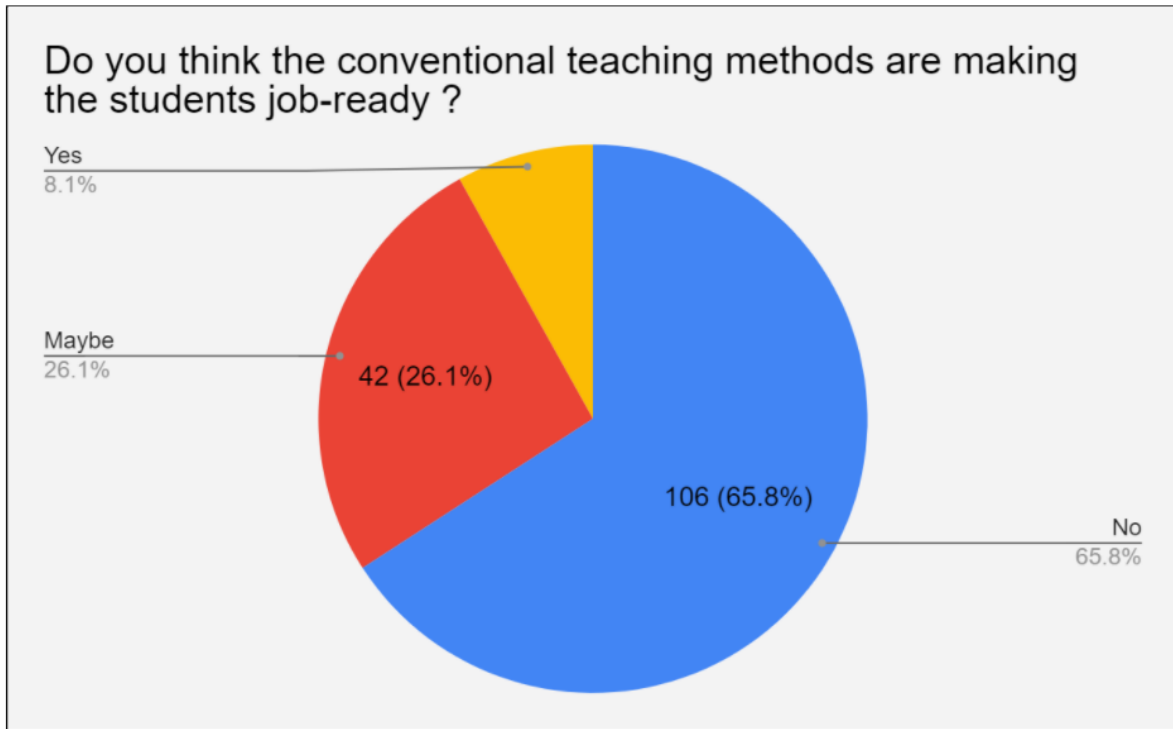
II. PERCEPTION OF CURRENT EDUCATION SYSTEM

H. ARE CONVENTIONAL EDUCATION SYSTEMS MAKING THE STUDENTS JOB READY?

The majority of the respondents were of the opinion that conventional education systems aren't making the students job-ready. This corresponds with the historical research undertaken as a part of this project and is a widely studied research topic. The following chart highlights the various responses and their respective percentage:

TABLE 6: EFFICACY OF CONVENTIONAL EDUCATION SYSTEMS

	NUMBER	PERCENTAGE
Yes	42	8.1%
No	106	26.1%
Maybe	13	65.8%

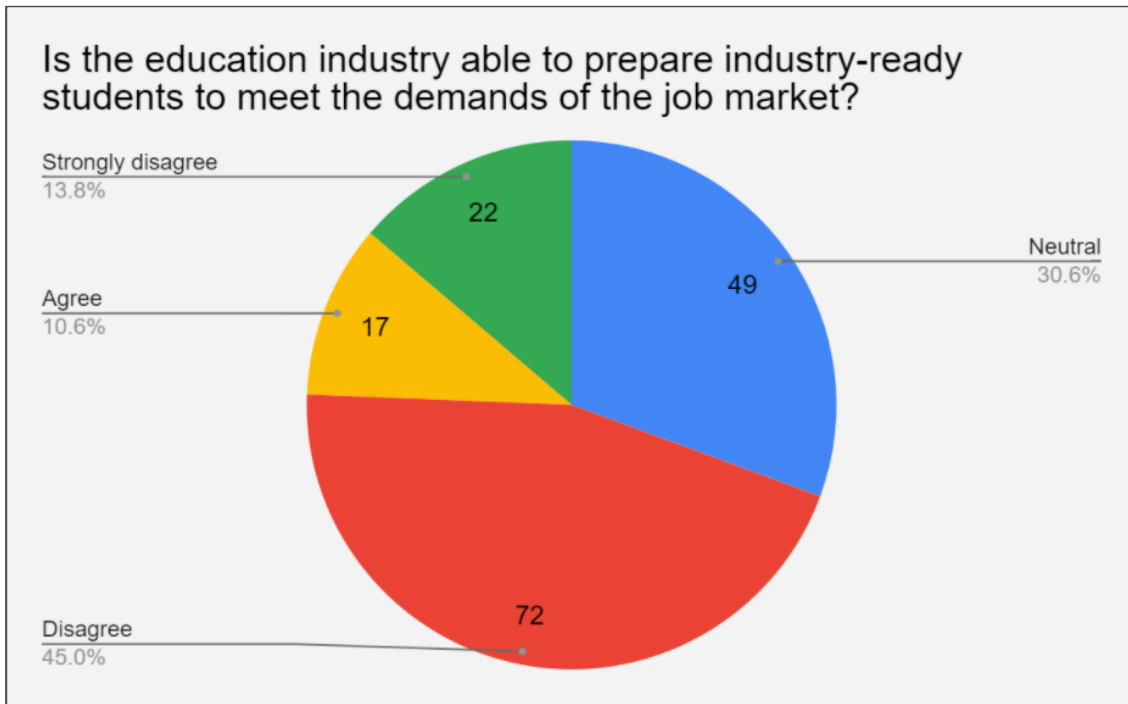


I. IS THE EDUCATION INDUSTRY ABLE TO PREPARE INDUSTRY-READY STUDENTS TO MEET THE DEMANDS OF THE JOB MARKET?

The majority of the respondents were of the opinion that the education industry is unable to meet the demands of the job-market. This corresponds with the historical research undertaken as a part of this project. The following chart highlights the various responses and their respective percentage:

TABLE 7: MEASURE OF INDUSTRY DEMAND

	NUMBER	PERCENTAGE
Strongly disagree	22	13.8%
Disagree	72	45%
Neutral	49	30.6%
Agree	17	10.6%
Strongly Agree	0	0%

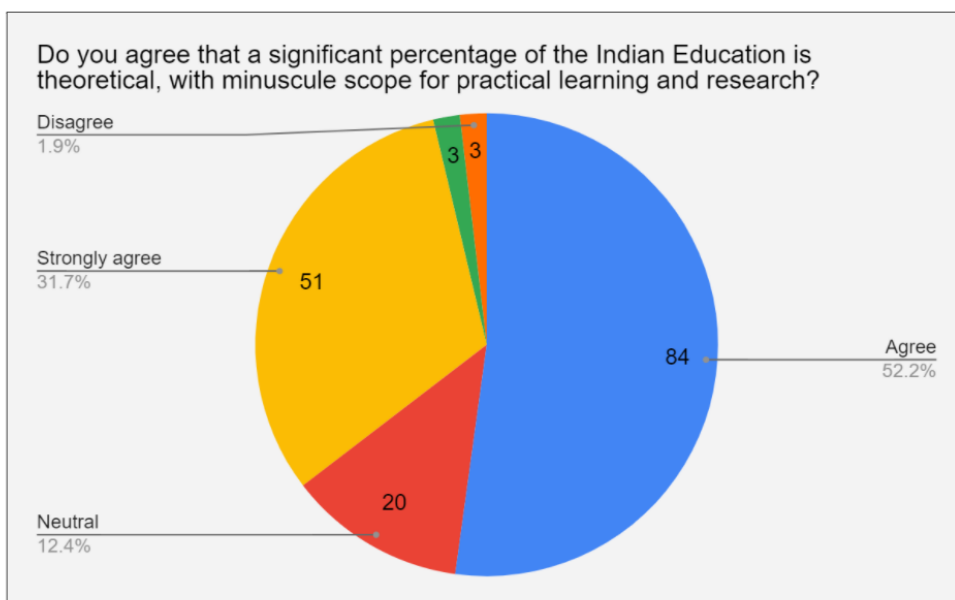


J. DO YOU AGREE THAT A SIGNIFICANT PERCENTAGE OF THE INDIAN EDUCATION IS THEORETICAL, WITH MINUSCULE SCOPE FOR PRACTICAL LEARNING AND RESEARCH?

Most of the respondents agreed that a significant portion of Indian Education is theoretical, providing for little or no scope of practical learning and research. This mirrors the data and research which attributes it as one of the major reasons for unemployment. The following chart highlights the various responses and their respective percentage:

TABLE 8: SCOPE FOR PRACTICAL RESEARCH

	NUMBER	PERCENTAGE
Strongly disagree	3	1.9%
Disagree	3	1.9%
Neutral	20	12.4%
Agree	84	52.21%
Strongly Agree	51	31.7%

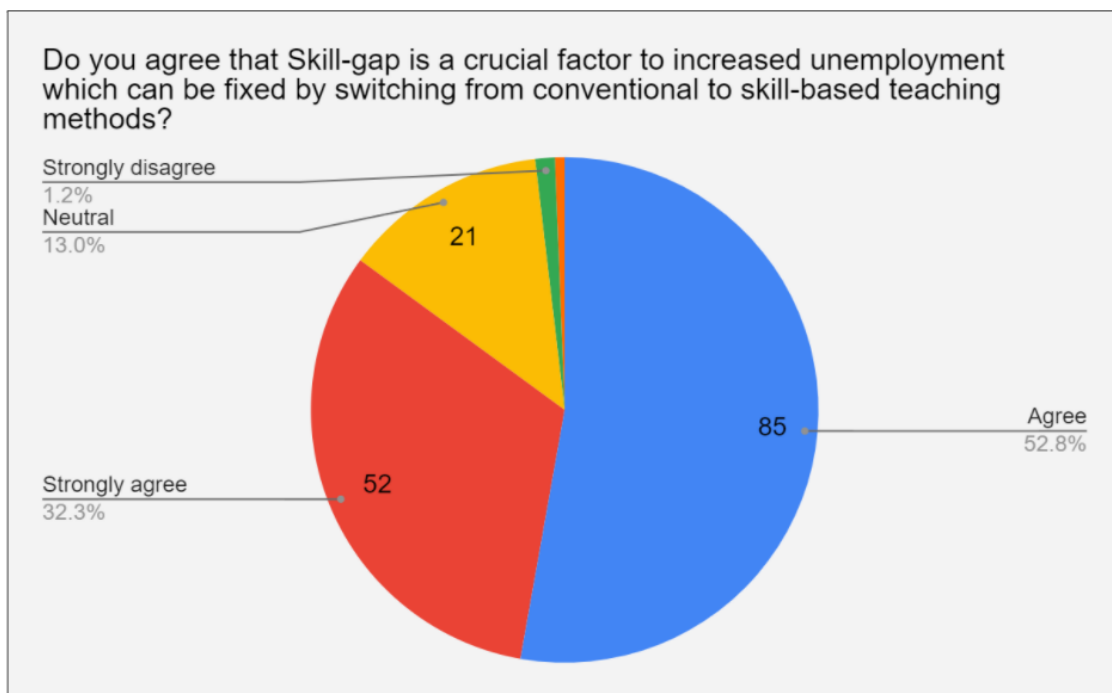


K. DO YOU AGREE THAT SKILL-GAP IS A CRUCIAL FACTOR TO INCREASED UNEMPLOYMENT WHICH CAN BE FIXED BY SWITCHING FROM CONVENTIONAL TO SKILL-BASED TEACHING METHODS?

On being asked if skill-gap is a crucial factor to increased unemployment, most of the respondents answered in affirmative. This validates the proposition that schools like Zoho School of learning are required to bridge the gap between academics and employment. The following chart highlights the various responses and their respective percentage:

TABLE 9: SKILL-GAP AS A REASON FOR UNEMPLOYMENT

	NUMBER	PERCENTAGE
Strongly disagree	2	1.2%
Disagree	1	0.7%
Neutral	21	13%
Agree	85	52.8%
Strongly Agree	52	32.3%

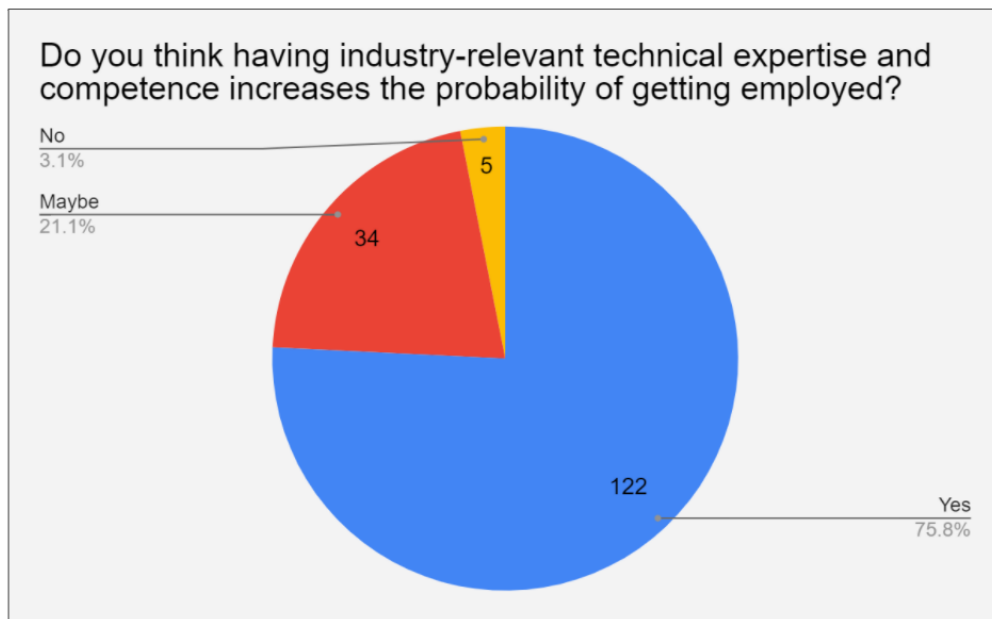


L. DO YOU THINK HAVING INDUSTRY-RELEVANT TECHNICAL EXPERTISE AND COMPETENCE INCREASES THE PROBABILITY OF GETTING EMPLOYED

Most of the respondents agreed that a significant portion of Indian Education is theoretical, providing no scope of practical learning, however having industry-relevant technical expertise and competence increase the chances of getting employed. The following chart highlights the various responses and their respective percentage:

TABLE 10: CORRELATION BETWEEN TECHNICAL EXPERTISE AND EMPLOYABILITY

	NUMBER	PERCENTAGE
Yes	122	75.8%
No	5	3.1%
Maybe	34	21.1%

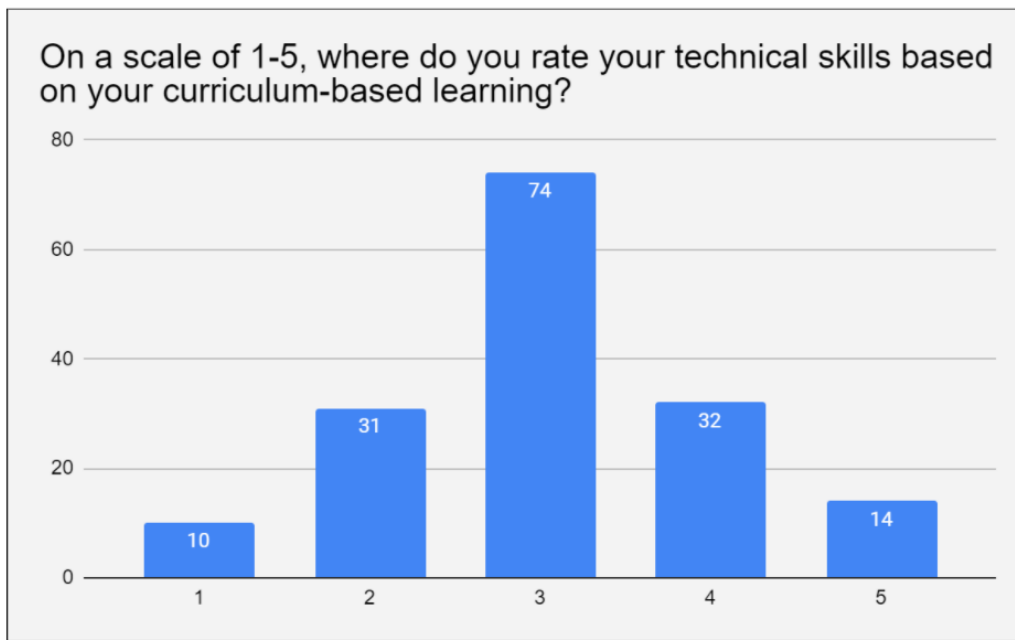


M. ON A SCALE OF 1-5, WHERE DO YOU RATE YOUR TECHNICAL SKILLS BASED ON YOUR CURRICULUM-BASED LEARNING?

Most of the respondents agreed that technical expertise is required in the corporate world, however most of them are not acquainted with any technical skill or expertise. On a scale from 1-5, most of the responses indicate that the population does not possess technical skills. The following chart highlights the various responses and their respective percentage:

TABLE 11: RATE YOUR TECHNICAL SKILLS

	NUMBER	PERCENTAGE
1	10	6.2%
2	31	19.3
3	74	46%
4	32	19.9%
5	14	8.7%

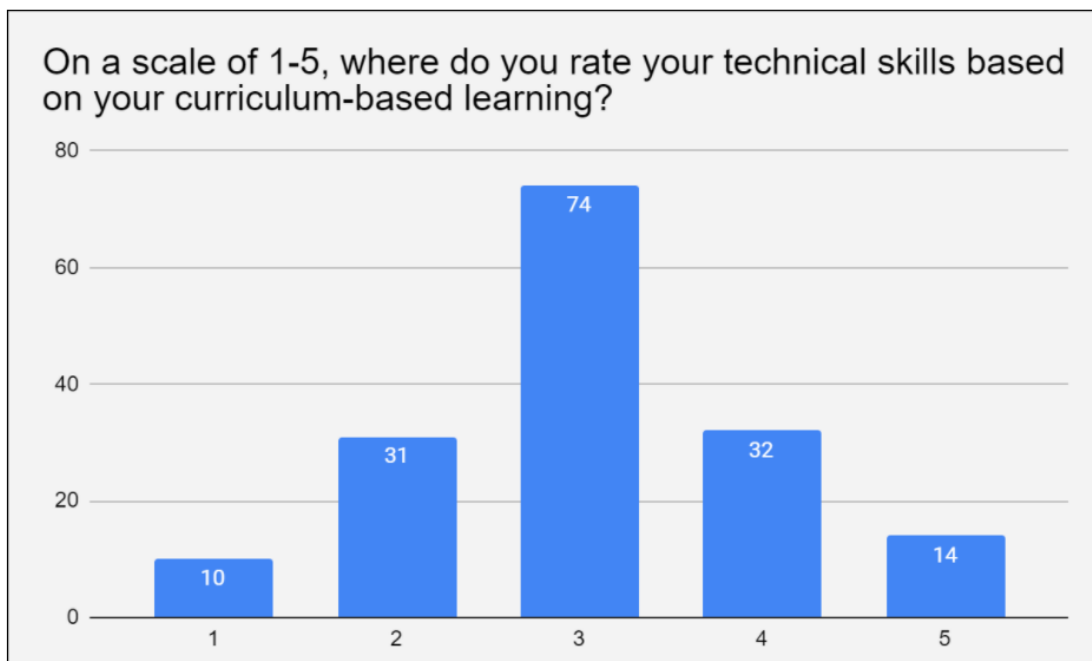


N. ON A SCALE OF 1-5, HOW READY ARE YOU TO JOIN THE WORK-FORCE?

Most of the respondents agreed that a significant portion of Indian Education doesn't have scope for practical learning, hence they feel they are not job-ready. On a scale of 1-5, most respondents feel they are not ready to meet the demands in a corporate setup.. The following chart highlights the various responses and their respective percentage:

TABLE 12: PREPAREDNESS TO JOIN WORKFORCE

	NUMBER	PERCENTAGE
1	10	6.2%
2	31	19.3
3	74	46%
4	32	19.9%
5	14	8.7%



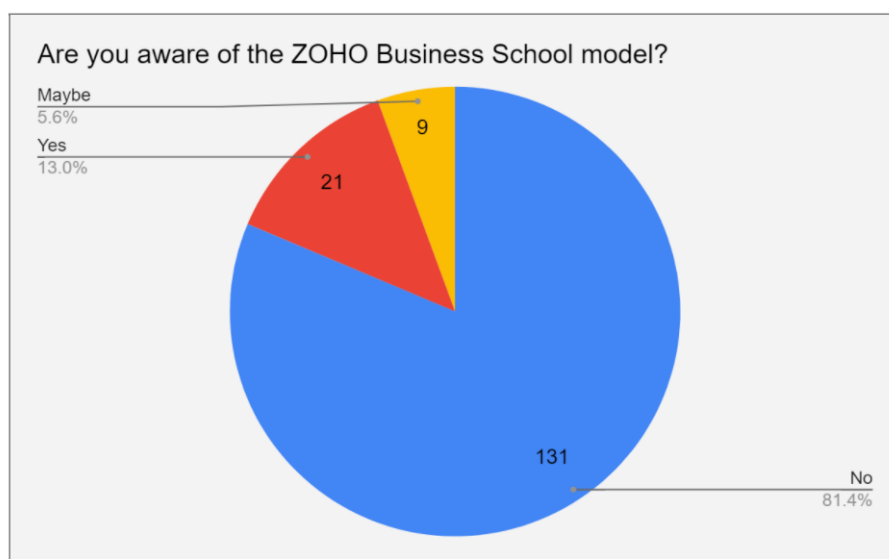
III. AN ALTERNATIVE MODEL

O. ARE YOU AWARE OF THE ZOHO BUSINESS SCHOOL MODEL?

Most of the respondents are not aware about the Zoho Business School Model. This accents the need for research on the same. The following chart highlights the various responses and their respective percentage:

TABLE 13: AWARENESS REGARDING ZOHO BUSINESS SCHOOL MODEL

	NUMBER	PERCENTAGE
Yes	21	13%
No	131	81.4%
Maybe	9	5.6%

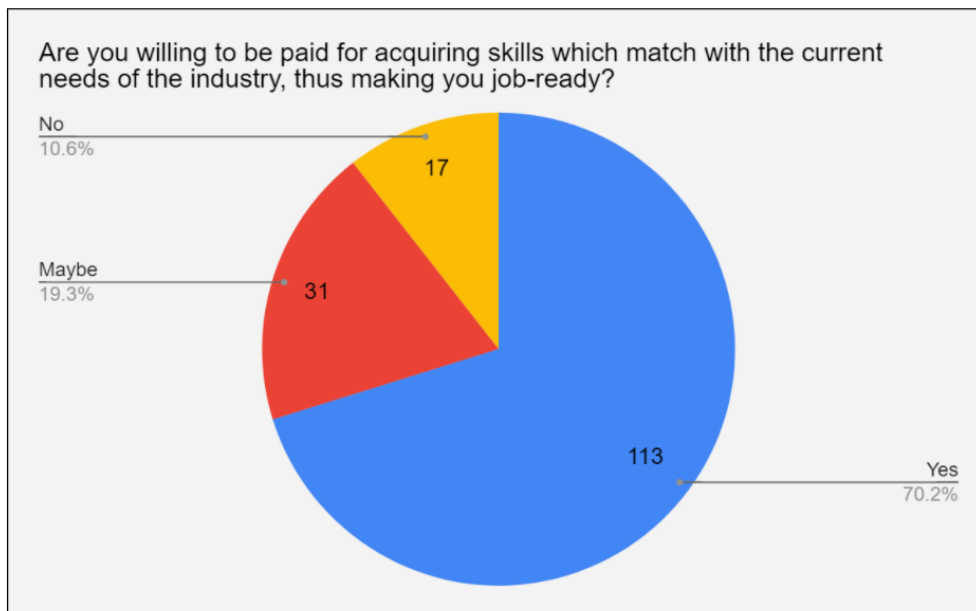


P. ARE YOU WILLING TO BE PAID NOMINALLY FOR ACQUIRING SKILLS WHICH MATCH WITH THE CURRENT NEEDS OF THE INDUSTRY, THUS MAKING YOU JOB-READY?

Most of the respondents showed willingness to be paid a nominal amount to learn industry- ready skills. This shows that incentives are required to stimulate candidates to learn practical skills outside of the regular curriculum. The following chart highlights the various responses and their respective percentage:

TABLE 14: WILLINGNESS TO BE PAID TO LEARN INDUSTRY SKILLS

	NUMBER	PERCENTAGE
Yes	113	70.2%
No	17	10.6%
Maybe	31	19.3%

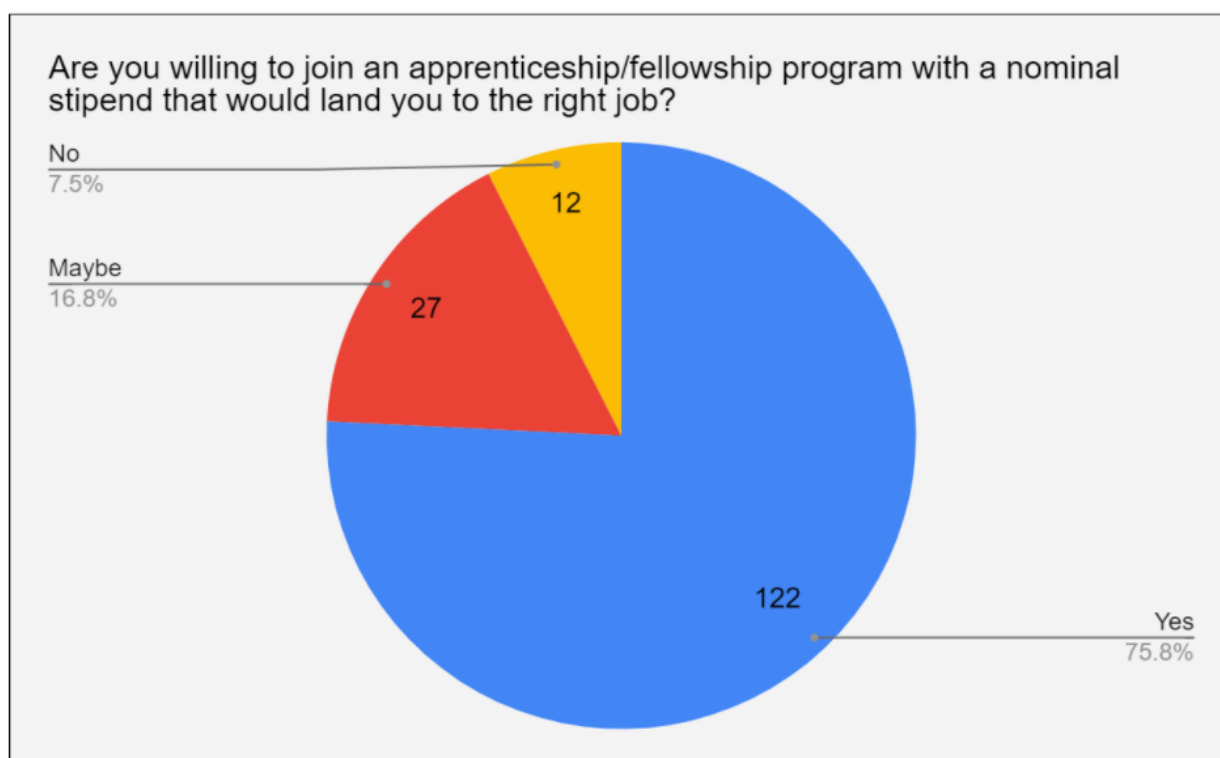


Q. ARE YOU WILLING TO JOIN AN APPRENTICESHIP/FELLOWSHIP PROGRAM WITH A NOMINAL STIPEND THAT WOULD LAND YOU TO THE RIGHT JOB?

Most of the respondents displayed a willingness to join an apprenticeship programme. This validates the suggestion that such live-projects/ programmes should be initiated to provide insights into their work by the corporations. The following chart highlights the various responses and their respective percentage:

TABLE 15: WILLINGNESS TO JOIN AN APPRENTICESHIP PROGRAMME

	NUMBER	PERCENTAGE
Yes	122	75.8%
No	12	7.5%
Maybe	27	16.8%



Recommendations

The survey, quantitative ROI analysis and secondary research undertaken as a part of this research experiment revealed that there is a wide gap between skills taught at institutional level and skills required to work in a professional setting. The key takeaway from our experiments is that students lack both access and incentive to learn skills that can make them employable and technically sound. Keeping these factors in mind, we would suggest the following initiatives that can be taken by the corporates, universities, education boards and governments:

- *Stipend based cohort programmes by companies:* Companies should initiate live-projects wherein they pay students to learn and gain experience of its various operations and divisions. This shall not only help companies save money during recruitments due to drop-offs but also ensure that it gets serious and skilled candidates. As a social and CSR aspect, the companies should target rural underprivileged children brimming with potential held but held back owing to lack of opportunities.
- *Career-focussed learning:* Efforts should be made to transform curriculums from theoretical based text to career-focussed learning that enables students to gain a plethora of practical exposure and select the right fit for themselves in terms of industry and work requirements.
- *Collaboration with EdTech companies:* Universities should be allowed to collaborate with EdTech startups to increase knowledge and skills of students. For example: The administrators of Northern Virginia Community College, partnered with Amazon to give students an opportunity to learn about cloud computing as part of the information systems technology track. In a similar manner, Google also announced a partnership with 25 community colleges in order to offer their students with its IT Support Professional Certificate. The tech giant partnered up with Coursera, to give students access to classes on everything from applied digital skills to IT security. The main feature of this collaboration is that once graduates finish their course, they can share their certificate directly with one of the many corporate partners involved in the project, such as GE Digital. The Government should encourage such collaborations in Indian universities as well to bridge the gap between education and employment.
- *Collaboration with startups:* Universities should collaborate with start-ups to expand their teaching modules and create a more dynamic syllabus for students. For example: IIHMR University in Jaipur has decided to expand its teaching module through the digital segment. Implementing its plan, the university has collaborated with resources that can help them achieve this goal.
- Collaboration with start-ups will also require a faculty that is acceptable to change and is capable enough to guide its students. Therefore, it should be ensured that the teaching faculty should be supportive and increase their perspective to see the bigger picture.

Conclusion

It can be established from our research that Zoho has successfully managed to offer an alternative to traditional theory-based education through its venture Zoho School of learning. According to a statement given by Zoho founder, Sridhar Vembu, Zoho School model in addition to being a social-venture is a prudent investment in the future of his company as the ROI of the model is positive owing to 90% of students who complete the programme and go on to serve as the employees of Zoho foundation. Zoho claims that the ROI reaches break-even within 5 years of a student completing the programme and joining the firm after which the investment starts to reap returns. Thus, Zoho school model is a scalable social-entrepreneurship venture that can even be adopted by for-profit companies to overcome challenges such as dearth of skilled and technically-experienced labour. Moreover, this model is also a solution to the unemployment problem of India due to which even after completing formal education students are unable to find jobs due to excessive competition, lack of technical skills, and practical exposure. Students having requisite skill sets can also initiate their own ventures and need not be dependent on a corporate job or face unemployment. Thus, adequate efforts on the part of corporations, government and educational institutions in implementing the aforementioned suggestions will ensure that the current supply-demand crisis of skilled workforce is resolved and the unemployed, underprivileged youth does not venture into unskilled and temporary jobs like agriculture, construction work etc thereby becoming a liability instead of an asset for the economy of the nation.

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10

An android application hack to keep a track of a wide category of events and fest easily



By Prof. Prajakta Bhangale, Prachi Mohare, Lidya Simon, Sreenivasan Murugan, Uttam Savaliya*

Abstract

In today's competitive world students are expected to keep boasting their skills by learning new courses, attending seminars, webinars, participating in competitions, hackathons, extra co-curricular activities etc . Nowadays we also know that apart from being a coder being a multitasker or a multitalented graduate with all round development is also given a higher priority. Having said this we also know that time management is an essential factor in a student's life especially in this research talking about the engineering, medical graduate and undergraduate folks. Surfing for webinars, hackathons, and sports events online becomes very tiring and haphazard approach and the student usually tends to miss informative data while researching in bulk. To improve this approach this article proposes a system where in the student can obtain all this relevant information at one click in the form of a single android application. The user will be able to directly view all the events be it hackathons, sports or webinars and register for the same without spending time surfing randomly for the best or important ones. The main motive behind this research is to save the time, energy, and patience of the user by giving all the data of hackathons/sports fests/webinars at a single place at one click. This research is targeted at people who would like to explore contests in their related domain or apart from their related domain and also like a regular update on skills, courses, competitions, etc. It shows the upcoming events based on the user's preferred platform. Trending websites and news on hackathons are pushed onto the database and are updated regularly which keeps the users updated . Our solution is the one which saves time , provides user convenience, saves efforts and provides varied data . Today's applications aim for minimal database which we have effectively furnished using API's to save database jamming. This research provides varieties of data in different categories like hackathons, sports webinars etc. which is a highlighting feature of the research.

Keywords-Hackathon,Webinars,Seminar,Contest,Coding,
Sports,Fest,Competition,Engineering,Algorithms, Java, API, Programming.

Introduction

In today's world self-learning has greatly increased. COVID has also become a reason for students preferring virtual engagement. Students learn, participate, discuss and develop their skills. This research paper proposes a system named "MY HACKAFEST DIARY". It is targeted at people with some programming experience who want to deepen their knowledge or learn new languages and this app is 100% free with an entirely open source and is designed to learn coding with fun and friendly. "MY HACKAFEST DIARY" is an application designed for android users where user gets updates related to sports, webinars and hackathons upcoming as well as ongoing events with latest news and websites on trend. The user-friendly interface adds a personal wish list that prioritizes events and a common reminder that notifies with an alarm before an action. The proposed system has a great flexibility by using Wi-Fi technology to register for desired events and is absolutely free. System allows users to add events to wishlist and get reminded before the event get started with a notification in the notification task bar with an alarm. Users can register for a particular event directly from the events sections or from wishlist listview or from history section. The register feature redirects users to the website's registration link.

The proposed system is an android based application developed in Android Studio with Sports, Webinars and Hackathon domains. Additional platforms like Database (data storage and retrieval for wishlist, reminder and some static page sections) and API (to extract data for Sports, Webinars and Hackathon events from the internet). Firebase database stores users login credentials with skill sets which will be retrieved to match and prioritize events, static data (data is directly pushed to the real time database and retrieved as listview). System uses the third party API for Hackathon domain and self implemented API for Sports and Webinar domain. Platforms such as Mongoose, MongoDB, Nodejs, Express Js and Heroku integrated together for API implementation. Mongoose and MongoDB store the event database in JSON format, Heroku helps in application deployment. Layouts are designed using android studio.

A. Motivation –

Being a one stop destination for information related to sports, hackathons and webinars the system gives several advantages that could be achieved using 'My Hackafest Diary' only.

- Time Management : Surfing for different hackathon competitions conducted, skills or websites on trend, available courses or webinars online results in wastage of time and energy. Hence Hackafest diary is a system that consists of all this information in a well categorized and organized manner.
- Efficiency in data : While surfing for events over the internet there are chances of failure in achieving 75% of efficient data where in the application different events can be compared and prioritized.
- Data usage : High number of searches over the browser results in consumption of high system memory.

Related Work

In today's busy world time management is the first priority for students and everyone so the researchers developed a hackafest app

where the users get the information about the events,webinars and hackathons.

- During this current pandemic each and every activities are made online , by developing a hackathon app will help the students to get all the informations related to events,fest at a single place and can access it accordingly.

There are various apps developed by the android developers which are available in google play store.

- Coding Calender –

Apps like coding calendar help to get notifications related to any technical contest and can get a reminder for the upcoming contests and the remainder to give a notification in the user's notification tab bar. The system used here was obsolete hence the app was outdated and is almost not being revised or used.

- Coders Calender –

The user can also sign up/sign in for this app , the user can update the list of contents.The app also has the reminder feature in which the user gets the notification before the contests called as notification reminder. The user can open the contest on the browser by clicking on it.

- Kody Alarm-Coding Calender(CURRENTLY UNAVAILABLE) –

This app fulfils the need of programming contest reminders. There are various platforms supported in this app. The user can see the upcoming as well as the ongoing events in this app. The app has an automatic reminder notification. The user can set a reminder and that particular time the user will get a notification with an alarm.

After the detailed research there are some drawbacks in the previous works such as a proper authentication should be provided to the system so that data breach doesn't take place. Proper API level should be used so that the app can run in various android versions and the data in the apps should be updated from time to time.

In the previous working apps it focuses only on the hackathons which are related to coding, it should also have a proper authentication system for the users so that the user can create an account and can save his/her activities related to the events,hackathons etc...

The above features are provided by the MY HACKAFEST DIARY app. It not only focuses on the technical events but also it gives the update related to sports, events and webinars to the users using proper API's respectively so that the users can accordingly search the events according to his/her interest.In this app initially the user needs to sign up using the OTP feature which provides security to the users to access the accounts. The unique features of my hackafest app are as soon as the user creates an account the users can see the upcoming and ongoing events so that they can enroll for it accordingly and can maintain a proper time management ,the user can also set remainders, add the events in the users wishlist respectively. The app especially has an inbuilt hackathon guide which will be helpful for the users, it also it has a top trending and news sections which helps the users to get latest information and trending website which helps the user to keep them updated from time to time .During the development of the app the users made a proper choice of API level so that it can efficiently run on any android device and built a smooth user interface which helps the user to access it easily without any difficulty.

The app proposed in this research especially has an inbuilt hackathon guide as an add on which will be helpful for the users especially the beginners who have little or no idea about the Hackathon world also the application has a top trending section and a news section which help the users to get latest news regarding the coding world and a list of trending websites which helps the user to stay updated with the growing trends and fashion in the Hackathon zone . Having stated all this the application basically doesn't generate a need of stepping out and surfing it has all the details and features that a beginner or a normal user requires owing to all these the application guarantees an effective amount of user engagement.

Methodology

A. Problem Statement –

Systems similar to these face five main challenges; these are fetching the correct API, creating an engaging application, deciding the data storage structure to minimize the memory usage, managing content, keeping a clean data structure to test and discover bugs and Scalability which are all taken care of.

The main objective of this research is to create a system where the students (targeting engineering students in specific) can access information related to Hackathon/Sports/Webinars and relative events and also register and create a wish list for the same.

B. Objectives –

The application was designed and implemented aiming to satisfy these following objectives

- Provide an easy registration link to eliminate the time consuming procedure of surfing.
- Maintain a wishlist for upcoming events and set reminders so that one does not miss any event which otherwise is very likely to happen.

Save login details for multiple events at one single place to save remembrance effort.

C. Proposed System Solution –

Currently time management and user convenience is the top priority while making user friendly applications. Researchers aim to provide the user maximum benefits of using the application so that the tech enthusiast does not miss out on anything. Normally it becomes very inconvenient to look out for different information on different sites due to which the user tends to miss 50% of effective data. So researchers' solution is to provide a Hack fest Diary which has the following features.

D. Algorithm –

The research uses a combination of DATABASE+API CALLS+ANDROID STUDIO + Nodejs.

- DATABASE

Firebase is a cloud-hosted database that lets us store and synchronize data between users in realtime .

This database has been used to build 80% of the application and the rest 20% of database belongs to the data of the api which has been stacked in MongoDB.

For logging in, Signing Up, storing user Credentials and other data storage purposes like storing the wishlist data , reminder data firebase is used and then for retrieving the data as and when required. The data related to the sports events and webinars is stored in the form of documents in MongoDB and produced as an API using node.js,express.js,mongoose.

2. API CALLS

The api used in the research furnishes the desired information like eventnames , their details ,sports events their details, webinars and their details etc. On making an okhttp request to the given api we can fetch the data in json format to work with it and manipulate it according to the need[16].

Android Studio is the official integrated development environment for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. Android studio is the main building tool in this research. All the XMLs, Main Activities and classes are going to be a part of the adroid studio.

So basically , the route followed or the algorithm used in this research is : Getting all the desired event details by making an api call and storing it into respective variables and the displaying those in the preferred xml layouts. Using the value of these variables to enable basic functionalities like add to wishlist , set reminder or register via history tab etc. Next , the database part comes into picture where we need to make separate user accounts and wishlist for that particular user has to be different along with the reminder so what we do is push the data accordingly under that particular users reference. This is how our whole application is interconnected . Root data is provided by the API. The API's made using node.js are important for our sports and webinars section because there all the root data is provided by these API's[21].

The system depicted is API and database based , for the two sections of sports and webinar the API was designed manually using node.js and the database used was MongoDB. It was deployed using Heroku and works in the same fashion as the third party API. We made an OKHTTP request to the API designed and the information pattern was different in terms of objects and array which was taken care of while fetching and retrieval of data. The Project structure of node.js constituted of controllers, routers, mongo keys, data models , development data, node modules ,git setup files , etc.

E. Architecture and Framework –

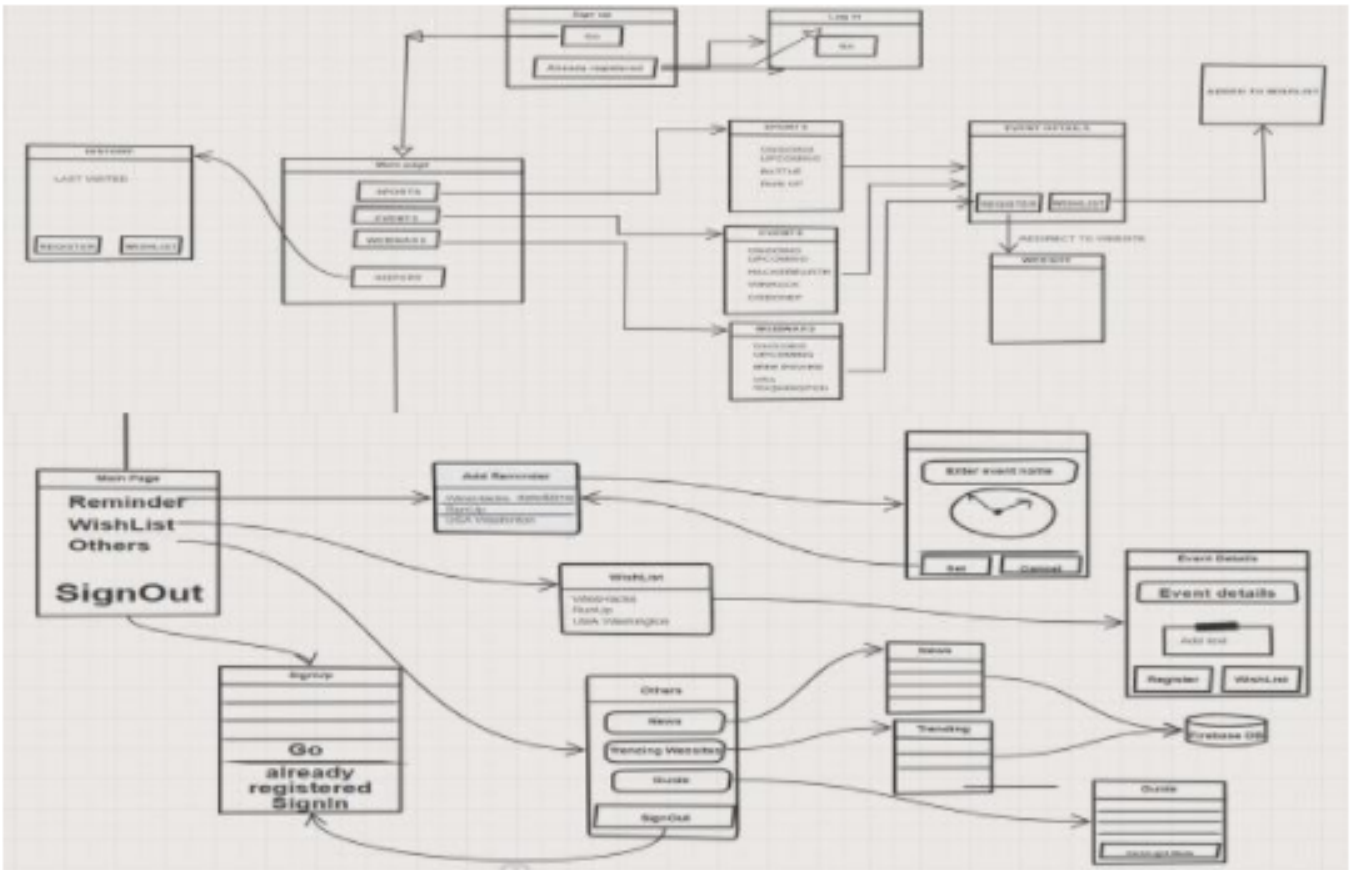


Fig. 1 Architecture and framework for the proposed system

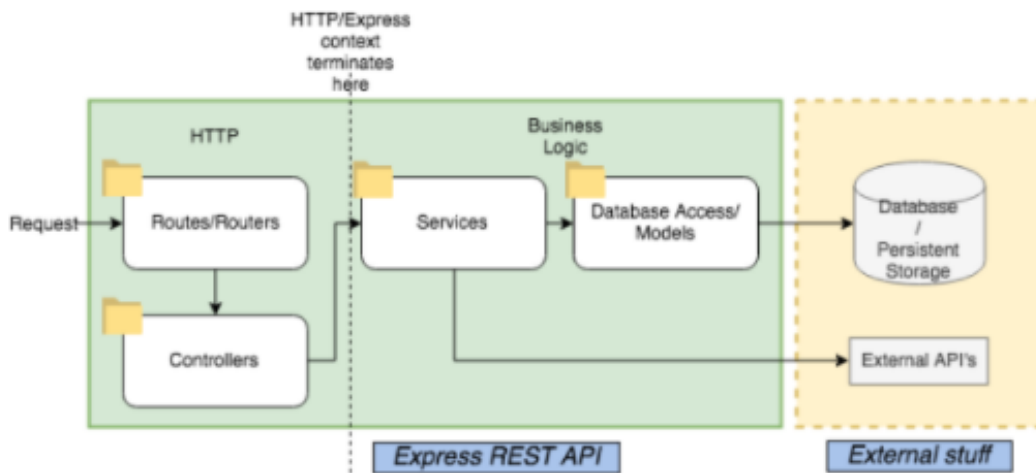


Fig. 2 Node.js Architecture for API's

F. Data Flow Diagram –

Higher-level DFDs are partitioned into low levels-hacking more information and functional elements. Levels in DFD are numbered 0, 1, 2 or beyond. Here, we will see mainly 3 levels in the data flow diagram, which are: 0-level DFD, 1-level DFD, and 2-level DFD[28].

Hence gradually increasing the complexity of the data flow the levels of data flow diagram represent nothing but different levels of abstraction.

G. Implementation –

A class is a user-defined blueprint or prototype from which objects are created. It represents the set of properties or methods that are common to all objects of one type. In general, java class declarations can include these components, in order:

What is an activity in Android studio?

The Activity class is a crucial component of an Android app, and the way activities are launched and put together is a fundamental part of the platform's application model. Unlike programming paradigms in which apps are launched with

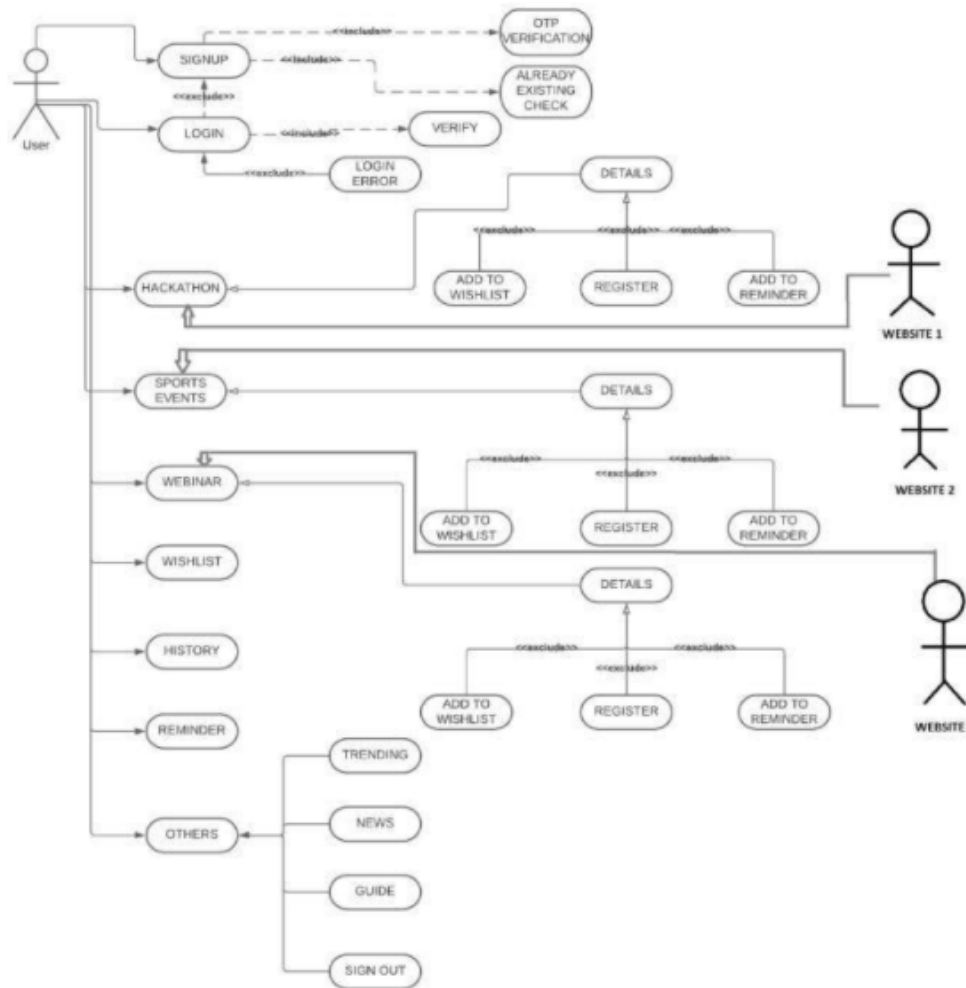


Fig. 3 Use Case diagram for the proposed system

a main() method, the Android system initiates code in an Activity instance by invoking specific callback methods that correspond to specific stages of its lifecycle [2].

Activities in the system are managed as activity stacks. When a new activity is started, it is usually placed on the top of the current stack and becomes the running activity -- the previous activity always remains below it in the stack, and will not come to the foreground again until the new activity exits. There can be one or multiple activity stacks visible on screen.

Life cycle of an activity :-The square rectangles represent callback methods you can implement to perform operations when the Activity moves between states[2],[25]. The colored ovals are major states the Activity can be in.

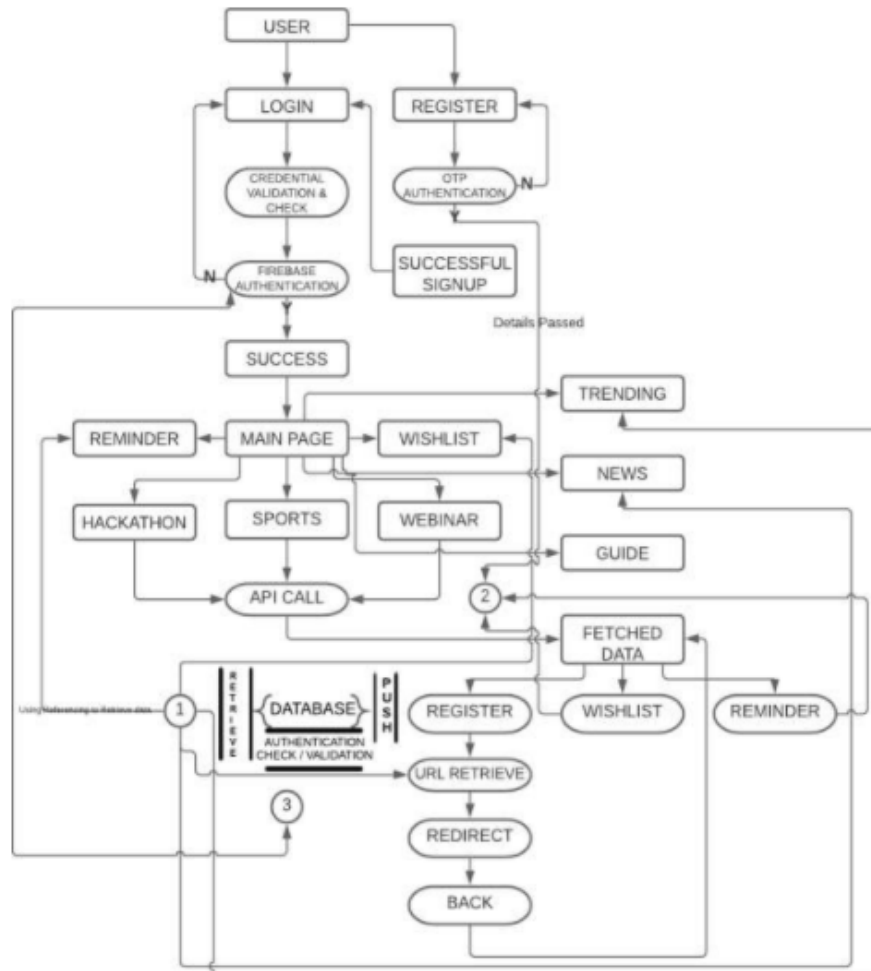


Fig. 4 Data Flow Diagram Level 2

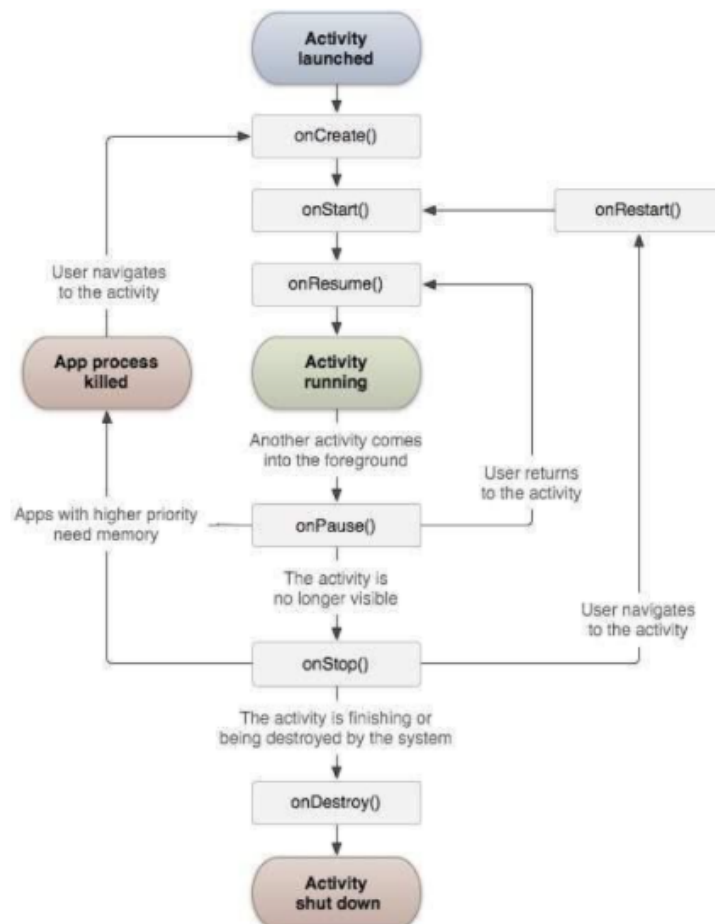


Fig. 5 Important state paths of an Activity

Our proposed system consists of the following modules

1. class user_signin

This is the first module as seen by the user . It allows the user to either sign in if not sign up.

The Login Module is a portal module that allows users to type a user name and password to log in. .You can add this module on any module tab to allow users to log in to the system. The data as entered by the user will be pushed to the database from here.

2. class user signup

The User is allowed to create his/her own account by entering 3 fields i.e. emailId , password , final_password . Once the user confirms the credentials he will be redirected to the sign in page.

3. class user

It is the main page which enrouts to all other essential classes/features of the app .On clicking each button the user is redirected to that particular tab for further exploration.Now, what happens in the background is when we click on the button the onclick() method invokes the relevant class.

4. class event list of event

5. class details description,link,location,schedule,capacity When the user Clicks on a particular event the details of the particular events are fetched and displayed in this class wherein the user gets a chance to add the event in his/her wishlist.

6. class reminder

7. class wishlist

This class will have a listview connected to the database which will show all the events that are added by the user to the wish- list in the details class.

The user is allowed to add item to wish-list or reminders and set timers ,description of the reminder as well.

8. class history

This class shows the last visited contest by the user with the intention of holding it up for the user as a quick access tool from where he/she can register for the event.

9. class guide_tab

This basically adds a beginners guide for hackathon to our application for the new comers in the coding world.This tab gives user the gist about the hackathons/events .It is basically a informative tab with scrollable static text .

10. class sports

11. class webinar

The above two classes work in the same pattern as the events class but the only difference is we have used reusable components of eventdetails class , constructors related to events etc. to entangle and transfer the data dynamically rather than creating more and more classes. These classes fetch the data from their own unique APIs according to the objects and array patterns of the API observed[24].

12. class top-trending and class news

As the title suggests these classes are informative classes which contain data related to hackathon news and top-trending coding websites to get started from.

Technologies used

1. Hardware Requirement:-

1) Physical ANDROID Debugging Device.

1. Software Requirements:-

2. Android studio

3. Firebase Database

4. Node.js

5. Express.js – Framework used

6. MongoDB – Database used for storing API related data of sports and webinars section.

7. Mongoose – Library used (API development)

8. Others :

Visual studio code – IDE used to craft the API related code . Heroku– Deployment platform used for the API .

GitHub – To collaborate with our team members and share and integrate our code segments.

Results and Discussion

1. SignUp page takes user credentials and pushes the data to the database. OTP Authentication is used to verify phone number.

2. SignIn page takes the users data and matches it with the data that is already pushed database.

3. Main page consists of all buttons that will intend to that particular page.

4. History tab displays the last visited event through which user can register and add to their wishlist.

5. Sports displays all sports events. (API fetch)

6. Events display all Hackathon events. (Third-party API)

7. Webinars display all webinars. (API fetch)

8. Event details display event details on which users can register and add to their wishlist.

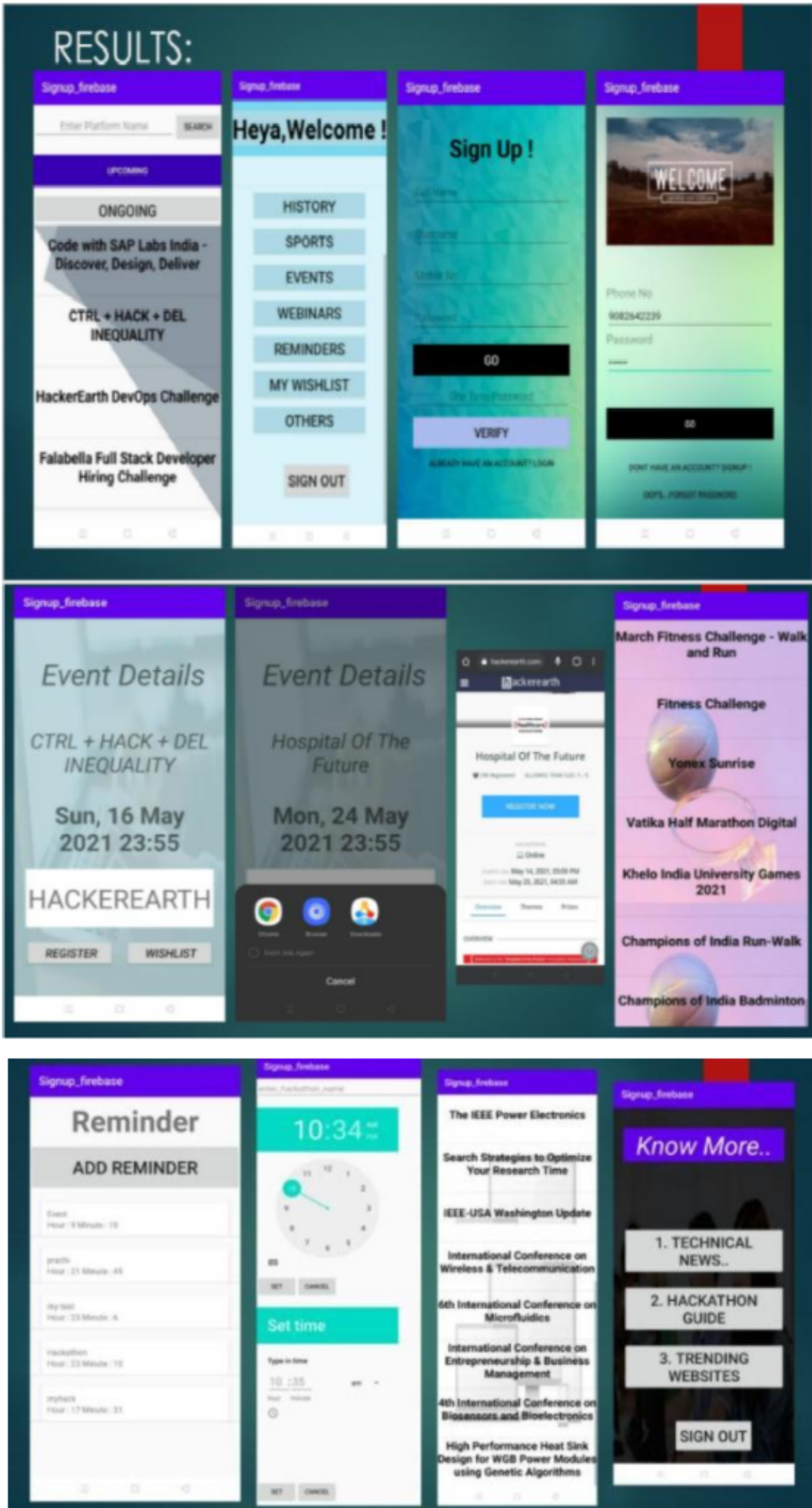
9. on Clicking the Register.

10. Redirect to the registration link on Website.

11. Reminders allows user set reminder, on Click of ADD REMINDER button.

12. Others page displays all static pages where data is directly pushed to the database.

RESULTS:



Conclusion and Future Work

Conclusion –

The Proposed app is particularly for Android users and for people having coding interests, mainly the engineering students as they can get all the events details at a single place and not waste their time in searching on the browser. Due to all day busy life schedule the user can get the reminder for all his/her events and never miss his/her event/contest. The main big advantage of this app is that the user can create a wishlist according to his/her interest and then follow it.

Future Work –

It's very obvious that a user will prefer to handle a single all in one app rather than multiple apps with the same data. So in today's world the research in such app domains can be proved very effective. The effectiveness is impactfully a boon for the society when such applications will be linked to bigger platforms like linkedin, Google calendar, and other discussion or education forums. So there's a wide scope in this domain as due to the pandemic situation remote Hackathons, remote fest's are at peak hence such registration apps are really handy for students as well as other users.

Multiple features can be added to the system in future :

A. Achievement section : A section where the user can record his/her achievements or upload the certificates, etc.

These records of the user are pushed to the database. This section gives advantage of having all user achievements recorded in a single place.

This page can be simply implemented as an input page where the user pushes achievement records that can be later retrieved as a listview.

B. Chat/feedback section : Chat support is a common method of user service through online chat boxes (Server-Client technique). By connecting through chat support, users receive instant responses in real time, expediting issue resolution and increasing user satisfaction.

Feedback survey forms with a set of questions can be designed on a section that could be with respect to each individual user.

C. Parking service : A Parking Management Service section can be implemented for users interested in

attending offline Hackathon competitions, Sports events or Webinars.

How would this section function? Area allotment status would be set to 'occupied' if the area already has a vehicle parked and no allotment possible and once free the status would be set to 'free' where the user can reserve the space which would change the allotment status as 'reserved'.

Acknowledgment

1. It is a great pleasure for us to undertake this project. We feel highly honoured doing the project entitled "My Hackafest diary".
2. We are very grateful to our project guide Prajakta Bhangale Ma'am and would like to extend special thanks to her and the Faculty Members of FRCRCE, Bandra. They really made our work easy during the pandemic as they helped us with required technical knowledge and learning materials.
3. This project would not have been possible to complete smoothly without their worthy experience. Whenever we were in need, they extended enormous help.

11

GENDER GAPS IN ENTREPRENEURSHIP



By Amisha Narayan* and Reeti Kumar*

Abstract

This paper analyses the gender gaps in entrepreneurship especially in developing economies like India where women entrepreneurs are less in number as compared to male entrepreneurs. The objective of the paper is to find out and understand challenges faced by women entrepreneurs and what are the social and economic reasons of the gender disparity in entrepreneurship and what can be done to cover these gaps. Though there has been a lot of effort put in by the government and other institutions, still a lot needs to be done and this paper tries to explore the ways in which the problems faced can be solved. The brief builds on a review of the latest literature on the subject and supplements theory. Also through primary research it tries to find out differences in industry sector of the business on the basis of gender. This paper seeks to provide a comprehensive overview of the condition of women entrepreneurs in India. Additionally, it gathers information on the category of businesses (small, medium and large) that are started by Indian women, in which areas they require support the most, in which states they are active and also finds out about the nature of operations of establishment owned by women. How many women entrepreneurs hire or don't hire workers and what are the reasons to do so. It explores the factors that make it difficult for Indian women to succeed and offers suggestions for driving women's entrepreneurial empowerment forward.

Introduction

Entrepreneurship plays a vital role in the development of any economy. It generates employment, eases lifestyle and boosts the growth of a country. The topics connected with women in economy, respectively Entrepreneurship and gender are broadly discussed in politics and research. Globally 1 in 3 businesses are owned by women. This rate varies with regions. Female participation in business ownership is directly related with countries' income level, but not to a big extent. In low-income countries, merely 25% of businesses have female owners. In middle- and high-income countries, the rates are around 35-37.5.

When we see this topic in contrast to India things aren't positive. The World Economic Forum's Global Gender Gap Report 2018 ranks 149 countries on four measures: economic participation and opportunity, educational attainment, health and survival rate, and political empowerment . India ranked 108th in this, with particularly low scores on two metrics: health and survival and economic participation.

Also India performs poorly in indexes of entrepreneurship. India ranked 52 among 57 countries in the 2018 Mastercard Index of Women Entrepreneurs, being one of the last rankers. The index looks at things like financial access, advancement outcomes, and ease of doing business.

Based on these indexes the theoretical groundwork for this paper will be looking into differences and their plausible reasons and we will also try to come forward with some practical solutions. We will move forward by stating objectives then moving further with literature review of the topic followed by research questions and data analysis at last we have tried to provide some suggestions regarding maximizing women's participation in entrepreneurship .

Objectives

1) Why are women entrepreneurs still disproportionately low in many countries?

Women are less likely than men to become entrepreneurs, and when they do, their enterprises are smaller and concentrated in fewer sectors. Gap in training creates a barrier for women to gain the needed experience and build networks in many of the industries in which scientific and technological progress creates new entrepreneurial opportunities. Access to information is not equal in all countries partly because in many countries, women and girls do not have equal access to education.

People have access to different information and process it differently depending on idiosyncratic knowledge and preferences. Therefore, the ability to discover and exploit opportunities depends largely on previous education and work experience.

It has been shown that because of both demand and supply factors, women lack the experience needed to identify and exploit opportunities. Also women have lower personal financial assets than men. Lower literacy levels and oppressive social norms which do not allow women to explore cheaper financing opportunities prevent them from acquiring knowledge about available finance options, advantages and disadvantages, costs of various options, benefits of borrowing, etc. As a consequence, they face reluctance from formal channels to access finance. This means that for a given opportunity and equally capable individual, women must secure additional resources compared to men in order to exploit the opportunity because they control less capital. Four areas have been identified as potential or real problems for women when it comes to financing: (a) women may be disadvantaged in raising the initial capital to start a new firm; (b) collateral required for external financing may be above the wealth level of many women; (c) finance for an existing firm may be less available, because women are less likely than men to penetrate formal financial networks;

(d) women entrepreneurs' relationship with different financial institutions might suffer because of gender stereotyping and/or legal discrimination. Evidence indicates that women still perceive a negative attitude from financial institutions such as banks and other lending institutions. This negative attitude, according to the literature, arises due to two possible reasons: (a) women are not viewed as entrepreneurs due to the attitudes formed by traditional gender roles; (b) women engage in industries that the financial institutions are not extensively familiar with (as personal services, care, etc.). Another recurring obstacle for women to engage in entrepreneurship is the perceived lack of time or competing demands on time. Because women are more likely to be responsible for domestic chores and childrearing, they may not have enough free time to develop either their entrepreneurial skills to become entrepreneurs or to develop an existing business. The lack of free time may not allow them to seek support from financial institutions for advice and information on credit, to attend training programmes to acquire skills, or to seek out better customers or suppliers.

The importance of the entrepreneur's social network has been acknowledged in the literature. Entrepreneurs draw on social networks to make key decisions along all the phases of entrepreneurship and social networks have been recognized as an essential factor for entrepreneurial success. Formal and informal networks useful for business development are often composed predominantly of men, while women's personal networks, based on friends and family members, are less effective to find financial resources to start or grow a business.

Evidence on entrepreneurial participation indicates that individuals who personally know an entrepreneur are more likely to participate in entrepreneurial activities at any venture stage. However, women entrepreneurs, compared with their male counterparts, are less likely to be acquainted with an entrepreneur. Taken together, it suggests that one of the reasons why women are less likely to become entrepreneurs is that they lack entrepreneurial resource providers or role models in their social networks.

Women have been shown by many studies to be heavily engaged in family businesses, often taking an invisible role. When spouses have a business together, business and private lives are mixed and intertwined. In such situations, women tend to take a back-seat position engaging in those tasks that are in line with traditional female roles. In addition, in countries where the government provides incentives for women to start businesses, evidence suggests that in many cases, women are owners only on paper and the real control of the business actually rests with their spouses.

2) What can be done to reduce the gap?

As gender inequality is multifaceted, there's no single solution and the best solution will vary across countries and economies, depending on economic development, existing gender gaps and speed at which technological advancements affect the economy.

We need to bring more women into workforce: Range of institutional, legal, regulatory and fiscal policy levers have shown to boost female labour force participation. While there's no single solution for all, policies should try to foster opportunity and remove barriers. Policies and infrastructure that make it easier for women to reconcile work and family life are particularly effective.

Concerted efforts are needed to provide women more opportunities to rise into managerial and leadership roles by setting relevant recruitment and retention targets for organisations, setting promotion quotas as was done in Norway, and creating mentorship and training programmes.

Literature review

(Koellinger, Minniti & Schade, 2013) According to the study involving multiple countries, argues that the lower business ownership in case of women is because of lower inclination to start, rather than the failure rate. The study attributes low start up rate by women to a

higher level of fear of failure, less confidence in entrepreneurial abilities and different social networks; and these factors seem to explain the gender gap.

The gender effect has been studied on motivational factors (Humbert & Drew, 2010), and the effect is more prominent by marital status and motherhood. It can be inferred that a host of socio-cultural factors influencing women in a given context would influence women entrepreneurship. For example in India, property rights, education, socialization, family as decision making unit, low degree of familial independence or any other bias specific to gender can be construed to impact entrepreneurship formation.

(Gupta, Turban & Pareek, 2013; Gupta, Goktan & Gunay, 2014). There are suggestions that masculine and feminine stereotype activation influenced men and women's evaluation of a business opportunity differently. Thus given the same scenario, there will be different evaluations about a specific opportunity based on gender of the entrepreneur. Men report higher opportunity evaluation as compared to women, study says.

(Meunier, Krylova and Ramalho, 2017) This paper analyzes data on female and male entrepreneurship that were collected by the World Bank Group's Entrepreneurship Database. The paper finds that the gender gap in business ownership remains high in many economies around the world. The gap in female entrepreneurship is especially apparent in low-income economies, where women are much less likely than men to start a new business. The paper also provides new insights into the relationship between female entrepreneurship and various institutional factors, including women's financial inclusion, the gender gap in education, etc.

(Basole, Amit) Basole finds that in informal Indian manufacturing enterprises, differences in performance persist between male and female-owned enterprises, even after controlling for owner and firm characteristics. However, these differences in performance disappear when examining the sub-sample of women who are able to hire wage employees. Basole offers insight that facilitating the scaling up

of female-owned enterprises might help address the gender gap in entrepreneurship. However, in the Indian context, the decision to hire labor is one that is often closely linked to existing social norms.

pChiplunkar and Goldberg,2021) The study developed a framework for identifying and quantifying barriers to entry and operation faced by female entrepreneurs in developing countries, and apply it to the Indian economy. We find that despite considerable progress over time, female entrepreneurs still face substantial entry and business registration costs (almost twice their male counterparts'). The costs of expanding a business, conditional on entry, are also substantially higher for women. However, there is one area in which female entrepreneurs have an advantage: hiring female workers is easier for them. We show that this pattern is not driven by the sectoral composition of female employment.

Counterfactual simulations indicate that removing all excess barriers faced by women entrepreneurs would: (a) increase the fraction of female-owned firms significantly (nine times); (b) increase the real wages of female relative to male workers; and (c) generate substantial aggregate productivity and welfare gains (ca. 7% and 18% respectively). These large gains are due to reallocation: low productivity male-owned firms previously sheltered from female competition are replaced by higher productivity female-owned firms previously excluded from the economy.

RESEARCH QUESTIONS

1. Why is there a high difference among the men to women entrepreneurship ratio?

Literature on the subject often cites data from the Sixth Economic Census which was conducted between January 2013 and April 2014. Out of 58.5 million businesses counted by that census, 8.05 million were owned by women, that is there are 13.76 percent of women among the total number of entrepreneurs in India. The World Bank Enterprise Survey, found that in 2014, the percentage of firms with female participation in ownership was 10.7 percent. Recent media reports indicate a rise in the number of startups founded by women. There are several challenges that women entrepreneurs face that are not common for their male counterparts. According to a report by MasterCard, India's business environment is not favourable for female entrepreneurs. There are several social, technical and financial barriers that hinder the growth of women-owned businesses.

Only 14 of 100 entrepreneurs in India are women and of them nearly half (49.9%) get into business out of necessity rather than interest, says a November 2020 report of the Initiative for What Works to Advance Women and Girls in the Economy (IWWAGE), a gender research and advocacy organisation.

Women entrepreneurs make a significant contribution to the Indian economy. There are over 3 million MSMEs owned fully or partially by women that collectively contribute 3.09 percent of industrial output (IFC, 2014). Despite this, they face gender specific barriers in labour force participation, such as, market, mobility, time, and credit constraints. These factors have been the driving forces behind the emergence of home-based businesses led by women especially in the informal sector. Despite the increasing recognition of women entrepreneurs' contribution to economic growth and their demonstrated capabilities, women entrepreneurs face

disproportionately high barriers in starting and growing their businesses, particularly in accessing finance (IFC, 2019). India ranks 70th among 77 countries covered in the Female Entrepreneurship Index and exhibits the third highest gender gap in entrepreneurship across

Also some firms are registered as women-owned due to financial and administrative reasons but are actually managed and operated by men.

The lack of role models in entrepreneurship. There exists a strong connection between the presence of role models and the emergence of entrepreneurs (Shapero & Sokol, 1982) and women as they historically have not been present as entrepreneurs in general lack role models.

2. Is there any difference in the way women find and choose their business ideas?

Entrepreneurs have to search deeply for business ideas from different sources and have to check these ideas using different methods. Regulated by the type and scale of the idea and resource availability, this process also varies from gut feeling and interest to professional market research.

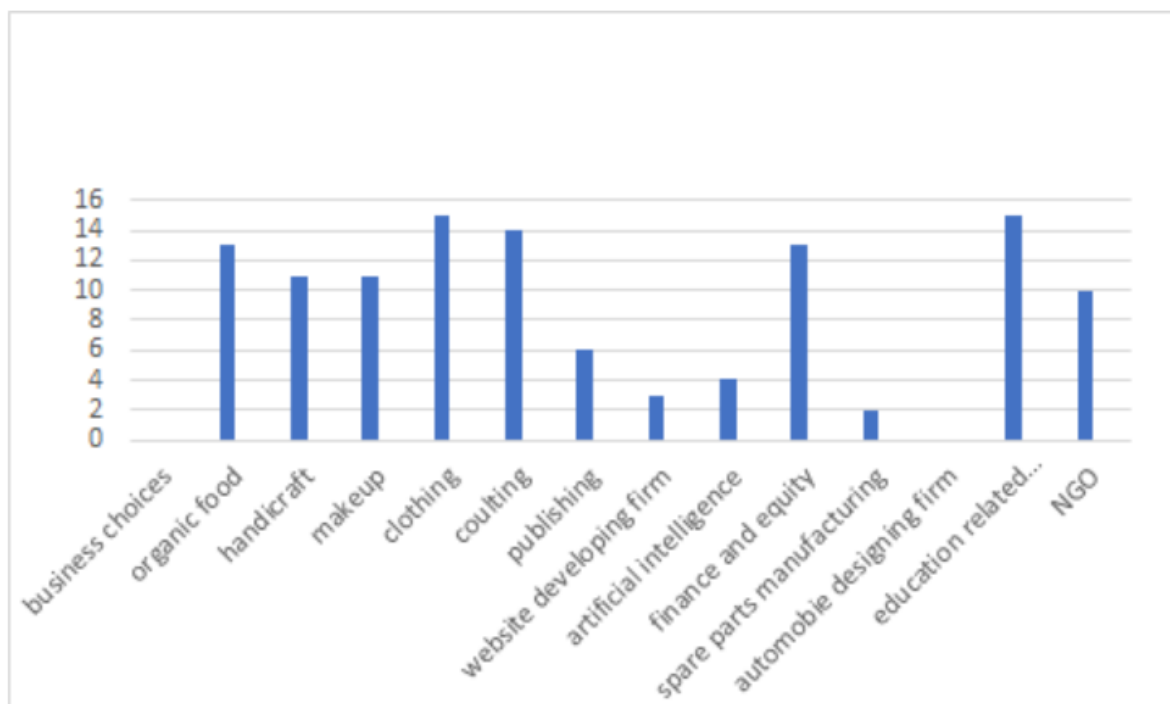
So here we have tried to figure out the difference (if any) in terms of choosing ideas for different gender.

Following primary data was collected by circulating Google forms in regard to business ideas.

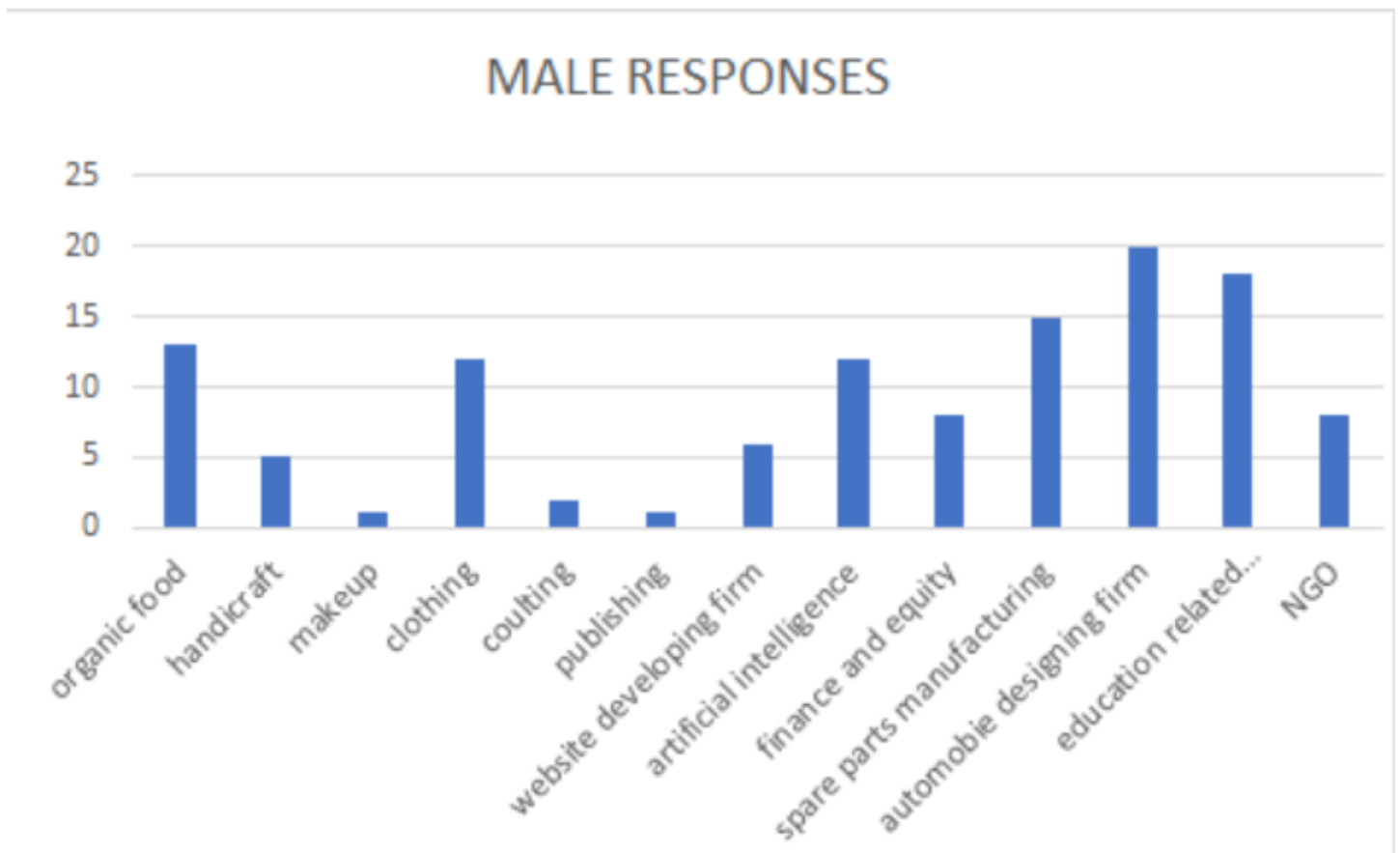
Features of collected data:

1. response of male to female is 1:1

2. Age group: 16-30



Graph 1 response from females



Graph 2 response from males

From the above two graphs it can be inferred that females have more inclination towards makeup and clothing as compared to males. While males show more inclination towards manufacturing and automobile industry. Apart from these rest ideas are common choice for both the genders.

3. Is there any difference in access to funds from financial institutions on the basis of gender?

The risks associated with entrepreneurial projects play a part in holding back women entrepreneurs who often have to tackle biased perceptions while seeking credit. Getting a loan from a financial institution requires adequate collateral and the gendered differences in asset ownership and the lack of sufficient savings, often disqualify women from receiving credit. Banks are risk averse and their credit approval processes are designed for larger businesses and corporate clients rather than for small businesses. This preference for larger firms might inadvertently be a disproportionate disadvantage for women-owned firms as their businesses are, on average, smaller than men-owned firms. This overrepresentation of smaller businesses, in turn, impacts the likelihood of rejection, as well as interest rates and other loan terms. Women-led small enterprises with sufficient capital to access credit face high interest rates and credit costs. Such high risks cause many women to avoid taking loans. Studies also have shown that women are 5%-15% more likely to have their loan applications rejected than men, making women business owners unwilling to apply for business credit. (oxfam report, 2018).

Reports also indicate that women are less likely than men to seek capital from external financing because of low confidence and expectations of discrimination.

4. Is there any knowledge gap regarding the business between the genders?

Limited exposure to the world of business makes women with entrepreneurial ambitions undermine themselves and question their ability to succeed in the space. This under confidence is only heightened by the lack of formal training and consequent inadequate skill sets. Women's low literacy rate is already indicative of their limited exposure to classroom training and skilling. Women are categorically exposed to fewer on-the-job training opportunities across sectors as well. In addition to limited understanding of the market landscape, women have a significantly lower rate of awareness of government and banking policies that would help grow their business. This restricts their entrepreneurial ventures to traditional sectors which require limited technical capabilities, or to subsistence entrepreneurship where the focus is on consistent income, rather than growth and profit. Limited business knowledge coupled with the lack of relevant advisors and mentors is a serious challenge facing women entrepreneurs. In a study on female business owners, 48% of female founders claimed that a lack of quality advisors limited their professional growth. With the majority of the business world still being male dominated, it is harder for women entrepreneurs to initiate connections into top-notch business networks. Among the self-employed women, the most common training attended was to learn either sewing skills or manufacturing of food products. Interestingly, only one entrepreneur interviewed in the focus groups was working in a business she had received formal skills training in. This might indicate a need for a more tailored approach in the delivery of training programs. Further, entrepreneurs that hired workers stated that business training skills were important to them, while for self-employed women this was not a priority. Business training needs were largely driven by having to pay wages, maintain accounts, so on and so forth.

Hypothesis

1. There is no difference between gender in terms of innovation, planning and risk taking in a startup.
2. Approach of both genders regarding investment, development and growth of the business would be the same.
3. There is no difference between the genders about perceived challenges of doing a business

Methodology

It refers to various methods used to collect and analyse information regarding the topic. The data is based on the insights obtained from an exhaustive literature review of reports, policy briefs and research papers on women entrepreneurship.

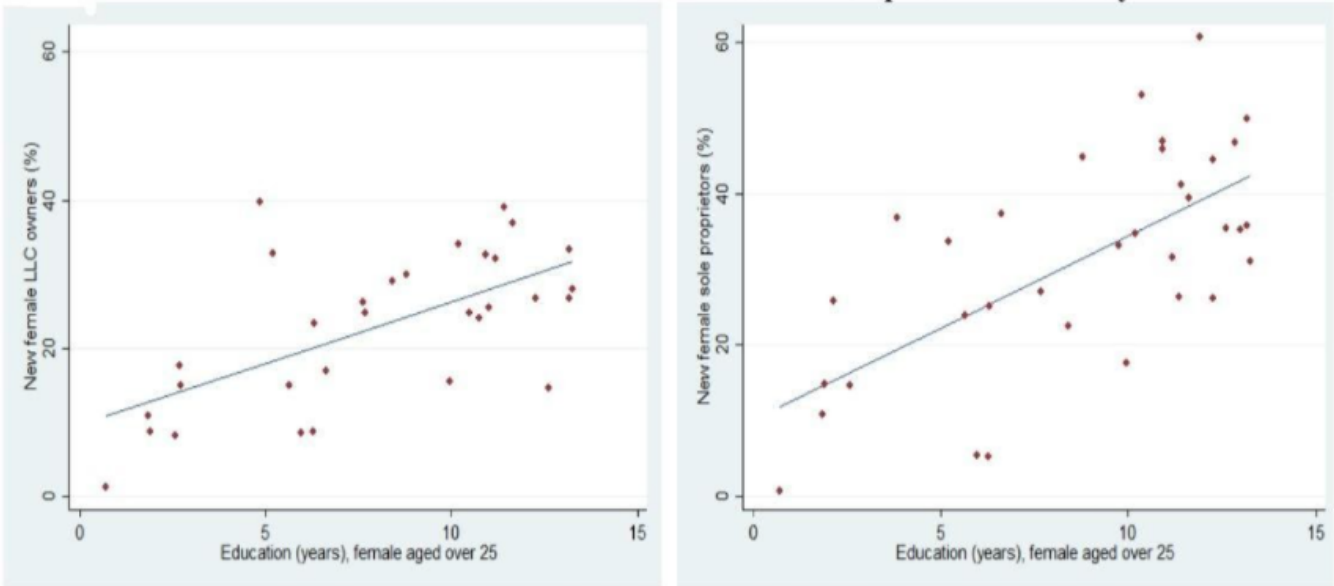
The data collected for the research paper is secondary data from organisations like world bank, UN, Niti Aayog and educational institutions like Yale etc. And government of India data (sixth economic Census). Also for literature review academic papers of various experts in the field were taken. The secondary data has been collected from all reputed organisations. The quantitative data from there has been analysed using basic statistical tools: average, mode, median, min, max etc., graphical/ scatter diagrams etc.

Due to pandemic constraints, limited primary data could be collected through online survey which has been used in finding out whether there are any biases when women and men choose the type of business they want to start .

Data Analysis

Figure given below demonstrates that a higher mean number of years of education is positively associated with the level of female entrepreneurial activity.(world bank data). This analysis suggests that economies where women have a higher number of years of education are also characterized by relatively high numbers of new female entrepreneurs at the level of both LLCs and sole proprietorships. Importantly, the positive effect of education is slightly stronger for female sole proprietors. Overall, the data show that education is critical for fostering female entrepreneurship. The educational attainment variable also captures the quality of entrepreneurs; there is a broad consensus that individuals with a higher number of years of schooling are more capable of starting more sophisticated businesses in the most technologically-advanced industries. The positive relationship between educational attainment and business ownership is observed in all regions and income groups, suggesting that equal access to education is critically important for the development of female entrepreneurial activity. In this context, narrowing the gender gap in education also contributes to narrowing the gap between male and female business owners.

Years of education of women and the level of female entrepreneurial activity

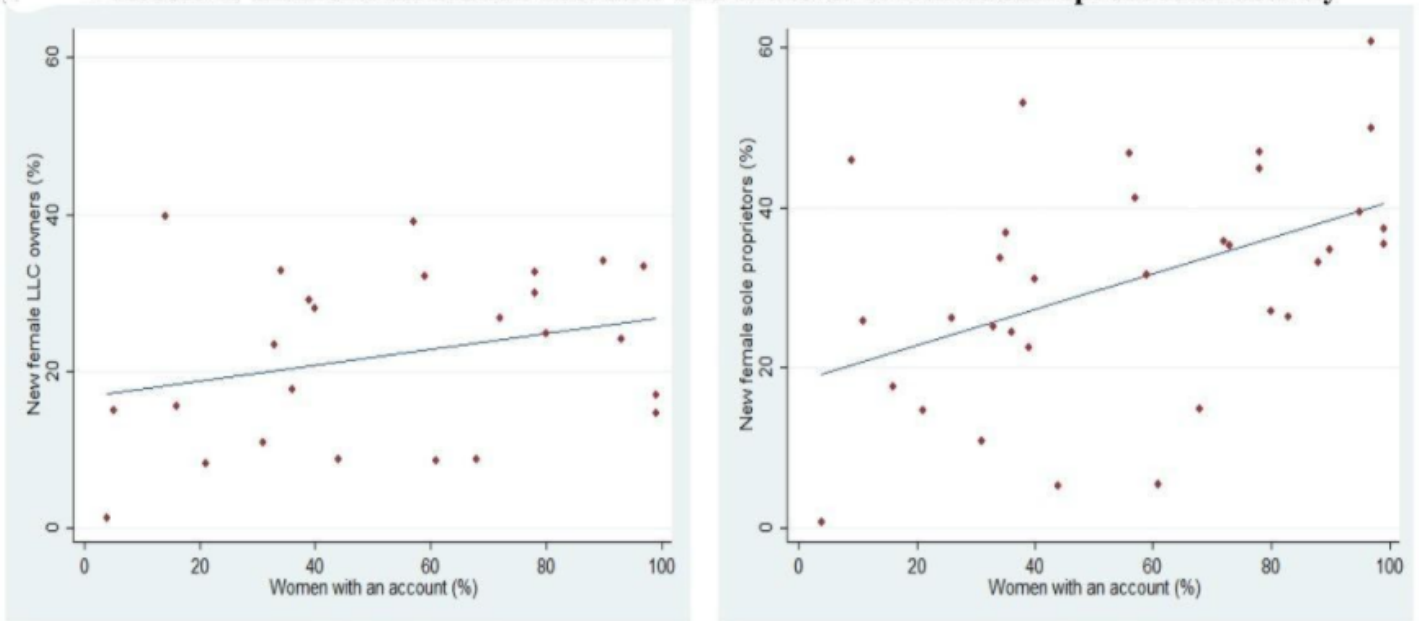


Sources: Entrepreneurship Database; adapted from the Institute for Health Metrics and Evaluation (2017).

Figure given below shows that access to bank accounts as savings and payment mechanisms is positively associated with female business ownership.(world bank data) This analysis suggests that the removal of barriers to account ownership tends to benefit the development of female entrepreneurial activity at the level of both LLCs and sole

proprietorships. Importantly, the positive effect of account ownership is stronger for female sole proprietors. Considering the existing disparities in account ownership across different income groups, it can be argued that women in less- developed economies would have greater entrepreneurial advantages from easier access to bank accounts.

Access to financial institution accounts and the level of female entrepreneurial activity

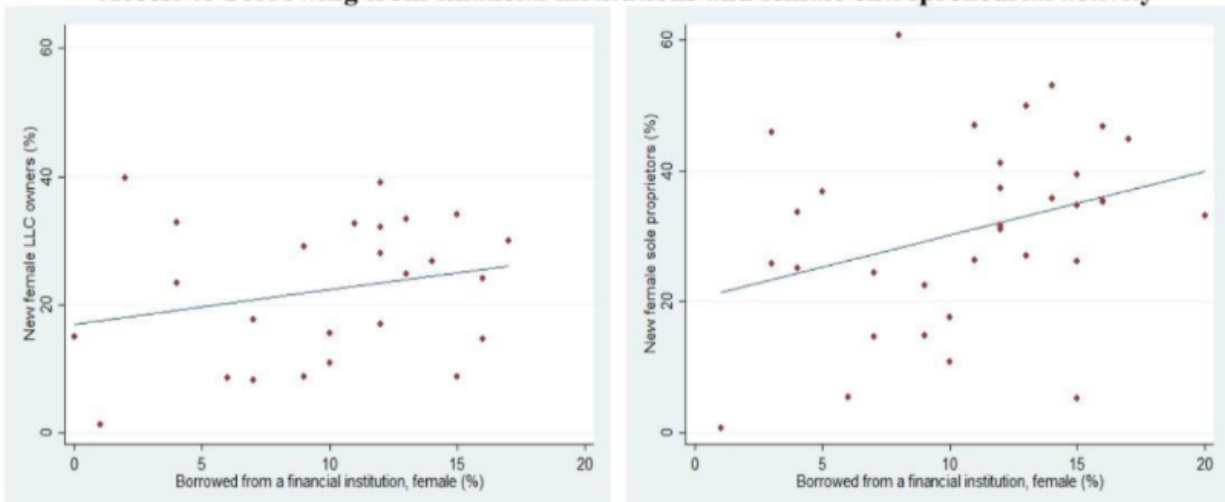


Sources: Entrepreneurship Database; Global Findex Database (<http://datatopics.worldbank.org/financialinclusion/>).

Figure below demonstrates that there is a positive relationship between an economy’s female business ownership and the percentage of women who borrowed from a financial institution within the past 12 months.(world bank data)

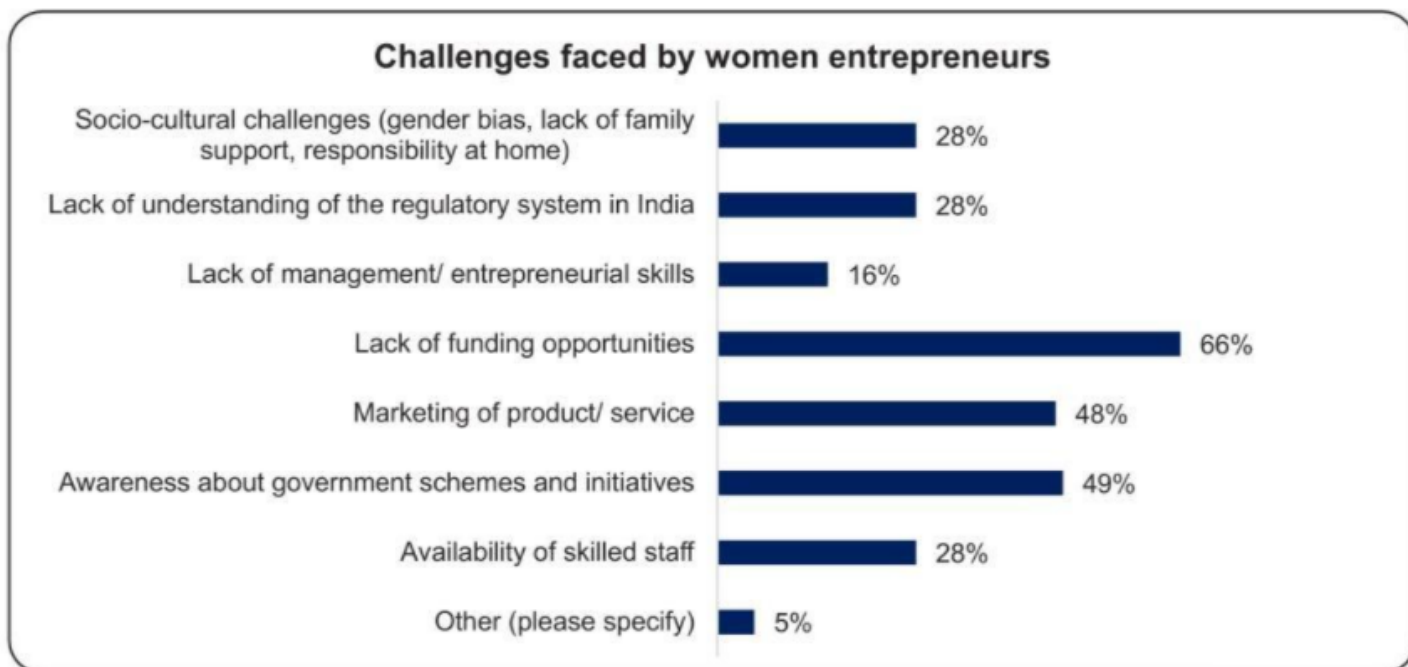
This analysis suggests that the availability of formal loans to women who start their own businesses can be beneficial for the development of female entrepreneurship at the level of both LLCs and sole proprietorships. Importantly, the positive effect of borrowing from financial institutions is stronger for female sole proprietors. However, a number of economies are characterized by extremely low levels of access to capital for women. In such cases, female entrepreneurs must often rely on informal social networks for resource acquisition; such networks tend to be male-dominated (Aidis et al. 2008; Estrin and Mickiewicz 2011; Krylova 2016). The importance of public policies aimed at expanding women’s financial inclusion is underscored by this point.

Access to borrowing from financial institutions and female entrepreneurial activity

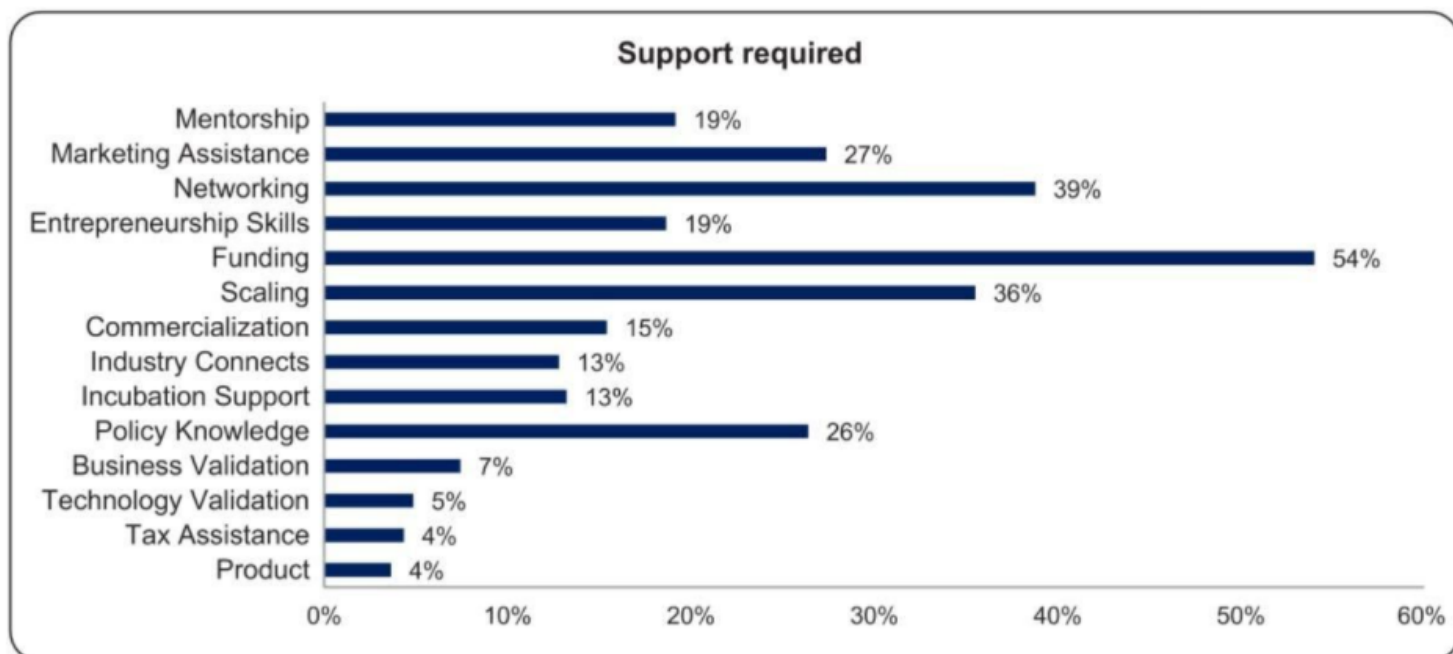


Sources: World Bank Entrepreneurship Database; Global Findex Database.

About 66% of the women in India feel that a lack of funding opportunities is a challenge they face in their entrepreneurial journey and around 49% feel the same about the lack of information about government schemes. Inputs provided by these users indicate that the challenges faced by them overlap with established research on constraints to female entrepreneurship: funding support, networking, information about government schemes and programs, mentorship, and marketing. (Niti Aayog, March 2021 data)



Funding, networking and scaling are the top 3 reported support areas to aid women entrepreneurship with a frequency of 54%, 39% and 36% respectively.



The table below points out that women owned enterprises in India are largely skewed towards smaller sized firms, with almost 98 percent of businesses falling in the category of micro-enterprises.

Table I Percentage of Enterprises by Male/Female Owners

Category	Male	Female
Micro	79.56	20.44
Small	94.74	5.26
Medium	97.33	2.67
All	79.63	20.37

Source: Annual Report, 2018-19 Ministry of Medium and Small Enterprises

The limited presence of women entrepreneurs indicates that while India's business environment is improving as reported by World Bank in 2018, the overall ecosystem still poses multiple challenges for women-owned or led businesses. This is backed by evidence as well; India was ranked 52 out of 57 countries when it came to women entrepreneurs' ability to capitalize on opportunities offered by their local environments by the Mastercard Index in 2018. Stimulating women entrepreneurship can go a long way in bridging gender gaps and empowering women. However achieving this requires building an enabling environment where the constraints to women entrepreneurship are actively identified and removed. These constraints are instrumental in determining the size, scale and the success of women led businesses and have larger implications for India's vision for inclusive growth and attainment of the Sustainable Development Goals (SDGs).

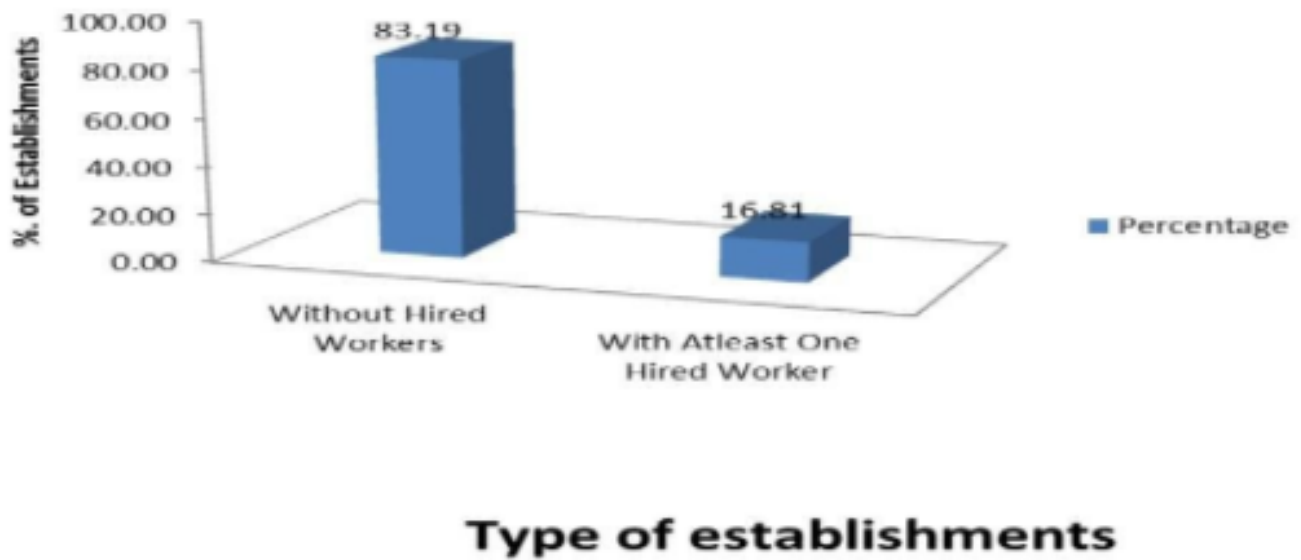
The total number of establishments owned by women entrepreneurs in India was 8,050,819 out of which 5,243,044 constituting about 65.12 % of the total establishments were located in rural areas and the remaining 2,807,775 (34.88%) were located in urban areas. Further, about 6,697,354 establishments i.e., 83.19% operated without hired workers and 1,353,465 (16.31%) operated with hired workers. The percentage of establishments without hired workers in rural areas was 86.85% whereas, in urban areas, it was 76.33%. The number of women establishments involved in agricultural activities was 2,761,767 constituting 34.3 % of the total number of establishments owned by women.

The state wise total number of establishments under women entrepreneurship and type of establishments is depicted in Table II. The details of five top states in terms of percentage share in total number of women owned establishments in the country are: i) Tamil Nadu (13.51%) ii) Kerala (11.35%), iii) Andhra Pradesh (10.56%), iv) West Bengal (10.33%) and v) Maharashtra (8.25 %). (Sixth Economic Survey data)

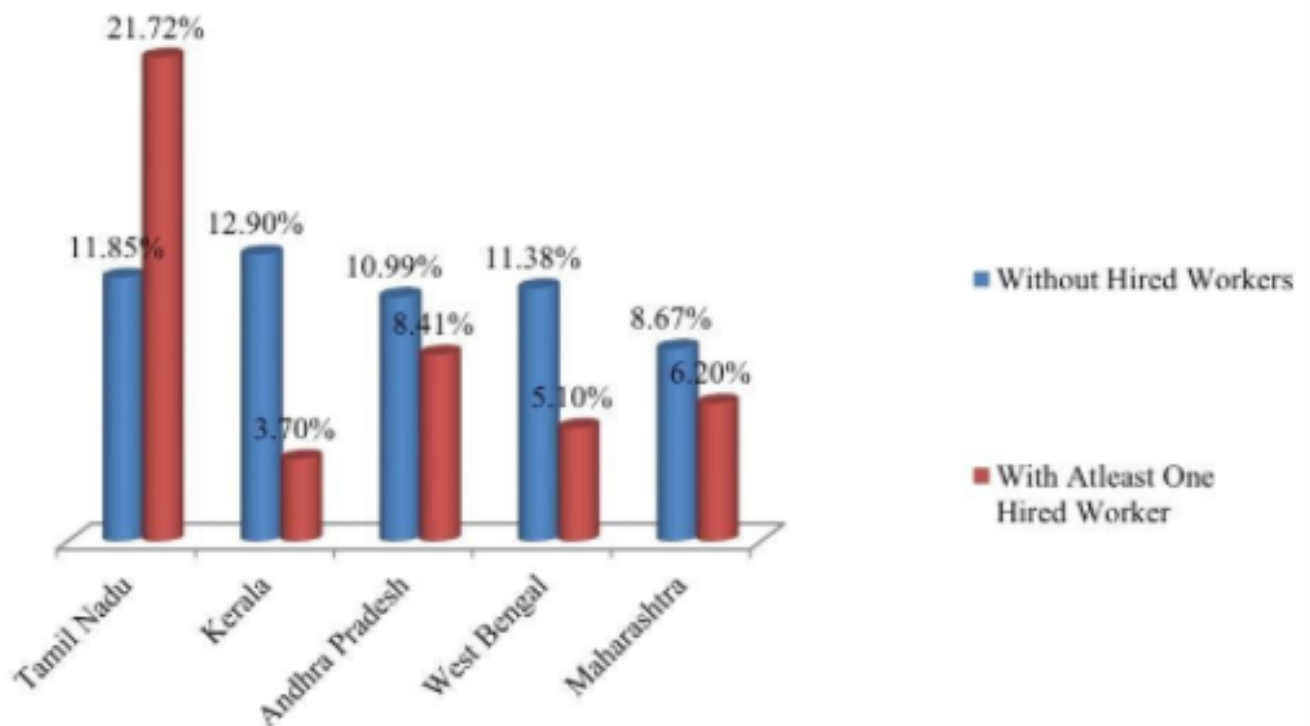
Table II State/UT wise distribution of total number of Establishments under women entrepreneurship by type of establishment

State/UT	Number of Establishments by type			
	Without Hired Workers	With at least One Hired Worker	All	Percentage share of establishments
01 - Jammu & Kashmir	23012	8280	31292	0.39
02 - Himachal Pradesh	45229	3944	49173	0.61
03 - Punjab	83916	27005	110921	1.38
04 - Chandigarh	4921	862	5783	0.07
05 - Uttarakhand	26828	4591	31419	0.39
06 - Haryana	113224	11300	124524	1.55
07 - Delhi	50403	20031	70434	0.87
08 - Rajasthan	193234	54758	247992	3.08
09 - Uttar Pradesh	371730	110649	482379	5.99
10 - Bihar	90115	63495	153610	1.91
11 - Sikkim	4383	921	5304	0.07
12 - Arunachal Pradesh	4438	1975	6413	0.08
13 - Nagaland	11840	1817	13657	0.17
14 - Manipur	84550	3736	88286	1.1
15 - Mizoram	12808	3020	15828	0.2
16 - Tripura	13168	1338	14506	0.18
17 - Meghalaya	21540	7990	29530	0.37
18 - Assam	130338	23820	154158	1.91
19 - West Bengal	762247	69090	831337	10.33
20 - Jharkhand	19827	34905	54732	0.68
21 - Odisha	223875	25725	249600	3.1
22 - Chhattisgarh	62328	15648	77976	0.97
23 - Madhya Pradesh	155898	67507	223405	2.77
24 - Gujarat	403569	125054	528623	6.57
25 - Daman & Diu	566	239	805	0.01
26 - D & N Haveli	352	952	1304	0.02
27 - Maharashtra	580337	83963	664300	8.25
28 - Karnataka	492506	53300	545806	6.78
29 - Goa	13539	3117	16656	0.21
30 - Lakshadweep	329	131	460	0.01
31 - Kerala	863797	50120	913917	11.35
32 - Tamil Nadu	793646	293963	1087609	13.51
33 - Puducherry	8192	1977	10169	0.13
34 - A & N islands	2011	502	2513	0.03
35 - Telangana	292512	63974	356486	4.43
36 - Andhra Pradesh	736146	113766	849912	10.56
All India	6697354	1353465	8050819	100.00
	83.19%	16.81%	100.00%	

Percentage of of Establishments under Women Entrepreneurs by type



% Share of top five States/UTs in Women Establishments

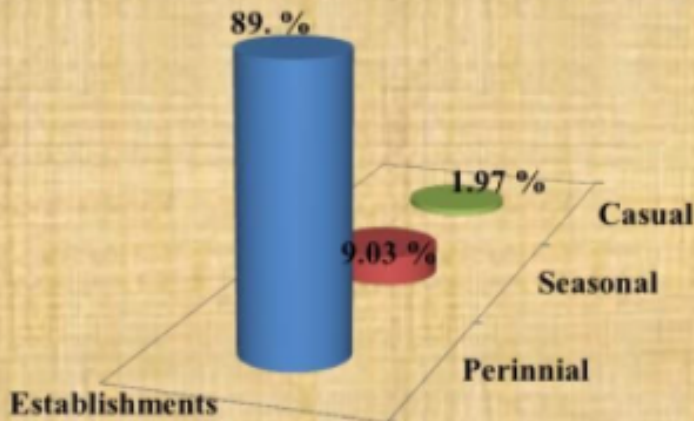


About 89% of the women owned establishments were perennial, 9% seasonal and remaining 2% casual (TableIII).

Table III State/UT wise total number of establishments under women entrepreneurship by nature of operation

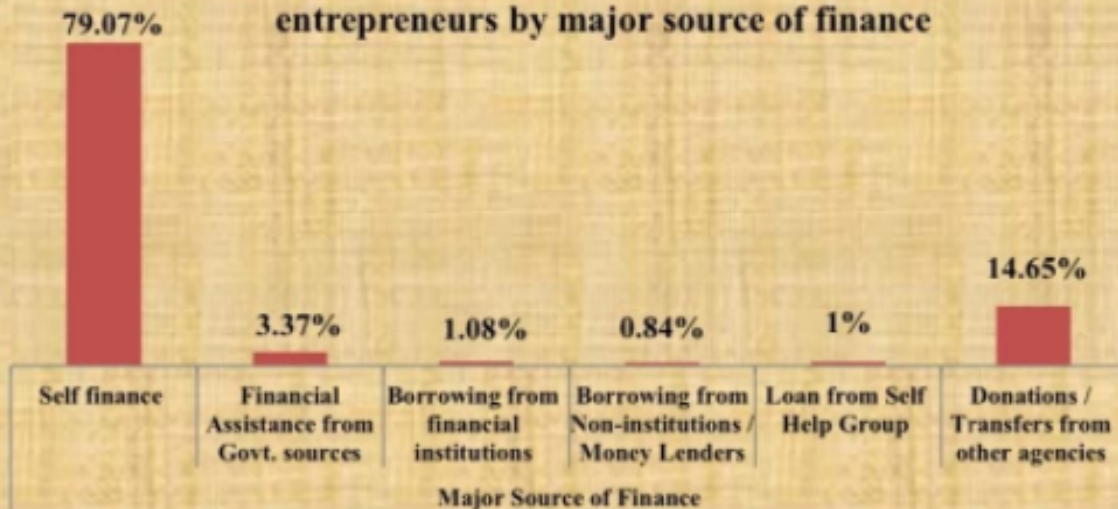
State/UT	Perennial	Seasonal	Casual	Total
01 - Jammu & Kashmir	23264	7030	998	31292
02 - Himachal Pradesh	36956	8800	3417	49173
03 - Punjab	101598	6944	2379	110921
04 - Chandigarh	5460	256	67	5783
05 - Uttarakhand	27597	2865	957	31419
06 - Haryana	101907	17538	5079	124524
07 - Delhi	66544	2864	1026	70434
08 - Rajasthan	214987	29224	3781	247992
09 - Uttar Pradesh	432631	42374	7374	482379
10 - Bihar	141579	10465	1566	153610
11 - Sikkim	5071	211	22	5304
12 - Arunachal Pradesh	6032	241	140	6413
13 - Nagaland	9636	3054	967	13657
14 - Manipur	81106	5657	1523	88286
15 - Mizoram	15264	259	305	15828
16 - Tripura	13586	714	206	14506
17 - Meghalaya	27525	1233	772	29530
18 - Assam	132924	14285	6949	154158
19 - West Bengal	738603	64990	27744	831337
20 - Jharkhand	51075	3319	338	54732
21 - Odisha	166525	65829	17246	249600
22 - Chhattisgarh	44829	32501	646	77976
23 - Madhya Pradesh	201458	19654	2293	223405
24 - Gujarat	433199	88087	7337	528623
25 - Daman & Diu	694	95	16	805
26 - D & N Haveli	1287	14	3	1304
27 - Maharashtra	613038	44616	6646	664300
29 - Karnataka	498295	40993	6518	545806
30 - Goa	14573	1614	469	16656
31 - Lakshadweep	346	90	24	460
32 - Kerala	825386	54589	33942	913917
33 - Tamil Nadu	1026273	45422	15914	1087609
34 - Puducherry	9736	302	131	10169
35 - A & N islands	2092	347	74	2513
36 - Telangana	328637	27643	206	356486
37 - Andhra Pradesh	766306	82316	1290	849912
All India	7166019 (89%)	726435 (9.03%)	158365 (1.97%)	8050819

Percentage distribution of establishments under women entrepreneurs by nature of operation



Almost 79% of the women establishments were self-financed. The second important source is donation or transfer from other agencies contributing 14.65%. The next important sources were Assistance from Government and Borrowing from financial institutions with contributions of 3.4% and 1.1% respectively.

% Distribution of number of Establishments under women entrepreneurs by major source of finance



Result from the Analysis

Total number of establishments owned by women entrepreneurs was 8.05 million (13.76%). Table I points out that women owned enterprises in India are largely skewed towards smaller sized firms, with almost 98 percent of businesses falling in the category of micro-enterprises.

These establishments provided employment to 13.45 million persons (10.24%), out of which 83.19% were without hired workers. About 88.8% of the workers were employed in the establishments hiring less than 10 workers. Total number of Self Help Groups (SHGs) were 0.19 million out of which all women Own Account Establishments were 89%.

Among the states, the largest share in number of establishments under women entrepreneurship was held by Tamil Nadu (13.51%) followed by Kerala (11.35%), Andhra Pradesh (10.56%), West Bengal (10.33%) and Maharashtra (8.25%). For female entrepreneurship to have a catalytic effect on employment and the economy, investments in women's education, skills and assets is of paramount importance. The five states with the highest percentage of female entrepreneurs (Tamil Nadu, Kerala, Andhra Pradesh, West Bengal and Maharashtra) also have comparably higher literacy rates. Regions where women are seen in leadership roles are usually those where investments in their education have been made, which in turn helps future generations face fewer socio-economic barriers to enter the market. The existing gaps in access to education, financial inclusion, legal rights to ownership of assets and even skill training — like small and medium-sized enterprises (SMEs) training programmes—do not allow women to build large scale, innovative and technology driven businesses.

In India, the majority of women-owned enterprises run as sole proprietorships and women's entrepreneurship is rising mostly amongst entrepreneurs who do not hire workers. No. of establishments owned by women with hired workers are very less in comparison to establishments owned by women without hired workers except for the state of Tamil Nadu (21.72%), meaning that most of the establishments come under the informal sector as formal sector establishments have more than 10 hired workers. This also makes it difficult for these women entrepreneurs to have access to benefits that the formal sector enjoys. Additionally, it also implies that they do not generate any employment and rather rely on unpaid family help. However, firms that employ more people and those that do not are vastly different in terms of their contribution to the economy: more hired labour suggests that ventures are more likely to experience growth, their activities streamlined, and are usually seen to establish better infrastructure. In India, while fewer women-owned firms hire workers, when they do, they hire more employees than male-owned firms and are more likely to use computers and manage accounts (Daymard, Arnaud).

(Basole) finds that in informal Indian manufacturing enterprises, differences in performance persist between male and female-owned enterprises, even after controlling for owner and firm characteristics. However, these differences in performance disappear when examining the sub-sample of women who are able to hire wage employees. Basole offers insight that facilitating the scaling up of female-owned enterprises might help address the gender gap in entrepreneurship.³⁷

However, in the Indian context, the decision to hire labor is one that is often closely linked to existing social norms.

Despite these difficulties in operating women-owned enterprises in India, the majority of such enterprises operated almost throughout the year perennial in nature (89% of the establishments are perennial). Since the majority of women-owned establishments were perennial, it is important to analyse whether the perennial status of the establishment had made it easy to access finance and other credit facilities for effective functioning of the enterprises. It is disturbing to note that 79 per cent of women-owned establishments were self-financed, and financial assistance from government sources was limited to only 3 percent. This indicates that access to finance was one of the major challenges to women taking up entrepreneurship. Most female entrepreneurs usually have to depend on their own savings, loans from family and friends, or micro-loans to finance their business needs.

Thus, access to different basic infrastructural and financial facilities indicates that women are further deprived of many of these essential services. This not only signifies their limited scope of operation, but also restrains their business expansion in future.

Suggestions

1. Family and society support: Women entrepreneurs need more support from their families and social circles to pursue their entrepreneurial ambitions. Household and care duties should not be understood as women's sole responsibility. Furthermore, granting maternity benefits to women entrepreneurs, improving childcare, and cultivating social acceptance would help them combine their entrepreneurial pursuits and family responsibilities.

2. Entrepreneur Skilling & Mentorship: Imparting essential entrepreneurial and management skills to stimulate innovation and sustainability. The lower women entrepreneurship rates are part of a broader gender gap in economic participation and opportunity. Thus, it is crucial to provide equal access to education and encourage women to use their acquired skills by joining the workforce. Policies aimed at including more women in senior and leadership positions are needed and will help women gain experience and knowledge, which in turn will enable them to start their own businesses.

3. Funding and Financial Assistance: Providing information on sources of funding, financial management for launch and expansion of enterprises.

4. Incubation & Acceleration: Connecting women to incubation and acceleration programs for speeding up the growth of startups and early stage companies. Women entrepreneurs in India need better access to finance and networks. Organisations such as NITI Aayog's Women Entrepreneurship Platform, Catalyst for Women Entrepreneurship, and the accelerator for women in tech initiated by Zone Startups India, provide dedicated support for women entrepreneurs. They connect them with relevant people in their industry and foster networking among the women entrepreneurs themselves, so they can learn from each other's experiences. Moreover, they assist in fundraising by teaching how to pitch and connecting them with potential investors.

5. Compliance & Tax Assistance: Leveraging knowledge partners for resources around taxation, audit, business licensing and regulations.

6. Marketing Assistance: Providing guidance to help women-led businesses improve their online and offline market presence.

7. Community & Networking: The ultimate goal is to build a robust network of women entrepreneurs to enable an ecosystem of support, learning, collaboration and mentorship. Sharing their success stories in social and traditional media provides inspiration and proof that business can be a woman's world, too, and therefore strengthen the confidence of younger female entrepreneurs.

Conclusion

In India, as in other developing nations, non-discriminatory social attitudes need to be foregrounded to encourage higher female participation in the labour force and growth of female-led enterprises. Vocational, business and training programmes for soft skills positively affect both women's income and non-cognitive skills like self-efficacy, aspirations and agency. These are essential to boosting an individual's attitude towards their own social and economic standing. That is where programmes and policies which specifically nurture such behavioural changes can come into play. Despite supportive policies and institutional arrangements, women entrepreneurship in India remains low. Entrepreneurship is often regarded as a preferred choice among women considering greater flexibility than day job. Due to technological advancement and increasing e-business opportunities more women may be nurtured to become entrepreneurs. But a majority of women led enterprises remain home based and unregistered and hence are unable to reap available benefits.

The women entrepreneurs, especially first generation and stationed at districts / villages require sensitisation and support to run and expand the enterprise. Women interested to initiate business require information and market assistance to initiate the business, also mentoring and support services to facilitate sustainability.

Promoting women's entrepreneurship will boost the economy by better demand conditions, resource utilisation, capacity expansion, increased employment – in the process it would prove to be an effective tool to improve female labour force participation.

In closing, any positive change in the state of female labour force participation and entrepreneurship needs to be more focused on both demand side issues, like discrimination and legal disparities, and confidence in female credit risk and skill development, along with equally salient supply side issues such as women's attitude towards owning, operating and scaling businesses. Only the elimination of such a skewed and iniquitous environment can allow women to cross over from informal or unpaid work to set up ventures that generate employment and contribute to both economic growth and equality.

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12

ENTREPRENEURSHIP AND REGIONAL DEVELOPMENT, GROWTH, COMPETITIVENESS



By Agrima Chourasia, Drishika Bajaj, Akshi Dhaka*

Abstract

This research and study offer a review and relationship between entrepreneurship and regional development which leads to overall growth and competitiveness in the economy. There's detailed explanation and clarification of entrepreneurship and regional development. Also, importance of entrepreneurship on regional development like it leads to inclusive growth, increase in per capita income, standards of living, etc is also explained. The impact of technology and competitiveness on regional growth is also explained. Furthermore, statistical comparison of entrepreneurship rate (2018 & 2019) is provided showing how entrepreneurship activity is increased in the country. Some plans and schemes launched by government have also been mentioned to examine government's role in regional entrepreneurship. The outcome shows that this field of study is very recent and there are many ways and opportunities yet to be discovered. The research concludes with both pluses and minuses remarks.

Introduction

Entrepreneurship and regional evolution are distinctive therein it gives direction to the central factors in economic development -entrepreneurial vivacity and innovation - as local and regional phenomena. It provides an adaptable gathering for scientists and reality finders in the field of business and miniature firm turn of events, as well as those investigating and fostering the neighborhood and territorial setting where business people emerge, improve, and build up the new monetary exercises that drive financial development and create new productive abundance and work.

Entrepreneurship depends on risk-taking initiatives in a cut-throat economic environment. It stimulates creative activity and propels an area to the forefront of economic development. Over the past few decades, regional economics has made a victorious attempt at the complexities of the modern space economy. The effect of entrepreneurial activity on the regional economic process keeps it up with the attention of researchers and policy-makers throughout our global environment. Public administration and government policies should brace both entrepreneurship and

innovation as such support is mandatory for organizations as they design programs and expand policies for growth and competitiveness.

New ventures need flair, constructive ideas and a knowledge-based economy around them to confidently impact regional growth. Organizations tend to acquire knowledge from probing sources, completely assuming that entrepreneurship and innovation call for developing social networks and collective actions. The importance of elucidating the space and level of knowledge networks for innovation is critical. Furthermore, emerging entrepreneurial firms are very active in acquiring knowledge from a wide range of sources and geographical locations. However, these networking activities may lessen during future periods of peak firm growth. Entrepreneurship has surely acquired central importance among the procedure that determines regional economic change. Entrepreneurs are vital actors of change, and they can act to expedite the creation, diffusion and implementation of new ideas.

One key differentiation of this progressive innovative society that may observe this ongoing technological business revolution from previous technological change eras is the reality that spatial proximity may no longer be as dominant as it once was. Entrepreneurial activity evolves in response to innovation and knowledge, and entrepreneurship is a critical component of regional progress.

Given some current technological opportunities, regional development needs to focus on knowledge-based solutions for regional firm support that enable local start-ups to take part in the increasingly global marketplace. Instead of brawling between traditional and emerging ecosystems and old versus new business models, regional policymakers should visualize and work towards an entrepreneurial ecosystem that capitalizes existing local opportunities while creating a structure that braces the absolute potential of those firms within the digital marketplace.

HOW DOES ENTREPRENEURSHIP HELP IN REGIONAL DEVELOPMENT?

Entrepreneurship plays an essential role in the development of every area that is very significant for inclusive growth of the economy. As we all know, entrepreneurship being a modern idea is not quite familiar to rural parts of India. Entrepreneurs act as a catalyst which boosts regional development, competitiveness, growth of the economy. It's the entrepreneurs who produce by arranging and using capital, human and material resources. The Entrepreneurship process is the source for the creation of new units and employment generation that promotes the growth of the economy further existing enterprises are boosted and energized which sustains competitiveness and development. There are many ways through which entrepreneurship helps the economy to achieve inclusive growth. Following are some of the qualities/ features of entrepreneurship that helps in the regional development-

i) **ACTIVENESS IN ALL REGIONS:** Entrepreneurs with their constant efforts and innovative ideas cause the spread of activeness in all areas of life. They provide opportunities to people irrespective of the region whether urban or rural to become self-sufficient. In rustic areas, with the presentation of business venture individuals have

been acquainted with more favourable and dynamic living as far as a framework, work openings, training, and so on

ii) **EMPLOYMENT OPPORTUNITIES:** Entrepreneurs create employment both directly and indirectly. Directly through self-employment by making a person independent and giving him a reasonable living. This makes entrepreneur self-employed, independent and possessor of the business. By establishing massive and multiple units in both urban and rural areas, as well as providing ample employment opportunities to a large number of people. Since there's balanced regional growth by employment in every region unemployment issue is reduced moreover the economy is boosted.

iii) **INCLUSIVE GROWTH:** This is one of the most important feature of entrepreneurship for reinforcing regional development. Entrepreneurship through the setting up of units in backward and rural areas helps in balanced regional growth. Many concessions and subsidies are provided to entrepreneurs to set up units in remote regions by central and state governments.

iv) **IMPROVEMENT IN LIVING STANDARDS:** In rural regions, customers are quite naive. So entrepreneurs introduce them to new products and remove the shortage of essential goods. Likewise, these products are presented at reasonable costs to individuals which prompts an increment in utilization in the compass of an everyday person. As a result, expectations for everyday comforts are being raised, making items more appealing and accessible in each district, thus fulfilling the fundamental concept of provincial development and advancement.

v) **INCREASE IN PER CAPITA INCOME:** Entrepreneurs locate and exploit natural and human resources in every best possible way of the region best suited for their business. Generally, the unit is set up in areas where land, raw material, and cheap labour are easily available generally for this kind of environment small towns are preferred. These sources of production are locally available at reasonable rates in underdeveloped areas which lead to an increase in national income and per capita income. This also helps in making economy stronger and everyone being part of the economic growth of the country removing regional disparities.

So, these are some of the important factors of the entrepreneurship process that leads to regional development. Regional development is necessary as it makes growth an inclusive process.

COMPETITIVENESS IN ENTREPRENEURSHIP

Competitiveness refers to the competition or rivalry among different business units selling similar products or targeting same consumer base. There are different regions that offer different conditions and environment to promote or reduce business activity. Competitive advantage helps a company to stand out, outshine and distinguish itself from other units. For any business unit, establishing competitive advantage is one of the momentous aims. It also enhances the company's performance in the form of higher production and prices, increased customers, and brand loyalty. Some examples of

competitive advantages are highly skilled and equipped labour, suitable geographical location, innovative technology, brand image, access to resources, etc.

Generally, we have noticed that rural people are less competitive as compared to urban people. In rural areas, activities are done mostly for own family consumption barely output is there for carrying out a business. But with the introduction of entrepreneurship, many positive changes occurred in these regional areas. People are gradually learning to maintain a competitive edge in the market.

IMPORTANCE OF COMPETITIVENESS –

To spur innovation: Competition among different entrepreneurs can induce the invention and betterment of technology. Firms start racing among each other to be the first to bring a new technology or products. all this also benefits consumers as they get various new and better choices.

Lower-cost of production: Competition can lead companies to develop lower-cost manufacturing processes that lower their production costs and increase their profits. As a result the product prices are reduced by this customers gets advantage and their savings are increased.

Need to Differentiate: The presence of competitiveness in the market encourages the competing units to distinguish themselves from each other and they try to make them unique. This leads to better products being developed, faster upgradations and considerably increasing market size.

Growing loyalty: The more a customer chooses and likes your products over other competitors, the more likely they are to continue to shop from you. This positive feedback creates a long-lasting customer-producer bond that outlasts any challenge.

Awareness and market acceptance: When there is greater competition ,then the product gets more recognition in the market. This product gets in the knowledge and attention of the consumers this way product is able to gain more market acceptance and penetration.

Improved customer service and satisfaction: As the startup founder the main emphasis should be that the customers benefit the most. Customers are getting excellent goods and services from entrepreneurs because if not, they move to other competitors. So, competition makes customers positive towards buying the product.

Successful entrepreneurs are known to meet challenges and work in competitive markets. So, entrepreneurs should consider competition not as threat but a opportunity to improve more. Having a powerful online presence, staying active also helps in increasing the competitive edge. Through competition, businesses learn how to stand out, grow business and economy at large.

RURAL ENTREPRENEURSHIP

Rural Entrepreneurship means developing a new enterprise that invents new products and services. Hence, creating a new market in that area that uses an advance or new technology.

Nearly 70% population resides in rural areas still the level of opportunities provided to them remains low. We need to give more entrepreneurship opportunities in these areas to ensure regional growth. Migration leads to population explosion in the urban area as the rural workers migrate there for better opportunities. We need to generate these opportunities in rural areas to reduce the need for migration. In addition to this, their region will develop as well, moving towards regional development of our country.

Rural employment is the way through which we can achieve this goal. As it will promote entrepreneurship opportunities as reduce the level of below poverty line population in rural areas.

As we know, rural areas focus on agriculture activities. It reduces the scope of expansion for the people residing there, which is the main reason behind migration is fewer employment opportunities in the agriculture sector. So to achieve regional development, we need to encourage rural entrepreneurship to develop the scale of the market in these areas.

Now the question arises that, "How can we achieve this concept in our country at a higher level?"

The most efficient and effective way to do this includes using the local resources to promote entrepreneurship and venture in the region rather than migrating to urban areas. The level of opportunities can be raise by following this method.

Rural entrepreneurship will reduce the income gap between the rural and urban areas. Also, create opportunities outside the agriculture sector. Rural entrepreneurship will lead to the overall economic growth of our country.

But still we need to take a lot steps to achieve this goal, as many people are not aware of the concept of rural entrepreneurship. So we need to make people aware of this concept to create a considerable impact on the growth of our nation.

Globalization impact on rural entrepreneurship: -

To make this plan effective and efficient, a link between the macro concept of modernity and the micro concept of rural entrepreneurship must be established. Globalization is important for rural areas as well. It increases the level of competition in this area leading the entrepreneurs to improve their products to match the benchmarks of products produced by the multinational enterprise. Along with this, it provides access to foreign technology in rural areas. So, we can examine the level of impact globalization have on rural entrepreneurship.

CREDIT AVAILABILITY

Businesses held by rural entrepreneurs may grow sluggish than their urban and suburban counterparts, they also tend to be more fruitful.

In our line of work, one in five rural enterprise owners enumerated access to capital as one of their huge obstacles. While it is frequently cited as a barricade to entry by entrepreneurs in each location, rural businesses face particular hardship. The leading concern they face when attempting to increase access to funding include:

- Poor credit
- Lack of support
- Lack of trusted lenders
- High-interest rates

Subsequently, a precipitous majority of rural entrepreneurs (71%) say they used their gleanings to commence their business.

Entrepreneurs in rural areas also don't have access to resources that can support them direct the lending options accessible to them. While business consultants, small business shareholders and business support organizations may be common in urban areas, they aren't as numerous in other countries.

Due to the shortage of genuine security and credit within the market, most rural entrepreneurs fizzle to urge external funds. Also, the procedure to meet the credit facility from the banks is laborious that its postponement often disappoints the rural entrepreneurs. The lack of capital available to rural entrepreneurs is currently one of the most significant issues confronting rural entrepreneurs, particularly in light of the global economic slump. Some of the serious difficulties faced by rural entrepreneurs include a low level of buying power of rural consumers so trading volume is inadequate, lessen profits due to competition, lack of funds to start a business, pricing of goods and services. Today, a rural entrepreneur's financial statements are also difficult to maintain due to rigid tax laws, a lack of guarantees for loan growth, significant difficulty in raising capital through equity, reliance on small money lenders for loans for which they charge biased interest rates, and enormous rent and property costs. These all obstacles create difficulty in uplifting money through loans.

In comparison to metropolitan regions, artificial intelligence is not often used in rural communities. This exposes one of the core challenges for entrepreneurs. Entrepreneurs rely on an internal link that encourages the flow of services, ideas, goods and information. The keenness of family and personal relationships in rural communities can sometimes be very favourable but they may also present hurdles to productive business relationships. Local politics in rural areas tend to blur the lines of power and decision-making.

GOVERNMENTS MEASURES TO INCREASE CREDIT AVAILABILITY FOR STARTUPS AND ENTREPRENEURSHIP

- The government has launched a 59-minute loan platform that permits quick access to credit for MSMEs

- SIDBI has started loaning to companies directly instead of through banks
- Changes have been recognised in the existing schemes for startups and MSMEs

Top 10 Government Schemes that provide subsistence to Start-ups and Entrepreneurship in India

- Start-up India
- ATAL Innovation Mission
- e-Biz Portal
- Support for International Patent Protection in Electronics & Information Technology (SIP-EIT)
- Multiplier Grants Scheme (MGS)
- Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)
- Software Technology Park (STP)
- Loan For Rooftop Solar Pv Power Projects
- NewGen Innovation and Entrepreneurship Development Centre (NewGen IEDC)
- Dairy Processing and Infrastructure Development Fund (DIDF)

PLANS AND INITIATIVES BY THE GOVERNMENT IN PROMOTING ENTREPRENEURSHIP FOR REGIONAL AND INCLUSIVE DEVELOPMENT

State and central governments framed many policies for promoting entrepreneurship in urban and rural areas making growth a balanced and inclusive process. India is amid an entrepreneurship bloom, whose magnitude scale has broken all the previous records. Fuelled up by Govt's start-up and stand-up India plan, entrepreneurs are right now provided with excellent opportunities and platforms to enhance their growth. India has unique and vibrant demography that has enormous potential to develop, grow, innovate the youth and create employment. The government's prime goal is to foster employment opportunities and innovation in every region and sector of the economy. Following are some of the schemes/ plans of action by the government to encourage entrepreneurship-

*SMALL INDUSTRIES DEVELOPMENT ORGANISATION(SIDO): SIDO was launched in 1973 under t is concerned with the work of formulating policies for the development and promotion of small-scale industries(SSIs). It was formed under the marketing, trade and industrial ministries Its core functions are -

*Coordination (coordinating programs and policies of several state governments as a step towards regional growth)

*Extension (to offer training, advisory, workshops, data analysis and technical services to strengthen the competitiveness of the small-scale industries)

* Industrial development (to reserve products for production by small scale industries, offer assistance to ancillary units, and analyze data of imported goods to produce domestically)

* SFURTI: The Scheme of Fund for Regeneration of Traditional Industries(SFURTI) was established to reinforce and promote the rural base of the country on October 2005. This organization integrates the traditional crowd of khadi, coir, village, leather, and pottery industries to promote regional development. It helps the rural population to become self-dependent and facilitates farmers to think beyond farming. These units are showing appreciable regional growth and making the rural population aware of entrepreneurship.

* RURAL AND WOMEN ENTREPRENEURSHIP DEVELOPMENT(RWED): This program aims at providing a suitable work environment to encourage rural people, primarily women. It also gives and aids women entrepreneurs the training manuals and workshops

*STARTUP INDIA: This scheme was set in motion in 2016. This scheme of Central government aims to generate employment, promote set-ups and entrepreneurship and develop the nation. This plan has many benefits such as ease of working together (offers offices such as simple enlistment, complaint handling, and online gateway), government support (prioritise new businesses in getting tenders and no need for related knowledge for getting tenders), monetary support (offers an assessment exclusion for the first three years and monetary help to persuade remarkable detail up), and various other benefits.

*MAKE IN INDIA: This revolutionary and transforming scheme was launched on 2014 by central government to empower domestic manufacturing . Also, it targets to increase both domestic and foreign investment(FDI &FIIs) and make India a manufacturing hub and boost employment. Various supportive schemes were first introduced under the Make in India initiative like skill India, digital India, smart cities, etc.

Furthermore, there are also many other policies and plans which promote entrepreneurship. Indeed the Indian government is taking many appreciable steps to stimulate entrepreneurship along with regional growth. The government has also set up help centres and regional offices to help and provide guidance to budding entrepreneurs.

TECHNOLOGICAL BACKWARDNESS

India needs to upgrade its technological advancements rather than focusing on capital investments for faster economic growth. The urging for research will promote the use of IT in ways beneficial to society. The country should use developing technologies through indigenous means. Kerala Startup Mission (KSUM), an online event, was organised to celebrate National Technology Day.

According to a report, even though India has entrepreneurial strength. 90% of its startups fail within their initial five years because of technological backwardness. About 75% of these ventures fail due to the lack of the latest and innovative technology.

Following are some technologies that every entrepreneur should have access, to create more opportunities to expand their ventures:

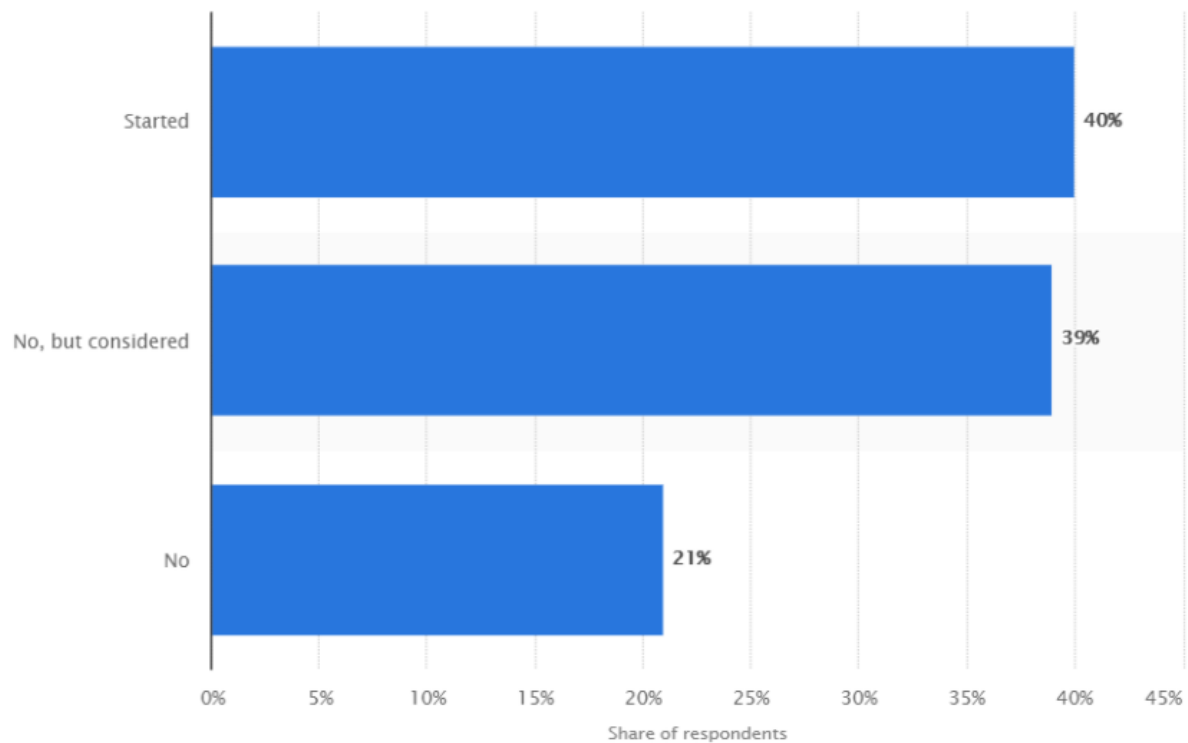
Cloud-Native Technology-Nangru was the founder of this technology that included consulting and providing solutions to various ventures through email exchange. It offers speed, elasticity and scalability. Businesses of all scales can use this technology at their convenience.

Automation- Entrepreneurs also comment that they find difficulty in managing the venture work within 24 hours of a day. Especially for the solopreneurs as they need to manage their business alone. Automation tools include outsourcing the task that is essential to be performed but is not necessarily by the owner himself. Automation tools are used to assist their work. It includes performing various activities like tracking expenses, sending reminders for appointments, generating contracts or managing client onboarding.

Customer relationship management software-Customers play a dominant role in each venture irrespective of the goods they produce or the services they render. CRM (Customer relationship management) software gives these ventures the power to handle them more effectively and efficiently. It collects a wide range of information that can help them increase sales and improve their customer retention.

Marketing tools- The digital era has introduced a wide range of marketing tools and techniques. These are some of the essential tools used to be successful and reach the customer base by the entrepreneurs. Social media, email campaigns, SEO are some of the significant sources used by the companies. We are all aware that most startups don't have the financial resources to hire an advertising agency. The best part about this is that the marketing tools make it easier and affordable to manage each task. For example, Mailchimp helps entrepreneurs create and manage email campaigns, while HootSuite allows startups to schedule social media posts weeks in advance. Marketing tools make a remarkable impact by offering analytics and integration with other cloud platforms. Also, many of them provide tutorials that make their use easier for entrepreneurs.

STATISTICAL COMPARISON OF RATE OF ENTREPRENEURSHIP IN THE YEAR 2018 AND 2019



This chart clearly states that about 40% of the respondents started their enterprise in the year 2018. It shows a significant growth in the rate of entrepreneurship in our country.

According to Economics Times, about 1,300 startups started in the year 2019. Also, about 8,900 tech startups established in our country

This data clearly shows that the rate of entrepreneurship is improving every year, stating a great sign of improving entrepreneurship opportunities in India.

The startups created a significant impact on the level of job opportunities for the working population of our country. It contributed about 1.3-1.8 lakh indirect jobs and 60,000 direct jobs.

About 18 per cent of the startups of India have started using high tech technology that means there are about 1,600 such companies in India. This number comprises just 8 per cent of in the year 2014 and now has seen a remarkable growth of about 40 per cent CAGR (compound annual growth rate) over the past five years according to the report presented by Economies Times.

This information clearly states the level of impact technology plays in the field of entrepreneurship. We still need to work harder to achieve the goal of 100% high-tech technology-based ventures. Technology helps increase the scale of their business, which further leads to an increase in the level of job opportunities that their enterprise can provide to the nation. Technology up-gradation will be the ultimate solution to the problem of unemployment. Entrepreneurs must use cutting-edge technology to grow their businesses and contribute to India's economic growth.

According to Mr Ghosh," the Indian startups' ecosystem plays a significant role in providing a platform for the innovators to flourish and explore by strengthening their capabilities and fostering co-creation.

It will help in improving the research sector of our nation as well. So, the adoption of technology plays a vital role in the development of our economy. So, we require some strict policies from the government to improve the level of technology used in our country. Also, it will help to increase the level of production and manufacturing in our

country. It will solve numerous amount of problems in our country. Studies found an increase in the number of B2B services provided by these startups to various ventures. It shows that education plays a positive impact on entrepreneurship. Educated entrepreneurs can provide the latest services through the knowledge obtained by their higher education. Also, education helps in widening the scope of thinking. So, educated entrepreneurs can use this skill to make better decisions in the initial stages of their enterprise.

In a nutshell, we need to improve the level of education and access to high-tech technology to improve the level of entrepreneurship at a greater rate to achieve the goal of 100% and solve the problem of unemployment to the earliest.

CONCLUSION

The current study focuses on the link between entrepreneurship and regional development and growth. Entirely, the paper argues that the innovation accomplishment of entrepreneurial firms, and afterwards the innovation and growth performance of the regions in which they are located, is considerably associated with network capital investment in dynamically set up inter-organizational interactions and relationships.

From a massive or global point of view, a region is a strategic place in worldwide development. But from a micro point of view, the region is formed by innovative actions of audacious entrepreneurs. Battle, faith, system organisation and public policy are ingredients for win-win circumstances at the local level.

From an effective entrepreneurial and regional development theory, the intermixed connection of entrepreneurial, industrial and (multi)regional life cycles is an engrossing research issue, not only from a conceptual point of view but also from an applied modelling viewpoint. Needless to say that in this field still plenty of research questions and answers are waiting to be addressed.

It is proposed that regional transformation rates are a function of the interconnection between the rate of entrepreneurship and the rate of network capital collection by entrepreneurs and their firms, as demonstrated by the ability to acquire external knowledge, in order to improve our understanding of the irregularity of regional rates of innovation and economic growth. This indicates that the interlinkage between rates of entrepreneurship and network capital should be more specifically integrated into instinctive models of regional growth.

This paper demonstrates there is a tool for upgrading regional competitiveness, which conduces to interventions frequently targeted at victorious locations and groups of economic activity, or as an aid for addressing economic and social drawbacks in locations with higher unemployment and lower entrepreneurship. Pick out the cultural change in underprivileged areas is unlikely to have temporary gains for the lawmaker, which to some range results in central-local apprehension and dispute in observing progress and allowing on policy aims and results. Although promoting the cultural revolution needed to develop entrepreneurial regional cultures is undoubtedly a long-term responsibility, policies have been manifest by the urge of the government to measure objectives. This has appeared in an exceptional deal of regional business management activity defined by temporary targets, which is individually obvious in the

area of developing start-ups. It is discovered that regional policymakers are stressed to evaluate temporary outputs, which has surely addressed policy towards termism, at the expense of extended sustaining. While policies have positive elements, there is still a necessity for more durable and stable policies. The regional policy can perform a role in empowering entrepreneurial firms.

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13

Beyond Masculinity: Restructuring Entrepreneurship Theory



By Gorangi Gupta*, Divyanshi Rawat* and Ravleen Bajaj*

Abstract

Purpose: The purpose of this paper is to analyze the entrepreneurship model focusing on the three aspects in particular: gender, sexuality, race and color

Methodology: the research paper has been organized with the theme of 'Entrepreneurship and gender' and gives a brief review of the assessment of the three stages. Further, each block of the paper is detailed, explaining the entrepreneurship model that stretches beyond masculinity.

Approach: focusing on the approach the evidence is collected from the people engaged in the entrepreneurial sector. The evidence suggests how barriers to enter the entrepreneurial sector are rigid, creating a glass wall that appears to be all shiny and fancy but in the same way proves difficult to break

Practical Implication: networking with the people through survey and analyzing their responses on how they faced indifferences from the society while establishing their business. The survey also includes the responses of people who aspire to be a part of this field.

Social implication: entrepreneurs are often seen as innovators, idolators and change makers from society's point of view. The societal stereotypes that limit entrepreneurship to a great extent. These factors visibly demoralize different sexes, gender and race in defining themselves.

Highlights: The paper highlights the process model of various aspects of gender and entrepreneurship that creates a link between the two which often one fails to understand. Following the process model, the paper reviews the hurdles faced by the entrepreneurs and their development despite the same.

Introduction

Any organization or firm is what according to people helps in a nation's development. Whether in terms of employment, improving standard of living or a person's development, organizations do help in many ways. But what changed the course of these ventures is entrepreneurship. Pandemic gave rise to not only budding

entrepreneurs but also pave the way to the small business owners. This resulted in the structural changes in this sector. Although it is the twenty-first century, there has been a slight change with respect to the past decades. But still being a male-dominated sector, the difference with respect to gender still prevails. With these differences, entrepreneurship became an important research domain. Associating entrepreneurship with the theme of gender, the paper showcases the three aspects: 'gender and entrepreneurship', 'sexuality and entrepreneurship' and 'race and color and entrepreneurship'. The three views are discussed in detail about the challenges faced by them in view of their individuality and how they are adamant about being successful entrepreneurs. Further, the paper reviews the real based statistical data obtained by us through google forms filled by the real entrepreneurs and the ones who are aspiring to be one. Also going for some general research data by various sites showing the trend of the entrepreneurship sector. Illustrating the not so perfect entrepreneurial sector that stretches beyond masculinity as well.

SEXUALITY

Sexuality is how we understand our bodies and understand all aspects of ourselves. It is very important for us to understand our own sexuality as it is ever-changing and differs with respect to each person. The way a person talks, understands, behaves, desires, and feels helps a person to understand themselves. Sexuality is dynamic as we tend to discover diff outlook of our lives and affirm the way we are. Not to confuse our identity, it is important to know yourself. A person may be asexual, bisexual, homosexual and heterosexual.

With the term, "modernization" evolving from the past decades we can see a sexual revolution which has not only colored our world with rainbow individuals but has also given rise to a new and sensitive topic: The Sexual Entrepreneur. There's a lot more on our plate, more than masculinity and femininity. The act of giving sexual freedom, and intimately entangled with the corporate and capitalists sector encouraged the economy to grow. But has it really encouraged the individuals with different sexual preferences?? With the behavior of the individuals dominating the entrepreneur sector, they refer to people with different sexual nature as a risk. Associating sexual behavior with the challenging framework, they often neglect the willingness of them as waste. Sexual prejudice in entrepreneurship those with different orientation have often experienced the harshness of business atmosphere and workplace. The harshness faced by them at the workplace becomes a reason to them to leave employment and become an entrepreneur and be open without being judged at work

The driving force behind these entrepreneurs is spectacular but their failures are often perceived negatively by the general public. Defamed for both, their failure and sexual orientation, they feel both shamed and blamed. Comparing the same behavior of the public with failure of male and female entrepreneurs, the people with different sexual nature end up facing overly harsh failure evaluations than male and female entrepreneurs. Becoming an entrepreneur proves to be an escape from the judgmental society. On one hand the people escape the stigmatization of entrepreneurs and on the other hand helps to improve our societies behavior with

different sexual orientation.

Letting people of different sexual orientation flourish empowers the people to exhibit their hidden talent which helps in the development of the nation's economy themselves. Facing discrimination, criticism and considered to be risk, they choose for themselves and succeed to their career and future. Not cutting them out from the corporate world and not letting one's sexuality come in the way of their dreams is important.

GENDER

Usually, the idea of one's gender and sex are considered the same but are different in real life. Sex is what differentiate one another at the time of birth and as they grow up society gives different roles, attributes, opportunities, privileges and rights to different sexes that creates the social difference among them and thus is the idea of gender. Gender is a halo constructed by the society that assigns the specific set of roles and responsibilities to a definite part of sex. Gender roles vary greatly across different societies, time period, culture, age, education, ethnicity, and various other socio-economic factors. While male domination is still a worldwide problem, entrepreneurship isn't an exception to that. The ratio of different gender entrepreneurs is far different than its ideal image. Though it has been bridging the gap over the years, it is still quite unequal to a great extent. The difference in the average level of entrepreneurial abilities, social networks and pay gaps is higher than estimated. Various factors whether intentional or motivational acts as a starting point for people with different gender to establish themselves as an entrepreneur.

Considering the major portion of socio-cultural factors, the people whether women or transgenders, are discouraged from their familial independence. Entrepreneurship can be described as the means of livelihood, progress in life, doing innovative and useful things. This purposefulness of entrepreneurship becomes a major goal for people with different gender to build their career in this sector. These gender differences not only lead to entrepreneurial deficiency but also become a setback for the nation's development. Elements such as masculinity, feminine stereotype and biased behavior towards people choosing different gender still prevails in entrepreneurship as a field.

Despite these differences faced by the people they don't display any indifference towards their aim. Self-analyzing their knowledge and ability, they are able to discover themselves and start their own ventures. Distinctiveness in terms of pay, opportunities or social respect is far below the overall satisfaction one gains by his or her growth. Additionally, govt support to the entrepreneurs in different sectors make them feel stronger and help the society to accept a variety of entrepreneurs in terms of gender. Empowering the women and

transgenders to unleash the potential within themselves so that they can become successful as well as sustainable entrepreneurs. Making gender equality the focal point in the entrepreneurial sector and stabilize the link between the gender and entrepreneur. This will not only help in economic growth and development but also in the poverty alleviation.

Ensuring the active participation of people with different genders and making the sector gender inclusive. Creating more opportunities for making them self-independent. Through these persistent ways, we will be able to achieve rapid growth and make this a powerful point for one's economy.

RACE AND COLOUR

People of color are the ultimate driving force of what results in any nation's economic development: entrepreneurship. Majority of owned firms across the world are owned by people of color. Many of them opt to become entrepreneurs to give lives to their innovative desires and dreams. But what they always face in the process of defining and proving themselves are not only countless hurdles and obstacles but also criticism. Facing these structural changes, the ability of them limits and negatively impacts them. This process harms our nation's business, slowing the innovation process. Some of the barriers faced by them are; gender pay gap, expulsion from the network, negligence by the mentors etc.

GROWTH: With the remarkable increase in the business-owners of people of color, it can be easily deciphered how they possess undeniable potential and thrive to fulfill their passion to help the economy. Asian-American, African American, Latin people, native Hawaiian people and who do not have such an extensive impact on the economy. Not only filing themselves but also creating job opportunities for others and inspiring the people of color to stand strong for themselves, makes the economy strong and grow even further.

CHALLENGES: Going over to the challenges faced by the people of color, one of the most important is funds. Many funding organizations refuse to provide funds for the business of people of color in fear of losing the money. In different cases if the person is single and on their own, they often fail to start their venture as well since their personal wealth is not enough. Facing challenges on taking out loans is a considerable task. To make it easier, many people thrive to improve their performance scale to access the funds. With the challenge to increase their performance, this charm of entrepreneurship continues to fascinate them.

They are often underrepresented on the managerial and high positions receiving negative racial or gender stereotyping. Having the large pay gaps in comparison to others and missing on the opportunities to engage with important clients restrict the professional growth of what they desired to be. Whether the challenges in their workplace advancement, pay gaps, racial criticism, or the lack of opportunities in the particularly dominated corporate world, the people of color get more reasons to be the boss of their own. Having control on their destinies to pursue their passion and make a place for themselves.

CONCLUSION: These racial gaps cost a billion to the country. Having the people of color powering the population, breaking the barricades of entrepreneurship, it is evident how equity should be there in the workplace. Letting the people of color to

exhibit themselves and bloom in as entrepreneurs will not only benefit them but also the nation. Empowering the people of color to capitalize their talent can bring inevitable demographic changes by closing the racial and ethnic gaps between the people. Succeeding the career paths, they choose for themselves regardless of the hurdles they face, they have the ability to not only stabilize themselves but also the economy.

SURVEY

The study associated with the challenges faced by different entrepreneurs have been taken up in the survey. Various socio-economic contexts that require the investigation in order to identify their influence on the choice of different entrepreneurs. In the light of discussion above, the survey answers various questions.

Relevance of the survey:

The survey helps to identify the various changes that took place in the past decade that change the structure of entrepreneurship

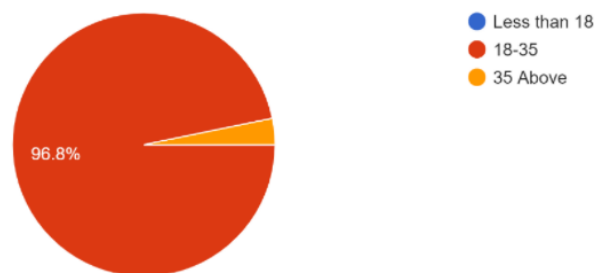
Target population:

The target population for the sample survey were the people already engaged in this network and probably have faced indifferences from the society in the process of establishing their own venture. Initially the survey was sent to 50 entrepreneurs out of which 31 valid responses were obtained.

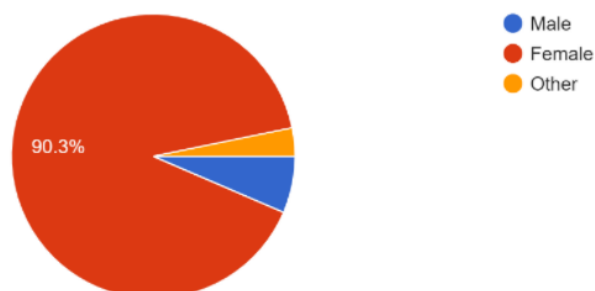
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Data with respect to Questions asked in the survey

Age
31 responses

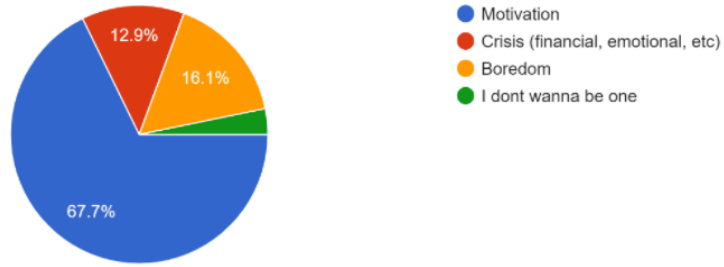


Gender
31 responses



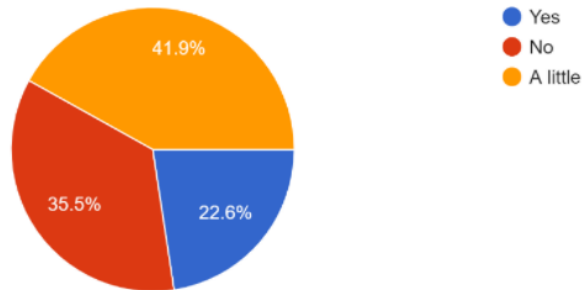
What was the cause behind your decision to be an entrepreneur?

31 responses



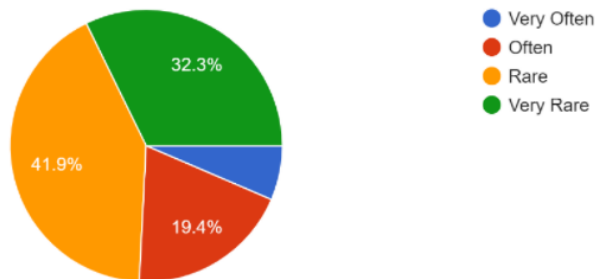
Did you face criticism from your loved ones while planning to start your business?

31 responses



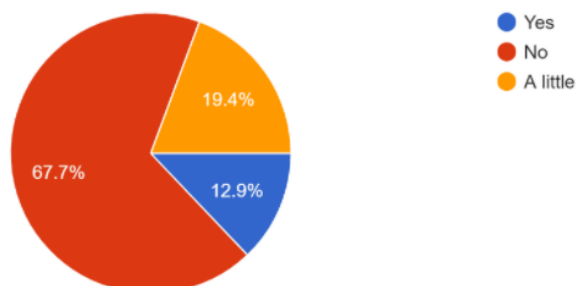
How often have you been discriminated on the basis of your colour/gender/sexual preference?

31 responses



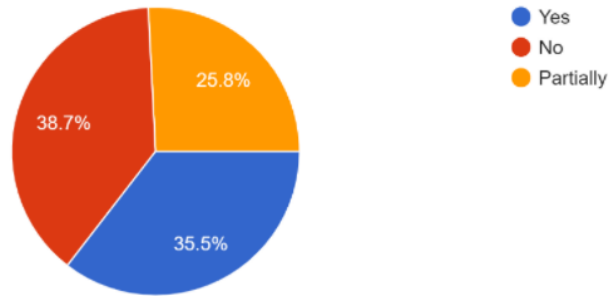
Did you face any discrimination on the basis of your sexual orientation while establishing your business?

31 responses



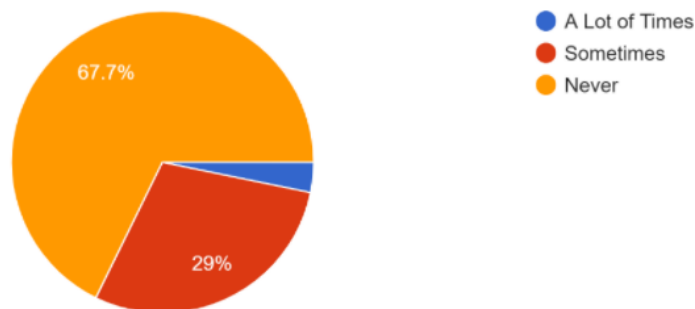
Did you receive any community support or external support being a business person of colour?

31 responses



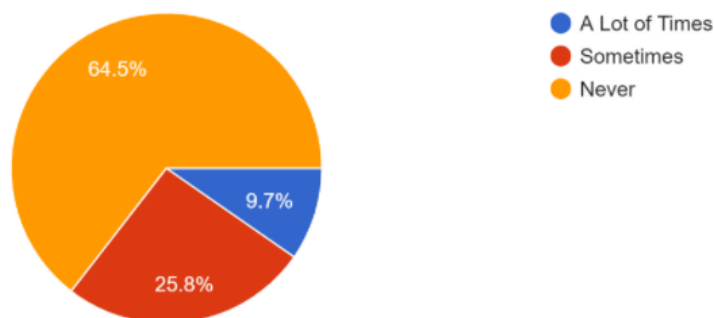
Have any of your customers/potential customers denied purchasing from you because of your sexual preferences? If yes how frequently?

31 responses



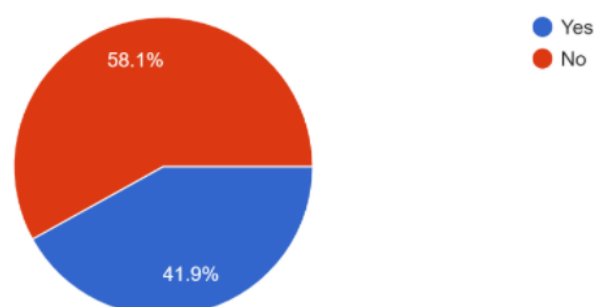
Have you ever experienced any biasness from your supplier because of your gender, race or colour?

31 responses



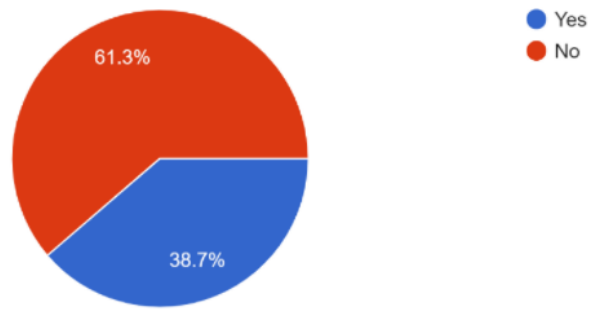
Are you able to form alliances with other business men or women around you or your sexuality becomes an obstacle?

31 responses



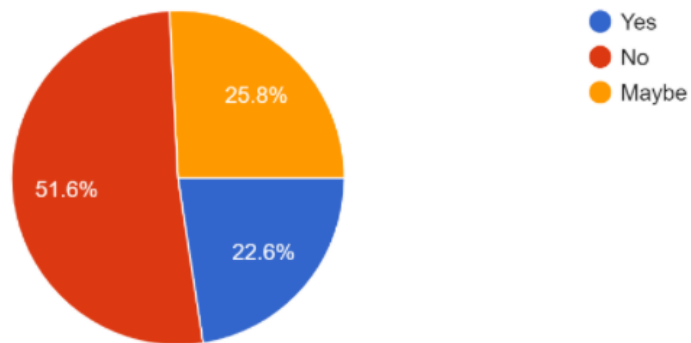
Are you a part of business club or community? If yes, did you get any benefit from there?

31 responses



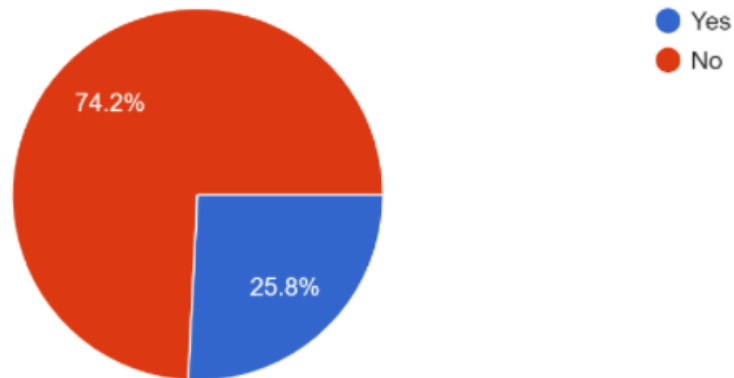
Have you ever felt judged because of your gender or sexuality while working?

31 responses



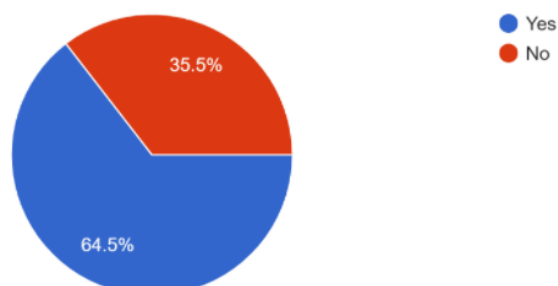
Do you get any benefits that your male colleagues don't get?

31 responses



Do you believe in the idea of "It's a dress. Not a Yes!"? Does it have an impact on your mindset and work?

31 responses



Personal evaluation of the survey

Based on the responses collected from the survey, many of them were females (90.3%) who wanted to be an entrepreneur in order to explore themselves. The entrepreneurs surveyed although faced discrimination in the workplace because of their color/gender and sexual preference, but most of them experienced it very rarely (41.9%) while a noticeable number of them (22.6%) were criticized by their loved ones when planning to start their business. In context with sexual orientation the biases faced vary from a little (19.4%) to no (67.7%). With respect to their color many of them faced either full (35.5%) or partial (25.8%) community/ external support from the community. A great number of entrepreneurs denied the biases they faced from their customers (67.7%) or suppliers (64.5%) based on their gender, race and color and sexual orientation.

The entrepreneurs are not able to form alliances with other entrepreneurs (58.1%). For the issue of getting judges because of their gender and sexuality, the entrepreneurs gave a mixed response. 22.6% felt judged while 51.6% denied.

The above evaluation showcases how the scenario changed with respect to societal stereotypes. Being judged, facing biasness and going through criticism changed depending upon an individual. The entrepreneurs still paved the way for themselves and managed to start their own venture. This survey showed how despite the hurdles, the people with their own individuality managed to take a stand for themselves and flourish.

Conclusion

The main purpose of the paper is now fulfilled. The review of the entrepreneurial sector with respect to gender, sexuality, race & color has been achieved. the paper builds from the base of the research, further exploring the topic through scrutinizing each and every aspect of the above topics mentioned. research on factors that affect a person's choice to be an entrepreneur specifically their motivation to be one has been identified. The criticism they face, the opportunities they are deprived of their rights or entrepreneurial responsibilities and their success in this field is important. Thus, providing them with only education and literature is not enough. The whole entrepreneurial process should be unfolded in front of them to provide a unique perspective.

Synthesizing the existing process model where masculinity prevails at each stage, motivating the people with different gender, sexual preferences and race and color is important. In doing so we can not only encourage them but also expect society to change their behavior. we believe that the distinctive contribution of this paper may help to explain the entrepreneurial process in detail to the ones who aspire to be entrepreneur or to people who face this discrimination from the society. Broadly speaking, this motivates the people to accept their individuality, pursue the given opportunity, make the use of resources, participate in the activities, and believe in success as an outcome of their performance. In the light of the above research, alternative measures to make the success of these entrepreneurs helps and the idea of restructuring the entrepreneurship model may advance. the entrepreneurship process model stretch way beyond masculinity.

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14

GENDER AND ENTREPRENUERSHIP: A STUDY



By Jigyasa*

ABSTRACT

Although it has risen in recent years, the percentage of female entrepreneurs is still significantly lower than that of male entrepreneurs. The purpose of this article is to specify a model in which the relationship between entrepreneurial potential, gender, and entrepreneurial intention is investigated, by analysing how exogenous variables such as perceived behavioural control (PBC) and perceived entrepreneurial skills affect expression of entrepreneurial intention, and how these are mediated by entrepreneurial motivations and risk taking propensity. Multivariate analysis reveals gender differences at the mediation level, as well as the fact that necessity-driven incentives, particularly in men, are an influencing factor, reducing the importance of subjective norm. The extent to which entrepreneurship has an economic impact is determined by a variety of factors, including the quality, gender composition, and type of entrepreneurial activity. Gender equality and female entrepreneurship are critical components of economic growth. This research analyses how gender-related economic growth and female entrepreneurial activity are associated in order to study the relationship between gender equality and the rate of female entrepreneurship.

INTRODUCTION

Males and females have varied experiences with the process of starting a business and the elements that contribute to it, including perceptual and cognitive factors that lead to developing intents to start the venture (Gupta et al., 2017; Hyams-Ssekasi et al., 2019). This has gained traction in the study community since entrepreneurial potential is also dependent on whether these characteristics account for gender differences and how they may be factored in to boost this potential, but what is this potential in this case?

WHAT ARE THE DIFFERENCES BETWEEN MALES AND FEMALES IN THE DEVELOPMENT OF ENTREPRENEURIAL POTENTIAL AND INTENTIONS?

According to our theoretical research, the evidence strongly suggests that gender asymmetry in entrepreneurship stems from the following factors. First, it has been suggested that entrepreneurship as a professional choice now aligns better with male, rather than female, characteristics, particularly attitudinal, behavioural, and motivational traits (Muntean and Ozkazanc-Pan, 2015). Some theories, such as the person-fit theory (Caplan, 1987) and the attraction-selection-attrition model (Schneider, 1987), argue that people will self-select occupations that are more compatible with their personality, competencies, and values. Other personality factors, such as people's perceptions of controllability and efficacy over specific acts, have been proven to be a significant predictor of entrepreneurship goals (Zhao et al., 2005; Krueger, 2017). Males score higher in these perceptions of entrepreneurship (Koellinger et al., 2008), yet the causal relationship between genders and intents has been proven to be non-significant (Zhao et al., 2005). As a result, we anticipate finding differences in their perceptions by gender in their mean, but no differences in causal predictions to intention in both.

MOTIVATIONAL FACTORS

Competencies are unlikely to be sufficient reasons for people to desire to be entrepreneurs on their own. This interest in company could also be due to them personally wanting to, believing that entrepreneurship can provide an intrinsic pleasure or help them reach personal goals, making it appealing (Krueger and Brazeal, 1994). There is also some gender variation in these objectives, with females seeking independence (Sánchez Caizares and Fuentes Garca, 2010), males seeking profit (Maes et al., 2014), and both seeking personal fulfilment (Buttner and Moore, 1997). This inherent urge to achieve personal goals is what pushes a person to take action toward that goal.

ENVIRONMENTAL FACTORS

Males and females have various hurdles in entrepreneurship (Jennings and McDougald, 2007), some of which may be related to stereotypes (Marlow and Patton, 2005) that may create a self-imposed barrier for females (Langowitz and Minniti, 2007). In other words, it becomes more difficult for them to succeed or they are primed not to pursue it, as evidenced by studies that show a bias against traits more commonly found in females (Balachandra et al., 2017), or stereotyping effects that create a cascade on perception toward the entrepreneur stereotype (e.g., Gupta et al., 2008, 2017). It has also been shown that a significant number of females are focused on various business sectors, primarily low-income or tiny businesses, which are more

difficult to finance or assist due to reputation issues and a lack of investor interest in these types of initiatives (Klapper and Parker, 2011). We don't have the power in our dataset to explain relationships with stereotype-related factors, or how they are mirrored in the perceptions of would-be entrepreneurs, so we'll utilise subjective norm to infer how perceived support might affect intention and motives more broadly. To this purpose, Baughn et al. (2006) discovered that positive societal perceptions of entrepreneurship influence females more than males to pursue entrepreneurial activities, and that gender equality does not increase the number of female entrepreneurs (a finding also shared by Sarfaraz et al., 2014). However, in many countries, the perception of female entrepreneurs is improving, which motivates more women to start businesses. Given how female empowerment and engagement in the labour market could benefit their entrepreneurial endeavours, we based our next hypothesis on the United Nations Development Programme's Gender Inequality Index. In its most recent report (UNDP, 2018), Spain is ranked 14th in the world for gender equality (out of 189 nations), therefore it's realistic to expect a good effect from social perception with both groups, and that females are encouraged. We further expect, based on Baughn et al. (2006)'s research, that this would have a bigger effect on females' reasons, therefore moderating its favourable effect on intention.

Finally, entrepreneurship activity is related to economic development and impacts both genders; nevertheless, it has a greater impact on females in a way that fluctuates more dramatically, even closing TEA gaps in some developing nations due to necessity-driven circumstances (Kelley et al., 2017). This third variable narrows, disappears, or even inverts the gender difference if women need to be entrepreneurs, but widens if they don't.

HOW DID INDIA'S WOMEN-OWNED BUSINESSES FARE DURING COVID-19?

Due to supply chain interruptions, the pandemic has impacted self-employed women (including women entrepreneurs, members of women self-help groups, and home-based employees), who account for over half of all working women in India. In addition, non-payment of past salaries and current arrears have exposed these women and their families to economic shocks. In the early aftermath of the lockdowns, between March and April 2020, an estimated 17 million to 19.3 million women (Abraham et al 2021) were unemployed. It's worth noting that women dominate high-impact industries like commerce and services. Personal and non-professional services, which include small-business owners such as tailors, dressmakers, petty shopkeepers, barbers, and beauty salon owners, as well as domestic help and part-time workers, had higher volatility than other sectors. The impact of the lockdown was unmistakable, with male employment falling by 30% and female employment falling by 43% compared to pre-lockdown levels. Women-led businesses in rural areas, on the other hand, have a history of surviving economic downturns. However, India's long-term lockdown was unusual, and nothing is known about the consequences of a complete shutdown, particularly when women are burdened with increasing unpaid care duties and limited cash reserves at home and in their businesses. Covid-19 has ushered in some game-changing changes, such as acceptance of remote working models, increased use of digital channels on both the demand and supply sides, and a shift toward digital

versus physical interactions, all of which have the potential to level the playing field, particularly for women. The difficulty is to get over the shattering short-term impact while also designing medium-term solutions that will allow women to benefit from these transformative advances.

WOMEN ENTREPRENEURS DURING PANDEMIC AND HOW SOCIAL MEDIA HELPED THEM

For Shalmoli Chatterjee, 42, of West Bengal, the year 2020 was much like any other - a fatal virus, being quarantined, domestic tasks, and wondering when the epidemic would end. It was also the year she decided to take a risk and start her own retail store, fulfilling a childhood goal that had been stifled by years of domestic duties. Shalmoli's spouse lost his job owing to the pandemic in May 2020. The Kolkata couple knew the coming months would be difficult, but none of them gave up hope. Shalmoli wanted to establish her own business with the money she had saved over the previous decade. "Handicrafts and the lifestyles of the craftsmen who create them have long piqued my attention. I'd be inspired by them and make my own jewellery, which I'd be complimented on every time I wore it. It was 'now or never,' I realised. I had a few pieces of jewellery that I had crafted to pass the time during the lockdown. I hurriedly snapped a few images on my husband's phone and sent them to many WhatsApp groups. In fact, there has been a paradigm shift in the way people conduct their businesses in recent years, particularly among women entrepreneurs. The introduction of social media can be responsible for much of this.

Just like Shalmoli Chatterjee, many women and young girls started their small businesses from their home, most of which were hand-made jewellery, cakes and bakery, thrift stores online, home-made achar-chutney businesses, and many more innovative initiatives.

Everyone noticed a sudden rise in their demand, which was because of the good quality of the products and at-home touch. Women face additional challenges when beginning a business: obtaining financing, gathering support from others, overcoming sceptics, and juggling home chores with her passion in India, where women are still the primary carers in the family. However, social media makes it easier for women to gain attention for their home-based companies.

It's easy to use, free, and allows you to work from anywhere.

The work-from-home concept is ideal for women like Shalmoli who are returning to work after having children. Traditional brick-and-mortar businesses are rapidly becoming outdated as a result of social networking. For example, in the midst of a pandemic, although stores remain shut, social media is always available.

THE URGENCY

In India, women's socioeconomic role is undervalued. Only a small percentage of women work outside the home, as unpaid caretakers, household managers, or in other home-based occupations. Despite the fact that women are more educated and have access to better healthcare than males, they continue to confront structural, social, and economic hurdles to paid work. As a result, women's economic progression is limited, and India's social and economic progress is hampered. Women's potential in

the country is still mostly untapped. Despite substantial progress, women have been overlooked in India's development storey. According to the World Bank, 75% of working-age women (or 35% of India's working-age population) do not have paid work.

COUNTRIES' TAKE ON ENTREPRENEURSHIP

All governments see entrepreneurship promotion as a critical policy for long-term job development, as well as product, process, and organisational innovation (OECD Council Report, 2012). High female entrepreneurial activity rates are connected with countries having high total entrepreneurial activity rates (Verheul et al. 2004). In recent years, the number of female entrepreneurs around the world has steadily increased; researchers and policymakers have begun to pay more attention to female entrepreneurship (Nedelcheva, 2012). Treating women as second-class citizens means neglecting and undervaluing enormous human resources. If women have equal opportunity and access to resources, they can play critical roles in the economic growth process. Despite an increase in the number of female entrepreneurs, the proportion of female entrepreneurs remains low when compared to their participation rate (Minniti and Arenius 2003). For some women who need to work at home, entrepreneurship might be a viable alternative to make revenue and lower their unemployment rate and poverty, especially in LDCs with high female unemployment rates (Sarfaraz et al. 2013). Gender equality is predicted to boost female entrepreneurship support (Baughn et al. 2006). Women often find that entrepreneurship allows them to balance their domestic responsibilities while also providing financial assistance for their families (Bertaux and Crable 2007). In the recent decade, women's entrepreneurship has been recognised as a key untapped source of economic growth (Georgeta, 2012). According to the GEM Women's Report 2012, 126 million women were beginning or running new enterprises, while 98 million were running existing firms. Across regions, the distribution of total female entrepreneurial activity does not follow the same pattern. While female entrepreneurs in Sub-Saharan Africa have the highest rate (27%) of all regions, female entrepreneurs in the Middle East and North Africa have the lowest rate (4%). Furthermore, the MENA/Mid-Asia area has the biggest gender imbalance in Total Early Entrepreneurial Activity (TEA) (men four times that of women), whereas Sub-Saharan Africa and Developing Asia have the best gender equality in TEA on average.

Recognizing the elements that influence female entrepreneurship necessitates knowledge and comprehension of the subject and its relationship to economic development. "Although it is widely understood that entrepreneurship is a significant force affecting economic change, our understanding of the relationship between entrepreneurship and development remains incomplete" (GEM 2008 Executive Report). GEM's cross-national entrepreneurial activity metrics, which are offered separately for men and women, have paved the path for research and comparative studies between countries.

GENDER, ECONOMIC DEVELOPMENT AND ENTREPRENEURSHIP

Gender refers to the socially constructed roles, norms, behaviours, expectations, and activities that are assigned to men and women. Gender equality has been identified

as one of the eight Millennium Development Goals, as well as a critical component in reaching the other seven (United Nations Population Fund, 2013). Scholars agree that women can play an important part in the entrepreneurial phenomena. In terms of economic development and entrepreneurial activity rates, gender imbalance occurs. There is a considerable gender discrepancy in the rate of entrepreneurship around the world (Allen et al. 2008). Women's entrepreneurial engagement is lower than men's at different stages of growth, according to a GEM analysis of 18 economies from 2002 to 2010. (Kelley et al. 2011). In affluent areas, however, the likelihood of women engaging in entrepreneurial activities is lower than in poor ones .

In industrialised countries, women have more equitable possibilities than in undeveloped countries. As per capita income rises, various indicators of gender equality improve (Dollar and Gatti 1999). Is it reasonable to predict that as gender equality improves, entrepreneurial activity will increase? Or, to put it another way, do more developed countries with greater gender equality have a higher rate of female entrepreneurship? "In general, female TEA rates follow the same pattern as male TEA rates, but at lower levels" (Kelley et al. 2013). According to the 2011 GEM Women's Report, the gender gap between entrepreneurs has widened in certain nations while narrowing in others. Overall, regardless of gender, the rate of entrepreneurial activity falls as economies go to a higher degree of development. Individuals in more developed economies, when both men and women have varied career possibilities, appear to be more interested in having secure jobs than creating their own enterprises. In general, though, the entrepreneurial gap between men and women narrows as economic development progresses (Kelley et al. 2011). As economies progress from factor-driven to efficiency-driven to innovation-driven, the gap between men and women entrepreneurs narrows from 5.2 percentage points (lower for women) to 4 points and 3.4 points, respectively, as economies progress from factor-driven to efficiency-driven to innovation-driven. Gender equality, it appears, may lead to an increase in female entrepreneurship. As a result, one may argue that the prevalence of women entrepreneurial activity is higher in economies where women are more likely to have equal chances with men than in nations where women face greater gender disparity. The key contribution of this paper is that it provides a complete assessment of whether gender equality leads to a higher rate of female entrepreneurship; our findings support those of Baughn et al. (2006), who found that gender equality did not predict the proportion of female entrepreneurs.

DISCUSSION

Identifying the obstacles that impede women from contributing to socioeconomic growth is a significant focus of gender research and female entrepreneurship. Female entrepreneurship and gender parity may also be linked to economic development. The rate of female entrepreneurship, on the other hand, does not appear to provide any useful information about the level of development. Zambia (40%) and Pakistan (1%), both defined as factor driven countries, had the greatest and lowest rates of female entrepreneurship in 2012, indicating that there is no universal rule for connecting the rate of female entrepreneurship to the level of economic development. As a result, each country's female entrepreneurship has its own peculiarities and must be evaluated in its specific socioeconomic environment. While the low proportion of

female entrepreneurs in Pakistan can be linked to a considerable gender disparity in educational attainment, economic engagement, and opportunity, the low rate of female entrepreneurs in high-income economies can be attributed to job opportunities. In more developed countries, greater gender equality and access to a wider range of career opportunities appear to lower women's motivation. Gender parity does not automatically lead to more women starting businesses, implying that entrepreneurship is a complicated phenomena that requires "multiple theoretical lenses to comprehend" (Landstrom&Lohrke, 2010). More comparative research are needed in the context of female entrepreneurship to discover the hidden features of the causes for differences in female entrepreneurship rates, the quality and longevity of their enterprises, and their contribution to economic development. The interaction of various institutions (both formal and informal) and individuals in a society can produce an environment that fosters or inhibits female entrepreneurial engagement. It's worth noting that the causes for the absence of female entrepreneurship in developing nations appear to be distinct from those in industrialised economies. One could argue that women in industrialised countries are more likely to obtain suitable employment than women in developing countries, who, due to gender concerns and unfavourable entrepreneurial conditions, are less likely to be absorbed into the labour market. "Entrepreneurship tends to wane as economies improve because society affords more work opportunities. As a result, it appears that gender equality boosts women's prospects to become entrepreneurs or employees in developed economies, whereas gender disparity hinders women's economic contributions in developing countries, both in terms of establishing a business and finding work. In developing nations with a large gender disparity in employment, the need of supporting female entrepreneurial activity appears to be even more critical. For example, in Turkey, the jobless rate among university-educated women is more than three times greater than that of university-educated men; in Iran and the United Arab Emirates, it is over three times higher, and in Saudi Arabia, it is eight times higher. As a result, it can be concluded that a low rate of female entrepreneurship in developed economies does not always imply a low rate of female contribution to the economy, whereas a low rate of female entrepreneurship in developing economies combined with a high women unemployment rate may indicate a low contribution of women to socioeconomic development.

CONCLUSION

The growing involvement of women in economic development, as well as their increased participation in social activities, necessitates research into many aspects of women's entrepreneurial activity in the context of development. The relationship between different stages of entrepreneurial activity and the Gender Development Index in the high-income country group and the Europe and Asia low/middle-income country group shows that there is no significant relationship between early-stage entrepreneurial activity and the Gender Development Index. There appears to be an adverse association between the likelihood to establish an entrepreneurial endeavor and gender development equity, regardless of income levels.

There is no substantial association between established firm owner-managers and GDI across all country groups. However, when comparing each group of the three income

levels countries, a negative relationship between women established business owner-managers and GDI can be seen as the level of income declines from high-income country groups to low/middle-income country groups (Europe/Asia and Latin America/Caribbean regions the Europe and Asia). Within the Latin American and Caribbean low/middle-income nation group, there appears to be an inverse link between overall entrepreneurial activity and GDI. For all 41 nations studied, regardless of their income level, there is a diminishing link between overall entrepreneurial activity and GDI. Finally, the findings reveal that there is no correlation between GEM and the stages of entrepreneurial activity (early-stage entrepreneurial activity, established business ownership, and overall entrepreneurial activity) across all 41 nations studied.

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GROWTH, COMPETITIVENESS ENTREPRENEURSHIP AND REGIONAL DEVELOPMENT



By Ananya Gupta,* Disha Bhati* and Ashwajeet Kamble**

Abstract

Entrepreneurship: The Future of Growth and Competence

When we talk about the word "growth", it has a positive connotation; people and businesses both grow and mature, obtaining new knowledge and resources. To be absolute, Growth is a process that puts a person's, companies, and acting entrepreneurs' talents and resources to the limit. It entails both learning and letting go of what previously learnt or own and alters the history and trajectory of a single company and its founder. Growth of even a single start up may lead to region-wide opportunities. Entrepreneurship and Regional development are two terms which are unmistakable in its inclination yet when associated give the meaning that the improvement of the regions can be made with entrepreneurship. It generates employment and expands the per capita income through which the improvement of the country is estimated. The idea of a continuous structural change caused by entrepreneurship, which drives economic development, had a tremendous impact on economic thinking, ranging from growth theory to enquiries into the dynamics of innovative firms of economic history examining the relationship between institutional change and economic and technological progress.

This paper brings together the disparate literature on Entrepreneurship Growth, Regional Development and Competitiveness entrepreneurship in one place.

Introduction

Entrepreneurs are the persons who take initiatives, introduce new innovations and advancements in order to contribute towards economic wellbeing and resilience. The key to a nation's economic growth is the nurturing and unleashing of its entrepreneurial talents developed and developing nations regional development and stimulation of a culture of entrepreneurship can create jobs and opportunity. Regional development is not only based on the geographical one but with the development of human beings. The Entrepreneurs of Indian Subcontinent have been working efficiently to claim the highest level of innovation, development and healthy competition. Economic and technological progress. In a competitive market, some companies

expand while others do not—or grow at a slower rate. Corporate entrepreneurship is more than just new product development, and it can include innovations in services, channels, brands, etc. The individual perceptions of opportunities in national business start-up culture differ widely from country to country. In Asia, the Indian subcontinent scores higher than other East Asian countries. With the development and stimulation of a culture of entrepreneurship, Indian economy has become an indispensable part of Global entrepreneurship. It was the impact of Indians in America that gave the lie to the deeply held belief in traditional India that entrepreneurs were born – in a certain community. India has been continuously aiming to build the top-down strategic policy for creating an entrepreneurship friendly environment throughout the nation. Our research paper has thrown light upon how Indian Entrepreneurs have soared to the heights in the last decade by overcoming all the challenges.

Research Methods

In our case study, we used an inductive research method.

The research began with the collection of primary data about the subject of study in order to identify patterns that would later be used as the foundation for model creation. The process also includes comparing the reported difficulties to earlier research's conceptual and process models and suggesting changes or modifications. In the case of the inductive technique, the models and concepts offered in the literature review can influence but not limit what the researchers find when gathering primary data.

Because the case study technique is best adapted to the goal of understanding novel and emerging phenomena, a single case study was chosen.

Because it allows the researcher to construct a rich, holistic image of the target, the qualitative research method was chosen. Semi-structured talks were used to gather information. Pre-planned themes were used to ensure that conversation covered the important subjects that emerged from the framework design and to direct so that summaries and comparisons between individual respondents could be made.

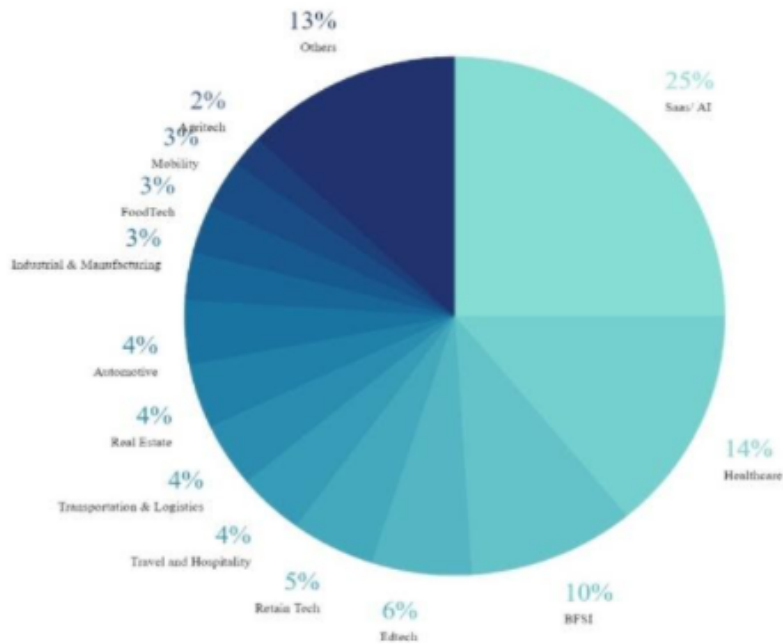
For the case study, our team consisted of three researchers with different educational and research backgrounds and expertise. A collaborative semi-structured frame was constructed in advance to eliminate biases in conducting dialogues. Each of our team members saved and analysed the data collected from respondents in order to form our own opinions.

FINDINGS

According to the research, in the past decade the Indian economy has surged due to a change in entrepreneurial plan of action. The following findings give a brief view of the entrepreneurial ecosystem in India:-

- India boasts the world's third-largest start up environment, with annual growth of 12-15 per cent predicted year over year. India has received an increase of 20% in the last.
- India is becoming the world's fastest-growing start-up ecosystem with over 60 Unicorn Start-ups, as of 2021. Indian Entrepreneurs are trying to master all the sectors Artificial Intelligence Edtech, Real Estate Automobile Healthcare and Hospitality with great speed claim the highest position in the World Economy and increase the GDP of India.

Sector-wise split of startups

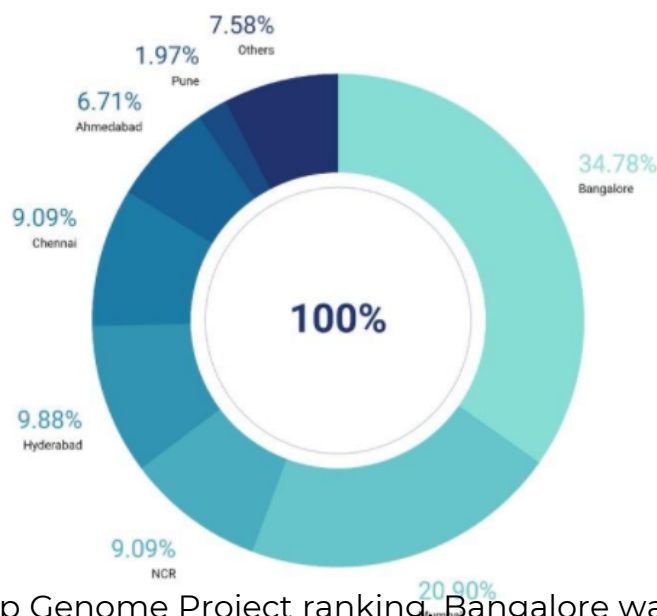


- South and central India are among first to welcome entrepreneurs and start-ups. Delhi, Bangalore and Mumbai are some of the most booming state economies in India.

Analytically south India and central India are among first to welcome entrepreneurs and start-up get a high surge in number of investors, technological, managerial support. Entrepreneurs are the persons who take initiatives, introduce new innovations and advancements in order to contribute towards economic wellbeing and resilience. The key to a nation's economic growth is the nurturing and unleashing of its entrepreneurial talents developed and developing nations regional development and stimulation of a culture of entrepreneurship can create jobs and opportunity. Regional development is not only based on the geographical one but with the development of human beings. The Entrepreneurs of Indian Subcontinent have been working efficiently to claim the highest level of innovation, development and healthy competition. Economic and technological progress. In a competitive market, some companies expand while others do not—or grow at a slower rate. Corporate entrepreneurship is more than just new product development, and it can include innovations in services, channels, brands, etc. The individual perceptions of opportunities in national business start-up culture differ widely from country to country. In Asia, the Indian subcontinent scores higher than other East Asian countries. With the development and stimulation of a culture of entrepreneurship, Indian economy has become an indispensable part of Global entrepreneurship. It was the impact of Indians in America that gave the lie to the deeply held belief in traditional India that entrepreneurs were born – in a certain community. India has been continuously aiming to build the top-down strategic policy for creating an entrepreneurship friendly environment throughout the nation. Our research paper has thrown light upon how Indian Entrepreneurs have soared to the heights in the last decade by overcoming all the challenges

- States like Maharashtra and other in central region (having a better opportunity for start-ups and have more number of entrepreneurs) are having high GDP growth along with low fiscal deficit. Jharkhand and Chhattisgarh are the regions with most of the ores thus attracting many entrepreneurs in terms of investment and raw materials.
- Central Region contributes to maximum per capita income of the country, considering the fact that about 50% of start-ups and entrepreneurs are from central regions with high level of entrepreneurship, income, development, start-up and innovation.
- Women Entrepreneurs play a major role in Indian and World Economy. Globally, India ranks third amongst countries reporting gender gaps in business – only 33% of the early-stage entrepreneurs in India are women.
- Out of 58.5 million businesses counted by that census, 8.05 million were owned by women, which correspond to a rate of 13.76 per cent of women among the total number of entrepreneurs in India.
- Millennial says that measures to close the gender gap could lead to a 6.8-percent gain in GDP. It has been estimated that advancing women’s equality in India could boost its GDP by \$0.7 trillion in 2025 or 16 per cent as compared to the ‘business as usual’ scenario. Moreover, entrepreneurship remains critical to harness the economic potential of women and thus this will further help to achieve the sustainable development goals by 2030.

Best City to Startup



- In the 2019 Start-up Genome Project ranking, Bangalore was declared one of the top five fastest growing start-up cities in the world. Indian businesses have gone on to raise large sums of money from a variety of international and domestic investors. The top 15 deals accounted for around 40% of total deal value, suggesting that most funds place a higher emphasis on deal quality than quantity.
- In 2018, India had over 50,000 start-ups, with around 8,900–9300 of these being technology-based. The start-up ecosystem grew at a rate of 15% year over year, while the number of incubators and accelerators expanded by 11%. Over the course of the year, start-ups in the country were able to create an estimated 40,000 new positions,

bringing the overall number of jobs in the start-up ecosystem to 1.6-1.7 lakh. The number of private equity deals in India increased for the second year in a row in 2018, and while the average deal size fell somewhat from the previous year, the overall value of \$26.3 billion was the second largest in the recent decade.

- In a recession-like year, when the revenue crunch caused by the Covid-19 pandemic Indian start-ups managed to weather the storm, post impressive revenue figures and raise funding to gain a valuation of more than \$1 Ban and enter the unicorn club.
- Standing tall during the pandemic second-wave headwinds, Indian start-ups have shown a strong resilience in this quarter. About 160 funding deals were closed in the three months to June 30, up 2% from the January-March period, while fundraising rose 71% to \$6.5 billion with finch upstarts cornering over a quarter of the incoming capital. Besides these, 11 Indian start-ups — Unacademy, Pine Labs, First Cry, Zenoti, Nykaa, Postman, Zerodha, Razor pay, Cars24, Daily hunt and Glance — entered the unicorn club this year
- The core propositions of the Indian start-ups were to actually solve challenges for individuals and businesses during the lockdown for a large portion of the year. Economic Times stated that at \$800 million, Swiggy raised the biggest round during the quarter, followed by ShareChat (\$502 million), Byju's (\$340 million), PharmEasy (\$323 million) and Meesho (\$300 million), the report stated.

Discussion

- The entrepreneurial ecosystem in India is the third largest and fastest growing ecosystem in the world according to the World Economic Forum. This entrepreneurial network has been built since the time of Rig-Veda when cottage industry was a means of self-employment for more than 50% of the Indian Economy. This gave huge economic independence to local artisans and markets in India.
- The number of new companies formed has been steadily increasing over the past decade. Surge in the start-up activities have built the foundation of the knowledge, economy and have led to the creation of highly valued tech based and non-tech start-ups. Growing entrepreneurial web has not only stimulated competition but has also made the most out of artisanal skills in tech and rustic areas of the country.
- At India the entrepreneurship is not limited to a group of people working together or working in the cooperative societies but it has extended to a larger level where individuals are working to set up their own business and build opportunities not only for themselves but also the budding artisans of India.
- The Indian Entrepreneurial Ecosystem seems to have all the critical elements in place —a large market, high-quality talent and access to finance. To increase the pace of entrepreneurship, Indian Government is trying to bring about a change in policy making, exports and imports and various other sectors to achieve its stated targets by 2025.
- Women entrepreneurship is gaining pace throughout the Indian subcontinent. A lot of women are taking the initiative to set up their businesses. Of the 63.3 million MSMEs in India, 60.8 million (96%) were proprietary concerns and of these men ran 79.6% of enterprises and women, 20.4%. Earlier, Out of 58.5 million businesses, 8.05 million were owned by women, which corresponded to a rate of 13.76 per cent of

women among the total number of entrepreneurs in India. However, improvements have been done and better assistance is being provided to Women Entrepreneurs resulting to an increase of about 7% in female contribution to entrepreneurship.

- India Entrepreneurs have set an example that entrepreneurship is not a legacy but a solution of problem created by inquisitive mind without any age bar. One of the finest example of this is a 15 year old young mind “Tilak Mehta” who is the Founder of Paper n Parcel a Digital Courier Company which provides One-Day parcel service, with the help of "Mumbai Dabbawala." The initiative by young Mehta not only created business opportunities, employment, but also posed a great competition to age-old existing courier services in Mumbai. Eventually this competition led to decrease in the price of courier services of various local companies.
- The eco-system for early-stage entrepreneurship in India is developing in India. In fact, organizations like TiE and NEN have been fostering entrepreneurship, and enabling the eco-system for quite some time now. Recently, a number of accelerators and incubators have started operations; a number of events like Start-up Weekend, etc. are taking place.
- The connectivity to remote areas has been improved to a great extent both in terms of physical accessibility by road and rail and virtual accessibility in terms of telecommunications and information technology. This presents the ideal situations for enterprises to spring up in the rural areas where the cost of operation, labour and availability of raw materials is substantially cheaper as compared to urban parts of the country.
- Consequently, the budding Entrepreneurs and existing SMEs in the growth mode are identifying the sources, enablers, and barriers to growth in India thereby fostering future growth, regional development and competitiveness in India

LIMITATION

This section consists of two parts:

- 1) LIMITATIONS OF ENTREPRENUERSHIP INDIA
- 2) LIMITATIONS OF RESEARCH PAPER

1) LIMITATIONS OF ENTREPRENUERSHIP IN INDIA

Indian businesses have shown the entrepreneurial skills and flexibility to grow despite the challenges. Besides this, some issues like political supremacy, corruption/stalemate, non-inclusive growth that focuses only on the urban rich, stalled reforms, etc. that are brimming over the financial and economic aspects of Entrepreneurship. Through our research we have figured out some of the factors which adversely affects Entrepreneurship in India. They are as follows:

- Capital is one of the most crucial factors in establishing a business. Increased capital investment in viable projects leads to higher returns, which helps to speed up the capital formation process. It has been observed that Entrepreneurs and venture capitalists realize the return on their investments only through a successful exit. In the absence of exits, the resources stay locked up, liquidity is scarce and

entrepreneurial recycling that can support the next generation of startups is not set in motion

- Access to the proper kind of labor has an impact on entrepreneurship. The creation and growth of entrepreneurship is influenced by the quality of labor rather than the quantity. Due to lack of awareness and skills various Entrepreneurs stoop down to failure. Infrastructural facilities, such as efficient transportation, can help to overcome the problem of labor immobility.
- For the growth of entrepreneurship, the role and importance of market and marketing are critical. Both the size and composition of the market have an impact on entrepreneurship. In practice, a monopoly in a market for a certain product has a greater impact on entrepreneurship than a competitive market. The price-sensitive nature of the Indian market raises questions on its potential to support highly profitable businesses. The disadvantages of a competitive market, can be mitigated to some extent by improvements in transportation systems that facilitate the transfer of raw materials and completed commodities, as well as increased demand for producer goods.
- India's educational system was founded on religion. It propagated the notion that business is a legacy rather than innovation of mind. However academic intelligence does not gives birth to unique business plans. The lack of awareness and literacy forbade various various artists, craftsman and communities to step ahead and live a life of their choice..
- Society's attitude towards entrepreneurship plays a major role in its development. Some communities have a natural aversion to any form of profit-making and they cannot tolerate change. The dynamic aspect of Entrepreneurship madfe it difficult for entreoreneurs to prosper.The unsolicited opinions of women being lesser then men has receded the growth of women entreprenurs thereby putting another major break on the developing economies.

Entrepreneurial growth necessitates the pursuit of appropriate goals such as profit, prestige, and social position. The strength of these motivations is determined by the society's culture. Entrepreneurship would be celebrated and rewarded if the society was economically or monetarily oriented; money accumulation as a way of life would be admired. People in less developed countries are not driven by money. Compared to monetary incentives, monetary incentives are less appealing. Non-economic endeavors provide many opportunities for people to achieve social distinction. As a result, men with organizational skills are rarely dragged into business. They put their skills to non-economic purposes.

2) LIMITATIONS OF RESEARCH PAPER

- Our research paper is limited to the context of Indian Entrepreneurial Ecosystem
- As students we have time constraints.
- The online mode has restricted our research to internet and various research papers

Future Scope

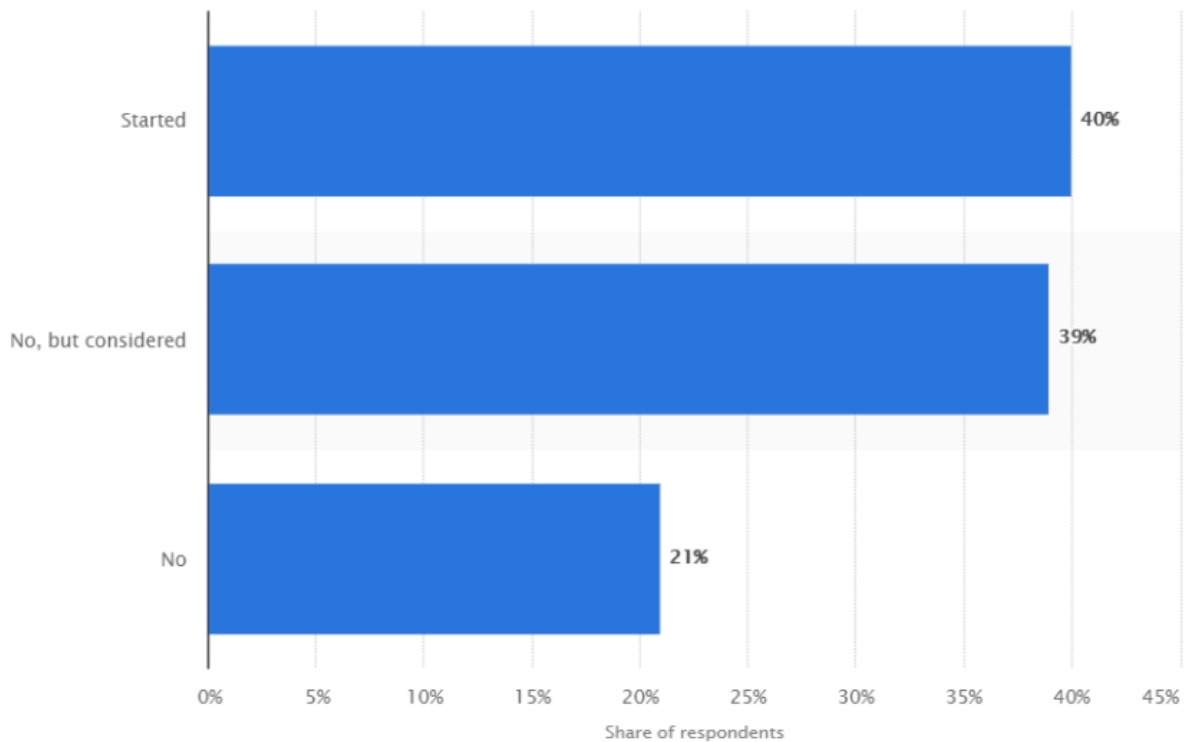
India has steadily grown as an economic power in the past two decades and has created the bare necessary infrastructure required to sustain this rate of growth. Being a developing economy, entrepreneurship has a great scope in India. Due to the change in course of action, professional education for new venture creation has botched up the age-old divergence in mind-set. This has not only led to development of employment rate and business creation but also has made Indian Start-ups stand amongst World Unicorn Start-ups. Indian businesses have shown the entrepreneurial skills and flexibility to grow despite the challenges. However, the Indian Economy still needs to grow on a sustainable basis. Being a context-dependent phenomenon, growth is influenced by stakeholders' expectations. Resources, market possibilities, and personal ambitions all influence growth, as well as its directions and speed. Therefore, the budding Entrepreneurs and existing SMEs in the growth mode should identify the sources, enablers, and barriers to growth in a similar way, bolstering the argument that researching can help predict future growth. They should make use of both labour and technology intensive techniques in equal proportion. In any developing or developed country, value addition takes place efficiently when their Government supports and formulates complementary policies like making various infrastructural facilities efficient and responsive to the needs of the manufacturing sector. Indian Government has introduced schemes such as MSME Market Development Assistance, Start-up India Initiative, Women Entrepreneurship Platform by NITI Aayog, NewGen Innovation and Entrepreneurship Development Centre and few others to help the start-ups with the necessary funding and skill sets crucial for the growth of their business ahead. It has been predicted that closing the gender gap could lead to a 6.8-percent gain in GDP. Advancing women's equality in India could boost its GDP by \$0.7 trillion in 2025 or 16 per cent as compared to the 'business as usual' scenario. Moreover, entrepreneurship remains critical to harness the economic potential of women and thus this will further help to achieve the sustainable development goals by 2030. Businesses are recognising the disruptive potential of start-ups and teaming with or investing in them. Corporate Firms can take the form of social media platforms like Facebook, Instagram, Twitter, in collaboration with Start-up India Program. The Indian government has started recognising the importance of collaborating with disruptive innovators at all stages of the value chain and leveraging their innovations to improve public service delivery. Various MNCs like Goldman Sachs, Microsoft, Ernest Young have started programs to empower women and young entrepreneurs. Small Initiatives like these can bring about a huge change in Indian Economy with a great scope of development and new start-ups. Therefore, it would be worthwhile for all the Entrepreneurs in and outside India to explore themselves and various opportunities available, thereby promoting creative thinking and innovation to foster growth, stimulate regional development and boost healthy competitiveness for all.

Conclusion and Suggestions

Entrepreneurship provides employment opportunities to everyone, irrespective of age, gender, educational qualification and financial status. As technology gets developed the entrepreneurial ecosystem has improved and now India is generating entrepreneurs from all communities.

There is always a scope for improvements. We recommend following suggestions which can be undertaken by the Entrepreneurs and Government for better development-

- For a single optimum model of growth of a start-up enterprise, many models should be researched and used rather than sticking to age-old ideas
- To promote rural development, bring about major regional changes as part of economic liberalization Government should focus on including reorganization of spatial structures pertaining to industrialization and the formation of new industrial regions
- Initiatives should be taken to introduce entrepreneurship into educational systems, to educate rural entrepreneurs, to set up labs throughout India to incubate companies and ideas.
- Leadership skills, Creative thinking, Networking and Communication skills, financial knowledge and management Technical knowledge should become an essential part of the educational system to make the youth get hands-on experience.
- Entrepreneurs should focus on exploring the similarities and differences between various models to foster growth, stimulate regional development and boost healthy competitiveness
- Female Entrepreneurs should be aided with better assistance to equate the male-female proportion and harness the economic potential of women entrepreneurs and achieve SDG's.
- Funding should be made by government for supporting small Entrepreneurs. Government offices should speed up the pace work for approvals.
- Women and Young Entrepreneurs should be given full assistance and their ideas should be made vocal amongst all.



This chart clearly states that about 40% of the respondents started their enterprise in the year 2018. It shows a significant growth in the rate of entrepreneurship in our country.

According to Economics Times, about 1,300 startups started in the year 2019. Also, about 8,900 tech startups established in our country

This data clearly shows that the rate of entrepreneurship is improving every year, stating a great sign of improving entrepreneurship opportunities in India.

The startups created a significant impact on the level of job opportunities for the working population of our country. It contributed about 1.3-1.8 lakh indirect jobs and 60,000 direct jobs.

About 18 per cent of the startups of India have started using high tech technology that means there are about 1,600 such companies in India. This number comprises just 8 per cent of in the year 2014 and now has seen a remarkable growth of about 40 per cent CAGR (compound annual growth rate) over the past five years according to the report presented by Economies Times.

This information clearly states the level of impact technology plays in the field of entrepreneurship. We still need to work harder to achieve the goal of 100% high-tech technology-based ventures. Technology helps increase the scale of their business, which further leads to an increase in the level of job opportunities that their enterprise can provide to the nation. Technology up-gradation will be the ultimate solution to the problem of unemployment. Entrepreneurs must use cutting-edge technology to grow their businesses and contribute to India's economic growth.

According to Mr Ghosh," the Indian startups' ecosystem plays a significant role in providing a platform for the innovators to flourish and explore by strengthening their capabilities and fostering co-creation.

It will help in improving the research sector of our nation as well. So, the adoption of technology plays a vital role in the development of our economy. So, we require some strict policies from the government to improve the level of technology used in our country. Also, it will help to increase the level of production and manufacturing in our

country. It will solve numerous amount of problems in our country. Studies found an increase in the number of B2B services provided by these startups to various ventures. It shows that education plays a positive impact on entrepreneurship. Educated entrepreneurs can provide the latest services through the knowledge obtained by their higher education. Also, education helps in widening the scope of thinking. So, educated entrepreneurs can use this skill to make better decisions in the initial stages of their enterprise.

In a nutshell, we need to improve the level of education and access to high-tech technology to improve the level of entrepreneurship at a greater rate to achieve the goal of 100% and solve the problem of unemployment to the earliest.

CONCLUSION

The current study focuses on the link between entrepreneurship and regional development and growth. Entirely, the paper argues that the innovation accomplishment of entrepreneurial firms, and afterwards the innovation and growth performance of the regions in which they are located, is considerably associated with network capital investment in dynamically set up inter-organizational interactions and relationships.

From a massive or global point of view, a region is a strategic place in worldwide development. But from a micro point of view, the region is formed by innovative actions of audacious entrepreneurs. Battle, faith, system organisation and public policy are ingredients for win-win circumstances at the local level.

From an effective entrepreneurial and regional development theory, the intermixed connection of entrepreneurial, industrial and (multi)regional life cycles is an engrossing research issue, not only from a conceptual point of view but also from an applied modelling viewpoint. Needless to say that in this field still plenty of research questions and answers are waiting to be addressed.

It is proposed that regional transformation rates are a function of the interconnection between the rate of entrepreneurship and the rate of network capital collection by entrepreneurs and their firms, as demonstrated by the ability to acquire external knowledge, in order to improve our understanding of the irregularity of regional rates of innovation and economic growth. This indicates that the interlinkage between rates of entrepreneurship and network capital should be more specifically integrated into instinctive models of regional growth.

This paper demonstrates there is a tool for upgrading regional competitiveness, which conduces to interventions frequently targeted at victorious locations and groups of economic activity, or as an aid for addressing economic and social drawbacks in locations with higher unemployment and lower entrepreneurship. Pick out the cultural change in underprivileged areas is unlikely to have temporary gains for the lawmaker, which to some range results in central-local apprehension and dispute in observing progress and allowing on policy aims and results. Although promoting the cultural revolution needed to develop entrepreneurial regional cultures is undoubtedly a long-term responsibility, policies have been manifest by the urge of the government to measure objectives. This has appeared in an exceptional deal of regional business management activity defined by temporary targets, which is individually obvious in the

area of developing start-ups. It is discovered that regional policymakers are stressed to evaluate temporary outputs, which has surely addressed policy towards termism, at the expense of extended sustaining. While policies have positive elements, there is still a necessity for more durable and stable policies. The regional policy can perform a role in empowering entrepreneurial firms.

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