

## STARTUP ECOSYSTEM: AN EMPIRICAL STUDY ON ISSUES AND CHALLENGES

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### Abstract

The success and failure of any business in general and startups in particular largely depend on coping with challenges that emerged like the commercialization of novel technique or technology prepositions into viable revenue-generating products or services. Besides this financing, the startups were also troublesome to the investors due to a lack of adequate return for a longer period of time with the aggregated risk involved in it. The young graduates from various universities are entering into the startup business without understanding the ecosystem. The aim of this work is to analyse the challenges encountered by the startups , their awareness levels on various policies of the Government and the role played by the startup entrepreneurs in the startup ecosystem.

**Keywords:** Startup, Challenges, Ecosystem, Entrepreneurs

### Introduction

Though the startup ecosystem in India is still not reached the maturity stage, it has contributed to the Indian economy in multiple ways and there is every need to study the patterns of the growing startup ecosystem and its various interrelated and interactive components. The recent pandemic COVID-19 has disturbed some entrepreneurs but not entrepreneurship. The recent Startup Pulse Survey- Q1 2020 by NASSCOM reported that 40% of Indian tech startups have shut down their businesses temporarily and few are closing down as they were unable to sustain the pandemic situation. Despite the situation, the majority of early and mid-stage tech startups were operating in India and these startups have bootstrapped their finance. Startups are diversifying into various growth verticals like health care and EduTech and grabbing the opportunities in various tech sectors such as artificial

intelligence, IoT and Cloud technology. In the manufacturing and service areas agile supply chain, decentralization, glocalization, resilient, reduced cost of ownership, remote control and automation of plans are some of the strategies that are followed to enhance greater leverage of technology.

## Start up

‘Startup’ is usually an entrepreneurial venture, formed as a small business, is in the first stage of its operation, financed initially by their founders, which is designed to develop, grow fast and scale up to higher with its business model which focuses on an innovative product, service, process, platform or solutions to address various business and economic problems pertaining to the target market, in which the founders strongly believe in. Most often, startup companies make use of technologies, such as the internet, e-commerce, telecommunications, or robotics. Generally, startups have very high failure rates, but those with their best strategies and plans in place, with their innovative offers, with a perfect understanding of the environment and its trends, can face the difficulties, scale-up higher and can grow into potential and big influential companies.

Startup and small scale firms appear to be similar with features of being small in size, operate with limited finance and provide numerous job opportunities, but the startups differ as they function on an entirely different business model which creates new customers, new demands and functions on an idea that is repeatable and scalable.

In India, the number of youngsters turning entrepreneurs or those thriving on an entrepreneurial ambition is increasing exponentially every year. India is the third-largest startup ecosystem in the world (NASSCOM, 2019). As per the DPIIT, there were 27,916 startups in India which were recognized as of February 2020. Startups have played and continue to play a significant role in the growth, development and industrialization of many economies the world over. Globally technology-based startup companies were registering in higher numbers than non-technology companies because of their growing importance in the new knowledge economy. Since the rate of generation and innovation in knowledge has become very fast, the rate of obsolescence of technology has also become fast and consequently, the rate of mortality of startup companies has also gone up. There is a need for an entrepreneur not only to have the best idea and passion to pursue his dream of startup entrepreneurship but also to have the best team, understand the potential market and competition, network with the startup ecosystem, understand the regulatory policies, calculate

the risk involved and it is very essential and important that appropriate strategies are framed for its long term survival.

## Indian Startup Ecosystem

The Indian startup ecosystem has emerged quite recently. The situation post-liberalization of the Indian economy in 1995-1996, India saw more youngsters moving to the US and Europe as IT professionals and this had made India gain a lot of experience and knowledge. Since the millennium there has been a conscious attempt to start new ventures. When we look at the Indian scenario, which was once popularly known as an IT outsourcing destination due to its cheap labour, had 5200 tech startups, according to NASSCOM startup report 2017, and many more startups were thriving to be part of the startup hubs. There are a number of startup companies in India which have made headlines in 2017 as per the Economic Times report (2017), such as Paytm, FlipKart, Ola, etc. which continued to influence the young generation to dream big and play a very crucial role in the economic development and growth with their innovative solutions, bringing radical changes and disrupting the economy. According to the NASSCOM report (2017), the Indian economy is characterized by an increased number of local and global investors, with an expanded digital consumer base, a high number of mobile users, an improved political environment which is driving the most promising startup verticals such as IoT, analytics, health-tech and hyper-local e-commerce. In its report, Start-up India- Momentous rise of the Indian Start-up Ecosystem 2015, Bangalore, NCR and Mumbai with its 65% of total Indian startups have been the top startup destinations, and as per the 2019 report, they continued to be the top destination. Hyderabad, Chennai, Pune, Jaipur, and Ahmedabad, and Indore from Tier 2 cities were also emerging as startup destinations in 2020. Since 2010, India has seen tremendous changes with regard to technology and innovation thereby creating a new breed of entrepreneurs which has led to recognizing India as a 'Startup Nation'. There are a number of positive indications pointing that the Indian ecosystem is moving towards rapid evolution and becoming globally attractive. The various supporting policies and initiatives of central as well as state governments were adding to the successful startup ventures. Startups with innovative technological solutions are addressing pressing problems such as healthcare, education, poverty, employment in developing countries like India which is making the lifestyles of its people simple and enhances the way of living.

The Indian startup ecosystem ranked third in the world, after China and the US as per the report by NASSCOM, 2021. The Indian government is active in promoting entrepreneurship and has taken several initiatives to ensure that it provides appropriate support. It is relevant in this regard to refer to the 'Make in India' campaign by the Indian government introduced in September 2014 to attract the foreign investors' attention and to encourage the domestic companies to participate in the manufacturing sector. The government of India enhanced foreign direct investment limits and strengthened the intellectual property rights protection to instill confidence in startups. The Government of India introduced another new campaign 'Startup India' in 2015 to make India the number one destination and to support and promotes entrepreneurship among women. Another noticeable and far-reaching initiative 'Digital India' was introduced in 2015 to ensure government services are made more available to every citizen through an online platform that aims to connect rural areas by developing their digital infrastructure which offers a huge business opportunity to these startups (Kumar, G.P. 2018). The 'Aatmanirbhar Bharat' campaign by the government in 2020, has given a lot of importance to startups to be innovative and self-reliant.

## Literature Review

Thyagi, M (2019) found that startups are growing like a grapevine. Females were coming with more ideas and the startup environment is built on education, talent, innovation, incubators and various funding agencies. The researcher further stated that as per NASSCOM, India ranks third in the global startup ecosystem. The researcher felt that startups are an opportunity for many entrepreneurs to educate, inspire and develop others.

Chokhani, R (2020) revealed that skilled talent was hesitant to join startups as they had witnessed mass firing and downsizing. In addition to this challenge, raising the capital was the biggest challenge for startups for a very long time. The researcher further stated that in startups employment is uncertain due to companies reaching scale and then downsizing for better efficiencies.

Devi, P (2020) in her study discussed the effect of corona virus on various sectors in India, such as MSME, employment and supply chain and others. The researcher suggested the need for change in the business environment and the revival support from the Government which can play a vital role in reviving the economy.

Jain. S (2020) in her research discussed the consequences of the pandemic Covid-19 crisis on job opportunities. The researcher found that there is uncertainty about the income levels and

employment creation for another year. The researcher found that the situation after the pandemic will be favorable for startups as many with current job loss will be looking for entrepreneurship as an alternative. The researcher believed that the situation post-covid-19 creates employment challenges and expresses that situation tends to be attractive to startups.

Joern, H.D. et al. (2020) found in their research that there was a positive impact of self-employment on bootstrapping. The entrepreneurs with good experience were found to be with high skills to manage the liquidity during financial turmoil like the covid-19 pandemic. They have also expressed in their research that the government policies and bootstrapping act as complimentary support leading to a strong motivation for the entrepreneurs.

Kuckertz, A. & et al. (2020) conducted research and studied the shocks and adversities faced by startups due to the outbreak of Covid-19 in Germany and the way innovative startups faced the situation and they also suggested long term policies which are required to support startups during the crisis. They cited that innovativeness is one of most preconditions for any startups which make them resilient and this precondition makes them anticipate and adjust for the crisis constantly and continuously. The researchers revealed that startups had seen a reduction in sales on one hand and fixed cost remaining the same which had threatened the survival of startups.

Robert W. Fairlie (2020) in the discussion papers discussed the impact of Covid 19 on small business in the United States and stated that there was a drop in businesses across all sectors over a period of two months from February to April. The paper also discussed the impact of lockdown on job losses, unequal income and leading to a recession for a longer period of time.

Sedláček, P., & Sterk, V (2020) have expressed that the startups are very important and these young businesses create new jobs, as seen in the United States 2.9 million jobs being created every year. The increased rate of growth and exit by these young firms called 'up-or-out dynamics' suggested that the startups were categorized as creators of positive net jobs. The researchers have expressed positivity and a ray of hope stating that these startups respond positively to the policies and support mechanism extended to them which could foster their long-term growth.

In the Startup Genome report- 2020, authors Gauthier, JF and Moreliz, A have studied the impact of Covid -19 on startups globally and they found that there was a reduction in venture capital deals by 50% to 57% in China in comparison with other economic crises. There was a reduction in technology and IPR in the United States. They also stated that the crisis brought in the opportunities by quoting an example of earlier economic recessions during which

fortune 500 companies contributed towards the creation of jobs. In another report, the authors revealed that 41% of startups across the world were left with cash to sustain for three months. 20% of startups suffered as their investors dropped the term sheets. 74% of startups had to remove their staff and 39% laid off its employees. Startups in North America had the highest termination compared to Asian startups. The report also stated that 80% of startups had reduced their revenue and B2B startups were mostly hit by the crisis which shows the severity of the impact of Covid-19 on startups. In the third installment series, the researchers found that the tech startups played an important role in improving the economic situation as there was a lot of transition taking place due to digitalization. The report suggested that Governments should invest in these companies and frame suitable policies which can contribute towards the recovery of its economic system.

## Methodology

1. Research design	1.1. Research paradigm : Positivist	
	1.2. Research approach : Quantitative	
	1.3. Details : (i) Purpose of the study - Hypotheses testing	
2. Measurement Variable	2.1 Dependent Variable	Startups in Delhi/NCR
		Challenges
		Opportunities
		Awareness of startup policies
3. Pretesting	3.1 Face validity	Entrepreneurs establishing new companies
4. Data collection	4.1 Research Instrument	Questionnaire
	4.2 Population	Startup Entrepreneurs from

		the ecosystem.
5. Analysis of data and techniques used	5.1 Chi-square	
	5.2 ANOVA	

## Analysis

### Age of the respondents

Ages in years	No. of Respondents	%	x2 value
< 20 years	25	12.5	45.95 @ 5 % Significance level
20 - 25 years	45	22.5	
25 - 30 years	68	34.0	
30 - 40 years	50	25.0	
> 40 years	12	6.00	
Total	200	100	

**Table 1: Characteristic profile of startup entrepreneurs**

Characteristic profile of respondents	No. of Respondents	%	x2 value
Sole Entrepreneur	70	35	16.00 @ 5% significance level
Social Entrepreneur	50	25	
Serial Entrepreneur	50	25	
Startup Investor	30	15	
Total	200	100	

## Hypothesis

H1	There exist significant variation in the profile of entrepreneurs	Accept
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**Chi-square table**

Calculated value	Significance Level	Degree of freedom	Table Value
16	5%	3	7.815

**Chi-square Analysis**

The calculated value being 16.00 higher than the TV = 7.815 @ 5% level of significance with df = 3 failed to accept H<sub>0</sub> and accepts H<sub>1</sub>. Therefore it was concluded here that there exist significant variation in the profile of respondents.

**Table 2: Startuppreneurs awareness about the initiatives taken up by the government**

Different initiatives	Aware	Neutral	Not Aware
Self certification	200	Nil	Nil
Startup India Hub	200	Nil	Nil
Registration through App	178	22	Nil
Patent protection	123	48	29
10,000 crores fund	58	44	98
National Credit Guarantee Trust	23	47	130
No income tax for three years	200	Nil	Nil

**Hypothesis**

H <sub>1</sub>	There exist significant variation with regard to awareness about government startup initiatives	Accept
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**ANOVA Table**

Source of variation	ss	df	m-s	F-ratio	5% F-limit (from the F-table)
Between	57565.81	(3-1)=2	57565.81/2 =		



sample			28782.91		
Within sample	54084.86	(21-3)=18	54084.86/18 =3004.71	28782.91/ 3004.71 =9.58	(2,18)=3.55
Total	111650.6 7	(21-1)=20			

### ANOVA Analysis

The calculated value being 9.58 higher than the TV = 3.55 @ 5% level of significance with  $df = v_1 = 2$  and  $v_2 = 18$  failed to accept  $H_0$  and accepts  $H_1$ . Therefore it was concluded here that there exist significant variation in the data.

**Table 3: Startups opinion about the financial challenges**

Challenges confronted	Difficult	Neutral	Easy
Raising of capital	137	55	08
Ensuring the quality of products & services while keeping its cost low	126	57	17
Working capital	136	56	08
Budget allocation	113	79	08
Pricing of the services	26	147	27
Selecting right fund option	27	144	29
Payment related problems	34	146	20

### Hypothesis

H1	The startups encounter financial challenges	Accept
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## ANOVA Table

Source of variation	Ss	df	m-s	F-ratio	5% F-limit (from the F-table)
Between sample	26716.1	(3-1)=2	26716.1/2 = 13358.05	13358.05/1676.92 =7.97	(2,18) =3.55
Within sample	30184.57	(21-3)=18	30184.57/18 =1676.92		
Total	56900.67	(21-1)=20			

## ANOVA Analysis

The calculated value being 7.97 higher than the TV = 3.55@5% level of significance with  $df = v_1 = 2$  and  $v_2 = 18$  failed to accept  $H_0$  and accepts  $H_1$ . Therefore it was concluded here that there exist significant variation in the data.

Table 4: Respondents awareness of other challenges

Other challenges	Difficult	Neutral	Easy
Undertaking and updating technology	129	64	7
Identifying niche business area	27	132	41
Motivation and encouragement	83	113	4
Identifying business opportunity	73	102	25
Lack of communication sources	26	118	56
Exit	126	48	26

## Hypothesis

H1	There exist significant variation in the data of other challenges encountered by startups	Accept
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## ANOVA Table

Source of variation	Ss	df	m-s	F-ratio	5% F-limit (from the F-table)
Between sample	15584.33	(3-1)=2	15584.33/2 = 7792.17	7792.17/1177.31 =6.62	(2,15) =3.68
Within sample	17659.67	(18-3)=15	17659.67/15 =1177.31		
Total	33244	(18-1)=17			

## ANOVA Analysis

The calculated value being 6.62 higher than the TV = 3.68@5% level of significance with  $df = v_1 = 2$  and  $v_2 = 15$  failed to accept  $H_0$  and accepts  $H_1$ . Therefore it was concluded here that there exist significant variation in the data.

**Table 5: Startup respondent's opinion with regard to the challenges in scaling the business assuming that the resources are available.**

Challenges faced in connection with scaling business	Difficulty	Neutral	Easy
Fighting competition	23	66	111
Creating partnership / team	44	129	27
Customer acquisition	28	48	124
Facing challenges of industry 4.0	56	78	66
Manufacturing challenges	46	64	90
Regulatory policies	112	37	51

**Hypothesis**

H1	There exist significant challenges in scaling the business when resources are available	Accept
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**ANOVA Table**

Source of variation	Ss	Df	m-s	F-ratio	5% F-limit (from the F-table)
Between sample	2254.33	(3-1)=2	2254.33/2 = 1127.17	1127.17/1141.58 =0.99	(2,15) =3.68
Within sample	17123.67	(18-3)=15	17123.67/15 =1141.58		
Total	19378	(18-1)=17			

**ANOVA Analysis**

The calculated value being 0.99 lower than the TV = 3.68 @ 5% level of significance with  $df = v_1 = 2$  and  $v_2 = 15$  accept  $H_0$ . Therefore it was concluded that there exist significant challenges in scaling the business when resources are available.

**Table 6: Economic impact of startup ecosystem on the startupreneurs**

Economic impact	Agree	Neutral	Disagree
Facilitates in raising of finance/capital	154	39	07
Facilitates in talent acquisition	163	32	05
Creates competitive advantage	112	33	55
Facilitates in regional innovation	126	39	35
Facilitates networking	177	14	09
Facilitates with incubation and acceleration	134	39	27
Provides required resources	126	46	28

**Hypothesis**

H1	There exist economic impact of startup ecosystem on the startup entrepreneurs	Accept
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## ANOVA TABLE

Source of variation	Ss	Df	m-s	F-ratio	5% F-limit (from the F-table)
Between sample	59550.10	(3-1)=2	$59550.10/2 = 29775$	$29775/327.14 = 91.02$	(2,18) =3.68
Within sample	5888.57	(21-3)=18	$5888.57/18=327.14$		
Total	65438.67	(18-1)=17			

## ANOVA Analysis

The calculated value being 91.02 higher than the TV = 3.68 @ 5% level of significance with  $df = v_1 = 2$  and  $v_2 = 18$  failed to accept  $H_0$  and accepts  $H_1$ . Therefore it was concluded here that there exist significant variation in the data.

## Conclusion

The startup ecosystem with its various stake holders has created a favorable environment for startups. The young startup entrepreneurs have knowledge about the entrepreneurship and they desire to be independent. There is a positive change in the behavior and acceptance of entrepreneurship as a career. The ecosystem has seen the increasing trend of e-commerce B2C startups and since 2017 the B2B segment has also started gaining the traction. The startups have created numerous job opportunities and there is a spill over effect too. The technology and regional innovation mechanism has improved and the startups are impacting the society by providing opportunities for the local community and enhancing the living standards of the people.

The analysis revealed that startups are encountering various challenges such as raising required finance to run its business, retaining its employees and the issues with bureaucratic regulations. The startup founders also lacked in the required skills and depended on the right team with complementary skills.

The startup entrepreneurs feel that going digital and cultivating innovative mindset is the most important criteria to face the challenges and convert them into opportunities. Startups feel that the access to finance and other resources need to be provided without many restrictions, so that they can have sufficient capital to run smoothly their business and sail through the crisis such as covid-19. The majority of the startup entrepreneurs also felt that,

managing the crisis and adapting to the changes taking place in the environment, will create boundless opportunities. Pandemic has created lot of changes that is seen in the functioning of businesses due to change in the behavior of stakeholders such as customers, suppliers, investors and others.

The startups need to be, not only adaptive but quick to pivot themselves to sustain. There is need to provide enhanced support from the ecosystem, for its survival which can help them to build strategic alliances and create a win-win situation for all players. There is also need felt for simplified government regulations Government, both central and state should simplify the process for startups and set up high class research labs and technological facilities.

Finance plays a critical role in any business, whether big or small. Most of startups struggle to manage its financial position. Startups waste considerable amount of time in raising the required financial capital, which could have been otherwise best used for its planning and execution of its business strategies. Raising capital is not only difficult, but managing and allocating for its various requirements also becomes a challenge, if the startup founder lacks skills in managing his finance. Planning for funds at right time and inability to manage funds leads to working capital inadequacy and firms may die due to lack of funds at a very early stage. The startups with limited experience and skills need to gain knowledge on pricing its products and services, sources of finance and other marketing related issues. Hence it becomes very important to have a team of founders with complementary skills to manage business or have access to information related to finance, marketing and other areas of business.

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