



## EMPOWERING INNOVATION: A COMPREHENSIVE ADVOCACY REPORT ON INDIA'S DIGITAL ENTREPRENEURIAL ECOSYSTEM

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**ABSTRACT:** *In the recent years, the citizens of India have experienced rapid changes in almost all the processes of our day to day lives with the bolstering impact of digitalization. (Chandrasekhar, 2021)cited that the digitalization process in India is aimed to transform the lives of people as it remains the prime concern of the Hon'ble PM. With the schemes like direct benefit transfer, electronic data transfers and electronic payment systems being used with power for all modes of commerce, it also opens gateways for other allied ventures/services. The purpose of this research paper is to assess the prevalence of Entrepreneurial activities over digital mode, to assess the challenges associated with digital mode of conducting business and to check with the status of entrepreneurial ecosystems in India. The paper also aims to provide valuable suggestions in respect to the objectives of the study whilst focusing on startups pertaining to entrepreneurs of modern digital era. A research instrument, consisting of 15 questions, based on Likert's 5-point scale was prepared using google forms. The instrument was scrutinized and redeveloped after consulting with subject experts and pilot testing. The data is collected from Two hundred respondents spanning across Haryana and Punjab. The collected data was coded and analyzed using SPSS. ANNOVA test is employed along with data visualization tools to express the findings. It was concluded that the rural areas of Haryana and Punjab witnessed a thriving success in terms of launching, adopting, and reinventing various tech-based domains. The status of E-Entrepreneurship and its prospects also stands firm as the government and industries are supporting the cause.*

**Key words:** *Entrepreneurship, Digital, Information System, Ecosystem, Haryana, Punjab*

### 1. INTRODUCTION:

As per the name goes on, an ecosystem comprises of some elements that are essential players for support and establishment of a certain circumstance/situation/condition. For creation of entrepreneurial ecosystem, it requires the alliance of government, other



entrepreneurs, lawyers, communities, investors, leaders, research agencies and similar parties to come together and evolve with the spirit of community development. (Ke, et al., 2018) explored the evolving body of future studies focusing towards entrepreneurial ecosystems. They further proposed three research dimensions for Entrepreneurial Ecosystems that includes – embeddedness, internationalization, and dynamics.

(Daniel, 2022) a professor at Babson B-School in Massachusetts working dedicatedly on entrepreneurial education published an article entitled ‘How to start an Entrepreneurial revolution’ and he further stated the elements and environment required for entrepreneurial ecosystem as follows –

- i. The Policy framework coming from government.
- ii. Sources of financing an idea/venture.
- iii. Some Societal norms and motivational stories that triggers psyche to be an entrepreneur.
- iv. Well educated and skill based Human capital.

A dynamic and robust entrepreneurial eco-system in a rural region is an asset for up-gradation; specifically, digital, and innovation-led entrepreneurship ecosystem has significant potential to reduce the regional imbalance.

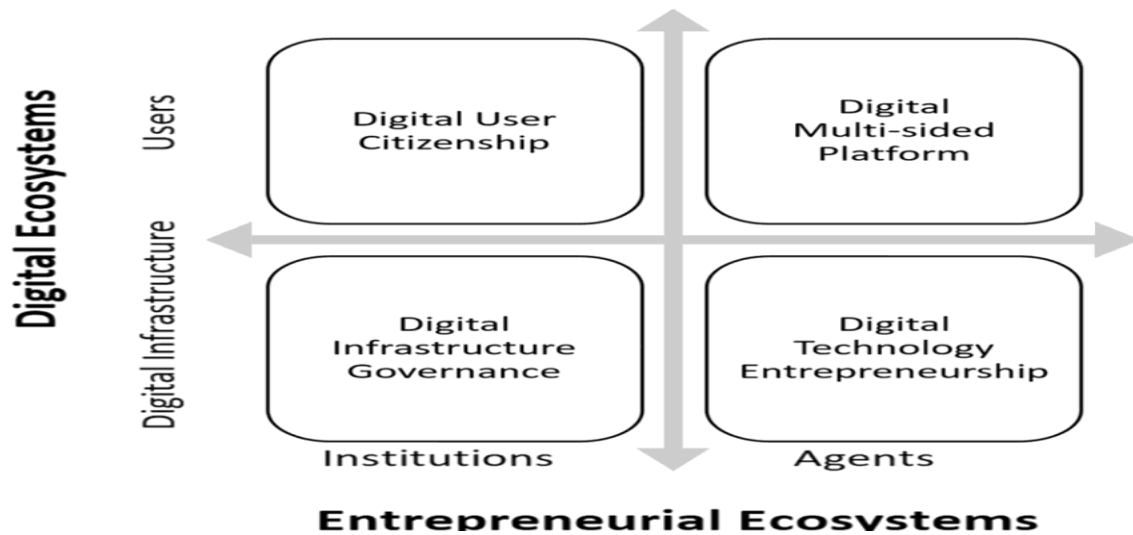
In nearly 2000s the term Digital Ecosystem (DE) is defined as self-organizing measurable and sustainable method comprised of mixed digital entities and their interconnections focusing on connections among entities to upturn system utility, gain benefits, and disseminate information, inward and interassistance and system innovation” (Li, Badr, and Biennier, 2012, 119).

Digital entrepreneurship ecosystem defines as an ecosystem that encourages, develops, and enlarges digital entrepreneurship. Since an ecosystem is competent in facilitating the incorporation and integration of resources, it also sustains essential elements ahead of the firm- level, also in the success of an enterprise digital entrepreneurship ecosystem play a significant role. “The Digital Entrepreneurial Ecosystem framework consists of 4 concepts: digital infrastructure governance, digital user citizenship, digital entrepreneurship, and digital marketplace. Digital advancement and innovation are becoming more and more imperative in today’s economy. Various digital innovations and advancement are not developed within the organizations, but in entrepreneurial ecosystems which is innovation-driven, and where collaboration and cooperation of entrepreneurship stakeholders take place. Regardless of its implication and significance investigational studies on digital entrepreneurship ecosystem (DEEs) for rural areas are limited and the theory of DEE is



mainly

under-theorised.



Source: Digital Entrepreneurial Ecosystem. Sussan and Acs (2017)

The difference between entrepreneurship, entrepreneurship ecosystem, digital entrepreneurship and digital entrepreneurship ecosystem can be drawn in the picture. At the individual level traditional entrepreneurs pursue opportunities based on business knowledge or institutions, while digital entrepreneurs pursue digitally enabled opportunities based on business knowledge or institutions. After integrating resources beyond the firm level and ecosystem is formed at the collective level. At this level the main difference between an entrepreneurship ecosystem and a digital entrepreneurship ecosystem is that a DEE is populated by digital species while an entrepreneurship ecosystem is populated by entrepreneurial species.

And India, being the country of most talents, the status of same remains questionable in terms of entrepreneurial activities being carried out in rural India. The researchers envisioned to check the status of entrepreneurial ecosystems in the rural Indian sector based in the states like Punjab and Haryana (Anushree, Ashish, Puja, & Vinod Kumar, 2020). The researchers assessed the status of these entrepreneurial values



## **2. LITERATURE REVIEW:**

(Jianhong, Desiree, & Henk, 2022) Revealed that digital technology helps in pushing the national ecosystems for entrepreneurship and such nations are witnessed to have supportive governments, society, institutions, and idea generators to contribute for the latter. (Maqsood, 2020) found that the integration of digitalization promises high impact on gaining profits as well as brand image. He also found that the process of digitalization reduces costs at large scale. (Zoltan J., Erik, David B., & Allan, 2017) ruled out that economics has continuously underestimated the impact of entrepreneurship in economic systems. They further suggested that entrepreneurial ecosystems promise to correct the shortcomings of old systems. (Iyappan & Rajamohan, 2020) Identified certain crucial elements that are crucial for the overall development of Agripreneurial eco-systems in the state of Tamil Nadu. They further suggested methods by which one may ensure the availability of such crucial resources in order to improve the agripreneurship development.

(Ron, 2016) presented a better definition of the ecosystem with characterization of essential aspects. He suggested that the very term ecosystem has become an important part of discussion in scholastic and applied terms.

Sung, Y.U. (2016) according to the study Digital ecosystem is the most imperative strategic subject in the current progressive digital economy. Digital ecosystem is vibrant and unconventional in nature. The economy progresses as new companies join the industry and heterogeneous systems integrate into different schemes and subsystem of the economy. The Feature of the digital ecosystem shows technological and economical success under the competitive environment with digital platform system.

Susan, F., & Acs, Z. J. (2017) examined that there is a need for a conceptualization of entrepreneurial activities in an innovative and digital age. The study introduced a conceptual framework to examine entrepreneurship by integrating (DE) Digital ecosystem and (EE) Entrepreneurial ecosystem. The combination of these two elements facilitates to understand the enhanced interaction of agents, clients and users that projects the approaches related to consumer's individual and socialistic behaviour. The study reveals that literature in the field of the digital economy is lacking and to fill the gaps the study proposes digital entrepreneurship ecosystem (DEE) structure through combining knowledge from MIS and marketing.

(Mahima & Hariti, 2020) Believes that innovative ideas come with a promising potential for commercialization and needs scaling. (Niranjan, 2022) The ex-president of ASSOCHAM and the founder of Hiranandani group critically acclaimed that Indian Business Ecosystem is made up of a perfect blend of Organized and Unorganized markets because it is engaged in catering to the requirements of a diverse consumer groups. (Colin & Brown, 2013) studied and commented that generating an advantageous environment for start-ups is not proving to be an ideal solution for the development of High Growth Firms. He further suggested that the governments should take care of the following factors while framing policies - The



entrepreneurial players that exists in the ecosystem, The resource suppliers that exists within the ecosystem and the entrepreneurial environment of the proposed ecosystem.

Song, A. K. (2019) this study reviews evaluates critiques and filters the framework proposed by Sussan and Ace towards the digital entrepreneurial ecosystem. The main view of this study is in the reconstruction that noticeably put the argument for a more supportive Digital Entrepreneurial Ecosystem—an ecosystem where user confidentiality is confined and protected, platform competence and proficiency enhanced, optimistic market competition, digital Technological communication and infrastructure is protected.

Kraus, S., Palmer, C., Kailer, N., Friedrich, L. K., & Spitzer, J. (2019) according to the researcher of the advancement in infrastructure and technological development in digital entrepreneurs, high topicality is created which crafts and generate many opportunities for entrepreneurs. In the societies even after the great concentration to new digital business structures still less amount of researches is conducted with opportunities, threats and achievement elements of digital entrepreneurship. In the study the state-of-the-art literature was gathered by the researcher related to digital entrepreneurship. The researcher identified six streams of research associated to digital entrepreneurship: Proposed digital business models; process of digital entrepreneurship; entrepreneurship education and learning; platform strategies and decision making; digital ecosystem; and social digital entrepreneurship (SDE).

(Prince Kwame, Kecheng, & John, 2019)conducted a series of studies to fill the gap in Digital Business Ecosystem research by proposing a framework that synthesizes& provides direction to Digital Business Ecosystemresearch by again identifying and bridging the gaps in DBE literature. Their research is aimed to further provide direction to future research.

(Saku J. & Ozgur, 2012)studies, finds and emphasize on the roles of ecosystem adherents i.e., the endogenic and exogenic factors required for evolution of ecosystem. (ESSEC Chair of Networked Business Models)identified some important streams that are responsible for development of entrepreneurial ecosystems. They suggested that one factor could be the technology management with apt. deployment of technology platforms. Other factor is closely linked to strategic management.

### **3. RESEARCH METHODS**

**Data Collection** – Primary data was collected using research instrument (online questionnaire) from people of rural Haryana and Punjab using tablets.

Secondary data was collected from magazines, journals and websites publishing information about successful entrepreneurs, policies, and research of same domain.

#### **Sampling:**

Simple Random sampling method is adopted to get the responses filled from the managers, entrepreneurs and spokesperson of startups, micro small medium enterprises spanning across Haryana and Punjab. 200 industrialists and MSME units were targeted to be the sample for present study.



**Hypothesis:**

*Ho – There is no significant evidence to prove that the rural areas of Punjab lack entrepreneurial activities*

*Ho – There is no significant evidence to prove that the rural areas of Haryana lack entrepreneurial activities*

*Ho – Rural areas of Punjab and Haryana are lacking in terms of digital technology and awareness*

**4. RESULTS AND DISCUSSIONS**

**Data Analysis:**

Primary data was thoroughly analyzed using the advanced statistical software like SPSS. Internal consistency was obtained using Cronbach’s Alpha. The questions of questionnaire were selected, coded and ran into different statistical procedures to obtain accurate results. The descriptive statistics are made available in the form of graphs and charts.

**Reliability Test:**

Reliability Statistics	
Cronbach's Alpha	N of Items
.923	12

In the test of Internal consistency for responses recorded, the values of Cronbach’s Alpha emerged at 0.92 which is much higher than the standard value of 0.75. It means that the data collected is fairly collected and shows greater group cohesiveness.



**Descriptive:**

	N	Minimum	Maximum	Mean	Std. Deviation
Name	199	1101.00	1299.00	1200.0000	57.59051
Age	199	24.00	60.00	39.8995	8.12030
Gender	199	1.00	2.00	1.1256	.33227
Government policies are helping local industries to go digital	199	1.00	5.00	3.8191	.89185
Adequate training is being provided to adapt to new methods	199	1.00	5.00	3.3719	1.04079
The locals are getting inspired from other entrepreneurs to go online	199	1.00	5.00	3.1910	1.01191
Cloud service is available for beginners	199	1.00	5.00	3.1809	1.14037
The business enjoys reduced costs in implementing EDI and EPS	199	1.00	5.00	3.1357	1.05729
The District Industries Center is providing adequate material for new ventures and how to start them	199	1.00	5.00	3.1759	1.02702
Does the area promote rich culture for entrepreneurial activities	199	1.00	5.00	3.4171	.98571
Digital business operations promote more revenue	199	1.00	5.00	3.1759	1.02702
The area is self-sufficient to host and adapt to latest technologies	199	1.00	5.00	3.4171	.98571
Adequate Human Resource is available for work in the areas	199	1.00	5.00	3.3668	.93803
Human Resource is skilled in Digital Operations	199	1.00	5.00	3.0452	.91174
The E-Entrepreneurial environment is adequate in your area	199	1.00	5.00	3.4824	.99415
Valid N (listwise)	0				



The data was collected from 200 target respondents, but one response is rejected due to incompleteness. The test is conducted on 199 respondents only.

ANNOVA Test

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Government policies are helping local industries to go digital	Between Groups	23.397	33	.709	.872	.669
	Within Groups	134.090	165	.813		
	Total	157.487	198			
Adequate training is being provided to adapt to new methods	Between Groups	28.486	33	.863	.766	.815
	Within Groups	185.996	165	1.127		
	Total	214.482	198			
The locals are getting inspired from other entrepreneurs to go online	Between Groups	33.372	33	1.011	.985	.498
	Within Groups	169.372	165	1.026		
	Total	202.744	198			
Cloud service is available for beginners	Between Groups	40.633	33	1.231	.937	.571
	Within Groups	216.854	165	1.314		
	Total	257.487	198			
The business enjoys reduced costs in implementing EDI and EPS	Between Groups	27.895	33	.845	.721	.865
	Within Groups	193.442	165	1.172		
	Total	221.337	198			
The District Industries Center is providing adequate material for new ventures and how to start them	Between Groups	26.136	33	.792	.715	.871
	Within Groups	182.708	165	1.107		
	Total	208.844	198			
Does the area promote rich culture for entrepreneurial	Between Groups	28.942	33	.877	.885	.649
	Within Groups	163.440	165	.991		





activities	Total	192.382	198			
Digital business operations promote more revenue	Between Groups	26.136	33	.792	.715	.871
	Within Groups	182.708	165	1.107		
	Total	208.844	198			
The area is self-sufficient to host and adapt to latest technologies	Between Groups	28.942	33	.877	.885	.649
	Within Groups	163.440	165	.991		
	Total	192.382	198			
Adequate Human Resource is available for work in the areas	Between Groups	24.756	33	.750	.828	.733
	Within Groups	149.465	165	.906		
	Total	174.221	198			
Human Resource is skilled in Digital Operations	Between Groups	17.071	33	.517	.579	.967
	Within Groups	147.522	165	.894		
	Total	164.593	198			
The E-Entrepreneurial environment is adequate in your area	Between Groups	27.154	33	.823	.806	.764
	Within Groups	168.534	165	1.021		
	Total	195.688	198			

As per the results generated in ANOVA, the degree of freedom is recorded at number 33 and the F values ranged above 0.500 in all cases. It is hereby deduced that the null hypothesis in the case stands rejected. It clearly means that there is positive environment thriving in the rural areas of Punjab and Haryana for the entrepreneurial activities using digital media and technology.

## 5. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions:

Based on the data collected, analyzed and interpreted it was concluded that the rural areas of Haryana and Punjab signals very positive status of Digital wellbeing and promotes optimal level of entrepreneurial activities. The ANOVA test signals towards a flourishing ecosystem of entrepreneurial activities as all factors scored relatively higher values than expected. It means that the condition for entrepreneurial ecosystem exists in the rural areas of Haryana & Punjab and is being accelerated by digitalization and Internet at many ends. It can be summed up that the government initiatives and various policies to promote entrepreneurial activities using digital media are helping local vendors/small firms/ business-oriented



masses to establish new ventures in the allied areas of Haryana and Punjab. It is identified that Satisfactory efforts to provide training to the new business units is being carried out in the rural and suburban areas of Haryana and Punjab by both public and private parties. The research reveals that the people hailing from the rural areas of Haryana and Punjab are drawing inspiration from successful entrepreneurs who opened their ventures and are making millions now. It was also revealed that cloud-based data storage and allied services are available for future entrepreneurs in the areas of current study. It was concluded that the business readily enjoys more profit margins on the new ventures who uses the power of digitalization because majority of business deals are now a days taking place over online medium – right from sending or receiving orders to paying amount for the orders. It remains same across all models of E-Commerce.

### Recommendations:

It is recommended to state and local governments that they should promote technological infrastructure and know-how among suburban and rural areas of Haryana and Punjab because they are in proximity of NCR region and the youth hailing from these villages often need to visit capital city of India to get the major work done in respect to starting any business. A little attention is being paid on digital startups. It is strongly recommended that the young entrepreneurs focus a more on knitting a web of purely I.T. based work so that more youth can be employed, and rapid development of the area can be made possible. It was observed that the age of the existing entrepreneurs ranges between 26-60, and most of them are of 40+ age group. To set better examples, more success stories can be bundled if the young entrepreneurs are brought up in limelight. It's the psyche of Indian youth that majority of the people start following / taking risks like who they see and envy on posters.

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