Research Paper

Navigating the Startup Journey: Opportunities and Barriers to Growth in Punjab

Neeti Gupta
Post Graduate Dept. of Commerce, DAV College, Sector-10, Chandigarh

Abstract
This research is to examine the determinants of startup growth and performance in Punjab based on the perception of opportunities, perseverance and the demographic profile of entrepreneurs. A questionnaire was distributed to 320 startup entrepreneurs belonging to various sectors (IT/Software, Services, Manufacturing and Agri tech). Descriptive analysis unveiled digitalisation/automation (adopting digital tools), access to online markets, and government support programmes as the most important growth opportunity, while financial difficulties, regulatory difficulties and difficulty in finding skills emerged as other barriers. Results from correlation and regression analysis showed that perceived opportunities drive an increase in revenue growth, customer base expansion and employment prospects while they mitigate the effect of perceived barriers. The demographic analysis showed that women perceived greater barriers, while higher education and working in IT/services sector were linked to better ability to recognize opportunities. There is a need for a comprehensive policy response encompassing financial support, simplification of regulation, skills development, mentorship and gender-targeted support to improve startup sustainability and performance. The study adds to the entrepreneurial regional literature by presenting a fine-grained analysis of the Punjab start-up ecosystem and suggests practical implications for policy makers, incubators and ecosystem players.
Keywords: Startup growth, opportunities, barriers, entrepreneurial performance, demographic factors, Punjab, ecosystem support.

I. Introduction

Startups are the lifeblood of a growing economy, driving innovation, and employment. Over the past few years, India's environment for entrepreneurship has grown exponentially with government initiatives like Startup India, Atal Innovation Mission Programmes and other policy measures that have been undertaken to ease barriers to entry to facilitate innovation. However, with these supports, many startups still encounter serious constraints such as lack of availability of capital, regulatory challenges, skills scarcity and infrastructural inefficiencies that may impede sustainable development (Singh & Pravesh, 2017).

Whether such opportunities and constraints are important to start-up founders, and whether they are associated with growth outcomes in practice (e.g. higher revenue or employees, market expansion), are important implications for designing effective policy instruments.

Punjab presents an interesting landscape for understanding the growth of startups. As per the official Startup India / DPIIT data, at the end of 2017, there were more than 5147 startups recognized by DPIIT in India that are estimated to have created over 51,980 direct jobs. Amid this larger continuum, Punjab accounts for 56 startups recognized by DPIIT, highlighting its emerging ecosystem at the national stage.

This paper attempts to address the research gaps by analyzing what opportunities and challenges Punjab start-ups see and how this view is related to the growth performance of the startups, which demographic and firm-level factors affect their perception. The increasing use of ICT and its effects on growth may not only be of academic interest but provide insightful information that can be applied to the managers of incubators, policy makers and ecosystem players in the region, as well as other regions with similar characteristics, aiming to trigger the promotion of startups in Punjab.

II. Literature Review

In the era of startups, India has made a name for itself in the global startup ecosystem. India ranks among the top five countries in the world in terms of number of startups founded. Mittal (2014) maintained that India is at crossroads where it now has to cater to the aspirations of a billion people. Existing frameworks can prove to be inadequate and there is a great need to leverage a billion minds and become a global power. Startups and entrepreneurship is the best way forward in becoming a major superpower.

The startup ecosystem is getting substantial support from foreign and Indian investors, who have shown more faith in the industry and have provided funds to help these companies to grow leaps and bounds (Anand 2016). A Fortune India 2017 report said that India is now host to the third-largest start-up ecosystem on the planet. There have been more than 49,000 start-ups launched in the country that have raised a combined total of more than $51 billion from 2008 to 2018. Around $38.5 billion of this capital went into start-ups between 2014 and 2018 – a remarkable acceleration of capital deployment.

Dr. Gopaldas Pawan Kumar (2018) opined that the startup arena has lot of challenges ranging from finance to human resources and from launch to sustaining the growth with tenacity. Being a country with large population, the plethora of opportunities available are many for startups offering products and services ranging from food, retail, and hygiene to solar and IT applications for day to day problems which could be delivered at affordable prices. It is not out of place to mention that some of these startups would become unicorns. Okrah,etal. (2018)in their paper, exploring the factors of startup success and growth were of the view that Government has a major rule to play in ensuring growth in the success of startups.

For the startup idea to flourish, it needs careful construction and execution of the entrepreneur's entire working plan. Thus the right skillset needs to be cultivated by the entrepreneur (Sharma, 2016).

Singh and Pravesh (2017), through a multi-sectoral approach, identified early constraints for Indian startups, such as access to finance, infrastructural gaps and compliance burden. They said that without structural overhauls in taxation and labour laws, scalers would have a hard time. Similarly, Arshed et al. (2018) in their paper on intellectual capital and SME's performance in Pakistan reported that education, previous experience and networking abilities enhance startup survival and performance. Their results are consistent with the Indian evidence that the skill gap constrains effective scaling.

The studies highlight that though the entrepreneurial ecosystem in India is growing quickly, regional-level insights need to be extracted from unexplored areas such as Punjab. There are relatively few quantitative studies that explicitly examine the association between perceptions of opportunities/barriers and actual growth measures, a focus of this study.

III. Research Gap and Objectives of the Study

First, there is scant state-level evidence on the opportunities and challenges and less so in Punjab, despite a burgeoning landscape of more than 1700 DPIIT-recognized startups (Government of India). Second, limited research provides a quantitative analysis for the direct effect of perceived opportunities and barriers on startup performance. Third, less is known about whether the demographic traits of entrepreneurs (such as age, gender, education, or previous experience) have a nontrivial role to play in shaping these perceptions.
Addressing these gaps, the present study aims:
1. To identify and analyze the key opportunities contributing to the growth of startups in Punjab.
2. To examine the major barriers faced by startups in Punjab.
3. To investigate the relationship between perceived opportunities and startup performance outcomes using correlation and regression.
4. To assess whether demographic variables significantly influence perceptions of opportunities and barriers using t-tests and ANOVA.
By focusing on Punjab, this research will extend the existing body of knowledge beyond national aggregates, providing granular insights into the entrepreneurial ecosystem at a regional level and offering evidence-based recommendations for policymakers and ecosystem stakeholders.

IV. Research Methodology

The current study was descriptive and analytical in nature, which aimed to analyze the opportunities as well as barriers to growth for start-ups operating in Punjab. The data collected was primary in nature, for which a questionnaire was used; this survey was conducted with founders, co-founders, and senior executives of the start-ups that are registered and operational in the state. A multistage sampling technique was implemented. In the 1st wave, stratified sampling was done by sector (IT, agritech, manufacturing and services) line of business, along with strata based on region to attain a homogeneous sample. In the second stage, a purposive sampling technique was applied to shortlist potential respondents from incubators, government startup directories and entrepreneurial networks. Given that several startups in Punjab are unregistered and hard-to-find, snowball sampling has also been applied where initial respondents forwarded on to other start-up founders within their professional networks-allowing them to reach more tiered segments of the ecosystem. A total of 400 questionnaires were administered, but after discarding those with incomplete responses, the final sample included more than 300 respondents. The sample size met the requirements of Cochran's formula for adequacy and for inferential analysis, had sufficient power. The questionnaire comprised Likert-scale items for perceived opportunities and barriers, as well as demographic questions (e.g., age, gender) and performance indicators such as turnover growth, employment

creation, and market share expansion. Data was analyzed using SPSS software. Descriptive statistics were used to profile participants, and Cronbach's alpha was employed to calculate the internal consistency of scales, while inferential statistics, such as independent-samples t-test, one-way ANOVA test statistic measures (e.g., Pearson correlation coefficients and multiple regression), were used to test the objectives of the study.

V.   Data Analysis and Interpretation

The demographic analysis highlights that of the total respondents male entrepreneurs were 66% while female business owner was recorded as 34%, showing a playing field skew towards men, which is a norm for most startup ecosystems. Most respondents belonged to the age group of 25–34 (41.9%), followed by those between 35 and 44 years (30%), indicating that entrepreneurship in Punjab was largely practiced by young or mid-level career professionals. The sample was highly educated, as the proportion of postgraduates (36.9%) and graduates (33.8%) was the two largest segments, suggesting a high human capital level among startup founders. Approximately 58% had previous entrepreneurial experience, meaning that the group was composed of both relatively inexperienced and experienced entrepreneurs. Last year, IT/software (32.5%) and services sectors (25.6%) were the ones that dominated, but Agri tech and manufacturing took smaller shares, indicating sectoral preferences. In terms of the firm characteristics, in most of the startups, it was found that they were Private Limited (40%) and Sole Proprietorships (39.4%), having 1–5 employees (35 %), and their annual revenues reported significantly less than 50 lakh rupees (51.3%). Most of the funding was self-funded (44.4%), indicative of marginal external funding.

Demographic profile implies that programs for assisting startup growth should keep in mind gender diversity, young age entrepreneurs and sector-specific policies, especially in manufacturing and agritech. The role of bootstrapping also points toward areas for financial support and funding opportunities.

Table 1. Demographic Profile of Respondents (n = 320)

Variable	Category	Frequency	Percentage (%)
Gender	Male	210	66.0
	Female	110	34.0
Age (years)	<25	42	13.1
	25–34	134	41.9
	35–44	96	30.0
	45–54	34	10.6
	Above 55	14	4.4
Educational Qualification	High School	12	3.8
	Diploma	28	8.8
	Graduate	108	33.8
	Postgraduate	118	36.9
	Professional (CA, CS, etc.)	32	10.0
	PhD	22	6.9
Prior Entrepreneurial Experience	Yes	186	58.1
	No	134	41.9
Industry / Sector	IT/Software	104	32.5
	Agritech	56	17.5
	Manufacturing	78	24.4
	Services (EdTech, HealthTech, FinTech, etc.)	82	25.6
Legal Status of Firm	Sole Proprietorship	126	39.4
	Partnership	40	12.5
	Private Limited	128	40.0
	LLP	26	8.1
Number of Employees	1–5	112	35.0
	6–20	94	29.4
	21–50	56	17.5
	51–100	34	10.6
	Above 100	24	7.5
Annual Revenue (last FY)	<10 lakh	68	21.3
	10–50 lakh	96	30.0

Variable	Category	Frequency	Percentage (%)
	50 lakh–2 crore	84	26.3
	2–10 crore	54	16.9
	Above 10 crore	18	5.6
	Bootstrapped	142	44.4
	Angel Investor	46	14.4
External Funding Received	Venture Capital	38	11.9
	Bank Loan	66	20.6
	Govt. Grant	28	8.8

The most promising growth opportunities identified by entrepreneurs were digital adoption and infrastructure (M = 4.21, SD = 0.68) and market access via online channels (M = 4.07, SD=0.73). The high-country/high-innovation values of entrepreneur had moderate rank while government support programs (M= 3.88, SD =.81 and talent availability were the most frequently identified value adding activity that induced an entrepreneurs' innovation capabilities among four dimensions of induced values with university/incubator collaboration being the least acknowledged value adding activity point among them (M = 3.32, SD=. 92). Notably, financial constraints (M= 4.15, SD = 0.65) and regulatory/compliance needs (M = 3.94, SD = 0.78) were identified as the leading two barriers in this list before talent retention and high cost of operations.

The findings indicate that support and facilitation of technology absorption and online marketisation can be major schemes to increase the start-up growth, whereas financial support and deregulation are ways to mitigate barriers. The top policy interventions and incubation programs to support startups should be through facilitating funding, regulation guidance and talent development.

Table 2. Perceived Opportunities and Barriers among Startups in Punjab (n = 320)

Dimension	Mean	SD	Rank	Dimension	Mean	SD	Rank
Opportunities				**Barriers**			
Digital adoption & infrastructure	4.21	0.68	1	Financial constraints (funding access)	4.15	0.65	1
Market access through online channels	4.07	0.73	2	Regulatory and compliance requirements	3.94	0.78	2
Government support schemes/subsidies	3.88	0.81	3	Talent retention issues	3.80	0.74	3
Skilled talent availability	3.70	0.76	4	High operational costs	3.69	0.85	4
Access to financial institutions	3.52	0.89	5	Poor physical infrastructure/logistics	3.55	0.82	5
Collaboration with universities/incubators	3.32	0.92	6	Lack of mentorship/advisors	3.44	0.91	6
Composite Index	3.87	0.59		**Composite Index**	3.78	0.62	

The correlational analysis reveals that the Opportunity Index is positively associated with an increase in revenue (r = 0.46), growth in customer base (r = 0.42), and growth in employment (r = 0.37), all being significant at p < .001. In contrast, the Barrier Index is negatively associated with both revenue growth (r = –0.39) and market expansion (r = –0.33). Startups with higher perceived opportunities enjoy better performance, while barriers hinder growth. This underscores the importance of entrepreneurs capitalizing on opportunities but also addressing hurdles like funding and regulatory issues.

Table 3. Correlation of Opportunities and Barriers with Startup Performance (n = 320)

Performance Outcome	Opportunity Index (r)	Barrier Index (r)	Significance
Revenue growth	0.46	–0.39	p < .001
Customer base expansion	0.42	–	p < .001
Employment growth	0.37	–	p < .001
Market expansion	–	–0.33	p < .001

The results of the regression analysis indicate that opportunities are significantly and positively related to new venture revenue growth (β = -0.41, t =7.52, p < .001), and barriers negatively predict profit growth (β = –0.28, t = –5.10, p <.001). The model accounts for 31% of the variance (R² = 0.31) in revenue growth for startups.

This indicates that increasing opportunity factors such as digital uptake, access to markets, and government support can help achieve revenue, with the mitigation of barriers like financial limitations and red tape being equally important. These insights are useful for policy making and incubators as they plan interventions with both opportunity-enhancing and barrier-demolishing elements.

Table 4. Regression Analysis of Opportunities and Barriers on Revenue Growth (n = 320)

Predictor	B	t	Sig.
Opportunity Index	0.41	7.52	.001
Barrier Index	–0.28	–5.10	.001
Model Statistics	**R² = 0.31, F (2,317) = 71.88, p < .001**	**–**	**–**

Female entrepreneurs also perceived barriers more strongly (M = 3.91) than males (M = 3.72, t = 2.64, p < .009); although there was also no gender difference on opportunities (M = 3.87 for both). The ANOVA results demonstrate significantly higher perceptions of opportunities (M = 4.05) among postgraduates than those of the graduates (M = 3.72, F (4,315) =4.23 ,p < .001), while moderate to high scores were obtained by professional/PhD holders. Barriers perceived were very similar across the educational strata.

IT and Services startups perceived the **highest opportunities (M = 4.12)**, followed by Agri tech (M = 3.75) and Manufacturing (M = 3.58, F(3,316) = 5.67, p < .001). Post-hoc analysis indicated that **IT/Services significantly outperformed Manufacturing and Agri tech**. Mean barrier scores were slightly higher for Manufacturing (M = 3.80), suggesting sector-specific challenges. These findings highlight **gender-specific support needs**, particularly for female entrepreneurs, and indicate that **higher education levels are associated with better opportunity perception**, which could be leveraged in entrepreneurship programs. Sector-specific policies may be needed to support Manufacturing and Agri-tech startups in **overcoming barriers and capitalizing on growth opportunities**.

Table 5. Influence of Demographic Variables on Perceived Opportunities and Barriers (n = 320)

Demographic Variable	Category	Mean Opportunity Score	Mean Barrier Score	SD (Opportunity)	SD (Barrier)	Statistical Test	Value	Significance
Gender	Male	3.87	3.72	0.59	0.64	t-test	2.64	.009*
	Female	3.87	3.91	0.59	0.59			
Educational Qualification	High School	3.55	3.68	0.62	0.65	ANOVA	F(4,315) = 4.23	< .001*
	Diploma	3.63	3.70	0.61	0.63			
	Graduate	3.72	3.75	0.60	0.62			
	Postgraduate	4.05	3.78	0.58	0.61	Post-hoc (Tukey HSD)	Postgraduates > Graduates –	
	Professional / PhD	3.95	3.76	0.59	0.62			
Industry Sector	IT / Software	4.12	3.70	0.57	0.60	ANOVA	F (3,316) = 5.67 < .001*	
	Services (EdTech, HealthTech, FinTech)	4.12	3.72	0.57	0.61			
	Manufacturing	3.58	3.80	0.60	0.63	Post-hoc (Tukey HSD)	IT/Services > Manufacturing/ Agri tech	
	Agri tech	3.75	3.68	0.59	0.62			

Note: p < .005 indicates statistical significance.

VI. Discussion and Implications

This research helps explain how startups grow in Punjab. It shows that many different things are important, such as what business owners believe are good opportunities, the problems they face, their backgrounds, and how they run their businesses. Studies also point out that using technology and selling products online are now the best ways for new businesses to grow quickly and reach more people (Shane, 2003; Brush et al., 2009). Having experts and getting good support in the country are also really helpful, showing that both smart people and strong organizations help new businesses do better (Audretsch & Belitski, 2017).

On the other hand, not having enough money, tough government rules, and trouble keeping staff are the biggest problems for startups. Some researchers found that finding money and dealing with complex laws are the main reasons why new companies often fail (Cassar, 2004; Beck et al., 2006). But if business owners are good at

spotting new chances, their businesses are more likely to grow in sales and jobs, even when there are obstacles (Gartner, 1985). This shows that when business owners grab new opportunities, they have a better chance of succeeding.

The demographic analysis also showed that female entrepreneurs have a greater likelihood of perceiving impediments, and that higher levels of education as well as work in the IT and services sectors are positively related to potential for recognizing opportunity, which is consistent with Zhao & Seibert (2006)'s discovery about the moderating effects of human capital and sector context on entrepreneurial cognition. These findings suggest that policies for startups need to cover many areas at once. This means, the government and other groups should build better digital tools and internet access, help people learn business skills, and offer things like ease-to-get funding, simpler rules, and guidance from experienced mentors.

Also, having special support for women, targeted help for certain business sectors, and better education can help new businesses find more chances and deal with challenges. The idea is to create a system where making opportunities and removing obstacles are equally important. This kind of supportive environment can help startups in Punjab grow and compete better, just as research shows in successful business communities elsewhere (Isenberg, 2011; Stam, 2015).

VII. Conclusion and Scope for Future Research

This research shows that what business owners think about chances and problems is closely linked to how well startups grow in Punjab. Using technology, selling online, and getting help from the government help businesses grow. But not having enough money, facing hard rules, and trouble keeping good staff are big problems. Demographic factors like gender, education, and the type of industry also affect how business owners see their opportunities and challenges. This means it is important to offer things like financial help, simple rules, training, guidance, and special support for women, to help new businesses succeed. For future research, it would be useful to study how these opportunities and problems change over time and what happens in different regions. It is also important to learn how new technology, social networks, and business education help business owners spot chances and overcome problems, both in India and in other developing countries.

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