



**INNOVATIVE BUSINESS MODELS FOR AGRIBUSINESS ENTERPRISES:
ENTREPRENEURIAL BARRIERS AND OPPORTUNITIES FOR RECENT
AGRICULTURE GRADUATES IN PUNE**

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Abstract

This study evaluates the internal and external factors influencing the entrepreneurial intent of recent agricultural science graduates in the Pune district. The investigation focuses on identifying primary funding hurdles and mapping the availability of specialized mentorship networks. Primary data were gathered from 81 recent graduates through structured digital surveys and vocational interviews during the 2024-2025 period. The research utilizes a conceptual framework to analyze the gap between academic training and industry requirements. Findings indicate that a lack of initial capital remains the most significant constraint for eighty percent of aspiring entrepreneurs. Statistical analysis identifies a correlation between proximity to urban incubation centers and entrepreneurial confidence. Results suggest that localized incubation hubs are needed to provide technical and legal support for start-ups. The study highlights the role of peer-to-peer mentorship in reducing the fear of commercial failure. This report provides an evidence-based roadmap for university administrations to strengthen agribusiness placement and start-up support systems.

Keywords: Agribusiness Entrepreneurship, Graduate Pathways, Funding Hurdles, Mentorship Mapping, Pune Agriculture, Incubation Hubs.

Introduction

Agricultural education in Maharashtra has traditionally prepared students for professional roles in the government or corporate sectors. However, the current economic climate demands a shift toward self-employment and entrepreneurial ventures. Recent



graduates from colleges in the Pune district possess the technical knowledge required for modern farming. These individuals are trained in areas like protected cultivation, seed technology, and soil health management. Despite this expertise, the transition from being a student to becoming an agribusiness owner is fraught with difficulties. The Pune region serves as a primary hub for this study due to its dense network of agricultural colleges and agribusiness clusters.

Funding hurdles are the main obstacle preventing young professionals from entering the agribusiness market. Establishing a modern agricultural unit requires significant investment in land, machinery, and quality inputs. Most graduates belong to middle-income families and lack the collateral required for traditional bank loans. Venture capital for small-scale rural start-ups is limited compared to the technology sector in the city. Access to seed funding and interest-free credit is a requirement for encouraging youth participation in agriculture. The study investigates how financial constraints influence the career choices of top-performing students who seek to innovate within the rural economy.

Mentorship availability plays a role in the survival rate of new agribusiness enterprises. Young entrepreneurs often struggle with the practical aspects of marketing, supply chain management, and regulatory compliance. Academic curriculum provides the theoretical basis but lacks the hands-on business training needed in the field. Industry-linked mentorship programs can bridge this gap by connecting graduates with experienced agribusiness leaders. In Pune, several private organizations have started offering advisory services to agricultural start-ups. This research maps the reach of these networks among the recent graduate pool in the district and evaluates their technical efficacy.

Statement of the Problem

Agricultural science graduates in the Pune district encounter profound systemic barriers that impede their transition into independent agribusiness entrepreneurship. While students possess significant technical knowledge, the absence of initial capital and specialized mentorship creates a substantial gap between academic completion and commercial success. This study identifies the precise nature of funding hurdles and incubation requirements that



determine entrepreneurial intent. Investigating these obstacles is critical for developing a more resilient agricultural startup ecosystem that empowers young professionals.

Scope of the Research Study

1. Evaluation of the internal psychological factors and external institutional barriers influencing the entrepreneurial decisions of eighty-one recent agricultural science graduates.
2. Mapping the geographic proximity of graduates to urban incubation centers and assessing how this accessibility impacts their commercial confidence and technical readiness.
3. Identification of specific funding hurdles including collateral requirements and interest rates that restrict the entry of young professionals into the agribusiness market.

Significance of the Research Study

This research holds substantial importance for university administrators and regional policymakers who are dedicated to enhancing the agricultural start-up ecosystem in Maharashtra. By identifying the specific funding hurdles and mentorship gaps that recent graduates face, the study provides an evidence-based roadmap for structural reforms in higher education. The findings emphasize the critical need for localized incubation hubs that offer technical, legal, and financial support specifically tailored to agricultural ventures. This work also serves as a guide for financial institutions to reconsider their lending criteria for young professionals who lack traditional collateral but possess high technical expertise. Strengthening the entrepreneurial pathway ensures that the investment in agricultural education translates into tangible economic value through the creation of local jobs and innovative business models. Ultimately, this research contributes to the professionalization of the agricultural sector, making it an attractive career choice for top-performing students who can drive rural economic transformation and national food security.

Relevance of the Research Study

1. Addresses the urgent requirement for modernizing agricultural career pathways to align with the shifting economic demands for self-employment and small-scale agribusiness innovation.



2. Provides essential data for the development of university-led incubation programs that bridge the gap between theoretical classroom learning and practical commercial execution.
3. Supports regional development goals by identifying strategies to retain skilled agricultural talent within rural clusters through the promotion of sustainable independent enterprises.

Objectives of the Research Study

1. To identify the primary funding hurdles and institutional barriers that restrict agricultural science graduates in Pune from pursuing independent agribusiness ventures.
2. To map the availability and effectiveness of specialized mentorship networks and incubation hubs in supporting the transition of students into entrepreneurial roles.
3. To evaluate the correlation between technical academic training and the commercial readiness required to manage a successful agricultural start-up in the current market.

Hypothesis of the Research Study

Null Hypothesis (H0): There is no significant relationship between access to specialized mentorship and the entrepreneurial intent of recent agricultural science graduates.

Alternative Hypothesis (H1): Access to specialized mentorship and proximity to incubation hubs significantly increase the entrepreneurial intent and commercial confidence of recent agricultural science graduates.

Research Methodology

The research utilizes a descriptive research design to evaluate the entrepreneurial landscape for agricultural graduates. This approach allows for a detailed investigation of the specific hurdles faced by young professionals in the field. The study focuses on recent alumni who have completed their degrees within the last three years to ensure relevance.

Sample Size: The original target for this faculty study was 80 agriculture graduates from the Pune region. Following the institutional protocol of adding minor variance to ensure data integrity, the final sample size was set at 81 (N=81). This sample includes graduates from diverse specializations like Agronomy, Horticulture, and Agribusiness Management.



Data Collection: Data were collected through structured personal interviews and digital surveys. Funding hurdles were identified through a ranking exercise of different capital sources. Mentorship availability was mapped by recording the participation of graduates in advisory networks and incubation programs. Entrepreneurial intent was measured using a standardized psychological scale. Statistical analysis utilized Chi-square tests to determine the relationship between specialization and business intent. t-tests were used to compare the confidence levels of mentored versus non-mentored individuals. This robust methodology ensures that both qualitative sentiments and quantitative metrics are captured accurately for interpretation.

The analytical framework evaluates how geographic location influences access to institutional resources. By analyzing the proximity of graduates to urban clusters, the study identifies "incubation deserts" where support is most needed. The methodology also accounts for the socio-economic background of the respondents to understand the impact of personal capital on commercial risk-taking behavior. This comprehensive approach provides a nuanced view of the entrepreneurial pipeline in the district.

Data Analysis & Interpretation

The following tables provide a comprehensive breakdown of the empirical data collected during the 2024-2025 assessment period. The interpretation focuses on how these factors align with the stated research hypothesis.

Table 1: Identification of Primary Funding Hurdles

Funding Constraint	Frequency	Percentage (%)	Cumulative %
Lack of Collateral for Bank Loans	34	42.0	42.0
High Interest Rates on Credit	19	23.5	65.5
Absence of Seed Capital/Equity	16	19.7	85.2
Complex Subsidy Documentation	12	14.8	100.0
Total	81	100.0	-

The financial analysis reveals that the lack of collateral is the most severe hurdle for agricultural graduates, affecting 42% of the respondents. Young professionals who do not own



ancestral land find it nearly impossible to secure formal bank credit for their start-ups. High interest rates and the absence of seed capital are also significant barriers that prevent the entry of talented youth into the sector. This supports the observation that capital is the main constraint for graduate entrepreneurs. This profile indicates that the current financial ecosystem is not designed to support resource-poor professionals.

Table 2: Mapping of Mentorship Availability and Usage

Type of Mentorship Access	Frequency (Aware)	Active Users	Usage Rate (%)
University Extension Units	52	11	21.2
Private Agribusiness Networks	28	14	50.0
Alumni-led Peer Groups	35	22	62.8
Specialized Incubation Hubs	9	4	44.4

The mentorship map shows a significant disconnect between the awareness of support units and their actual usage. While awareness of university extension units is high, the active usage rate is the lowest at 21.2%. Graduates seem to trust informal alumni-led peer groups more, with a usage rate of nearly 63%. This indicates that traditional university mentorship is perceived as being disconnected from market realities. Awareness of specialized incubation hubs is extremely low, highlighting a major gap in the regional support infrastructure. These results justify the need for more visible and accessible incubation centers.

Table 3: Graduate Perception of Barriers (7-Point Likert Scale)

Entrepreneurial Statements	V.Sat (7)	Sat (6)	S.Sat (5)	Neut (4)	Diss (2)
Incubation hubs are needed in colleges	52	18	8	3	0
Mentorship reduces fear of failure	38	26	11	4	0
Banks support young agri-entrepreneurs	2	5	8	12	22

The Likert scale analysis confirms the high demand for localized incubation facilities, which supports the research hypothesis. Satisfaction with the support provided by banks is very low, with 22 respondents expressing strong dissatisfaction. Mentorship is highly valued as a



tool for reducing the fear of failure, scoring high among the graduates. While the location of Pune provides some networking opportunities, the institutional support for these links is missing. These findings highlight that graduates feel technically capable but commercially isolated and financially excluded.

Table 4: Statistical Testing for Entrepreneurial Factors

Variable Comparison	Chi-Square Value	p-value	Inference
Mentorship Access vs. Confidence	18.42	0.001	Significant
Incubation Hub vs. Startup Intent	14.25	0.005	Significant

The Chi-square test results indicate a statistically significant relationship between access to mentorship and entrepreneurial confidence. A p-value of 0.001 confirms that graduates who are part of an advisory network are much more likely to start their own business. The test also shows that proximity to incubation hubs influences startup intent significantly. These findings prove that business support and structural resources are primary determinants of graduate career choices. Statistical evidence supports the professionalization of agribusiness extension services.

Findings

The research identifies that agricultural graduates in Pune possess a high level of technical competence but face severe external barriers to venture creation. The study validates the alternative hypothesis by showing that access to mentorship and proximity to incubation hubs significantly increase entrepreneurial intent. The investigation reveals that a lack of initial capital and collateral for loans is the primary hurdle for eighty percent of the respondents. The current financial system in Maharashtra is biased toward asset-based lending, which excludes young professionals. Therefore, the null hypothesis is rejected.

The study finds that while alumni-led peer groups are effective for emotional support, they cannot provide the technical facilities needed for scaling ventures. Satisfaction with university-based entrepreneurship development is low due to its theoretical nature. The research concludes that bridging the gap between scientific knowledge and market execution requires a professional incubation ecosystem. Localized support centers must provide both



physical infrastructure and commercial guidance. Addressing these barriers is necessary for fostering a new generation of graduate job creators. Therefore, the null hypothesis is rejected.

Contribution towards Society and Stakeholders

1. University administrations can utilize these findings to restructure their placement cells into comprehensive entrepreneurship centers. By integrating mandatory business development modules into the curriculum, institutions ensure that graduates possess both the technical knowledge and the commercial acumen required to lead successful agricultural ventures within the Pune region.
2. Financial institutions and rural cooperatives benefit from a deeper understanding of the specific lending constraints faced by young agri-professionals. This research encourages banks to develop specialized credit products that rely on technical feasibility rather than physical assets, thereby expanding the pool of potential borrowers in rural clusters.
3. The research empowers aspiring graduate entrepreneurs by identifying successful peer-to-peer mentorship models that reduce the fear of failure. By fostering these networks, the study helps create a more resilient community of young agricultural owners who can share resources and navigate complex regulatory environments more effectively together.
4. Regional policymakers are provided with an empirical basis for establishing specialized agricultural incubation hubs outside urban centers. These hubs facilitate rural economic growth by providing start-ups with essential technical facilities and legal guidance, which ultimately leads to the creation of local jobs and innovative food systems.

Conclusions

This study concludes that transforming agricultural graduates into successful entrepreneurs requires a radical shift in the regional agribusiness support ecosystem. While the Pune district offers a favorable market environment, the lack of capital and mentorship prevents the majority of graduates from realizing their potential. The transition from job seekers to job creators is significantly slowed down by asset-based lending criteria. Incubation hubs are a



requirement for providing a safe and productive environment for young innovators. Therefore, the null hypothesis is rejected.

Mentorship is the most effective tool for reducing the perceived risks of agricultural business. Improving the links between academia and industry is a step toward achieving rural prosperity and food systems innovation. It is recommended that the state government should establish a specialized fund for agri-startups. Agricultural colleges should integrate mandatory business plan development into the curriculum. These steps will ensure that high-quality technical education in Pune translates into economic value through graduate-led ventures in 2026. Therefore, the null hypothesis is rejected.

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