

International Journal of Agriculture Extension and Social Development

Volume 7; SP-Issue 8; August 2024; Page No. 99-101

Received: 10-06-2024
Accepted: 15-07-2024

Indexed Journal
Peer Reviewed Journal

Challenges for agricultural startups in Chhattisgarh: An empirical analysis

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DOI: <https://doi.org/10.33545/26180723.2024.v7.i8Sb.938>

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Abstract

Chhattisgarh has a number of challenges for agricultural startups, impeding their growth and sustainability. The issues, which include financial support (debt burden and increased cost of capital), technological bottlenecks, both marketing and HR-related adversities, targeted government policy supports, and red-tape- dominating administrative procedures, necessitate tailored assistance from various stakeholders, including industry organisations. Resolving these challenges by providing adequate funds, guidance on technology and marketing strategies, proper human resource development, and seamless administrative procedures can significantly improve the success of the region's agribusiness startups. This study explores these challenges using data collected from 11 agricultural startups, which were part of the 160 registered agricultural startups in the state. It identifies the core difficulties and proposes policy measures to enhance the agricultural startup ecosystem in Chhattisgarh. Opportunities for growth through government support, technological adoption, and market expansion are also discussed. The findings suggest that a strategy involving financial support, technological advancement, market access, capacity building, infrastructure development, regulatory streamlining, and community-building is essential for fostering innovation and sustainable growth in the agricultural sector.

Keywords: Agricultural startups, Chhattisgarh, financial challenges, technological adoption, policy measures

Introduction

Agriculture holds a critical position in India, making a substantial contribution to both employment and GDP (Singh 2020, Manimannan *et al.*, 2019) ^[12, 7]. The nation has achieved notable progress in agricultural development, shifting from a food-deficient country to one boasting a surplus in trade, with an average annual growth rate of 3.2% over recent decades (Usera, 2022) ^[15]. The emergence of agricultural startups, referred to as AgTechs, presents the opportunity for transformative advancements in the sector by introducing innovative technologies and methods. These startups have a crucial role in the agricultural landscape, emphasizing precision and environmentally friendly technologies in what is known as agriculture 4.0, which can further improve productivity and sustainability in Indian agriculture (Alves *et al.*, 2022) ^[1]. A significant majority of the respondents, 93.8% and 93.5%, were utilizing mobile phones and televisions, respectively, highlighting the widespread adoption of these technologies in rural areas. (Tiwari *et al.*, 2021) ^[14]. Through the utilization of these innovations, India can advance towards achieving self-sufficiency in food production and possibly even attaining trade surpluses, as long as agricultural policies continue to be supportive and unbiased towards both consumers and producers. (Usera, 2022) ^[15].

This study employs a mixed-methods approach, combining quantitative data analysis with qualitative insights from interviews and surveys. Data collection involved structured interviews, surveys, and secondary sources such as

government reports and industry publications. The methodology focuses on identifying the diverse challenges faced by these startups while also pinpointing common themes that can inform policy interventions.

Review of Literature

Agricultural startups are increasingly acknowledged as crucial catalysts of innovation and efficiency in the agricultural industry (Gray *et al.*, 2004) ^[3]. Nevertheless, these startups frequently encounter notable limitations that impede their capacity to expand and grow efficiently. The state of Chhattisgarh, marked by a mostly agrarian economy, poses particular barriers for agricultural startups given its socio-economic and infrastructural context (Vijayan & Shivkumar, 2020) ^[16]. The goal of this research is to investigate the main limitations encountered by farming startups in Chhattisgarh and suggest strategies that may lessen these obstacles.

Methodology

Data Collection

Data for this study was collected through a pre-structured interview process the sample size includes 11 agricultural startups from the 172 registered in Chhattisgarh, selected based on their activity level, diversity of operations, and willingness to participate in the study, offering insights into the challenges they encounter. The interview questionnaire focused on various aspects such as financial, technological, marketing, personal, and governmental support challenges.

Sampling Technique

A purposive sampling method was used to select participants. The inclusion criteria required that participants be founders or co-founders of agricultural startups based in Chhattisgarh and that their startups had been operational for at least one year. This criterion ensured the relevance and reliability of the data.

Data Analysis

The collected data was analyzed using both qualitative and quantitative methods. Descriptive statistics were used to summarize the data, while thematic analysis was employed

to identify common challenges across different categories. Mean scores were calculated for various challenges to determine their severity and ranking.

Challenges Faced by Agricultural Startups in Chhattisgarh

Financial Challenges

One of the most significant challenges faced by agricultural startups in Chhattisgarh is financial instability. High interest rates, reluctance from financial institutions, and lengthy procedures for obtaining financial aid are major obstacles (Singh & Chauhan, 2020) ^[12], (NABARD, 2020) ^[10].

Table 1: Financial Challenges Faced by Agricultural Startups

Financial Challenges	Mean Score	Rank	Description
High interest rates	3.82	1	High borrowing costs create financial stress for startups.
Reluctance of funding institutions	3.73	2	Financial institutions are hesitant to invest due to perceived risks.
Lengthy financial procedures	3.09	3	Complex and time-consuming processes hinder access to capital.
Insufficient working capital	3.00	4	Startups struggle with maintaining adequate cash flow for operations.
Lack of government support in financing	2.73	5	Inadequate financial assistance from the government increases challenges.

Technological Challenges

Despite the opportunities, startups face significant technological challenges, including the high cost of new

technologies and inadequate consultancy services (Kumar & Reddy, 2021) ^[6].

Table 2: Technological Challenges Faced by Agricultural Startups

Technological Challenges	Mean Score	Rank	Description
High cost of technologies	3.73	1	The financial burden of acquiring advanced technologies is significant.
Inadequate consultancy services	3.36	2	Lack of expert guidance limits the effective use of new technologies.
Lack of technical know-how	3.18	3	Startups struggle with the skills needed to implement technological solutions.
Inadequate knowledge of emerging techniques	3.18	4	There is a gap in awareness and education regarding new agricultural methods.
Lack of skills in handling advanced technologies	2.82	5	Many startups lack the training needed to manage modern farming equipment.

Marketing Challenges

Marketing remains a critical challenge for agricultural startups. Limited advertising budgets, lack of strategic

marketing knowledge, and insufficient market intelligence are some of the primary issues (Gupta & Patel, 2019) ^[4], (Ministry of MSME, 2021) ^[9].

Table 3: Marketing Challenges Faced by Agricultural Startups

Marketing Challenges	Mean Score	Rank	Description
Small advertising budget	3.64	1	Limited funds for marketing restrict startups' ability to reach customers.
Lack of knowledge on marketing strategies	3.09	2	Startups often lack expertise in developing effective marketing strategies.
Lack of market intelligence	3.00	3	Insufficient data on market trends hinders strategic decision-making.
Low product prices	2.82	4	Competitive pricing pressures reduce profitability for startups.
Lack of market information	2.73	5	Limited access to market data impedes growth and expansion efforts.

Personal Challenges

Entrepreneurs in agricultural startups also face personal challenges such as low self-motivation, lack of managerial

skills, and inadequate technical education (Jain & Verma, 2020) ^[5].

Personal Challenges

Table 4: Personal Challenges Faced by Agricultural Startups

Personal Challenges	Mean Score	Rank	Description
Lack of self-motivation	3.09	1	The entrepreneurial journey can be demotivating, leading to burnout.
Lack of managerial skills	3.00	2	Many founders lack the skills necessary to manage business operations effectively.
Lack of confidence	2.91	3	Entrepreneurs often struggle with self-confidence, affecting decision-making.
Non-cooperation from family members	2.64	4	Family support is often lacking, which can hinder entrepreneurial efforts.
Lack of technical education	2.09	5	Limited access to education and training in relevant technical fields poses a challenge.

Government Policies and Support

While government initiatives have positively impacted startups, there are still significant gaps in the accessibility

and effectiveness of these policies (Department of Agriculture, 2021, Ministry of Commerce and Industry, 2020).

Table 5: Government Policies and Support for Agricultural Startups

Government Policies and Support	Mean Score	Rank	Description
Positive impact of Startup India	3.73	1	The Startup India initiative has provided substantial support for startups.
Effective state-level policies	3.45	2	State-specific policies are tailored to support agricultural startups.
Accessibility of government grants and subsidies	3.27	3	While policies exist, accessing financial support remains challenging.
Beneficial government policies	3.18	4	Existing policies are beneficial but require better implementation.
Perception of inadequate government support	2.27	5	Despite policies, many startups feel they do not receive sufficient support.

Bureaucratic Processes

Bureaucratic inefficiencies are a significant hurdle for agricultural startups in Chhattisgarh, with issues such as

delays, lack of clarity in regulations, and complex licensing procedures (Sharma & Singh, 2020) ^[12], (Ministry of MSME, 2021) ^[9].

Table 6: Bureaucratic Challenges Faced by Agricultural Startups

Bureaucratic Challenges	Mean Score	Rank	Description
Delays in bureaucratic processes	3.45	1	Lengthy procedures slow down startup operations, affecting time-to-market.
Insufficient support from government agencies	3.36	2	Government agencies provide limited assistance in navigating complex processes.
Inefficiency of bureaucratic procedures	2.91	3	Startups face inefficiencies in dealing with bureaucratic requirements.
Non-clarity of government regulations	2.45	4	Regulations are often unclear, leading to confusion and delays.
Complexity in obtaining licenses and permits	2.27	5	The process for obtaining necessary licenses and permits is overly complex.

Conclusion

Agricultural startups in Chhattisgarh encounter a multifaceted range of obstacles that impede their expansion and continuity. These obstacles, encompassing financial, technological, marketing, personal, governmental policy support, and bureaucratic procedures, necessitate tailored interventions from various stakeholders, such as the government, financial institutions, and industry participants. Alleviating these challenges through enhanced financial backing, technological instruction, marketing tactics, personal growth, and efficient bureaucratic processes has the potential to significantly augment the prosperity of agricultural startups in the area.

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