



AGRIPRENEURSHIP DEVELOPMENT IN ODISHA: AN EMPIRICAL ANALYSIS OF CHALLENGES AND POLICY SUPPORT

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Article DOI: <https://doi.org/10.36713/epra27600>

DOI No: 10.36713/epra27600

ABSTRACT

Agripreneurship has emerged as an important driver of agricultural development, rural employment and economic resilience in India. This study examines the status of agripreneurship in Odisha with special emphasis on socio-demographic characteristics, technological adoption, institutional support and the effectiveness of government initiatives. Primary data were collected from 420 agripreneurs across seven districts of Odisha using a structured questionnaire. The data were analysed using descriptive statistics and Chi-square tests to examine associations among key variables. The findings reveal balanced participation of male and female agripreneurs, with the majority belonging to economically active age groups. Horticulture, crop farming, livestock, agri-tech and agro-processing emerged as the major agribusiness activities. The study identified lack of technical knowledge, bureaucratic delays, financial constraints and supply chain disruptions as the major challenges affecting agripreneurial growth. Chi-square analysis revealed a significant association between technological adoption and market access, indicating that the use of technological tools improves market connectivity among agripreneurs. However, no significant relationship was found between technological adoption and access to financial assistance, highlighting persistent institutional and financial barriers. The study also found moderate to low levels of awareness and accessibility of government support programmes, with no significant association observed between awareness, accessibility and perceived policy effectiveness. The study highlights the need for stronger capacity-building programmes, simplified financial procedures, improved policy outreach and enhanced digital integration to create a sustainable and inclusive agripreneurship ecosystem in Odisha.

KEYWORDS: Agripreneurship, Sustainable Agriculture, Government Initiatives, Technological Adoption, Rural Entrepreneurship, Odisha-----

INTRODUCTION

Agriculture continues to play a crucial role in the Indian economy by contributing significantly to employment generation, food security and rural development. Nearly 73% of India's population depends on agriculture and allied activities for their primary source of livelihood (Haldhar et al., 2023). India is also the world's second-largest producer of agricultural commodities, reflecting the sector's strategic importance in the national economy (Mahendra et al., 2023). Beyond its economic contribution, agriculture serves as the backbone of rural society by supporting income generation, industrial raw material supply and sustainable livelihoods. In recent years, rapid technological advancement, market integration and changing consumer demand have transformed agriculture from a traditional subsistence activity into a market-oriented and innovation-driven sector.

The concept of entrepreneurship in agriculture is not new. In the 18th century, French physiocrats closely associated entrepreneurship with agricultural activities, although the concept later became more industrially oriented (Singh & Krishna, 1994). In the modern context, an agripreneur refers to an individual who initiates, organises and manages a business venture within the agricultural sector (Usanga, 2021). Agripreneurship combines agriculture with innovation, technology, business management and market orientation to create value-added opportunities across the agricultural value chain. Agriculture has gradually evolved from a low-technology and labour-intensive sector into a dynamic and commercially driven industry due to economic, social and regulatory transformations (Uplaonkar & Biradar, 2015). As a result, agripreneurship has emerged as a promising approach for improving agricultural productivity, promoting rural employment and encouraging sustainable economic development.



In India, agripreneurship offers substantial opportunities in activities such as crop production, horticulture, livestock management, agro-processing, agri-tech services, storage, logistics and agricultural marketing. These opportunities are expanding due to globalisation, increasing industry linkages and rising demand for modern farming technologies (Trivedi & Patel, 2024). Odisha, being a predominantly agrarian state, possesses significant potential for agripreneurship development. A large proportion of the state's population resides in rural areas and depends directly or indirectly on agriculture for livelihood. The state has considerable scope for agro-processing industries, horticulture-based enterprises and small-scale agri-businesses supported through MSMEs and rural development initiatives. However, Odisha's agricultural economy is also highly vulnerable to climatic uncertainties such as cyclones, floods and droughts, which frequently disrupt agricultural production and supply chains. These vulnerabilities create additional challenges for agripreneurs and increase the need for resilient and sustainable agricultural business models.

Despite the growing importance of agripreneurship, several structural and institutional barriers continue to hinder its development in Odisha. Agripreneurs often face challenges such as inadequate access to finance, limited market connectivity, lack of technical knowledge, insufficient training opportunities, bureaucratic delays and weak infrastructure support. Tribal youth in Odisha, despite possessing significant potential, continue to experience declining and unsustainable agricultural livelihoods due to low productivity and structural constraints, highlighting the urgent need to modernise agriculture and create viable entrepreneurial opportunities (Dash et al., 2018). Similarly, studies have shown that coastal youth in Odisha demonstrate more positive attitudes towards agriculture and agripreneurship than tribal youth, indicating regional variations in participation, constraints and support requirements (Jena & Kanungo, 2017).

Although several national and international studies have examined agripreneurship from the perspectives of entrepreneurial intention, government support, technology adoption and youth participation, there remains limited empirical evidence focusing specifically on Odisha. Existing studies provide inadequate understanding of district-level variations, the effectiveness of government initiatives and the relationship between technological adoption, institutional support and sustainable agribusiness growth in the state. Furthermore, limited research has explored how agripreneurs perceive and access government support mechanisms in Odisha's diverse socio-economic and agro-climatic environment.

In this context, the present study attempts to examine the current status of agripreneurship in Odisha by analysing the socio-demographic and business characteristics of agripreneurs, identifying major challenges affecting agribusiness development and assessing the role of technological adoption and government initiatives. The study further seeks to propose pathways for sustainable agripreneurship growth through improved policy implementation, market integration, financial inclusion and capacity-building initiatives. By providing empirical insights into the agripreneurial ecosystem of Odisha, the study contributes to the development of a more resilient, inclusive and sustainable agricultural economy.

REVIEW OF LITERATURE

Agripreneurship has gained increasing attention as a strategy for promoting agricultural modernisation, rural employment and sustainable economic development. Existing literature highlights several dimensions of agripreneurship, including entrepreneurial intention, technological adoption, government support, youth participation, gender inclusion and financial accessibility.

1. Agripreneurial Intention and Entrepreneurial Attitudes

Several studies have examined the factors influencing agripreneurial intention among youth and agricultural students. Amaran et al. (2025) found that attitudes, subjective norms, perceived behavioural control and personality traits significantly influenced agripreneurial intention among agricultural college students in India, whereas formal agripreneurship education and demographic variables showed limited impact. Similarly, Behera & Raj (2024), observed that agriculture students possessed moderate entrepreneurial attitudes with strong planning and marketing orientation but comparatively weaker entrepreneurial mindsets. Their study also highlighted gender-based differences in entrepreneurial orientation, suggesting the need for gender-sensitive interventions.

Studies conducted outside India also support the importance of perception and education in shaping agripreneurial intention. Magagula & Tsvakirai (2020) reported that positive economic perceptions of agriculture, agricultural



education and financial support significantly increased youth participation in agripreneurship in South Africa. These studies collectively indicate that psychological, educational and motivational factors play a crucial role in encouraging agripreneurial engagement among youth.

2. Technology Adoption, Innovation and Capacity Building

Technological adoption and skill development have emerged as major determinants of agripreneurship development. **Malhotra et al. (2025)**, systematically reviewed using the TCCM framework, identified access to finance, government support, technological adoption and entrepreneurial training as key enablers of agripreneurship, while inadequate infrastructure, limited market access and lack of technical skills acted as major barriers. Similarly, **Dash et al. (2021)** analysed the training needs of tribal youth in Odisha and found a strong demand for village-based, short-duration and practical agripreneurial training programmes supported by scientists and extension workers. The study further emphasised the importance of regular follow-up and skill monitoring for sustainable livelihood development.

The role of innovation and technology in transforming agriculture into a commercially viable sector has also been highlighted by **Arumugam & Manida (2014)**, who argued that agripreneurship promotes sustainable development through innovation, improved productivity and environmental sustainability. These studies suggest that technological integration and capacity-building initiatives are essential for improving agribusiness efficiency and long-term sustainability.

3. Government Support and Institutional Interventions

Government initiatives and institutional support play a critical role in strengthening agripreneurship ecosystems. **Adeyanju et al. (2023)** examined the impact of the ENABLE-TAAT agribusiness empowerment programme across Kenya, Nigeria and Uganda and found that participation significantly improved agripreneurial income, food security and entrepreneurial skills among youth participants. The study demonstrated the effectiveness of structured institutional interventions in improving livelihood outcomes and agribusiness performance.

Similarly, **Otache (2017)** argued that agripreneurship and agricultural diversification are essential for achieving sustainable economic growth, particularly in developing economies dependent on traditional sectors. However, despite the growing importance of government support, several studies indicate that institutional barriers, policy implementation gaps and inadequate outreach continue to limit the effectiveness of agripreneurship programmes, especially in rural regions.

4. Youth Participation and Financial Accessibility

Youth participation in agripreneurship has been widely discussed as a solution to rural unemployment and economic instability. **Akrong & Kotu (2022)**, studied youth participation in agripreneurship in Benin and found that education, entrepreneurship training, business registration and access to credit significantly influenced engagement in agricultural and non-agricultural agribusiness activities. The study particularly highlighted the positive role of credit accessibility in promoting cash crop production and entrepreneurial participation.

Similarly, studies in Odisha reveal varying levels of youth interest and participation in agriculture. **Dash et al. (2018)** observed that tribal youth in Odisha face declining and unsustainable agricultural livelihoods due to structural and productivity-related constraints, emphasising the need for agricultural modernisation and entrepreneurial opportunities. **Jena and Kanungo (2017)** further reported that coastal youth demonstrated more positive attitudes towards agriculture and agripreneurship than tribal youth, indicating regional disparities in opportunities, awareness and support systems. These findings collectively suggest that financial inclusion, entrepreneurship training and region-specific policy interventions are essential for increasing youth participation in agripreneurship.

5. Gender Participation and Climatic Challenges

Gender dimensions in agripreneurship have also received growing academic attention. **Jeeva et al. (2019)**, in their study among tribal communities in Odisha, found that women actively participated in crop and livestock activities despite limited ownership of productive assets. Their interventions significantly improved women's livelihood participation, leadership and nutritional awareness, highlighting the importance of inclusive capacity-building programmes. Similarly, **Nayak et al. (2022)** examined women agripreneurs in coastal Odisha and reported that crop production was the most adopted enterprise, while climatic challenges such as floods and cyclones emerged as major constraints affecting agricultural activities.



These studies demonstrate that women play a significant role in agripreneurship, but their participation is often constrained by unequal resource ownership, climate vulnerability and limited institutional support. Odisha's frequent exposure to cyclones and floods further intensifies operational risks for agripreneurs, particularly in coastal regions. The existing literature establishes that agripreneurship is influenced by multiple socio-economic, technological and institutional factors. Access to finance, technological adoption, entrepreneurial training, government support and positive perception towards agriculture have been identified as major enablers of agripreneurship development (Adeyanju et al., 2023; Malhotra et al., 2025). At the same time, inadequate infrastructure, lack of technical knowledge, limited market access, climate vulnerability and institutional barriers continue to hinder agribusiness growth. Although several studies have explored agripreneurship from national and international perspectives, Odisha-specific empirical research remains limited, particularly regarding the effectiveness of government initiatives, technological adoption and district-level variations in agripreneurial challenges and opportunities. The present study attempts to address this gap by providing a comprehensive empirical assessment of agripreneurship development in Odisha.

RESEARCH GAP

Existing studies on agripreneurship mainly focus on general opportunities, challenges and entrepreneurial intention at the national and international levels. However, very few empirical studies have examined agripreneurship specifically in Odisha. There is limited district-level comparative research on agripreneurial activities, challenges and institutional support across different regions of the state. Further, existing literature provides limited evidence regarding the effectiveness of government schemes and policy support in promoting sustainable agribusiness growth in Odisha. The relationship between technological adoption, market access and institutional support has also not been adequately explored. In addition, Odisha's unique challenges, such as climate vulnerability, frequent cyclones and regional disparities among tribal and coastal areas, remain underexplored in agripreneurship research. Therefore, the present study attempts to fill these gaps by examining the socio-demographic profile, technological adoption, institutional support and policy effectiveness among agripreneurs across different districts of Odisha.

OBJECTIVES

1. To analyse the socio-demographic and business characteristics of agripreneurs across different districts.
2. To examine the key challenges, technological adoption and access to market and financial support among agripreneurs.
3. To assess awareness, accessibility and perceived impact of government initiatives on agripreneurship development.

HYPOTHESES

H0₁: There is no significant association between technological adoption and access to market and financial support among agripreneurs.

H0₂: Awareness and accessibility of government initiatives have no significant impact on the development of agripreneurship.

RESEARCH METHODOLOGY

The present study adopts a quantitative research design to examine the challenges, government initiatives and sustainable growth pathways of agripreneurship in Odisha. Primary data were collected through a structured questionnaire consisting of 20 questions from 420 agripreneurs across selected districts of Odisha. The study covered seven districts, namely Cuttack, Khordha, Puri, Ganjam, Balasore, Kalahandi and Sambalpur. These districts were selected purposively to ensure representation of both coastal and western regions of Odisha, as well as different agro-climatic and socio-economic conditions. The selected districts also represent areas with varying levels of agricultural activities, agro-processing units and agribusiness development. Both rural and semi-urban agripreneurs were included in the study to obtain a broader understanding of agripreneurship practices and challenges. A purposive sampling technique was used to select respondents who were actively engaged in agribusiness activities such as crop farming, horticulture, livestock, agro-processing and agri-tech services. Data collection was conducted through direct field surveys and personal interactions with respondents.

The questionnaire was divided into five sections: (i) Demographics and Business Background, (ii) Challenges in Agripreneurship, (iii) Awareness and Utilisation of Government Initiatives, (iv) Perceived Impact of Government Policies and (v) Future Directions and Suggestions. Responses were measured using Likert-type scales, multiple-



choice and categorical questions to capture both quantitative and perception-based information. The collected data were coded and analysed using SPSS software. Descriptive statistical tools such as frequency and percentage analysis were used to understand respondent characteristics and business patterns. Inferential statistical tools, particularly the Chi-square test, were applied to examine associations among key variables and test the stated hypotheses (Dixon & Woolner, 2012).

DATA ANALYSIS

Table 1: District-wise Distribution of Agripreneurs in Odisha

District	Number of Respondents	Percentage (%)
Puri	75	17.86
Ganjam	61	14.52
Balasore	59	14.05
Sambalpur	58	13.81
Kalahandi	58	13.81
Cuttack	57	13.57
Khordha	52	12.38
Total	420	100.00

Source: Compiled by Authors from Primary Data

Table 1 presents the district-wise distribution of agripreneurs included in the study. Puri district recorded the highest number of respondents (17.86%), followed by Ganjam (14.52%) and Balasore (14.05%). Khordha reported the lowest representation with 12.38% respondents. The comparatively higher concentration of agripreneurial activities in districts such as Puri and Ganjam may be associated with better market connectivity, tourism-linked demand and stronger agricultural trade networks. The distribution also reflects the presence of agribusiness activities across both coastal and western regions of Odisha, providing a balanced regional representation for the study.

Descriptive Statistics

Table 2: Demographic Profile of Agripreneurs in Odisha

Variables	Category	Frequency	Percentage (%)
Gender	Male	212	50.48
	Female	208	49.52
	Total	420	100.00
Age	Below 20	52	12.38
	21–30	51	12.14
	31–40	114	27.14
	41–50	102	24.29
	51–60	101	24.05
	Total	420	100.00
Agribusiness Type	Agri-tech	80	19.05
	Agro-processing	78	18.57
	Crop farming	82	19.52
	Horticulture	98	23.33
	Livestock	82	19.52
	Total	420	100.00
Years in Agripreneurship	Below 5	69	16.43
	5–10	66	15.71
	11–15	64	15.24
	16–20	63	15.00
	21–25	70	16.67
	26–30	88	20.95
	Total	420	100.00
Scale of Operation	Large	136	32.38
	Medium	143	34.05
	Small	141	33.57
	Total	420	100.00



Government Programme Names	MKUY	86	20.48
	RKVY	92	21.90
	PMKSY	80	19.05
	Multiple Schemes	75	17.86
	None	87	20.71
	Total	420	100.00

Source: Compiled by Authors from Primary Data

Table 2 presents the demographic and business profile of agripreneurs in Odisha. The findings show almost equal participation of male (50.48%) and female (49.52%) agripreneurs, indicating balanced gender involvement in agribusiness activities. The majority of respondents belonged to the economically active age groups of 31–40 years (27.14%) and 41–50 years (24.29%), suggesting that agripreneurship is largely driven by experienced and productive individuals. Among different agribusiness activities, horticulture emerged as the most preferred enterprise (23.33%), possibly due to increasing market demand, profitability and favourable agro-climatic conditions in Odisha. Crop farming, livestock, agri-tech and agro-processing also showed balanced participation, reflecting diversification within the agribusiness sector. The study further indicates that a significant proportion of respondents possessed long-term business experience, with 20.95% having 26–30 years of involvement in agripreneurship. This reflects the gradual transition of traditional farming practices towards entrepreneurial agricultural activities. The scale of operation was found to be evenly distributed among small, medium and large enterprises, indicating a balanced agribusiness structure in the study area. With regard to government schemes, RKVY recorded the highest participation (21.90%). However, 20.71% of respondents were not associated with any government programme, highlighting gaps in awareness, accessibility and institutional outreach among agripreneurs.

Table 3: Challenges and Resource Accessibility Among Agripreneurs in Odisha

Variables	Category	Frequency	Percentage
Primary Challenges	Bureaucratic delays	89	21.19
	Financial constraints	85	20.24
	Lack of technical knowledge	96	22.86
	Market access issues	63	15.00
	Supply chain disruptions	87	20.71
	Total	420	100.00
Market Access Challenges	Difficult	132	31.43
	Easy	138	32.86
	Moderate	150	35.71
	Total	420	100.00
Financial Support Barriers	Difficult	162	38.57
	Easy	134	31.90
	Moderate	124	29.53
	Total	420	100.00
Technological Adoption	No	207	49.29
	Yes	213	50.71
	Total	420	100.00
Adequate Technical Knowledge	No	195	46.43
	Yes	225	53.57
	Total	420	100.00
Supply Chain Challenges	No	198	47.14
	Yes	222	52.86
	Total	420	100.00

Source: Compiled by Authors from Primary Data

Table 3 highlights the major challenges and resource accessibility issues faced by agripreneurs in Odisha. Lack of technical knowledge emerged as the most significant challenge (22.86%), followed by bureaucratic delays (21.19%), supply chain disruptions (20.71%) and financial constraints (20.24%). These findings indicate that both institutional inefficiencies and skill-related limitations continue to affect agribusiness performance. Market accessibility remains moderate for many respondents, as only 32.86% reported easy market access, while a larger share experienced moderate or difficult access conditions. This may be due to inadequate transportation facilities, limited digital connectivity and



dependence on intermediaries in agricultural marketing. Financial accessibility was identified as a major concern, with 38.57% of agripreneurs reporting difficulty in obtaining financial assistance. The findings suggest the presence of procedural delays, collateral-related issues and limited institutional credit support for agribusiness ventures. The adoption of technological tools was found to be almost equally divided, indicating gradual but uneven digital transformation within the agricultural sector. Although 53.57% of respondents reported adequate technical knowledge, a considerable proportion still lacked essential technical skills, highlighting the need for training and capacity-building initiatives. In addition, more than half of the respondents faced supply chain challenges, reflecting the impact of infrastructure limitations and climatic disruptions on agribusiness operations in Odisha.

Table 4: Chi-Square Test of Agripreneurial Challenges and Resource Access

Variables	Chi-square (χ^2)	df	p-value	Result
Technology Use vs Market Access	12.213	2	0.002	Significant
Technology Use vs Financial Assistance Access	1.362	2	0.442	Not Significant
Adequate Technical Knowledge vs Supply Chain Challenges	4.588	1	0.032	Significant
Primary Challenges vs. Financial Assistance Access	11.087	8	0.197	Not Significant

Source: Compiled by Authors using SPSS

Table 4 presents the results of the Chi-square analysis conducted to examine the association between agripreneurial challenges and resource accessibility. The analysis revealed a statistically significant association between technological adoption and market access ($\chi^2 = 12.213$, $df = 2$, $p = 0.002$) at the 5% significance level. This indicates that agripreneurs using technological tools experience better market connectivity and improved access to customers and business information.

A significant relationship was also observed between adequate technical knowledge and supply chain challenges ($\chi^2 = 4.588$, $df = 1$, $p = 0.032$), suggesting that agripreneurs with better technical skills are more capable of managing supply chain-related problems effectively.

However, no statistically significant association was found between technology use and access to financial assistance ($\chi^2 = 1.362$, $df = 2$, $p = 0.442$). Similarly, primary business challenges did not show a significant relationship with financial assistance accessibility ($\chi^2 = 11.087$, $df = 8$, $p = 0.197$). These findings imply that financial barriers are influenced more by structural and institutional issues than by technological adoption or operational challenges.

Hypothesis Testing

H01: *There is no significant association between technological adoption and access to market and financial support among agripreneurs.*

The Chi-square test results showed a significant association between technological adoption and market access ($p < 0.05$). However, no significant association was observed between technological adoption and access to financial assistance ($p > 0.05$). Therefore, H01 is partially rejected. The findings indicate that technological adoption improves market accessibility but does not significantly influence financial support access.

Table 5: Government Programme Awareness and Perceived Policy Impact Among Agripreneurs

Variables	Category	Frequency	Percentage (%)
Government Programme Awareness	Not aware	163	38.81
	Somewhat aware	135	32.14
	Very aware	122	29.05
	Total	420	100.00
Accessibility of Government Initiatives	Not accessible	147	35.00
	Somewhat accessible	133	31.67
	Very accessible	140	33.33
	Total	420	100.00
Perceived Policy Effectiveness	No	212	50.48
	Yes	208	49.52
	Total	420	100.00
Suggestions for Policy Improvement	Better outreach	116	27.62
	Increased funding	98	23.33
	Streamlining policies	107	25.48
	Other	99	23.57
	Total	420	100.00

Source: Compiled by Authors from Primary Data



Table 5 shows moderate to low engagement of agripreneurs with government support systems. A considerable proportion of respondents (38.81%) were not aware of government programmes, indicating significant gaps in policy communication and outreach. Only 29.05% of respondents reported high awareness regarding government schemes. Accessibility of government initiatives also showed mixed responses, with 35% reporting that schemes were not easily accessible. This may be due to bureaucratic complexity, lack of information and procedural difficulties in availing benefits. Perceptions regarding policy effectiveness were almost equally divided, reflecting uncertainty about the actual impact of government interventions on agribusiness growth. Respondents mainly suggested better outreach, policy simplification and increased funding as key measures for improving government support systems. These findings highlight the need for stronger institutional coordination and more effective implementation mechanisms.

Table 6: Chi-Square Tests of Government Programme Awareness, Accessibility and Policy Effectiveness

Variables	Chi-square (χ^2)	df	p-value	Result
Awareness vs Accessibility	5.993	4	0.200	Not Significant
Awareness vs Perceived Policy Impact	4.740	2	0.093	Not Significant
Accessibility vs Perceived Policy Impact	4.958	2	0.084	Not Significant

Source: Compiled by Authors using SPSS

Table 6 presents the Chi-square test results examining the relationship between awareness, accessibility and perceived policy effectiveness of government programmes. The analysis found no statistically significant association between awareness and accessibility of government schemes ($\chi^2 = 5.993$, $df = 4$, $p = 0.200$). Similarly, awareness and perceived policy impact ($\chi^2 = 4.740$, $df = 2$, $p = 0.093$), as well as accessibility and perceived policy impact ($\chi^2 = 4.958$, $df = 2$, $p = 0.084$), were not statistically significant at the 5% significance level.

These findings suggest that awareness and accessibility alone may not be sufficient to influence agripreneurs' perceptions regarding policy effectiveness. Other factors such as quality of implementation, timely financial support, training opportunities and institutional efficiency may play a more important role in shaping policy outcomes.

H02: *There is no significant association between awareness/accessibility of government schemes and perceived policy effectiveness.*

Since all p-values were greater than 0.05, the null hypothesis was accepted. The findings indicate that awareness and accessibility of government schemes did not significantly influence perceived policy effectiveness among agripreneurs in the study area.

RESULTS

The study reveals that agripreneurship in Odisha is influenced by demographic, technological and institutional factors. The findings indicate balanced participation of male and female agripreneurs, reflecting inclusive involvement in agribusiness activities. Most respondents belonged to the economically active age groups of 31–50 years, suggesting that agripreneurship is mainly driven by experienced individuals. Horticulture emerged as the most preferred agribusiness activity, followed by crop farming, livestock and agri-tech enterprises.

The study identified lack of technical knowledge, bureaucratic delays, financial constraints and supply chain disruptions as the major challenges affecting agripreneurs. Access to markets and institutional finance remained moderate to difficult for a large proportion of respondents. Although technological adoption was gradually increasing, nearly half of the agripreneurs still lacked adequate use of technological tools and digital platforms.

The Chi-square analysis showed a statistically significant association between technological adoption and market access ($p < 0.05$), indicating that agripreneurs using technological tools experienced better market connectivity. A significant relationship was also found between technical knowledge and supply chain management, suggesting that technical skills improve operational efficiency. However, no significant association was observed between technological adoption and access to financial assistance, indicating that institutional and financial barriers continue to persist.

The findings further revealed moderate to low levels of awareness and accessibility regarding government support schemes. The Chi-square results showed no significant association between awareness, accessibility and perceived policy effectiveness, implying that awareness alone is insufficient to ensure effective agripreneurship development. Respondents emphasised the need for better outreach, increased funding and simplified policy implementation to improve government support systems.



DISCUSSION

The findings of the study highlight the growing importance of agripreneurship as a source of rural employment and economic diversification in Odisha. The balanced participation of male and female agripreneurs supports the findings of **Jeeva et al. (2019)**, who emphasised the increasing involvement of women in agricultural and allied activities. The dominance of horticulture and diversified agribusiness activities reflects the changing nature of agriculture from subsistence farming towards market-oriented enterprises.

The study identified technical knowledge, financial constraints and supply chain disruptions as major barriers to agripreneurship development. These findings are consistent with **Malhotra et al. (2025)**, who identified inadequate infrastructure, lack of entrepreneurial training and limited market access as key obstacles affecting agribusiness growth. Similarly, **Dash et al. (2021)** highlighted the importance of skill development and capacity-building programmes for improving agripreneurial performance among tribal youth in Odisha.

The significant association between technological adoption and market access indicates that digital tools and technological integration can improve agribusiness connectivity and marketing opportunities. This finding aligns with the observations of **Arumugam & Manida (2014)**, who argued that innovation and technology are essential for sustainable agricultural development. However, the absence of a significant relationship between technological adoption and financial accessibility suggests that institutional credit barriers still remain unresolved. This supports the findings of **Akrong & Kotu (2022)**, who highlighted the importance of financial inclusion and credit access for strengthening agripreneurship participation.

The study also found that awareness and accessibility of government schemes did not significantly influence perceived policy effectiveness. This indicates that policy implementation gaps, procedural complexity and inadequate institutional support may limit the practical benefits of government initiatives. Similar concerns regarding the effectiveness of agribusiness support programmes were noted by **Adeyanju et al. (2023)**, who stressed that institutional interventions are effective only when supported by proper implementation, training, and financial assistance mechanisms.

Overall, the findings suggest that sustainable agripreneurship development in Odisha requires a combination of technological support, financial inclusion, skill development and effective policy implementation. Strengthening institutional coordination and improving market integration are essential for building a resilient agribusiness ecosystem in the state.

PATHWAYS FOR SUSTAINABLE GROWTH

1. Enhancing Market Linkages

Developing strong market linkages is essential for the sustainable growth of agripreneurship. E-commerce platforms and digital marketplaces can help agripreneurs connect directly with consumers, reduce dependence on intermediaries and improve profitability. Cooperative marketing systems can also support small-scale agripreneurs through collective bargaining and wider market reach.

2. Financial Inclusion and Support

Access to finance remains a major challenge for agripreneurs, particularly for small and medium enterprises. Financial institutions should introduce simplified loan procedures, microfinance facilities and credit guarantee schemes to improve financial accessibility. Venture capital support and startup funding can also encourage innovation and agribusiness expansion.

3. Strengthening Capacity Building

Regular training and skill development programmes are necessary to improve technical knowledge and managerial capabilities among agripreneurs. Government agencies, universities and extension organisations should collaborate to provide practical training on modern farming practices, agro-processing, digital marketing and supply chain management.

4. Promoting Agro-Innovation

Innovation in agri-technology and agro-processing can improve productivity and sustainability in the agricultural sector. Establishing incubation centres, innovation hubs and research partnerships can encourage young entrepreneurs to develop new agribusiness models and technological solutions. Government incentives and subsidies for innovation can further strengthen agripreneurship development.



POLICY RECOMMENDATIONS

1. Streamlining Policy Implementation

Government policies should focus on reducing bureaucratic delays and simplifying application procedures for agripreneurs. Faster processing of financial assistance and transparent implementation mechanisms can improve trust and participation in government schemes.

2. Expanding the Reach of Government Schemes

Awareness programmes should be strengthened to ensure that agripreneurs, especially in rural and tribal regions, can access available government support. Targeted outreach activities, local awareness campaigns and digital information platforms can improve participation in government initiatives.

3. Strengthening Public–Private Partnerships

Public–private partnerships can help improve infrastructure, technology transfer and market integration in the agricultural sector. Collaboration between government agencies, private companies and financial institutions can create sustainable agribusiness opportunities and improve rural economic development.

CONCLUSION

The study highlights that agripreneurship in Odisha is shaped by technological, institutional and socio-economic factors. The findings reveal balanced gender participation and growing diversification in agribusiness activities such as horticulture, livestock, agro-processing and agri-tech services. However, agripreneurs continue to face major challenges including lack of technical knowledge, financial constraints, bureaucratic delays and supply chain disruptions. The empirical analysis shows that technological adoption significantly improves market access among agripreneurs, while access to institutional finance remains a persistent challenge. The study also reveals that awareness and accessibility of government schemes alone are not sufficient to ensure positive policy outcomes, indicating the need for stronger implementation and institutional support mechanisms. The findings suggest important practical implications for policymakers and development agencies. Greater focus should be placed on capacity building, digital integration, simplified financial procedures and effective outreach programmes to strengthen agripreneurship in Odisha. Improving market connectivity, promoting innovation and ensuring timely institutional support can help create sustainable livelihood opportunities and enhance rural economic resilience. A sustainable agripreneurship ecosystem in Odisha requires integrated institutional support combining technological training, simplified financial access and region-specific policy implementation.

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