

Research Article

Determinants of Agribusiness Enterprise Growth in West Shoa Zone, Ethiopia: A Multi-Factor Analysis

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Abstract

Agribusiness is pivotal for economic transformation, job creation, and poverty reduction in agrarian economies like Ethiopia. However, its growth is constrained by multidimensional factors that are not fully understood at the sub-regional level. This study investigates the determinants of agribusiness enterprise development in the West Shoa Zone of the Oromia Region, Ethiopia. A mixed-methods approach was employed, combining descriptive and explanatory research designs. Data were collected from 290 purposively selected agribusiness entrepreneurs using a structured questionnaire. Multiple regression analysis was used to assess the influence of six independent variables: Financial Access, Technological Adoption, Marketing Capabilities, Government Support, Demographic Factors, and Environmental Conditions. Results reveal that Technological Adoption ($\beta = 0.797$, $p < 0.001$), Financial Access ($\beta = 0.474$, $p < 0.001$), and Government Support ($\beta = 0.281$, $p < 0.001$) are the most significant positive predictors of enterprise growth. Marketing Capabilities showed a moderate positive effect, while Environmental Conditions exerted a significant negative influence. Demographic Factors were statistically insignificant. The model explained 57.1% of the variance in agribusiness development. The study concludes that a synergistic policy framework prioritizing technology diffusion, inclusive finance, and proactive public-sector support is essential for unlocking the agribusiness potential in rural Ethiopia. Recommendations are directed at policymakers, development agencies, and entrepreneurs to foster a resilient and market-oriented agribusiness ecosystem.

Keywords

Agribusiness Development, Enterprise Growth, Technological Adoption, Access to Finance, Government Policy, Ethiopia, West Shoa Zone, Rural Entrepreneurship

1. Introduction

1.1. Global and Regional Context of Agribusiness

Agribusiness encompassing the integrated value chain of agricultural production, processing, marketing, and distribu-

tion is increasingly recognized as a critical engine for sustainable economic development, particularly in Sub-Saharan Africa (SSA) [31, 34]. The sector is projected to become a US\$1 trillion industry in SSA by 2030, presenting unprecedented opportunities for job creation, import substitution, and export diversification [2]. However, the continent's transition from

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subsistence agriculture to commercially viable agribusiness remains sluggish, hampered by structural, institutional, and resource-based constraints [16].

1.2. The Ethiopian Context and the Policy Imperative

In Ethiopia, agriculture contributes approximately 50% of GDP, 85% of employment, and 90% of export earnings [8, 24]. Despite its centrality, the sector is characterized by low productivity, limited value addition, and a heavy reliance on rain-fed smallholder farming. The government's Agricultural Development-Led Industrialization (ADLI) strategy underscores the need for agricultural transformation through commercialization and entrepreneurship [11]. Agribusiness development is thus a strategic priority for achieving food security, reducing rural poverty, and absorbing the burgeoning youth workforce.

1.3. Problem Statement

Despite the substantial agribusiness potential in West Shoa Zone of Oromia Regional State, Ethiopia, characterized by favorable agro ecological conditions, proximity to major urban markets such as Addis Ababa, and a large and active labor force, participation in commercially oriented agribusiness remains notably low. At the national level, agriculture continues to play a dominant role in the economy, contributing significantly to GDP and employment; however, the sector is still largely subsistence oriented, with limited integration into formal markets and modern value chains [15, 32].

Empirical evidence indicates that multiple structural constraints continue to hinder the transition from subsistence farming to market driven agribusiness. Limited access to finance remains one of the most binding constraints, particularly for rural entrepreneurs who face collateral requirements, high transaction costs, and underdeveloped financial institutions [6, 10]. In the Ethiopian context, these financial barriers significantly reduce the capacity of smallholder farmers to invest in improved inputs, adopt new technologies, and scale their operations toward commercialization [1].

In addition, inadequate rural infrastructure, including poor road networks, weak transportation systems, and insufficient storage facilities, continues to increase transaction costs and reduce market accessibility. According to [18], infrastructure plays a critical role in facilitating agricultural commercialization by improving both input delivery systems and output market access. The absence of such infrastructure discourages farmers from engaging in market-oriented production.

Furthermore, weak market linkages and fragmented value chains limit agribusiness development. Lack of coordination among producers, traders, and institutions, combined with information asymmetry, reduces efficiency and constrains value addition opportunities [5, 7]. Technological backwardness

also remains a persistent challenge, as the adoption of improved agricultural practices is often constrained by limited access to extension services, training, and innovation systems [14].

Although these studies provide valuable insights, important limitations remain. Prior research in developing countries, including Ethiopia, has predominantly focused on single commodity value chains or employed macro level analyses that fail to capture localized heterogeneity and context specific dynamics [5, 28]. Moreover, empirical studies tend to analyze constraints in isolation, overlooking the possibility that financial, infrastructural, institutional, and technological factors interact in shaping agribusiness participation outcomes [12].

This fragmentation in the literature has resulted in limited understanding of the relative importance and combined effects of key determinants at the sub regional level. Evidence suggests that location specific factors, such as market proximity, institutional arrangements, and socio-economic conditions, significantly influence agricultural commercialization pathways [9, 21]. However, such context sensitive analyses remain scarce for areas like West Shoa Zone.

Therefore, there is a clear need for a comprehensive and integrated empirical investigation that simultaneously examines the major constraints to agribusiness participation and evaluates their relative influence within a unified analytical framework. Such an approach is essential for generating actionable, evidence-based policy recommendations and for advancing the broader agenda of agricultural transformation and rural development in Ethiopia [15, 32].

1.4. Specific Objectives

Specifically, the research seeks to:

- 1) Identify and assess the key factors influencing the development of agribusiness enterprises.
- 2) Determine the relative significance and directional relationship of these factors on enterprise growth.
- 3) Provide evidence-based recommendations for stakeholders.

The study is guided by the following research questions:

- 1) RQ1: What are the primary financial, technological, marketing, governmental, demographic, and environmental factors affecting agribusiness enterprises in West Shoa Zone?
- 2) RQ2: Which of these factors exert the most significant influence on enterprise development?
- 3) RQ3: How can policymakers and practitioners effectively address these constraints to foster a vibrant agribusiness sector?

1.5. Significance of the Study

This study contributes to both academic literature and practical policy in several ways. Academically, it provides a comprehensive, empirical analysis of agribusiness determinants in

a specific Ethiopian context, enriching the discourse on rural enterprise development. Practically, it offers actionable insights for local and regional policymakers, development agencies, and financial institutions to design targeted interventions. For agribusiness entrepreneurs, the findings highlight priority areas for investment and development.

2. Theoretical Review

2.1. Theoretical Underpinnings: A Resource-Based and Systemic View

This study is anchored in the Resource-Based View (RBV) of the firm, which posits that competitive advantage stems from unique, valuable, and inimitable resources [4]. For agribusinesses, these resources include financial capital, technological assets, human capital, and market linkages. Complementarily, the Agricultural Innovation Systems (AIS) perspective emphasizes that enterprise performance is shaped by interactions within a broader system of actors (research, extension, policy, finance) and institutions (rules, norms) [30]. An integrated RBV-AIS lens is therefore apt for analyzing the multi-level determinants of agribusiness growth.

2.2. Empirical Review: Determinants of Agribusiness Enterprise Development

2.2.1. Financial Factors

Access to finance is consistently identified as a primary constraint to agribusiness development in developing economies [27]. Small and medium enterprises (SMEs) in agriculture face particular challenges due to high perceived risks, seasonality of cash flows, lack of traditional collateral, and the underdevelopment of rural financial markets [29]. This financial gap limits investments in critical areas such as technology adoption, quality inputs, expansion of operations, and market development, thereby stunting enterprise growth and resilience.

2.2.2. Technological Factors

The adoption of improved agricultural and processing technologies is a cornerstone of productivity enhancement and value addition [22]. Technologies range from improved seeds, fertilizers, and irrigation systems to post-harvest handling equipment, processing machinery, and digital tools for market information and financial services. The persistent "technology adoption gap" in SSA is attributed to factors including high upfront costs, lack of awareness and technical know-how, inadequate extension services, and mismatches between available technologies and local needs [34].

2.2.3. Marketing and Value Chain Factors

Effective integration into viable markets is crucial for enterprise profitability and sustainability. Agribusinesses face

challenges related to poor market infrastructure (roads, storage, cold chains), price volatility, stringent quality standards, and weak bargaining power [25]. The development of strong linkages within value chains between producers, processors, traders, and retailers facilitates access to information, reduces transaction costs, and enables upgrading into higher-value activities [23]. Without reliable market access, even productive enterprises struggle to commercialize their output.

2.2.4. Governmental and Institutional Factors

The role of the state and institutional environment is foundational. Government policies on trade, taxation, land tenure, and investment climate directly influence the cost of doing business and the attractiveness of the agribusiness sector [3]. Public investments in physical infrastructure (roads, electricity, irrigation) and soft infrastructure (research and development, extension services, market information systems) are critical public goods that reduce costs and risks for private enterprises. Conversely, policy instability, bureaucratic hurdles, and weak enforcement of contracts deter investment and innovation.

2.2.5. Environmental and Climatic Factors

Agriculture is inherently vulnerable to biophysical conditions. Climate variability manifested as erratic rainfall, droughts, floods, and shifting pest/disease patterns poses significant production risks [19]. Environmental degradation, such as soil erosion and deforestation, further undermines the natural resource base for agribusiness. Enterprises operating in marginal environments or those lacking adaptive capacity (e.g., irrigation, drought-resistant varieties) are particularly at risk, which affects their stability and growth prospects [13].

2.2.6. Demographic and Socio-Cultural Factors

Entrepreneurial characteristics including age, gender, education level, prior experience, and risk tolerance can influence business entry, strategic choices, and growth trajectories [17]. Social norms and cultural attitudes toward entrepreneurship, specific types of business (e.g., livestock vs. crops), and the role of women in business also play a role. However, the empirical evidence on the impact of demographic factors is mixed and highly context-dependent, suggesting they may be mediating rather than primary determinants.

2.3. Synthesis and Conceptual Framework

The literature reveals that agribusiness development is not determined by a single factor but by a complex system of interacting elements. Building on this synthesis and the integrated RBV-AIS theoretical perspective, the study proposes the conceptual framework shown in Figure 1. This framework positions Agribusiness Enterprise Development (the dependent variable) as being influenced by six key independent variable groups derived from the literature.

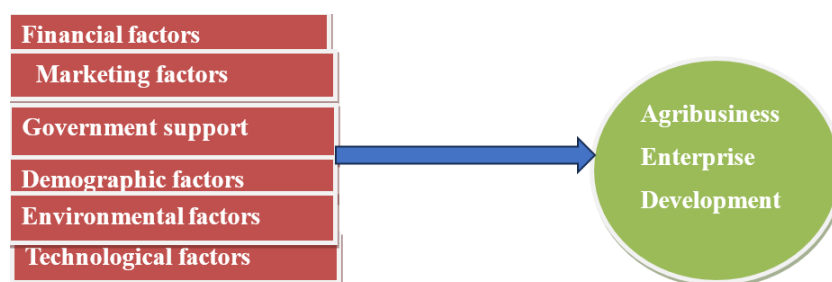


Figure 1. Conceptual Framework of Agribusiness Enterprise Development.

2.4. Hypotheses Development

Based on the framework and literature, the following hypotheses are formulated:

- 1) *H1*: Financial Access has a significant positive effect on agribusiness enterprise development.
- 2) *H2*: Technological Adoption has a significant positive effect on agribusiness enterprise development.
- 3) *H3*: Marketing Capabilities have a significant positive effect on agribusiness enterprise development.
- 4) *H4*: Government Support has a significant positive effect on agribusiness enterprise development.
- 5) *H5*: Demographic Characteristics have a significant effect on agribusiness enterprise development.
- 6) *H6*: Environmental Conditions have a significant negative effect on agribusiness enterprise development.

3. Materials and Methods

3.1. Research Design

This study employed a cross-sectional research design that combines descriptive and explanatory approaches. The descriptive aspect aimed to profile the agribusiness entrepreneurs and their enterprises, while the explanatory aspect sought to establish the nature and strength of relationships between the independent variables and enterprise development.

3.2. Population, Sampling, and Data Collection

The target population consisted of all owners/managers of operational agribusiness enterprises in the selected woredas, engaged in the specified value chains (dairy, poultry, honey, horticulture, oil processing). A two-stage sampling technique was used. First, woredas were selected based on the concentration of target agribusinesses (cluster sampling). Second, within each woreda, a purposive sample of enterprises was drawn to ensure representation across different business types and sizes.

The sample size was determined using Yamane's formula [33] for finite populations:

$$n = N / (1 + N(e)^2)$$

Where: n = sample size, N = estimated population of agribusinesses (approx. 600), e = margin of error (0.05). This yielded a minimum sample of 240. To account for non-response, 366 questionnaires were distributed.

Primary data were collected through a structured and self-administered questionnaire. The questionnaire had four sections: (A) Demographic information, (B) Enterprise characteristics, (C) Likert-scale items (1-Strongly Disagree to 5-Strongly Agree) measuring the six independent constructs and the dependent variable, and (D) Open-ended questions on major challenges. Secondary data were obtained from zonal and woreda agricultural offices for contextual information in addition to previously conducted empirical evidences.

3.3. Variables and Measurement

Dependent Variable: Agribusiness Enterprise Development (ABED). This was operationalized as a composite index based on three dimensions measured via multiple Likert-scale items: (1) *Growth in Scale* (increase in permanent employees and capital investment), (2) *Technological Advancement* (adoption and use of improved technologies/processes), and (3) *Market Expansion* (entry into new markets and increased sales volume).

Independent Variables: Each construct was measured using multiple items on a 5-point Likert scale.

3.4. Data Analysis

Data were analyzed using SPSS version 25. Descriptive statistics (frequencies, percentages, means, standard deviations) summarized the demographic and enterprise profiles. Inferential statistics, specifically Multiple Linear Regression Analysis, was used to test the hypotheses and determine the relative influence of the independent variables on enterprise development. The regression model was specified as:

$$ABED = \beta_0 + \beta_1(FA) + \beta_2(TA) + \beta_3(MC) + \beta_4(GS) + \beta_5(DF) + \beta_6(EF) + \varepsilon$$

Where β_0 is the constant and β_1 - β_6 are the coefficients for the independent variables. Diagnostic tests for multicollinearity (VIF), autocorrelation (Durbin-Watson), and heteroscedasticity were conducted.

3.5. Reliability and Validity

Scale reliability was assessed using Cronbach's Alpha, with a score of 0.819 for the combined measurement items, indicating good internal consistency [26]. Content validity was ensured through expert review and a pilot test with 15% of the sample (43 respondents) in a similar but non-sampled area, leading to refinement of ambiguous questions.

4. Results and Discussion

4.1. Demographic and Enterprise Profile

Out of 366 distributed questionnaires, 290 were fully completed and usable (79.2% response rate). As shown in Table 1, the majority of respondents were young (75% aged 21-30) and male (62%). Most had a secondary school education (68.3%), and 82.8% were single. Regarding their enterprises, 66.9% were organized as partnerships, with fruits and vegetables being the most common activity (34.5%). A significant majority (84.1%) reported a current capital above 150,000 ETB, and most businesses (52.4%) employed 5-10 permanent workers.

Table 1. Demographic and Enterprise Characteristics (N=290).

Characteristic	Category	Frequency	Percentage
Age	21-30 years	215	75.0%
	31-40 years	75	25.0%
Gender	Male	180	62.0%
	Female	110	38.0%
Education	Not educated	46	15.9%
	Secondary school	198	68.3%
	Above secondary	46	15.9%
Business Form	Partnership	194	66.9%
	Shareholders	46	15.9%
	Sole proprietor	50	17.2%
Primary Activity	Fruits & Vegetables	100	34.5%
	Dairy farming	60	20.9%
	Honey production	52	17.9%
	Poultry	46	15.9%
	Oil production	32	10.9%

4.2. Regression Model Results and Hypothesis Testing

The results of the multiple regression analysis are presented in Tables 2 and 3. The model was statistically significant ($F =$

62.684, $p < 0.001$) and explained 57.1% of the variance in Agribusiness Enterprise Development ($R^2 = 0.571$, Adjusted $R^2 = 0.562$). The Durbin-Watson statistic of 2.114 indicated no serious autocorrelation, and Variance Inflation Factors (VIFs) for all predictors were below 5, confirming the absence of multicollinearity.

Table 2. Model Summary.

Model	R	R ²	Adjusted R ²	Std. Error	Durbin-Watson
1	.755	.571	.562	.22984	2.114

Table 3. Regression Coefficients.

Predictor	Unstd. Coeff. (B)	Std. Error	Std. Coeff. (β)	t-value	p-value	Hypothesis
(Constant)	1.051	.172		6.120	.000	
Technological Adoption	.310	.022	.797	13.790	.000	H2 Supported
Financial Access	.332	.032	.474	10.325	.000	H1 Supported
Government Support	.083	.019	.281	4.410	.000	H4 Supported
Marketing Capabilities	.060	.017	.193	3.635	.000	H3 Supported
Environmental Factors	-.095	.030	-.148	-3.196	.002	H6 Supported
Demographic Factors	.032	.046	.052	.705	.482	H5 Not Supported

Key Findings:

Technological Adoption (TA) emerged as the strongest predictor ($\beta = 0.797$, $p < 0.001$), providing strong support for H2. This indicates that enterprises that actively adopt and utilize improved technologies experience significantly higher growth.

Financial Access (FA) was the second most influential factor ($\beta = 0.474$, $p < 0.001$), supporting H1. This underscores the critical role of capital in enabling investment and expansion.

Government Support (GS) showed a positive and significant effect ($\beta = 0.281$, $p < 0.001$), supporting H4. This highlights the importance of an enabling environment created by public policies and infrastructure.

Marketing Capabilities (MC) had a moderate but significant positive effect ($\beta = 0.193$, $p < 0.001$), supporting H3.

Environmental Factors (EF) had a significant negative effect ($\beta = -0.148$, $p = 0.002$), supporting H6. This confirms that adverse climatic and biophysical conditions constrain enterprise development.

Demographic Factors (DF) were not statistically significant ($p = 0.482$), leading to the rejection of H5.

4.3. Discussion**4.3.1. The Primacy of Technology and Finance**

The finding that Technological Adoption is the most critical driver aligns with the innovation-driven growth paradigm in agricultural development literature [22, 34]. In the context of West Shoa, this suggests that enterprises are moving beyond basic production and recognize that technology is key to improving efficiency, product quality, and competitiveness.

However, adoption is contingent on Financial Access, the second most important factor. This interdependence creates a vicious cycle for undercapitalized firms: they cannot afford technology, which limits their profitability and ability to generate or attract capital. Our findings validate the integrated nature of these constraints, as emphasized in systemic approaches like AIS [30].

4.3.2. The Enabling Role of Government

The significant positive role of Government Support underscores that private enterprise growth in emerging markets does not occur in a vacuum. Effective public investment in roads, electricity, and extension services reduces operational costs and risks [3]. The moderate effect size suggests that while government action is crucial, its impact may be indirect or not fully realized due to implementation gaps, such as the limited reach of extension agents or poorly maintained infrastructure, as noted in other Ethiopian studies [20].

4.3.3. Marketing and Environment as Critical Contextual Factors

The significant role of Marketing Capabilities confirms that production alone is insufficient; enterprises must successfully commercialize their output. The moderate beta value may reflect the fact that many enterprises in the study area still operate in localized, informal markets where sophisticated marketing is less critical than basic market access. The negative impact of Environmental Factors is a stark reminder of the sector's vulnerability. This aligns with growing concerns about climate change impacts on Ethiopian agriculture [19] and calls

for integrating climate-smart technologies and risk management strategies into business models.

4.3.4. The Insignificance of Demographics

The rejection of H5 suggests that in the West Shoa context, entrepreneurial success is less determined by who the entrepreneur is (age, gender, education) and more by the external resources and environment they can access. These findings challenge deterministic human capital theories and support institutional and resource-based views that highlight structural constraints [4]. It implies that intervention programs should be universally accessible rather than narrowly targeting specific demographic groups.

5. Conclusion and Recommendations

5.1. Conclusion

This study provides robust empirical evidence on the multi-dimensional determinants of agribusiness enterprise development in West Shoa Zone, Ethiopia. The findings confirm that enterprise growth is a function of a complex interplay of resources and systemic conditions. Technological capability and financial access are the primary internal engines of growth, while government support provides the necessary external runway. Market access and environmental conditions act as critical enabling or constraining contexts. Notably, entrepreneur demographics were not a decisive factor, shifting the focus of development efforts from individual traits to systemic barriers.

The study contributes to the literature by offering a quantified, hierarchical understanding of these factors in a specific Ethiopian sub-region, bridging a critical knowledge gap. It validates and extends the integrated RBV-AIS framework by demonstrating the relative weights of different resource and systemic elements.

5.2. Recommendations

5.2.1. For Policymakers and Government Agencies

Prioritize Technology Diffusion: Strengthen agricultural research and extension systems to develop and promote context-appropriate, affordable technologies. Establish technology demonstration centers and facilitate linkages between agribusinesses and research institutions.

Deepen Financial Inclusion: Develop innovative financial products tailored to agribusiness needs (e.g., warehouse receipt financing, value chain finance, weather-indexed insurance). Strengthen the capacity of microfinance institutions to serve the agricultural sector and encourage the establishment of rural saving and credit cooperatives.

Enhance Market Infrastructure and Linkages: Invest strategically in rural road networks, storage facilities, and market information systems. Support the formation and strengthening

of producer cooperatives to improve bargaining power and reduce transaction costs.

Build Climate Resilience: Mainstream climate-smart agriculture (CSA) practices into extension packages. Support investments in small-scale irrigation and water harvesting technologies to mitigate rainfall variability.

5.2.2. For Development Partners and NGOs

Facilitate Integrated Programs: Design interventions that simultaneously address technology, finance, and market linkages, rather than single-issue projects. Support business development services (BDS) that offer bundled training in technical skills, financial management, and marketing.

Promote Inclusive Business Models: Encourage and support contract farming and out grower schemes that link small-holder farmers or small enterprises with larger processors and exporters, ensuring knowledge and resource transfer.

5.2.3. For Agribusiness Entrepreneurs

Invest in Learning and Innovation: Proactively seek information on new technologies and best practices. Be willing to reinvest profits into upgrading equipment and processes.

Explore Collective Action: Join or form cooperatives and business associations to access bulk inputs, shared services, and better market opportunities.

Diversify and Manage Risk: Consider diversifying products or income sources to spread risk. Explore basic record-keeping and financial planning to better manage cash flow and attract finance.

5.3. Limitations and Future Research

This study has limitations that suggest avenues for future research. The cross-sectional design limits causal inference. Longitudinal studies could better capture the dynamics of enterprise growth over time. The study focused on relatively established enterprises; future research could investigate the factors affecting business start-ups and early-stage survival. Qualitative, in-depth case studies could provide richer insights into the "how" and "why" behind the quantitative relationships found here. Finally, research could explore sector-specific determinants within agribusiness (e.g., comparing perishable horticulture with grain storage enterprises).

Abbreviations

ABED	Agribusiness Enterprise Development
AIS	Agricultural Innovation Systems
BDS	Business Development Service
RBV	Resource Based View
RQ	Research Question
SSA	Sub Saharan Africa

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Author Contributions

Abebe Techan: Conceptualization, Data curation, Formal Analysis, Investigation, Methodology, Resources, Writing – original draft, Writing – review & editing

Gemechu Bayessa: Data curation, Formal Analysis, Investigation, Methodology, Validation, Writing – review & editing

Conflicts of Interest

The authors declare no conflicts of interest.

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