



THE VIABILITY OF AGRICULTURAL DEVELOPMENT BANK IN ETHIOPIA

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Abstract

The viability of agricultural development banks is a fundamental issue due to inflation, poor loan collection, and operational overheads. To improve their viability, banks should serve a larger number of customers with a wider range of financial services, including deposit facilities, increase the amount of purchasing power transferred, improve the quality of services offered and reduce transaction costs. This paper uses quantitative data from commercial, development, and central banks in Ethiopia and a modified framework from the "Fit-Viability Model." Four determinant variables (organizational competencies, economic feasibility, technology readiness, and societal factors) were regressed on the dependent variable (viability), and all variables were positively supported. It is recommended that commercial banks have an agricultural banking segment, and the Development Bank of Ethiopia should promote full-fledged agricultural development banking. Agricultural Development Banking organizational competencies can be achieved through strong government backing, competent skilled manpower, investing in different portfolios, corporate social responsibilities, the value chain of the product, and good security measurements.

1. Introduction

Agricultural Development Banks have several functions, Gebrehiwot, A. (2018) such as providing credit to small-scale farmers at affordable interest rates, offering financial services such as savings accounts and insurance, promoting innovation in agriculture through funding research and development, building the capacity of farmers through training and technical assistance, and contributing to rural development by investing in infrastructure projects. According to a report from the National Bank of Ethiopia for 2021–2022, the agricultural sector contributes 32.4% of Ethiopia's GDP, with the remaining two-thirds coming from industry and service sectors. The agricultural development bank in Ethiopia has been a priority for the government for many years, providing a range of financial products and services, including loans, savings accounts, insurance, and advisory services. It also supports smallholder farmers through its microfinance program, which provides small loans to rural entrepreneurs.

Essien (2001) The Ethiopian government has taken steps to modernize the agricultural sector and increase productivity. According to Ismael (2022) one of the key strategies has been to improve access to finance for farmers and agricultural businesses. However, the decision-making process for agricultural lending has become more complex due to issues related to contracts, ownership, location, management quality, and risk management. Additionally, Arindam B. (2007) supply and demand pressures have led to increased volatility in agricultural commodity prices, farmland values, and farm production costs. To overcome these challenges, FedLinks (2012) collaboration between the government, financial institutions, and other stakeholders is needed to develop innovative solutions that address the specific needs of the sector. With the right policies and initiatives in place, agricultural banking can become a viable and sustainable solution to the challenges facing the sector.

Statements of the problem: Agriculture is the backbone of Ethiopia's economy, but access to finance remains a major challenge for smallholder farmers and agribusinesses. Existing commercial banks provide minimal agricultural credit to large agricultural businesses, but their viability is still a major



issue. A full-fledged agricultural development bank is critical to addressing these challenges and facilitating the growth of the sector. A comprehensive study is needed to examine the constraints on its viability and how to mitigate them.

Objectives of the study

The general objective of the study is to review the current state of agricultural development banking and their viable factors in Ethiopia. And the specific and clear objectives include

1. To review the current status of the agricultural development bank in Ethiopia
2. To examine the factors that influence the viability of agricultural development banks in Ethiopia
3. To recommend a viable way to open a full-fledged agricultural development bank in Ethiopia.

Research Questions

1. What is the current state of the agricultural development bank in Ethiopia?
2. What are the factors and constraints that contribute to the viability of the agricultural development bank in Ethiopia?
3. What is a viable way to open a full-fledged agricultural development bank in Ethiopia?

2. Literature Review

2.1. Agricultural Development Bank in Ethiopia

The Agricultural Development Bank in Ethiopia has attempted to establish agricultural banks, but there are plans to split them into different developmental banks. Moges and Belay (2014) highlighted that agricultural financing in Ethiopia faces several challenges, such as lack of access to finance, low financial literacy, limited infrastructure, high risk, limited collateral, and climate change. The government has implemented various policies and programs to support smallholder farmers, increase productivity, and promote agribusiness. These include the Agricultural Transformation Agency (ATA), which aims to boost agricultural productivity and commercialization through innovation, technology transfer, and market linkages. The Agricultural Commercialization Clusters (ACCs) provide infrastructure, training, and market information to farmers and agribusinesses, enabling them to produce high-quality products and access better markets.

The Development Bank of Ethiopia (DBE) has been instrumental in financing development projects across various sectors in Ethiopia since its establishment in 1909. It has supported the agricultural, industrial, transport, and energy sectors, and has undergone reforms to improve its performance. Studies have demonstrated the positive impact of DBE credit on small-scale agribusinesses' performance and employment generation. However, the DBE still faces challenges, such as improving its governance and risk management systems, expanding its outreach to underserved areas and sectors, and enhancing its financial sustainability. It has changed its name several times, starting from 1945 to 1994.

The Agricultural Bank of Ethiopia was established in 1945 with the mission of providing loans to small landowners whose farms were destroyed during the Italian occupation. The Agricultural Bank of Ethiopia (DBE) was established to transform subsistence agriculture into a profitable industry through better tools and equipment, credit policies, tax policies, land reform, and agricultural services. However, the DBE faced challenges such as limited access to credit and infrastructure, a lack of modern technology, and poor governance. The Commercial Bank of Ethiopia (CBE) is partnering with the government to provide agricultural finance products and services to smallholder farmers,



cooperatives, and agribusinesses in Ethiopia. Private commercial banks in Ethiopia have also been working with the government to support the country's agricultural sector, but the financing situation by private commercial banks in Ethiopia is almost nonexistent, with only 1% of credit allocated by 16 private banks. This vulnerability in funding sources is concerning given agriculture's significant role in Ethiopia's exports.

PRIVATE COMMERCIAL BANKS (ETH)														
SUMMARY BY LOAN (FINANCING)														
AS OF 30 JUNE 2021														
#	NAME OF BANKS	OTHERS	Agro.	HOTEL	Transp.	Staff	Personal	IFB	IMPORT	Bldg & Const.	Manuf.	EXPORT	Domestic Trade	TOTAL OUTSTNDG
1	Abay Bank S.C.		124,166	436,466	1,127,024				4,277,587	3,274,453	1,588,643	4,277,587	5,056,475	20,162,400
2	Addis International Bank		4,885		29,490	29,197	19,350		292,627	844,673	543,431	1,849,762	919,649	4,533,064
3	Awash International Bank		338,670		2,250,100	2,708,137	6,244,374	2,120,280	10,190,725	18,091,986	10,470,171	17,625,711	17,499,132	87,539,286
4	Bank of Abyssinia		2,742,179		1,516,613		2,019,007	382,738	4,065,756	8,504,387	13,928,759	27,156,717	16,260,503	76,576,659
5	Berhan International Bank		69,493	417,496	365,516	1,202,324	1,364,992		1,366,483	4,047,912	2,008,330	1,137,112	5,842,370	17,822,028
6	Bunna International Bank		60,604		664,619	844,193			4,804,385	3,148,266	946,595	4,804,385	3,019,178	18,292,224
7	Cooperative Bank of Oromia		505,233			1,928,373		7,816,229	1,930,830	2,124,341	9,088,737	11,927,928	19,181,708	54,503,379
8	Dashen Bank	1,105,763	381,071	415,388	1,518,366	2,860,817	4,186,537	2,256,056	2,404,352	8,366,417	14,452,596	8,355,219	17,945,763	64,248,345
9	Debab Global Bank		20,717		96,404	258,203	86,239		782,833	958,687	659,223	3,179,395	2,334,426	8,376,127
10	Enat Bank		98,441		521,480	289,977	65,439		774,530	1,749,696	1,443,020	2,873,081	1,266,482	9,082,146
11	Hibret Bank		106,432	1,335,571	883,722	1,458,619	336,010	1,012,511	7,337,514	4,662,611	7,038,842	5,523,635	6,187,134	35,882,601
12	Lion International Bank		139,787	913,075	272,276	373,144			4,287,199	2,016,651	1,218,920	8,268,772	5,438,175	22,927,999
13	Nib International Bank	212,192	186,990	4,232,510	755,075		665,752	-	3,912,069	6,367,280	5,919,780	6,160,726	6,072,472	34,484,846
14	Oromia International Bank	92,273	290,130	1,415,178	320,102	2,149,051	134,808	3,542,349	1,839,061	1,752,911	2,429,502	4,684,710	7,101,806	25,751,881
15	Wegagen Bank				1,109,082	1,185,967		361,866	3,542,099	3,921,198	4,009,083	7,756,109	5,406,287	27,291,691
16	Zemen Bank		196,522	2,023,316	132,475	490,185	779,448		1,102,619	1,174,283	3,217,011	2,349,766	2,791,463	14,257,088
	TOTAL	1,410,228	5,265,320	11,189,000	11,562,344	15,778,187	15,901,956	17,492,029	52,910,668	71,005,752	78,962,643	117,930,614	122,323,023	521,731,764
	PERCENTAGE	0.27%	1.01%	2.14%	2.22%	3.02%	3.05%	3.35%	10.14%	13.61%	15.13%	22.60%	23.45%	100%

Source: Translated from Amharic book “Ma-genzeb from Gensis to Today” (Abdulkarir Nureddin (2022))

2.2. The Viability Issues

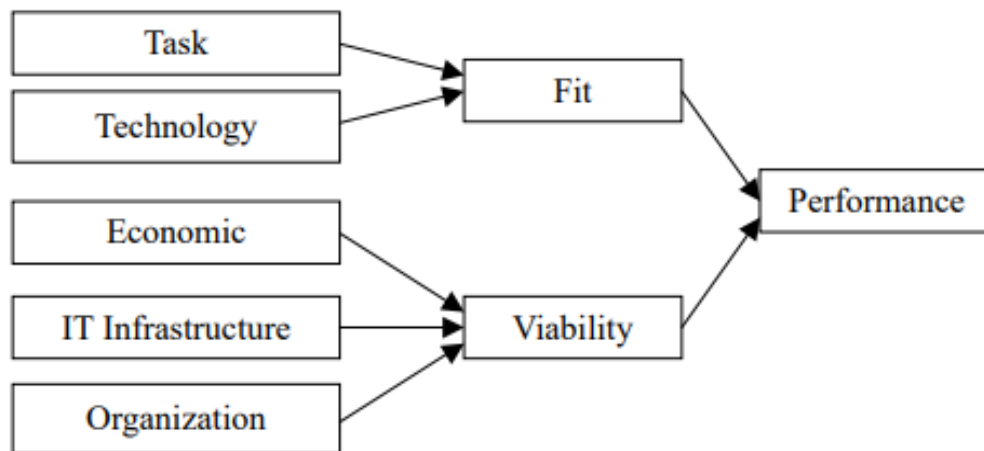
Agricultural development banks face viability issues due to inflation, poor loan collection, and operational losses, resulting in a decline in their real loanable funds and loss of support from clients and donors. According to Alan Doran et al (2009), Siebel et al (2005), three choices are presented: ignoring, closing, or reforming them, with reforming being the best option to create sustainable financial intermediaries mobilizing domestic resources, increasing outreach, and improving service quality. The advancement of technology has also had a significant impact on agricultural development banking, improving services, reducing costs, and enhancing financial inclusion. However, concerns over cyber security risks need to be addressed. Agricultural banks need to embrace technology while also investing in measures to mitigate risks to improve the productivity and income of farmers and rural communities.

2.3. Theoretical Framework

The researcher has identified several theoretical frameworks that could guide the study on the viability of agricultural development banks in Ethiopia. These include the Technology Adoption Theory, Rogers (2003) which emphasizes the factors that influence the adoption of innovation; the Stakeholder Theory,



which focuses Freeman (1984) on effective collaboration with stakeholders; the Institutional Theory, Scott (2014) which highlights the role of norms, values, and regulations; the Financial Inclusion Theory, Kabeer (2012) which suggests that promoting financial inclusion can enhance the viability of financial institutions; and the Sustainable Development Theory, Sachs (2015) which links the viability of institutions to sustainable development outcomes. The selection of the most appropriate framework will depend on the specific research questions and objectives of the study. Finally, Liang's Fit-Viability Theory (FVT) has been widely cited and applied in the field of strategic management and can offer guidance on the implementation of new technological systems in organizations. The FVT suggests that the decision to adopt a technology is based on two factors: fitness and viability. Kwanya, 2014; Liang et al., 2007; Ossai & Wickramasinghe, 2021.



Source: Liang and Wei (2007)

The study "Anticipating Mismatches of ADB viability: Developing and modifying a Viability-Fit Model for ADB Services" provides an in-depth discussion of the four different viability constraints, including technological, economic, organizational, and societal viability. Tobias Mettler (2015).

The Viability-Fit model for ADB services assumes that viability and fit constructs are crucial in understanding the adoption and long-term productivity gains of Agricultural Development Banking (ADB) investments. Understanding the four different types of viability constraints (organizational, economic, technological, and societal) can help to identify the constraints to ADB adoption and inform the decisions around ADB implementations.



DETERMINANTS OF THE VIABILITY OF AGRICULTURAL DEVELOPMENT BANK

DETERMINANTS OF THE VIABILITY OF AGRICULTURAL DEVELOPMENT BANK		
DIMENSION	DEFINITION	SOURCE
Organizational Competence		
Competency	The organizaional competence is gearing up the viability of ADB's implementation and/or running the solution.	R.T. Mercuri (2004), H. Zafar, S. Sneha (2012); R. Ramanujam, D.M. Rousseau (2006); E. Turban, T.-P. Liang, S.P.J. Wu (2011)
Management support	Limitation of ADB viability due to a lack of support from top management (Here National Bank of Ethiopia).	
Corporate Social Responsibility	Limitation of ADB viability due to lack corporate social responsibility.	
Economic Feasibility		
Project-related costs	Limitation of ADB viability due to exceeding explicit costs and/or opportunity costs for implementing the solution.	Liang et.al. (2007); Espadanal, (2012); Gupta et.al., (2013); Tehrani (2013); E. Turban, T.-P. Liang, S.P.J. Wu (2011)
Usag-related costs	Limitation of ADB viability due to a projected increase of fixed and/or variable costs for running the solution.	
Sustainability	Lack of Sustainable economic ground limits the viability of ADB	
Technological Readiness		
Infrastructure	Limitation of ADB viability due to inapt infrastructures, hardware components and software software components.	E. Turban, T.-P. Liang, S.P.J. Wu (2011); J.G. Anderson (2007); (Bennett and Savani, 2011; Espadanal, 2012; Killaly, 2011; Liang et al., 2007); Winter (2011)
Integration	Necessary technical requirements, Internet connection, computational capabilities	
Security	Limitation of ADB viability due to inappropriate measures against cybercrime and hacking.	
Societal Factors		
Political will	Limitation of ADB viability due to missing incentives and intentions to support the solution.	Porter and Millar (1985); Armbrust et al. (2010); Oliveira and Martins (2010); Low et al. (2011); Singh et al. (2007); E. Turban, T.-P. Liang, S.P.J. Wu (2011); J.G. Anderson (2007)
Competitive pressure	Limitation of ADB viability due to rivalry of other commercial banks	
Readiness of soctety	Limitation of ADB viability due to low willingness of technology adoption.	

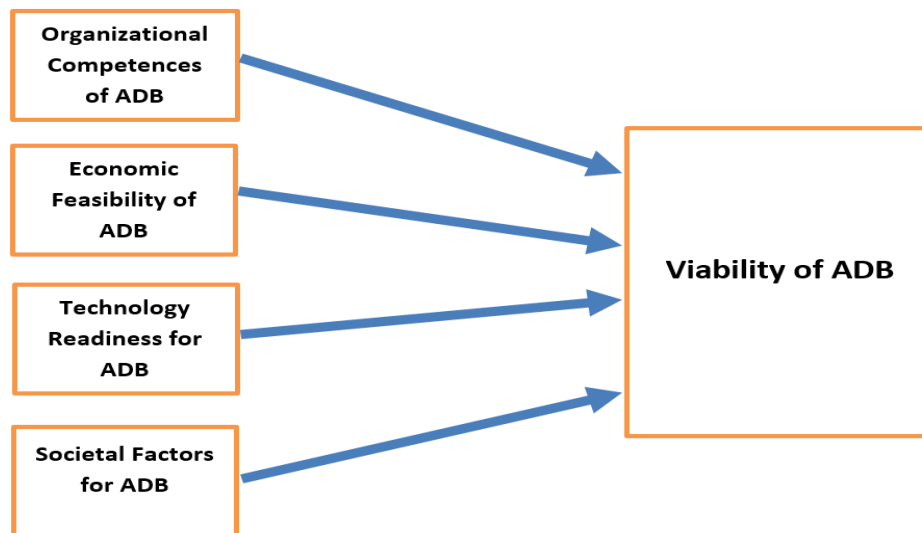
Source: Own compilation from different authors

H1: Organizational Competences have a significant and positive influence on viability of Agricultural Development Bank.

H2: Economic feasibility has a significant and positive influence on Viability of Agricultural Development Bank.

H3: Technological readiness has a significant and positive influence on Viability of Agricultural Development Bank.

H4: Societal factors have a significant and positive influence on Viability of Agricultural Development Bank.



Research framework for current research

2.4. Research Gap

There is a lack of empirical evidence on the effectiveness of Agricultural Development Banks in Ethiopia, as well as strategies to overcome the challenges faced by these banks. Despite their crucial role in promoting agricultural development and rural poverty reduction, there is a significant research gap on their viability. This study aims to address this gap by examining the factors that influence the viability of Agricultural Development Banks in Ethiopia through a quantitative research method with primary questionnaire data. The study aims to provide insights into how these banks can be viable in Ethiopia.

3. Research Methodology

The third chapter of the thesis paper explores the research methodology used for the study. It discusses the research philosophy, which is positivism, and the quantitative research design selected for empirical research using theories and concepts. The chapter covers the sampling technique and data collection methods, including the primary questionnaire data that was used to identify the challenges facing agricultural development banks in Ethiopia. The study uses a Likert scale and dichotomous questions to measure the independent variables for viability, which are organizational competences, economic feasibility, technological readiness, and societal factors. The data analysis was done using Statistical Package for Social Science (SPSS) version 25, and preliminary analysis, statistical results, and findings were extracted and reported. The chapter concludes by discussing the limitations of the study, including the availability of data on agricultural financing in Ethiopia, political and economic context, and inability to provide a comprehensive analysis of all factors impacting the viability of agricultural development banks.

4. Result and Discussion

4.1. Reliability Test Results

Privitera (2013) explains that reliability refers to the consistency of a measurement instrument, specifically the degree of similarity in results across different situations or repeated testing. Internal consistency, which assesses the consistency of results across items within a test, is commonly evaluated using Cronbach's Alpha. These measures are particularly useful for surveys with multiple Likert-type questions. In this study, both measures were used to assess construct reliability for multiple variables.



The recommended minimum value for both measures is 0.70, and all constructs in this study met this requirement, (organizational competences = 0.883, economic feasibility = 0.701, technological readiness 751 and societal factors = 0.717); with no constructs needing to be dropped. Cronbach's Alpha value for all variables is 0.908.

4.2. Research Findings and Corresponding Analysis

4.2.1. Correlation Results and Analysis Between Independent Variables

Correlations					
	Viability	Organizational Competences	Economic Feasibility	Technology Readiness	Societal Factors
Viability	1				
Organizational Competences	.576**	1			
Economic Feasibility	.586**	.409**	1		
Technology Readiness	.660**	.536**	.603**	1	
Societal Factors	.626**	.454**	.653**	.655**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Own reporting from the analysis software (2023)

A correlation matrix is used to ensure the correlation between the dependent and explanatory variables. Cooper and Schindler (2009) suggested that a correlation coefficient above 0.8 is a sign of a multicollinearity problem, while Malhotra (2007) argued that it can be used at 0.75. Correlation (r) is a measure of the association between two variables, with positive values indicating a positive correlation and negative values indicating a negative correlation. Cohen (1998) and Warokka et al. (2012) interpreted the coefficient of correlation between 0 and 1 as follows: a correlation coefficient (r) ranging from 0.10 to 0.29 indicates a low degree of correlation, a correlation coefficient (r) ranging from 0.30 to 0.49 indicates a moderate degree of correlation, and a correlation coefficient (r) ranging from 0.50 to 1.00 indicates a high degree of correlation.

Viability shows a high degree of correlation with organizational competencies ($r = 0.576$), economic feasibility ($r = 0.586$), technology readiness ($r = 0.626$), and societal factors ($r = 0.626$). A high degree of correlation means $r > 0.5-1.0$. This is just a mutual correlation between variables.

The correlation between organizational competencies and two variables fell to a moderate degree (r is between 0.3 and 0.49% with a significant level of 0.01): economic feasibility ($r = 0.409$), and societal factors ($r = 0.454$). But organizational competencies with economic feasibility have a high rate of correlation ($r = 0.536$).

The third column, economic feasibility, has a strong correlation to the corresponding two variables. Hence, economic feasibility is associated with technology readiness ($r = 0.603$) and societal factors ($r = 0.653$).



Finally, technology readiness with societal factors is ($r = 0.655$) and showed a high correlation as well. The correlation matrix shows only mutually moving in the same direction, different directions, or remaining uncorrelated. The regression analysis is different and shows the impact of one variable on another. So, next is the regression analysis section.

4.2.2. Regression Results and Analysis

The study employed linear regression models. This model captured the effects of viability constructs on the Viability Agricultural Development Bank by breaking into two parts. The model analyzed the impact of the aggregate and disaggregate explanatory variables (Organizational Competences, economic feasibility, technology readiness and societal factors) on the dependent variable (viability).

The Problem

To investigate the effect of organizational competences, economic feasibility, technology readiness, and societal factors on the viability of the Agricultural Development Bank in Ethiopia.

H1: There is a significant and positive impact of organizational competences on the viability of the Agricultural Development Bank.

H2: There is a significant and positive impact of economic feasibility on the viability of the Agricultural Development Bank.

H3: There is a significant and positive impact of technological readiness on the viability of the Agricultural Development Bank.

H4: There is a significant and positive impact of societal factors on the viability of the Agricultural Development Bank.

Hypothesis	Regression Weights	B	T	P-value	Hypothesis Supported/Rejected
Constant	VIA	0.488	2.144	0.034	
H1	ORC → VIA	0.205	3.639	0.000	Supported
H2	ECF → VIA	0.173	2.106	0.037	Supported
H3	TER → VIA	0.250	3.155	0.002	Supported
H4	SOF → VIA	0.204	2.437	0.016	Supported
R ²	0.586				
F(4,122)	40.121				

Note: $P < 0.05$, ORC: Organizational Competences, TEC:ECF: Economic feasibility, TER: Technology readiness and SOF: Societal factors. Source: Own reporting from the analysis software (2023)

H1 evaluates whether Organizational Competences (ORC) significantly and positively affect viability. The result revealed that Organizational Competences has significant and positive impact on the viability of Agricultural Development Bank ($B = 0.205$, $t = 3.639$, $P = 0.000$). Hence, H1 supported the hypothesis.

H2 (economic feasibility = ECF), the data analysis showed a significant and positive impact on the viability of Agricultural Development Bank ($B = 0.173$, $t = 2.106$, $P = 0.037$).



H3, the third hypothesis (technological readiness), has a significant and positive impact on the viability of Agricultural Development Bank ($B = 0.250$, $t = 3.155$, $P = 0.002$). Technological readiness (H3) supported the viability of Agricultural Development Bank.

Finally, H4 (societal factors) has a significant and positive impact on the viability of Agricultural Development Bank ($B = 0.204$, $t = 2.437$, $P = 0.016$). Hence, H4 is also supported. According to Jafer et al. (2016) and Montgomery and Ranger (1999), since the P-value is < 0.05 and the absolute value of the t-value is ≥ 1.96 , the independent variable has significant impact on the dependent variable.

In regression analysis, this study investigated the relationship between Viability of Agricultural Development Bank and its constructs. To this end, the effects of each construct factor (Organizational Competences, economic feasibility, technology readiness, and societal factors) on each dimension of viability have been regressed using a linear regression model. Then, the effects of viability (independent variable) have been regressed by using the weighted values of aggregate level of factors as dependent variable.

This provided a regression coefficient (beta value), which indicated the effects, direction, and degree of contribution made by each independent variable to the dependent variable. R- square (coefficient of determination) tells how much variation is taking place in the dependent variable (viability) due to the variation in the independent variable (Organizational Competences, economic feasibility, technology readiness, and societal factors). The p-value indicates the statistical significance of the relationship between the dependent and independent variables. The model's adequacy and fitness were checked before running the regression analysis.

The B value on viability in ascending order is, economic feasibility ($B = 0.356$), technology readiness ($B = 0.290$), societal factors ($B = 245$), technology readiness ($B = 210$ and Organizational Competences, ($B = 0.202$), with a P-value < 0.005 .

Recall our regression coefficient formula:

$$VIA = \beta_0 + \beta_1ORC + \beta_2ECF + \beta_3TER + \beta_4SOF + \varepsilon + \eta_i$$

Where: VIA = The Viability, β = Vector of Unknown Parameters, ORC = Organizational Competences, ECF = Economic Feasibility, TER = Technology Readiness, SOF = Societal Factors, ε = Error Term, η_i = Unobservable Heterogeneity $\beta_1, \beta_2, \beta_3, \beta_4$ = slope of each independent variable and their measure by what extent affect the dependent variable, i.e viability in this case.

The variable with the highest beta value contributes the most to explaining the dependent variable's variance, which is controlled by all other variables in the model. As shown in the B column under the unstandardized coefficient (ignoring the negative sign with a descending value). Economic feasibility ($B = 0.356$), technology readiness ($B = 0.290$), societal factors ($B = 245$), technology readiness ($B = 210$), and Organizational Competences, ($B = 0.202$).

Substituting the regression coefficients, we can specify our model as;

$$VIA = 0.587 + (.202ORC) + 0.210TEC + (0.356ECF) + 0.290TER + (-0.245GOV) + \varepsilon + \eta_i$$

According to the table, the aggregate impact of explanatory variables, the model summary shows that 58.6% of the Viability of Agricultural Development Bank could be attributed to the combined effect of the predictor variables. However, 41.4% of the variance is explained by other factors not covered in this study. Some factors such as societal factors, have a significant effect, but have a negative impact on



viability. ANOVA results showed that the level of significance is below 0.01. This indicates the model is reliable and best fitted at all conventional levels of significance. The dependent variable (viability) was regressed on predicting variables (Organizational Competences, economic feasibility, technology readiness, and societal factors). The independent variables significantly predict the viability of the Agricultural Development Bank, $F(4,122) = 40.121$, $P < 0.001$, which indicates that the five factors under study have a significant impact on the viability of the Agricultural Development Bank. Moreover, the $R^2 = 0.586$ explained before depicts that the model explains 58.6% of the variance in viability of the Agricultural Development Bank predicted by the listed five factors.

Earlier research by Mhonto Mhonto (2020), Seok-Keun Yoo (2018) showed that societal factors had a very strong influence on viability. This implies that higher results from higher societal factors positively affect viability. Therefore, excellent government policy in Ethiopia leads to the viability of the Agricultural Development Bank. This result is also supported by the findings of Liang and Wei (2004), who found support for the relationship between social factors and viability in assessing m-commerce applications.

The implementation of Agricultural Development Banks takes into account organizational viability constraints, according to Liang and Wei (2007). They argue that a user's willingness and ability are the main factors determining organizational viability, while Liang, Huang, Yeh, and Lin (2007) emphasize the importance of user satisfaction and system usage for success. Tobias Mettler (2015), on the study "Anticipating mismatches of HIT investments: Developing a viability-fit model for e-health services," said that while user satisfaction is important, we believe that it is a consequence of Agricultural Development Bank implementation rather than a determinant. We prefer to focus on factors that directly affect technology adoption decisions at the enterprise level, such as legal restrictions, organizational competency levels, and government support. The success of an implementation often depends on these factors, including government support for the objectives of the implementation of the project under study, here the Agricultural Development Bank.

The General and Viability Issue Results and Analysis

The questionnaire on Agricultural Development Bank in Ethiopia showed that while 61.4% of respondents had heard of these institutions, there is a need for greater awareness-raising efforts to build support. The majority of respondents (89%) believed there is still a need for agricultural development banks in Ethiopia, but 81.1% felt these banks need to be reformed. Only a small percentage (4.7%) believed they should be closed. The results suggest a need for further discussion and debate on the future of agricultural development banks to ensure they are viable and effective in supporting the growth and development of the agricultural sector and improving the livelihoods of farmers and rural communities.

4.3. Discussions of the Results

The earlier parts of this chapter dealt with the presentation of statistical data and its corresponding meanings. In this section, the findings were discussed as determinants of the viability of agricultural banking. We learned from the data, there are four determinant factors for viability.

Organization Competence: Organization competence has a significant positive impact on the viability of agricultural banking, with factors such as corporate social responsibility, specialized banking products, stakeholder support, and technology usage being important for sustainability. Agricultural



development banks can also prioritize lending to small-scale farmers, provide technical assistance for sustainable agriculture practices, and engage in community development initiatives.

Economic Feasibility

The availability of funding is a significant determinant of the viability of agricultural banking and has a strong correlation with bank sustainability. Governments can support agricultural development banks by providing adequate funding, establishing a regulatory framework, supporting capacity building initiatives, and encouraging collaboration with other stakeholders.

Technological Readiness

Technology can play a vital role in overcoming challenges associated with agricultural development banking, such as the high risk associated with agricultural lending. By leveraging advances in mobile banking and data analytics, agricultural development banks can provide scattered farmers with access to credit and other financial services, improve their productivity, and reduce their vulnerability to weather variability and other risks.

Societal Factors

Societal factors, such as political will, competitive pressure, and the readiness of society, also play a crucial role in the viability of agricultural banking. Strong government policies can help agricultural development banks operate efficiently and effectively and achieve their objectives of promoting agricultural development and reducing poverty in rural areas. Some of the key policies include providing adequate funding, establishing a regulatory framework, supporting capacity building initiatives, and encouraging collaboration with other stakeholders.

Reforming

The majority of respondents in a survey and many literatures support reforming Agricultural Development Banks instead of closing them. The paper "Reforming Agricultural Development Banks" suggests a planning framework for policymakers and advocates for agricultural development bank reform, transforming them into sustainable financial intermediaries. The reforming mechanisms include mobilizing savings deposits, introducing market rates of interest, finding alternatives to government ownership, engaging in policy dialogue, adjusting legal and policy framework, diversifying into non-agricultural lending, emphasizing cost-effectiveness, productivity, and efficiency, expanding branch networks, operating as profit centers, using individual lending through joint liability groups, and mobilizing rural savings. The paper recommends cooperation between donors and agricultural bank associations to agree on a conceptual framework, division of labor, and steps to follow in the reform process.

5. Summary of Findings and Conclusion

This study investigates the factors that influence the viability of Agricultural Development Banks in Ethiopia. It uses quantitative data from commercial, development, and central banks in Ethiopia and a modified framework from the "Fit-Viability Model". Four determinant variables (organizational competencies, economic feasibility, technology readiness, and societal factors) were regressed on the dependent variable (viability), and all variables were positively supported. The establishment of a full-fledged Agricultural Development Bank can facilitate the growth of the sector and improve the livelihoods of millions of Ethiopians. However, there is limited research on the viability of such banks in Ethiopia. The following three tables summarized the research findings.



5.1. Summary of Findings

The first research objective:

Key Issues	Summary
Research objective 1:	To review the current status of the agricultural development bank in Ethiopia.
Research question 1:	What is the current state of the agricultural development bank in Ethiopia?
Result of the study	The Agricultural Development Bank in Ethiopia was established in 1945 to provide financial services to farmers and agricultural businesses. The Development Bank of Ethiopia (DBE) has been instrumental in financing development projects since 1909. However, the viability of agricultural development banks in Ethiopia has faced challenges such as inflation, poor loan collection, and inadequate infrastructures. The Commercial Bank of Ethiopia (CBE) is partnering with the government to provide agricultural finance products and services. Private commercial banks with limited capacity have also been working with the government to support the agricultural sector, but there is no full-fledged agricultural bank in Ethiopia.
Achievement of the objective	Assessing the current status and the history of agricultural banking. The government has tried many times and is still struggling to open a full-fledged agricultural development bank. But the research identified that there is no full-fledged agricultural bank in Ethiopia right now, in 2023.

The second research objective: This research aims to explore the determinants of the viability of Agricultural Development Banks in Ethiopia, such as organizational competences, economic feasibility, technology readiness, and societal factors. The study used a Fit-Viability Model and used both descriptive and inferential methods of data analysis. A structured questionnaire was designed and prepared using a Likert five-point scale, and closed-ended questions were used. The response rate was calculated based on the number of questionnaires distributed, with 150 questionnaires distributed and 131 responses received. The paper discusses reliability in measurement instruments, which refers to consistency of results across different situations or repeated testing.

Key Issues	Summary
Research objective 2:	To examine the factors that influence the viability of agricultural development banks in Ethiopia
Research question 2:	What are the factors and constraints that contribute to the viability of the agricultural development bank in Ethiopia?



<p>Result of the Study</p>	<p style="text-align: center;">1. The Disaggregate Analysis (Descending Beta Order)</p> <ul style="list-style-type: none"> ▪ Technology readiness → Viability (B = 0.250), 0.000 significance and positive effect ▪ Organizational competences → Viability (B = 0.205), 0.037 significance and positive effect ▪ Societal Factors → Viability (B = 204), 0.016 significance and positive effect ▪ Economic Feasibility → Viability (B = 0.173), 0.002 significance and positive value. <p style="text-align: center;">2. Aggregate regression analysis:</p> <ul style="list-style-type: none"> ▪ 58.6% of the viability of the agricultural development bank could be attributed to the combined effect of the predictor variables (Organizational competences, economic feasibility, technological readiness and societal factors. ▪ 41.4% of the variance is explained by other factors not covered in this study.
<p>Achievement of the objective</p>	<p>If and when full-fledged agricultural development bank is implemented, all independent factors can be used. Because, all are demonstrated a significant and positive effects. But the aggregate analysis shows only 58.6% is from those four independent variables and 41.4% to be other factors not covered by this study.</p>

The third research objective: The following is a viable way to open a full-fledged Agricultural Development Bank in Ethiopia and the reforming way of the current agricultural financing.

Key Issues	Summary
<p>Research Objective 3:</p>	<p>To recommend a viable way to open a full-fledged agricultural development bank in Ethiopia.</p>
<p>Research Question 3:</p>	<p>What is a viable way to open a full-fledged agricultural development bank in Ethiopia?</p>
<p>Result of the</p>	<p>It is based on research objectives and questions 1 and 2.</p> <p>a) There is no full-fledged agricultural bank and need should be open</p> <p>b) Agricultural development bank can be viable by:</p> <ul style="list-style-type: none"> • Organizational competences by creating profitable environments like investing in different portfolios, competent staff and competent banking technologies, stakeholders support and focus on corporate social responsibility



<p>Study</p>	<ul style="list-style-type: none"> • Economic feasibility: explicit, implicit and opportunity costs should be secured and assessed for initiation, usage and sustainability • Technological readiness: hardware and software infrastructure should be available throughout the country, integration of the banking technologies should be tested and the system security methods and policies be ready. • Societal factors: political will is necessary for land holding reforms, legal enforcements and policies should be formed for full-fledged agricultural development banking, the competitive pressures from other banking institutions should be secured by laws. <p>c) Closing or ignoring the agricultural development banking is not a solution, rather it needs reforming the current commercial and development banking by forcing them to do agricultural development banking services at least as windows or segments.</p>
<p>Achievement of the objective</p>	<p>Major determinant factors for the viability of agricultural development bank are identified and analyzed. Reforming of the current commercial and development banks are recommended.</p>

5.2. Conclusion

The viability of agricultural development banks is a fundamental issue due to inflation, poor loan collection, and operational overheads. To improve their viability, banks should serve a larger number of customers with a wider range of financial services, including deposit facilities, increase the amount of purchasing power transferred, improve the quality of services offered and reduce transaction costs. Viability requires environment and policy changes, institutional strengthening, and technological innovation. This paper uses quantitative data from commercial, development, and central banks in Ethiopia and a modified framework from the "Fit-Viability Model." Four determinant variables (organizational competencies, economic feasibility, technology readiness, and societal factors) were regressed on the dependent variable (viability), and all variables were positively supported. It is recommended that commercial banks have an agricultural banking segment, and the Development Bank of Ethiopia should promote full-fledged agricultural development banking. Agricultural Development Banking organizational competencies can be achieved through strong government backing, competent skilled manpower, investing in different portfolios, corporate social responsibilities, the value chain of the product, and good security measurements.

5.3. Recommendations

The most important details in this text are the recommendations made to further enhance the viability of agricultural banks in Ethiopia. These include opening a full-fledged agricultural development bank, learning from successful agricultural development banks in African countries, using the fit-viability model, and using organizational competences, economic feasibility, technological readiness, and societal factors as determinant factors. The first determinant factor (organizational competence) of agricultural development banks is achieved by investing in different portfolios, competent staff, corporate social responsibility, the value chain of agricultural products, and technical assistance.



Economic feasibility: A sufficient budget is needed for initiation, implementation, and sustainability. The sustainability costs of agricultural banks in Ethiopia include opportunity costs from other sectors, a tax cut, and an interest rate reduction.

Agricultural banks should invest in modern banking technology to improve their operations and service delivery to rural areas, create an enabling environment that supports the growth of the agricultural sector, reduce interest rates and fees, collaborate with government agencies, NGOs, and private sector actors to address challenges, and undergo reform to improve their governance, risk management, and financial sustainability. Ethiopia's economy relies on agriculture, and the government is willing to do anything for the advancement of the agricultural sector. By implementing these recommendations, agricultural banks in Ethiopia can become more competitive, efficient, and sustainable, contributing to the overall development of the agricultural sector and improving the livelihoods of farmers and rural communities.

5.4. Suggestions for Future Study

The most important details in this text are that the model used a Fit-Viability Model (FVM) but focused on the viability part. The study gap showed that 58.6% of the viability of agricultural development bank could be attributed to the combined effect of the predictor variables, but 41.4% of the variance was explained by other factors not covered in the study. The study was conducted by quantitative data, but qualitative data can add some values. The Ministry of Agriculture of Ethiopia is not included in the study, which should be included in future studies.

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