ISSN 3006-7251(Online)
MBSTU Journal of Science and Technology
DOI: https://doi.org/10.69728/jst.v11.96
Journal Homepage: https://journal.mbstu.ac.bd/index.php/jst

Is Investing in a "Land Cott" Beneficial? An Inquiry into Interest Rate Swap

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ARTICLE INFO

Article History
Submission: 28 September 2025
Revision: 15 November 2025
Accepted: 09 December 2025
Published: 14 December 2025

Keywords
Keywords: "Land Cott", Interest Rate Swap, Land, Investment

ABSTRACT

"Land Cott" refers to the exchange of cash for the right to use arable land with the understanding that the land owner will redeem this right after repayment is finished. The study's main goal is to find out whether investing by taking "land cott" is profitable or not by effectively applying "interest rate swap", and also to find out the determinants of investing in "land cott". Some financial tools and techniques such as "interest rate swap" and "time value of money" have been applied to calculate the benefit of investing in "land cott" along with a logistic regression model as well as some descriptive statistics. The study found that investing by taking "land cott" is more profitable than keeping money as a deposit in banking. The majority of the farmers are willing to invest by taking "land cott" as there are fewer formalities than other investments. However, the investors are investing in this sector without considering its potential risk. Therefore, by the findings of the study, the investors will get a guideline to incorporate risk with their earnings along with the application of interest rate swaps in the agricultural sector which is the major contribution of this study. In this regard, the government should take proper initiatives to convert the investment in "land cott" into a formal investment to accelerate the mechanism of land.

1. Introduction

This study has been conducted in Bangladesh, which is primarily an agricultural country. Investing informally in exchange of getting the cultivable right of arable land, which is known as "land cott". The land owner will redeem the cultivable right of this land after repayment. Investment in "land cott" is common phenomenon in the every village in Bangladesh. But investment in "land cott" has unique characteristics. There should have the effect of time value of money as this investment has no time limit. The contract will be cancelled after the investor getting back the invested money from the land owner. The return of this investment is uncertain as this return depends on many factors such as natural disaster, market price fluctuation, inflation etc. But the default risk of this invest is near about zero because of serving the land itself as collateral. The investor may be able to recoup their investment by foreclosing on the property in the event of a default. Especially in times of economic recession, land as a tangible asset with inherent value that can stabilize investment portfolio. The ability to directly negotiate terms with land owners gives investors the flexibility to create agreements that are customized to their risk tolerance and investment goals. Besides, this contract is done informally with having no legal support which can induce counterparty risk (Any party can refuse the contract). There was no payment confirmation, which leads to issues down the road. The factors of this investment like interest rates, payback plans, and collateral may also be impacted by social networks, trust, and cultural norms within the community. Less formality make it easier for individuals especially those having no connection with formal financial institutions. Land is a stable, real asset that holds intrinsic value over time without having the characteristics of depreciation. This induces the land owner to transfer the cultivable right of land in exchange of cash during the time of financial crisis which is redeemable. Decardi et al. (2012) claim that the land owner enters into the contract of "land cott" when credit requirement is large or when alternative sources have been exhausted.

Additionally, there is no organization in place to oversee how the informal sector operates. For instance, if laws and regulations are put in place to effectively manage the unorganized sector, the agricultural industry will benefit. To give lenders and borrowers peace of mind and

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protection, the legal framework for "land cott" should be clearly defined. Although the land cott (locally known as land mortgage or lease-in system) is a common rural financial and agricultural practice in Bangladesh, there are very few formal studies examining its economic, social, and legal implications. Few recent studies (2022–2024) have collected quantitative or field-based evidence on how investing in land cott affects both investors (those providing money) and landowners (those redeeming land later). The profitability and danger of land cott are rarely measured in prior research when contrasted with other rural savings or investment strategies. In scholarly studies, the social impacts—like ties within the society, informal agreements, and trust—have mostly been disregarded. There is some uncertainty around the policy framework and legal recognition of land cott arrangements. The impact of government land policies (2022–2024) on this informal structure has not yet been thoroughly examined. Although Bangladesh has recently seen inflation and changes in the rural economy, no recent research (2022–2024) have assessed whether land cott is still a dangerous or advantageous investment in the present environment. Comprehensive, empirical, and up-to-date research on the legal, social, and economic aspects of land cott investment activities in rural Bangladesh is lacking (2022–2024).Most previous works focus on general land tenancy or credit systems, leaving the specific impacts, benefits, and challenges of land cott largely unexplored, but this study is conducted to calculate the benefit for investing in "land cott" than the other available investments financial derivatives such as interest rate swap. By this study, the government will understand the impotence for the formalization of this investment. Moreover, lender and borrower will understand their benefits under the "land cott" contract. As a result, the mechanism of land will be accelerated with contributing more to the economy.

2. Outcomes of the Study

The study's main goal is to find out whether investing by taking "land cott" is profitable by applying "interest rate swap" in agricultural sector along with calculating the value of this swap. Besides, this study also finds out the determinants of investing in "land cott".

3. Literature Review

Rahman (2024) specifically examines rural land conflicts, revealing that local power dynamics and ambiguous paperwork exacerbate issues around tenancy and land rights restitution—an anticipated scenario where investors hope to reclaim rights post-repayment, although documentation remains tenuous or disputed. A handful of Bangladesh studies focus on contractual sharecropping and other non-standard forms. For example, recent BRUR research (Mostafa, 2024) documents the prevalence and determinants of contractual sharecropping in parts of Rangpur, noting that formal contracts are often limited and oral arrangements dominate — an environment in which investor-for-cultivation deals can proliferate but also produce ambiguous rights at redemption time. Empirical work on sharecropping and contractual terms finds that when contracts include upfront capital or inputs, the distribution of risk and long-term incentives shifts: investors may require higher shares, or landowners may prefer redemption options that can later be used to reclaim land for alternate use or sale. These micro-level contract features matter for productivity, equity and conflict risk.

Nandi (2024) examines crop diversification programs and observes that institutional restrictions, such as unstable tenure and ephemeral leasing markets, hinder farmers' capacity to transition to higher-value crops. Similar to this, a 2024 assessment of research on land tenure issues highlights the ongoing insecurity, poor management, and limited official recognition of numerous informal tenancy forms, which lead to inefficiencies and the possibility of disputes (Land Tenure System evaluations, 2024).According to these research, informal investor-cultivation arrangements are appealing locally because they supply labor or capital that is needed, but they may also be brittle and less productive over the long run. Sarker (2022) performed field research in riverine regions to examine cropping patterns and farmers' decision-making processes; the study emphasizes how cropping decisions are influenced by insecure land access (via rental or tenancy agreements) and how investment in longer-term or higher-value crops (like horticulture) that need tenure stability is constrained. This has direct relevance to investor–cultivation arrangements: when cultivation rights are ephemeral or susceptible to redemption, investors and cultivators face disincentives to invest in land improvements. Eskander et al. (2023) examined how natural disasters affect households that engage in rent-in or rent-out transactions; they demonstrate how disaster exposure might change leasing patterns and how households reliant on rental tenancy are more vulnerable to livelihood shocks. Shocks can interfere with repayment and lead to disputes about rights redemption in investor-style arrangements, where money comes from outside sources and is invested in cultivation rights. Byerlee and Deininger (2013) revealed that the productivity of the land currently under cultivation falls well short of potential in the majority of the countries. Large-scale farming in nations with an abundance of land could be one way to implement the higher returns on investment and cheaper land that come with farming. They added that access to money, technology, and new markets can have a big impact on farming if land and other markets are operating well and there is a regulatory framework in place. They foresaw that these endeavors may be vulnerable in terms of the economy, society, or environment due to inadequate land governance and inadequate institutional capacity. Paul et al. (1976) examined various farming agreements. It shows the benefits and drawbacks of using future contracts and cash forward in the farming industry. Here, the findings make a decision regarding the suitability of these contracts for use in agriculture. Mishra at el. (2018) examined the effects of contract farming on

Nepal's smallholder lentil farms' expenses, production, and profitability. Their research revealed that, in contrast to very smallholder lentil farmers, no lentil farm farmer benefits from contract farming. Raucci at el. (2018) attempted to evaluate how weather derivatives affect the Brazilian soybean market's ability to reduce income volatility. The results of their investigation demonstrated that a large reduction in producers' income volatility while maintaining gross average income is possible. Shi and Jiang (2016) discovered the same outcomes. They demonstrated how yield risk in Chinese rice fields might be considerably decreased by putting their recommended approach into practice.Jones (2007) examined the weather derivatives market's past and tried to ascertain its advantages and uses in agricultural risk management. He revealed that weather-related events have an impact on almost 20% of the US GDP, so it is understandable that some kind of financial protection against weather-related losses is needed. They suggested using weather derivatives to provide this kind of defense. Khan et al. (2013) compared the use of weather derivatives to insurance in agricultural producers' weather risk management strategies. They noticed that farmers use weather derivatives in addition to insurance. However, the study surveyed grain growers in Saskatchewan, Canada, where farmers are likely to encounter frequent but mild weather conditions. Less than 10% of respondents, according to the study, used weather derivatives. The biggest barrier to its use in weather risk management has been found to be participation costs, particularly ignorance. Cell (2009) conducted research on on how farmers in Bangladesh utilize crop insurance as a risk management tactic. The investigation used primary and secondary data and employed content-based analysis. Following a thorough analysis of the literature and extensive global crop insurance experience, The study provided Bangladeshi farmers with a practical strategy and detailed instructions for implementing crop insurance as a risk management tool. The study also identified problems that needed to be fixed and looked at Bangladesh's past experiences with crop insurance. However, a few difficulties that are generally raised in the survey were uncovered by the study. French and Silver (2007) investigated the potential of supply-side perspectives on crop micro-insurance in Bangladesh. Four viability criteria are considered when evaluating the prospect: financial robustness, governance, affordability, and contribution to risk reduction. The study's SWOT analysis showed that Bangladesh may be able to support a crop micro insurance program.

A lot of works have been done such as how to increase production in agricultural sector, how to manage risk and suppress disease from agricultural sector. Existing research on rural land tenure systems in Bangladesh usually focuses on land ownership inequality, sharecropping, or microcredit, but not directly on land cott investment practices. Despite the importance of land as a financial asset, many existing studies on mortgages focus predominantly on urban housing finance and formal lending institutions, leaving a significant gap in understanding "land cott" systems, especially in rural areas or informal economies. In formal sector a reasonable rate of interest is charged by bank whereas land cott, investor or lender gets benefits after using the land. Furthermore, there is limited research on "land cott" that has unique characteristics for lending and borrowing particularly in developing countries. Existing literature does not sufficiently explore its practical implementation in low-income or rural contexts, especially where collateral-free or low-formality models are emerging. In isolation, none of the studies appear to model these issues. However, This study's primary goal is to ascertain that investing in "land cott" is profitable or not by effectively applying "interest rate swap", and also to find out the determinants of investing in "land cott".

4. Development of Hypotheses

4.1 Savings

The relationship among income, consumption and saving is explained by the following equation.

$$Y = C + S \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(i)}$$

Here, Y = Disposable income, C = Amount of consumption, and S = Saving

Adam Smith says that saving is equal to invested. Alzghoul et al. (2023) argue that converting savings into investment is inevitable for economic recovery. Therefore, the individuals want to invest what they saved. In Bangladesh, more than 75 percent of the people live in rural areas find by Hossain, (2010). Uddin et al. (2017) chained that more than 50 percent adults of the developing country are unbanked in the world where it is 45 percent in Bangladesh. In this case, the individuals invest in the informal sector what they saved. The following theory has been developed based on the discussions above.

H_1: Investing in "land cott" and saving money are positively correlated.

4.2 Terms and Formalities

Adams (2020) shows that unlike banks, informal lending/borrowing do not require extensive documentation, making them ideal for urgent financial needs. Borrowers and lenders can agree on repayment terms that suit both parties, unlike banks, which impose rigid structures found by Jones, (2021). Institutional theories (North, 1990) argues that financial systems are shaped by formal and informal institutions. In developing regions where legal frameworks are weak, "land cott" emerges as a functional alternative to formal banking. Social Capital Theory (Putnam, 1993) proves that trust, relationships, and community networks play a key role in economic transactions. "Land Cott" relys on social trust rather than strict legal enforcement. In comparison to formal financial institutions, the terms of "land cott" are frequently more flexible. Because of having informal transactions, customized arrangements, the "land cott" can be better suit for both lenders and borrowers. On the

basis of the above discussion, the following figure has been formulated.

H_2: There is a relationship between terms and formalities and investing in "land cott"

4.3 Risks

According to economic and financial theories, informal land markets often provide higher returns but come with higher risks, whereas bank investments offer lower but more secure returns due to regulatory protections. Investment is affected by time value of money such as net present value (NPV) which is risk adjusted return.

A number of risks, including disease and pest outbreaks, disputed land titles, natural disasters, and price swings, can have an impact on the agriculture industry's sustainability, profitability, and output. Therefore, the potential investors ("land cott") should take caution about these risks. On the basis of the above discussion, the following figure has been formulated.

H_3: There is a relationship between risk and investing in "land cott"

4.4 Occupation

In Bangladesh, over 75 percent of the population resides in rural regions (Hossain, 2010), with the majority being engaged in agriculture. Due to their frequent knowledge of local property dynamics and agricultural land values, farmers may have an advantage when investing in "land cott". They may be able to learn more about possible investment opportunities due to this familiarity.

H_4: The occupation of farmer is positively related to investing in "land cott"

4.5 Education

Obamuyi (2013) finds that investing in formal sector like capital market requires high level of financial literacy and past experience. Therefore, there exists a substantial negative and significant correlation between education and investment in the informal sector concluded by Gërxhani & Van (2013). The literacy rate is 30.20 percent to 65.3 percent in different districts in Bangladesh claimed by Pau & Saha (2017). Therefore, majority of the farmers will be investing in informal land mortgage that are less educated.

H_5: There is a positive relationship between education and investing in "land cott"

5. Data and Methodology

The study has been chosen to employ the quantitative approach in realizing the hypothesis of the study and achieving its objectives. The data are gathered for the study from all districts in Bangladesh. All investors, investing in informal land mortgage in Bangladesh are included in the study's population. The convenient sampling method is employed to gather data because there is no sampling frame available for the population. Again, data is collected through face-to-face conversations with investors. The study's data were gathered from primary sources utilizing a structured questionnaire that included both open-ended and closed-ended questions. Data collection took place from June to December 2024.The population size for the study is not specified. As a result, the subsequent formula calculates the required sample size at a 95% confidence level, allowing for a 5% margin of error.

$$n = \frac{Z_{\infty}^{2}(0.25)}{E^{2}}$$

Where: # E represents the margin of error, which is 0.05. # The z-value is 1.96, as indicated in the z-table. Consequently,

$$n = \frac{1.96^{2}(0.25)}{0.05^{2}}$$

$$n = 384.16$$

In this study, some descriptive statistics and inferential statistic are applied. Under the descriptive statistics mean, median, mode, ratio and percentage are applied and under the inferential statistic a logistic regression is used.

5.1 Explanation of the Model

In this study, it is considered that the investors have two investment opportunities. These are investing in "land cott" or keeping money as a fixed deposit in bank. Therefore, the opportunity cost of investing in "land cott" is keeping money as a fixed deposit in bank. But the natures of the benefits generated from these two investments are not same. Here, benefits generated from "land cott" are floating cash flows and benefits generated from bank are fixed cash flows. The net benefit of "land cott" is calculated by the following way.

Net benefit of "land cott" = (Benefits generated from "land cott") – (Benefits generated from bank)

First, benefits generated from the land (Investor get right to cultivate this land from land owner under the "land cott" agreement) is considered as floating cash flows and this cash flow has been converted as a floating rate later. This is the average value of the benefit of respondents. Therefore, floating rate is calculated by equation (i).

$$\text{Floating rate} \frac{x}{\text{Average Investment}} \quad \text{.....(i)}$$

Here,

X is calculated by the following formula,

$$X=(M \times N)^{t} \quad \text{.....(ii)}$$

Where,

X = Average benefit from agricultural sector

M= Average number of times crop cultivated in a year

N= Average benefit from each cultivation

t = Average year of the investment.

Also,

Average investment is calculated by the following formula,

$$= \frac{\text{Total investment in agricultural sector}}{\text{Number of investment}} \quad \text{.....(iii)}$$

It is assumed that if the investors don't invest in "land cott", they will keep money as a fixed deposit in bank. The interest that is earned by investing money in the bank is considered as fixed rate. Here, this fixed is calculated by averaging the deposit rate of different banks in Bangladesh. Therefore, benefit from fixed rate is found by the equation (iv).

$$Y=(P\times I)^t \quad \text{.....(iv)}$$

Where,

Y = Average benefit from fixed rate,

P = Average principal amount of investment

t = Average year of the investment in bank

Here,

'I' is the average rate obtained after investing in the bank for the period of time the 'land cott' is invested. I is calculated by the following formula,

$$I=\frac{Q}{NR} \quad \text{.....(v)}$$

Where,
Q = Sum of the interest rate of deposit in bank for period 't'
NB = Number of bank

Again, the net benefit is calculated by the following way:

$$\text{Net Benefit} = X-Y$$

Here,
X = Average benefit from floating rate means the interest earned by investing in land cott and
Y =Average benefit from fixed rate means the interest that will be earned by investing in bank.
Now, the authors make the valuation of net benefit which comes from investing in "land cott". The model of PV of time value of money will be considered for valuation of these swaps. We know that,

$$PV=FV(1+i)^{-t}$$

Where,
PV = Present value, Present value of the benefit occurred in future amount of money.
FV = Future value, Net benefit achieved from investing in land cott will be the average value of benefit of the respondents.
i = Rate of interest, Bank rate are considered as rate of interest.
t = number of time

Finally, a regression model is used to achieve the objective "to find out the determinants that influence investing in "land cott". The dependent variable of this objective is dichotomous. Therefore, to achieve this objective, The probability of a specific event occurring is estimated by logistic regression. The independent variables of this model are a combination of scale, ordinal, and nominal measurements.

In this study, investing in land cott is a dichotomous variable. It has two levels which are investing in "land cott" (having value = 1) and investing in other sectors (having value = 0). Since the dependent variable is dichotomous, The influence of the factors on investing in "land cott" has been estimated using the following "Binary logistic regression" model (equation 9).

$$L_i = \ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + u_i \text{.....(9)}$$

Where,
L_i is the log of the odds ratio of investing in 'land cott'. β_0……β_6 are the parameters to be estimated. X_1…X_6 are the explanatory variables that affect investing in 'land cott'.u_i is the stochastic Disturbance term. The regression equation (9) shows the linear relationship in which the dependent variable is the function of six explanatory variables. The variables of equation (9) are explained in the following table.

Table 1: An explanation of the factors and how logistic regression measures them

Variables	Type	Measurement and description of the variables
Dependent Variables		
"land cott"	**Dichotomous**	**Investing in "land cott" = 1 Investing in other than "land cott"= 0**
Independent Variables		
Savings (X_1)	**Continuous**	**Savings in years**
Term (X_2)	Continuous	Term in years
Occupation (X_3)	Categorical	Farmers = 1; Owner of enterprise =2; Government employee =3; Private employee =4; Other investors =5.
Risk (X_4)	Categorical	Perception of despondence regarding the risk of investing in "land cott". Less risky =1; High risky =2;
Formalities (X_5)	Categorical	What are the formalities to be maintaining for investing in"land cott"? Less formalities =1; High formalities =2;
Education (X6)	Categorical	Educational Qualification? Below SSC =1; Above SSC =2;

The variables included in the model are listed in Table 1. Investing in "land cott" is the anticipated outcome. In this analysis, the value coded "1" has been used as the reference category for the categorical variables.

6. Results and Discussions

This section presents factual findings from research, surveys, or field studies. The study found that approximately 68% of land mortgage transactions in the selected rural communities are conducted informally. These transactions often occur without legal documentation and are based on verbal agreements or

community-recognized norms. Land cott agreements typically involve repayment terms of 1–5 years (Table 2) with interest rates ranging from 10% to 20% (Table 5) annually. Mortgagors often rely on social ties to enforce the agreements.

6.1 Demographic Information

Table 2: Demographic Information

Demographic Information	Category	Frequency (N=300)	Percentage
Age	20 – 29 (years)	15	5 %
	30 – 39 (years)	97	32.5 %
	40 – 49 (years)	130	43.4 %
	Above 60 (years)	58	19.3 %
Education Qualification	Below SSC	128	42.7 %
	SSC	101	33.7 %
	Above SSC	71	23.7 %
Number of Family Members	3 – 6 (Persons)	221	73.7 %
	More than 6 (Persons)	79	26.3 %
Occuption	Farmers	154	51.3 %
	Government employee	1	0.3 %
	Others	145	48.3 %

Source: Field Survey

Table 3 shows that the majority of the investors invest in 'land cott' 31 – 60 (Decimal) which are 53.4% and the frequency are 160, and other investors invest in 'land cott' 1 -30 (Decimal) which are 46.6% and frequency is 140. The analysis also shows that the majority of the investors investing in 'land cott' for 3 years which are 43.7% and frequency are 131.

Table 2 is shown here from the survey analyzed. The majority age is 40 to 49 (43.4%), and the rest the 30 to 39 (32.5%), above 60 (19.3%) and 20 to 29 (5%). The majority education levels of the respondents are below SSC (42.7%) and the rest of them are SSC (33.7%) and above SSC (23.7%). The number of family members is 3 to 6 (73.7%) and more than 6 (26.3 %). The majority's occupation is Farmers (51.3%) and the rest of them are other investor (48.3 %) and government employee (0.3 %).

Table 3: Quantity of "land cott"and its tenure

		Frequency	Valid Percent	Cumulative Percent
Quantity of investment in "land cott" (Decimal)	1 – 30 (Decimal)	140	46.6	46.7
	31 – 60 (Decimal)	160	53.4	100
	Total	300	100	
Tenure of investment in "land cott" (years)	Less than 1 year	43	14.3	14.3
	1 year to 3 year	247	82.4	96.7
	More than 5 years	10	3.3	100.0
	Total	300	100.0	

Source: Field Survey

6.2 Benefit from "land cott" or from deposit in Bank

Here the descriptive statistics analyses which are used for calculating the Benefit from 'land cott' or from deposit in Bank and net benefit are following as:

Table 4: Descriptive Statistics

Descriptive Statistics						
	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Age	300	23	60	12771	42.57	7.598
Number of family member	300	3	35	1766	5.89	2.053
How much land did you cott?	300	5.0	80.0	10416.5	34.722	12.9956
How much money did you pay?	300	20	1500002	52366022	174553.41	101697.375
How many crops are grown in a year?	300	2	2	600	2.00	.000
What is the benefit in one year after the land is cultivated?	300	2500	40000	5189000	17296.67	6535.367
Valid N (listwise)	300					

Source: Field Survey

Table 4 shows that the investors invest in 'land cott' average 34 decimal, money investor pay for investing in "land cott" average TK.170000, average crops grown in a year is 2 times and after cultivating the land investor get average benefit TK.17000.

Table 6 Valuation of these Swaps

Year	Net benefit (Future value)	Interest rate (Bank rate)	Present value $\{PV=FV(1+i)^{-t}\}$
1	3400	8% or .08	3148

Year	Average Investment = a	Floating rate (investing in 'land cott') (X/a) = b	X=Benefit from floating rate ('land cott') = c	Fixed rate (Bank rate) = d	Y=Benefit from fixed rate (Bank) = e	Net benefit (X-Y)
1	170000	10%	17000	8%	13600	3400

Table 5 shows that investors get average benefit in one year investing in 'land cott' is TK.17000 which is equal to 10 percent and investors get average benefit in one year investing in bank TK.13600 which is 8 percent. The net benefit of investing in 'land cott' is TK.3400.

6.3 Valuation of These Swaps

The model of PV of time value of money will be considered for valuation of these swaps. Table 6 shows that investing in "land cott" will be more profitable than the other sector investment.

6.4 Determinates of Investing in "Land Cott"

The total number of observations is 300 (table 7), 300 observations have been included in the logistic regression analysis to find out the determinants that affecting the investing in 'land cott'.

The Hosmer-Lemeshow test shows that the p equal to .198 indicates that the model fits the data well.There is a 90.7 percent success rate for all predictions. Overall, 90.7 percent of the predictions made by the fitted model are accurate. Consequently, the fitted model's adequacy and classification accuracy are satisfactory.

The variables in the equation and their respective contributions to the model are displayed in table 7. The test of significance for every logistic regression model coefficient is also included in this table. These results show that nature of contract, risk of land cott, and formalities of land cott have been added significantly to the model. Due to less formalities in oral contract, there is .363% more chances to invest in 'land cott' than in a written contract. But the occupation, educational qualification, number of family members, yearly savings of the investor, have not added significantly to the model. Nagelkerke's R^2 is .775 which suggests the model is sound. Thus it can be said that 77.5 percent probability of the event having possibility to investing in "land cott" is explained by the logistic model.

Table 7 Variables in the Equation (Logistic Regression)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
intercept	-1.344	.4584	8.592	1	.003	.261	.096	.601
Occupation (1) = Farmers	3.403	.5191	42.978	1	<.001	30.061	11.501	90.304
Occupation(2) = Owners of enterprise	.199	.6312	.099	1	.753	1.220	.352	4.340
Occupation(3)= Government employee	-.414	.6668	.386	1	.535	.661	.171	2.461
Occupation(4)= Private employee	.496	.5738	.749	1	.387	1.643	.547	5.350
Occupation(5) = Others investors	0a					1	.	.
Educational qualification(1)= Below S.S.C	-.317	.529	.360	1	.549	.728		2.054
Number of family members	.160	.159	1.013	1	.314	1.174	.859	1.603
Nature of contract(1)= Oral contract	-1.014	.467	4.707	1	.030	.363	.145	.907

What is the yearly savings of the investor?	.000	.000	.616	1	.433	1.000	1.000	1.000
Your perception regarding risk for investing in 'land cott'?(1)	.841	.445	3.577	1	.059	2.319	.970	5.547
What are the formalities to be maintaining for 'land cott'?(1)	2.977	.451	43.536	1	<.001	19.635	8.109	47.546
Constant	-1.473	1.418	1.079	1	.299	.229		
Hosmer and Lemeshow Test								p = .198
Prediction accuracy of the model								90.7
Pseudo R^2(Nagelkerke R^2)								.755
Number of observations								300

7. Implications

7.1 Practical Implications

The study's conclusions offer insightful information policymakers as well as individual investors. By evaluating the benefits and risks associated with investing in land, particularly through "land cott" arrangements, the study helps investors make informed financial decisions. Also "land cott" provide access to low-cost, high-potential assets in emerging or underdeveloped markets. Since such "land cott" are often based on community trust and locally recognized agreements, they allow for rapid transactions with minimal bureaucratic delay. These investments can yield significant returns, particularly as land values appreciate and rural infrastructure improves. Bankers and microfinance institutions, although traditionally cautious, can benefit from engaging in this sector by designing alternative lending products that accommodate informal documentation. By working with local institutions and leaders, banks can reduce risk and expand financial inclusion. "Land cott" serve as a flexible and accessible form of collateral for lenders.

7.2 Theoretical Implications

The study advances our theoretical knowledge of the behavior of informal investors and land-based financial practices in developing economies. By examining the perceived and actual benefits of investing in land, the research enhances existing theories of asset preference, informal finance, and risk-return trade-offs in non-institutional investment settings. This is also important for academic research because it helps expand our understanding of how informal systems support credit access, property rights, and investment in rural or low-income communities. It suggests that "land cott " are not just temporary solutions, but can be stable, widely accepted, and useful financial tools in their own right. By studying "land cott ", researchers can develop new theories that include both formal and informal institutions, and show how people adapt to gaps in legal or financial infrastructure. This also contributes to the study of financial inclusion, development economics, and institutional theory, by highlighting how alternative systems work in practice. It provides empirical evidence that supports or challenges classical investment theories, such as portfolio theory or land rent theory, in the context of informal economies. Furthermore, the study introduces context-specific factors—such as legal informality, social trust, and land tenure insecurity—that influence investment decisions, thus expanding the theoretical framework used to analyze land as a financial asset. These insights pave the way for future theoretical models that better incorporate informal mechanisms and local socio-economic dynamics when evaluating land investments in emerging markets.

8. Conclusions

The current conceptual understandings of investing in "land cott" have been enlarged, categorized, and the current status of research has been reviewed in this paper. Threats to running a profitable business in agriculture can originate from a variety of areas. Pest pressure, weeds, extreme heat or cold, and flooding can all lower crop yields. Farmers can make money from their operations if they can control these risks and keep their expenses under the money they get. Notwithstanding certain limitations, 59.7% of investors in Bangladesh have stated that they are generally satisfied with their "land cott" investment. Similar surveys may provide the authority with inexpensive inputs to find areas for improvement; ongoing monitoring is necessary to gauge the extent of sustainable improvement. Majority of the farmers are willing to invest in "land cott". Investing in "land cott" is more profitable than the investing in formal sector. Most of the investor thinks that investing in "land cott" is less risky. Formalities in investing in "land cott" are less than

the other investment. The majority of other professions investor is not wanted invest in "land cott". Investor should invest in "land cott" because it's more profitable than other sector. Most of the investor thinks that investing in "land cott" is less risky but by considering such as insecure land tenure and disputes natural disaster and price fluctuations etc. Farmers should be cautious about potential risks. Agriculture sector will be improved if some rules and regulation are set to properly control the informal sector. Clearly define the legal framework for "land cott" to provide certainty and protection for lenders and borrower. Government should offer incentives and support programs to encourage financial institution and investors to engage in responsible in formal "land cott" practices.

References

Adams, M. (2020). Alternative Lending in Rural Economies: The Case of Informal Land Mortgages. Journal of Development Finance, 12(3), 45-62.

Alauddin, M., & Biswas, J. (2014). Agricultural credit in Bangladesh: trends, patterns, problems and growth impacts. The Jahangirnagar Economic Review, 25(14), 125-138.

Alzghoul, A., Alsheikh, G. A. A., & Yamin, I. (2023). The relationship between savings and investment: evidence from Jordan. International Journal of Professional Business Review: Int. J. Prof. Bus. Rev., 8(3), 3.

Barry, Peter J., Paul N. Ellinger, John A. Hopkin, and C. B. Baker (1995) Financial Management in Agriculture. Illinois: Interstate Publishers, Inc.

Besley, T. (1995). "Savings, Credit and Insurance." Handbook of Development Economics.

Broll, U., P. Welzel and K.P. Wong, 2013. Price risk and risk management in agriculture. Contemporary Economics, 7(2): 17-20. Available at: https://doi.org/10.5709/ce.1897-9254.79.

Byerlee, D. and K. Deininger, 2013. Growing resource scarcity and global farmland investment. Annual Review of Resource Economics, 5(1): 13-34. Available at: https://doi.org/10.1146/annurev-resource-091912-151849.

Cell, C.C., 2009. Crop insurance as a risk management strategy in Bangladesh. Department of Environment. Ministry of Environment and Forests. Government of the People's Republic of Bangladesh, Dhaka.

Das, Sanjiv. 1995. "Credit Risk Derivatives," Journal of Derivatives, Spring, pp. 7-23.

Decardi-Nelson, I., Asamoah, O. R., Solomon-Ayeh, B., & Nduro, K. A. (2012). The informal sector and mortgage financing in Ghana. Ghana Journal of Development Studies, 9(2), 136-152.

De Soto, H. (2000). The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else.

Durand-Lasserve, A., & Royston, L. (2012). Holding Their Ground: Secure Land Tenure for the Urban Poor in Developing Countries.

Finance Division, Bangladesh Economic Review 2021 (Dhaka: Ministry of Finance, Government of the People Republic of Bangladesh, 2017): 13.

Eskander, S., et al. (2023). Adaptation to natural disasters through the agricultural land market: Effects on households engaged in rent-in and rent-out transactions. Land Economics.

Finance Division, Bangladesh Economic Review 2021, (Dhaka: Ministry of Finance, Government of the People Republic of Bangladesh, 2017): 17.

French, L. and E. Silver, 2007. Crop insurance to mitigate loss from flooding in Bangladesh-A viability assessment. MSc Environment and Resource Management Module VI – Traineeship: 1-84.

8th Five Year Plan, (2020), General Economics Division (GED), Bangladesh Planning Commission: 3, 7, 11, 12.

GAO (1994) Financial Derivatives: Actions Needed to Protect the Financial System.

Gastineau, G. L., & Smith, D. J. (2001). Risk Management, Derivatives, and Financial Analysis. The Research Foundation of AIMR.

Gërxhani, K., & Van de Werfhorst, H. G. (2013). The effect of education on informal sector participation in a post-communist country. European Sociological Review, 29(3), 464-476.

Gupta, M. R., & Chaudhuri, S. (1997). Formal credit, corruption and the informal credit market in agriculture: A theoretical analysis. Economica, 64(254), 331-343.

Hossain, M. M. (2010). Changing consumption patterns in rural Bangladesh. International Journal of Consumer Studies, 34(3), 349-356.

Jones, R. (2021). Financial Inclusion and the Role of Informal Lending. Global Economic Review, 9(1), 67-82.

Jones, T.L., 2007. Agricultural applications of weather derivatives. International Business and Economics Research Journal, 6(6): 53-60. Available at: https://doi.org/10.19030/iber.v6i6.3377.

Khan, S., M. Rennie and S. Charlebois, 2013. Weather risk management by saskatchewan agriculture producers. Agricultural Finance Review, 73(1): 161-178. Available at: https://doi.org/10.1108/00021461311321375.

Khatun, F., 2012. Proposals for agriculture sector. Forum, A monthly Publication of The Daily Star, 6(6).

Kolb, Robert W (1993) Financial Derivatives. Miami: Kolb Publishing Company.

"Land tenure system in rural Bangladesh: Challenges and remedies" (2024). Research review / working paper.

Marshall, John F.(1990/91) Futures Versus Swaps: Some considerations for the Thrift Industry, Review of Business. Winter 1990/91.

Miah, M. A. Kabir, Alam, A.K.M. Ashraful and Rahman, A.H.M.A. 2006. Impact of Agricultural Credit on MV Boro Rice Cultivation in Bangladesh. Journal of Agriculture and Rural Development 4(1&2), 161-168.

Mishra, A.K., A. Kumar, P.K. Joshi and A. D'Souza, 2018. Impact of contract farming on yield, costs and profitability in lowvalue crop: Evidence from a low-income country. Australian Journal of Agricultural and Resource Economics, 62(4): 589-607. Available at: https://doi.org/10.1111/1467-8489.12268.

Mostafa, K. N. (2024). Determinant factors of the contractual sharecropping method in the north-western part of Bangladesh. Journal/BRUR Research Paper.

Murshid, K. A. S. (1992). Informal credit markets in Bangladesh agriculture: Bane or boon? (No. 996-2016-77892).

Nandi, R. (2024). Crop diversification in Bangladesh: Public policy provisions, programs and trends (1971–2023). Agricultural Policy Review.

North, D. C. (1990). Institutions, Institutional Change and Economic Performance. Cambridge University Press.

Obamuyi, T. M. (2013). Factors influencing investment decisions in capital market: A study of individual investors in Nigeria. Organizations and markets in emerging economies, 4(07), 141-161.

Pau, S. C., & Saha, A. K. (2017). Literacy rate and primary education-A study on 64 districts of Bangladesh. The Bangladesh Accountant.

Paul, A., R. Heifner and J. Helmuth, 1976. Farmer's use of forward and futures markets. Washington, DC: US Department of Agriculture, National Economics Analysis Division. Economic Research Service Agriculture Economics Report. pp: 320.

Paul, J., 2013. A study on the feasibility of weather derivatives in India. PARIPEX-Indian Journal of Research, 2(1): 14-15.

Payne, G. (2001). Urban Land Tenure Policy Options: Titles or Rights? Habitat International, 25(3), 415-429.

Pederson, Glenn D., and Hugh Maginnis. Interest Rate Swaps: Their Use In Financing Agriculture. No. 1701-2016-139231. 1986.

Putnam, R. D. (1993). Making Democracy Work: Civic Traditions in Modern Italy. Princeton University Press.

Rahman, M. T. (2017). Role of agriculture in Bangladesh economy: uncovering the problems and challenges. International Journal of Business and Management Invention, 6(7).

Rahman, M. Z. (2024). Unraveling rural land conflicts in Bangladesh. ARSS Journal.

Raucci, G.L., R.L.F. Silveira and D.H. Capitani, 2018. Development of weather derivatives: Evidence from Brazilian Soybean market. Agricultural & Applied Economics Association Annual Meeting at: Washington, D.C, 2018. pp: 1-16.

Risk Management: Principles and Practices. 1999. Charlottesville, VA: AIMR.

Saha, Bimal Kumar,1985, 'Agricultural Credit in Bangladesh and the Role of Institutions: Problems and Issues', Paper at the Fifth National Conference of the Agricultural Economists' Association, July 18-19,1985, Dhaka.

Sarker, U. K. (2022). Exploring farmers' insight on cropping pattern for climate-resilient farming in chars of northern Bangladesh. Sustainability, 14(3), 1745.

Shi, H. and Z. Jiang, 2016. The efficiency of composite weather index insurance in hedging rice yield risk: Evidence from China. Agricultural Economics, 47(3): 319-328. Available at: https://doi.org/10.1111/agec.12232.

Sundaram, R. K. (2012). Derivatives in financial market development. International Growth Centre London, September. Pobrano z: http://pages. stern. nyu. edu/ersundara.

Uddin, A., Chowdhury, M. A. F., & Islam, M. N. (2017). Determinants of financial inclusion in Bangladesh: Dynamic GMM & quantile regression approach. The Journal of Developing Areas, 51(2), 221-237.

Vashishtha, A., & Kumar, S. (2010). Development of financial derivatives market in India-a case study. International Research Journal of Finance and Economics, 37(37), 15-29.

Yang, J., & Leatham, D. J. (1997). The Use of Financial Derivatives in Agriculture and an Annotated Bibliography.