LENDING ETHICS IN PARTIAL CREDIT SCREENING AUTOMATION AGE: CAN UTILITARIANISM ENHANCE LOAN QUALITY?

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Abstract

The study aimed to determine the influence of lending ethics and loan performance. It also sought to analyse the intervening effects of credit screening on the relationship. The analysis targeted commercial bank branches amongst the 1,384 branches of the 43 licensed commercial banks in Kenya's three-tier groups – large, medium and small. The data was collected through a structured questionnaire. In total, 269 commercial bank branches were analyzed. The data was analyzed through hierarchical regression analysis, Baron and Kenny's (1986) path analysis to test mediation, and augmented by Haye's (2017) matrix procedure test for the size of direct and indirect effects of mediation. The research established that lending ethics influence loan

performance positively, implying that enhancing lending ethics can boost loan performance. The study further demonstrated that credit screening mediates the relationship between lending ethics and loan performance. Tests of mediation show that the effect is positive and statistically significant. Therefore, the study concludes that lending ethics influences loan performance directly and indirectly through enhancement in applicant screening. The inquiry proposes that commercial banks should stress enhancing lending ethics rather than focusing on screening sophistications alone. Emphasis on utilitarianism by focusing on profiting all the stakeholders affected by the lending decision can optimize the impact of credit markets. The research views the pursuit of the interests of a particular stakeholder alone as sub-optimal, which cannot enhance loan quality and credit market efficiency. Therefore, the efforts to enhance the ethics of the lending officers should go in tandem with screening automation for better loan quality. Emphasis on maximisation of happiness for all should in included in the credit risk management programs. This study is one of its kind, testing the effect of ethics and mediation effects of credit screening in a developing credit market context, analyzing commercial banks' branches through rigorous quantitative processes.

Keywords: Lending Ethics, Credit Screening, Loan Performance, Utilitarianism, Commercial Banks

INTRODUCTION

Despite its significance, the concept of ethics has been given inadequate emphasis not just in society but also in academia in relation to its impact on the banking industry (Melé, Rosanas & Fontrodona, 2017). The key focus of the world at large today is innovation and mechanisation, whose potential to revolutionize and enhance life cannot be ignored. While modern technologies such as the Internet of Things, blockchain, artificial intelligence, and machine learning can revolutionise the banking industry, for instance, it may be worthwhile to think about the irreplaceable human impacts to finance and trading (Agarwal & Ben-David, 2016; Cornee 2017; Lee et al., 2021). However greatly automated an industry can reach, Boustani (2022) observes that replacing the human element is impossible, especially in credit markets, where emotional intelligence is essential.

While different theories have been advanced to explain ethics, the utilitarian theory of ethics by Bentham (1780) remains pivotal when interpreting whether actions are ethical. Utilitarianism emphasises optimality for all. In utilitarianism, actions/decisions are good if they produce maximum happiness/pleasure/satisfaction/utility to all those affected by the decision (Mill & Bentham, 1987). The decision maker's interests count as equal to the others, so

individual gains are ignored if they decrease utility. In lending, the most optimal decision is to lend so that all lent funds can be removed before they fall into the bad debts category. In that regard, the focus should be to ensure loan performance from inception and throughout the process (Stiglitz, 1985).

Conversely, that has not been the case. Loan non-performance has been rampant in financial institutions. Credit markets have witnessed some incidents of financial crises, including the famous sub-prime mortgage loans, which occurred in the U.S. and precipitated a global financial crisis (La Porta et al., 2003; Kim et al., 2014). The subprime mortgage loan failure is a classic example of how human actions can breach the tenets of utilitarianism, occasioning such disastrous events. The effects of mispricing or wrong-picking of loan applicants are many. First, it leads to non-performance, hence a loss of funds, which lessens return for investors (Akerlof, 1970). Also, defaults are associated with property auctions, often at low prices relative to assets' market value. In such eventuality, the borrower loses their property, and their dependents, too, might suffer.

Stiglitz and Weiss (1981) also note that defaults are associated with credit rationing tendencies, necessitating high-interest rates and more collateral demands. Potential borrowers with no assets for collateral can be rationed out of the credit market. Worse, the riskier borrowers are willing to borrow when banks increase interest rates and collateral, and that causes more defaults (Spence, 1973). The worst scenario is a credit crunch, with a sudden shortage of funds, as lenders get scared of bankruptcies or defaults. All those effects of poor lending contravene the utilitarian theory of ethics, where one should consider all stakeholders affected by the decision and maximize happiness for all. Therefore, lending institutions and their agents should exercise moral principles in lending to ensure quality loans at their inception. According to Kim et al. (2014), Cole et al. (2015), and Bermpei, Kalyvas, and Leonida (2021), lenders and their agents should exercise adequate disclosures, adhere to policies and principles, and apply requisite management procedures to enhance ethical practice, with the ultimate goal of eliminating ethical controversies to maximize loan performance to benefit all stakeholders.

Efforts by lending institutions to increase performance are effected through screening. If undertaken, effective screening can tame the officers' lending ethics by increasing compliance with policies and procedures. According to Stiglitz (1974), screening refers to gathering and validating facts about a loan applicant to determine creditworthiness, hence discriminating amongst the many applicants and increasing recoverability. Berg et al. (2013) argue that adequate collection and evaluation of information about applicants can help to determine whom to lend to and how much to allocate each borrower. A conventional lending approach should be

able to decide on an accurate credit score, which is the probability of a specific loan default (Kim et al., 2014). A lender's screening can be examined based on their capacity to comply with screening technology adoption, adherence to the existence of lending rules/criteria, adequate separation of duty amongst screening officers, suitable post-lending screening, and ensuring ample, modern screening resources (Berg et al., 2013; Kim et al., 2014; Cole et al., 2015).

THEORETICAL REVIEW

This section presents a review of empirical and theoretical literature. The study is underpinned by two theories: the theory of information asymmetry and the utilitarian theory of ethics. The empirical literature is then presented, followed by a conceptual model and research hypotheses.

Utilitarian Theory of Ethics

Utilitarianism, advanced by Bentham (1780), is one of the most persuasive and influential approaches in the history of philosophy to normative ethics. Although there are numerous varieties of the view articulated, utilitarianism is generally held to be the viewpoint that the morally right activities are the activities that produce the most good. According to Mill and Bentham (1987), utilitarianism theory of ethics is a type of consequentialism where the right action is comprehended exclusively in terms of the produced consequences. From the utilitarian standpoint, one should capitalize on the overall good, considering overall gain for all and not just individual gains.

Utilitarianism theory has been critiqued for its inability to evaluate future outcomes. Nonetheless, Blake (2009) maintains that the approach remains a cornerstone of policy formulation because its influence has profoundly influenced moral philosophy, social policy, and political policy. In lending settings, ethical undertakings are regarded as the mutual good for all stakeholders other than individual gains. According to Bentham (1996), utilitarianism allows credit officers (decision-makers) to ensure the most qualified borrower is approved for fund allocation and the money is recoverable accordingly. Similarly, loan performance ensures shareholders get their profits, and credit officers receive career growth and bonus rewards, fewer credit rationing practices, unethical auctions and asset repossessions, and associated credit market crises.

The Theory of Information Asymmetry

Akerlof (1970) advanced the concept of information asymmetry, which contends that at least one party to a contract tends to have relatively more information regarding the contract

object than others. Information asymmetry violates the free market fashioned by Smith (1776), who argues that free markets could produce efficient outcomes when controlled by an invisible hand devoid of imperfections. However, Akerlof, Spence, and Stiglitz (2001) faulted the concept of information asymmetry by claiming that imperfections make markets operate sub-optimally. A person with a superior informational advantage or leverage is likely to benefit from a contractual arrangement compared to one with less edge of information. According to Cawley and Philipson (1999), empirical investigations that indicate growing evidence of increased information flow in insurance through actuarial science, credit reference bureaus, experience, and knowledge of risk types that help to lessen asymmetric risks have challenged the idea.

The theory of information asymmetry is supportive of the current study. It is pertinent to this research since credit screening addresses the issue of information asymmetry. Spence (1973) supports proper evaluation of borrower signals to eliminate information asymmetry, whereas Stiglitz (1974) favors adequate screening of loan applicants. Credit screening is necessary to address the information asymmetry because the lender stands to lose money in the event of a loan default. Therefore, screening technologies, clear lending rules/criteria, division of duties, post-loan screening, and sufficient screening resources can improve screening efficacy and decrease information asymmetry. The effectiveness of the screening systems can aid in resolving unethical behavior among credit officers.

EMPIRICAL REVIEW
Lending Ethics, Credit Screening, and Loan Performance

Previous researchers have looked into how credit screening affects the connection between loan performance and lending ethics, and their findings support a favorable mediation. Using causality tests for the ratio of bad to total credit to examine the impact of information asymmetry on the Turkish credit market using monthly data from 1986 to 2010, Okuyan (2014) found a unidirectional causality that was best explained by the existence of credit rationing issues. According to his opinion, the most critical element that leads to credit rationing in banks is information asymmetry. He assured us that lessening asymmetries can lessen credit rationing. He emphasized that measures to minimize credit rationings, like assurance to secure the loan through the bidding effect of contracts and guarantees and creating credit institutions to gather information about credit applicants, are crucial.

According to Cole et al. (2015), the foundations of a healthy credit market include adequate, moderately priced credit financing and high-performing loans. According to Mill and Bentham's (1987) utilitarian theory of ethics, banking institutions should carry out their lending operations in a way that helps not only the banks but also the economy and society from which

they derive their revenue. They should ensure complete disclosure and implement pertinent policies, principles, and management practices to maximize the common good for all rather than personal gains. The most crucial goal should be loan performance. However, ensuring fair loan pricing and preventing credit rationing and shortages are essential. Keys et al. (2010) explored the effects of securitization on screening. They aimed to determine whether securitization minimizes financial intermediaries' incentive to screen borrowers. They utilized a dataset on securitized subprime mortgage loan contracts in the U.S. They established that in a loan portfolio, instances with a high likelihood of being securitized defaulted by 10–25% more frequently than those in a portfolio of credits with a lower possibility of securitization. That suggests that securitization undermines the lender's incentive to screen borrowers. Also, the screening process is essential, and the qualitative background check about loan applicants is crucial in determining their creditworthiness and potential for eventual debt recovery.

In a controlled business experiment conducted by Agarwal and Ben-David (2014), loan officers were paid to prospect for loans in addition to their regular duties of loan screening. The results of a 24-month controlled experiment involving 30,000 small company loans sanctioned by 130 employees showed that compensation for loan prospecting increased loan size and originations by 15% and 31%, respectively. The credit quality level was not, however, jeopardized. However, it was clear that there were ethical problems when the officers tried to sway judgment by offering their fundamentally sound decisions. Compared to novice loan officers, the behavior was more overt among the seasoned loan officers. While findings are significant in highlighting the potential consequences of allowing loan originators to screen their prospected loans, the study did not see the screening process as having any bearing on the impact of ethics on loan performance. Although more loans of larger sizes were originated, their performance may not always suffer because a loan's performance is not always correlated with its size.

Agarwal and Ben-David (2018) analyzed 30,000 small company loan applications that 130 credit officers processed in 24 months. Information was gathered from a large U.S. commercial bank. The researchers used a differences-in-differences approach to test the impact of screening that disregards soft information in favor of hard data. While the prospecting program saw a 28% rise in granted loans, ex-post-default rates skyrocketed by 24%. As a result, giving more weight to the hard data made it simpler for the officers to approve applications based on the system score. However, the loan would have been denied if the soft data had been considered to make the lending decision. The officers did not add any new clients, either. They sent invitations to their current clients to borrow larger sums more often, which they then allowed because they were credible on paper. Therefore, dependence on hard data may encourage lending based solely on credit ratings, reducing the bank model's total

capacity to anticipate the ability to pay (Agarwal & Ben-David, 2014). However, since inviting previous clients and putting a strict emphasis on the system's score do not fall under the ethics category, their study did not show how ethics may have contributed to the poor screening that resulted in delinquencies.

Cornee (2017) evaluated 389 microloans the French social bank provided between 2001 and 2004 to analyze soft information's role in screening extremely tiny applicants with informationally opaque enterprises. The study shows that soft information does boost credit default prediction and helps to improve loan quality. They found that the predictive power of soft information increased with applicant opaqueness. In contrast, the predictive power of hard information decreased. However, ethics would reduce the efficacy of soft data as a predictor. Although the finding highlights the value of soft data when small loan applicants with anonymous information are involved, ethical concerns about rejecting applicants based on the screener's personal biases and how they are handled could ultimately affect screening and prevent the paper from addressing loan defaults. Additionally, Agarwal and Ben-David (2018) found that loan officers' disregard for some unfavorable soft information is motivated by their desire to earn loan prospecting incentives.

Regarding credit screening, the lender has to ascertain pertinent information regarding applicants' capacity to repay the money they ask to be lent through its workers and third parties before extending credit. Stiglitz (1974) defines credit screening as acquiring and verifying information about loan applicants to assign each borrower a creditworthiness index. Screening aims to promote recoverability and differentiate among the numerous applications. According to Manove et al. (2001), effective screening reduces project failure's personal and societal costs by overcoming knowledge asymmetry and rejecting risky ventures. Different approaches have been taken to operationalize the screening notion. To prevent people who originate loans from being involved in or able to collude with those scoring applications, they include the degree of technology adoption, the reliance on hard instead of soft information when scoring loan applications, job matching, and the quantity of scoring.

In the Kenyan context, Otieno (2017) argued that the evidence of loan underperformance and corruption among bank credit officers bespeak the inefficiencies of commercial banks to uphold ethical lending. Increases in non-performing loans and repeated profit warnings are indicators of the excessive losses stockholders endure. Worse still, national dailies frequently run advertisements for banks looking to auction off assets they had financed because of defaulting debtors (CBK, 2017). People who depend on the property lost in such auctions are left worse than before they acquired the loan. That can be interpreted as a result of bad ethics, especially when coercion by the lender's persuasive salespeople influenced the

decision to take up the loan. In addition, most auctions undervalue the property for sale (McLeay et al., 2014). According to Otieno (2017), some dishonest credit officers lend to themselves and their friends even when they do not qualify, which raises the default rate.

Based on the literature, credit screening can neutralize or improve the ethical practice of lending officers. Adherence to lending policies, principles, and practices can ensure sufficient applicant screening, ultimately enhancing loan quality at its inception. As such, it is possible for credit screening to deter unethical practices in a lending institution. Conversely, employee ethical practices can improve loan performance, increasing screening adequacy and relevance. These research findings support the idea that lending ethics can influence loan performance, especially when lending to friends, relatives, or self without exercising adequate disclosure. Still, the effectiveness of credit screening can enhance the impact of lending ethics on loan performance by ensuring that sufficient information about the applicant is sought after and appropriately examined. Therefore, lending ethics can influence loan performance directly and indirectly by influencing credit screening effectiveness. That relationship is expressed in the conceptual model in Figure 1.
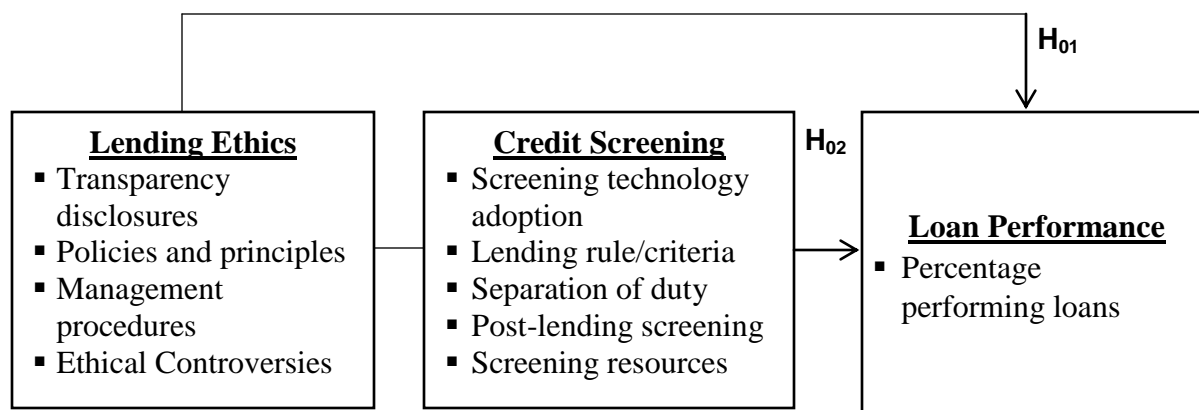
H_{01}

Lending Ethics
- Transparency disclosures
- Policies and principles
- Management procedures
- Ethical Controversies

Credit Screening
- Screening technology adoption
- Lending rule/criteria
- Separation of duty
- Post-lending screening
- Screening resources

H_{02}

Loan Performance
- Percentage performing loans

Figure 1: Conceptual Model

Study Hypotheses

H_{01}: The relationship between lending ethics and loan performance is not significant.

H_{02}: The effect of credit screening on the relationship between lending ethics and loan performance is not significant.

METHODOLOGY

The relationships between the variables, lending ethics, credit screening, and loan performance are analyzed through a positivist approach. That allows for a quantitative process to help empirically test the research hypotheses (Saunders et al., 2012). The study used a

cross-sectional survey research design to analyse the concepts of lending ethics, credit screening, and loan performance across commercial bank branches in Kenya. The target population was 1,384 bank branches in Kenya as of July 31, 2018, from 43 registered commercial banks (CBK, 2018). The study purposed to reach 310 of the population as indicated by Slovin's (1960) sample size calculation formula ($n=N/(1+Ne^2)$) would be good target for the population. Kenyan commercial banks are divided into three tiers: small, middle, and large. Stratified random sampling was used to ensure equal representation of the commercial banks.

The data was collected through structured questionnaires from the head of the credit department of the branch manager. To measure loan performance, an average of the annual percentage of performing loans between 2016 and 2020 for each target branch. While data for a short period can be more straightforward to get and analyse, a larger-period average is preferred for accurate presentation of measurement because it provides a more stable estimate of the nature of the measured attribute by reducing the impacts of short-term fluctuations (Chakrabarty, 2021). An average of the 2016-2020 loan performance was preferred to measure the overall loan quality in a branch to ensure accuracy of measurement of loan performance, using the recent five years from the year of actual data collection, which was in 2021.

Lending Ethics was measured through an index developed by mimicking Sustainalytics for Responsible Investment Services (SRIS), which uses a series of 5-point Likert scales to measure an institution's level of transparency disclosure, policies, and principles, management procedures, and ethical controversies (Kim et al., 2014; Bermpei et al., 2021). Credit screening was measured by mimicking the 5-point Likert scale to measure the level of screening technology adoption, adherence to lending rules/criteria, extent of separation of duty amongst credit officers, post-lending screening effectiveness, and sufficiency of screening resources. The study variables are operationalized, as shown in Table 1.

Table 1: Operationalization of the Study Variable

Variable	Operational Definition	Indicator	Source
Lending Ethics	The initiatives to uphold lending ethics to maximize performance to benefit shareholders, borrowers, employees, government, and society.	• Transparency disclosure • Policies and Principles • Management Procedures • Ethical Controversies	Kim et al. (2014) Bermpei et al. (2021)

Credit Screening	The extent of completeness of searching and evaluating information about an applicant before and after lending to lower default risks.	• Screening technology • Lending rule/criteria • Separation of duty • Post-lending screening • Sufficiency of screening resources	Berg et al. (2013) Murfin (2012) Cornee (2017)
Loan Performance	Percent of the loan being repaid accordingly or/ has not exceeded 90 days in default.	• Percentage Performing loans	Tzioumis and Gee (2013) Cole et al. (2015)

The effect of lending ethics on loan performance was tested through Ordinary Least Squares (OLS). Test of mediation of credit screening on the relationship between lending ethics and loan performance was undertaken through Baron and Kenny (1986) four-step process through hierarchical regression. The test was augmented through Hayes (2017) matrix procedure test, both direct and indirect mediation, by regressing credit screening with loan performance, controlling for causal effects of lending ethics to determine whether credit screening has complete or partial mediation of the relationship between lending ethics and loan performance.

RESEARCH FINDINGS

From the targeted 310 branches, the study collected 293 questionnaires, but 24 of them had too many omissions, mostly in questions measuring lending ethics. Those were omitted, remaining with 269. Bank branches from the three bank tier groups were represented by 35, 54, and 180, respectively (see Table 2). Large bank branches were the majority (66.9%) because they have more branches countrywide, followed by medium (20.1%) and then small banks (13%). Generally, the bank branches (72.1%) targeted all clients.

Table 2: Response Rate and Target Clientele

Feature	Mother Bank Tier Group	Frequency	Percent
The branch belongs to what bank tier group?	Small bank	35	13.0
	Medium bank	54	20.1
	Large bank	180	66.9
	Total	**269**	**100.0**
Target Clientele			
Bank branch targets which target clientele?	Corporate borrowers	15	5.6
	Small and Medium Enterprises	22	8.2
	Personal Loans	38	14.1
	All Clients	194	72.1
	Total	**269**	**100.0**

Reliability and Validity

Cronbach's alpha was used to test the instrument's reliability. The item-to-total correlation for each variable's category of research indicators was used to ensure the reliability of the measuring scale through factor analysis. Cronbach's alpha of 0.7 was preferred. A factor for each indicator with the highest' alpha if deleted' was deleted until the alpha reached 0.7. Before factors analysis, the KMO and Bartlett's Sphericity tests were conducted before reliability and validity checks. The test data for the KMO and Bartlett are shown in Table 3. The findings indicate that the least KMO measure was 0.572, and the others were above 0.7. Also, Bartlett's sphericity test results suggest that all indicators have p-values of 0.000, less than 0.05, indicating a good correlation between the indicators measuring the specific variables, meaning adequate internal consistency. Validity of the instrument was achieved through the evaluation of measurements by unbiased academics and researchers during the University's proposal examination phases and a thorough analysis of the existing literature.

Table 3: The Kaiser-Meyer-Olkin and Bartlett's test

Independent variable	Indicators	KMO Measure	Approx. Chi-Square	df	Sig
Lending Ethics	Transparency disclosure	.765	592.202	15	0.000
	Policies and Principles	.828	994.249	15	0.000
	Management Procedures	.572	166.268	15	0.000
Credit Screening	Screening technology adoption	.726	505.693	15	0.000
	Lending criteria	.746	558.928	21	0.000
	Separation of duty	.765	582.958	28	0.000
	Post-lending screening	.744	737.057	21	0.000
	Adequacy of screening resources	.754	490.452	10	0.000

Test of Relationships

Lending Ethics and Loan Performance

The relationship between lending ethics and loan performance was examined through regression analysis. The test of the causal relationship between lending ethics and loan performance is shown in Table 4. The results (R and R-square are 0.211 and 0.044, respectively) indicate a weak, positive relationship. The coefficients and corresponding p-values (B=0.237, t-statistic=3.525, and p-value=0.000<0.05) suggest that ethics' effect is positive and statistically significant.

Table 4: Effect of Lending Ethics on Loan Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.211[a]	.044	.041	.40318
a. Predictors: (Constant), Lending Ethics				

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.019	1	2.019	12.423	.000[b]
	Residual	43.401	267	.163		
	Total	45.420	268			
a. Dependent Variable: LNLOANPERFORM						
b. Predictors: (Constant), Lending Ethics						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.820	.269		3.051	.003
	Lending Ethics	.237	.067	.211	3.525	.000
a. Dependent Variable: LNLOANPERFORM						

Lending Ethics, Credit Screening, and Loan Performance

Test of mediation of Credit Screening on the relationship between Lending Ethic and Loan Performance was tested through a four-step process called path analysis, as advanced by Baron and Kenny (1986), via hierarchical regression analysis. For complete mediation, the four steps are (1) correlation between predictor and dependent, (2) predictor correlation with mediator, (3) mediator correlation with dependent, controlling for causal effects, and (4) causal effect on dependent, controlling for mediator, whereby if effect is zero, the intervening variable (credit screening) completely mediates the effect of lending ethics on loan performance.

According to the results in Table 4, the first test confirms the predictor-dependent path. The second step in Table 5 testing tests the lending ethics correlation with credit screening. According to the results (R=0.590 and R-Square=0.348), lending ethics and credit screening have a positive, weak correlation. Model summary statistics (B=0.386, t value =12.013, and p-value =0.000<0.05) indicate a statistically significant relationship between lending ethics and credit screening. That implies that enhancing lending ethics improves credit screening effectiveness.

Table 5: Effect of Lending Ethics on Credit Screening

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.590[a]	.348	.346	.19318

a. Predictors: (Constant), Lending Ethics

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.325	1	5.325	142.689	.000[b]
	Residual	9.964	267	.037		
	Total	15.289	268			

a. Dependent Variable: Credit Screening
b. Predictors: (Constant), Lending Ethics

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.461	.128		19.077	.000
	Lending Ethics	.386	.032	.590	12.013	.000

a. Dependent Variable: Credit Screening

The third step tests the relationship between the mediator and the dependent variable. The results in Table 6 show that R and R-Square are 0.212 and 0.045, respectively, implying a positive, weak linear relationship between credit screening and loan performance. The coefficient (B=0.365, t value =3.539, and p-value =0.000<0.05) confirms a positive, statistically significant relationship. Since both paths show positive causation, there is positive mediation. It means that enhancing lending ethics improves credit screening, enhancing loan performance.

Table 6: Credit Screening Correlation with Loan Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.212[a]	.045	.041	.40310

a. Predictors: (Constant), Credit Screening

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.035	1	2.035	12.524	.000[b]
	Residual	43.385	267	.162		
	Total	45.420	268			

a. Dependent Variable: LNLOANPERFORM
b. Predictors: (Constant), Credit Screening

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.307	.412		.745	.457
	Credit Screening	.365	.103	.212	3.539	.000

a. Dependent Variable: LNLOANPERFORM

As explained in the results in Tables 4, 5, and 6, tests of mediation have been confirmed. The subsequent analysis tests the size of the effects and whether it is a partial or complete mediation. That was implemented through a hierarchical multiple regression of loan performance against lending ethics and credit screening. The results are summarized in table 7. The command yielded two models, one with lending ethics as the predictor and the other with the inclusion of credit screening. According to the results, linear models 1 and 2 have R and R-squared values equal to 0.211 and 0.237 and 0.044 and 0.056, respectively. The R-Square increases by 0.012(0.056-0.044) between the first and second models. While the change is not significant at 0.05, it is statistically significant at 0.1 level of significance because the significant value was 0.071. According to the results, the coefficient for lending ethics decreased from a significant amount of 0.237 to 0.148, which is not significant at 0.05 because its significant value increases from 0.000 to 0.075 when credit screening is included as a causal variable. Notably, the credit screening coefficient also decreases from 0.365 (see table 6) to 0.231 (see table 7). It means lending ethics and credit screening have some shared causation on loan performance because each of their coefficients reduces when combined.

Table 7: Credit Screening Correlation with Loan Performance, Controlling for Causal Effects of Lending Ethics

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.211[a]	.044	.041	.40318
2	237[b]	.056	.049	.40146

Change Statistics

R Square Change	F Change	df1	df2	Sig. F Change
.044	12.423	1	267	.000
.012	3.291	1	266	.071

a. Predictors: (Constant), Lending Ethics
b. Predictors: (Constant), Lending Ethics, Credit Screening

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.019	1	2.019	12.423	.000[b]
	Residual	43.401	267	.163		
	Total	45.401	268			
2	Regression	2.550	2	1.275	7.910	.000[c]
	Residual	42.871	266	.161		
	Total	45.420	268			

a. Dependent Variable: LNLOANPERFORM
b. Predictors: (Constant), Lending Ethics
c. Predictors: (Constant), Lending Ethics, Credit Screening

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.820	.269		3.051	.003
	Lending Ethics	.237	.067	.211	3.525	.000
2	(Constant)	.253	.412		.647	.540
	Lending Ethics	.148	.083	.133	1.787	.075
	Credit Screening	.231	.127	.131	1.814	.071
a. Dependent Variable: LNLOANPERFORM						

Table 7...

Based on the mediation test results in Tables 5, 6, and 7, it can be plausibly argued that the effect of lending ethics on loan performance goes through credit screening. Therefore, lending ethics affects loan performance directly and indirectly through credit screening. The analysis in Table 8 shows the direct and indirect test of lending ethics on loan performance. The direct and indirect effects tests were carried out through a matrix procedure advanced by Hayes (2017). The results show that the direct effect was 0.1485, which is significant since it lies within the lower confidence interval (LLCI) and upper level of confidence intervals (ULCI) -0.0151 and 0.312, respectively. The indirect effect through credit screening was 0.0889, also significant because it lay within the bootstrapped lower confidence interval (BootLLCI) and bootstrapped upper-level confidence intervals (BootULCI) -0.0567 and 0.2296 (see table 8).

Table 8: Analysis of Direct and Indirect Mediating Effects of Credit Screening

The direct effect of X_1 on Y					
Effect	S.E.	t	P	LLCI	ULCI
0.1485	0.0831	1.7869	0.0751	-0.0151	0.312
Indirect effect(s) of X_1 on Y:					
	Effect	BootSE	BootLLCI	BootULCI	
Credit Screening	0.0889	0.0718	-0.0567	0.2296	

CONCLUSION

This study established that lending ethics positively influence loan performance, and the effect is statistically significant. That means that enhancing lending ethics in a lending institution enhances loan performance. In addition, the study established that credit screening mediates the relationship between lending ethics and loan performance. That implies that lending ethics influences loan performance through credit screening. Further, the analysis demonstrated that both the direct and indirect effects are statistically significant. Therefore, the study concludes that lending ethics directly and indirectly influences loan performance through credit screening.

The finding corroborates the works of past researchers but from a developing market context. Spence (1973) contends that credit screening aids in overcoming information asymmetry, a market imperfection that Akerlof (1970) argued causes adverse selection problems equivalent to wrong selection. When borrowers successfully disguise their willingness and capability to pay and get credit, defaults may occur. To minimize average default risk, lenders enforce credit rationing by augmenting security requirements and interest rates (Akerlof et al., 2001). Such credit rationing can distort the functioning of credit markets if a poor screening of borrowers causes the ex-ante defaults.

Arguably, ethical lending ought to lower ex-post defaults, reduce collateral requirements by systematically reducing default risks, stabilize credit rates, and reduce credit rationing, all factors bearing on past loan non-performance. Nevertheless, this is possible in an ethical lending environment where participating credit officers have the common goal of ensuring loan performance to the advantage of the stakeholders. Therefore, credit applicant screening is critical as it can enforce ethical lending practices besides beating the information asymmetry problem when lending. Appropriate screening mechanisms can detect and deter unethical practices such as lending to friends, relatives, or related ventures. Yet again, credit screening adequacy thrives in a lending environment with high moral standing. Therefore, more utilitarianism should be emphasized to help achieve better loan quality. Focusing the credit officer's thinking toward the benefits that should be pursued for the sake of the diverse stakeholders affected by their lending choices might be the next game changer in advancing credit markets' success.

IMPLICATIONS OF THE STUDY

Concerning credit risk management, financial institutions have partly embraced technology-driven screening, but there are aspects of banking that cannot be automated. For instance, people must be involved in making judgments and communications, creativity, and handling errors and deviations. In that regard, personnel capacity and ethics appear to be essential variables in organizations. Regarding personnel knowledge about the job and requisite automation, capacity is necessary for quality lending decisions. However, bad ethics cannot be substituted with applicant screening automation because people will be involved. Further, literature from Agarwal and Ben-David (2018) and Cornee (2017) opine that hard-information-based screening must be accompanied by adequate soft-information to ensure both quantitative and qualitative screening is achieved. To that end, human involvement in screening is mandatory.

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Even if it would be possible to eliminate the qualitative aspect of applicant screening, automation in credit markets has not and may never substitute humans. Therefore, efforts by lenders to enhance the ethics of their credit officers are as essential as the screening sophistications by automation. Ethical lending practices can accomplish fair interest rates and loan quality, avoid market malfunctioning, and exercise full disclosure to maximize the interests of all relevant stakeholders. Credit screening mediates ethical lending to promote loan performance besides increasing bank profitability. Credit screening adequacy is a fundamental requirement for loan performance. Therefore, increased reliance on objective screening techniques over subjective opinions of officers, adoption of technology, adequate screening resources, adequate post-lending screening, and duty separation among officers are essential applicant screening that add to loan performance.

This research contributes to both knowledge and policy. For instance, it is the first to be undertaken in the developing market context in Africa, determining the mediating effects of credit screening on the impact of lending ethics and loan performance. The study bridges the gap by applying quantitative approaches to establish relationships and mediation roles of credit screening in shaping loan performance. The study proposes that rather than focusing on screening sophistication to help overcome the information asymmetry problem, embracing and emphasizing utilitarianism and more loan performance can be achieved, and credit market imperfections associated with non-performance can be eliminated. In contrast to other literature focusing on developed contexts like the U.S., the UK, India, and China, the study findings are in the context of Kenyan Commercial Bank branches, an underdeveloped economy.

LIMITATIONS OF THE STUDY

While the study provides plausible theoretical and policy implications, it has some limitations. Due to the sensitive nature of lending ethics and loan officer incentives, some bankers were unwilling to participate, while others provided incomplete questionnaires. Being part of the entity that was being analysed, the bankers might have given fair ratings. Although banks from the three tires were equally represented, other lending institutions like microfinance institutions and Savings and Credit Cooperative Societies (SACCOS) were not included; hence, the results should be cautiously generalized.

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