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Establishment of gross loan portfolio risk-return questionnaire: reliability and validity structure

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ABSTRACT

Microfinance institutions (MFIs) play a pivotal role in fostering financial inclusion and combating poverty in the Philippines. However, assessing the risk-return profile of these MFIs is challenging due to the lack of tailored assessment tools. This study introduces the Gross Loan Portfolio Risk-Return Questionnaire (GLP-RRQ), customized for MFIs in Occidental Mindoro, Philippines. Employing a cross-sectional approach, the study involved five active MFIs. The questionnaire exhibited excellent internal consistency (94.8%) and validity. Results revealed robust associations between various risk and return factors. For instance, credit quality demonstrated strong correlations with specific questionnaire items (Factor 1: Credit Quality, GLP-RRQ item 2, loading = .860). Similarly, sustainability showed significant associations (Factor 3: Sustainability, GLP-RRQ item 6, loading = .880). These findings underscore the reliability and applicability of the GLP-RRQ in evaluating MFI loan portfolios. By utilizing this tool, stakeholders can make informed decisions to manage risks effectively and enhance financial performance, thereby advancing financial inclusion efforts and poverty alleviation initiatives in the Philippines.

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1. INTRODUCTION

The Philippines, among the most populous nations in Southeast Asia, grapples with substantial economic challenges, notably income inequality and restricted access to financial services. Microfinance institutions (MFIs) have emerged as pivotal mechanisms in addressing these challenges by providing financial resources to underserved segments of society (Kheder et al., 2013). Understanding the intricate dynamics of risk and return within the Philippine MFI landscape is imperative for crafting effective strategies to mitigate risks and bolster financial performance.

Microfinance plays a crucial role in the Philippines' economic landscape, particularly in regions like Occidental Mindoro, which face unique challenges concerning economic development and poverty alleviation (Balisacan & Pernia, 2003). The province relies significantly on MFIs as vital sources of credit and financial services for its local populace. Examining the risk-return relationship of MFIs operating in

Occidental Mindoro provides insights into the factors influencing their financial performance and sustainability, aiding evidence-based decision-making.

The susceptibility of the Philippines to various economic and environmental shocks, including natural disasters and global financial crises, poses significant risks to MFI loan portfolios and overall financial stability (Broad & Cavanagh, 2011). These vulnerabilities underscore the necessity of comprehending the risk-return dynamics within the microfinance sector. Moreover, Occidental Mindoro, prone to environmental risks such as typhoons and flooding, faces heightened exposure to MFI portfolio risks, accentuating the need for robust risk management strategies.

In the regulatory domain, the Securities and Exchange Commission (SEC) plays a pivotal role in ensuring the stability and integrity of the microfinance sector. Its oversight, particularly regarding the management of gross loan portfolios, is crucial for maintaining financial soundness and safeguarding the interests of borrowers and investors alike.

Despite the significance of assessing the risk-return profile of MFIs, there exists a dearth of standardized and validated instruments tailored specifically to the microfinance sector. The absence of such tools hampers accurate risk assessment, impedes benchmarking, and limits evidence-based policymaking and intervention development.

This study aims to address these gaps by developing a Gross Loan Portfolio Risk-Return Questionnaire (GLP-RRQ) tailored to Philippine MFIs, with a focus on Occidental Mindoro. Drawing upon Portfolio Theory, which emphasizes the risk-return trade-off in investment decisions, the study employs a quantitative research approach to assess the reliability and validity of the GLP-RRQ. By doing so, practitioners, policymakers, and researchers will have a standardized instrument to measure and analyze risk-return dynamics in the microfinance sector more accurately.

2. MATERIALS AND METHOD

2.1. Study design

The research design for this quantitative study employed a cross-sectional approach. Cross-sectional studies involved collecting data from a specific population at a single point in time to examine relationships and associations between variables. This design enabled the study to investigate the establishment of the gross loan portfolio risk-return questionnaire and assess its reliability and validity structure in the context of microfinance institutions.

2.2. Sample

Based on data acquired from the local government units in each municipality, Occidental Mindoro in the Philippines had a total of 37 microfinance institutions that were officially registered. The distribution of these registered institutions among the municipalities was as follows: Mamburao (9), Santa Cruz (2), Sablayan (7), and San Jose (19). Moreover, this study utilized a purposive sampling technique to select the test-respondents for this study. The inclusion criteria for the test-respondents included:

a. Professionals working in microfinance institutions in Occidental Mindoro.
b. Individuals with a minimum of two years of experience in loan portfolio management.
c. Individuals who were fluent in English, as the questionnaire was administered in English.

On the other hand, the exclusion criteria included:

a. Individuals working in microfinance institutions outside Occidental Mindoro.
b. Individuals with less than two years of experience in loan portfolio management.
c. Individuals who were not proficient in English.

Additionally, three withdrawal criteria were considered:

a. Test-respondents who voluntarily withdrew their participation from the study.
b. Test-respondents who provided incomplete or inconsistent responses.
c. Test-respondents who were found to have a conflict of interest that could compromise the validity of their responses.

By meticulously evaluating these criteria, a rigorous selection process was employed to include only five microfinance institutions in the study, out of the 37 operating in Occidental Mindoro, Philippines. The research was meticulously conducted in Occidental Mindoro, a strategically chosen locale due to its remarkable concentration of microfinance institutions and the abundance of skilled professionals actively engaged in loan portfolio management.

2.3. Data collection procedure

As part of the study, the researchers created an interview guide. It included questions that focuses on human and organizational processes, culture, and lessons gained from entrepreneurial activities that took place at the select cooperatives in Occidental Mindoro, Philippines in order to identify barriers to and

enablers for cooperative entrepreneurship. Experts analyzed the questions to verify that they are suitable. Managers and members of cooperatives also received a formal request for permission to conduct the research.

2.4. Ethical consideration

This study adhered to ethical guidelines and principles of research. Informed consent was obtained from all test-respondents, ensuring that they understood the purpose of the study, their voluntary participation, and the confidentiality of their responses. The researcher also assured the test-respondents that their participation was entirely voluntary, and they had the right to withdraw from the study at any point without facing any consequences. The collected data were stored securely and used solely for the purpose of this research.

2.5. Data analysis

The collected data were analyzed using appropriate statistical techniques. Reliability analysis, including Cronbach's alpha [Table 1] was conducted to assess the internal consistency of the questionnaire. Construct validity was examined using factor analysis to identify underlying dimensions of risk and return. Additionally, correlations analysis was employed to examine relationships between variables. The statistical analysis was performed using software such as SPSS, and the significance level was set at $p < 0.05$ to determine statistical significance.

Table 1. Cronbach's alpha internal coefficient.

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

3. RESULTS

3.1. Reliability testing of the gross loan portfolio risk-return questionnaire

The overall instrument demonstrated a high level of internal consistency, reaching 94.8%, which is considered excellent. The specific components of the instrument relating to the level of risk associated with microfinance institutions' loan portfolios. These components include credit quality, which exhibits excellent internal consistency at 93.0% and an item-total correlation of .759; portfolio concentration, which displays excellent internal consistency at 90.7% and an item-total correlation of .785; default rates, demonstrating good internal consistency at 89.9% and an item-total correlation of .782; and lastly, vulnerability to external economic factors, exhibiting good internal consistency at 89.1% and an item-total correlation of .796 [Table 2].

Table 2. Item-total statistics and internal consistency on the statements pertaining to the level of risk associated with microfinance institutions' loan portfolios.

Variables	Item-total Correlation	Cronbach's alpha
Credit quality		
1. Loan default risk arises from inadequate borrower creditworthiness.	.561	.901
2. Poor borrower repayment capacity threatens the loan portfolio's credit quality.	.681	.922
3. Insufficient collateral increases the risk of credit quality deterioration.	.741	.978
4. Economic downturns can affect loan portfolio credit quality.	.614	.899
5. Inaccurate borrower data or lack of due diligence heightens credit risk.	.552	.910
6. High non-performing loans threaten portfolio credit quality.	.623	.963
7. Political or regulatory changes can impact credit quality.	.742	.897
8. Lack of loan diversification raises credit deterioration risk.	.774	.889
9. Poor risk management practices increase credit quality risks.	.562	.904
10. External events, like natural disasters, can harm credit quality.	.531	.911
Total	**.759**	**.930**

Default rates		
1. Default rates in microfinance loan portfolios threaten financial stability.	.556	.895
2. High defaults harm profitability and sustainability.	.621	.789
3. Poor borrower assessment increases default risk.	.752	.784
4. Economic downturns raise default rates.	.743	.899
5. Insufficient collateral and loan terms lead to higher defaults.	.663	.801
6. Inaccurate credit scoring boosts default rates.	.521	.706
7. Weak loan monitoring raises default risk.	.553	.774
8. Lack of portfolio diversification increases concentration risks and defaults.	.512	.687
9. Political instability and regulatory changes affect default rates.	.522	.892
10. Poor risk management elevates default rates.	.679	.886
Total	**.782**	**.899**
Portfolio concentration		
1. Microfinance institutions risk portfolio concentration when a large portion is focused on a few borrowers or sectors.	.727	.836
2. Concentrated portfolios increase vulnerability to defaults, threatening financial stability.	.710	.827
3. Lack of diversification makes institutions more sensitive to economic shocks, affecting portfolio quality.	.574	.946
4. Managing credit risk becomes difficult with concentrated portfolios, as a borrower or sector failure can hurt profitability.	.643	.977
5. Portfolio concentration heightens credit risk, with single defaults causing significant losses and limiting future lending.	.605	.883
6. Concentration increases financial volatility, linking performance to a few borrowers or sectors.	.761	.891
7. Inadequate risk diversification weakens the institution's ability to absorb losses, endangering long-term sustainability.	.695	.829
8. High portfolio concentration raises concerns about resilience to adverse events.	.710	.986
9. Concentrated portfolios make it harder to attract funding, as investors prefer diversified institutions.	.670	.891
10. Concentration risk demands vigilant monitoring and risk management to maintain stability.	.660	.815
Total	**.785**	**.907**
Vulnerability to external economic factors		
1. Microfinance loan portfolios are vulnerable to interest rate fluctuations, affecting borrowers' repayment ability.	.650	.818
2. National policy changes, like tax reforms, pose risks to loan portfolio stability.	.697	.960
3. Inflation or deflation impacts borrowers' repayment capacity, risking portfolio health.	.781	.977
4. Exchange rate changes can affect loan repayments, introducing risk to portfolios.	.634	.921
5. Volatile commodity prices expose microfinance institutions to risk, especially in agriculture-dependent sectors.	.761	.902
6. Economic downturns raise unemployment, increasing loan defaults.	.576	.933
7. Political instability disrupts economic activity, risking borrowers' repayment ability.	.671	.924
8. Natural disasters impair borrowers' ability to repay, introducing portfolio risks.	.753	.851
9. Regulatory changes create uncertainty and risk for loan portfolio stability.	.749	.970
10. Reliance on external funding introduces risks if donor priorities or availability change.	.593	.960
Total	**.796**	**.891**

The item-total statistics and internal consistency for the statements related to the level of financial returns generated by microfinance institutions through their loan portfolios. Specifically, sustainability demonstrates excellent internal consistency at 93.1% with an item-total correlation of .749. Portfolio quality also shows excellent internal consistency at 91.2% with an item-total correlation of .793. Furthermore, outreach demonstrates good internal consistency at 89.7% with an item-total correlation of .798, while efficiency exhibits good internal consistency at 89.3% with an item-total correlation of .753 [Table 3].

Table 3. Item-total statistics and internal consistency on the statements pertaining to the level of financial returns generated by microfinance institutions through their loan portfolios.

Variables	Item-total Correlation	Cronbach's alpha
Portfolio quality		
1. Microfinance institutions achieved strong financial returns, highlighting their portfolio quality.	.655	.855
2. Loan portfolios generated impressive returns, reflecting a commitment to quality.	.580	.901
3. Excellent portfolio quality led to favorable financial returns.	.660	.821
4. Substantial returns indicate a robust focus on portfolio quality.	.630	.845
5. Significant financial gains showcase the strength of portfolio quality.	.654	.964
6. Exceptional returns underscore effective portfolio management.	.764	.981
7. Strong portfolio quality drove substantial financial returns.	.602	.881
8. Impressive financial results affirm high portfolio standards.	.666	.903
9. Returns reflected the institution's dedication to portfolio quality.	.601	.891
10. Favorable returns demonstrate diligent portfolio management.	.722	.815
Total	**.793**	**.912**
Efficiency		
1. Microfinance institutions achieved high returns, demonstrating efficient lending.	.742	.820
2. Loan portfolios generated significant returns, showcasing operational efficiency.	.638	.944
3. Efficient portfolio management led to impressive financial returns.	.652	.846
4. Institutions displayed remarkable efficiency in generating returns.	.564	.956
5. Loan portfolios proved highly efficient in delivering returns.	.758	.962
6. Efficient lending strategies resulted in substantial returns.	.738	.905
7. Institutions leveraged portfolios effectively, reflecting operational efficiency.	.738	.968
8. Efficient capital allocation in loan portfolios led to favorable returns.	.677	.902
9. Institutions demonstrated efficiency with commendable financial returns.	.563	.959
10. Managed loan portfolios showcased efficiency, yielding significant returns.	.685	.929
Total	**.753**	**.893**
Sustainability		
1. Microfinance institutions generate sustainable returns through their loan portfolios.	.573	.969
2. Loan portfolios yield consistent positive financial returns.	.622	.957
3. Well-managed portfolios ensure sustainable financial returns.	.613	.861
4. Strong returns demonstrate portfolio sustainability.	.780	.828
5. Loan portfolios generate reliable, sustainable returns.	.627	.975
6. Effective portfolio management leads to sustainable returns.	.747	.930
7. Diversified loan portfolios consistently deliver sustainable returns.	.772	.990
8. Loan portfolios show the ability to provide sustainable financial returns.	.759	.821
9. Prudent lending drives sustainable portfolio returns.	.685	.864
10. Successful portfolio performance ensures sustainable financial returns.	.663	.809
Total	**.749**	**.931**
Outreach		
1. Microfinance institutions' strong financial returns have enabled expanded outreach to underserved communities.	.591	.897
2. Impressive portfolio returns allow institutions to reach more borrowers and promote financial inclusion.	.666	.929
3. Effective portfolio management has led to notable returns and expanded outreach to marginalized groups.	.642	.879
4. Significant returns from loan portfolios have broadened access to financial services for the unbanked.	.636	.925
5. Favorable returns have facilitated greater outreach to economically disadvantaged populations.	.596	.877
6. Attractive portfolio returns empower institutions to serve unbanked individuals and drive economic growth.	.642	.916
7. Substantial returns have enabled institutions to expand outreach and improve access for underserved populations.	.582	.853
8. Efficient portfolio use has led to notable returns and greater inclusion for marginalized communities.	.681	.937
9. Financial returns from loan portfolios have fueled outreach initiatives and financial empowerment for the unbanked.	.628	.930
10. Significant portfolio returns have expanded outreach, bringing services to excluded populations.	.713	.836
Total	**.798**	**.897**

3.2. Validity testing of the gross loan portfolio risk-return questionnaire

In factor 1: credit quality, the highest factor loading, indicating the strongest association, is exhibited by GLP-RRQ item 2, with a value of .860. In contrast, the lowest factor loading, suggesting a weaker relationship, is associated with GLP-RRQ item 3, which has a factor loading of .730. Moving on to factor 2: default rates, it becomes evident that GLP-RRQ item 9 demonstrates the highest factor loading, signifying a significant correlation, with a value of .900. Conversely, the lowest factor loading is attributed to GLP-RRQ item 7, indicating a relatively weaker connection, with a factor loading of .810. When examining factor 3: portfolio concentration, the highest factor loading is observed with GLP-RRQ item 3, indicating a substantial association, with a value of .890. On the other hand, the lowest factor loading is linked to GLP-RRQ item 5, suggesting a comparatively weaker relationship, with a factor loading of .820. Lastly, in considering factor 4: vulnerability to external economic factors, the highest factor loading is displayed by GLP-RRQ item 6, emphasizing a notable correlation, with a value of .890. In contrast, the lowest factor loading is identified with GLP-RRQ item 9, suggesting a relatively weaker association, with a factor loading of .770 [Table 4].

Table 4. Results from a factor analysis of the gross loan portfolio risk-return questionnaire focusing on the level of risk associated with microfinance institutions' loan portfolios.

GLP-RRQ Items	Factor Loading			
	1	2	3	4
Factor 1: Credit Quality				
2. Poor borrower repayment capacity threatens the loan portfolio's credit quality.	**.860**	-.002	.017	.017
4. Economic downturns can affect loan portfolio credit quality.	**.860**	-.005	-.016	-.008
1. Loan default risk arises from inadequate borrower creditworthiness.	**.840**	.015	-.005	.010
7. Political or regulatory changes can impact credit quality.	**.840**	-.010	-.008	.006
8. Lack of loan diversification raises credit deterioration risk.	**.780**	-.013	.021	.010
3. Insufficient collateral increases the risk of credit quality deterioration.	**.730**	.013	.002	.013
Factor 2: Default Rates				
9. Political instability and regulatory changes affect default rates.	-.015	**.900**	.016	.017
5. Insufficient collateral and loan terms lead to higher defaults.	-.015	**.860**	-.006	.017
4. Economic downturns raise default rates.	-.004	**.830**	.006	.011
8. Lack of portfolio diversification increases concentration risks and defaults.	.020	**.820**	.001	.020
7. Weak loan monitoring raises default risk.	.016	**.810**	.003	.020
Factor 3: Portfolio Concentration				
3. Lack of diversification makes institutions more sensitive to economic shocks, affecting portfolio quality.	.006	-.017	**.890**	.004
2. Concentrated portfolios increase vulnerability to defaults, threatening financial stability.	.002	.008	**.870**	.005
4. Managing credit risk becomes difficult with concentrated portfolios, as a borrower or sector failure can hurt profitability.	-.021	.020	**.850**	.013
5. Portfolio concentration heightens credit risk, with single defaults causing significant losses and limiting future lending.	.011	.017	**.820**	.200
Factor 4: Vulnerability to External Economic Factors				
6. Economic downturns raise unemployment, increasing loan defaults.	.008	-.001	-.008	**.890**
8. Natural disasters impair borrowers' ability to repay, introducing portfolio risks.	.003	.180	.011	**.830**
10. Reliance on external funding introduces risks if donor priorities or availability change.	-.005	.140	.100	**.800**
1. Microfinance loan portfolios are vulnerable to interest rate fluctuations, affecting borrowers' repayment ability.	-.200	.190	.009	**.790**
3. Inflation or deflation impacts borrowers' repayment capacity, risking portfolio health.	.130	.007	.016	**.770**
9. Regulatory changes create uncertainty and risk for loan portfolio stability.	.010	.120	.030	**.770**

For, factor 1: portfolio quality, it is worth noting that the GLP-RRQ item 2 exhibits the highest factor loading at .900, indicating a strong association. In contrast, the GLP-RRQ item 9 displays the lowest factor loading of .750, suggesting a relatively weaker connection. Shifting the attention to factor 2: efficiency, it can be observed that the GLP-RRQ item 6 displays the highest factor loading at .880, implying a significant correlation. On the other hand, the GLP-RRQ item 8 demonstrates the lowest factor loading of .820, suggesting a relatively lesser degree of association. Similarly, within factor 3: sustainability, the GLP-RRQ item 6 stands out with the highest factor loading at .880, indicating a substantial link. Conversely, the

GLP-RRQ item 8 reveals the lowest factor loading at .790, implying a comparatively weaker relationship. Lastly, with respect to Factor 4: Outreach, the GLP-RRQ item 7 showcases the highest factor loading of .860, signifying a strong connection. Conversely, the GLP-RRQ item 5 reflects the lowest factor loading at .740, suggesting a relatively weaker association [Table 5].

Table 5. Results from a factor analysis of the gross loan portfolio risk-return questionnaire focusing on the level of financial returns generated by microfinance institutions through their loan portfolios.

GLP-RRQ Items	Factor Loading			
	1	2	3	4
Factor 1: Portfolio quality				
2. Loan portfolios generated impressive returns, reflecting a commitment to quality.	**.900**	.019	.210	.005
4. Substantial returns indicate a robust focus on portfolio quality.	**.770**	-.002	.009	.016
5. Significant financial gains showcase the strength of portfolio quality.	**.870**	-.210	-.017	-.021
6. Exceptional returns underscore effective portfolio management.	**.860**	-.012	.016	.006
7. Strong portfolio quality drove substantial financial returns.	**.880**	.005	-.009	.021
9. Returns reflected the institution's dedication to portfolio quality.	**.750**	.040	-.051	.017
Factor 2: Efficiency				
6. Efficient lending strategies resulted in substantial returns.	.210	**.880**	.006	.005
9. Institutions demonstrated efficiency with commendable financial returns.	-.003	**.880**	.011	.018
10. Managed loan portfolios showcased efficiency, yielding significant returns.	.002	**.820**	.009	-.013
3. Efficient portfolio management led to impressive financial returns.	.021	**.820**	-.190	.006
8. Efficient capital allocation in loan portfolios led to favorable returns.	.010	**.820**	.018	.020
Factor 3: Sustainability				
6. Effective portfolio management leads to sustainable returns.	-.015	.017	**.880**	.019
9. Prudent lending drives sustainable portfolio returns.	.006	.021	**.870**	.005
4. Strong returns demonstrate portfolio sustainability.	.002	.005	**.870**	.007
2. Loan portfolios yield consistent positive financial returns.	.019	.015	**.790**	.013
8. Loan portfolios show the ability to provide sustainable financial returns.	-.012	.012	**.790**	-.003
Factor 4: Outreach				
7. Substantial returns have enabled institutions to expand outreach and improve access for underserved populations.	.017	.016	.017	**.860**
1. Microfinance institutions' strong financial returns have enabled expanded outreach to underserved communities.	.008	.014	.011	**.850**
10. Significant portfolio returns have expanded outreach, bringing services to excluded populations.	-.003	.008	.001	**.780**
8. Efficient portfolio use has led to notable returns and greater inclusion for marginalized communities.	.020	-.016	.005	**.760**
5. Favorable returns have facilitated greater outreach to economically disadvantaged populations.	.020	.014	-.017	**.740**

4. DISCUSSION

The assessment of microfinance institutions' loan portfolios is a critical task in understanding the risk and financial performance of these institutions. The instrument used in this study demonstrates a high level of internal consistency across various components, providing reliable measures of different aspects of microfinance institutions' loan portfolios. The component of credit quality, which is crucial in risk assessment, exhibits excellent internal consistency. This implies that the items within this component, such as loan repayment history and borrower creditworthiness, consistently measure the same underlying construct of credit quality (Barakova et al., 2003). The high Cronbach's alpha coefficient of 0.90 further confirms the reliability of this component in capturing the risk associated with microfinance institutions' loan portfolios.

Another important component, portfolio concentration, also demonstrates excellent internal consistency. This component measures the degree of concentration in the loan portfolios of microfinance institutions, indicating the diversification of loans among different borrowers and sectors (Krauss & Walter, 2009). The strong internal consistency of the portfolio concentration component, as indicated by a Cronbach's alpha coefficient of 0.92, ensures that the items within this component consistently capture the level of portfolio concentration across various microfinance institutions. The assessment of default rates, which reflects the proportion of loans that borrowers have failed to repay (Tsai et al., 2009), is another essential component in evaluating the risk of microfinance institutions' loan portfolios. The instrument's default rate component demonstrates good internal consistency, indicating that the items reliably measure the

default risk within these portfolios. The Cronbach's alpha coefficient of 0.80 provides evidence of the internal consistency of this component and supports its usefulness in assessing default risk.

Furthermore, the instrument includes a component that assesses the vulnerability of microfinance institutions' loan portfolios to external economic factors. This component examines how changes in the external economic environment impact the institutions' portfolios (Krauss & Walter, 2009). The vulnerability component exhibits good internal consistency, as shown by the Cronbach's alpha coefficient of 0.82. This finding suggests that the items measuring vulnerability consistently capture this aspect of risk across different microfinance institutions.

Moving on to the components related to financial returns, the instrument demonstrates strong internal consistency. The sustainability component, which assesses the long-term financial viability and stability of microfinance institutions (Kar, 2011), exhibits excellent internal consistency. A Cronbach's alpha coefficient of 0.88 for the sustainability component, indicating that the items consistently measure the financial performance and stability of microfinance institutions across different contexts. The portfolio quality component, which evaluates the overall quality and performance of microfinance institutions' loan portfolios, also shows excellent internal consistency. A Cronbach's alpha coefficient of 0.90 for this component, suggesting that the items reliably capture the quality of loan portfolios across different microfinance institutions.

Assessing the outreach of microfinance institutions, which measures the extent to which they reach underserved populations and provide financial services to them, is another important aspect of evaluating their loan portfolios. The outreach component demonstrates good internal consistency. This finding suggests that the items consistently capture the level of financial inclusion achieved by microfinance institutions across different contexts. Finally, the instrument includes a component called efficiency, which evaluates the operational efficiency and cost-effectiveness of microfinance institutions' loan portfolios. The efficiency component exhibits good internal consistency. This implies that the items measuring efficiency consistently capture the level of operational efficiency and cost-effectiveness across different microfinance institutions.

The instrument used to assess microfinance institutions' loan portfolios demonstrates a high level of internal consistency across various components. The reliable and consistent measurement of credit quality, portfolio concentration, default rates, vulnerability to external economic factors, sustainability, portfolio quality, outreach, and efficiency provides valuable insights into the risk and financial performance of microfinance institutions. The robust findings from multiple studies conducted support the instrument's reliability and make it a useful tool for evaluating microfinance institutions' loan portfolios.

5. CONCLUSION

In conclusion, the instrument used to assess microfinance institutions' loan portfolios demonstrates a high level of internal consistency across its various components. The components related to risk assessment, including credit quality, portfolio concentration, default rates, and vulnerability to external economic factors, exhibit excellent or good internal consistency. Similarly, the components assessing financial returns, such as sustainability and portfolio quality, show excellent internal consistency, while outreach and efficiency exhibit good internal consistency. These findings, in congruence with the previous studies that portray similar ideas about gross loan portfolio provide robust evidence of the instrument's reliability in evaluating microfinance institutions' loan portfolios.

Based on the strong internal consistency demonstrated by the instrument, it can be recommended for wider adoption in assessing the risk and financial performance of microfinance institutions' loan portfolios. The reliable measurement of credit quality, portfolio concentration, default rates, vulnerability, sustainability, portfolio quality, outreach, and efficiency provide valuable insights for stakeholders, including investors, regulators, and practitioners. By employing this instrument, stakeholders can make more informed decisions and effectively manage the risks associated with microfinance institutions' loan portfolios.

While the internal consistency of the instrument's components provides valuable insights, it is important to acknowledge certain limitations. First, the instrument's reliability relies on self-reported data from microfinance institutions, which may be subject to reporting biases or inaccuracies. Additionally, the studies reviewed in this discussion were conducted in various contexts and with different sample sizes, which may limit the generalizability of the findings. Further research is needed to validate the instrument's internal consistency in diverse settings and with larger and more representative samples of microfinance institutions. Additionally, while internal consistency is an important aspect of instrument reliability, other psychometric properties, such as validity and stability, should also be considered to ensure a comprehensive assessment of the instrument's performance.

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BIOGRAPHY OF THE AUTHOR

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