



# THE EFFECT OF THE APPLICATION OF QUANTIFICATION INSTRUMENTS AND METHODS ON THE QUALITY OF FINANCIAL PERFORMANCE ASSESSMENT OF MSMES IN AMBON CITY

## PENGARUH PENERAPAN INSTRUMEN DAN METODE KUANTIFIKASI TERHADAP KUALITAS PENILAIAN KINERJA KEUANGAN UMKM DI KOTA AMBON

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DOI: <https://doi.org/10.62567/micjo.v3i3.2785>

### Abstract

This study aims to analyze the effect of the implementation of financial measurement instruments and *quantification* methods on the quality of financial performance assessment of Micro, Small, and Medium Enterprises (MSMEs) in Ambon City. The study employed a quantitative approach using a survey method through the distribution of questionnaires to 60 MSME owners in Ambon City. The data analysis techniques included validity testing, reliability testing, classical assumption testing, multiple linear regression analysis, t-test, F-test, and coefficient of determination ( $R^2$ ) analysis using the Statistical Package for Social Sciences (SPSS). The results indicate that the implementation of financial measurement instruments does not have a significant effect on the quality of MSME financial performance assessment, with a significance value of  $0.209 > 0.05$ . Meanwhile, quantification methods have a positive and significant effect on the quality of MSME financial performance assessment, with a significance value of  $0.000 < 0.05$ . Simultaneously, the implementation of financial measurement instruments and quantification methods significantly affects the quality of MSME financial performance assessment, as indicated by a significance value of  $0.000 < 0.05$ . The coefficient of determination ( $R^2$ ) is 0.797, indicating that 79.7% of the variation in the quality of MSME financial



performance assessment can be explained by the two independent variables, while the remaining 20.3% is influenced by other factors outside the research model.

**Keywords :** Financial Measurement Instruments, Quantification Methods, Financial Performance Assessment MSMEs Ambon City.

### Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh penerapan instrumen pengukuran keuangan dan metode kuantifikasi terhadap kualitas penilaian kinerja keuangan Usaha Mikro, Kecil, dan Menengah (UMKM) di Kota Ambon. Penelitian ini menggunakan pendekatan kuantitatif dengan metode survei melalui penyebaran kuesioner kepada 60 pemilik UMKM di Kota Ambon. Teknik analisis data meliputi pengujian validitas, pengujian reliabilitas, pengujian asumsi klasik, analisis regresi linier berganda, uji-t, uji-F, dan analisis koefisien determinasi ( $R^2$ ) menggunakan Statistical Package for Social Sciences (SPSS). Hasil penelitian menunjukkan bahwa penerapan instrumen pengukuran keuangan tidak berpengaruh signifikan terhadap kualitas penilaian kinerja keuangan UMKM, dengan nilai signifikansi  $0,209 > 0,05$ . Sementara itu, metode kuantifikasi berpengaruh positif dan signifikan terhadap kualitas penilaian kinerja keuangan UMKM, dengan nilai signifikansi  $0,000 < 0,05$ . Secara bersamaan, implementasi instrumen pengukuran keuangan dan metode kuantifikasi secara signifikan mempengaruhi kualitas penilaian kinerja keuangan UMKM, sebagaimana ditunjukkan oleh nilai signifikansi  $0,000 < 0,05$ . Koefisien determinasi ( $R^2$ ) adalah 0,797, yang menunjukkan bahwa 79,7% variasi dalam kualitas penilaian kinerja keuangan UMKM dapat dijelaskan oleh dua variabel independen, sedangkan sisanya 20,3% dipengaruhi oleh faktor lain di luar model penelitian.

**Kata Kunci :** Instrumen Pengukuran Keuangan, Metode Kuantifikasi, Penilaian Kinerja Keuangan UMKM Kota Ambon.

## 1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a significant role in Indonesia's economy by contributing to economic growth, employment creation, and community welfare. In Ambon City, MSMEs are an important pillar of the local economy, operating in various sectors such as trade, culinary businesses, services, handicrafts, and home industries. Despite their important contribution, many MSMEs still face challenges related to financial management, limited access to resources, and inadequate financial information.

The quality of financial information is a crucial factor in supporting business sustainability and decision-making. High-quality financial information should be accurate, complete, timely, relevant, and reliable. Through quality financial information, MSME owners can better understand their financial condition and make appropriate decisions regarding planning, cost control, investment, and business development. However, many MSMEs in Ambon City still have difficulties in evaluating their financial performance due to inadequate financial recording practices and limited understanding of financial analysis. In many cases, business owners do not maintain systematic financial records and often mix personal and business finances, resulting in inaccurate and less useful financial information.

To improve the quality of financial performance assessment, MSMEs require appropriate financial measurement instruments and quantification methods. Financial measurement instruments, such as financial statements, cash flow reports, and transaction records, provide the data needed for financial evaluation. Meanwhile, quantification methods help transform financial data into objective and measurable information that can support business decisions. The proper application of these



instruments and methods is expected to improve the quality of financial performance assessment and strengthen financial management practices among MSMEs.

Based on these conditions, this study seeks to answer the following research questions: (1) Does the application of financial measurement instruments affect the quality of financial performance assessment of MSMEs in Ambon City? (2) Do quantification methods affect the quality of financial performance assessment of MSMEs in Ambon City? and (3) Do financial measurement instruments and quantification methods simultaneously affect the quality of financial performance assessment of MSMEs in Ambon City?

Accordingly, the objectives of this study are to analyze the effect of financial measurement instruments on the quality of financial performance assessment, to examine the effect of quantification methods on the quality of financial performance assessment, and to determine the simultaneous effect of both variables on the quality of financial performance assessment of MSMEs in Ambon City.

## 2. RESEARCH METHOD

This study employed a quantitative research approach, which is a research method used to examine the relationship between variables through numerical data and statistical analysis (Sugiyono, 2014). The research was conducted on Micro, Small, and Medium Enterprises (MSMEs) in Ambon City.

The population of this study consisted of MSME owners operating in Ambon City. Using a purposive sampling technique, 60 MSME owners were selected as research respondents based on predetermined criteria. Data were collected through questionnaires using a five-point Likert scale to measure respondents' perceptions regarding the application of financial measurement instruments, quantification methods, and the quality of financial performance assessment.

The study involved two independent variables, namely Financial Measurement Instruments (X1) and Quantification Methods (X2), and one dependent variable, namely the Quality of Financial Performance Assessment (Y). Financial measurement instruments were assessed through indicators such as completeness of financial data, recording accuracy, availability of financial information, and ease of use. Quantification methods were measured through the use of financial analysis techniques, accuracy of analytical methods, data interpretation ability, and utilization of analytical results. Meanwhile, the quality of financial performance assessment was evaluated based on accuracy, objectivity, relevance, reliability, and usefulness in decision-making.

The research process consisted of several stages. First, data were collected from 60 respondents through questionnaires. Second, validity and reliability tests were conducted to ensure that the research instruments were accurate and consistent. Third, classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, were performed to assess the suitability of the regression model. Finally, the data were analyzed using multiple linear regression analysis, t-tests, F-tests, and the coefficient of determination ( $R^2$ ).

The results of these analyses were used to interpret the relationships among variables and to determine the effect of financial measurement instruments and quantification methods on the quality of financial performance assessment. The findings were then discussed and used as the basis for drawing conclusions and recommendations for improving financial management practices among MSMEs in Ambon City.

## 3. RESULT AND DISCUSSION

The study involved **60 MSME owners in Ambon City**. Based on the type of business, most respondents operated in the trade sector, accounting for **40 respondents (66.7%)**, followed by services (**15.0%**), culinary businesses (**8.3%**), production businesses (**3.3%**), and other sectors (**6.7%**). Regarding business experience, the majority of respondents (**73.3%**) had operated their businesses for **1–5 years**, indicating sufficient experience in managing business activities and financial records

### 1. Respondents Characteristics based on Business Type

**Table 1. Respondent Characteristics**

| Characteristics  | Category   | Frequency | Percentage (%) |
|------------------|------------|-----------|----------------|
| Type of Business | Trade      | 40        | 66.7           |
|                  | Services   | 9         | 15.0           |
|                  | Culinary   | 5         | 8.3            |
|                  | Production | 2         | 3.3            |
|                  | Others     | 4         | 6.7            |

Source: Primary Data, 2026

**2. Respondents Characteristics based on Business Age****Tabel 4.2 Karakteristik Responden Berdasarkan Lama Usaha Beroperasi**

| Characteristics   | Category   | Frequency | Percentage (%) |
|-------------------|------------|-----------|----------------|
| Business Duration | < 1 Year   | 14        | 23.3           |
|                   | 1–5 Years  | 44        | 73.3           |
|                   | 6–10 Years | 2         | 3.4            |

Source: Primary Data, 2026

Regarding business experience, the majority of respondents (**73.3%**) had operated their businesses for **1–5 years**, indicating sufficient experience in managing business activities and financial records

**Validity Test**

The validity test was conducted by comparing the Corrected Item-Total Correlation value with the critical value of **r-table = 0.254** at a significance level of 5%. The results showed that all questionnaire items for Financial Measurement Instruments (X1), Quantification Methods (X2), and Financial Performance Assessment Quality (Y) had correlation values greater than the r-table value. Therefore, all items were considered valid and suitable for measuring the research variables.

**Table 2. Summary of Validity Test Results**

| Variable                                     | Range of r-value | r-table | Result |
|----------------------------------------------|------------------|---------|--------|
| Financial Measurement Instruments (X1)       | 0.759 – 0.955    | 0.254   | Valid  |
| Quantification Methods (X2)                  | 0.930 – 0.977    | 0.254   | Valid  |
| Financial Performance Assessment Quality (Y) | 0.899 – 0.979    | 0.254   | Valid  |

Source: Primary Data, 2026

The high correlation values indicate that all questionnaire items successfully measured the intended constructs.

**Reliability Test**

Reliability testing was performed using Cronbach's Alpha. A variable is considered reliable if the Cronbach's Alpha value exceeds 0.70. The results indicate that all variables achieved values well above the required threshold.

**Table 3. Reliability Test Results**

| Variable                                     | Cronbach's Alpha | Result   |
|----------------------------------------------|------------------|----------|
| Financial Measurement Instruments (X1)       | 0.967            | Reliable |
| Quantification Methods (X2)                  | 0.992            | Reliable |
| Financial Performance Assessment Quality (Y) | 0.988            | Reliable |

Source: Primary Data, 2026

These findings confirm that the research instrument was highly reliable and consistent in measuring the study variables.



### Multiple Linear Regression Analysis

Multiple linear regression analysis was used to examine the influence of Financial Measurement Instruments (X1) and Quantification Methods (X2) on Financial Performance Assessment Quality (Y).

**Table 4. Multiple Linear Regression Results**

| Variable                               | Coefficient |
|----------------------------------------|-------------|
| Constant                               | -4.685      |
| Financial Measurement Instruments (X1) | 0.230       |
| Quantification Methods (X2)            | 0.914       |

The regression equation is:

$$Y = -4.685 + 0.230X_1 + 0.914X_2 + e$$

### Partial Hypothesis Test (t-Test)

The t-test was conducted to determine the individual effect of each independent variable on the dependent variable.

**Table 5. t-Test Results**

| Variable                               | t-value | Sig.  |
|----------------------------------------|---------|-------|
| Financial Measurement Instruments (X1) | 1.271   | 0.209 |
| Quantification Methods (X2)            | 5.167   | 0.000 |

Source: Primary Data, 2026

The results indicate that Financial Measurement Instruments (X1) do not significantly affect Financial Performance Assessment Quality because the significance value (**0.209**) is greater than 0.05. Therefore, the first hypothesis (H1) is rejected. On the other hand, Quantification Methods (X2) have a positive and significant effect on Financial Performance Assessment Quality because the significance value (**0.000**) is lower than 0.05. Therefore, the second hypothesis (H2) is accepted.

### Simultaneous Hypothesis Test (F-Test)

The F-test was used to determine whether both independent variables simultaneously influence the dependent variable.

**Table 6. F-Test Results**

| F-value | Sig.  |
|---------|-------|
| 112.000 | 0.000 |

Source: Primary Data, 2026

The significance value of **0.000** is below 0.05, indicating that Financial Measurement Instruments and Quantification Methods simultaneously have a significant effect on Financial Performance Assessment Quality. Therefore, the third hypothesis (H3) is accepted.

### Coefficient of Determination (R<sup>2</sup>)

The coefficient of determination was used to measure how much variation in the dependent variable could be explained by the independent variables.

**Table 7. Coefficient of Determination**

| R Square | Adjusted R Square |
|----------|-------------------|
| 0.797    | 0.790             |

Source: Primary Data, 2026

The R<sup>2</sup> value of **0.797** indicates that **79.7%** of the variation in Financial Performance Assessment Quality can be explained by Financial Measurement Instruments and Quantification Methods. The remaining **20.3%** is influenced by other variables not included in the research model.



## DISCUSSION

The findings reveal that the application of financial measurement instruments alone does not significantly improve the quality of financial performance assessment among MSMEs in Ambon City. Although many respondents already possess financial records such as cash books and transaction records, these instruments are primarily used for recording purposes rather than for evaluating business performance. Consequently, the existence of financial measurement instruments does not automatically lead to better financial performance assessment.

In contrast, quantification methods were found to have a positive and significant effect on financial performance assessment quality. This result suggests that MSME owners who apply quantitative analysis techniques are better able to transform financial data into meaningful information. Such information helps them evaluate business performance, control costs, measure profitability, and make more informed business decisions. Therefore, quantification methods contribute directly to improving the accuracy, objectivity, and usefulness of financial performance assessments.

Furthermore, the simultaneous effect of financial measurement instruments and quantification methods demonstrates that high-quality financial performance assessment requires both adequate financial records and effective analytical capabilities. Financial measurement instruments provide the necessary financial data, while quantification methods convert that data into useful information for decision-making. The strong coefficient of determination (79.7%) further confirms that these two variables play an important role in explaining improvements in the quality of financial performance assessment among MSMEs in Ambon City.

### Summary of Hypothesis Testing

| Hypothesis                                                                                                                      | Decision |
|---------------------------------------------------------------------------------------------------------------------------------|----------|
| H1: Financial Measurement Instruments significantly affect Financial Performance Assessment Quality                             | Rejected |
| H2: Quantification Methods significantly affect Financial Performance Assessment Quality                                        | Accepted |
| H3: Financial Measurement Instruments and Quantification Methods simultaneously affect Financial Performance Assessment Quality | Accepted |

These results suggest that strengthening financial analysis skills and the application of quantification methods should be prioritized to enhance the quality of financial performance assessment among MSMEs.

## 4. CONCLUSION

This study examined the effect of financial measurement instruments and quantification methods on the quality of financial performance assessment of MSMEs in Ambon City. The results revealed that financial measurement instruments did not have a significant effect on the quality of financial performance assessment. This finding indicates that the existence of financial recording tools alone is not sufficient to improve assessment quality when they are primarily used for administrative purposes rather than for evaluation and business decision-making.

In contrast, quantification methods were found to have a positive and significant effect on the quality of financial performance assessment. The results suggest that the ability to process, analyze, and interpret financial data quantitatively enables MSME owners to produce more accurate, objective, and relevant financial information, thereby supporting better managerial and strategic decisions.

Furthermore, financial measurement instruments and quantification methods simultaneously had a significant effect on the quality of financial performance assessment. The coefficient of determination ( $R^2 = 0.797$ ) indicates that 79.7% of the variation in the quality of financial performance



assessment can be explained by these two variables, while the remaining 20.3% is influenced by other factors outside the scope of this study. Overall, the findings highlight the importance of combining proper financial recording systems with effective quantitative analysis techniques to improve financial management and business sustainability among MSMEs in Ambon City.

Based on these findings, several recommendations can be proposed. First, MSME owners should not only maintain financial records regularly but also utilize financial information for performance evaluation and business development. Improving financial analysis skills and the application of quantification methods can enhance the quality of financial performance assessment and support more effective decision-making. Second, local government agencies should strengthen training and assistance programs related to financial management, financial reporting, and quantitative analysis for MSMEs. Third, universities, business support institutions, and MSME development organizations should provide continuous education and mentoring programs to improve financial literacy and analytical capabilities among MSME owners. Finally, future studies are encouraged to include additional variables, such as financial literacy, human resource competence, managerial capability, information technology utilization, and accounting information systems, as well as larger samples and broader research areas to provide a more comprehensive understanding of factors affecting the quality of financial performance assessment.

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