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The Influence of Total Quality Management (TQM) and Characteristics of Management Accountig Information Systems on Managerial Performance

Siti Asyiah Sundari[1], Rarassatika Ainunnisa[1]
Universitas Langlangbuana, Indonesia[1]
*Coresponding Email : rarassatika.unla@gmail.com

ABSTRACT

Managerial performance is one of the key determinants of organizational success, particularly in food manufacturing companies where operational efficiency, product quality, and strategic decision-making are highly dependent on managerial effectiveness. Two important factors that may influence managerial performance are Total Quality Management (TQM) and the Characteristics of Management Accounting Information Systems (MAIS). The implementation of TQM supports continuous improvement, customer focus, employee involvement, and process control, while the characteristics of MAIS—such as broad scope, timeliness, aggregation, and integration—provide managers with relevant and timely information for planning, controlling, and decision-making.

This study aims to examine the influence of Total Quality Management and the Characteristics of Management Accounting Information Systems on Managerial Performance in food manufacturing companies in Indonesia. This research adopts a quantitative approach using descriptive and explanatory (verification) methods. Primary data were collected through structured questionnaires distributed to 40 food manufacturing companies in Indonesia, represented by managers, supervisors, department heads, and finance controllers who are directly involved in managerial decision-making processes. The sampling technique used was probability sampling with a simple random sampling method. Data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS software.

The results indicate that Total Quality Management has a positive and significant effect on Managerial Performance. Likewise, the Characteristics of Management Accounting Information Systems also have a positive and significant effect on Managerial Performance. These findings indicate that better quality management practices and stronger accounting information system characteristics contribute significantly to improving managerial effectiveness.

This study contributes to the literature by integrating TQM and MAIS characteristics as complementary managerial control mechanisms in the context of food manufacturing companies in an emerging economy. Practically, the findings provide important implications for managers in improving operational excellence, strategic decision-making, and long-term organizational competitiveness.

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INTRODUCTION

Managerial performance is one of the main determinants of organizational success because it reflects management's ability to plan, coordinate, supervise, evaluate, and make strategic decisions effectively. In highly competitive industries, particularly food manufacturing, managerial performance becomes increasingly important because operational efficiency, product quality, customer satisfaction, and regulatory compliance depend heavily on managerial decisions. Management theory has historically emphasized productivity improvement and organizational effectiveness in achieving organizational goals aligned with the company's vision and mission (Diwyarthi et al., 2022). Good organizational performance is strongly supported by managerial competence at all levels,

from top management to operational managers. Effective managerial performance indicates leaders who are able to motivate employees, maintain operational discipline, ensure compliance with company regulations, and achieve strategic targets efficiently (Masni & Zulfaidah, 2021).

The food manufacturing industry in Indonesia faces increasingly complex challenges due to rising raw material costs, inflationary pressure, supply chain disruptions, food safety regulations, halal certification obligations, environmental sustainability concerns, and rapidly changing consumer preferences. These conditions require companies to continuously improve competitiveness and maintain operational excellence. Competition no longer depends solely on product output, but also on the ability of managers to ensure process efficiency, quality consistency, and fast strategic decision-making. Product defects, delivery delays, and inconsistency in product standards can directly reduce consumer trust and weaken company competitiveness. Companies such as PT Indofood Sukses Makmur Tbk, PT Mayora Indah Tbk, PT Garudafood Putra Putri Jaya Tbk, and PT Ultrajaya Milk Industry Tbk continuously face pressure to improve managerial effectiveness in order to sustain long-term growth and market performance.

One of the most important managerial approaches used to improve organizational effectiveness is Total Quality Management (TQM). TQM is a strategic management philosophy that integrates all organizational functions to continuously improve product quality, customer satisfaction, employee involvement, and long-term organizational commitment (Rusmawati et al., 2021). According to Sudarmanto et al. (2022), TQM aims to strengthen organizational capabilities in delivering products and services that meet customer expectations consistently. Harahap et al. (2023) further explain that company effectiveness cannot be separated from reliable managerial leadership because leaders play a central role in ensuring quality implementation and organizational discipline. Therefore, the successful implementation of TQM is expected to improve managerial performance significantly.

Recent international studies strengthen the importance of TQM in improving managerial and organizational performance. Singh et al. (2018) found that TQM significantly improves organizational performance through leadership commitment, customer focus, employee involvement, and continuous improvement in manufacturing and service industries. Bannor et al. (2024) also confirmed that TQM practices positively affect job performance and operational effectiveness, while Masudin et al. (2025) found that TQM contributes to sustainable performance and competitive advantage through better process quality and strategic management. In the food industry, Burgess et al. (2023) explain that supply chain quality management strongly affects product consistency and sustainable business performance, while Radu et al. (2023) found that modern quality management systems such as HACCP are critical because they directly influence food safety, operational efficiency, and customer trust. These findings indicate that TQM is no longer optional but has become a strategic necessity for managerial success in food manufacturing companies.

Despite the importance of TQM, many food manufacturing companies still experience inconsistency in quality control implementation across production lines. Variations in raw materials, production errors, weak continuous improvement practices, and limited employee awareness often result in product complaints, waste, rework costs, and product recalls. These problems indicate that managerial performance is still not fully supported by effective quality management practices. Previous studies by Diwyarthi et al. (2022) and Rusmawati et al. (2021) found that TQM positively affects managerial performance because managers become more focused on process control, employee empowerment, and customer-oriented decision-making. However, the implementation of TQM alone may not be sufficient without strong information support systems.

In addition to TQM, managerial performance is also strongly influenced by the quality of information available to managers, particularly through Management Accounting

Information Systems (MAIS). According to Susanto (2017), a management accounting information system must provide accurate, relevant, timely, and complete information because managerial decisions depend heavily on the quality of information produced. MAIS supports cost control, productivity measurement, budgeting efficiency, and better operational planning. When managers receive reliable information, they are able to make faster and more effective decisions that improve managerial performance.

Furthermore, Susanto (2017) explains that improving the quality of management accounting information systems increases managers' understanding of both internal and external environmental changes, enabling them to respond quickly and accurately to business dynamics. This is particularly important in food manufacturing industries where managers must make immediate decisions regarding inventory control, production scheduling, supply chain efficiency, pricing strategy, and quality assurance. Without effective accounting information systems, managerial decisions become slower, less accurate, and more dependent on personal intuition rather than objective information.

Recent studies also emphasize that the success of accounting information systems strongly determines managerial effectiveness. Monteiro et al. (2022) found that high-quality information systems significantly improve company success, especially through better financial and non-financial information integration. Lutfi (2023) explains that accounting information system success is influenced by information quality, system quality, and service quality, which directly improve decision-making effectiveness. Saad (2023) found that accounting information system adoption significantly improves business performance because managers are able to respond faster and more accurately to changing business conditions. Chang et al. (2023) also explain that management accounting systems support managerial decision-making by providing strategic information needed in uncertain environments.

The characteristics of management accounting information systems—namely broad scope, timeliness, aggregation, and integration—are considered critical in supporting managerial performance. Broad scope provides external and future-oriented information, timeliness ensures fast reporting, aggregation summarizes information efficiently, and integration connects information across departments. According to Masni and Zulfaidah (2021), these characteristics enable managers to perform their responsibilities more effectively and improve organizational outcomes. Septiani and Rachman (2021) also found that management accounting information systems significantly influence managerial performance because managers rely on broad scope, aggregation, timeliness, and integration of information to improve decision quality and operational effectiveness. Pedroso and Gomes (2024) further found that top management involvement significantly affects the utilization of management accounting systems and improves managerial decision quality, while Nguyen et al. (2024) confirmed that accounting information system effectiveness improves organizational performance when supported by strong managerial commitment.

However, many food manufacturing companies in Indonesia still face problems related to timeliness, integration, and managerial utilization of accounting information systems. In some companies, accounting systems function only as administrative tools rather than strategic decision-support systems. Managers often still rely more on personal experience and intuition rather than information generated by accounting systems. This weakens planning quality, evaluation processes, and performance control. Jaya et al. (2024) explain that managers require accounting information that fulfills managerial objectives and supports strategic decision-making under uncertain business environments. Begum and Rahman (2025) also found that management accounting practices improve financial performance through rational managerial decisions, while Alhasnawi et al. (2023) explain that budget participation strengthens managerial performance through clearer targets, stronger coordination, and better accountability.

Although previous studies have examined TQM, accounting information systems,

and managerial performance, most studies investigate these variables separately. Limited attention has been given to the simultaneous influence of TQM and the characteristics of management accounting information systems on managerial performance, particularly in food manufacturing companies in emerging economies such as Indonesia. This gap is important because TQM and MAIS characteristics may function as complementary managerial control mechanisms rather than independent variables. TQM improves operational quality and organizational discipline, while MAIS characteristics provide strategic information that supports managerial decision-making.

Therefore, this study contributes to the management accounting and quality management literature by integrating Total Quality Management and the Characteristics of Management Accounting Information Systems as complementary determinants of managerial performance in Indonesian food manufacturing companies. This study also provides empirical evidence from an emerging economy context where operational complexity, regulatory pressure, and competitive intensity create strong managerial challenges. Based on the theoretical background, previous empirical findings, and existing organizational phenomena, this study aims to examine the influence of Total Quality Management and the Characteristics of Management Accounting Information Systems on Managerial Performance in food manufacturing companies in Indonesia.

Hypothesis Development

The Effect of Total Quality Management on Managerial Performance

Total Quality Management (TQM) is a management approach that emphasizes continuous improvement, customer focus, employee involvement, teamwork, and long-term organizational commitment to achieve superior organizational performance. The implementation of TQM helps managers improve control over organizational processes, reduce operational inefficiencies, and ensure that all activities are aligned with company objectives. Through TQM, managers become more focused on quality standards, customer satisfaction, and strategic decision-making, which ultimately improves managerial performance.

According to Sudarmanto et al. (2022), TQM aims to strengthen organizational capabilities in delivering quality products and services consistently according to customer expectations. Harahap et al. (2023) also explain that effective quality management cannot be separated from strong managerial leadership because managers play a central role in ensuring discipline, teamwork, and continuous improvement. Therefore, better implementation of TQM will encourage better managerial effectiveness.

Previous empirical studies also support this relationship. Singh et al. (2018) found that TQM significantly improves organizational performance through leadership commitment, employee involvement, customer focus, and process management. Bannor et al. (2024) also found that TQM practices positively influence job performance and operational effectiveness. In Indonesia, Diwyarthi et al. (2022) and Rusmawati et al. (2021) concluded that TQM positively affects managerial performance because managers become more focused on process control, employee empowerment, and customer-oriented decision-making. These findings indicate that the better the implementation of TQM, the higher the managerial performance achieved by the company.

Based on the theoretical explanation and previous empirical findings, the first hypothesis is formulated as follows:

H1: Total Quality Management has a positive effect on Managerial Performance

The Effect of Characteristics of Management Accounting Information Systems on Managerial Performance

Management Accounting Information Systems (MAIS) provide managers with information needed for planning, controlling, evaluating, and making strategic decisions. The effectiveness of MAIS depends on its characteristics, namely broad scope, timeliness,

aggregation, and integration. These characteristics allow managers to obtain relevant, accurate, and timely information, which supports better managerial decisions and improves organizational performance.

According to Susanto (2017), management accounting information systems must provide accurate, relevant, timely, and complete information because managerial decisions are highly dependent on information quality. Furthermore, Susanto (2017) explains that improving the quality of accounting information systems increases managers' understanding of internal and external environmental changes, allowing faster and more accurate responses to business dynamics. This is particularly important in food manufacturing companies where managers must make quick decisions related to production scheduling, inventory management, supply chain efficiency, and quality control.

Previous studies also confirm this relationship. Monteiro et al. (2022) found that high-quality accounting information systems significantly improve company success and managerial effectiveness through better financial and non-financial information integration. Septiani and Rachman (2021) found that broad scope, timeliness, aggregation, and integration significantly influence managerial performance because managers rely on high-quality information to improve decision-making effectiveness. Pedroso and Gomes (2024) further explain that the effective use of management accounting systems improves managerial decision quality, while Nguyen et al. (2024) found that accounting information system effectiveness improves organizational performance when supported by strong managerial commitment.

These findings indicate that the better the characteristics of management accounting information systems implemented by the company, the better the managerial performance produced by managers.

Based on the theoretical explanation and previous empirical findings, the second hypothesis is formulated as follows:

H2: Characteristics of Management Accounting Information Systems have a positive effect on Managerial Performance

METHODS

This study employs a quantitative research approach using descriptive and explanatory (verification) methods to examine the influence of Total Quality Management (TQM) and the Characteristics of Management Accounting Information Systems (MAIS) on Managerial Performance in food manufacturing companies in Indonesia. The descriptive method is used to provide a systematic overview of the implementation of TQM, MAIS characteristics, and managerial performance practices within the companies, while the explanatory method is used to test the causal relationships among the research variables and verify the proposed hypotheses.

The research model consists of two independent variables and one dependent variable. The independent variables are Total Quality Management (X1) and the Characteristics of Management Accounting Information Systems (X2), while the dependent variable is Managerial Performance (Y). All variables are measured using an ordinal scale through a five-point Likert scale questionnaire ranging from 1 (strongly disagree) to 5 (strongly agree). This measurement scale is commonly used in management and accounting research to capture respondents' perceptions regarding organizational practices and managerial outcomes.

The data sources used in this study consist of primary and secondary data (Duli, 2019). Primary data were collected directly from respondents through structured questionnaires distributed to food manufacturing companies operating in Indonesia. The respondents were selected from managerial positions, including managers, supervisors, department heads, and finance controllers, because they are directly involved in planning, controlling, evaluating, and strategic decision-making processes. Secondary data were

obtained from annual reports, company profiles, previous empirical studies, books, and relevant scientific literature related to TQM, management accounting information systems, and managerial performance.

The population of this study consists of food manufacturing companies in Indonesia that have implemented managerial control systems, quality management practices, and accounting information systems in their operational activities. The sampling technique used is probability sampling with a simple random sampling method, where each company has an equal opportunity to be selected as a sample. The study uses 40 food manufacturing companies as research samples. This sample size is considered adequate for Partial Least Squares Structural Equation Modeling (PLS-SEM), which is suitable for small to medium sample sizes and complex predictive models (Hair et al., 2017).

Data collection was conducted by distributing structured questionnaires to one representative respondent from each company. The questionnaire items were developed based on established theoretical dimensions and previous empirical studies. Total Quality Management (TQM) was measured using nine dimensions adopted from quality management literature: customer focus, obsession with quality, scientific approach, long-term commitment, teamwork, continuous system improvement, education and training, controlled freedom, and unity of purpose. The Characteristics of Management Accounting Information Systems (MAIS) were measured using four dimensions proposed by Chenhall and Morris (1986), namely broad scope, timeliness, aggregation, and integration. Managerial Performance was measured using eight dimensions developed by Mahoney et al. (1963), including planning, investigation, coordination, evaluation, supervision, staffing, negotiation, and representation.

Before hypothesis testing, the research instrument was evaluated using validity and reliability tests to ensure measurement accuracy and consistency. Convergent validity was assessed using factor loadings and Average Variance Extracted (AVE), where loading values greater than 0.70 and AVE values above 0.50 indicate acceptable validity. Discriminant validity was evaluated using the Fornell–Larcker criterion and cross-loadings to ensure construct distinctiveness. Reliability testing was conducted using Cronbach's Alpha and Composite Reliability (CR), where values above 0.70 indicate satisfactory internal consistency (Hair et al., 2017).

The data analysis technique used in this study is Structural Equation Modeling–Partial Least Squares (SEM-PLS) using SmartPLS software. SEM-PLS was selected because it is appropriate for exploratory and predictive research, supports latent variable analysis, and performs well with relatively small sample sizes and non-normal data distribution. The analysis consists of two main stages: outer model evaluation and inner model evaluation.

The outer model evaluation assesses the measurement model through convergent validity, discriminant validity, AVE, Cronbach's Alpha, and Composite Reliability. Meanwhile, the inner model evaluation assesses the structural model by examining path coefficients, t-statistics, p-values, coefficient of determination (R^2), predictive relevance (Q^2), and effect size (f^2). Hypothesis testing is conducted using the bootstrapping procedure with a significance level of 5 percent ($\alpha = 0.05$). A hypothesis is accepted if the t-statistic value exceeds 1.96 and the p-value is less than 0.05.

This analytical approach is expected to provide robust empirical evidence regarding the simultaneous influence of Total Quality Management and the Characteristics of Management Accounting Information Systems on Managerial Performance in food manufacturing companies in Indonesia and to strengthen the contribution of this study to the literature on management accounting and quality management in emerging economies

RESULTS AND DISCUSSION

Total Quality Management

The total quality management variable is measured using nine dimensions including focus on customers, obsession with quality, scientific approach, long-term commitment, teamwork, continuous system improvement, education and training, controlled freedom, and unity of purpose. This dimension is a reflective dimension. The estimated results of the parameter measurement model for this variable can be proven in the following figure:

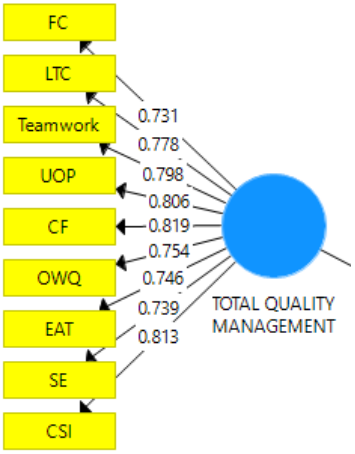

Figure 1: Total Quality Management Path Diagram
Source: data processed by SEM-PLS (2023)

From the total quality management path diagram above, it can be seen that the values contained in each indicator are generated through dimensions derived from reflective total quality management. The results of calculating the total quality management measurement model are as follows

Table 1: Calculation results of the Total Quality Management Measurement Model

Item	Loading Factor	Indicator Reliability	t-hitung	p-value
Focus on customers	0,731	0,72	6,527	0,000
Obsession with quality	0,754	0,742	8,961	0,000
Scientific approach	0,739	0,736	8,697	0,000
Long term commitment	0,778	0,765	8,197	0,000
Teamwork	0,798	0,802	11,953	0,000
Continuous system improvment	0,813	0,803	9,385	0,000
Education and training	0,746	0,739	8,795	0,000
Controlled freedom	0,819	0,819	13,165	0,000
Goal unity	0,806	0,786	8,967	0,000
Average Variance Extracter (AVE)	0,603			
Composite Reliability (CR)	0,932			

Source: data processed by SEM-PLS (2023)

Based on the Outer Loading of the reflective construct measuring total quality management in the table above, all values are above 0.5. The results of the calculation of the total quality management measurement model above show that the customer focus dimension has a loading factor value of 0.731 with a significance (p=0.000) at a 5% significance level. Then, the dimension of obsession with quality has a loading factor value of 0.754 with a significance (p = 0.000) at a 5% level of significance. Likewise, the

dimensions of the scientific approach have a loading factor value of 0.739 with a significance (p=0.000) and a 5% significance level. Next is the dimension of long-term commitment. Teamwork and continuous system improvement have loading factor values of 0.778, 0.798 and 0.813 respectively with a significance (p=0.000) and a 5% significance level. Then for the dimensions of Education and training, controlled freedom, and unity of purpose, each has a loading factor value of 0.746, 0.819, and 0.806 with a significance (p=0.000) and a significant level of 5%. So that the AVE value obtained is 0.603 which is above the minimum level required, namely 0.5. So the composite reliability value is 0.932 which is above 0.7 which shows that the total quality management construct has a good level of internal consistency realibility.

Characteristics of Management Accounting Information Systems

Variable characteristics of management accounting information systems are measured using 4 dimensions, namely: broadscope, timeliness, aggregation, and integration. This dimension is a reflective dimension. The parameter estimation results for this variable measurement model are shown in the figure below:

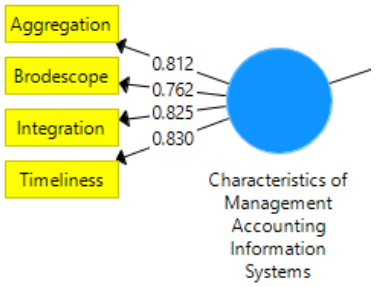

Figure 2: Path Diagram of Management Accounting Information System Characteristics

Source*:* data processed by SEM-PLS (2023)

From the path diagram of the characteristics of the management accounting information system above, it can be seen that the value of the characteristics of the management accounting information system contained in each indicator is generated through dimensions derived from reflective. The results of calculating the characteristics of the management accounting information system measurement model are as follows:

Table 2: Calculation Results of the Management Accounting Information System Characteristics Model

Item	***Loading Factor***	***Indicator Reliability***	**t-hitung**	**p-*value***
Broadscope	0,762	0,745	6,955	0,000
Timeliness	0,83	0,824	15,354	0,000
Aggregation	0,812	0,812	11,053	0,000
Integration	0,825	0,822	10,312	0,000
Average Variance Extracter (AVE)	0,652			
Composite Reliability (CR)	0,882			

Source*:* data processed by SEM-PLS (2023)

Based on the Outer Loading of the reflective construct of the characteristics of the management accounting information system, all are above 0.5. The broadscope dimension has a loading factor value of 0.762 with a significant (p=0.000) and 5% significance level. Then for the timeliness dimension it has a loading factor value of 0.830 with a significance (p = 0.000) and a significant level of 5%. Then for the aggregation dimension it has a loading factor value of 0.812 with a significant (p = 0.000) and a significant level of 5%. and for the integration dimension it has a loading factor value of 0.825 with a significance (p-

0.000). So that the AVE value obtained is 0.652 which is above the minimum level required, namely 0.5. Then the value of composite reliability is equal to 0.882 which is above 0.7 which shows that the characteristic construct of the management accounting information system has a good level of internal consistency reliability.

Managerial Performance

Managerial performance variables are measured using 8 dimensions, namely planning, investigation, coordination, evaluation, supervision, staffing, negotiation, and representation. This dimension is a reflective dimension. The estimation results of the measurement model are shown in the following figure:

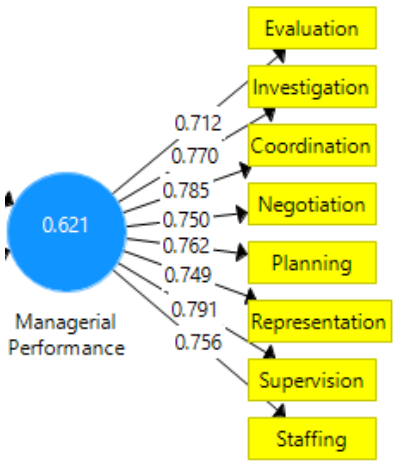

Figure 3 : Managerial Performance Path Diagram
Source: data processed by SEM-PLS (2023)

From the managerial performance path diagram above, it can be seen that the managerial performance value contained in each indicator is generated through a dimension that comes from reflective. The results of calculating the managerial performance of the measurement model are as follows:

Table 3: Results of Managerial Performance Measurement Model Calculations

Item	*Loading Factor*	*Indicator Reliability*	t-statistics	p-*value*
Planning	0,762	0,755	10,703	0,000
Investigation	0,770	0,746	9,791	0,000
Coordination	0,785	0,783	8,464	0,000
Evaluation	0,712	0,712	7,723	0,000
Supervison	0,791	0,788	12,020	0,000
Staffing	0,756	0,757	8,081	0,000
Negotiation	0,750	0,744	11,018	0,000
Representation	0,749	0,747	10,771	0,000
Average Variance Extracter (AVE)			0,577	
Composite Reliability (CR)			0,916	

Source: data processed by SEM-PLS (2023)

Based on the Outer Loading of the reflective construct of managerial performance measurement in the table above, all values are above 0.5. The results of the calculation of the managerial performance measurement model above show the result that the planning

dimension has a loading factor value of 0.762 with a significant (p = 0.000) at the 5% level of significance. Then, the investigative dimension has a loading factor value of 0.770 with a significant (p = 0.000) at the 5% level of significance. Then, the dimensions of coordination, evaluation, and supervision have a loading factor value of 0.785, 0.712, and 0.791 respectively with a significance (p = 0.000) and a significant level of 5%. Furthermore, the staffing, negotiation and representation dimensions have loading factor values of 0.756, 0.750 and 0.749 respectively with significance (p = 0.000) and a significant level of 5%. So that the AVE value obtained is 0.577 which is above the minimum level required, namely 0.5. So the composite reliability value is 0.916 which is above 0.7 which shows that the managerial performance construct has a good level of internal consistency reliability

Collinearty Testing

This structural model explains the reciprocal relationship between research variables. Structural model analysis is related to testing the research hypothesis. Before carrying out such analysis, it is necessary to test the structural model for collinearty. The reason is that the estimation of the path coefficients in the structural model is based on the PLS regression of each endogenous latent variable in the associated construct. With multiple regression, the estimated path coefficients are biased when there is a significant degree of collinearty between the predictor constructs. To evaluate collinearty, the variance inflation factor (VIF) measure is used, in the PLS-SEM context, with a tolerance value of 0.20 or less than the VIF value of 5 or more indicating that there is a collinearty problem (Hair et al., 2017)

Table 4 : Collinearty Assessment

Construct	VIF
Total Quality Management	1,207
Characteristics of management accounting information system	1,207

Source: data processed by SEM-PLS (2023)

In this study, collinearty testing was carried out on a structural model that represents the relationship between total quality management latent variables and management accounting information system characteristics as predictors for managerial performance latent variables. The results of calculating the VIF value of each total quality management variable and the characteristics of the management accounting information system are presented in the table above. Based on the table, the VIF values are beyond the tolerance values for the presence of significant collinearty problems between these predictor variables. Thus the results of the structural model evaluation can be realized which includes testing of two research hypotheses.

Structural Model Evaluation

The structural model represents the relationship between latent variables. In this study the structural model relates to two types of research hypotheses which imply a causal relationship between latent variables. The structural model of this study includes two exogenous latent variables, namely total quality management and management accounting information system characteristics, and one endogenous latent variable, namely managerial performance. The results of the calculation of standardized path coefficients for the structural model of the influence of total quality management and the characteristics of management accounting information systems on managerial performance are shown in the following figure:

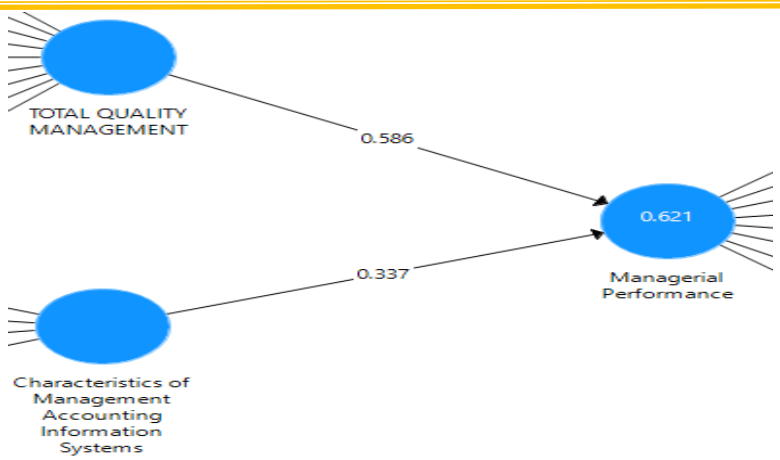

Figure 4 : Coefficients of Standardized Structural Model
Source: data processed by SEM-PLS (2023)

Statistical hypothesis 1
H0 : $\gamma_{11} = 0$ Total Quality Management has no effect on performance managerial
H0 : $\gamma_{11} \neq 0$ Total Quality Management has a significant effect on Managerial Performance
Statistical hypothesis 2
H0 : $\gamma_1 2 = 0$ Characteristics of Management Accounting Information Systems no effect on Managerial Performance
H0 : $\gamma_1 2 \neq 0$ Characteristics of Management Accounting Information Systems have an effect significant to Managerial Performance

To test this hypothesis, the t-student statistical test is used as described in the previous chapter. The testing criterion is that H0 is rejected if the p-value is less than α, with α = 0.05. The test results have been summarized in the following table:

Table 5: Hypothesis Testing Results

Statistics Hypothesis	Path coefficient	t-statistics	F square	p-value	Keterangan
$H_0 : \gamma_{11} = 0$ $H_0 : \gamma_{11} \neq 0$	0,586	5,890	0,750	0,000	H_0 Rejected
$H_0 : \gamma_{12} = 0$ $H_0 : \gamma_{12} \neq 0$	0,337	2,946	0,249	0,003	H_0 Rejected

Source: data processed by SEM-PLS (2023)

The Effect of Total Quality Management on Managerial Performance

Based on the research on the effect of the total quality management variable on managerial performance, the results obtained were that the effect of the total quality management variable on managerial performance was 0.586 and was included in the large category. This coefficient of influence shows the variability of managerial performance as explained by total quality management as reflected by customer focus, obsession with quality, scientific approach, long-term commitment, teamwork, continuous system improvement, education and training, controlled freedom and unity of purpose.

From the results of the loading factor, it can be seen that the dimension of controlled freedom has a high result from the other variables, which is equal to 0.819 which indicates that employees at Food manufacturing companiescan develop expertise and skills through the training and education they attend. Thus the dimensions of education and training can make changes to managerial performance if education and training are carried out properly in the company.

Research findings on total quality management are in a good category but not completely perfect. This is caused by a dimension that has a large gap compared to other dimensions, namely the customer focus dimension with a gap of 25%. This is because there are still employees of Food manufacturing companieswhich is not yet fully aware of the importance of providing good quality workforce and products.

From the results of testing the hypothesis shows that total quality management can affect managerial performance at Food manufacturing companies in Indonesia. This means that if managerial performance is not supported by total quality management, total quality management will result in poor quality. At Food manufacturing companieshas been good at implementing total quality management, from the research results almost all employees work according to the applicable SOPs. The results of the study show that there is an influence of total quality management on managerial performance, this shows that managerial performance at PT. The results of the study show that Total Quality Management influences managerial performance, indicating that managerial performance in food manufacturing companies in Indonesia is significantly affected by the implementation of Total Quality Management. Good communication with customers, employees or suppliers is well established, the teamwork that is created is able to support goals and system improvements are regularly carried out so as to achieve maximum customer satisfaction. The higher the total quality management that is applied, the managerial performance will also increase.

The Effect of Management Accounting Information System Characteristics on Managerial Performance

Based on the results of the study, the effect of the characteristics of the management accounting information system on managerial performance is 0.337 which is included in the medium or medium category. This coefficient indicates that the managerial performance variable is explained by the characteristics of the management accounting information system, which are reflected in the dimensions of broadscope, timeliness, aggregation and integration.

The results of the loading factor can be seen that the timeliness dimension has a high yield of other variables, namely 0.830 which indicates that employees at Food manufacturing companieshas coordinated well between one department and another. Thus the integration dimension can provide changes to managerial performance if the integration dimension is implemented properly in the company.

Research findings on the characteristics of management accounting information systems are already in a good category but not completely perfect. This is caused by a dimension that has a large gap compared to other dimensions, namely the aggregation dimension with a gap of 17%. This is because there are still employees of Food manufacturing companieswhich is not fully aware of the importance of properly conveying and reporting summary information to other units.

From the results of testing the hypothesis shows that the characteristics of management accounting information systems can affect managerial performance at Food manufacturing companies in Indonesia. This means that if managerial performance is not supported by the characteristics of the management accounting information system, it will result in the characteristics of the management accounting information system being of low quality.

Characteristics of management accounting information systems at Food manufacturing companiesis already good, from the results of the research, almost all employees work well. The results showed that there was an effect of the characteristics of management accounting information systems on managerial performance, this indicated that managerial performance at Food manufacturing companiesin obtaining more extensive information so that it can improve managerial performance, then timeliness helps a manager in making good and timely decisions, then with more concise information it shows good

managerial performance, then from the integration of information it will be able to improve managerial performance. The higher the characteristics of the management accounting information system that is applied, the managerial performance will also increase

CONCLUSION

Based on the research phenomena, problem formulation, hypotheses, and empirical findings, this study concludes that Total Quality Management (TQM) and the Characteristics of Management Accounting Information Systems (MAIS) have positive and significant effects on Managerial Performance in food manufacturing companies in Indonesia.

First, Total Quality Management has a significant positive effect on Managerial Performance. This finding indicates that better implementation of TQM contributes to higher managerial effectiveness. TQM supports managers through customer focus, quality orientation, scientific approaches, long-term commitment, teamwork, continuous system improvement, education and training, controlled freedom, and unity of purpose. However, managerial performance has not yet reached optimal levels because several TQM dimensions are still not fully implemented due to operational constraints and organizational challenges. Therefore, improving the consistency of TQM implementation will strengthen managerial performance and support better organizational outcomes.

Second, the Characteristics of Management Accounting Information Systems also have a significant positive effect on Managerial Performance. The availability of accounting information systems in food manufacturing companies is generally categorized as good, particularly in supporting planning, control, evaluation, and strategic decision-making. However, some dimensions such as broad scope, timeliness, aggregation, and integration still experience implementation limitations and practical obstacles. These weaknesses may reduce the effectiveness of managerial decisions and performance evaluation processes. Therefore, improving the quality and characteristics of management accounting information systems will further enhance managerial performance.

Overall, this study confirms that Total Quality Management and Management Accounting Information System Characteristics function as complementary managerial control mechanisms that strengthen managerial performance. The better the implementation of TQM and the stronger the characteristics of MAIS, the higher the managerial performance achieved by the company. These findings provide important implications for food manufacturing companies in Indonesia to improve operational excellence, strategic decision-making, and long-term organizational competitiveness.

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