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Logistic Capability and Total Quality Management Practice on SME's Performance

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Abstract

Purpose: This study aims to analyze and prove the effect of logistic capability and Total Quality Management practices on Micro, Small and Medium Enterprises (SME) performance directly or mediated by non-financial performance. **Research design, data and methodology:** This study tested the hypothesis using Hierarchical multiple regression analysis, the method of data collection in this study was using questionnaire, the sampling technique was purposive sampling technique, with SME that has been established for more than 5 years and manufacturing. The data analyzed were 180 respondents using SPSS 25. **Results:** The findings showed that logistic capability has direct and indirect effects on SME financial performance and has a positive effect on SME financial performance mediated by non-financial performance. While the total quality management practices have a positive effect on SME financial performance mediated by non-financial performance. Thus, companies can achieve maximum financial performance if they invest in developing employee knowledge and concerning on non-financial actions, such as employee satisfaction, innovation and proactively seeking market opportunities. **Conclusions:** In conclusion, one of the main factors that companies need to consider to improve financial performance is non-financial performance in mediating the effect of logistic capability and TQM practices on the financial performance of SMEs.

Keywords : Logistic Capability, TQM Practices, SME, Distribution, Non-financial Performance, Financial Performance

JEL Classification Code: M1, M11, M15

1. Introduction

Company's failure in conducting the business is caused by the manager's lack of understanding on their business goals so that it has implications for the decline in company performance. Sooner or later, company must have supply

chain agility by logistic capability to achieve performance by TQM (Gligor & Holcomb, 2012; Haroon, Shariff, & Yusof, 2019). The positive contributions are obtained from various processes or activities that provide added value to the company, for example the production process, logistics and marketing processes and all these activities must lead to

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the company's goals (Valaei & Rezaei, 2016). Some studies also showed the same results that logistic capability has a strong effect on company performance both financial and non-financial (Arsić, Jovanović, Tomić, Tomović, Arsić, & Bodolo, 2020). Thus, logistic capability is said to be one of the company's strategic choices in maintaining and improving company performance. In addition to logistic capability, there are other factors that affect performance, namely total quality management (TQM) practices. TQM is a continuous process needed by everyone in the organization to carry out all the responsibilities and achieve the standards needed and expected by consumers both external consumers and internal consumers.

Logistic capability and TQM practices are inherent to non-financial performance because logistic capability and TQM practices are related to the company's strategy, goals and vision/mission (Sridhar & Srinivasan, 2012). Therefore, non-financial performance is also one indicator of overall company performance (Haas & Hansen, 2005). Measuring non-financial performance aims to achieve long-term competitive advantage (Prieto & Revilla, 2004). Therefore, having concern on non-financial performance will facilitate the company to achieve maximum performance. Non-financial performance is suspected to have a role in mediating the correlation between logistic capability and TQM practices on company performance, in this case SMEs performance. In line with Baron and Kenny (1986), it can be said that non-financial performance meets the criteria as a mediating variable because there is a strong correlation between logistic capability and TQM practices on financial performance as well as the one between logistic capability and TQM practices on non-financial performance. Most of the literature discussed, focus on measuring SMEs financial performance, whereas according to Hoque (2004) measuring non-financial performance is as important as financial performance. The above opinion is also supported by contextual phenomena at SMEs in Indonesia, especially in Madura, as a development area following the construction of Suramadu bridge.

Based on the research conducted by Shahin (2011) shows that TQM has positive influence on five financial ratios and has negative influence on one ratio, and thus it can be concluded that financial performance of the corporation has been improved due to TQM implementation. It should be noted that among the ratios, debt to total assets is the one which its excessive increase indicates weakness, while increase in other five surveyed ratios can strengthen financial performance of each division respectively, the findings indicate that compared to standard organizations in the period after implementation of TQM, five ratios have been improved, while one ratio has been weakened. According to Blaik's logistics concept cited in Zimon (2016), in which the basis is in a systemic approach and orientation

of flow and crosscutting, is the major premise and the plan of application the total quality management concept. The basic elements of these programs, and also the guidelines of TQM philosophy are customer orientation, employee involvement and improving internal processes and making quality activities covering all the supply chain. It should also be emphasized that the supply chains operating in accordance with the principles of TQM philosophy are typically well-established and have a social recognition. The implementation of the principles of total quality management beyond the significant increase in the level of logistics customer service affects positively the efficiency of the supply chain by significant increase in the quality of the offered services and products, minimizing losses while increasing the efficiency of realized processes, use of modern quality management instruments, the integration of the activities of individual supply chain, improving the competitive position, increase the involvement of employees.

From the description above, it can be concluded that TQM and logistic domain has the positive impact on financial performance of the company through TQM which are focused on customers' need along with all the employee involved and the logistic domain for more security, efficiency, and good quality product for customer satisfaction. The satisfaction from the customers will have positive impact on company's financial performance and caused the repeat order from customer.

This study aims to analyze and prove the effect of logistic capability and Total Quality Management practices on SME performance directly or mediated by non-financial performance. This study uses perceptions to measure financial performance because of the limitations of financial statement data held by small organization. This can lead to a self-report from company leaders to assess their company's performance better than the actual situation. Regarding practical implications, this study shows that companies can achieve maximum financial performance if they invest in developing employee knowledge and have concern on non-financial actions, such as having concern on employee satisfaction, innovation and proactively seeking market opportunities. Measurement of SME financial performance is an evaluation of its financial context, and is used as a basis for making decisions for fund allocation. Non-financial performance as a mediating variable is the main contribution in this study, because without any non-financial actions, such as having concern on employee satisfaction, innovation and proactively seeking market opportunities, other activities will only be concentrated on short-term profits, because the measurement of non-financial performance aims to achieve long-term competitive advantage (Choi & Lee, 2003). Thus, it can be concluded that one of the main factors that companies need to consider to improve financial

performance is non-financial performance in mediating the effect of logistic capability and TQM practices on the financial performance of the Micro, Small and Medium Enterprises (SMEs).

2. Literature Review

Definition of supply chain management in a small or medium sized company is often narrowed to consideration of several key dimensions (business/economic, environment, social impact) (Kot, 2018). Opposed to this (and out of scope of this research), within large companies, existing literature considers a whole variety of logistics functions, including purchasing, warehousing, packaging, sales, flow of information, and materials. When witnessing efforts of an SME, to succeed in a very competitive market, it is often concluded that expansion to new markets and enlargement of internal operational capacity can establish as main sources of profitability. Logistics capacities, in terms of supply chain management, can be defined as all economic, infrastructural, and technical means of any type, size, and structure, all of which are available for an unlimited period of time, to be actively manipulated towards achieving business success. Still, after reviewing current literature, the influence of logistics capacity as one of main enablers of successful business performance is not clearly analyzed. The focus of this paper is on identifying financial and non-financial SMEs performance which have logistics capacities, compared to those which outsource logistics capacities, in order to maintain economic sustainability of their business performance.

2.1. Total Quality Management Practices

Total quality management (TQM) is essentially a unity of techniques, management principles, technology and methodologies that are used together to work with certain goals. TQM tries to develop the organization by creating better planning, external focus, design and priorities (Feng, Prajogo, Chuan Tan, & Sohal, 2006). TQM mentioned above consists of three important factors, namely strategic factors, technical factors and operational factors. Strategic factors are important to improve commitment to top management, organizational culture, continuous improvement and leadership. Technical factors are related to problem solving and the use of technology, whereas the operational factors are more focused on product design, customer relations and customer orientation.

TQM is seen as a quality operational enhancement model, able to generate performance. The argued compatibility and positive interaction with exploitation and exploration may open new gates towards a potential

integration, to fulfill the missing strategic dimension of TQM as the focus of the latter in mainly internal while exploration targets external required assets and capabilities (Moreno-Jiménez, Rodríguez-Muñoz, Hernández, & Blanco, 2014). TQM implementation allows a greater malleable structural design which enables the organization to absorb new knowledge into continuous process improvement and innovation of new products (Modarres & Pezeshk, 2017).

Lederer and Karmarkar in Zimon (2016) identify the key characteristics of TQM program as: A company-wide dedication to totally satisfying customer needs and expectations, quality concerns are fully integrated and central aspects of business planning, using factual data to support the decision making, involving the employers, prevention of quality problems, designing them out of products and the processes that create them and on planning for quality, a policy of continuous improvement.

SMEs require a greater focus on adopting and sustaining TQM practices to create a distinguished management style which would enable them to compete locally as well as internationally. TQM paves the way for channelizing a quality culture and cross-functional team knowledge transfer which can shield SMEs from intense competition and can allow them to leapfrog and outperform their business (Haroon et al., 2019). TQM enables organizations to build an organizational culture open and receptive to business innovativeness. Concurrently, TQM supports the ability of firms to learn by shaping corporate learning culture, supporting employees, teams and the organization as a whole in creating and sharing relevant knowledge.

2.2. Non-financial Performance

Non-financial performance is an approach that determines goals and is related to the organization's vision and strategy. Non-financial performance consists of various activities such as operational activities and logistical activities. Moeller (2009) states that non-financial performance or intangible performance consists of: (1) Innovation Capital, a component of performance in the form of expressing creativity; (2) Human Capital, the value of immaterial performance in terms of the human resources, knowledge of work patterns, social competence; (3) Customer Capital, refers to the material value in terms of the sales sector. Included in customer capital is the list of customers, market share, customer satisfaction and brand; (4) Supplier capital, in terms of purchasing, all immaterial values based on integrated supply relation; (5) Investor capital, in terms of a financial perspective, immaterial value can be seen from the value of capital and credit; (6) Capital process, determined through efficiency and the process of selecting work and organizational structures, including high

level quality control, and good communication between networks; (7) Location capital is a distinct advantage when the location of the company is very strategic with a connection to good infrastructure and transportation.

Non-financial performance measurement means realizing the company's strategy and vision on a tool that motivates the performance and communication intensity. In addition, the key factor in the organization's success is through non-financial performance that results in superior finance. Non-financial performance practices are related to product quality, service quality, customer satisfaction, employee satisfaction and community involvement (Ciptono, 2007). Non-financial performance is intended to improve quality, innovation, markets and reduce costs in production and other practices (Dunk, 2011).

2.3. SMEs Financial Performance

SMEs financial performance is expected to direct creativity and ensure that the emerging new ideas are translated into products desired by consumers (Hansson & Eriksson, 2002). In addition, Lassala, Orero-Blat, and Ribeiro-Navarrete (2021) also explains that financial performance can lead companies to adopt a strategic commitment and serve as a way to monitor important processes in the company, which are related to creativity, customization and interaction between opportunity and learning that allows to enhance the process so that maximum profit can be achieved.

The measurement of SMEs financial performance is an evaluation of its financial context, and is used as a basis in making decisions for allocation and funding, that a manager or director will not be able to make a good decision without financial information to respond to environmental situations (Moneva, Rivera-Lirio, & Muñoz-Torres, 2007). According to Škrinjar, Bosilj-Vukšić, & Indihar-Štemberger (2008), financial performance is the goal of all aspects of managerial activities. Measurement of financial performance is very important in an organization or known as monetary gains such as: net income, profit margin, market performance, all of which are directed to increase market share, sales volume, operating costs and efficiency.

2.4. Logistic Capability, Non-financial Performance, and Financial Performance

In this study, various impacts on economic sustainability of small and medium-sized companies are analyzed, and states that financial performance is influenced by logistic capability and non-financial performance (Arsić et al., 2020). For external aspects SME position within a supply chain, but also to internal aspects of the company itself. Empirical research findings suggested that logistics capacity can have

an impact on economic sustainability of SMEs, measured through SMEs performance (Kot, 2018). The company's competitive advantage will be achieved depending on the company's ability to observe the environment and market demands to gain business opportunities and operational skills (Kale & Singh, 2007).

Based on previous theories, organizations with logistic capability is different from the ones without logistic capability. Logistic capability is how to SMEs distribute their products and SMEs which are present on an international stage and have a very diversified consumer base (Arsić et al., 2020). In order to provide empirical evidence of the importance of the effect of logistic capability on financial performance, this study examines the following hypotheses:

H1: Logistic capability has a positive effect on SMEs financial performance

As explained in the introduction of this study, measuring performance should be carried out in an integrated and comprehensive manner involving all elements of the organization (Dick, 2009) and literature has confirmed the positive and significant correlation between the evaluation of non-financial performance and financial performance (Ciptono, 2007; Fullerton & Wempe, 2009; Prieto & Revilla, 2004; Škrinjar et al., 2008). All organizations expect maximum profit from the activities carried out. Profit is not only generated by good financial performance but there are also other influencing factors such as non-financial performance because non-financial performance plays a role in achieving long-term competitive advantages related to non-financial operational activities. In order to provide empirical evidence of the importance of the effect of logistic capability on financial performance mediated by non-financial performance, this study examines the following hypotheses:

H2: logistic capability has a positive effect on SMEs financial performance mediated by non-financial performance.

2.5. Total Quality Management, Non-financial Performance, and Financial Performance

TQM and learning capability are important for financial and non-financial performance of SMEs (Shafqat et al., 2021). TQM is one of the keys to a company's success because TQM is a continuous process that is needed by everyone in the organization to carry out all the responsibilities and achieve the standards set and expected by consumers both internal and external (Miller, 1996; cited in Sutrisno et al., 2019). TQM practices influences overall

organizational performance because they are related to the innovation and quality of each process. This makes TQM practices essential in an organization because the organization may discover the productivity from its resources, the resource's problem solving ability, the leadership and the relationships with suppliers. TQM practices are related to the commitment of the work force to continue to make improvements to the quality and optimization of the value generated which will indirectly affect the overall organizational performance. In order to provide empirical evidence of the importance of the influence of TQM practices on financial performance, this study examines the following hypothesis:

H3: TQM practices have a positive effect on SMEs financial performance

Salaheldin (2009) states that indicators of implementing TQM are the key to the success of the financial performance of medium-sized companies in Qatar through the mediating role of non-financial performance. It is confirmed by Demirbag et al. (2006) who emphasizes the mediating role of non-financial performance regarding the effect of TQM application on the company's financial performance explicitly described the financial performance of small and medium-sized companies in Turkey, this study examines the following hypothesis

H4: TQM practices affect SMEs financial performance mediated by non-financial performance.

3. Research Methods and Materials

Independent variables consisted of two variables; those are; (1) Logistic capability is the ability Capability for surviving and prospering in a competitive environment of continuous and unpredictable change by reacting quickly and effectively to changing markets both internally, and in conjunction with its key suppliers, to adapt or respond in a speedy manner to changes as well as potential or actual disruptions for firm performance consisting 10 questions and (2) TQM practice is the ability of an organization to respond to present and future markets, so that the processes and products are in accordance with what consumers want. TQM practice consists of three factors namely strategic, technical and operational consisting of 15 questions, using a 5-point type Likert scales, ranging from strongly disagree to strongly agree. While mediating variables are Non-financial performance is related to product quality, service quality, customer satisfaction, employee satisfaction and certain community involvement (Ciptono, 2007). This variable is measured using an instrument developed by Prieto and

Revilla (2004) consisting of 5 question items using a 5-point Likert scale, ranging from strongly disagreeing to strongly agreeing.

Meanwhile, dependent variable used in this study is financial performance. Financial performance consists of 4 indicators, namely (1) the perception of an average increase in Return on Investment (ROI) for the last 3 years (in rupiah); (2) Perception of average profit for the last 3 years (in rupiah); (3) Perception of profit for the last 3 years (in rupiah); (4) Perception of an average increase in Return on Assets (ROA) for the last 3 years. Instrument is measured using instrument developed by Prieto and Revilla (2004) consisting of 5 question items, using a 5-point Likert scale, ranging from strongly disagree to strongly agree.

The sampling technique in this study uses a purposive sampling technique, a sampling of the population based on certain criteria. The sample criteria used in accordance with the objectives of this study are small companies that are run independently and have assets between Rp 50,000,000 and Rp 500,000,000 or sales between Rp. 300,000,000 and Rp 2,500,000,000 per year in accordance with the provisions of Law Number 20 of 2008 concerning SMEs and the small companies have been operating for more than 5 years, operating in Madura in manufacturing businesses. The sample size in this study was 250 respondents. In order to collect primary data, data collection technique in this study is questionnaire. Primary data is data obtained directly from the first hand and has not been processed by any party for certain research. Data sources from the first party referred to in this study are the leaders of small companies located in Madura.

4. Results and Discussion

Measuring the quality of the research instrument was carried out by testing the validity and reliability of all the variables or indicators used in this study. Validity test was carried out using Confirmatory Factor Analysis using SPSS 25 software. Reliability test aims to examine the consistency of the indicators used in this study. The results of validity and reliability tests can be seen in Table 1. SMEs' performance construct validity was measured using 5 question items and all of them were reliable as evidenced by MSA of more than 0.5. It indicates that small companies experience rapid development and growth. The construct of non-financial performance was measured by 5 question items and all of them were valid and reliable as evidenced by an MSA of more than 0.5. It indicates that small companies have concern on employee satisfaction, reward and also the commitment of the leaders to always innovate for the betterment of the company.

Logistic capability does not have dimension. The TQM

practice construct consists of three dimensions, namely strategic, technical and operational factors. Each consists of 5 question items and all question items were valid and reliable.

Table 1: Statistical Description

Item	MSA	KMO
Financial performance		0.769
KK1	0.643	
KK2	0.664	
KK3	0.614	
KK4	0.749	
KK5	0.845	
Logistic capability		
Internal factors		0.774
IF1	0.599	
IF2	0.858	
IF3	0.855	
IF4	0.760	
IF5	0.603	
External factors		0.717
EF1	0.827	
EF2	0.669	
EF3	0.834	
EF4	0.650	
EF5	0.728	
TQM practices		
Strategic factors		0.751
FS1	0.587	
FS2	0.821	
FS3	0.585	
FS4	0.780	
FS5	0.870	
Technical factors		0.835
FT1	0.811	
FT2	0.888	
FT3	0.814	
FT4	0.853	
FT5	0.842	
Operational factors		0.779
FO1	0.794	
FO2	0.815	
FO3	0.744	
FO4	0.742	
FO5	0.827	
Non-financial performance		0.759
KNK1	0.599	
KNK2	0.760	
KNK3	0.730	
KNK4	0.709	
KNK5	0.618	

While Table 2 shows that all variables have a high level of internal consistency because the Cronbach alpha (α) value is greater than 0.7. Thus, it can be concluded that the instruments in this study are valid and reliable.

Table 2: Reliability Test

Item	Cronbach's Alpha
Logistic Capability Internal Factors	0.782
External Factors	0.757
TQM practices Strategic factors	0.765
Technical factors	0.835
Operational factors	0.742
Non-financial performance	0.753
SMEs' Financial Performance	0.727

Table 3: Summary of the Results of Simple Regression Analysis

Dependent Variable: Financial performance				
Independent Variable	α	t	p	R ²
Logistic Capability	0.703	13.152	0.000***	0.490
TQM practices	0.671	12.036	0.000***	0.446
Non-Financial Performance	0.647	11.294	0.000***	0.521

*** Significant at the level of $p < 0.001$

Based on the results of regression analysis, Table 3 shows that logistic capability has a positive and significant impact on financial performance with a value of path coefficient (α) of 0.703 with the t-value = 0.000, and the variance explained by the logistic capability with value of determinant coefficient (R^2) of 0.490. The above table also shows that non-financial performance has a positive and significant effect on SMEs' financial performance with a value of path coefficient (α) of 0.647 with a probability of 0.000. In addition, TQM practices have a positive and significant effect on SMEs' financial performance with a value of path coefficient (α) of 0.671 with a probability of 0.000. The variance explained by TQM practices is 0.446.

The results of H1 testing show that logistic capability has a positive effect on the financial performance of small companies. The finding provides empirical evidence that logistic capability does not only improve the performance of large companies (Zawawi et al., 2017), but also improve small companies. This study also confirms that small companies are able to withstand crises because they understand what market needs. Thus, in other words, logistic capability as a predictor of the financial performance of small companies has been empirically tested in various economic environmental conditions.

The results of H2 testing show that logistic capability has a significant effect on the financial performance mediated by non-financial performance. Therefore, non-financial performance is also one indicator of overall company

performance (Haas & Hansen, 2005). The finding provides empirical support that not only is the market need to be considered, but also the internal condition of the company because the company's customers are not only external consumers but also internal consumers (employees) that should be considered.

Dayton (2003) in his research reveals that many other factors influence SMEs' financial performance such as TQM practices. This is reinforced by the results of H3 testing that there is a positive effect of TQM practices on SMEs' financial performance. It indicates that small companies (SMEs) make continuous improvements, control all activities, have concern on customer satisfaction and focus on product quality. The results of H4 testing show that TQM practices have a significant effect on the performance of small companies are mediated by non-financial performance, this is in line with other studies (Brah & Lim, 2006). This finding shows that there is a strong interaction and is supported by a leadership attitude that proactively controls company's activities and innovates to always provide the best for its customers.

Non-financial performance as a mediating variable is the main contribution in this study because without the non-financial measurements, such as having concern on employee satisfaction, innovation and proactively seeking for market opportunities, other activities will only be concentrated on short-term profits earning because the measurement of non-financial performance aims to achieve long-term competitive advantage (Prieto & Revilla, 2004). Therefore, it can be concluded that one of the main factors that companies need to consider to improve financial performance is non-financial performance in mediating the effect of logistic capability and TQM practices on the financial performance of the Micro, Small and Medium Enterprises (SMEs).

From a theoretical point of view, this study shows that logistic capability and TQM play an important role in achieving non-financial performance and financial performance of a company. Therefore, non-financial (non-physical) resources must be considered to explain the company's overall performance.

Regarding practical implications, this study shows that companies can achieve maximum financial performance if they invest in developing SMEs operational optimization and having concern on non-financial measurements, such as paying having concern on employee satisfaction, innovation and proactively seeking for market opportunities, other activities will only be concentrated on the search for short-term profits, because the measurement of non-financial performance aims to achieve long-term competitive advantage. Therefore, it can be concluded that one of the main factors that companies need to consider to improve financial performance is non-financial performance in

mediating the effect of logistic capability and TQM practices on the financial performance of the Micro, Small and Medium Enterprises (SMEs).

4.1. Originality

Non-financial performance as a mediating variable is the main contribution in this study, because without any non-financial actions, such as having concern on employee satisfaction, innovation and proactively seeking market opportunities, other activities will only be concentrated on short-term profits, because the measurement of non-financial performance aims to achieve long-term competitive advantage. Thus, it can be concluded that one of the main factors that companies need to consider to improve financial performance is non-financial performance in mediating the effect of logistic capability and TQM practices on the financial performance of the Micro, Small and Medium Enterprises (SMEs).

4.2. Limitation

There are some limitations in this study including the fact that this study only focuses on two predictor variables, namely logistic capability and TQM practices. Further research can add other variables, including logistic orientation and logistic strategies. This study uses perceptions to measure financial performance because of the limitations of financial statement data of the small companies. This can lead to a self-report from company leaders to assess their company's performance better than the actual situation. The next researcher needs to control the evaluation of the company's performance accompanied by financial statements.

5. Conclusions

Based on the findings, it is possible to infer that logistical capacity has a favorable and considerable impact on financial performance. This indicates that by implementing operation capability, strategic choices for performance enhancement may be acquired. Furthermore, logistic capacity produces an optimized distribution operation role. Logistic skill also has a beneficial impact on financial performance, which is mediated through non-financial performance. It demonstrates that non-financial performance may be used to predict future financial performance. TQM procedures have a large and favorable impact on financial performance. It indicates that strategic advantage may be gained by using TQM methods such as leadership commitment, continuous improvement, quality emphasis, and customer-oriented performance improvement.

Furthermore, TQM practices have a favorable and considerable impact on financial performance, which is mediated through non-financial performance. It indicates that gaining a strategic advantage may be accomplished through boosting the quality of market innovation, lowering manufacturing costs, and rewarding people.

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