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Implementation of Total Quality Management (TQM), Organizational Culture and Performance: Evidence from Indonesian Micro, Small and Medium Enterprises (MSMEs)

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Abstract. Organizational performance is a description of a level of achievement of an implementation of an activity in actualizing goals and objectives of an organization contained in the strategic planning of an organization. The organizational performance can be seen from the extent to which the organization can achieve the goals. To measure this organizational performance, it can be used quantitative and qualitative approaches. Total quality management (TQM) and organizational culture include variables that affect an improvement of the organizational performance. TQM is a philosophy of quality management to improve all organizational performances based on leadership, customer focus, education and training, benchmarking, teamwork, continuous improvement processes, employee engagement, supplier quality management, recognition, and rewards. The organizational culture provides assertiveness and reflects specifications of an organization so that it differs from other organizations. The organizational culture encompasses all behavioral patterns of members of an organization and becomes a grip for each individual in interacting with both the internal and external environment within a Micro, Small and Medium Enterprises (MSMEs). Micro, Small and Medium Enterprises (SMEs) have a vital role in the growth and development of economy. Furthermore, MSMEs also exist not only in developing countries (Indonesia) but also in developed countries. Moreover, the role of MSMEs not only has a role in the growth and development of the economy, but also has a very important role in addressing unemployment problems. However, these situations are not supported by quality management as a factor to support a success in a MSMEs and the existence of an organizational culture which can help stand small and medium enterprises in a competition. The objective of this study was to determine the correlation and effect between the implementation of TQM and organizational culture on MSMEs' organizational performance in Indonesia. The data analysing technique was descriptively carried out by multiple linear regression. The result of this study is expected to know the correlation and effect between implementation of TQM and organizational culture on organizational performance in Indonesia and to provide practical knowledge for Indonesian practitioners and academics to understand the eminence of the implementation of TQM and organizational culture on MSMEs' performance.

Keywords: Organizational Performance, TQM, Organizational Culture, MSMEs

1. Introduction

The expanding the market and survive in a competitive global marketplace requires companies to provide product and service of quality. Implementation of TQM in the organization has been the answer to this challenge of global competition. TQM will bring the companies to a world class service and manufacturing organizations, by providing the kind of quality products and services required for customer satisfaction, have gained competitive

edge and greater market share [30]. It has become a practice for modern industry to improve organizational performance over the past few years. In addition, the implementation of TQM is influenced through culture. The culture is a very important variable and has a relationship between success and barrier of TQM deployment.

TQM literature indicates that organizational culture is an important aspect in the successful implementation of TQM [6][10][12][13][26]. Organizational culture has affected soft and hard TQM. The clan and adhocracy cultures provide the best working environment for the successful implementation of TQM[2]. Many companies fail to implement TQM because they do not recognize that the implementation of the procedure may be a fundamental change of direction, the values and culture of their company[8]. Other researchers show organizational culture is being recognized increasingly as an important determinant of quality management success and organizational performance[4][23][27][31]. In the Indonesian context previous research has proposed the obstacles to key issues of the quality management system are characterized as socio-cultural dynamic rather than technical-structural Indonesia[13]. Implementation of TQM has a positive and significant influence in shaping the organizational culture[3].

The key point of this study is quality management, and they are important for both practitioners and academics. The aims of this study are to investigate a relationship between organizational culture, TQM Implementation and company performance on Indonesian MSMEs. The result provides an important contribution in the better understanding implementation of TQM and ISO process. These help to build theories and models of total quality management practices in TQM and ISO implementations.

2. Organizational Culture, Total Quality Management and Performance

Understanding the relationship between organizational culture, TQM implementation and performance before the implementation of TQM in MSMEs are important. Changes in working environments produce different emphases within an organization, thus, new approaches to learning and adaptation are required. The cultural change can be initiated by top management[7]. Leaders must focus on what the objectives of the organization and implement appropriate strategies and in accordance with the subordinates to achieve the company's success.

According several earlier researches, it has been found that organizational culture is an important aspect in the successful implementation of TQM[7][12][26][13]. Hofstedes dimension national culture and organizational culture based on Competing Values Framework (CVF) impact successful TQM implementation[21][33]. The national culture has a positive effect on the organizational culture, while the organizational cultures have a significant effect on the implementation of TQM in Indonesia[21]. In the context of organizational performance, the organizational culture has a significant effect on the implementation of TQM and organizational performance[26].

3. Methodology

A survey instrument in this research is developed based on the previous research. The model is used to investigate a relationship between organizational culture, TQM implementation and performance in SMEs. In this study, the organizational culture variables were based on Organizational Culture Assessment Instrument (OCAI), as developed by Cameron and Quinn[8] is used to measure organizational culture. While the Potential TQM implementation constructs were identified from the instruments of Aziz and Morita[3]. The company performance was based on the work of Salaheldin[26] and M. Mar FF et al[20]. In the study participants are expressing their opinion, their agreement or disagreement using a seven-point Likert scale, namely: (1) Strongly Disagree until (7) Strongly Agree. Based on research objectives, to clarify relationship between organizational culture, TQM

implementation, and performance in Indonesia MSMEs, following the three hypotheses are offered in this study:

Organizational culture is defined as the values, beliefs, and hidden assumptions that organizational members share[7]. Cameron and Quinn (1999) built the competing values framework (CVF) model of organizational culture which was developed based on research on the major indicators of effective organisations. The CVF is one of the most extensive models and has been used in empirical studies on organizational culture. This framework was developed according to two main dimensions: flexibility as opposed to stability, and internal as opposed to external focus. Plotted on a Cartesian plane, these dimensions give rise to four main quadrants, each of which represents a dominant culture type: clan, adhocracy, market, or hierarchy. TQM literature indicates that organizational culture is an important aspect in the successful implementation of TQM[6][12][13]. The clan and adhocracy cultures provide the best working environment for the successful implementation of TQM[2]. Many companies fail to implement TQM because they do not recognize that the implementation of the procedure may be a fundamental change of direction, the values and culture of their company[8]. Other researchers show organizational culture is being recognized increasingly as an important determinant of quality management success and organizational performance[4][27][31].

H1. Organizational culture significantly affects TQM implementation. Organizational culture represents four factors such as clan culture (OC1), adhocracy culture (OC2), hierarchy culture (OC3), and market culture (OC4).

Organizational performance comprises the actual output or results of an organization as measured against goals and objectives[24]. Measuring performance is a critical factor and crucial for the effective organization because it requires to improve the organizational performance. Several researchers have been analyzed the impact of Organizational culture and organizational performance. That Organization culture had a positive and significant effect on the organization performances [10][23].

H2. Organizational culture significantly affects organizational performance. The performance represents two factors such as financial performance (OP1), and nonfinancial performance (OP2).

Several researchers have been analyzed the impact of TQM practices and organizational performance[15][19][25][26][28][33]. As conclusions, they all consistently found a positive and significant effect between the implementation of TQM practices and organizational performance. In our study, performance measured in two dimensions: financial and non-financial. Financial performance measured by financial measures such as return on assets, profit to revenue ratio, revenue growth and net profits. Non-financial performance are secondary measurement result of the implementation of TQM, which measured using market share, customer satisfaction, products/service defects or failures, customer complaints, employee satisfaction, employee turnover, and reputation among major customer segments. Accordingly, performance measures have been suggested by previous researcher[17][27] are used to measure performance in this research. Al-Hawary and Abu-Laimon (2013) assessed the impacts of TQM practices on service quality in Jordan cellular communication companies. Their results showed that the leadership, information and analysis, customer focus, continuous improvement, and supplier quality management had positive effects on service quality.

H3. TQM implementation significantly affects organizational performance. TQM Implementation represents ten factors such as Leadership (TQM1), Vision and Plan Statement (TQM2), Customer Focus (TQM3), Education and Training (TQM4), Benchmarking (TQM5), Teamwork (TQM6), Continuous improvement process (TQM7), Employee Involvement (TQM8), Supplier Quality Management (TQM9), Recognition and Reward (TQM10)

The population of this study is the MSMEs in Lampung, South Sumatera, Jakarta, West Java , and Bali province in Indonesia that has implemented quality management or TQM. The company information was obtained from the Indonesian Statistics Bureau. In Lampung and Surabaya province have several small and medium companies. Prior to distributing questionnaires, managers are interviewed using the telephone. In addition to those perceptual measures, we asked a yes–no question in the questionnaire to the respondent if the company had implemented a TQM or quality management, if so when they started. The respondents have to have some knowledge of the implementation of quality management. The type of sample and the number of companies are determined on the basis of information require in this study. We visited each company and checked the progress of each company.

A sample of companies was randomly selected from the database. A total of 319 questionnaires from senior executive, general manager, quality manager, managerial level and ordinary employees in these firms. The Breakdown of the respondents' profile in shown in this table:

Table 7 Breakdown of the Responden

Province	**Frekuensi**	**Percentage (%)**
Lampung	116	36,4
South Sumatera	50	15,7
Jakarta	61	19,1
West Java	42	13,2
Bali	50	15,7
Unit Businnes	**Frekuensi**	**Percentage (%)**
Manufacture	132	41,4
Service	94	29,5
Others	93	29,2

4. Result and Discussion

Data were collected from respondents for each type of firms has been analyzed using SPSS 21. Factor-analysis and Cronbach's alpha test conducted by analyzing the data collected. The reliability tests with Cronbach's alpha and the validity test with factor-analysis formed in a single factor with eigenvalue greater than one result from Aziz and Morita[3].

The multiple regression analysis used four factors of organizational culture as independent variables, TQM constructs and two factors of organizational performance as dependent variables, as shown in Table 3. The organizational culture significantly affected TQM, confirming hypothesis H1. Clan and adhocracy cultures had a significant positive effect on TQM. For hypothesis H2, only one factor of organizational culture (Hierarchy culture) had a positive and significant effect on finansial and non-financial performance.

Table 8 Profiles of the respondents by job position and industry

Job Position	**Frequency**	**Percentage (%)**
CEO/GM/Directur	154	48,3
Engineering Manager	9	2,8
HRD Manager	3	,9
Quality Manager	6	1,9
Production Manager	32	10,0
Staff	96	30,1
Others	19	6,0
Industry	**Frequency**	**Percentage (%)**
Food industry	97	30,4
Funiture and Wood Industry	42	13,2
Mining	2	,6
Clothing, Garment and Leather	39	12,2
Cemical and Petrochemical	4	1,3
Agribusiness Industry	8	2,5
Others	127	39,8

Table 9 Regression analysis between organizational culture, TQM, and performance

Predictors (Organizational Culture)	**TQM**			**Financial**			**Non-Financial**		
	R = 0,828			*R* = 0,580			*R* = 0,585		
	F-value = 136,645			*F*-value = 12.296			*F*-value = 32,550		
	Significance = 0.000			Significance = 0.000			Significance = 0.000		
	B	***t***	**Sig.**	***B***	***t***	**Sig.**	***β***	***T***	**Sig.**
Clan	,061	,986	,325	,099	1,105	,270	,106	1,184	,237
Adhocracy	,333	6,719	,000**	,182	2,526	,012*	,205	2,852	,005**
Market-1	-,067	-1,497	,135	,014	,211	,833	,082	1,265	,207
Market-2	,329	7,651	,000**	,107	1,720	,086	-,012	-,195	,845
Hierarchy	,295	4,695	,000**	,270	2,957	,003**	,281	3,096	,002**

Note: $^{*}t \geq t_{(0.05)} = 1.657$; $^{**}t \geq t_{(0.01)} = 2.356$

Organizational culture is an important aspect of TQM implementation. The clan culture emphasizes commitment, communication, employee involvement, teamwork, and development while concentrating on flexibility and discretion with internal strengthening. While the adhocracy culture emphasizes creativity, flexibility, innovativeness, and adaptability, both culture's dimensions suggest a conducive environment for the effective implementation of TQM. This result is consistent with previous studies [1][2]. The successful implementation of TQM is determined by an awareness of and adaptation to organizational culture before implementation. In addition, only market culture had a significant effect on non-financial performance in the relationship between organizational cultures and organizational performance. The market culture emphasizes productivity, profitability, and goal achievement with stability and control to enhance external competitiveness. The success for a market culture is measured by a high market share, customer satisfaction, and a strong

reputation among major customer segments. Indonesian companies can adopt a market culture to improve their non-financial performance.

The multiple regression analysis used 10 variables of TQM constructs as independent variables and two factors of organizational performance as dependent variables, as shown in Table 3.These results show that TQM implementation had a significant effect on organizational performance, confirming hypothesis H3. Five constructs of TQM implementation (leadership, education and training, teamwork, supplier quality management and recognition and reward) had significant positive effects on financial performance, while benchmarking had a significant negative effect. Analysis shows that the five constructs of TQM implementation (leadership, teamwork, continuous improvement process, supplier quality management and recognition and reward) had significant positive effects on non-financial performance, while benchmarking and vision and plan statements had significant negative effects.

These results are consistent with those of the previous studies [26][27]. Thus, leadership correlates to financial and non-financial performance. Leadership can be impactful in a variety of ways. For Indonesian companies, leaders can institute education and training to improve employee skills and achieve organizational goals. They can also develop teamwork to manage change, implement plans, solve problems, and create a sense of empathy and engagement. Teamwork can improve the quality of products and services, lower rates of failure and defective products, and was fundamental to successful TQM implementation. Additionally, companies require continuous process improvement to increase productivity, reduce failure rates, improve process efficiency, and stimulate innovation. This is also essential for supplier quality management to improve product quality and organizational performance. A continuous supply of raw materials with the required quality is vital in all stages of manufacturing. Long-term relationships with inspection teams can help minimize the cost of raw materials[17]. In addition, recognition and rewards are important business tools. They can help improve performance within an organisation and can effectively stimulate employee commitment to quality. Companies must develop a formal compensation system to encourage, evaluate, reward, and recognize individual and team efforts at quality enhancement and improved customer satisfaction[4].

Table 10 Regression analysis between TQM constructs and performance

Predictors (TQM constructs)	**Financial**			**Non-Financial**		
	R = 0,632			*R* = 0.605		
	F-value = 20,533			*F*-value = 17,824		
	Significance = 0.000			Significance = 0.000		
	β	***T***	**Sig.**	***B***	***t***	**Sig.**
Leadership	,064	,914	,362	,181	2,511	,013*
Vision and Plan Statement	,288	3,572	,000**	,304	3,676	,000**
Customer Focus	,182	2,777	,006**	,105	1,561	,120
Education and Training	-,112	-1,474	,142	-,143	-1,821	,070*
Benchmarking	,053	,803	,423	,091	1,337	,182
Teamwork	-,147	-2,232	,026*	-,108	-1,591	,113
Continuous Improvement Process	-,132	-1,676	,095	,049	,610	,542
Employee Involvement	,208	2,601	,010**	,152	1,851	,065*
Supplier Quality Management	,239	3,618	,000**	,140	2,069	,039*
Recognition and Reward	,066	,857	,392	-,076	-,969	,333

Note: $^{*}t \geq t_{(0.05)} = 1.657$; $^{**}t \geq t_{(0.01)} = 2.356$

Furthermore, Table 4 shows that benchmarking and vision and plan statements have significant negative effects on organizational performance. However, previous researchers have found benchmarking to have a significant positive effect[30], as it is one way to improve product quality, reduce production cost and increase sales. In addition, vision and plan

statements results revealed that there is no clear long-term vision towards improving organizational performance. Whereas Zhang[33] proposed vision, and plan statements provide a clear overview of strategies for an organisation to achieve its goals. Vision provides direction and the path for transformation. On the other hand, Table 3 shows that employee involvement did not have a significant effect on organizational performance. This could be due to Indonesian companies not having employees who are thoroughly engaged in performance improvement. The aim of employee involvement is to encourage them to contribute more to the firm. However, unfortunately, some companies only view employees as one of the company's resources. Thus, managers should trust and care for their employees, and encourage and motivate them to develop and utilize their full potential.

5. Result and Discussion

Numerous hypotheses testing MSMEs show a number of relationships between the variables as follows:

- Organizational culture has a direct impact on TQM implementation. Clan and adhocracy cultures have significant positive effects on TQM. However, only hierarchy culture shows a positive effect on non-financial performance.
- TQM constructs play a positive role in improving organizational performance. TQM implementation requires leadership, education and training, teamwork, continuous improvement process, supplier quality management, and recognition and rewards. These constructs are vital to improving organizational performance.

The results of this study indicate that organizational culture has an effect on TQM and organizational performance. Additionally, TQM constructs have a positive impact on organizational performance.

This research addressed the issue of culture and its relationship with the implementation of TQM. Despite our findings, and there are opportunities for further research. First, the instruments in this study can be used for larger sample sizes that have more mixed demographics. Second, the data collected in this study was subjective and dependent on the perceptions of the respondents. Further research could include observations using a longitudinal case study. Third, further research could consider financial statements and other performance measures as indicators of company performance.

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