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Darmawan Napitupulu[1,2], Krisna Adiyarta[2], Mohammad Syafrullah[2], Tata Sutabri[3]

[1]Research Center for Quality System and Testing Technology, Indonesian Institute of Sciences, Banten, Indonesia
[2]Program Studi Magister IlmuKomputer, Universitas Budi Luhur, Jakarta, Indonesia
[3]Fakultas TeknologiInformasi, UniversitasRespatiIndonesia, Jakarta, Indonesia

Email: darwan.na70@gmail.com, krisna.adiyarta@budiluhur.ac.id, mohammad.syafrullah@budiluhur.ac.id, tata.sutabri@urindo.ac.id

Abstract. Generic requirements of ISO 9001 make it applicable to all types of organizations including SMEs. However not a few of SMEs are not able to obtain recognition or certification from ISO 9001. Problems faced by SMEs are lack of capital and access, limited human resources, low knowledge and skills to weak business networks and market penetration ability is alleged to be the cause. This certainly does not mean that SMEs are not able to apply ISO 9001. In the initial survey research, researchers found some SMEs took the initiative to successfully obtain certification. This study aims to examine the level of readiness of SMEs in the application of quality management system in terms of socio-technology. The research method used is survey with descriptive quantitative approach. The results showed that overall the level of SME quality culture is still relatively low with an average score of 2.15. This means that the level of readiness of SMEs in the implementation of quality management system is also said to be low. Some principles of quality management have been done but still far from ideal conditions where quality aspects have not been a priority of SMEs.

1. Introduction

End of 2015 was a new history for the Indonesian economy. This is due to the commencement of the ASEAN Economic Community (MEA) where in the MEA the products of ASEAN countries will be free to enter other ASEAN countries. This condition is an opportunity as well as a challenge for business actors in Indonesia, especially small and medium enterprises (SMEs) which has been the backbone of the Indonesian economy, even during the past monetary crisis [1]. SMEs can survive the monetary crisis because they do not use imported raw materials that are generally used by large businesses or companies [2]. But to be able to compete with products from within and outside the country, SMEs need to show its superiority. Improving the quality of products/services is absolutely necessary for SMEs to have competitive advantage. Good products/services can only be generated through good internal organizational processes so that ultimately can increase stakeholder satisfaction [3].

The application of the principles of quality management is required to ensure the quality of the process, which in turn will affect the quality of the products/services offered by SMEs. Therefore, the strengthening of management on SMEs is absolutely necessary. In other words, the principle of quality management is an important factor in organizational management.

One of the most widely adopted organizational strategies is the ISO 9001 Quality Management System aimed at providing quality assurance of products/services through the improvement of quality management practices provided [4]. ISO 9001 is a standard quality management system issued by the world standardization body of The International Organization for Standardization (ISO) that is generic, applicable to all organizations both government and private as well as non-profit organizations. ISO standards are also flexible to be applicable to all levels of organizational management. Quality management system (QMS) such ISO 9001 has been implemented in more than 162 countries [5]because it is considered proven to provide significant benefits in the improvement of organizational performance. Such performance includes organizational productivity, improved working procedures, increased trust in organizational quality, enhancement of corporate image and customer satisfaction [6]. In other words, an organization capable of implementing a quality management system in accordance with its organizational context, the organization will benefit from applying quality management principles.

As mentioned earlier that the generic requirements of ISO 9001 make it applicable to all types of organizations including SMEs. However not a few of SMEs are not able to obtain recognition or certification of ISO 9001 standards. It is reported that the problem of SMEs is the limitations of the lack of capital and access, low human resources in terms of formal education, knowledge and skills as well as weak business networks and market penetration ability [7][8].

SMEs do have different characteristics in terms of assets, structures and strategies compared to large enterprises [9]. SMEs have a flat and flexible structure, when compared to large enterprises where SME strategies are more informal and dynamic. Characteristic differences between SMEs and large enterprises are also the cause of differences in the successful implementation of quality management systems.

In addition, one of the problems related to the implementation of ISO 9001 in SMEs is the assumption of inappropriate ISO 9001 for SMEs. Various limitations of SMEs that cause the difficulty of ISO 9001 can be implemented. This is because in achieving its goals the organization tends to categorize itself as an organic organization, which emphasizes the important role of the individual. As a preliminary study, all roles are mostly performed by the owner (one man show) of the SMEs starting from the selection of raw materials, production to marketing. There is no clear and detailed division of labor and procedures so that the management of the business does not go well and impresses the ad hoc without any careful planning. Whereas ISO 9001 was generally viewed the organization as a form of mechanistic organization that emphasizes the important role of the procedure [10]. It is rarely found in organizations of this type of SMEs.

Departing from the above problems, resource constraints and organizational models tend to be organic which makes it difficult for SMEs to gain recognition or QMS certification. This certainly does not mean SMEs are not able to apply the QMS ISO 9001. In the initial survey research, researchers found some SMEs took the initiative to implement SMM to successfully achieve the certification of SMM ISO 9001.

This study aims to examine the socio-technological aspects of SMEs readiness in applying QMS ISO 9001 especially from the aspect of quality culture. Organizations that are willing to implement QMS should adopt the principles of quality management in their overall business processes. The principles of quality management or so-called quality culture must be incorporated into the practice of SMM implementation. There are 8 basic principles of quality management that are the basis of ISO 9001 standards, namely customer focus, leadership,

involvement of people, process approach, system approach to management, continual improvement, factual approach to decision making, and mutually beneficial supplier relationships [11] . With these 8 basic principles are expected to implement ISO 9001, and related organizational business processes become more productive and effective to improve the company's performance in achieving the targets set. If one principle is omitted or not executed, it may cause the QMS implementation to be weak or even fail [11].

Based on some previous research on organizational quality culture that can be encountered such as research conducted by Goestch & Davis [12] who found that the quality culture can support the successful implementation of quality management system in the organization. Organizations that have a quality culture that is finally able to apply QMS optimally to improve the quality of products / services produced. Ipnugraha [13] mentioned that the practice of quality management principles facilitates the development of QMS in developing countries. Esa & Syukri [14] in his research also found the perception of the implementation of ISO 9001: 2008 based QMS is quite high. This is supported by a conducive organizational culture, especially the culture of quality. Some empirical or theoretical studies have found that the practice of QMS implementation is determined by quality culture factor [14]. In line with that, Maulana [15] also affirmed the awareness of quality culture is very important in the organization including the culture of its members to continue to maintain the certification of ISO 9001 QMS.

2. Methodology

The type of this research is descriptive research that aims to find a picture about the readiness of applying quality management system at the level of small and medium enterprises (SMEs) seen from the side of organizational culture. This study explores about organizational culture, especially the quality culture in several SMEs in Yogyakarta city, especially SMEs under the supervision of BPTBA LIPI Yogyakarta. There are total 5 (five) selected SMEs that have food processing business field that is Bandeng Presto, Gudeg, Lobster, Tuna and Chocolate. Total respondents in the survey involved were 5 respondents as business owners who were asked to fill out questionnaires and interviewed.

As mentioned earlier that the quality culture will support the successful implementation of the quality management system in the organization [12], then in this study will be explored the extent to which the quality culture of the organization becomes a key factor for SMEs in the implementation of quality management system. Based on Esa & Syukri's research [14] 2011), the quality culture variables focus on eight dimensions of ISO 9001: 2008: organizational culture that has characteristics: customer focus, leadership, employee involvement, process approach, system approach, continuous improvement, factual approach in decision making and relationships with suppliers. However, since ISO 9001: 2008 has been renewed to ISO 9001: 2015, international experts of ISO/TC 176 revise the quality management principle to only 7 indicators: customer focus, leadership, people involvement, process approach, continuous improvement, decision making evidence-based and supplier-relationship management [16].

Therefore, this research adapted the research instrument related to organizational culture quality variable which has been done by previous research [14]. But in addition to the survey, this study also uses interview methods to explore further about the readiness and constraints for SMEs in implementing the quality management system. As is known characteristics of SMEs loaded with various limitations both in terms of capital, human resources, knowledge

to management aspects is a series of barriers in the application of quality management system. The instruments used in this study can be presented in Table 1 below:

Table 1. Research Variables

Customer Focus	CF01	I know and do not stop looking for information about customer needs and expectations
	CF02	I am always open and friendly in accepting customer complaint
	CF03	Management performs monitoring and measuring customer satisfaction periodically
Leadership	L01	I am able to adjust my personal goals with business goals
	L02	I always make the values in the vision and mission of the business as a guide in doing the work
	L03	I am always obedient and obedient to the prevailing laws and regulations
People Involvement	PI01	I always share information with employees about what is being done
	PI02	I always involve employees in making business strategies
	PI03	I always encourage and facilitate employees to improve their competence
Process Approach	PA01	I can always control the entire work process well
	PA02	Every mistake I make is always an input for better process improvement.
	PA03	In carrying out the principal activities, I always refer to the standard criteria that are always evaluated periodically
Continues Improvement	CI01	I show high concern for teamwork training and ongoing improvement processes
	CI02	I always create innovations related to product quality improvement
Evidence Based-Decision	ED01	I use information technology to access the data I need to improve business performance
	ED02	I use data and information in making decisions
	ED03	Business performance is always regularly evaluated
Supplier Relationship	SR01	I do not stop looking for information on qualified suppliers that can meet business needs
	SR02	I believe that the supplier is a very important partner in improving product quality

Source: adapted from [14][15]

Based on table 1, the quality culture instrument used consisted of 19 questions divided into 7 dimensions respectively: customer focus has 3 question items, 3 item question of leadership, persons involvement has 3 question items, 3 item question for processing approach dimension, continuous improvement has 2 items, factual approach has 2 items and supplier relationship management has 2 items of question. The questionnaire was designed using LSR (Likert's Summated Rating) consisting of 4 scales to avoid neutral answers i.e 1 = "Strongly Disagree", 2 = "Disagree", 3 = "Agree", and 4 = "Strongly Agree". The total value of each respondent's answers is mapped to the interval class where the number of classes is four (4), so that the interval is obtained as follows:

$$\text{Interval} = 4 - 1/4 = 0.75 \text{ ..... } (1)$$

Based on the interval, it can be determined the scale of the respondent's opinion distribution is 1) The average variable value ranges from 1.00 to 1.75, meaning that the level of organizational culture as the factor of readiness of SMM implementation is very low, 2)

Average the value of variables ranging from 1.76 to 2.51 means that the level of organizational culture as a factor of readiness of SMM implementation is low, 3) Average value of variables ranging from 2.52 to 3.27 means the level of organizational quality culture as factor of readiness of SMM implementation is high, 4) Average value of variable ranged from 3.28 to 4.00 means level of culture of quality as readiness of implementation of SMM is very high.

3. Result and Discussion

Based on the results of data processing questionnaires of 5 (five) SMEs selected by purposive sampling with the criteria that respondents are SMEs in the field of food that is considered to have a more prepared condition for the implementation of ISO 9001, based on information from BPTPA LIPI Yogyakarta city. Respondents' demographic data can be described as follows: in terms of sex of the majority of men as many as 4 people (80%) and 1 woman (20%). In terms of age, the majority of respondent's age is in the range of 20-30 years (40%) and> 40 years (40%), whereas the age of respondents ranges from 30-40 years only reaches 20%. The education level of the respondents varies from Junior High School or equivalent to 1 person (20%), SMA or equal to 1 person (20%), Diploma (D3) also 1 (20%), Bachelor (S1) amounting to 1 person (20 %) and 1 person (20%) with post-graduate education (S2). In addition, several other things in the survey include the demography of the SMEs such as long-standing business, the form of business legal entity, the amount of assets, business legality to the level of understanding of SMEs to ISO 9001 can be shown in Table 2 and Table 3 as follows:

Table 2. Demography of SMEs

SMEs	Business (Years)	Total Assets (Millions)	Number of Employees	Total Omset (Millions)
Lestari Jaya	7	<50	4	<300
Bandeng Presto	14	<50	5	<300
GudegAndrawina	40	50-500	15	300 to 2500
GriyaCoklat	4	<50	12	<300
Gureng Lobster	5	50 – 500	5	<300

Table 3. Business legality and understanding of QMS ISO 9001

SMEs	Legal Entity	Legal Aspect	Understanding of ISO 9001
Lestari Jaya	Non Formal	PIRT	Know litte
Bandeng Presto	Non Formal	PIRT	Do not understand
GudegAndrawina	Non Formal	PIRT, Halal MUI	Know litte
GriyaCoklat	Non Formal	PIRT	Know litte
Gureng Lobster	Non Formal	PIRT	Do not understand

The level of understanding of SMEs to ISO 9001 in table 3 above can be classified into 3 parts: 1) Understand, that is able to explain ISO 9001 well although in general only; 2) Know

little, ie never heard or get socialization / training; 3) Do not understand that has never received information about ISO 9001. Legality aspects of business related licensing related to business or business such as PIRT, Halal or related standards.

Furthermore, to know the level of readiness of SMEs in the implementation of QMS based on the quality culture of the organization. Previously done data analysis, first tested reliability questionnaire used. Based on Cronbach Alpha coefficient value obtained with the help of SPSS Software is 0.858 for 19 items of question then it can be said that the questionnaire has been reliable because it has met the minimum requirements of Alpha coefficient> 0.6 [17]. The results of questionnaire processing from 5 (five) SMEs related to the practice of quality management principles in detail can be presented in table 4 below:

Table 4. Quality Management Principles Analysis of SMEs

Item/Variables	Mean	Total Mean/Dimension
Customer Focus		
CF01	2.20	**2.20**
CF02	2.40	
CF03	2.00	
Leadership		
L01	2.20	**2.67**
L02	2.40	
L03	3.40	
People Involvement		
PI01	1.60	**1.73**
PI02	1.40	
PI03	2.20	
Process Approach		
PA01	1.60	**1.80**
PA02	1.60	
PA03	2.20	
Continuous Improvement		
CI01	2.40	**2.10**
CI02	1.80	
Evidence Based-Decision		
ED01	1.40	**1.93**
ED02	2.20	
ED03	2.20	
Supplier Relationship		
SR01	2.40	**2.60**
SR02	2.80	
	Total Mean	**2.15**

Table 4 above shows the level of overall quality culture of SMEs as a variable or factor of readiness of the implementation of SMM ISO 9001. Based on equation (1), the quality culture of organization is divided into four level: very low (1.00 - 1.75), low (1.76 - 2.51), high (2.52 - 3.27) and very high (3.28 - 4.00).Socio-technological aspects that can be analyzed are as follows: for the dimension of customer focus obtained an average value of 2.20 where the practice of quality management principles are still considered low level. Customer is the key word for the survival of an organization. A SME must understand the needs or demands of its current and future customers if it is to continue to survive (Astuty, 2014). But unfortunately, SMEs in general pay less attention to customer desires. It appears that there is no measurement and monitoring of customer satisfaction with the products offered. Even

customer feedback has not been considered important when compared to sales and marketing of more products into business priorities. Information and Communication Technology (ICT) such as social media and websites have started to be used, though only as a channel of product ordering by customers. Relationships with customers are not well managed, just for transactional purposes only.

For the leadership dimension, it is found that overall SMEs have good leadership. This is indicated by an average score of 2.67 indicating a high level of cultural quality especially in leadership dimensions. This shows the high commitment of SMEs in running and achieving business goals, although no commitment has been pushed towards quality improvement. The owners also always try to comply with government regulations related to business licenses such as PIRT license, Halal MUI, etc. ICTs are being used for better coordination in order to communicate the organization's vision, mission, goals and objectives.

Furthermore, people involvement dimension has an average score of 1.73 which means the practice of quality management principle is at very low level. The lack of employee (personnel) roles in planning, implementing plans, controlling work plans and being responsible for their work. Nevertheless, ICTs are being used internally for communication media such as the WhatsApp group app for all employees to share their knowledge and experience. This facilitates open discussion as a means of improving personnel competence.

For a process approach dimension, an average score of 1.80 indicates that the practice of process approach as one of quality management principles is still low. The SMEs did not identify any internal organizational business processes that occur, the input required by the process associated with the efficiency and output factors generated by the process associated with the effectiveness factor so that it can be improved in the future.

Furthermore, for the dimensions of continuous improvement and successive factual approaches have an average score of 2.10 and 1.93, which means the practice of quality management principles is also still at a low level. These two dimensions are interrelated where SME actors are generally difficult to evaluate and remedy actions against appeals or findings. This is because in general SMEs do not utilize information and communication technology (ICT) where for transactions recording is still done manually so that data and information that is history is difficult to be traced or even not available. Whereas data and information is very necessary for SME actors in making decision related to day to day operations.

For a supplier relationship management dimension we get an average value of 2.60 which means that the quality culture associated with managing relationships with suppliers is at a high level. Suppliers are considered an important part in ensuring business sustainability even though product quality is not yet a priority. What is important to them is the continuity of business, given the difficult raw materials obtained especially marine fish considering the regional geographical area.

Overall, the readiness of SMEs in the implementation of SMM ISO 9001 is still lacking, with the result of measuring the low level of organizational culture quality with an average total score of 2.15. SMEs should improve the implementation of quality management principles practices that in turn can improve the quality culture of the organization in support of the implementation of SMM ISO 9001 to gain recognition or certification. From the side of ICT, SMEs that become objects in research is a slow organization adopted ICT (lately adopter). This is characterized by the limited use of ICT in SMEs, especially to support theimplementation of quality management system.

4. Conclusion

Based on the research conducted can be concluded that the readiness of SMEs in terms of socio-technological aspects, especially the culture of the quality of the organization can be said is still low. In general the seven principles of quality management have been done but still far from ideal conditions. The quality culture of the organization should be improved in order to support the successful implementation of QMS ISO 9001. Further research suggestions should be examined to what extent the influence of quality culture factors on the implementation of QMS ISO 9001 in SME environment.

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