

# Gap Analysis of Quality Management Principle between ISO 9001 and Non ISO SMEs

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Abstract: To be able to survive Quality management systems especially ISO 9001 have been widely adopted as strategy for organizations to ensure the quality of process, which in turn will increase the quality of product/services. In fact, many organizations in SMEs level could not implement the QMS because of their constraints. Even worse, they do not know about the advantage of QMS and feel they do not need it. This research purpose is to discuss how far the gap between SMEs that already have implemented QMS ISO 9001 and those that have not, especially in terms of quality management principle. The method of deep interview and survey used in this research. The result shows that there is a huge gap between two kinds of organization especially SMEs with ISO 9001 and those who do not, in some variables such as customer focus, leadership, process approach and evidence-based decision. This research also explored what the benefits obtained by organization with successful ISO 9001 certification, including better management, available data & information to trace until customer satisfaction.

## 1 INTRODUCTION

The concept of small and medium enterprises (SMEs) in Indonesia is very diverse. The criteria of SMEs are also different depending on the perspective of the institution. There are three institutions that define SMEs differently, namely the Central Bureau of Statistics (BPS), the Ministry of Trade, and Bank Indonesia. In general, SMEs usually cover at least two aspects, namely aspects of the initial investment value (total assets) and aspects of the amount of labor. According to BPS, for example, if the workforce is 5 to 19 people then it is a small business, whereas if the workforce consists of 20 to 99 people, it is a medium-sized business. According to Law No. 9 of 1995, the criteria for a small business is to have a net worth of a maximum of Rp 200 million (not including land and building for business) or to have a sale of at most Rp 1 billion per year. For medium-sized businesses divided into two, namely the industrial sector that has assets of at most Rp. 5 billion and for the non-industrial sector, has a net wealth of at most Rp. 600 million (not including land and building business premises) or having a maximum sales of Rp. 3 billion per year. In addition, Presidential Instruction No. 10

of 1999 defines medium-sized businesses as activity units that have net assets between Rp. 200 million to Rp. 10 billion, excluding land and business buildings. These various points of view are complementary to the concept or criteria of an SME (Setiawan, 2004)

UKM is one of the driving forces for economic development in various countries including Indonesia. Based on experience in developed countries shows that SMEs are a source of production and technology innovation, the growth of the number of creative and innovative entrepreneurs and the creation of skilled and flexible workforce in the production process to deal with rapid changes in market demand (Tambunan, 2002).

In Indonesia, it cannot be denied how important the role of SMEs is in the creation of employment opportunities and community income sources. Data from the State Ministry of Cooperatives and SMEs (2014) shows that SMEs in Indonesia amount to 56.54 million units spread throughout Indonesia, where the number represents 99.99% of the number of business units in Indonesia, with more and more annual growth. SMEs have been able to prove their existence in the economy in Indonesia. When the storm of the monetary crisis hit Indonesia in 1998 small and medium-sized businesses that were

relatively able to survive compared to large companies. Because the majority of small-scale businesses are not too dependent on large capital or loans from outside in foreign currency. Thus, when there is fluctuation in exchange rates, large-scale companies that generally always deal with foreign currencies are the most potential to experience crisis impacts (Bank Indonesia, 2015). The MSME business contributes around 60% of GDP (Gross Domestic Product) and opens jobs for the community. Figure 1 below illustrates the growth of SMEs compared to large businesses, as follows:



Figure 1: Growth of SMEs 2011-2012  
(Bank Indonesia, 2015)

Based on Figure 1, during 2011 to 2012 there was a growth in MSMEs and a decline in large businesses. If in 2011, large businesses reached 41.95% the following year only 40.92%, down around 1.03%. In MSMEs the opposite occurs. If the medium-sized business in 2011 was only 13.46%, in 2012 it reached 13.59%. There was an increase of 0.13%. Unlike small businesses, there was a slight decline from 2011. In that year it reached 9.94% but in 2012 it only reached 9.68%, meaning that it decreased by around 0.26%. A significant increase occurred in micro-enterprises, if in 2011 it only reached 34.64%, in 2012 succeeded in reaching 38.81% an increase of 4.17% (Bank Indonesia, 2015).

In addition, the role of SMEs in employment is also very large, namely accommodating 99.44 percent of the entire workforce. In addition to the formation of Gross Domestic Product (GDP), the contribution of SMEs to National GDP reached 59.08 percent (Bank Indonesia, 2015). The development of SMEs in Indonesia cannot be separated from various problems. There are some common problems faced by small and medium entrepreneurs such as limited working capital and/or investment capital, difficulties in obtaining raw materials with good quality and affordable prices, limited technology, good quality human resources (management and production

techniques), market information, and difficulties in marketing. The level of intensity and nature of these problems can differ not only according to the type of product or market that is served, but also different between regions, between countries, between sectors or types of activities, and between business units in the same sector (Tambunan, 2002).

Amidst these limitations, SMEs must have a strategy to be able to compete with other products both from within and outside the country. Improving the quality of products / services is the main key so that SMEs can meet customers' increasingly high needs. One strategy that is widely used by SMEs is to implement a quality management system, especially ISO 9001, with the aim of ensuring the quality of internal processes. A good process will in turn produce good quality products/services (Purwaningsih & Kusuma, 2015). But there are still many UKM who have not been able to implement a quality management system due to the limitations mentioned above. This study aims to find out the comparison between existing SMEs and SMEs that have not implemented ISO 9001 from their quality management aspects. Besides that, it was also explored, the benefits that have been obtained significantly by SMEs that have implemented and obtained ISO 9001 certification.

## 2 METHODS

The research method used is a combination of quantitative and qualitative approaches (mix-method). The survey and interview techniques are used to analyze gaps between SMEs that have implemented an ISO 9001 quality management system and SMEs that have not implemented especially in terms of the quality management principles adopted. There are 3 SMEs that have successfully implemented ISO 9001, used as samples in this study, with the consideration that the three SMEs have obtained international recognition in the form of ISO 9001 (best practice) certification. All of these SMEs are guided by one of the government work units that managed to improve its performance because it has implemented ISO 9001. In total there are 6 respondents from these 3 SMEs who are themselves from the owners and managers who understand the application of ISO 9001 in their organizations. The survey results of the 3 SMEs above will be compared with the results of the previous survey to several SMEs that have not implemented a quality management system especially ISO 9001 (Napitupulu, 2018). In the

previous survey activity, there were 5 SMEs in the food sector. The total respondents in the survey were 5 people as business owners. Although the business sectors of SMEs that are compared in this study are not homogeneous, but in the application of ISO 9001 are general in nature so they do not depend on the type of business of the UKM (Hafsah, 2004; Kurniawan, 2009). Gap analysis between SMEs with one another is done from the aspect of quality management principles. Based on ISO / TC 176, there are 7 principles of quality management at ISO 9001: 2015 which include the factors of customer focus, leadership, people involvement, process approach, continuous improvement, evidence-based decision making and supplier-relationship management (Sugian, 2015). This study adapts some literature (Goetsch & Davis, 2010; Karimi & Kadir, 2012; Esa & Syukri, 2011) to obtain measurement indicators from these 7 principles, which can be presented in Table 1 below:

Table 1: Measurement Instrument

Customer Focus	I know and do not stop looking for information about customer needs and expectations (CF1)
	I am always open and friendly in accepting customer complaint (CF2)
	Management performs monitoring and measuring customer satisfaction periodically (CF3)
Leadership	I am able to adjust my personal goals with business goals (LD1)
	I always make the values in the vision and mission of the business as a guide in doing the work (LD2)
	I am always obedient to the prevailing laws and regulations (LD3)
People Involvement	I always share information with employees about what is being done (PI1)
	I always involve employees in making business strategies (PI2)
	I always encourage and facilitate employees to improve their competence (PI3)
Process Approach	I can always control the entire work process well (PA1)
	Every mistake I make is always an input for better process improvement (PA2)
	In carrying out the principal activities, I always refer to the standard criteria that are always evaluated periodically (PA3)
Continues Improvement	I show high concern for teamwork training and ongoing improvement processes (CI1)

	I always create innovations related to product quality improvement (CI2)
Evidence Based-Decision	I use information technology to access the data to improve business performance (ED1)
	I use data and information in making decisions (ED2)
	Business performance is always regularly evaluated (ED3)
Supplier Relationship	I do not stop looking for information on qualified suppliers that can meet business needs (SR1)
	I believe that the supplier is a very important partner in improving product quality (SR2)

Based on table 1, the measurement instrument have 19 indicators/item of total 7 factors (variables). They are customer focus (3 items), leadership (3 items), persons involvement (3 items), processing approach (3 items), continuous improvement (2 items), factual approach (2 items) and supplier relationship management (2 items). Four likert scale was used in this instrument to measure the agreement of respondents from 1=strongly disagree until 4=strongly agree.

### 3 RESULT & DISCUSSIONS

Based on the results of the survey, it was obtained an overview of the quality management principles that have been applied by SMEs that have not implemented ISO 9001 and SMEs that have applied to obtain ISO 9001 certification.

Table 2: Non ISO 9001 SMEs Result (Napitupulu, 2018)

Items	Mean	Mean of Factors
CF1	2.20	2.20
CF2	2.40	
CF3	2.00	
LD1	2.20	2.67
LD2	2.40	
LD3	3.40	
PI1	1.60	1.73
PI2	1.40	
PI3	2.20	
PA1	1.60	1.80
PA2	1.60	
PA3	2.20	
CI1	2.40	2.10
CI2	1.80	
ED1	1.40	1.93
ED2	2.20	

ED3	2.20	2.60
SR1	2.40	
SR2	2.80	
<b>Total Mean</b>		<b>2.15</b>

Based on Table 2, the average value obtained by each item / indicator is below 3 (<3.00). This means that the principles of quality management have not been applied to the five SMEs, except for LD 3 items that have a score of 3.40. LD 3 is related to the fulfillment of legal aspects or government regulations including business licenses. In general, SME owners are aware of the obligations that exist so that all SMEs have business licenses (PIRT) and some have adopted halal certificates (MUI). However, from the principles of quality management others are still relatively low, especially for PI2 and ED1 items that get the lowest score. PI2 items related to employee involvement in planning business strategies can also be said to be still low. Likewise, ED1 is related to the use of data and information to improve performance not yet done by the majority of SMEs. Most SMEs do not record in the workflow process that runs in the organization. The average total score of the adoption of quality management principles in SMEs that have not implemented ISO 9001 is also low, namely 2.15. In other words, it can be said that SMEs do not have a culture of quality in organizations. The focus on sales is still a priority for SMEs so that their products can generate transactions and profits, without heeding the improvement of the quality of their products. In addition, SMEs do not have a good management system that can plan, implement, monitor and evaluate the existing workflow processes so that continuous improvement is not carried out. The following table 3 shows the results of a survey of SMEs that have implemented an ISO 9001 quality management system specifically from the quality management portrait.

Table 3: ISO 9001 SMEs Result

Items	Mean	Mean of Factors
CF1	3.90	3.83
CF2	3.80	
CF3	3.80	
LD1	3.80	3.76
LD2	3.70	
LD3	3.80	
PI1	3.70	3.73
PI2	3.80	
PI3	3.70	
PA1	3.80	

PA2	3.90	3.86
PA3	3.90	
CI1	3.50	3.65
CI2	3.80	
ED1	3.70	3.73
ED2	3.70	
ED3	3.80	
SR1	3.70	3.70
SR2	3.70	
<b>Total Mean</b>		<b>3.75</b>

Based on Table 3 it can be seen that the average value of each item / indicator exceeds number 3 (> 3.00). This means that all SMEs have implemented the principles of quality management well. The average value obtained for each factor (> 3.00) also shows that each quality management principle has been applied in the organizational workflow process. For the quality management principle factor that gets the highest score (3.86) is the process approach principle. This means that SMEs conduct their business activities always referring to the process approach. The process is monitored, measured and improved in quality continuously so as to optimize business performance. The average total score also obtained a value of 3.75 which indicates that all three SMEs have successfully applied the principle of quality management. This is in line with the ISO 9001 certification they have obtained. In other words, with the implementation of ISO 9001 encourages SMEs to develop the principles of quality management and in turn quality culture can be built. Improving the quality of Products / services into a culture and values instilled in the organization. There is one measurement item that gets the lowest score is CI1 related to teamwork in implementing ISO 9001 is a challenge for SMEs. At first there was a high resistance from internal, especially employees. But over time and coupled with training support, employees can gradually receive ISO 9001 as one part of the organization's strategy.

In addition, from the results of interviews with SMEs that have implemented ISO 9001 mentioned various benefits and changes that are felt by the organization. As an example of conditions prior to the adoption of ISO 9001, one of the SMEs often suffered losses but did not know the causes because SMEs did not have traceable data. SMEs also do not have clear business planning and standard operating procedures. After implementing ISO 9001, several perceived changes are the availability of data and information, clear work procedures so that employees can do a good job. Other SMEs also benefit from implementing ISO 9001, which is better management

because it uses a process approach so that it is easy to manage the process. Besides that the level of defective products decreased from 15% to 0.6% so that losses can be reduced. One of the SMEs also mentioned that the perceived benefits of ISO 9001 were a decrease in customer complaints. Previously there were 10-20 customer complaints every day but decreased to 1-2 customers each month. The level of trust from customers and partners also increases. This was marked by the existence of several new collaborative projects with other parties which required ISO 9001 certification.

#### 4 CONCLUSIONS

Based on the research that has been done, it can be concluded that there is a gap between SMEs that have implemented ISO 9001 and that have not been based on quality management principles where SMEs with ISO 9001 have a quality culture in the organization while SMEs without ISO 9001 still do not have awareness of the importance of product quality/services offered. Product sales are still a priority of SMEs without ISO 9001 without being accompanied by continuous improvement in product quality. The advantage gained after implementing ISO 9001 is better management, data is available for analysis, defective product levels and customer complaints are reduced, thus customer satisfaction could be improved.

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