Ayi Tejaningrum[1], Anton Mulyono Azis[2], Maya Irjayanti[3]
## QUALITY CULTURE MODEL FOR SMES

*The purpose of this study is to create a model measuring the quality of organization's culture of SMEs in food and clothing industrial centers in West Java Indonesia. This is a qualitative research, with ethnography approach resulting in a quality culture model with 6 dimensions: material handling; machinery and equipments handling; plant production environment; human resources; problem solving; and quality obsession.*
*Keywords: SME; quality culture; quality management.*

Аю Теянінгрум, Антон Мульоно Азіс, Майя Іріянті
## МОДЕЛЬ КУЛЬТУРИ ЯКОСТІ ДЛЯ МАЛОГО ТА СЕРЕДНЬОГО БІЗНЕСУ

*У статті представлено модель, що вимірює якість організаційної культури малого та середнього бізнесу на прикладі виробників продуктів харчування та текстилю Західної Яви, Індонезія. За результатами якісного дослідження з використанням етнографічного підходу представлено модель, що складається з 6 параметрів-вимірів: операції з матеріалами та сировиною; операції з технікою та обладнанням; середовище виробництва; людські ресурси; методи вирішення проблем; залучення персоналу до питань якості.*
*Ключові слова: малий та середній бізнес; культура якості; управління якістю.*
*Рис. 4. Табл. 2. Літ. 21.*

Аю Теянингрум, Антон Мульоно Азис, Майя Ириянти
## МОДЕЛЬ КУЛЬТУРЫ КАЧЕСТВА ДЛЯ МАЛОГО И СРЕДНЕГО БИЗНЕСА

*В статье представлена модель, измеряющая качество организационной культуры малого и среднего бизнеса на примере производителей продуктов питания и текстиля Западной Явы, Индонезия. По результатам качественного исследования с использованием этнографического подхода представлена модель, состоящая из 6 параметров-измерений: обращение с материалами и сырьём; обращение с техникой и оборудованием; среда производства; человеческие ресурсы; методы решения проблем; вовлечённость персонала в решение проблем качества.*
*Ключевые слова: малый и средний бизнес; культура качества; управление качеством.*

**Introduction.** The concept of quality culture has become popular in many studies related to its role in long-term sustainability of enterprises. K. Rashid and M. Aslam (2012) showed the importance of quality practices such as leadership and strategic quality planning, supplier relationship management, customer focus, quality data and reporting, process management and HR management to firm business process, especially in a supply chain. Various studies successfully proved that quality improvement can increase companies profit (Deming, 1986; Juran et al., 1999), especially when handling customer complaints (Awan et al., 2009), increasing market share (Flynn et al., 1995) or competitive advantage (Fotopoulos and Psomas, 2010). J. Juran et al. (1999) mentioned that quality is associated with increased productivity, cost reduction, process time reduction and value increase. On the other hand, studies related to culture demonstrate the significance of the relationship between organization and corporate culture.

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Working on quality culture should become a necessary activity not only for large corporations, but also for small and medium enterprises (SMEs). In Indonesia, SMEs play an important role as an economic foundation and regarded as the backbone of Indonesia's economy. Out of 100% businesses in Indonesia, 99% are SMEs, contributing greatly to the revenues of more than 50% of Indonesia's total GDP and also absorbing up to 97% of all force workers (Irjayanti and Azis, 2012).

Small and medium enterprises in Indonesia are currently dealing with a weak ability to compete as a result of poor quality of goods and services produced. A. Tejaningrum (2014) showed that lot of SMEs have inconsistent quality products dimensions, so this impacts the low level of consumer loyalty. Furthermore, there is an identified relationship between the significance of dimensional consistency of product quality and customer loyalty to SMEs. Many of the problems faced by SMEs in implementing their quality management were identified during the preliminary assessment in this study including:

1. No documented agreement related to quality standards of raw materials delivered from supply chains even though there is a standardized evaluation for finished goods.

2. System storage/warehousing are not reliable, and this significantly impacts the declining quality of both materials and finished products.

3. Each member of an organization interprets the quality of process basing on his/her own perception.

4. Procurement of raw materials is done from different sources and this leads differences in raw materials quality.

5. Lack of long-term commitment from owners.

Coming from these identified problems, this study aims to determine a model for measuring the quality of company culture, especially at small and medium enterprises in food and clothing industries.

**Quality culture.** G. Bounds et al. (1994) stated that culture has several fundamental aspects: 1) culture is a social construction of cultural elements such as values, beliefs and understanding, shared by all members of a group; 2) culture provide guidance for its members in understanding events; 3) culture contains customs or traditions; 4) in a culture pattern values, beliefs, expectations, understanding and behaviors arise and evolve over time; 5) customs or traditions serve as the "glue" that unites an organization and ensure its members behave according to established norms; 6) each culture is unique.

Under quality culture organization believes that the way in which its learns is the key way to its effectiveness and potential to improve (Lam et al., 2006). K. Chin and K. Pun (2002) stated that quality culture is a critical factor for successful quality management implementation in organization. A. Ngowi (2000) proved there is a correlation between organizational learning capability and quality culture in total quality management. Quality culture in organization should be implemented by a quality circle which is a small group of employees (Majumdar and Manohar, 2011). These quality circles are those who work in similar functional areas and volunteer themselves to identify the processes that need to be improved.

The process of cultural formation is often derived from beliefs, values, customs, habits. Through a long process, values and beliefs interact with one another, eventu-

ally forming a belief, values and habits of a group. Values, habits, beliefs can be formed on an agreement, written or oral one.
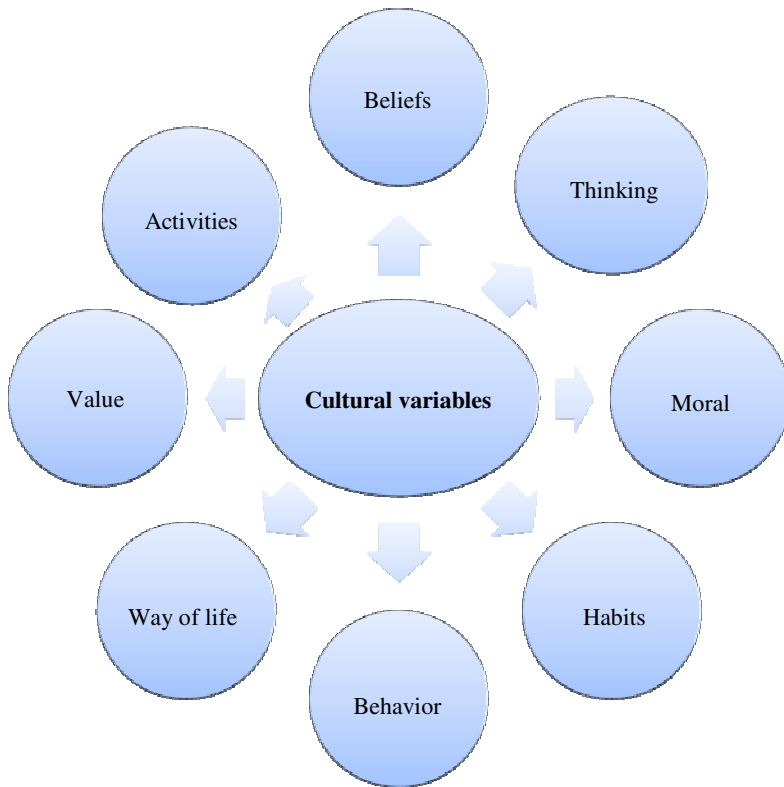


*Figure 1.* **Cultural variables,** *authors' presentation*

Figure 1 illustrates culture as a system of values, beliefs, cognitive patterns, habits, way of life, morals, ethics, owned by a person interacting with other community members and agreed whether written or not. The process of culture formation can be described as follows see Figure 2.

S. Robbins (1998) explains that the so-called organizational culture refers to a system that distinguishes oneself from another by 7 primary characteristics: 1) innovation and risk-taking; 2) serious attention; 3) results orientation; 4) people orientation; 5) team orientation; 6) aggressiveness; 7) consistency. Meanwhile, D. Goetsch and S. Davis (1997) define quality culture as an organizational value system that result in an environment for establishment and continual improvement of quality that consists of values, procedures, traditions, and expectation in promoting quality. E. Ogbonna and L. Harris (2000) added that culture of organization is a collective sum of beliefs, values, meanings and assumptions shared by a social group and that help to shape the ways in which they respond to each other and to their external environment.

E. Scheim (2010) mentioned that organizational culture is a pattent of shared basic assumptions that the group learned to solve its problems of external adaptation

and internal integration, that has work well enough to be considered valid and thefore, to be taught to new members as a proper way to percieve, think and feel. Culture itself contains 3 main points: 1) assumption of a mutually agreed basis; 2) it is a pattern of all members of the group; 3) it is followed continuously by the members of the group.
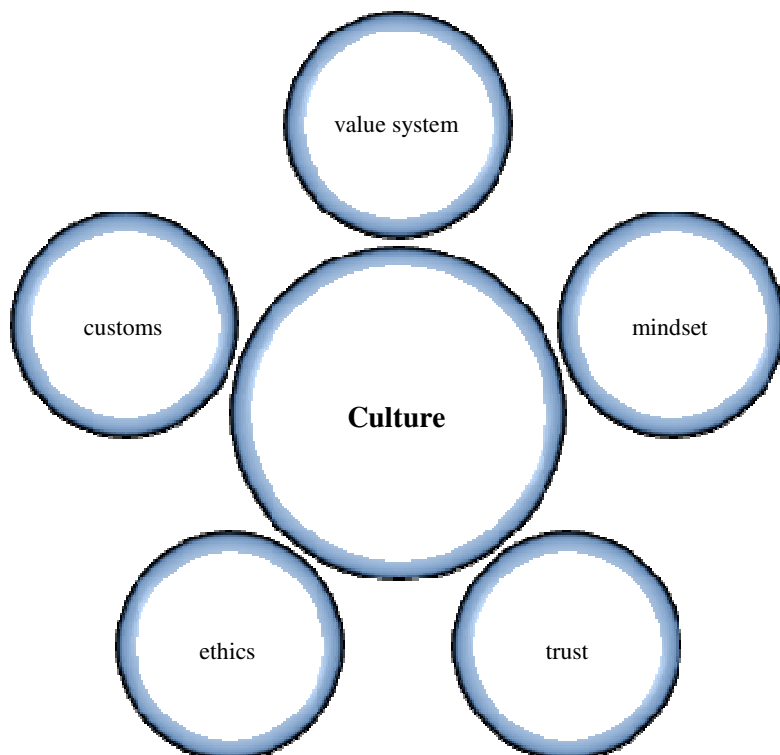


*Figure 2.* **The process of culture formation,** *authors' presentation*

Basing on the literature review above, organizational cultural can be identified as follows:

1. The pattern of basic assumptions in the process of problem-solving.

2. Reflected in the process of how organization handles its administration, management and troubleshooting.

3. A set of shared assumptions held by the group that determines how is perceived, think, and react to diverse environmental changes.

4. A system of shared meaningd held by the members that distinguishes organization from its counterparts. The shared meaning contains characteristics: innovation and risk taking, attention to details, people orientation, results orientation, team orientation, aggressiveness and stability.

5. Specific patterns for all members of the organization in their behavior day to day.

6. Collective sum of beliefs, values, meaning and assumptions shared by a social group which help shape the ways in which they respond to each other and to external environment.

It can be conclude that organizational culture is a set of mutually agreed patterns between members of a group, either written or not. The agreement is visible in everyday decision-making processes, organizational management, interaction between members groups and in certain behavioural pattern.

Evolution of quality organization started from the culture of non-quality, turning to inspection, quality assurance, total quality management, and now already entering the era of six sigma. Understanding quality has been studied many experts. There are 5 perspectives of understanding quality: 1) trascedental approach; 2) product-based approach; 3) user-based approach; 4) manufacturing-based approach; 5) value-based approach. D. Goetsch and S. Davis (1997) mentioned that quality is a dynamic state associated with products, services, people, process, and enviroment that meets or exceeds expectations, and help produce superior value. J. Juran et al. (1999) stated that the best quality is the one fit for use which is: 1) meeting the expectations of customers; 2) free from defects.

According to W. Deming (1986), there are important things that company need to do for its transition to quality culture: 1) continuously improve product and very services; 2) adopt a new philosophy in business competition; 3) form quality from the very beginning; 4) stop practice of contracts with lower bids; 5) improve production and services systems continuously to improve quality and productivity; 6) have job trainings; 7) build a good leadership; 8) eliminate employees worries; 9) team work; 10) remove irrelevant targets; 11) remove quotas and management by objectives; 12) remove barriers to employees expertise; 13) perform transformation of knowledge. In 1980 the concept of quality with the basic fundamentals of management emerged as Total Quality Management (TQM), requiring that the issue of quality should be the responsibility at all levels of organization. TQM should implement at least 10 points of activities including: 1) focus on customer; 2) obsession with quality; 3) using scientific approaches in decision-making; 4) long-term commitment; 5) team work; 6) improving processes continuously; 7) education and training; 8) restrained freedom; 9) a unity of purpose; 10) involvement and empowerment of employees.

**Research methodology.** This study used qualitative research methods. According to J. Creswell (2009) there are 5 types of qualitative research: phenomenological research, grounded theory, ethnography, case studies and narrative research. This study using the ethography approach in which a researcher studies an intact culture group in a natural setting over a prolonged period of time by collecting primarily observational and intervied data. F. Erickson (1986) mentioned that the featurse of such a qualitative research include:

1. Intensive, long-term participation in field setting.

2. Careful recording of what happens in the setting by writing field notes and interview notes, by collecting other kinds of documentary evidence.

3. Analityc reflection on the documentary records obtained in the field.

4. Reporting the result by means of detailed descriptions, direct quots from interview, and interpretative commentary.

This study is to create a quality culture measurement model, starting with analyzing the underlying theory: the field study of culture, organizational culture study, study the areas of quality, and study the existing problems in SMEs, as described in Figure 3.
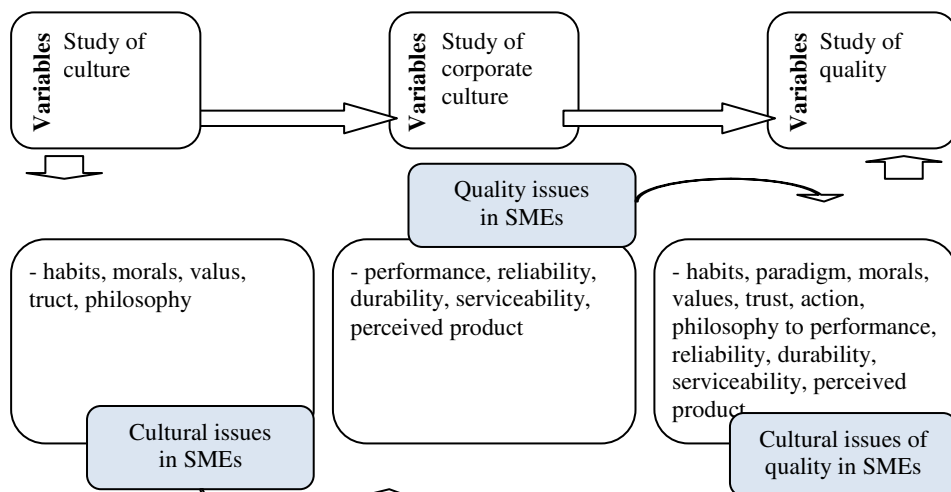
*Figure 3.* **Phase study,** *authors'*

**Key results and discussion.** According to J. Juran et al. (1999) quality culture is defined as patterns of human habits, beliefs, values and behavior concerning quality. Quality dimensions should be sourced from the perception of consumers, not producers. D. Goetsch and S. Davis (1997) defined quality culture as an organizational value system that results in conducive environment for quality establishment and continual improvement. It cosists of values, traditions, procedures, and expectations that promote quality. The implemented concept of quality at small and medium enterprises, especially in the food and clothing sectors, is usually based on the theory of P. Crosby (1979) divided in 2 dimensions: 1) meeting customer expectations; 2) free of errors or defects. In this context meeting customer expectations in the culinary industry in addition to satisfying tastes of consumers also means paying serious attention to health of consumers, especially concerning preservative dyes and other ingredients. Meanwhile, D. Garvin (1998) had a different perspective for quality at SMEs in the food sector. He stated that food sectors should apply the value-based approch, manufacturing-based approach and user-based approach as a foundation of their quality culture.

D. Garvin (1998) identified 8 dimensions of quality including: 1) performance; 2) features; 3) reliability; 4) conformance to specifications; 5) durability; 6) service-abilty; 7) aesthetics; 8) perceived quality. This study managed to successfully observe 5 out of 8 quality dimensions in SMEs in food and clothing sectors, including:

1. Performance. Dealing with fundamental characteristics of a product. In the food sector this concerned: deliciousness, savory, crunchiness, and distinctiveness. While in clothing the attention was focused on comfort and beauty.

2. Reliability. Food must be released from sale due to stale/rancid smell, strange taste, shrinking size or uniformity, potential danger to body health in short term or long term. For clothing, product should be free from defects like stitching loose, uneven screen printing, and color fading.

3. Durability. All products have certain life term or period of consumption. The longer is the better, both for food products and clothes.

4. Serviceability. It is related to personal capabilities of those who provide services to consumers, including: tidiness, courtesy, hygiene, hospitality etc.

5. Perceived quality.The quality as perceived by the public. With some products of well-known brands, consumers will tend to give more value to quality.

So, what is the quality situation in food and clothing industries in Indonesia? This study conducted an analysis of several centers with food-processing industry and clothing in West Java, Indonesia. Our analysis shows there are several problems associated with quality of the related products.

The problems identified in Table 1 were caused successfully collected during site visits, observations, and interviews. Table 2 groups the conditions that influence the poor quality the industries under study.

*Table 1.* **Problems in the quality of the food and clothing industries,** *authors'*

| Food industry | Clothing industry |
|---|---|
| Non-competitive with many similar products | Non-competitive with many similar products |
| Many products still use preservatives and dangerous dyes | There are a lot of scraps left |
| Non-uniformity in shape and size | Different sizes on the same number of clothes |
| Defects in food | There are some defects in stitching and printing color |
| Durability is different | Low durability |
| Products sometimes smell strange | Short-term of use |
| Lack of product variation | Return of bought products is relatively still high |
| Products are less attractive | Lack of new designs |

*Table 2.* **Conditions and causes for poor quality (food and clothing industries),** *authors'*

| Condition | M | MN | EN | PS | QO | RM |
|---|---|---|---|---|---|---|
| Floor, ceiling, place of production, warehouse are not clean, dirty or dusty | √ | | √ | | √ | |
| No guidelines or written documents on standard quality of materials/processes/handling | √ | | | | √ | √ |
| Raw and auxiliary materials come from different and not standardized suppliers | | | | | √ | √ |
| Improving the quality of a products is not the main objective | √ | | | | √ | |
| Troubleshooting activity to secure quality is not found | | √ | | √ | | |
| No reliable measuring devices to determine the quality of products, processes or tools | √ | | | √ | √ | |
| Transportation, handling and storage technologies are not used to maintain quality. | √ | √ | √ | | | |
| Raw materials which are highly depend on the process of planting, failed in harvesting process, resulting in quality loss | √ | | | | | √ |
| Plant layout is irregular, scattered, and sometimes collide | | √ | √ | | | |
| Industries prefer materials to maintain low production cost that influence the result quality | √ | | | √ | √ | |
| Industries still sell defected product to gain more profit | √ | | | √ | √ | |
| Production site is also a place of residence, not a workshop | √ | | √ | | √ | |

Aspects of poor quality: M – machine; MN – man; EN – enviroment; PS – problem solving; QO – quality obsession; RM – raw material.

After analyzing the conditions and causes of quality problems in small business of the food and clothing sector, the authors conclude with the following model of quality culture for food and clothing SMEs sector (Figure 4).
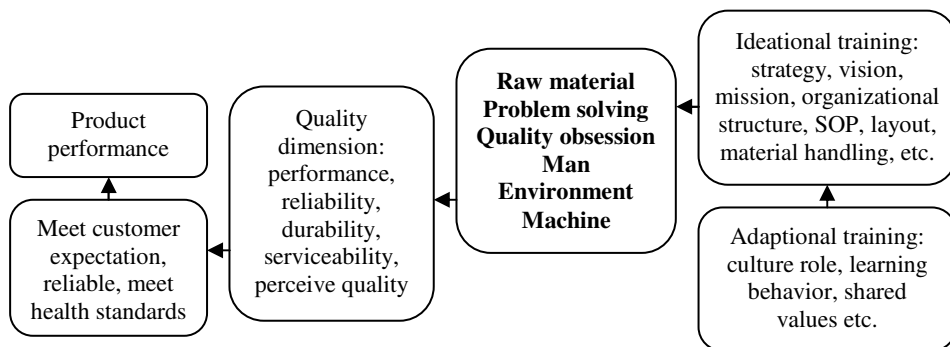


*Figure 4.* **Quality culture model for SMEs, authors'**

Therefore, there are 6 dimensions that can be used as one model to measure the quality of company culture, including:

1. Handling materials/raw materials for a final product should remain oriented on quality care considering such parameters as performance, reliability, durability, serviceability, perceived product.

2. Handling machines and equipment. SMEs should use maintaining, caring, cleaning, standardizing machinery and equipment (vehicles, tools etc.) to maintain performance, reliability, durability, serviceability, perceived product in accordance with the standards as expected by consumers.

3. Plant production environment. Production environment such as factory layout, condition of the floor, ceiling, warehouse, factory general conditions (air pollution/dust/smells), environmental conditions will lead to quality of a final result.

4. Human resources. Beliefs, actions, mindset, values, habits, thoughts of a leader must be successfully delivered to all employees to maintain company's performance and quality.

5. Problem solving. Decision-making process has a significant impact on performance and quality. Manager/leader should consider things comprehensively using both internal and external information.

6. Obsession quality. All members of an organization should share a similar vision when it to comes to quality. They should perceiv quality as a significant factor for company's sustainability in the long term.

**Conclusions.** Small and medium enterprises, especially in the food and clothing sectors in Indonesia, still pay little attention to the role of quality in their performance and its possible impacts on their competitiveness. There is a simple model of quality culture that has 6 dimensions: material handling, machinery and equipments handling, plant production environment, human resources, problem solving, and quality obsession. This model could accomodate SMEs with a basic foundation for self-assessment in terms of reaching certain quality, thus, they can compete not only locally but also at global markets.

The model presented in this study, has not been implemented by SMEs yet. Thus, limitations or weaknesses of the model have not been identified so far. In future research, the authors will continue the study by implementing this model on several types of SMEs for the purpose of quality model development that is expected to give positive contribution into quality improvement.

### References:

*Awan, M.U., Raouf, A., Ahmad, N., Sparks, L.* (2009). Total Quality Management in Developing Countries: A Case of Pharmaceutical Wholesale Distribution In Pakistan. International Journal of Pharmaceutical And Healthcare Marketing, 3(4): 363–380.

*Bounds, G., Yorks, L., Adams, M., Ranney, G.* (1994). Beyond Total Quality Management. Singapore: McGraw-Hill.

*Chin, K.S., Pun, K.F.* (2002). A Proposed Framework for Implementing TQM in Chinese Organizations. International Journal of Quality and Reliability Management, 19(3): 279–294.

*Creswell, J.W.* (2009). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. 3rd ed. Thousand Oaks, CA: SAGE Publications.

*Crosby, P.* (1979). Quality is Free. New York: McGraw-Hill.

*Deming, W.E.* (1986). Out of the Crisis, The MIT Press, Cambridge, MA.

*Erickson, F.* (1986). Qualitative Methods in Research on Teaching. In: M. Wittrock (ed.). Handbook of Research on Teaching. 3rd ed. New York, NY: Macmillan.

*Flynn, B., Schroeder, R.G., Sakakibara, S.* (1995). The Impact of Quality Management Practices on Performance and Competitive Advantage. Decision Sciences, 26(5): 659–691.

*Fotopoulos, C.V., Psomas, E.L.* (2010). The Structural Relationships Between TQM Factors and Organizational Performance. The TQM Journal, 22(5): 539–552.

*Garvin, D.A.* (1998). The Processes of Organization and Management. MIT Sloan Management Review 39 No. 4.

*Goetsch, D., Davis, S.* (1997). Introduction to Total Quality: Quality Management for Production, Processing, and Services. New Jersey: Prentice Hal.

*Irjayanti, M., Azis, A.M.* (2012). Barrier factors and potential solutions for Indonesian SMEs. Procedia Economics and Finance, (4): 1–12.

*Juran, J.M., Godfrey, A.B., Hoogstoel, R.E., Schilling, E.G.* (1999). Juran's Quality HandBook. 5th ed. New York, NY:McGraw-Hill.

*Lam, V.M.Y., Poon, G.K.K., Chin, K.S.* (2006). The Link Between Organizational Learning Capability and Quality Culture for Total Quality Management: A Case Study in Vocational Education. The Asian Journal of Quality, 7(1): 195–205.

*Majumdar, J.P., Manohar, M.B.* (2011). How to Make Quality Circle a Success in Manufacturing Industries. Asian Journal on Quality, 12(3): 244–253.

*Ngowi, A.* (2000). Impact of Culture on the Application of TQM in the Construction Industry in Botswana. International Journal of Quality and Reliability Management, 17(4/5): 442–452.

*Ogbonna, E., Harris, L.C.* (2000). Leadership Style, Organizational Culture and Performance: Empirical Evidence From UK Companies. The International Journal of Human Resource Management, 11(4): 766–788.

*Rashid, K., Aslam, M.M.H.* (2012). Business Excellence Through Total Supply Chain Quality Management. Asian Journal on Quality, 13(3): 309–324.

*Robbins, S.* (1998). Organisational Behaviour. 8th ed. New Delhi: Prentice Hall.

*Scheim, E.H.* (2010). Organizational Culture and Leadership. 4 ed. Jossey-Bass.

*Tejaningrum, A.* (2014). Inconsistency Quality Product on Six Sigma Programs Affect on Customer Loyalty. Management Studies, 2(1): 35–42.