

## **‘Soft’ Elements of TQM and Firm Performance in Indonesian Service Industries: Some Evidence**

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**Abstract:** Quality leadership, worker empowerment and teamwork, all considered the soft elements of TQM are examined in this study in relations to performances of service companies in Indonesia. Researchers have long suggested that the cumulative impact of ‘soft’ elements of TQM should provide a good platform for sustainable firms’ performance. These soft elements, emphasized by the notion of capability in the resource based view framework can be rare and difficult to imitate. Right decisions on optimizing the resources will contribute significantly to increase operating efficiency in business process and profitability of a firm. Data was collected from firms representing various sectors in service operations in Indonesia. Based on 266 responses received the results suggest that these ‘soft elements’ of TQM predicted firms’ financial performance, costs performance and customer service.

**Key words:** Soft quality • Service companies • Indonesia • Performances

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### **INTRODUCTION**

Prioritizing quality is the best way to sustain customers and business [1]. To achieve quality performance, studies on the critical success factors of quality management is well-researched [2-4]. Yet, attention to the soft elements of quality management has gained more attractions as they improve business process in a sustaining manner. For example, Prajogo and Cooper [5] found that the so-called people-related TQM practices are positively related to job satisfaction at both individual and organizational levels, with a stronger effect on employee attitudes observed at the organizational level. Another study suggested that the “soft” TQM elements have a significant direct impact on quality improvement, employee benefits and customer satisfaction [6]. In a cross-sectional study conducted amongst 106 ISO 9000-certified manufacturers found that: 1) innovation is influenced mainly by adopting soft (organisational) TQM elements and secondarily hard (process) TQM elements. [7]

Arunichalam and Palanichanmy [8] identified employee empowerment, employee training, teamwork, appraisal systems, customer focus, continuous

improvement, top management commitment, organizational trust and employee involvement as ‘soft’ TQM. The study found that top management commitment and employee empowerment, besides four other factors positively affect job satisfaction.

The soft elements of TQM is related to the so-called ‘infrastructural resources’ taken from operations management literature which assume very important role in achieving operations objectives. In the field of operations management, prudent management of manufacturing resources remains one of the most important determinants of a firm’s performance. Effective decisions with respect to optimization of resources within a firm may contribute significantly to increased operating efficiency and profitability of a firm. The cumulative impact of intermediate infrastructural decisions on firms’ performance can be as important as that of long-term structural decisions. However, even though the literature offers evidences of direct and indirect relationships between these variables, much of these are with respect to manufacturing operations.

This study offers new insights theoretically as the soft elements of TQM is discussed as infrastructural resources in the paradigm of operations management.

Secondly, this study seeks to know the soft TQM effect in service industries, which is less studied as compared with manufacturing. Additionally, the impact of such decisions on firm performance is still an empirical question of significance, especially when it is applied in the context of developing economies such as Indonesia.

**Literature Review:** In manufacturing operations, resources are often classified as “structural” and “infrastructural”. The soft elements of TQM are closely related to infrastructural resources in operations management paradigm. Nonetheless, there is no consensus on which resources should be considered as structural and which should be considered as infrastructural.

Infrastructural resources is defined as the set of structures, controls, procedures, systems and communication combined with attitudes, experience and skills of the people involved with the manufacturing system [9]. Structural resources, on the other hand, are considered as the “process” which includes not only the technology, equipment and facilities of the manufacturing system but also the characteristics of human resources.

Meanwhile, Another author suggests that infrastructural resources should include only the systems, relationships and information couplings which bind the operation together [10]. It consist of two kinds of resources namely labor and technology. Technological resources refer to the facilities and technology, or the hardware side of the manufacturing system, while labor is associated with human resources, i.e., basically the people involved in the manufacturing system [10].

In their attempt to differentiate these decisions, Hayes and Wheelwright [11] suggest that the infrastructural decisions in nature should be more tactical and easy to reverse than the ones, which they consider as structural (capacity, facilities, technology and vertical integration). Given the workforce has increasingly been regarded by many authors as the most important asset of organizations, reversing decision concerning people’s attitudes and their commitment to the company’s objectives and motivation, have generally proved to take a long time and considerable amounts of organizational effort. In this context, therefore, infrastructural decisions are more important to handle.

In general, infrastructural decisions or practices are said to have operative effects on current costs and consequently short-term effects on a firm’s performance. The rational being the fact that infrastructural resources do not require large capital investments. Instead, these

resources comprise only operational practices and decisions that correspond to operations managers exclusively. These decisions may be regarded as strategic or tactic choices since they refer to the systems, policies, practices, procedures and organization which support the manufacturing processes and enable them to perform their function. Their accumulative influences can be as difficult and costly to change as the structural ones are [11].

The norm of continuous progress is central to the philosophy of TQM. In fact, TQM values, which emphasizes training and human development, is consistent with latest management trend, which is knowledge-based management and learning organization. TQM had started in Japan and expanded in the United States. Later, many European firms catch up with the principle and benefit from it.

Arunichalam and Palanicchanmy [8] identified employee empowerment, employee training, teamwork, appraisal systems, customer focus, continuous improvement, top management commitment, organizational trust and employee involvement as ‘soft’ TQM. Idris [12] suggested that that soft TQM dimensions are influencing company performance. In the study, the relationship between the elements of leadership, best practices, productivity, customer, employee and community focus and company performances is significantly proven.

With respect to TQM program, leadership provides guidance and direction for the entire organization to adopt and implement any quality improvement program. It is found in a research that a competent leader would be able to execute the important critical factors of organizational initiatives such as the TQM implementation more effectively. A study showed that all TQM practices are positively related to internal and external performance and top management support had the highest impact on performances[14]. In another study, Sila and Ebrahimpour [15] stated that leadership and information and analysis are two factors that act as the foundations on achieving favorable business results.

Empowerment is simply defined as the delegation of responsibility to the employees in order to create an atmosphere of autonomy and self-determination [16]. Empowered employees experience more freedom to organize their work and to make important decisions while accomplishing their everyday work and at the same time they relieve top managers from overwork [17]. Through empowerment, employees are expected to be more dedicated [18]. Prior research in large companies has found that empowered employees tend to have greater

freedom and increased motivation, thus contributing more towards higher organizational effectiveness [19]. In a hospitality industry, employee empowerment can be described as enabling or authorizing employees to make decisions to solve guest issues by themselves [20] [21]. Empowerment is especially suitable for heterogeneous services. This is where guest contact employees must adapt their behaviors to the requirements of service encounter [22] [23].

The formation of work teams is a human resource management practice that has become a norm in manufacturing plants [24]. The popularity of work teams stems from the idea that by identifying and solving work-related problems, teams can contribute to improved performance. With an increasing emphasis on high-quality, fast product innovation and improved customer satisfaction, many companies currently employ team approaches to realize these goals in an environment characterized by functional and process interdependencies. Work teams are considered to be "an integral tool aiding continuous improvement in work operations" [25]. Much of the evidence to date on the success of work teams, however, is in the form of anecdotes or case studies; stories of huge cost savings and quality improvements abound [26].

In sum, considering the literature of soft TQM and operational resources, we select three factor i.e., quality leadership, worker empowerment and team management due to logical and theoretical explanation from both the TQM literature and operations management.

Theoretically, perhaps the social exchange theory may be applied to rationalize the relationship between these variables. Basically, this theory posits that all human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. For example, when a person perceives the costs of a relationship as outweighing the perceived benefits, then the theory predicts that the person will choose to leave the relationship. The theory has its roots in economics, psychology and sociology.

**MATERIALS AND METHODS**

Data was collected based on field surveys. Self-administered questionnaires were used in the process. Table 1 shows the types of industries. Enumerators were employed to hand in and collect questionnaires from a sample of companies in the services industry in Indonesia.

Table 1: Type of industry

Type of Industry	Frequency Indonesian sample	Percentage (%)
Hotel	30	11.3
Fast food	30	11.3
Hospital	26	9.8
Auto repair	30	11.3
Retail store	30	11.3
Bank	28	10.5
Private college	30	11.3
Architect	30	11.3
Accountant	32	12.0
	266	100.0

**Sample Characteristics:** The numbers of responses usable for analysis are 266. The respondents represent various service sectors which includes hotels, fast food operators, hospitals, auto repair companies, retail stores, banks, private colleges, architecture firms and accounting firms. Appendix E show further details of the characteristics of the respondent firms in both samples.

**Measures:** The measures used to capture data on ‘soft elements’ of TQM are as follows: worker empowerment (7 items), quality leadership (6 items) and team management (4 items). Examples of items representing worker empowerment, quality leadership and team management are ‘giving employees a broader range of tasks’, ‘Top management provides personal leadership for quality improvement’ and ‘Our firm forms teams to solve problems’, respectively.

The measures of firm performance can be financially based (e.g., ROI, ROA) or market share based. Having different firm performance measures should be helpful considering firms' strategic emphases vary between firms. For example, some firms may opt for a penetration strategy instead of ROI to enhance its market share. The measures for firm performance used in this study are cost performance (3 items), customer service (4 items) and financial performance (consisting of growth of market share, return on assets, return on investment and operating profit).

For each of the measures used in the study, respondents were asked to state their preference on a 1 – 7 Likert scale. The reliability of the measures as indicated by the values of Cronbach alpha appears statistically acceptable.

**RESULTS AND DISCUSSION**

Table 2 shows the means and standard deviations of the key research variables. As the table shows, the means of all the research variables for both samples are skewed

Table 2: Means and standard deviations

Variables	Mean	SD
Work Empowerment	6.00	0.79
Quality leadership	6.10	0.74
Team management	5.84	1.03
Firm Performance (Customer Service)	6.05	0.92
Firm Performance (Cost )	5.40	1.01
Firm Performance (Financial)	5.56	0.99
n	266	

Table 3: Pearson correlation coefficients

	WE	QL	TM	CS	COST	FIN
WE	1					
QL	.648	1				
TM	.419	.544	1			
CS	.545	.538	.405	1		
COST	.507	.440	.328	.587	1	
FIN	.495	.496	.458	.677	.578	1

\*\* p<0.01 n 266

Table 4: Results of Multiple Regression Analysis

Dependent	R square	WE	QL	TM
Customer service	0.368	0.323*	0.259*	0.129*
Costs	0.284	0.373*	0.149**	0.090
Financial	0.338	0.272*	0.188**	0.242*

\*Significant at 0.01 \*\* Significant at 0.05

WE: Worker Empowerment; QL: Quality Leadership; TM: Team management

to the right, suggesting perceptions of respondents with respect to each of the research variables are positive. Interestingly, the means recorded for the sample of Indonesian firms are higher for all the independent variables – work empowerment, quality leadership and team management. Apparently, the results indicate that Indonesian firms, place greater emphasis on the need to practice worker empowerment, on the importance for managers to play a leading role in quality initiatives and on the significance in practicing team working in their operations.

On the performance indicators, overall, the means registered suggest that the majority of the firms in both samples demonstrate a favorable performance across all the measures.

Table 3 presents the Pearson correlation coefficients depicting the relationship between the research variables – both independent and dependent- for both samples. As shown in the table, all correlations between the variables are found to be statistically significant and positive, meaning the higher the degree of one variable leads to a higher degree of another variable and vice-versa.

Table 4 present the results of multiple regressions between the variables representing the infrastructural decisions and the indicators of firms’ performance.

The results show that, taken together, for the sample, the infrastructural variables explain about 37%, 33% and 28% of the variations in firms’ customer service performance, financial performance and firms’ cost performance, respectively.

The results selectively and directly support previous literature. For example, Hirzel and Leyer [27] showed that employee role of empowerment is crucial for continuous improvement initiatives.

It is also generally supported Prajogo and Cooper [5] who found that people-related TQM practices are positively related to job satisfaction. This study also concurs with Psomas, Vouzas and Kafetzopoulos, [6] who suggested that the “soft” TQM elements have a significant direct impact on quality improvement, employee benefits and customer satisfaction.

Similarly, it supports a study conducted amongst 106 ISO 9000-certified manufacturers indicates the role soft TQM influencing innovation [7]. The study supports Arunichalam and Palanicchanmy [8] who conclude that top management commitment and employee empowerment, besides four other factors positively affect job satisfaction.

As this is the preliminary findings, we call for more researches to investigate this interesting relationship.

## CONCLUSION

This paper has examined the extent to which several important aspects of infrastructural decisions are related to firms’ performance in the Indonesian service operations. Statistically, the study has managed to reveal several findings.

First, TQM soft elements assume a very important role in affecting firms performances. Secondly, worker empowerment is the most important infrastructural decision as it affects all types of service performances. Third, apparently, customer service are the most affected by the TQM soft elements, drawing from higher standardized regression scores and the model explain 36.8 % variance change in customer focus. Fourthly, costs are not influences by team management. Finally, costs has the lowest R square value, although still significant, indicating lesser influence by the three infrastructural decision.

For future research, more studies ought to be conducted to validate the above findings. Additionally, it would be interesting if researchers could look into the mediating effects of other variables on the relationship between the infrastructural decision variables and firms' performance.

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