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The Impact of the Effectiveness of Smart Quality Management on the Profitability Enterprises of Major Asian Companies

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ABSTRACT

This study aims to identify the extent of the influence of smart quality management practices and their impact on the profitability performance of major Asian companies. This paper used a sample of 143 major companies for the purpose of testing the relationship from the years 2020 to 2023. The study concluded that there is a positive and important link among smart quality management and profitability performance. Smart quality management is considered important in modern concepts that represent a new technical method for managing business processes and institutions in general. Smart quality management aims to improve profitability and productivity. This study considers smart quality management to be an integrated management system that aims to improve the firm's reputation and growing its profits and market share, and then confirm its existence and link in the field of effort.

Keywords: Smart quality management, profitability performance, major Asian companies

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1. INTRODUCTION

Smart quality management is an advanced approach that leverages advanced technologies such as machine learning (ML), artificial intelligence (AI), and data analytics, to improve and strengthen traditional processes of quality management. Quality management goes beyond traditional methods by integrating intelligent technologies to make quality assurance more adaptable, efficient and proactive. Today's businesses live in an era of pursuit of greater innovation, efficiency and excellence characterized by innovation and profitable performance. The current century is witnessing numerous “local and global” changes that have made a kind of competition among economic firms, whether they aim to conquer global markets or wish to maintain their participation in their local markets. This necessitated the need to pay attention to the modernization of the administrative methods used by these firms. It is inevitable that these firms obtain specific elements that help them gain a “competitive advantage” in the business field. Smart “quality management” represents one of the key inputs that support the innovation “capacity necessary to achieve the “competitive advantage” that supports the success and continuity of organizations in the modern era” (Fainshmidt et al., 2019).

This research makes many contributions to smart quality management on the profitability performance “literatures”. Firstly, it examines profitability performance in an evolving market while previous research had focused on advanced markets. Secondly, this study measures the smart quality management on the profitability performance by utilising the index. Therefore, this study employing the “annual reports” of top 143 companies from Asian main companies from 2020 to 2023. Depend on the overhead, this study exam the effect of smart quality “management” on the profitability “performance” of Asian main companies.

2. RESEARCH PROBLEM

The main issue of the study revolves around the extent to which the application of comprehensive smart quality management practices affects profitability performance through Asian large companies.

Most of the previous studies that addressed the effect of comprehensive “smart quality management practices on innovation” were conducted in developed countries. Quality Management on innovation, such as the studies of (Zimon et al., 2024 & Chang et al., 1991 &

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Singh, & Smith, 2004 & Weng, 2022 & Anderson, & Sohal, 1999). Therefore, there is a barrier to studying the influence of TQM practices on innovative performance and its reflection on firm performance. Therefore, the problem of the study is represented in trying to answer a number of the following questions. The basic objective of this paper is to study and analyse the influence of comprehensive smart "quality management" practices on profitability performance in Asian main companies at the point of study. Bridging the gap in the research literature by presenting and testing a concise model of smart "quality management practices" and their influence on profitability performance.

3. Review of the Study and hypotheses development

Smart management is the one that employs the human and material capabilities available to it, by setting the desired goals, then planning how to reach these goals, and organizing the resources available to the management (human resources, time, and technical materials) in order to achieve the desired goals at the lowest possible cost, and controlling practical.

The concept of TQM: our perspective on it and this is very significant. The definitions of TQM have varied due to the multiplicity of researchers and differences, as we are dealing with a foreign philosophy and administrative culture. Opinions around it differ, and the starting points and compatibility of the concept of comprehensive supply management differ. We intend to provide a unified and specific definition. The following lines are the most important definitions in order to determine the effect of relating the concept of "smart quality management" on the innovative performance of an organization. Both Singh and Smith (2004) defined it as a philosophy or systematic methodology that enables an organization to become innovative. As for some Chang et al. (1991) defined it as a mechanism or methodology for improving quality and innovation to strengthen the competitiveness of organizations operating in isolation under the conditions of competitive competition. The define TQM as an organized approach to improving the quality tool, productivity (Weng, 2022 & Aly et al., 1991 & Zimon et al., 2024) argue that TQM it is a gateway to improving the effectiveness, flexibility, and competitiveness of organizations in order to "meet or exceed customers' needs".

The impact of quality on improving productivity and profitability. Improving quality leads to greater product matching, that is, an growth in the relationship between products and inputs, which means an increase in productivity. Improving quality leads to greater "process efficiency", "reduced evaluation costs" and lower external and internal failure costs, which

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means lower costs. Increased productivity and reduced costs lead to greater “profitability”. Quality, consumer satisfaction and competitive position. Improving quality leads to improving the efficiency of resource utilization and improving the “efficiency of the production process”. Improving the “efficiency” of resources and the production process leads to improving the competitive position and increasing the price/cost ratio. Improving quality leads to increased consumer satisfaction and increased market share, this in turn leads to increased revenue. Increasing the price/cost ratio and increasing yield leads to increased profitability.

In reviewing the literature relating to “production and operations management”, it has become clear that innovation improves many of the fundamental factors that help organizations “gain competitive advantage” (Kafetzopoulos et al., 2015). Yusr (2016) study aimed to attempt to identify innovative capabilities and their role in improving the relationship with MCS practices. The results shows that the SQM practices did not have a direct effect on innovative performance, but an indirect effect did was observed through the presence of the mediating variable represented by innovative capabilities.

As for the study Sefati et al. (2015) attempted to recognize the influence of full supply management practices on radical and incremental innovation, by applying it to a number of Iranian enterprises. The study sample represented 31 enterprises, and using the structural modeling method, the study concluded that there is an impact to growth the level of SQM performs to growth the rate of “innovation” in the firms under study. The consequences focused the significance of the “culture variable” and its role in valuing the significance of the effective contribution of all employees as one of the most SQM performs and its influence on “innovation”. Yang (2011) also try to identify the effect of full “supply management practices” on innovative performance by relating it to a number of “industrial organizations in Malaysia”. The results of the study found that some comprehensive supply management practices had a positive, statistically significant impact, represented in: customer focus on “innovative performance”. The consequences of the study also “confirmed” that the most influential practices are innovativeness in companies. Place of study. Performance indicators were those associated to customer concentration, process management. Hence, this study fills this contribution by testing this connection. The following is proposed:

H1. The smart quality management are significance and a positive connection with profitability performance of Asian main companies.

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4. RESEARCH METHODOLOGY

To achieve the objects of the study, the researcher relied on the descriptive analysis method based on the analysis of the phenomenon, the comparison of the hypotheses of the study, the analysis and interpretation of the data collected and the conclusion which contribute to determining the effect of the management dimensions. The profitability performance of the company. The study used two types of sources to collect annual reports and "DataStream".

The study population represents main companies operating in the Asian. The researcher relied on a simple random sampling method for a group of industrial company's representative of the study population.

Profitability enterprises "measured" by Return on equity = net Income on shareholders' equity. And smart quality management "Measured" by employing "index" (disclosure) in "annual reports" "with a scale of 0 to 1, where a score of 0 is for non-disclosure and 1 for disclosure". Leverage measure by the total debts to total assets. Knowledge by employing "annual reports" "0 for non- indicates and 1 for indicates" (Topash, 2014).

5. RESULTS

Descriptive statistics

Table 1 display the "descriptive statistics" in completely the "variables" in the "sample" of 143 in Asian main companies' "annual reports" from 2020 to 2023. The profitability performance presents a mean with 0.627 and however smart quality management displays 11.899.the control variables "shows" the leverage mean 4.542 and the knowledge 17.613 with a min -1.805 and max 1.100.

Table 1: *Descriptive test*

Variable	Obs	Mean	Std. Dev.	Min	Max
Profitability performance	143	0.627	0.232	0.322	0.553
Smart Quality management	143	11.899	3.278	0.210	5.900
Leverage	143	4.542	1.102	1.000	12.100
Knowledge	143	17.613	7.740	-1.805	1.100

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Correlation Analysis

The "multicollinearity" is not a problem in the present study. The connection values of all the "variables" present that a thoughtful issue of "multicollinearity" does not be as their "values" are fewer than 0.80 ("Hair et al., 2010"). Some "correlations" among the "independent variables and the dependent variable". As explained in Table 2, the smart quality management, leverage, and knowledge are positively and considerably related with profitability performance. "In terms of multicollinearity, the correlation matrix proves that no multicollinearity exists among the variables because" none of the "variables" "correlate" "above" 0.80. The "correlation values of all" the "variables" are "less than 0.80".

Table 2: *Correlation Test*

Variables	Profitability	Smart quality management	Leverage	Knowledge
Profitability	1.000			
Smart Quality management	0.200*	1.000		
Leverage	0.900*	0.161*	1.000	
Knowledge	0.052	-0.070	-0.251**	1.000

Regression Test

The model is investigation the link among the profitability performance and smart quality management in Asian main companies. This paper employed an "ordinary least squares" (OLS). The paper proposed results by employing this "model" to improve their "comparability" to that of other analyses. Model "under" clarify the link.

$$PP_{it} = \beta 0 + \beta 1\, SQM_{it} + \beta 2\, LEV_{it} + \beta 3\, KNOW_{it} + \varepsilon$$

Table 3: *Regression test*

Variables	t.stat	sig	VIF
Smart Quality management	0.80	0.051**	1.29
Leverage	0.10	0.083*	1.22
"Knowledge"	0.07	0.075*	1.61
Constant	0.11	0.20	
n		143	
R2 (%)		53%	
Adjusted R2 (%)		61%	

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p-value	0.58		
F-value	0.87		

The findings refer to for the model presenting a “positive” and main link among smart quality management and profitability performance (t=0.80, p-value=0.051). The leverage and “knowledge” shows a positive association with profitability performance.

The employ of developed smart quality management with their “continuous” informing is one of the “factors” moving “the success of profitability performance, in addition to” the management's interest to efficiently serve “customers”, “which is one of the pillars of the success”. The instrument's rapid reaction to resolve issues and classify mistake control is one of the maximum important facilities given that smart quality management in detection of the “determinants” of its achievement. The conclusion of the “responsibilities” trusted to the units in the appropriate way, at the appropriate quickness, and in the identified “standard” time is one of the influences impacting the attainment of smart quality management and an important display of serving from the “outputs of the system”.

6. CONCLUSION AND SUGGESTIONS

The results of the study concluded that the combined set of practices for implementing the smart quality management on the profitability performance. The results have a positive impact among smart quality management on the company's profitability performance. This can be explained by the fact that the approach to smart quality management has helped companies increase the efficiency of their operations and meet and respond to customers’ needs. It is also a source of continuous “competitive advantage” for business firms. The consequences of the study concluded that the special dimension of process management as a part of the practices of the smart quality management approach is the most important practice in achieving the success of applying the smart quality management approach within the organization in the companies under study.

The results of the study also “reached” the variable of “smart quality management” “practices on the performance” of profitability and an interpretation of “program” for a wise one, and the inclusion of the overall smart quality management is a reason that the two continuing “inherents” of the quality and the responsibility of each company. To introduce new products/services, processes and improve productivity (Zakari Hayat, 2011).

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Practical recommendations a consequences of the study showed a positive, statistically significant association among “smart quality management practices” and profitability performance in the Asian companies under study. Therefore, the researcher recommends the necessity of taking advantage of the positives of applying the smart quality management approach and its role in enhancing the competitiveness of the firm. The consequences of the study displayed that the factor connected to training as one of the “smart quality management” practices was the least influential factor in the “successful implementation” of the “smart quality management” approach. “Quality, which was confirmed by the consequences of the “descriptive analysis”, where the dimension classified in the last test”. Therefore, the researcher recommends the necessity of increasing the role of training as one of the practices of the approach to smart quality management. This role must be translated into a comprehensive clarification of the importance of training for employees and its ability to enhance the culture of teamwork, reduce errors, and raise the morale of employees.

Therefore, the researcher recommends the necessity of working to increase the smart quality management for support the profitability performance. The philosophy of smart quality management and providing a supportive company environment. “Recommendations for future research, the present study was limited to investigating the model by the main Asian companies”. Therefore, the researcher recommends conducting a comparative study by testing this model in the service and industrial corporations sectors. The researcher suggests adding some intermediate variables, such as the size of the company, the age of the company, and the period of application of the smart quality approach.

The essential for the executives of the profitability “performance” in Asian main companies under study to give diverse significance to the “smart quality management”, covering the simplicity of employ of the “system” over the “beneficiaries”, furthermore to the “flexibility” and “reliability” that the “system” essential have. The consciousness of “the Asian main companies” under study of the significance of evolving smart quality management always in connection with the “requirements” and desires of the “beneficiaries”, additionally to providing that given that and “rapid answer to the operators” of this arrangement.

This study recommended that the smart quality management lead to educating the company and its employees about the importance of the role of “smart quality management” in enhancing the profitability performance and the services it provides. Providing good professional competencies through which the development process becomes easy to

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implement. Providing an accurate system that defines the responsibilities of each department and the limits of intervention between authorities, as well as an evaluation and accountability mechanism. Providing a harmonious work environment that clearly defines the organization's goals and works to achieve them efficiently and effectively. Providing appropriate technological tools and capabilities through which it is easy to increase work productivity in addition to its efficiency. Developing and improving the efficiency of employees by providing continuous educational workshops and lectures. As well the smart quality management principal to updating occupational safety and health standards as well as product quality standards on a regular basis so that services rise to a higher level of quality and efficiency. The role of "smart management" is attained in "enhancing" profitability performance not only for the company, but for the general "benefit" of each of the employees as well as suppliers and of course the target customer.

Smart quality management is reflected the basic post of the institution since it is "based on profitability" that transforms all "information" and actions according to the general "profitability" model; "it is also based on collection, review, monitoring and recording this data and your satisfaction. In short, making decisions based solely on the information contained in recent economic changes has forced various institutions to improve their management techniques to adapt to current management techniques in developed countries", which helps the method of audits and guarantees administrative control.

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REFERENCES

Aly, N.A., Maytubby., V. J. & Elshennawy., A. K. (1990), Total quality management: An Approach and A Case Study," *Computers and Industrial Engineering*, 19, 1 & 4, 111–116.

Anderson, M., & Sohal, A. S. (1999). A study of the relationship between quality management practices and performance in small businesses. *International Journal of quality & Reliability management, 16*(9), 859-877.

Chang, C. & Lin, J. T. (1991), "Data flow model of a total service quality management system. *Computers and Industrial Engineering*, 21, *1* & 4, 117–121.

Fainshmidt, S., Wenger, L., Pezeshkan, A., & Mallon, M. R. (2019). When do dynamic capabilities lead to competitive advantage? The importance of strategic fit. *Journal of Management Studies, 56*(4), 758-787.

Hair, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). "*Multivariate data analysis* (7th ed.). Upper saddle river, New Jersey: Pearson Education International".

Kafetzopoulos, D., Gotzamani, K., & Gkana, V. (2015). Relationship between quality management, innovation and competitiveness. Evidence from Greek companies. *Journal of Manufacturing Technology Management, 26*(8), 1177-1200.

Singh, P. J., & Smith, A. J. (2004). Relationship between TQM and innovation: an empirical study. *Journal of Manufacturing Technology Management, 15*(5), 394-401.

Topash, N. K. (2014). "Evaluation of efficiency of accounting information systems: A study on mobile telecommunication companies in Bangladesh. *Global Disclosure of Economics and Business, 3*(1), 40-55.

Weng, J. (2022). Study of Quality Management Practice Through Enterprise Service Innovation in the Era of Intelligent Manufacturing. International Conference on Decision Science & Management, (260), 369–377.

Yang, M. H., Lin, W. S., & Koo, T. L. (2011). The impact of computerized internal controls adaptation on operating performance. *African Journal of Business Management, 5*(20), 8204.

Yusr, M. M. (2016). Innovation capability and its role in enhancing the relationship between TQM practices and innovation performance. *Journal of Open Innovation: Technology, Market, and Complexity, 2*(1), 6.

Zakari Hayat (2010-2011). "The role of accounting information in improving the financial performance of the economic institution Master's thesis, Faculty of Economic, Commercial and Management Sciences, Biskra".

Zimon, G., Mohamed, A., & Haluza, D. (2014). Does the quality management system affect working capital management efficiency? Evidence from Polish firms. *Cogent Business & Management, 11*(1).

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