An Empirical Review of the Relationship between Strategic Quality Management and Organisational Performance
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Abstract: In the past 15 years, awareness concerning natural changes was evidently expanding among population and industries. International agencies and national governments have expanded their endeavors concerning natural resources depletion, ozone depletion, gas emissions and waste reduction. Therefore, the main purpose of this paper is to examine the existing literature on the relationship between just-in-time (JIT), total productive maintenance (TPM), total quality management (TQM) and organisational performance. In total, 20 articles were empirically reviewed, all published in peer-reviewed journals between 2014 and 2018. The articles are analysed in terms of several general variables such as type of research and theoretical viewpoint, and the perspective taken on organisational criteria. The empirical reviewed indicated that JIT, TPM and TQM, maintained by human resource practices, have a significant prospective to develop the organisational performance. However, a simultaneous implementation of JIT, TPM and TQM does not certainly lead to greater performance. As prospective purpose for this, human resources are viewed as restrictive factor both improvement programs draw on. Therefore, this limited resource is acknowledged as vital element with respect to organisational performance when implementing JIT, TPM and TQM concurrently.

Keywords: Just-In-Time (JIT), Total Productive Maintenance (TPM), Total Quality Management (TQM), Organisational Performance.

INTRODUCTION
Strategic quality management is considered one of the strategies that contribute to the reduction of production costs and improving skills of the staff, and it has been designed to produce materials and deliver them using the minimum items from the stocks based on enhancing the performance and full controlling all activities of this job through participating all staff concerned. This strategy has improved from being a production system in the factories to be a part of the service environment. It has proven that many of strategic quality management are suitable to be used in both non-industrial institutions and service organizations as well, that is because service organizations differs from production ones in many respects as following: service is tangible as in production organizations, its delivered to the client directly, it is not stored but immediately consumed, and finally the relation between the client and the service provider [1].

However, supply chain management (SCM) as a part of management has risen out of the supply side financial aspects that try to see how expenses of firms can be lessened through the marketing intermediaries with a specific end goal to make accessible the item at a more reasonable cost. It alludes to the management of a system of interconnected organizations required in a definitive arrangement of item and management bundles required by end clients. SCM traverses all development and capacity of crude materials, work-in-process stock, and completed merchandise from purpose of root to purpose of consumption [2].

In addition, in today’s complex marketplace, the opposition is between supply chains instead of individual organizations. An essential thought of inventory network administration is the stream of merchandise from the wellspring of crude materials to a definitive end shopper. The stockadministration is one of the foundations of SCM and stock is a key cost-donor in any production network. As indicated by the Institute of Management and Administration (IOMA), the cost of coordination’s in the U.S. for 1993 added up to $936 billion. The cost of conveying stock (counting interest, charges, oldness, deterioration, protection, and warehousing) added up to $300 billion, Institute of Management and Administration, 2004.

Moreover, company performance is extremely fundamental to management as it is a result which has been accomplished by an individual or a group of
people in an association identified with its power and obligation in accomplishing the objective legitimately, not illegal and adjusting to the assertion and ethic. Performance is the role of the capability of an association to gain and deal with the resources in a few diverse approaches to building up competitive advantage. There are two sorts of performance, nonfinancial performance and financial performance [3].

Therefore, over the past 15 years, awareness concerning natural changes was evidently expanding among population and industries. International agencies and national governments have expanded their endeavors concerning natural resources depletion, ozone depletion, gas emissions and waste reduction. Such endeavors involve huge modification and change production procedures and supply chain planning. Subsequently, to retain a similar level of production, in an environmentally and feasible way, the conventional method for managing manufacturing operations must be changed to react to environmental concerns [4].

However, the subject of industrial performance has gotten significant consideration from researchers in the different ranges of business and core management. It has likewise been the essential concern of business experts in a wide range of associations since performance has suggestions to association's health and eventually its survival. Great performance reveals management adequacy and proficiency in making utilisation of organization's resources, and this like this adds to the nation's economy at large [5]. Hence, the remaining sections of this paper consist: section 2 is the review of empirical studies; section 3 is the theoretical and conceptual framework; section 4 is the conclusion.

EMPIRICAL LITERATURE REVIEW

Al-Abdallah, Abdallah, and Hamdan [6] analysed the effect of suppliers relationship management (SRM) on competitive performance in the manufacturing sector. They quantified SRM through five primary practices: trust-based relationship with suppliers, supplier quality improvement, supplier lead time reduction, supplier partnership and supplier collaboration in new product development. They additionally measured aggressive performance through flexibility, cost, quality, on time product launch and delivery. They utilised international data collected in Japan, Korea, USA, and Italy as a major aspect of round 3 of High-Performance Manufacturing (HPM) project. The analysis demonstrated that two practices of supplier connection management, supplier lead time reduction and supplier partnership significantly and positively influence the competitive performance of the purchasing firms. Moreover, Abuhilal, Rabadi, and Sousa-Poza [7] provided engineering directors the rules to select a cost-effective supply chain inventory control system over assessing push inventory systems (MRP) and pull systems (JIT). They utilized Simulation demonstrating to construct and examine the supply chains with stationary and repetitive request designs. They showed the primary factors that should concern the engineering director to select amongst MRP and JIT. They inferred that because JIT decreases the holding cost, it turns into a more financially savvy framework at a more extensive territory as the request level increments. The result likewise demonstrated that when information is shared over a production network that actualizes an MRPFramework, the cost lessening is critical in correlation with no information sharing, particularly under recurrent and exceedingly factor request designs.

In addition, Ahmad, Zakuan, Jusoh, Yusof, and Takala [8] proposed association among TQM practices and business performance with moderator impact of AFTA. They used structural equation modelling methods. The findings revealed that the proposed conceptual model support the industry players and academicians to have better considerate on the influence of AFTA in TQM execution in refining their business performance. However, Bu and Cao [9] examined the influence of the TQM execution on the financial performance of the firms by applying Panel analysis and Event study methods in China. The findings revealed that the sales revenue appreciated a significant increase; the percentage of selling cost does not vary significantly, though the asset turnover is strangely increased, and the return on total assets showed a significant decline since firms have won the quality awards. However, the amount of capital strength has no significant impact on the financial performance after executing the TQM.

Valmohammadi and Roshanzamir [10] analysed the organizational culture of Tehran's pharmaceutical companies; examined the execution of diverse classes of TQM in the companies; compared the two models clarifying the associations between TQM, culture, and performance; and determined the impact of TQM and culture on performance. They employed structural equation model. They also collected data from 209 senior managers and CEOs of operations, quality, sales departments and R&D in the surveyed industry. The findings postulated the market and hierarchy cultures as the leading forms of culture and the leadership type as the most established feature of TQM. The results likewise, suggested that Tehran's pharmaceutical companies stress on steadiness more than liteness. The analysis revealed the positive direct impact of TQM and culture on performance and similarly the positive indirect impact of culture over its positive impact on TQM.

Furthermore, Zu'bi, Tarawneh, Abdallah, and Fidawi [4] analysed the impacts of supply chain synthesis on the environmental performance of food manufacturing organizations in Jordan. They gathered the data from 119 food organizations. They utilized
linear regression tests and descriptive statistical instruments. The outcomes demonstrated that supply chain synthesis influenced environmental performance. Furthermore, the outcomes demonstrated that supply chain synthesis emphatically influenced environmental control and pollution organisation. Similarly, Lakshmanasamy and Anil [11] empirically analysed the impacts of such smaller scale factors in the supply linkage utilizing the interpersonal organization inspection and diagrams the rising observational system in a business identified with development industry. The outcomes demonstrated that individual and social parts of people in the system impact the linking, organizing and the structure of the system which have imperative ramifications for business advancement and product distribution.

Conversely, Shaltayev, Deniz, and Hasbrouck [12] focused on changes and strategies for production arranging and control have turned out to be fundamental for the companies to organize, to enhance their procedures and, like this, stay competitive and reasonable. Customary techniques have been increasingly supplanted by more current and competitive methods, for example, Just-In-Time (JIT) and Theory of Constrains (TOC). During time, a broad number of studies and examines the theories, in regards to both strategy and execution, have been led, with the reason to give a response to the answer if there is one technique that is all the more fulfilling. Also, Uhrin, Brueque-Camara, and Moyano-Fuentes [13] investigated the impact of workforce advancement on the connection between lean production and operational performance. They obtained the data through questionnaire on a sample of first tier suppliers in the Spanish automotive industry. Their analysis highlighted the crucial part of workforce advancement in the usage period of lean production and drew upon the understanding that advancements in the execution of lean production compare to an expansion in educated representatives which like this encourages the achievement of enhanced operational performance results.

Aquilani et al., [14] used a systematic review of the literature contained in the three databases EbSCO, JSTOR, and Springer connects and on the internet searcher Google Scholar. The investigation of the literature recognized three distinct bunches of papers: “identification "papers, which demonstrate that client centre has selected up significance as of late; "execution " papers, which highlighted that a general or shared model or scale to effectively actualize TQM does not yet exist; and " effect on-execution " papers, which demonstrate that few studies have considered the connection amongst TQM and the issues of both marketing and performance, underlining the most significant gap in the TQM literature. Additionally, Waghmare, Raut, Mahajan, and Bhamare [15] empirically tested the impact of basic weaknesses for machinery manufacturing such as procedure problem, equipment problem, design problem, personnel error, training deficiency, external phenomena, management problem, and TPM pillars for example continuous improvement (kaizen), 5S, planned maintenance, quality maintenance, autonomous maintenance, safety, health environment control, education and training on SMEs in India. They used a sample of 473 manufacturing SMEs operating in the manufacture of machinery and equipment, automobile, packaging, chemical, metal processing and food processing in India. Likewise, Bu, X. Z., Feng, X. K., & Liu, C. [16] examined the influence of the TQM execution on financial performance in China. They used Regression analysis and Event study methods. The findings revealed that the market share relished a significant growth, the proportion of cost to sales is unusually amplified, the asset turnover rate does not alter significantly, and the return on total assets indicated a significant decline since firms have earned the quality awards. The fluctuations of the financial performance of quality award leaders are diverse with companies' capital intensity, size, the time of awards announcement and degree of change. In window eras sample firms which are bigger, little varied and recently quality awards leaders have enhanced financial performance than other sample firms, the amount of capital intensity does not influence the financial performance after executing TQM.

Recently, Migdadi et al., [17] used two mediating variables of supply chain integration and supply chain knowledge quality and examine the relationship between knowledge management practices and total organisational business performance. They obtained the data from a survey of 400 firms from the Jordanian manufacturing sectors. They applied structural equation modelling for the analysis. Their findings showed that commitment in knowledge management practices can lead to better assimilation among supply chain partners and better organisational knowledge quality which in turn, can lead to better organisational performance. Moreover, knowledge management practices have positive linkage with knowledge quality and supply chain assimilation offers organisations with practice-related stimulus for committing in collaborative knowledge management and notifies them to the prospect of other prospective benefits from it. Additionally, Zhu and Lin [18] revisit the causal impact and examine hysteresis influences of lean production on performance. They found that lean production has no significant impact on business performance; but the association along lean production and operations performance is positively significant, particularly for non-state-owned firms. Moreover, the non-significant influence of lean production on business performance of state-owned firms is mainly due to the failure of lean production execution. However, lean production can only increase operations performance of non-state-owned firms in the short term due to their incapability to constantly implement lean production.
In addition, Panwar et al., [19] employed multivariate statistical analysis and analysed the relationship among lean practices and performance development. The results revealed that lean practices are positively related with productivity, timely deliveries, first-pass yield, reduction in inventory, elimination of waste, reduction in defects, reduction in costs and better demand management. Nevertheless, inside a process-industry framework, lean practices associated to pull production were found to have a marginal influence on performance development. However, Alsubaie and Yang [20] presented a combined model to offer direction and sustenance for those organisations who intend to reach world-class criteria in maintenance processes through persistent development. Moreover, a strategic model has been established over theoretical assimilation of three standard process enhancement approaches, which are six sigma, total productive maintenance (TPM) and lean. They revealed that lean Six Sigma can function in similar with the TPM approach and will build it easier to comprehend by shop floor machinists. Moreover, the use of the model has been confirmed using a case study in maintenance of a fleet of military vehicles. The proposed model is very common in nature and can be functional to any service organisations with maintenance purposes to attain high development performance and general equipment efficiency.

Furthermore, Sing and Saudi [21] captured the existing state of Six Sigma and Total Productive Maintenance (TPM) as well as to offer the entrenched approach of Six Sigma and TPM on refining supply chain performance. Moreover, they analysed the relationship offered in the context using Partial Least Square Structural Equation Modeling (PLS-SEM). The results revealed that supply chain performance can be enhanced by leveraging on the entrenched TPM with Six Sigma rather than relating each approach independently. Similarly, Baidoun, Salem, and Omran [22] assessed the level of TQM implementation in Palestinian governmental and non-governmental hospitals using the Malcolm Baldrige National Quality Award (MBNQA) framework. They collected the data from 363 questionnaires from governmental and non-governmental hospitals functioning in Gaza Strip. The findings revealed that Palestinian hospitals functioning in Gaza Strip achieve at a fairly adequate level. Relating the results it indicated that the performance of non-governmental hospitals is enhanced with higher degree of TQM application than the governmental hospitals.

Additionally, Rexhepi, Ramadani, and Ratten [23] established a conceptual framework of the usage and impact of TQM systems in the sports organisations’ performance by offering the linkage among these systems and total performance. Their conceptual framework was established on the impact of these systems: benchmarking, quality circles, empowerment and outsourcing continuous improvement (kaizen). They revealed that these systems contributed to raise the total quality, increase the employees’ participation and loyalty, increase innovations and increase the financial steadiness of sport.

THEORETICAL AND CONCEPTUAL FRAMEWORK

Theoretical Framework

Socio-technical System Theory

The typically referred to issues in the implementation of industrial companies performance are those identified with social protection from change, the absence of preparing and instruction [24]. However, the lack of coordination of the distinctive department, and perplexity on the connection between industrial subsystems [25]. This study will give evidence of the significance of the establishment of normal practices that will encourage the successful usage of JIT, TPM, and TQM. Besides, as per the socio-technical system theory, the joint improvement of practices that are socially and in fact arranged should prompt great performance [26]. For instance, Bentley et al., [27] contends for the significance of building industrial assertiveness upon the reconciliation and coordination of procedure, structure, culture, and human resources subsystems inside a complex, evolving condition. Geels et al., [28] demonstrated that the idea of an adjusted socio-technical theory is reflected in all subsystems of effective industrial companies in Jordan. This study recognized the acts of JIT, TPM, and TQM as the regular practices that are human-and strategic-oriented and the essential systems that are exceptional to JIT, TPM, and TQM. The basic practices give a supporting instrument to the usage of TQM, JIT, and TPM basic methods. In the contention of this study, the use of key strategies will not give as reliable an effect on implementation performance as the joined organization of the regular practices and performance of the essential methods. Both the social and technical subsystems ought to be together raised to accomplish an ideal performance. Hence, this study expects that high industrial companies performing will have an atypical state of implementation of both the basic human-and vital situated practices and the essential methods, both the social and technical system [29].

CONCEPTUAL FRAMEWORK

Organisational Performance

Organisational Performance is a standout amongst the most well-known terms in the present public sector administration terminology. Managing organisational performance is by and large broadly acknowledged and embraced everywhere throughout the world. It spread quickly from the private sector to public sector in the developed world and has as of late discovered its way in many developing nations [30]. New activities and enactments keep on being issued as an indication of governments' emphasis on following the new concentrate on performance orientation. In addition, Performance is alluded to as being tied in with taking every necessary step, and in addition being about
the outcomes accomplished. It can be characterized as the results of work since they give the most grounded linkage to the vital objectives of an association, consumer loyalty and monetary commitments. The expression “Performance Management and Measurement” alludes to any incorporated, precise way to deal with enhancing organisational performance to accomplish key points and advance association's central goal and qualities [31]. In that sense Organizational Performance Management which particularly focuses on the individual performance of a representative despite the fact that the last includes a fundamental piece of the general organisational performance structure. Truth be told, a Performance Management framework goes for enhancing the aftereffects of individuals' endeavors by connecting these to the association's objectives and destinations. It is, ideally, the means through which employees’ performance can be enhanced by guaranteeing proper acknowledgment and reward for their endeavors, and by enhancing communication, learning and working arrangements [32].

**Just-In-Time (JIT)**

Just-In-Time (JIT) industry is a Japanese management rationality connected in assembling this includes having the correct things of the correct quality and amount in the perfect place and the opportune time. It has been generally announced that the best possible utilization of JIT fabricating has brought about increments in quality, profitability and effectiveness, enhanced correspondence and declines in expenses and wastes [33]. The capability of picking up these advantages has influenced numerous industries to address and consider this way to deal with assembling. Consequently, JIT has turned into an extremely prominent subject at present being examined by numerous overall industries [34]. Just-In-Time management includes the use of old management thoughts; nevertheless, their adjustment to the cutting edge fabricating firm is a generally new practice. Currently, many firms are examining and applying the JIT approach in light of an always competitive condition. Many industries know about the weight set upon them by the accomplishment of their Japanese rivals at acquiring incredible levels of profitability. To stay competitive and encounter monetary achievement, the organizations have to concentrate on expanding profitability, enhancing the quality their items and raising the guidelines of productivity inside their items and raising the principles of proficiency inside their organizations. The capacity to accomplish higher principles of efficiency without yielding quality is additionally an essential objective of an assembling firm. As time goes on, use of JIT assembling may help these organizations in accomplishing these objectives of assembling brilliance [35].

**Total Productive maintenance (TPM)**

Total Productive maintenance (TPM) is an extension of lean assembling framework. The objective of TPM is to improve zero breakdowns, zero loss, and zero accident. On the off chance those machine uptimes is not unsurprising and after that industry unfit to create speed of offers. Subsequently, a basic subordinate to guaranteeing supply is a proactive framework. With the assistance of appropriate preparing and independent preventive support, organizations have possessed the capacity to build the Overall hardware adequacy and to decrease the machine breakdowns. TPM depends on the perpetual scan for the change of the proficiency of the procedures and the methods for generation, for a solid and day by day association of the considerable number of individuals who take part in the beneficial procedure. Zero calamities, zero deficiencies, zero stops [36].

**Total Quality Management (TQM)**

Total Quality Management (TQM) has been characterized as a comprehensive approach and a management reasoning that looks for the persistent change in all the organizational capacities and operations to create and convey items and administrations that fulfill the clients' needs and meet their desires. In other meaning, TQM is a way to deal with enhances the execution and the nature of the yields to prepare for the clients' requests, an approach for long term achievement. Firstly, TQM reasoning was for the most part utilized as a part of the assembling business. Later, TQM has picked up notoriety as one of the drivers of the upper hand in administration area and others divisions too. Total quality management (TQM) is considered as a standout amongst the most imperative management instrument that helps industries to face challenges and accomplish a high rate of execution. TQM is an all-encompassing approach and a constant change in all operations in the organization in creating and conveying quality services and product to fulfill the changing clients' needs [37].

In addition, TQM is an integrated organizational efforts premeditated to enhance quality performance at every level of the organization. Issues regarding quality can be traced back during the Second World War as American scientists and engineers exerted great efforts to control the quality of military industries and to obtain successful weapons with high accuracy using the method of statistical control upon quality. But these efforts have been limited only to military industries [38].

**CONCLUSION**

The main purpose of this paper is to examine the existing literature on the relationship between Just-in-time (JIT), total productive maintenance (TPM), total quality management (TQM) and organisational performance. In total, 20 articles were empirically reviewed, all published in peer-reviewed journals between 2014 and 2018. The empirical reviewed papers

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revealed that organisations with an emphasis on JIT, TPM or TQM precise performs as well as organisations following a simultaneous quality strategy in relation to JIT, TPM and TQM indicated a higher performance contrary to organisation without a specific quality focus. Consequently, it can be concluded that the application of concept-specific quality practices seems to be a reasonable approach to improve organisational performance.

REFERENCES


