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BUSINESS PERFORMANCE IMPROVEMENT IN RUBBER-PARTS FACTORY THROUGH A QUALITY MANAGEMENT MODEL (CASE STUDY: PTX)

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ABSTRACT. A manufacturing plant operating in Banten producing automotive-rubber parts has been experiencing customer complaints increase in period of 2017-2019. Process management contributing to overall quality performance is examined and improved to reduce the problem. This research proposes a model consisting of Top Management Policy, Vendor Control, Employee Participation, Process Management, Quality Performance, Sales Performance and Intangible Performance is proposed. Top management policy provides direction for the vendor control, employee participation encouragement and process control. These three variables simultaneously increase the product quality in the form of conforming requirements, delivering excellent service and minimizing customer complaints. Subsequently, this quality performance improves sales and intangible performance. Respondents of this study were 100 employees of PT. X. PLS software was used to process the data in order to obtain the direction and magnitude of influence between variables referring to the proposed model. The research shows that top management policy has significant effect to vendor control, participation and process control at values of 0.398, 0.480, and 0.487 subsequently. These three variables increase quality of product and service at values of 0.303, 0.426 and 0.188. The quality performance affects intangible at 0.252 but it does not affect sales.

Keyword: Top management policy; Quality performance; Sales performance; Standardization

PENINGKATAN KINERJA BISNIS PADA PABRIK SUKU CADANG KARET MELALUI MODEL MANAJEMEN MUTU (STUDI KASUS: PT.X)

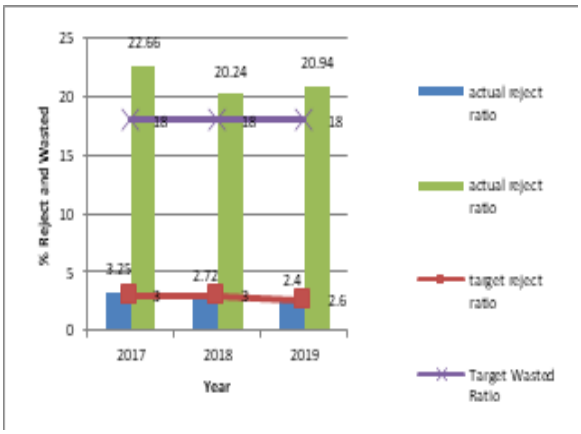
ABSTRAK. Sebuah pabrik yang beroperasi di Banten menghasilkan suku cadang karet sedang mengalami peningkatan keluhan pelanggan dalam perioda 2017-2019. Manajemen proses yang mengkontribusi pada kinerja mutu menyeluruh dikaji dan ditingkatkan untuk mengurangi masalah. Penelitian ini bertujuan untuk mengusulkan suatu model terdiri dari Komitmen manajemen puncak, Pengendalian Pemasok, Partisipasi karyawan, Manajemen proses, Kinerja mutu, Kinerja Penjualan dan Kinerja Intangibel. Komitmen manajemen puncak menyediakan arah untuk standarisasi, pengendalian pemasok dan dorongan pada partisipasi. Ketiga variabel ini secara simultan meningkatkan mutu produk dalam bentuk memenuhi persyaratan, memberikan jasa yang ekselen dan meminimalkan keluhan pelanggan. Selanjutnya, kinerja mutu ini meningkatkan volume penjualan dan kinerja intangibel. Responden untuk penelitian ini adalah 100 karyawan di PT.X dimana software PLS digunakan untuk memproses data sehingga diperoleh arah dan besaran pengaruh antara variabel merujuk pada model yang diusulkan. Penelitian menunjukkan Komitmen manajemen memiliki pengaruh penting pada standarisasi, pengendalian pemasok, partisipasi pada nilai 0.398, 0.480 dan 0.487. Ketiga variabel meningkatkan mutu produk dan jasa pada nila 0.303, 0.426 dan 0.188. Kinerja meningkatkan intangible pada nilai 0.252 tetapi tidak mempengaruhi penjualan.

Kata kunci: Kebijakan manajemen puncak; Kinerja mutu; Kinerja penjualan; Standarisasi

INTRODUCTION

Business performance, both tangible and intangible, is affected by quality of its products and services. Unfortunately, the factory (PT.X) has been experiencing declines in its quality performance due to increase of reject and wasted ratio, customer claims, total overtime ratio, productivity and QCC groups and theme completion.

Production has been designed to allow certain amounts of defects due to various technical reasons. However, the company's reject ratio and wasted ratio has been exceeding the defined target as revealed in the Figure 1.



Source: Company Annual Report

Figure 1. Total Reject Ratio and Wasted Ratio

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The figure shows reject *ratios* target at 18% could not be achieved in 2017 to 2019 at values of 22.66%, 20.24%, and 20.94% respectively. Neither actual *wasted ratio* at 3.25% in 2017 was higher than targeted wasted ratio at 3%. Unachieved reject ratio means higher quality problems due to substandard intermediate or final products.

Also, the customer's claim at 3, 2.1 and 2.05 ppm (part per million) exceeded the target at 3, 2 and 1.9 in three consecutive years as provided in Figure 2.

Source: Company Annual Report

Figure 2. Customer Claims

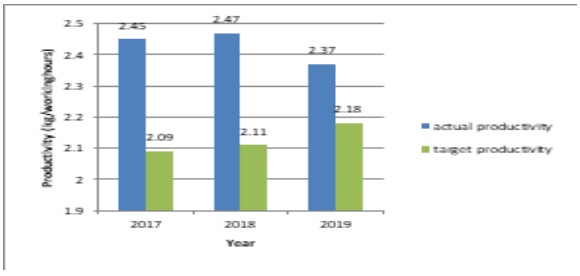
This suggests that the operation capability to prevent quality problems and to improve quality process is decreased since the products have been shipped to customers leading to complaints.

Thirdly, the human factor showed similar theme of decrease in its efficiency as presented in Figure 3 regarding overtime ratio. The higher ratio means the longer time needed to complete tasks beyond standardized timing. It indicates inefficient and ineffective human capability.

Source: Company Annual Report

Figure 3 Total Overtime Ratio

Figure 3 reveals *overtime ratio* at values of 5.7, 4, and 3.5 did not reach the target at values of 2.6, 2.6 and 2.26 from 2017 to 2019. It increases from 35% to 54% labor hours which is similar to higher operation costs.



Source: Company Annual Report

Figure 4. Productivity

Despite those drawbacks, product quantity at 2.45, 2.47 and 2.37 surpassed the determined target at 2.09, 2.11 and 2.18 within the period of 2017-2019 as shown in Figure 4. However, this quantity achievement sacrifices quality in the form of reject ratio, wasted ratio, customer claim ratio and overtime ratio as discussed above.

In its quality management, the company undertakes QCC (quality control circle) to maintain employees' involvement and awareness in achieving quality standards. Training for QCC group members is held every year for both existing and new group members. Problems seen includes lack of understanding to quality issues, passive participants, time constraints in anticipation to production increase. As to the product quality, this situation causes decline in job satisfaction and employees' performance.

It is reported that there are always some groups cannot complete themes. Despite, management has given support by giving working hours dispensation to member of group and committee, fund to run the meeting, cash reward to winning group as well as theme completing group. Furthermore, department's involvement in forming groups in its responsibility environment have not met to the maximum. There are also departments that in 2019 do not participate in the activities that are Human resource departments.

The data presented in the graphs above shows management problems in the company's operations that have led to the performance of the quality of products and services. The company has not made a review of the effect of such issues with sales.

Previous Research

Studies on the influence of factors to quality have been conducted by many researchers, but these are done partially and or using different models. For example, Baye and Raju (2016) specifically looked at the relationship between Top Management Commitments with Human Management, Supplier Management and Process Management. It did not go further to include employee participation nor their influences to performance. Whilst, Munizu (2013) focused more on the influence of human management and process management on product quality performance. The combination of both Baye and Raju (2016) and Munizu (2013) fits with the two themes examined by this research.

Furthermore, the process of quality management through TQM has been researched by Aziz, Sumantoro and Maria (2019) and Aziz (2019). Urubio (2016) and Irhamma and Nurcahyo (2018) emphasized on the QCC Group as part of the TQM process. Thus, they examined factors affecting TQM rather than

business performance. Several other researchers such as Kumar & Manjunath (2013), Munizu, M. (2013), and Dananjaya, R.H., & Sudaryanto, B. (2015) investigated the influence of TQM on the company's Performance rather than factors affecting TQM. Nonetheless, those research have not touched impact to business performance provided by this study.

Finally, this study proposes a comprehensive improvement model to the company starting from upstream point mentioned as top management commitment to downstream point namely business performance. The performance is affected by four variables considered as critical or value adding that consisting of vendor control, employee participation, and process control.

Frame of Thought and Hypothesis Development

The company's management process and performance are dependent on top management commitment as revealed by several researches on Total Quality Management such as Pratama and Aziz (2019), Irhamma and Nurcahyo (2018), Kumar and Manjunath (2013), and Baye and Raju (2016). Top management sets out the processes that are considered to support the achievement of the company's goals including revenue performance and non-financial performance. A significant and strong relationship was found by Baye and Raju (2016) between Top Management Commitment with Human Management, Supplier Management and Process Management. Based on the description, the hypotheses developed are Management commitments affecting supplier control (hypothesis 1), employee participation (hypothesis 2), and Process management (hypothesis 3).

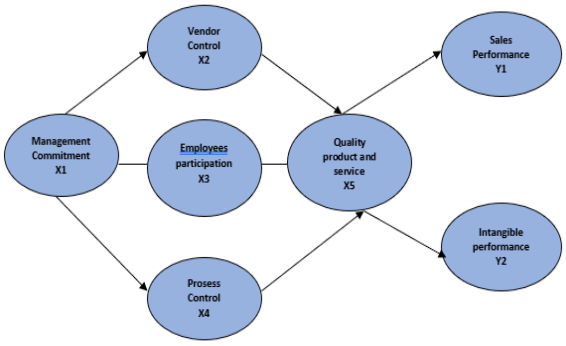


Figure 5. Frame of Thought

Following that, the quality of the company's products and services is influenced by various internal factors in strategic and operational level. A well-managed process will result in good quality products and services. This includes human beings are an important factor in order for the process to run well so as to also contribute to the achievement of the quality of products and services. Munizu (2013) and Pratama and Aziz (2019) discovered the influence of Human Management and Process Management on product quality performance. Pratama and Aziz (2019) mentioned the variables of training, employee participation, knowledge, quality awareness in human factors. The supply chain teaches the importance of controlling the processes and products or services supplied by suppliers. Thus, this study defines hypotheses 4 Supplier control affect the Quality of products and services and Hypothesis 5 Employee participation affects the Quality of products and services. Raw materials and supporting and services from the company's partners who meet the requirements of quality, time and price support quality consistency and minimization of reject and on time in accordance with the production plan. This is the basis of hypothesis 6 which states that process control affects the Quality of products and services.

The quality of products and services is a key element of the company to win the competition shown through sales and profits, the perception of both customers and other stakeholders, the appreciation of the value of the product and the company's ability compared to competitors. Irhamma and Nurcahyo (2018) examined and proved the influence of quality control groups (cost reduction, motivation, team work, quality, communication, improved the quality and service, build a happy and meaningful, attitude, contribute to develop, satisfy) on the company's performance represented by safety, profit and productivity. Based on the description, Hypotheses 7 is the quality of products and services affects sales performance and Hypothesis 8 is the quality of products and services affects Intangible Performance.

METHOD

This quantitative research collected data through survey and analyze it using PLS software. Location of the investigation was a manufacturing producing automotive-rubber parts in Tangerang, Indonesia. Population is employees involved in QCC program stationed in purchasing, production, quality control, business and management level. Number of samples is calculated based on PLS requirement which resulted in 100 persons. The selection is carried out based on *non-probability sampling*. The scale used in the measurement of indicator variables is Likert with a scale of 1 to 5 where 1 is Strongly Disagreed and 5 is Strongly Agreed.

Variable Operationalization

Variable in model is consisted of latent variables and indicator variable. Latent ones represent the

examined quality model, whilst indicators explain the latent wo which these can be understood. The following elaborates each operationalization variable.

Top Management Commitment (X1)

The success of any organization is initiated and affected by its top management commitment. Top management is an individual or a group of people having the highest structural position to direct and control organization (ISO 9001, 2015) in which they formalize their commitment into company policies. In this study, the policy is represented by quality vision and quality priority defined as follows: Quality vision (X1.1) is Top management conveys a quality vision to support business operations and performance. Quality Priority (X1.2) is Top management stops other activities if quality standards are not met.

Vendor Control (X2)

Hassan et al. (2015) and Dulani and Hariadi-DP (2020) states that a qualified supplier is a key element and a good resource for a buyer in reducing costs so which evaluation and selection of the potential suppliers has become important component to improve supply performance. In terms of representative indicators, Salunkhe and Bagi (2011) defined supply chain process as supplier evaluation and selection and supplier gradation on the basis of delivery time. Whilst, Petricli and Emel (2016) summarized criteria used in strategic supplier selection and evaluation is to include quality conformance to quality standard and quality reliability.

Indicator variables that describe supplier control are as follows: Selection standard (X2.1) is Identify and register suppliers in the manner established by the company; Quality of material from supplier (X2.2) is analysis or quality determination to grouping into categories is done consistently.

Employee Participation (X3)

Zhi et al. (2020) said that participation is a practice by which intellectual and creative potentials of employee are harnessed for decision affecting the goals and objectives of organization. As participation is a form of good communication, ISO 9001 (2015) defined that the extent to which employees feel good, open, and smooth, both between colleagues and leaders. Astrianti et al. (2020) selected indicators such as fair compensation, develop human capacities, social integration, social relevance, affective, continuance and normative commitment. Indicator variables that describe communication latent variable are as follows: Provision of information (X3.1) is management provides quality information to employees; Between management and employees (X3.2) is Involvement of quality committees and worker representatives; Between employees (X3.2) is forms of communication between employees are applied.

Process Management (X4)

Activities are carried out based on certain operating requirements or standards so that the process and products of activities are consistent. Requirements are the stated needs or expectations, either implied or expressed (ISO 9001, 2015). Indicator variables that describe process management latent variable are follows: Procedure availability (X3.1) is documented process used as guideline in various formats; Sanctions when there is a violation to requirements (X3.2) is as a mean of control; Employee understands and follows requirements consistently (X3.3).

Quality Performance (X5)

Okocha and Emezue (2021) defined performance was a broader indicator which includes productivity and quality, consistency and other factors. Whilst, ISO 9001 (2015) stated that performance related to product and service quality. Indicator variables that describe quality performance latent variables are follows: Quality specification (X5.1) is the goal set by the organization to achieve specific results consistent with the policy; Specifications and quality criteria (X5.2) is the extent to which planned activities are realized and planned results are achieved; Complaints' reduction (X5.3) is the complaints number decreases.

Sales Performance (Y1)

Sales performance is revenue of the business. Digalwar and Sangwan (2011) quoted Cross and Lynch (1989) proposed performance pyramid consisting of corporate vision, market, financial, customer satisfaction, flexibility, productivity, quality, delivery, cycle time and waste. This performance is comprised of tangible and intangible factors. Indicator variables that specifically describe sales performance are as follows: Sold volume (Y1.1) is number of products sold and product price (Y1.2) is product price according to company target.

Intangible Performance (Y2)

Intangible performance is non-quantitative achievement such as perception, brand and competitive advantage. Okocha and Emezue (2021) mentioned that brands are expected to deliver a range of objectives

including to identify the goods or services from one seller or a group of sellers and differentiated them from those of competitors. Sofiaty et al. (2022) put reputation and brand loyalty together with recognition and affinity. In this research, indicator variables that describe intangible performance latent variables are as follows: Reputation (Y2.1) is customer perception on product and service provided by the company; Brand (Y2.2) is product value represented by its brand; Competitive advantage (Y2.3) is competitiveness level of product and services in comparison to competitors'.

RESULTS AND DISCUSSION

Descriptive results from 100 respondents are presented in the following diagrams:

Table 1. Responses Composition

Code	Variable	%
X1	Top management commitment	
X1.1	Quality vision	98,54
X1.2	Quality significance in practice	97,56
	Vendor Control	
X2.1	Selection standard	98,04
X2.2	Incoming material quality from Vendor	98,05
	Employees' Participation	
X3.1	Achievement to working target	95,61
X3.2	Maximum in Planning	88,78
X3.3	Corrective Action	81,47
	Process Management	
X4.1	Procedure availability	90,73
X4.2	Control over deviation	98,05
X4.3	Comprehension to requirements	98,05
	Quality Performance of product and services	
X5.1	Meeting quality specification	97,07
X5.2	Good service	95,12
X5.3	Complaints' reduction	96,58
	Sales Performance	
Y1.1	Sales volume	90,25
Y1.2	Product price	95,61
	Intangible Performance	
Y2.1	Reputation	96,1
Y2.2	Brand	88,78
Y2.3	Competitive advantage	95,12

Analysis Using PLS-SEM

Data from 100 respondents responding to 18 issues contained in the distributed questionnaire is tabulated and processed using a program called Smart PLS v.3.3.3. The following elaborates stages in undertaking the analysis:

Measurement Model Assessment

The management model is evaluated in the sense of its compatibility and significance correlation between variable establishing the model. The testing includes validity and reliability to outer model (measurements), inner model (latent) and significance between variable. It was tested by Cronbach Alpha value in which it is reliable if the value is higher than 0.70 (Wong, 2019).

Outer Model Evaluation (Measuring Indicators)

The outer model is evaluated in order to know their validity and reliability values. The validity test consists of convergent validity and discriminant validity. An indicator is defined to have good reliability when the outer loading value higher than 0.70 (Wong, 2019). The PLS processing software has generated ***outer loading*** values as shown in Table A.1. It shows all values of the outer ***loadings*** are greater than 0.7. Therefore, the model is accepted from this parameter.

Table 2. Outer Loadings

	C1	C2	C3	C4	C5	C6	C7
X1.1	0.952						
X1.2	0.956						
X2.1		0.856					
X2.2		0.909					
X3.1			0.750				
X3.2			0.815				
X3.3			0.721				
X4.1				0.615			
X4.2				0.863			
X4.3				0.659			
X5.1					0.825		
X5.2					0.776		
X5.3					0.745		
Y1.1						0.521	
Y1.2						0.945	
Y2.1							0.970
Y2.2							0.672

Note: column 1 (C1)= policy; C2= Vendor Control; C3= Participation; C4= Process management; C5= Quality of product; C6= Sales performance and C7= Intangible performance.

Discriminant Validity Using Average Variance Extracted (AVE)

Another method to determine validity is to compare value of square root of average variance extracted (AVE) of each construct. Yamin (2021) and Wong (2019) stated that each indicator is valid when its value is greater than 0.70, whilst Yamin (2021) have different acceptance criteria which is higher than 0.5.

The PLS provides AVE results presented as follows: Top management policy is 0.909, Vendor control is 0.780, Participation is 0.583, Process management is 0.519; Quality performance of products and services is 0.613; Sales performance is 0.582 and Intangible performance is 0.696. It can

be concluded that all questions in the declared whole variable are valid.

Discriminant Validity Using Fornell-Larcker

Fornell-Lacrker is another method to test discriminant validity by giving criteria and cross loading. The criteria is that square root of AVE value of each construct must be higher than correlation value between construct of the tested model. Therefore, each latent variable are higher than block of indicators of other variable. The result is shown in Table A.2 Discriminant Validity Fornell-Larcker. These results show a standardized value where the magnitude on the diagonal path is greater than the value of the column on the left and the row below it.

Table 3 Discriminant Validity Fornell-Larcker

	C1	C2	C3	C4	C5	C6	C7
Intangible	0.834						
participation	0.073	0.763					
policy	0.136	0.480	0.954				
Supplier	0.119	0.268	0.398	0.883			
Control							
Quality	0.252	0.618	0.470	0.482	0.783		
performance							
Sales	0.496	0.155	0.085	-0.067	0.130	0.763	
Performance							
Process	0.105	0.591	0.487	0.342	0.543	0.249	0.721
Management							

Note: column 1 (C1) = Intangible Performance; C2= Participation; C3= Policy; C4= Vendor control; C5= Quality of product; C6= Sales performance and C7= Process management

Reliability Test: Composite

Composite reliability measures internal consistency of indicators constructing the latent variable. This latent variable is accepted when its composite reliability is higher than 0.7 (Wong, 2019). Nonetheless, Yamin (2021) added that this is not an absolute requirement. The reliability values of the variable are 0.816, 0.807, 0.953, 0.876, 0.826, 0.720 and 0.760 for Intangible, Participation, Policy, Vendor control, Quality Performance, Sales Performance and Process Management subsequently. Composite reliability test results reveal that all the variable values of leadership policy, supplier control, employee participation, process management, product and service quality performance, sales performance and intangible performance have composite reliability ≥ 0.7. All indicators of each variable are reliable, accurate, and consistent to measure the variable.

Reliability Test: Cronbach's Alpha

The composite reliability discussed before can be enhanced by Cronbach's Alpha testing. Variable is defined as reliable when its Cronbach Alpha value is higher than 0.7 (Wong, 2019) or 0.5 (Yamin, 2021). This reliability calculation based on Cronbach Alpha results in values of 0.641, 0.652, 0.901, 0.721, 0.684, 0.551, and 0.531 for intangible, participation, policy, vendor control, quality performance, sales performance and process management subsequently. is presented in the Table A.4. The above result shows that all variable except sales performance have value higher than 0.5 indicating adequate reliability.

Inner Model Evaluation (Structural Model)

Evaluation to inner model is to see direct and indirect influence among variable. It can be done using coefficient path testing, goodness of fit and hypothesis testing.

Goodness of Fit or Determining Coefficient (Rsquare)

Wong (2019) mentioned that the latent endogen variable affects to latent exogen variable is defined as good when Rsquare higher than 0.67. Subsequently, range of 0.33-0.67 is considered as medium and range of 0,19 – 0.33 is considered as weak.

The calculation result of Rsquare is presented in the Table A.5. The quality performance has the highest Rsquare which means that predictor percentage comprised of vendor control, employees' participation and process management is at 52.1%. The remaining at 47.9% is affected by other variable other than those three. The participation has R2 at 0.231 meaning that Top management policy influence reaches at 23.1%, however at 76.9% is contributed by other variables.

Table 4. R Square Value

	Reliability
Intangible Performance	0.064
Participation	0.231
Vendor Control	0.158
Quality performance	0.512
Sales Performance	0.017
Process Management	0.237

Hypothesis Testing

Hypotheses were tested at significance values: (1) coefficient of pathways, (2) t statistic;

R square value

Overall test result is revealed in Figure 1. It shows that commitment affects at loading factor of 0.398, 0.480 and 0.487 to vendor control, employee participation and process management respectively. Secondly, vendor control, employee participation and process management affect to quality performance at values of 0.303, 0.426 and 0.188 subsequently. The

last two variables are quality performance affect sales performance at 0.130 and intangible performance at 0.252.

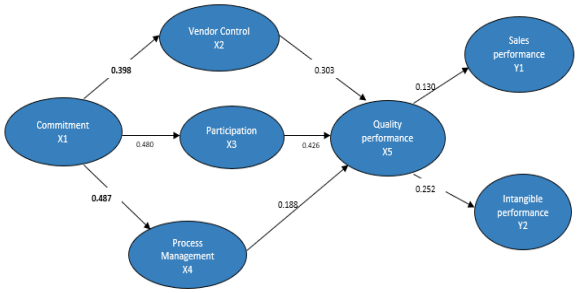


Figure 6. Overall Test Results

T test

Hypothesis testing establishes that there are influences from one variable to another in the model. This is known when the t test returns a value higher than 1.96 (t table). The significance of hypotheticals by looking at the coefficient of parameters and the significance of the t test of the algorithm to strengthen the significance of t statistic should be more than 1.96 (Wong, 2019).

The commitment and vendor control provide a t value of 7.74 (>1.96) which suggests a significance value. In other words, the policy has an influence on process management. Overall t test is presented as follows:

Table 5 T test and P value

	T value	P value	S/NS
Commitment → Vendor Control	4.454	0.000	S
Commitment → Participation	6.426	0.000	S
Commitment → Process control	2.250	0.025	S
Vendor Control → Quality Perf.	3.812	0.000	S
Participation → Quality Perf.	5.327	0.000	S
Process Control → Quality Perf.	2.055	0.040	S
Quality Perf. → Sales	0.952	0.342	N
Quality Perf. → Intangible	2.753	0.006	S

Note: S= significant; NS = not significant

Singh and Sangwan (2011) found that management commitment and employee empowerment are most important and vital principles for the successful implementation of any newer manufacturing system or modern practice in any organization because the newer systems/ practices require changed roles for people at all levels. This study discovers the same result revealing management model showing top management policy increases sales performance through selected operation factors consisting of vendor control, employees participation and process control (management) as well as quality performance. Details are explained as follows:

Management Commitment

Digalwar and Sangwan (2011) quoted EFQM (European Foundation for Quality Management) in that business excellence model showing subsequents effects of leadership to people, policy & strategy and partnership from which these affect processes followed by results on people, customer and society. This is in accordance with study report revealing positive and significant effect of the commitment to vendor control, participation and process control.

The subsequent effects were presented by Dananjaya and Sudaryanto (2015) reporting that management leadership, customer focus, information and analysis, process management, product design and continual improvement have effects to business performance. Furthermore, the role of management commitment to service quality that comprises of service training, empowerment and rewards together with job embeddedness is posited to enhance and exhibit excellent service recovery performance. Combining Digalwar and Sangwan (2011) and Dananjaya and Sudaryanto (2015) is reported by this study of which commitment management affects to the above mentioned.

Vendor Control

Vendor control affects quality of product and service at a value of 0.398. This is similar to Aziz et al. (2019) findings on bad quality material from vendors increases costs and reducing final product quality. Although this research reports lower strength of influence. However, it can be said in this company, quality responsibilities have been shifted to vendors within the same supply chain. PT X, then, can increase its plan to increase its vendor's capability and responsibility.

This study agrees with Petricli and Emel (2016) concluding that the supplier selection is one of the most important since results of the final decision affect profitability, position and market share of the company. In the same theme, Hassan et al. (2015) found that suppliers play a very vital role in the production value chain. They indirectly determine the quality of the final product.

Employees' Participation

This study found that the commitment gives impact to the participation at a value of 0.480 in terms of active involvement in attaining work target, maximizing planning and solving operation problems. Aziz et al. (2019) quoting Zhang et al., (2000) stated that fully involvement employees in quality improvement process results in gaining a new knowledge, materialize better quality and feeling of being performed. Subsequently, good planning ensures quality specification as associated details have been circulated. Active involvement can

be reason for good service considering there follow ups from incoming orders including complaints. With that, complaints are reduced as employees participate to find root cause and to response to complaining customers. In particular, this is in similar to Abomaleh and Zahari (2015) found that management commitment to service quality alone does not produce positive employee performance unless linked with employee involvement. Astrianti et al. (2020) supported this from the study revealing quality work life increases organizational commitment and decreases turnover intention.

Process management

Top management commitment affects process management at loading factor of 0.487. The policy has given positive impacts to existence and consistent procedures in place, documenting the procedures and associated records generated, as well as establishing and attaining quality target. This result is in accordance with Oke and Oke (2014) found that process management is one of TQM element affecting product quality and business performance.

Considered as intermediate process stage, the manufacturing process has direct impact to product quality or to business result as found Munizu (2013). The procedures, documentation and defined target are in line with processes to meet applicable internal standard, no rejected results, no missing material, broken equipment, and competent workers. Furthermore, process improvement leads to uniformize product and service output.

Quality Performance on Product and Service

Vendor control, employee participation and process control are found to give effect to quality performance at values of 0.304, 0.421, and 0.188 respectively. The three processes are in fact components of quality management system from which this study result is similar to Salunkhe and Bagi (2011) research. They reported that effectiveness of quality management system are achieved from the use of quality policy, quality objectives, analysis of data, corrective and preventive action. This study result is backed up by Zhi et al. (2020) research proving that there is positive correlation between employee participation in the decision making, motivation and higher performance in the workplace. A robust employee involvement in decision making process is a credible criterion, for enhancing the performance of organizations in the turbulent and competitive market place. Ojha et al. (2021) showed interactive marketing and effective communication will continue playing a significant role for service excellence in this constrained physical engagement world of service provider and customer in automotive sector.

Procedures ensures consistency and departmental quality target pushes continual improvement as also reported by Salunkhe and Bagi (2012) that measurable tasks achievement can be applied to established standards such as accuracy, completeness, cost, and speed. Also, improvement in processes is to demonstrate conformity of the product, ensure conformity and continually improve effectiveness of the quality management system. The employee participation causes to better service and complaints' reduction as reported by Zehir et al. (2017).

Sales Performance

The sales performance is affected by product or service quality at a value of 0.130, yet it is not significant. This differs from common knowledge in that quality increases volume and price of the sold product. One of the reasons is that, currently, the sales performance decreases resulted from pandemic which might lead to current perception that quality cannot help to gain sales. Different responses might be the case in later normal market. In a broader term, the company product has high brand awareness and loyalty in local market. The respondents perceive that the brand has given more effect than the quality, although as commonly seen, brand awareness is developed from the quality of product. Furthermore, two indicators in this study that are good service and complaint reduction could not be as factors directly affecting sales as respondents do not see the benefit of providing service to the final customers. Similarly, the complaints are gathered from its distributor or retailer rather than from final customers.

Intangible Performance

The study finds that product quality affects reputation, brand and competitive advantage at a value of 0.252. This supports Okocha and Emezue (2021) found that brand help companies to differentiate themselves from competition and to attract certain groups of the market. The plant's product is well-known for automotive customers which are also perceived by the respondents. Sofiaty et al. (2022) found that customer satisfaction was positively correlated with perception and expectation.

Therefore, it can be said that this brand of rubber-part of the automotive units is visible as explained by Okocha and Emezue (2021) that another dimension view in branding is perceived quality rather than been viewed as part of the overall brand association. It can be explained that the plant has operated for quite long

time from which the name of company has received recognition from its market.

CONCLUSION

The Quality model shows that continuous influence initiated from top management policy capable to improve tangible performance, but not intangible performance. This policy increases control over suppliers' which are the quality basis for the following phase in intermediate and final product. Similarly, it affects positively to employee's participation and process control. These three simultaneously provides improvement of quality of product and services of the company. At the end, the quality increases sales but not the reputation.

Research limitation. The researchers gathered data from respondents in majority through filling in questionnaire. With the limitation to pandemic, there were impossible to have some direct interview during filling in the questionnaire.

Research Contribution. This research provides an alternative model that has been examined using quantitative approach. As the model is proved to fit and gives significant influence, the company can revisit its management actions referring to these results. Adjustment to the model is needed to specific process business different from typical manufacturing and availability of other existing management system such as environmental management system.

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