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The Effect of Quality Management Systems on Corporate Performance

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Abstract: This study aims to determine the effect of quality management system on company performance. This research was conducted at PT ABC which is a precast concrete manufacturer company. The effect of quality management system is based on the clauses listed in ISO 9001: 2015. Analysis of the data to be discussed is limited only to the company quality management system in 2019. The method in collecting data used a questionnaire which was distributed to 304 respondents. This study used Structural Equation Modeling (SEM) to analyzed data. The results showed that quality management system had a significant and positive effect on the performance of the company with the strongest relationship of variables explained by the indicators financial and quality management system with the strongest relationship of variables explained by the indicator enchancement. Recommendations to PT. ABC in order for the organization in running the quality management system can run optimally, it is necessary to plan, implement and control the production process in order to produce products that meet customer requirements. In addition, organizations can conduct internal / external audits to see the suitability of quality achievement in each section.

Keywords: Quality Management System, Corporate Performance, Structure Equation Modeling, AMOS.

I. Introduction

In entering the era of global competition, companies must be able to compete in their business sector. Companies that want to be able to continue their business must continue to make continuous improvements. Continuous improvement can be done using a quality management system (QMS). QMS is a formal system that documents the company structure, duties, and responsibilities of employees and management, the procedures required to realize the quality of a product or service. every company or business organization strives to achieve certification from the International Standard Organization (ISO). ISO (International Organization for Standardization) is a non-governmental organization that has been established as a standard maker since 1974.

Many companies have acknowledged that after implementing this standard the organization can feel a significant increase in performance and have won awards related to international quality management systems. "Kantner (1997) states that many companies have experience in increasing sales value after obtaining an ISO certificate. Calingo (1995) states that with ISO 9000 companies can achieve a better quality management system, customer satisfaction, competitive power, and reduction of quality problems. Haversjo (2000) states that by obtaining ISO 9000 certification, companies get higher rates of return than companies that have not obtained this certification. " [11]. Other research shows that quality management has a significant and positive effect on company performance with the strongest variable relationship explained by the company's sales performance indicators [10]. However, the implementation of QMS is very dependent on employees, from top management to bottom management, because QMS is part of all processes in the company so that it can be well standardized.

Another study conducted by Othman, et.al entitled "The Total Quality Management (TQM) journey of Malaysian building contractors" shows that factors related to employees were identified as the most important factors affecting the implementation of TQM [9]. So this shows that employee performance affects the implementation of TQM. This is supported by research conducted by Falah and Prasetya which states that employee performance affects company performance, so this shows a continuity that can be explored more deeply about the correlation [2].

As one of the precast concrete producers in Indonesia, in maintaining and enlarging its market share, PT. ABC has been ISO certified since 2018. PT. ABC continues to implement and make continuous improvements based on the clauses of ISO 9001: 2015 to continue to develop and maintain its business. However, PT. ABC still often experiences problems that result in decreased company profits. In terms of productivity in 2019 PT. ABC cannot fulfill the planned productivity plan. On the other hand, the decline in profitability of PT. ABC can also be caused by deviations in production results/defects, costs of repairing equipment, deviations in production schedules, etc. which are high direct costs that erode company profits.

Seen from Ratio of Financial Soundness Ratio Table PT. ABC has decreased its total financial score from 69.5 in 2018 to 60.0 in 2019 which resulted in PT. ABC underwent a change in its financial status from "healthy" to "less healthy". Based on this problem, the writer will conduct research entitled "The Effect of the Application of Quality Management System on the Corporate Performance at PT ABC".

II. Study and Literature

1. Quality Management System (QMS)

Based on ISO 8402 (Quality Vocabulary) in defines quality management as all activities of the overall management function that determine quality policies, objectives and responsibilities and implement them through Quality Planning, Quality Control, Quality Assurance and Quality Improvement [4]. The quality management system includes elements: objectives, customers (costumers), results (outputs), processes (processes), inputs (inputs), suppliers (suppliers), and measurements for feedback and measurements for feedback and feed forward. In the English acronym it becomes: SIPOCOM; namely: Suppliers, Inputs, Processes, Outputs, Costumers, Obcetives, Measurements. Therefore, in brief, the Quality Management System (QMS) is an order / standard that guarantees the quality of the entire process of service / production of goods / services to customers.

A Quality Management System (QMS) is an order that ensures the achievement of planned goals and quality objectives. However, the definition of management standards will be more specific if it becomes a quality management standard, to support the standardization of the quality of each product produced by the company. The International Organization for Standardization (ISO) acts as an international standard-setting body consisting of representatives of national standardization bodies from each country. The quality management system divides the Quality Management System into two types, namely the informal quality management system and the formal quality management system [13]. ISO Quality Management Systems can be grouped into three frameworks: (1) ISO certification planning, (2) organizational or company commitment to quality, and (3) implementation of predetermined standard procedures [4]. ISO 9001 is a quality assurance system model in design/development, production, installation, and service or often referred to as ISO 9001 Quality Management System (QMS). ISO 9001 is the international standard governing the Quality Management System. Based on this understanding, it can be concluded that ISO 9001 is one of the ISO 9000 series that regulates the Quality Management System, so ISO 9001 is often referred to as ISO 9001 Quality Management System (QMS).

2. Corporate Performance (CP)

Performance management is an effort to obtain the best results from organizations, groups, and individuals through understanding and explaining performance within the framework of planned objectives, standards, and requirements for the attributes or competencies that are put together. Three main factors influence performance, namely individual (ability to work), work effort (desire to work), and organizational support (opportunity to work) [7]. The performance management system seeks to identify, encourage, measure, evaluate, improve and reward employee performance. The definition of performance appraisal is the determination of the operational effectiveness of an organization and periodically operating employees based on predetermined targets, standards, and criteria. Performance is a combination of the ability to do work and motivate achievement. The selection of assessment indicators as a proxy for measuring the financial performance of a company is a very important factor to consider because it involves the accuracy of the results in the study. Company performance appraisal can be seen through 2 points of view [12], namely:

1. Financial perspective: It is a measure of the performance of the company's financial aspects such as sales and company profits.
2. Non-financial perspective: It is a measure of the performance of the non-financial aspects of the company such as factory productivity and production quality.

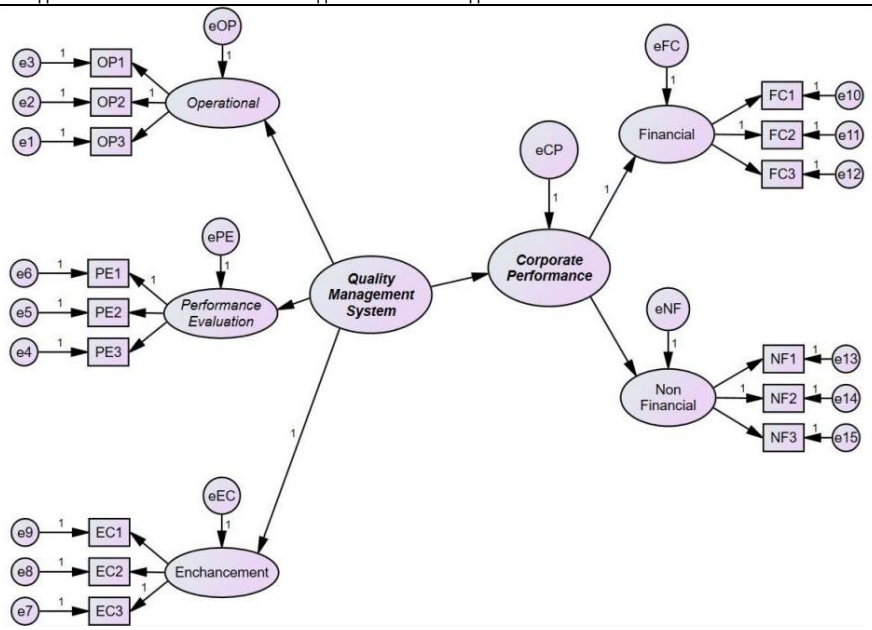

Fig 1. Framework Model

The hypothesis is a temporary answer to the formulation of research problems, therefore the formulation of research problems is usually arranged in the form of a question sentence [10]. Based on the theoretical basis and phenomena that occur, the researcher formulates a hypothesis that the quality management system has a positive effect on corporate performance.

III. Results Methods

Associative clausal research aims to test hypotheses that state causal relationships between two or more variables [1]. Experiments are the most appropriate research method. Based on these groupings, this study includes associative clausal research because this study intends to find a relationship between two or more variables. Based on the hypothesis proposed, the variables that will be used in this study are divided into:

1. The dependent variable (dependent), namely the variable whose value is influenced by the independent variable. In this study, the dependent variable is corporate performance (CP) (Y).
2. Independent variable, is a type of variable that affects other variables. In this study, the independent variable is the quality management system (QMS) (X).

In this study, the authors analyzed PT. ABC has 1 factory with 2 production lines in Karawang, which has 304 employees from the President Director and Commissioners to field executives. Structural Equation Modeling (SEM) analysis requires a sample of at least 5 times the number of parameter variables to be analyzed [3]. In this case, there are 15 parameter variables (indicators) so that 15 x 10 = 150 samples/respondents are needed in this study.

This study uses the type of subject data (self-report data) and uses a questionnaire technique in data collection. Structural Equation Modeling (SEM) is a multivariate statistical technique that combines factor analysis and regression analysis. This relationship is built between one or several independent variables with one or several dependent variables [14]. SEM analysis combines two models, namely:

1. Structural model: the relationship between independent and dependent constructs.
2. Measurement model: the relationship (loading value) between the indicator and the construct (latent).

Combining structural model testing with these measurements enables the researcher to:

1. Testing measurement errors as an integral part of SEM.
2. Perform factor analysis along with hypothesis testing.

The validity test of the data in this study was only limited to the validity and reliability tests. Validity is the degree of consistency between the data that occurs on the object of research and the power that can be reported by the researcher [5]. Before processing the data, it is necessary to test these variables. The validity test shows the extent to which the measuring instrument can measure the variables to be measured. Reliability is a

measure of the internal consistency of the indicators of a variable which shows the extent to which each indicator shows the same latent construct or factor. Instrument reliability testing aims to see the consistency of a measuring instrument. The next step is to calculate the load and assess the statistical significance of each indicator. If it is proven insignificant, then the indicator should be discarded or changed to fit for the latent variable [8]. To apply SEM, the data must be normally distributed. Normality data can be seen by comparing the z-score value with the critical ratio value (c.r.) of the data obtained. Z-score is the result of subtracting the average value of the raw data which is then divided by the standard deviation. The confidence level that is often used in SEM analysis is 99% (significance level = 0.1). At this level of significance, the z value obtained from the z table is ± 2.58. The data is normally distributed if the value of c.r. of these data is between -2.58 to +2.58

IV. Results and Discussion

To ensure a high-quality product, diagrams and lettering MUST be either computer-drafted or drawn using India ink. From the results of the questionnaire, data on the composition of respondents based on gender consisted of male (97.04%) and female (2.96%). From the age data of respondents, it shows that the majority of respondents aged ≥ 35 years are 17.11%, then respondents aged 30 to 35 years are 53.62%, 25 to 30 years of 25.00%, 20 to <25 years of 3.95%, and <20 years of 0.33%. Meanwhile, the characteristics according to position show that the majority of respondents who filled out the questionnaire had a Staff level position of 86.84%, then the Coordinator level was 6.58%, the Section Head level was 2.96%, the Section Manager level was 2.96% and the Director by 0.66%. Based on the work period, it shows that respondents with a service period of <5 years are 27.96%, then with a working period of 5 to 10 years is the majority of the data from the respondents, namely 59.54%, 15 to 20 years of 1.64 % ≥20 years of 1.97% and 10 to 15 years of 8.88%. Then the latter based on the work unit illustrates that the majority of respondents 80.92% came from the production work unit, then procurement was 2.96%, Marketing was 1.97%, Finance was 3.29%, HR was 2.63%, then PEP was 3.62%, and TM was 4.61%.

Table 2. Confirmatory Factor Analysis Variable Quality Management System

			Estimate	S.E.	C.R.	P	Label	Std. Estimate
OP	<---	QMS	.833	.146	5.704	***	par_7	.994
PE	<---	QMS	.804	.144	5.596	***	par_8	.933
EC	<---	QMS	1.000					.848
OP3	<---	OP	.851	.165	5.154	***	par_1	.646
OP2	<---	OP	1.000					.683
OP1	<---	OP	.933	.185	5.054	***	par_2	.668
PE3	<---	PE	1.000					.763
PE2	<---	PE	.885	.180	4.908	***	par_3	.632
PE1	<---	PE	.956	.191	5.015	***	par_4	.766
EC3	<---	EC	1.000					.747
EC2	<---	EC	.707	.128	5.526	***	par_5	.826
EC1	<---	EC	.808	.137	5.911	***	par_6	.681

The regression weight results in Table 2. show that the probability value for all indicators is 0.001 (***). Then all indicators and dimensions can be declared valid. Meanwhile, the standardized loading value for the indicator OP3 (0.646), OP2 (0.683), OP1 (0.668) on the Operational dimension; indicators of PE3 (0.763), PE2 (0.632), PE1 (0.766) on the Performance Evaluation dimension; and indicators EC3 (0.747), EC2 (0.826), EC1 (0.681) on the Enhancement dimension, from all indicators to the dimensions the standardized estimate loading result is more than 0.5. This shows that all indicators can explain the Quality Management System variable [6].

Table 3. Confirmatory Factor Analysis Variable Corporate Performance

			Estimate	S.E.	C.R.	P	Label	Std. Estimate
FC	<---	CP	1.000					.975
NF	<---	CP	.877	.171	5.144	***	par_5	.846
FC1	<---	FC	.329	.133	2.482	***	par_1	.645
FC2	<---	FC	.683	.163	4.185	***	par_2	.680
FC3	<---	FC	1.000					.662

			Estimate	S.E.	C.R.	P	Label	Std. Estimate
NF1	<---	NF	.741	.178	4.162	***	par_3	.690
NF2	<---	NF	.933	.195	4.772	***	par_4	.790
NF3	<---	NF	1.000					.804

It can be seen in the regression weight results in table 3, which shows that the probability value for all indicators is 0.001 (***). Then all indicators and dimensions in the Corporate Performance variable can be declared valid. The results of the standardized loading estimate for the indicators FC1 (0.645), FC2 (0.680), FC3 (0.662) on the Financial dimension and indicators NF1 (0.690), NF2 (0.790), NF3 (0.804) on the Non-Financial dimension so that all indicators are related to dimensions more than 0.5 is obtained. This shows that all indicators can explain the Corporate Performance variable [6].

A reliability test is a test to measure the consistency of internal indicators of a sequence variable which indicates the extent to which each indicator shows a commonly formed variable [13]. Two testing methods can be used, namely, construct reliability (CR) and variance extracted (VE), the cut-off value of construct reliability is at least 0.7 while the extracted variant is at least 0.5 [13]. The reliability test results show that the value (CR & VE) showed that the quality management system (QMS) 1st CFA for each indicator are OP (0.705 & 0.620), PE (0.765 & 0.523), EC (0.797 & 0.568) and the company performance variable (CP)1st CFA for each indicator are FC (0.710 & 0.540), NF (0.806 & 0.540). Reliability test 2nd CFA for variable quality management system (QMS) is (0.948 & 0.859) and for corporate performance (CP) is (0.909 & 0.833). The indicators of all research constructs have a value of the construct reliability test results of more than 0.7 and the extracted variance is more than 0.5, which means that all indicators in this study are valid and reliable.

Analysis of multivariate normality in AMOS was carried out using Multivariate (c.r.) criteria in Courtois. If the value of cr is in the range ± 2.58, it means that the data is normally distributed multivariate [13]. From the results of normality testing, it shows that the value of c.r for the multivariate is -2.771> ± 2.58, which means that the whole (multivariate) data is not normally distributed. To fulfill the normality assumption, it is necessary to test the outlier by deleting the outlier data. This data can be seen in the Observations farthest table from the centroid (Mahalanobis distance). The assumption is that there are outliers in the data if the p1 and p2 values are <5%. In the Observations farthest table from the centroid (Mahalanobis distance) (Appendix 1), it is known that respondents 8, 44, 211, 248, and 3 have p1 and p2 values of <5%. These outliers can affect the abnormalities of research data. So it is necessary to delete the 5 respondent data which has a value of p1 and p2 <5%. After removing the outlier, the normality test was carried out again and the results showed that the multivariate was not normal with a value of -3.229> ± 2.58. To overcome abnormal data in a multivariate manner, the analysis of the effect can be carried out using a bootstrapping technique [6].

Table 4.7*Goodness of Fit*

GOODNESS OF FIT	CUTT-OFF VALUE	RESULTS AFTER MODEL	STATUS
CMIN/DF	≤ 2,00	1.265	*Good Fit*
GFI	≥ 0,90(0 - 1)	0.955	*Good Fit*
AGFI	≥ 0,90(0 - 1)	0.936	*Good Fit*
TLI	≥ 0,90(0 - 1)	0.944	*Good Fit*
CFI	≥ 0,90(0 - 1)	0.955	*Good Fit*
RMSEA	≤ 0,08	0.030	*Good Fit*

In case studies with a large number of samples with many indicators, the analysis must be complemented by other test tools such as the Goodness of Git (GFI), Adjusted Goodness of Fit Index (AGFI), and Root Mean Residual (RMR) [6]. The GFI and AGFI figures range from 0 to 1, with a guideline if the number is closer to 1, the better the model will be in explaining the existing data. Therefore, this figure which is close to number 1 indicates that the model can be considered fit. From this model, the GFI results are 0.955 and AGFI is 0.936, indicating that the model is fit. Meanwhile, the RMSEA is 0.030, which means that the value is below 0.08, so the model can be considered fit [6].

Furthermore, Incremental Fit Indices is a test that compares a certain model with the null model (baseline model), which is a model that assumes that all indicators are not correlated with one another. The measurement tools, among others, are CFI and TLI which have a range of values between 0 to 1, which generally means that the value of the measuring instrument is above 0.9, indicating that the model is fit. From the research, it was found that the CFI got a value of 0.955 and the TLI got a value of 0.944. From the acquisition of high CFI and

TLI numbers close to the value of 1, even above 0.9, so from the measurement of the incremental fit indices the model can be considered fit.

If a study has met one of the Goodnesses of Fit (GoF) criteria, the research model can be considered fit [5]. According to Latan (2012), citing Hair et al (2010), said that the use of 4-5 Goodness of Fit (GoF) is considered sufficient to assess the feasibility of a model, provided that each criterion of Goodness of Fit (GoF) is Absolute [5]. Fit Indices, Incremental Fit Indices, and Parsimony Fit Indices are represented [6]. Meanwhile, the Goodness of Fit can be assessed by a minimum of 5 (five) fulfilled criteria [6]. From this description, it can be concluded that the overall model of this study is considered fit and can be continued with hypothesis testing to find out how much influence between the variables in the model.

Hypothesis testing is a test used to determine whether or not an independent variable affects the dependent variable. Then the hypothesis can be categorized as accepted if the probability value (P) <0.05. In the research model that has been declared fit, then the hypothesis test is carried out using the bootstrapping technique so that the loading factor data is obtained as in Figure 4.3 below. Hypothesis testing was carried out using a bootstrap technique, because after deleting 5 outliers the data still showed a multivariate abnormal distribution. The technique is a resampling procedure in which the original sample is treated as a population. Multiple sub samples with the same sample size as the original sample are then taken randomly with the replacement of the population. With this method, researchers can create multiple samples from the original data base [6].

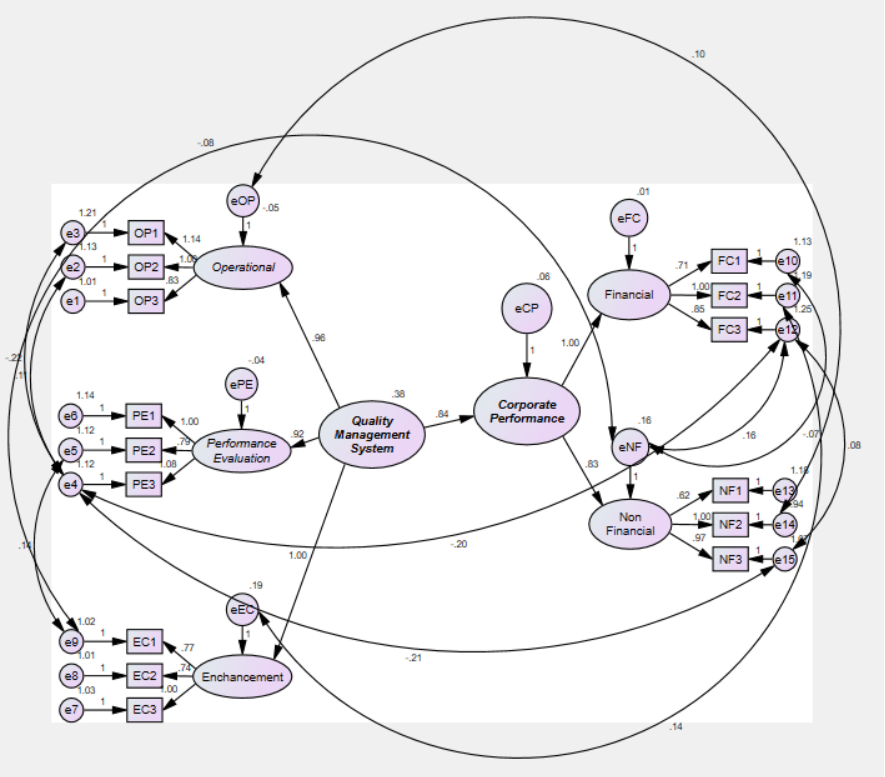

Fig 2. Modification Model Result

Tabel 4.7 Data *Output* Uji Hipotesis

			Estimate	S.E.	C.R.	P	Label	Std. Estimate
CP	<---	QMS	.837	.149	5.621	***	par_11	.827
OP	<---	QMS	.959	.177	5.407	***	par_12	.934
PE	<---	QMS	.922	.166	5.540	***	par_13	.903
EC	<---	QMS	1.000					.828
FC	<---	CP	1.000					.945
NF	<---	CP	.827	.187	4.428	***	par_14	.816
OP3	<---	OP	.830	.156	5.326	***	par_1	.609
OP2	<---	OP	1.000					.684

			Estimate	S.E.	C.R.	P	Label	Std. Estimate
OP1	<---	OP	1.137	.193	5.878	***	par_2	.652
PE3	<---	PE	1.077	.205	5.248	***	par_3	.628
PE2	<---	PE	.795	.165	4.823	***	par_4	.608
PE1	<---	PE	1.000					.655
EC3	<---	EC	1.000					.700
EC2	<---	EC	.736	.122	6.036	***	par_5	.673
EC1	<---	EC	.767	.127	6.018	***	par_6	.697
FC1	<---	FC	.711	.167	4.253	***	par_7	.603
FC2	<---	FC	1.000					.665
FC3	<---	FC	.855	.193	4.418	***	par_8	.650
NF1	<---	NF	.616	.152	4.058	***	par_9	.609
NF2	<---	NF	1.000					.759
NF3	<---	NF	.971	.222	4.378	***	par_10	.673

Based on the table above, it is obtained information on the results of hypothesis testing that the Quality Management System (QMS) has a positive effect on Corporate Performance (CP). Based on the data from the results of data processing, it is obtained a P-value (probability) of *** / 0.000 <0.05, then this value can illustrate that this research hypothesis can be accepted. Whereas the standardized regression weights table shows that the relationship between indicators on dimensions, relationship dimensions to variables, and also relationships between variables has a value above 0.5. This shows that all these relationships can be explained [6].

The results showed that the value of the estimate parameter between the Quality Management System (QMS) and Corporate Performance (CP) was 0.827, this indicates that the quality management system has a positive effect on corporate performance. The results of previous research that support, namely Pratama, W & Sulistyowati, N (2019) [10]; Wardana, R. (2007) [16]; Sulistyowati, et al (2020) [15].

In the hypothesis test data, it is also found that the "operational" dimension has the most influence on the quality management system, so this is a positive point for improvement. Besides, PT. ABC needs to improve the quality management system in the dimensions of enhancement and performance evaluation in order to produce better corporate performance. In the corporate performance variable, the most influential indicator is financial compared to non-financial, this shows that an organization is assessed for its first success based on its financial achievements such as the suitability of sales targets, the suitability of profit achievement, and the company's ability to pay its obligations.

From these results it can also be seen that in the quality management system variable, there are several indicators that have a value below 1,000, including OP3 (0.830), PE2 (0.795), EC2 (0.736), and EC1 (0.767). Therefore, it is necessary to evaluate the achievement of quality in each section (PE2), improve products & services to meet requirements as well as address future needs & expectations (EC1), and improve the performance & effectiveness of quality management (EC2) so that companies can provide products in accordance with customer requirements (OP3). If the company is able to provide the appropriate product, it can be said that the company can minimize defects in the product, which if this happens will result in high direct costs for product repair. The company needs to consistent the implementation of internal audits as well as quality patrols, which in the program are carried out every 3 months, this will be the company's reference to find out how the quality of each section is achieved and also the achievement of quality for the products produced (directly) so that this will continue to improve company achievements both from a financial and non-financial perspective.

V. Conclusion

From the research results the conclusions that can be drawn from this study are:

1. The quality management system has a positive effect on corporate performance with a standardized estimate of 0.827.
2. The operational dimension is the dimension that most influences the QMS at 0.934, while the enhancement dimension gets a value of 0.828 and the performance evaluation dimension is 0.903.
3. Meanwhile, the financial dimension that most influences CP with a standardized estimate value of 0.945, followed by the non-financial dimension has a value of 0.827.

Suggestions that can be conveyed in connection with the results of the research that have been carried out are as follows:

1. For the organization to run the quality management system optimally, it is necessary to plan, implement and control the production process to produce products that are by customer requirements. In addition, the organization can conduct internal/external audits to see the suitability of the quality achievement in each part.
2. If the organization wants to improve corporate performance, it is necessary to evaluate the planning of sales targets and production targets for that year, so that this will be closer to the conditions the company wants to achieve. In addition, the company can also make improvements to the financial cash flow system so that the company's obligations to stakeholders continue to be paid off regularly and can also hold CSR by the company's work program that has been determined.
2. It is necessary to carry out further research by re-examining different business sectors and adding other variables related to corporate performance.

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References

[1]. Astuti, Dewi. 2004. Manajemen Keuangan Perusahaan. Cetakan Ketiga. Jakarta: Ghalia Indonesia.
[2]. Falah ASN, Prasetya A. 2017. Pengaruh Knowledge Management terhadap Kinerja Karyawan dan Kinerja Perusahaan (Studi pada Karyawan PT Semen Indonesia Persero Tbk). Jurnal Administrasi Bisnis (JAB) Vol. 50 No. 4 September 2017. Universitas Brawijaya. Malang.
[3]. Ferdinand A. 2019. Metode Penelitian Manajemen Pedoman Penelitian untuk Penulisan Skripsi, Tesis, dan Disertasi Ilmu Manajemen. Badan Penerbit Universitas Diponegoro ISBN 979-704-254-5. Semarang.
[4]. Gaspersz V. 2005. Manajemen Kualitas. Jakarta: PT. Gramedia Pustaka Umum.
[5]. Hair, Joseph. F. 2007. Multivariate Data Analysis; Fifth Edition, USA: Prentice-Hall International, Inc.
[6]. Haryono S. 2017. Metode SEM Untuk Penelitian Manajemen AMOS Lisrel PLS. Luxima Metro Media. Cetakan I : Februari 2017, Halaman 371.
[7]. Katidjan, Purwanto. 2017. *Pengaruh Kompensasi, Pengembangan Karir dan Komunikasi Terhadap Kinerja Karyawan*. MIX JurnalIlmiah Manajemen Vol. VII, No. 3. Universitas Mercu Buana.
[8]. Noor, Juliansyah. 2011. Metode Penelitian, Prenada Media Group, Jakarta.
[9]. Othman I., et.al. 2019. The Total Quality Management (TQM) journey of Malaysian building contractors. Elsevier. Amsterdam.
[10]. Pratama W. 2019. Effect of Quality Management on Knowledge Management and Company Performance at PT XYZ. International Journal of Latest Research in Engineering and Management.
[11]. Purnama N. 2005. Tinjauan Kritis Terhadap Implementasi ISO 9000. Jurnal Siasat Bisnis. Vol. 2, No. 10, h. 163-178.
[12]. Serrat O. 2009. Building a Learning Organization Knowledge Solutions.
[13]. Soegiono MR, Rosiawan M, Sari Y. 2013. Perancangan Penerpan Sistem Manajemen Mutu ISO 9001:2008 di PT Welling Jaya Sejati Industrial, Gresik. JurnalIlmiah Mahasiswa Universitas Surabaya Vol. 2 No. 1.
[14]. Sugiyono. 2013. Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: Alfabeta CV.
[15]. Sulistyowati, et al. 2020. How TQM Mediates JIT in Improving Operational Performance of Industrial Companies. International Journal of Innovation, Creativity and Change, Vol. 14, Issue 8, 2020.
[16]. Wardana, R. 2007. Penerapan Sistem Manajemen Mutu Dalam Meningkatkan Kinerja Usaha UKM (Kasus di PT Sapukurata Kharisma). Jurnal MPI Vol.2 No.2, September 2007