

The Effect of Management System on Corporate Performance (A Study of 179 Companies, Manufacturing Sector, Listed on the Jakarta Stock Exchange Year 1998 - 2000)

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Abstract

This study proposed the concept of management system as one of the variables that are considered to have an influence on the resulting performance of the company, meant that by applying the participatory management system, which is considered as the most ideal management system, the performance of the companies have a tendency to be better when compared to the company which implements a non-participatory management system.

This study has three main objectives, namely: (i) analyze the extent to which the implementation of the Management participatory system by a number of companies in the manufacturing sector, (ii) analyze the performance of a number of manufacturing companies ranging from 1998-2000, and (iii) analyze the influence that occurs between the implementation of management system to the company performance. Measurement tool for management system, implemented by the company, using a questionnaire "Profile of the Organizational Characteristic" developed by Rensis Likert (1986). Corporate performance measurement using two items of financial performance, namely Return on Investment (ROI) and Return on Equity (ROE).

These results indicate that : (i) only 7 % or 25 companies that implement participatory management system of the 28 sampled companies, (ii) the performance of the resulting company is generally very low, the average values for the ROI are -7.81 and ROE is -118.8 , (iii) there is no significant relationship between the application of the management system to company's performance, it can be known through the scale coefficient of determination (R^2) of 0.109 or 10.9 % of ROI and 0.018 or 1.8 % for ROE.

Keywords: Management System; Authoritative; Benevolent Authoritative; Consultatif; Participative; Company Performance; Go-Public; Profile of the Organizational Characteristic.

1. Introduction

The development of a business entity can not be separated from the variety of things that can influence that comes from within and from outside. Various influences that arise, sooner or later will lead to changes for the company, and whether the change is negative or positive, ready or not the company will determine the continuation of life of the company. Companies are required to be responsive to any changes that occur. Delays in responding will result related to the overall performance of the company.

Why is the performance of the company become important? This is because the performance of the resulting company will provide two logical consequences for the company, namely: (1) increase the value of the company, and (2) decrease the value of the company. Positive performance of the company which of course will result in increased value of the company and give the advantage not only for the share holders but also stakeholders.

Increasing the value of the company is the main objective of the directors (management). Performance of the company will eventually give effect to the increase in the value of the company, is a major concern in this study. Many factors influence the performance of the resulting company. Use of loan/debt, allocating funding and inventory management are all factors that heavily researched in conjunction with the company's improved performance.

The resulting performance of the company can be determined by the shareholders/public one through the company's financial statements audited by a public accounting firm (KAP). There are three categories/ groups in classifying major aspects that can be used as a measuring tool to measure the performance of companies that have been generated, namely: (Copeland and Fred, 1995):

- a. Performance measure.
- b. Operating efficiency measure.
- c. Financial policy measure.

In this study, researchers put forward the concept of the management system as one of the factors that can affect the performance of the resulting company. In this case, the management system is a management system that is based on System 4 Management that was initiated and developed by Rensis Likert.

Research relating to the company's performance influenced by the application of management system are actually not new at all. Research related to the improvement of the company's performance has been conducted by previous researchers, such as the research conducted by Hitt & Hoskisson year 1994 regarding the company's performance influenced by the level of international diversification as well as other studies conducted by Blomm & Milkovich year 1998 about the company's performance influenced by incentive payments.

Research related to the effect of implementation of management systems on corporate performance, ever conducted on two automotive manufacturing companies, namely: General Motors is located in Atlanta and Lakewood, with the conclusion that the company's performance is affected by the application management system (Doling, 1975). Another study conducted by Mosley in 1987 at a chemical plant with 500 workers and produce the same conclusion.

As has been mentioned earlier, the implementation of the management system defined by the author is a management system that has been developed by Rensis Likert, System 4 Management approach, where in these approaches, there is one category management that are ideally suited to be implemented in the company.

Knowledge of the application of a category management approach that is considered ideal from System 4 Management, correlation and influence on the performance of companies that have been going-public becomes important to note. Is the performance of the company that has produced well has correlation and influenced by the implementation of the management system or just the opposite? Based on the background described, the researcher proposed formulation of the problem as follows:

1. How is the implementation of the management system in the companies (manufacturing sector), which has been categorized as a well-established company?
2. How is the influence of management system implementation on corporate performance that has been generated?

2. Literature Study

2.1. Company performance.

Performance of the company can be defined as achievement, demonstrated by legal entities organizations that enter into transactions or business. Associated with the definition, performance appraisal is a periodic determination of operational effectiveness, parts of the organization and his work by objectives, standards and criteria that has been applied previously (Siegel & Marconi, 1989). Performance is measured through the company's financial statements is one form of effort to determine how far the performance has been generated. A review of the relationship of financial analysis are presented in Table 1. Below.

Table 1. Review Of The Relationship Of Financial Analysis

Performance Measure

A. Profitability Ratio

- a. $\text{Net Operating Income} / \text{Total Aset}$
- b. $\text{Noi} / \text{Total Capital}$
- c. $\text{Net Income} / \text{Sale}$
- d. $\text{Net Income} / \text{Equity}$
- e. $\text{Change on NOI} / \text{Change on Total Capital}$
- f. $\text{Change on NI} / \text{Change on Equity}$

B. Growth Ratio

- a. Sales
- b. Net Operating Income

-
- c. Net Income
 - d. Earning/Share
 - e. Deviden/Share

C. Assessment Measure

- a. Price/Profit
- b. Equity Market Value/Equity Book Value
- c. Deviden Earning + Equity Profit (Return on Share Holder) 5 Yearly, 8 Yearly

Operational Efficiency Measurement

A. Activa and Investment Management

- a. Cost of Goods Sold/Inventory
- b. Average Collection Period
- c. Sales/Fixed Assset
- d. Sales/Total Capital
- e. Sales/Total Asset
- f. Chage on Total Capital/Total Capital

B. Cost Management

- a. Gross Profit/Sales
- b. Marketing And Administrative Expenses/Sale
- c. Labor Cost/Sales
- d. Employee Growth
- e. Pension Cost/Employee
- f. Research And Development Cost/Sales

Financial Policy Measurement

A. Leverage Ratio

- a. Total Asset/Equity Book Value
 - b. Interest Base Debt (IBD)/Total Capital
 - c. Ibd/Total Capital Market
 - d. Ebit/Interest Cost
-

- e. $\text{Ebit} + \text{Lease Cost} / \text{Fixed Cost}$
- f. $\text{IBD} / \text{Fund From Operations}$

B. Liquidity Ratios

- a. $\text{Current Asset} / \text{Current Liabilities}$
- b. $\text{Current Asset} - \text{Inventory} / \text{Current Asset}$
- c. $\text{Increase on Retained Earning} + \text{Depreciation} / \text{Investment}$

Source: Thomas E Copeland, Weston J Fred, 1995.

Company Performance that measured through the company's financial statements is one of the effort to know the extent performance that has been generated. Performance measures were analyzed into three groups, namely:

1. Profitability ratios, measures the effectiveness of management based on the return generated from sales and investment.
2. Growth rate ratios, measures the ability of the company to its economic position in the growth of the economy and in the industry or product market in which it operates.
3. Size valuation (valuation measure) measures the ability of management to achieve market values that exceed the cash outlay.

The second group includes a quantitative analysis of the size of the operation efficiency. There are two sets of ratios, namely:

1. Asset management and investment, to measure the effectiveness of corporate investment decisions and use of resources.
2. Management costs, measures how each cost element are controlled.

The third group in conjunction with a financial analysis of financial policy decisions. Financial policy measures consist of two main types, namely:

1. Leverage ratios measures the activity level of the company that has been financed by debt.
2. Liquidity ratios measures the company's ability to meet its obligations due.

The author chose the ratio of performance measures, namely return on investment (ROI) and Return on Equity (ROE) as a measurement tool used to determine the company's performance. ROI analysis, in financial analysis, is a thorough analysis or comparative, and commonly used to assess the effectiveness of the overall performance of the company. Ratio analysis is linking between corporate profits through its business activities with assets invested in. Michiharu Sakurai and L. N. Kiliogh (1989) expressed his opinion as follows: "the use of ROI as a measure to assess the performance of the company, was ranked as the top in the United States companies".

Mulyadi (2001) explains that the ratio of profit to sales information useful for management to:

1. Measuring cost efficiency, because the profits are determined by deducting the cost of sales, then at a certain level the less the cost of sales means more efficient.
2. Shows the ability of each dollar of sales in generating profits.

Aside from being an effective tool in measuring the company's performance, ROI is also used as a corporate goal setting. As a measure of performance, ROI has miraculous advantages, namely: (Supriyono, 2000)

1. An objective measurement method is based on accounting data available.
2. Is a comprehensive performance gauges and sensitive to changes in income and deciding factor turnover ratio of investment in a company.
3. Allows comparison of performance between companies despite its different scale business activities.
4. Performance measurement using this method encourages goal congruence.
5. The magnitude of the ROI can be used as a comparison to the percentage of the cost of capital in the capital market.
6. As a means to detect possible assets that are too big/ idle.

2.2. Management System

Intervention Process

Changes in the organization with the aim to make a number of improvements, performance improvements, anticipating the problems that it appears and handling in order to improve organizational effectiveness should always be done. One form of this is through the intervention. Chris Argyris (1970:15), the inventor of the theory of intervention, states "to interven is to enter into an ongoing system of relationships, to come between or among persons, groups, or objects for the purpose of helping them".

There are various ways that can be used as a tool in its efforts to intervene in order to progress develop organization. Porrás and Robertson (1992) presents, in a table, the tools used by units within the organization as well as aspects dimensions that influenced (Table 2

**Table 2. OD Intervention by Level and Are of Impact
Classification of OD Intervention by Oganizational Unit of Analysis
and System Variable Impacted**

	System Variable Impacted			
	Organizing Arrangements	Social Factors	Technology	Physical Setting
Individual	Diagnostic task force	Assessment centers	Job design	Space design
	Employee stock ownership plans	Career planning	Technical education and training	
	Flexible benefit programs	Behavioral education and training		
	Flexible working hours	Grid OD Phase 1		
	Goal setting	Life planning		
	MBO	Modeling-based training		
	Open job posting	Personal consulting		
	Pay system design	Personal coaching		
	Performance appraisal design	Responsibility charting		
	Recruitment and selection	Sensitivity training		
	Scanlon plan	Stress management		
		T-groups		
		Transactional analysis		
Interpersonal	Job expectations technique	Job expectation technique	Job expectation technique	Space design
	Role analysis technique	Role analysis technique	Role analysis technique	
		Role negotiation	Role negotiation	
		Thhrid-party consultation		

Group	Quality circle		Family diagnostic meeting	group	Autonomous group	work	Space design
			Team building		Self-managing group	work	
			Goal confrontation meeting		Self-regulation group	work	
			Goal-setting development	group			
			Grid OD Phase 2				
			Management diagnostic meeting				
			Process consultation				
			Sensing meeting				
			Tavistock conference				
Intergroup	Contingency design	organizational	Grid OD Phase 3				Space design
			Intergroup resolution	conflict			
			Intergroup meeting	relation			
			Organizational mirroring				
Organizational	Colateral organization	information	Confrontation meeting		Information technology design		Space design
			Communication network redesign		Sociotechnical organizational design		
			Grid OD Phase 4 & 5	Likert-system management	4		
			Human resources accounting				
			Information-processing based organization design	Sociometric network analysis			
			MAPS	Survey feedback			
			Organizational structure design				
			Multi level planning				
			QWL				
			Strategic planning				

Source: Poras and Robertson, 1992.

In Organization-Wide Intervention or System wide Intervention, there is a model that is often used in organizational intervention, namely System 4 Management. Smither, Houston and McIntire (1996:350) defines a Management System 4 as "OD approach that classifies an organization into one of four types based on management style". Each system is characterized by differences in the level of participation that influence decision-making, motivation, productivity (Donald & Donald, 1996). Summary of Likert's Typology of managerial style and the major differences between the four systems of management are shown in Table 3 below.

Tabel 3. Likert's Typology of Managerial Style

System of Organization				
Operating Charasterustic	Exploitative Authoritative	Benevolent Authoritative	Consultative	Participative
Motivation	Fear, threat, punishment and occasional reward	Reward and some actual or potential punishment	Rewards, occasional punishment and some involvement	Economic reward based on system developed through participation
Information flow	Downward	Mostly downward	Down and up	Down, up and horizontal
Decission making	Bulk of decision at top organization	Policy at top, many decision within prescribe freme-work made at lower levels	Broad policy and general decision at top, more specific decision at lower level	Decision making widely done throughout organization
Productivity	Mediocre	Fair to good	Good	Excellent
Absenteeism Turnover	Tends to be high	Moderately high	Moderate	Low

Source: adapted from Likert, 1961

1. System 1 or exploitative authoritative system is a management system in which every decision level use punishment and awards periodically used to motivate employees. Communication that occurs is from the top and work groups are very limited. Management system such as this often leads to a high rate of employee turnover and productivity are not special.
2. System 2 is also called benevolent authoritative, containing many parts of the system 1. Although these management systems allow multiple-way communication from the bottom up and have a tendency to

- provide more rewards to motivate employees, permanent decision is made on the upper level and has a high employee turnover rate .
3. System 3 is referred to as consultative and engagement communication from the bottom up greater and greater emphasis is also on the award exceeds the penalty. Although important decisions remains made at the top level , the employee influence in the decision-making. Productivity tends to be better under such a management system and has moderate levels of employee turnover .
 4. System 4 or participative is an ideal management system according to Likert . In this system the employee has an active role in decision-making and pushing to achieve the highest level of achievement and satisfaction through participation in working groups . Award was developed based on system- the system that was developed through participation and communication and are open at all levels .

Application of management systems generally involve the introduction stage, feedback and action planning stages. In the early stages of the engagement, management systems that make use of the equipment assessed ongoing survey called the Profile of Organizational Characteristics. There is a 51-item question asked to the members of the organization to find out about their perception of the organization's current and ideal conditions in the eight major categories, which include: leadership, motivation, communication, decision -making interaction, objectives, and performance monitoring (Donald & Donald, 1996) .

In the second phase of the program system 4, the members of the organization to receive feedback from the survey results and begin action planning activities. Feedback process starts from the top level management and then systematically extended to the lowest level groups within the organization. Through examination of the discrepancy between the current state and the ideal state of the organization, feedback groups to develop strategies to bridge the differences that occur (the third stage).

Often, management and the management of employee training programs proposed to help members of the organization to develop the skills necessary to be used within the framework of the system 4 as participation in goal setting and decision-making (Donald & Donald, 1996) . As recognized by Likert, however, a change in management behavior patterns can not be perceived in a short time (Donald & Donald, 1996) .

2.3. Relationship between Corporate Performance and Management System

In this research, the main concern is addressed to the company 's performance as the dependent variable, while the management system is regarded as one of the factors that affect the variability of the performance of the company. The dependent variable, company 's performance, is affected by the independent variables namely the management system applied. The relationship between management system implemented by the company that produced the performance closely and positively correlated (Dowling, 1975). Robin (1998) suggested “participative management has, at times, been promoted as a panacea for poor morale and low productivity”.

One author has even argued that participative management is an ethical imperative. But participative management is not appropriate for every organization or every work unit. For it to work, there must be adequate time to participate, the issue in which employees get involved must be relevant to their interests, employees must have the ability (intelligence, technical knowledge, communication skills) to participate, and the organization's culture must support employee involvement.

Participative management system is an ideal system to be applied in the management of the company. This is because there are application forms ideal relationship involving various aspects. With the use/ application of the management system of participation, Likert-founded, an organization can improve its effectiveness and create a more positive work environment for all members of the organization (Smither, Houston & McIntire, 1996).

Various aspects/ subject matter contained in the system is the participation of management, leadership, motivation, communication, relationships, decision making, monitoring objectives and performance. Donald & Donald (1996) suggested that the purpose of organizational change efforts using 4 systems management is to help organizations become more effective.

The pattern of the application of leadership and good relations will impact positively on the relationships that occur between individuals within an organization. Fleishman & Harris (1962) stated that the company/ department management system that uses a system approaching 4 (participation) has a boss-employee relationship is better than companies that use a management system which resembles the system 1 or system 2.

Good relationships will create an impact on the low conflict and other issues that arise as a result of a non-harmonious relationship. The situation will lead to an increase in employee performance. This happens because individuals in the organization are not experiencing the pressures, such as emotional stress, when doing his job. Likert (1961, 1967) argues that "participative manager, healthy develop relationships with important employee while pursuing organizational goals".

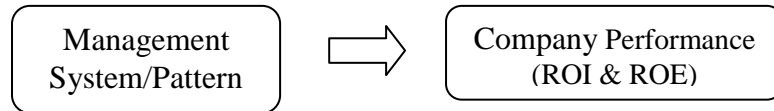
Highest productivity, good achievement and income, at this time seems to be achieved by organizations of the system 4. These organizations either direct non-economic motives and economic needs so that all the power of motivation that there is going to create behaviors that support collaboration focused on efforts to realize the goals of the organization (Likert, 1986).

3. Theoretical Framework

Analysis of the relationship between corporate performance management system will be done in one step, which is a simple linear regression. This test is done to determine how much the influence of implementation of the management system on the company performance. Researchers suspect that the direction of the

relationship between the dependent and independent variables is positive (this is based on previous studies).

Based on the above explanation, the authors create a model of research as contained in the picture 1. below.



Picture 1. Variable Relationship Diagram

4. Reserach Methodology

The population in this study are all companies that belong to the manufacturing sector which is listed on the Jakarta Stock Exchange (179 companies). There are 23 areas of business from manufacturing companies ranging from food and baverage to the wholesale and retail trade. The amount of sample used in this study is the response rate of the data collected.

Primary data (to determine the pattern of applied management / independent variables) in this study were collected through a questionnaire tool called “Profile of Organizational Characteristic” which was distributed to 179 companies. While secondary data to determine the performance of the company (the dependent variable) was obtained through Indonesian Capital Market Directory 2001 documents published by the Jakarta Stock Exchange.

Related with Profile of Organizational Characteristic questioner, There are 51 statements. Each item is given 15-degree assessment statement. By summing over the value of each statement and dividing by the number of statements, it will obtain the average figure. The average value can be converted into a score that lies between the system 1 to system 4 to provide assessment intervals ranging from 1.00-1.99 for system 1, 2.00-2.99 for system 2, 3.00-3.99 for 3 systems, and 4.00-4.99 for the system 4. The formula for changing the average value becomes the score is:

$$Score = \frac{4 \times x}{15} + 1$$

The statistical methods used to analyze this research is regression analysis, because it is based that the researchers wanted to determine the extent of influence that occurs between variables. Summary operationalization of variables can be seen in Table 4 below.

Tabel 4. Variables

Variable	Variable Concept	Indicator	Scale
Management system (X) as Independent variable	an approach to organization/development, which classifies the organization into one of four types based on the management system	<ul style="list-style-type: none"> • Leadership process used. • The characteristics of the power of motivation. • The characteristics of the communication process. • The characteristics of the interaction effect. • The characteristics of the decision-making process. • The characteristics of the targeting and delivery of orders. • The characteristics of the control process. • Target achievement and exercise. 	<ul style="list-style-type: none"> • Interval • Interval • Interval • Interval • Interval • Interval • Interval • Interval • Interval
Company Performance (Y) as dependent variable	Accomplishments achieved and demonstrated by legal entities organizations that conduct transactions/business	<ul style="list-style-type: none"> • Return on Equity (ROE). • Return on Investment(ROI). 	<ul style="list-style-type: none"> • Ratio • Ratio

The hypothesis of this study are as follows:

Ho: The management system does not have a significant effect on firm performance (ROI and ROE).

Ha: The management systems have a significant effect on firm performance (ROI and ROE).

5. Finding & Discussion

Descriptive Statistic.

Descriptive statistics related to the sample and result of this study can be seen in table 5, 6 and 7.

Table 5. Descriptive Statistic of Individual Sample

Item	Frequency	%
1. Sex		
Male	17	61
Female	10	36
Missing	1	3
Total	28	100
2. Education		
Senior high school	2	8
Undergraduate	17	61
Graduate	7	25
Post Graduate	1	3
Missing	1	3
Total	28	100
3. Division		
Human resources	13	47
Marketing	2	7
Finance	5	18
Operation	2	7
Corporate	5	18
Missing	1	3
Total	28	100

Table 6. Descriptive Statistic of Organizational Sample

Item	Frequency	Minimum	Maximum	Average	Standard Deviation
Number of employees	-	225	41362	4831	8281
Established (Year)	-	7	49	23	12
Total asset (IDR 000.000)	-	6528	1318619	2432254	46
Management system					
Exploitative Authoritative	0	-	-	-	-
Benevolent Authoritative	2	-	-	-	-
Consultative	19	-	-	-	-
Participative	7	-	-	-	-

Table 7. Results of Regression Analysis between the Management System and Company Performance (ROI & ROE)

Item	R	R ²	β	T	Significant
Return on Investment (ROI)	0.330	0.109	16.478	1.781	0.087
Return on Equity (ROE)	0.133	0.018	-51.068	-0.685	0.500

Of the two hypothesis testing that has been done, it is known that H_0 is accepted, and H_a is rejected. This means that there is no significant influence between the implementation of management systems on corporate performance (ROI and ROE). It could be due to the following reasons:

1. The level of response rate is low, amounting to 18.99 % (34 of 179 pieces). Out of the 34 pieces of the questionnaire, which meets the requirements of only 28 pieces.
2. Incomplete answer. There are 10 pieces questionnaire incomplete answer, so the answer blank is filled by the average value of the answers given .

Abnormal distribution of the data associated with the dependent variable, company performance .

6. Conclusions And Recommendations

The conclusion that can be draw from the results of this study are:

1. The use of management participation patterns on the sample of this study can be categorized as low. It happened because only 7 companies (25 %) which implements the management pattern of participation (participative) , while the rest are 19 companies (67.9 %) to implement a consultative management (consultative) and 2 companies implement a benevolent authoritative management.
2. Firm performance (ROI and ROE) resulted is generally very low.
3. Strong or weak relationships between variables can be known through the number of correlation coefficient (R). correlation coefficient (R) between the management pattern and corporate performance (ROI) is equal to 0.330 which means that the relationship is low. correlation coefficient (R) between the management pattern and corporate performance (ROE) is at 0.1333 which means that the relationship is very low.
4. The magnitude of the effect of management pattern on firm performance can be known through a number R-square (coefficient of determination). Figures R-square for the company 's performance ROI is 0.109 which means that the performance of the company (ROI) is affected by the implementation of the management pattern amounted to only 10.9 % and the remaining 89.1 % are influenced by factors outside of management pattn. Figures R-square for the performance of the company 's ROE is 0.018 which means that the performance of the company (ROE) is affected by the implementation of the management pattern amounted to only 10.9 % and the remaining 89.1 % are influenced by factors beyond management pattern.
5. There was no significant effect of the mangement pattern on a corporate performance (ROI and ROE) generated . It can be seen through a comparison between the t value with the value of t table and test the hypothesis that sets the confidence level of 5% or 0.05. The results of hypothesis testing showed that the smaller t value is -0.343 whereas ROE t table value is 1.703 (one-tailed ; df = 27) . Significant numbers show 0,087 to 0,500 for ROI and ROE.

Author suggestions related to the study are:

1. The author experienced low rate level of response, at 18.99 % . To researchers who will conduct research in this field, the authors suggest that the level of response-rate can be improved.
2. This study was only conducted on companies manufacturing sector alone, so it is still an open opportunity to examine the same problem category against companies in other sectors, for example; the service sector, mining, agriculture, and so forth.
3. Research conducted using the scale of the company's performance began in 1998, 1999, and 2000. In that year the Asian crisis hit Indonesia and still affect the performance of the resulting company. The same study would be more accurate if done in a normal economic situation (not in a crisis situation), so that the research results are expected to be unbiased.

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