

# Management Control System and Hospital Performance Among Public Sector: Is Environment Uncertainty and Information Technology the issue?

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## Abstract

This study examines the issue that contingency behavior does not yet have a comprehensive theoretical and empirical study in the institutional relationship between management control systems and work outcomes in a situational perspective in the application of good hospital governance. The purpose of this study was to analyze the significant influence together between environmental uncertainty, information technology, and hospital management control systems on hospital organizational performance.

This research uses survey research methods with an explanatory approach to causality research. The unit of analysis is medical and non-medical employees of health service industry. Time horizon uses cross section. The sampling technique is saturated sampling. This study uses Path Analysis, the number of samples collected was 188 samples.

The results showed that there was a significant simultaneous influence between environmental uncertainty, information technology, and hospital management control systems on organizational performance; there is a positive influence of environmental uncertainty on the Management Control System; there is a positive influence of information technology on Hospital Management Control Systems; there is a positive influence of the Management Control System on Hospital Organizational Performance; there is a positive influence of Environmental Uncertainty on Hospital Organizational Performance; and there is a positive influence of Information Technology on Organizational Performance.

The research findings are that the hospital carries out a budget preparation process with an optimistic approach in determining organizational targets. Thus, the hospital is able to perform efficiency performance, although it does not produce effective performance, hospital sustainability in its operational activities.

**Keywords:** environmental uncertainty, information technology, management control systems, organizational performance of hospitals

## BACKGROUND

Accountability of hospital agency performance is a concern because hospitals have high complexity both in terms of resources, services and infrastructure. The hospital functions as a means of accountability information to the public to describe the organization's operational implementation, the successful achievement of quality performance and accountability. Performance is the result that has been achieved from what has been done, done by someone in carrying out work

or tasks, as a result of one's efforts achieved by the ability and actions in certain situations (Seymour, 1991; Bambang, 2005). Mahoney et al (1963) stated management performance on management functions in the construct of management performance, namely planning, investigation, coordination, evaluation, supervision, staff selection, negotiation and representation

Achievement of hospital performance is required to review the relationship between the control system and work outcomes (Work

outcomes). Kenis (1979) suggests involving situational variables, such as personality, appropriate targets, reward expectancy, organizational and environmental variables as mediating variables that influence the relationship between management control systems and work outcomes [Govindarajan, 1984]. Variables that influence in determining management control systems are environment, technology, organizational size and corporate strategy (Outley, 1995). Contingency theory can be used to analyze design and management control systems to provide information that can be used by institutions for various purposes and to face competition [Adha, Wendi. 2014]. In examining the relationship between control systems and work outcomes, it suggests that situational variables are involved and the consideration that the variables that influence in determining management control systems are the environment, technology, organizational size and corporate strategy [Milliken, 1987]. The control system consists of techniques and mechanisms used by the company to set goals, complete objectives and successfully produce strategic achievements. Control systems combine, drive, assist decision making, communicate goals, and provide feedback information (Cunningham, 1992). Anthony et al (1991) stated that the control system guarantees the achievement of a desired state (performance). The effectiveness of the control system is related to the successful achievement of the company's expected performance. One contingency approach that affects management control systems is environmental uncertainty. The reason for using this variable is because environmental uncertainty has been identified as a contextual variable that can affect manager performance (Gordon Narayan, 1984; Chenhall and Morris, 1986, and Poniman 2005). Environmental changes are high, participation is used as well as possible by managers to obtain information related to the task, and the availability of accurate management accounting information will ultimately improve managerial performance (Poniman, 2005; Saudi 2018).

Environmental uncertainty is an individual's limitation in assessing the probability of failure or success of the decision that has been made. Environmental uncertainty is the situation of someone who is constrained to predict the situation around him so that he

tries to do something. In conditions of high uncertainty, individuals find it difficult to predict the failure and success of the decisions they make. Duncan (1972) continued that environmental uncertainty as a lack of information relating to environmental factors in making decisions, the inability to know the results obtained from decisions taken so that the amount of loss suffered due to mistakes in making decisions cannot be clearly identified.

Managers try to minimize the uncertainty of this environment by adjusting the structure of the organization to the development of information technology that radically changes the business environment faced by the company, from a stable business environment in which almost everything is predictable to a turbulent business environment, in which almost everything is difficult to predict. Managing hospitals in a stable environment is very different from managing hospitals that face an environment that is not sustainable (discontinuous change). A radical change, which does not contain any old elements. Robbins and Coulter (2015: 248) state that some organizations face a stable and simple environment with low uncertainty, while other organizations face a dynamic and complex environment and many uncertainties.

The motivation of this research is; First, contingency behavior does not yet have a comprehensive theoretical and empirical study in the study of the institutional relationship between management control systems and work outcomes in a situational perspective [Milliken, 1987]. This study examines contingencies in situational environmental uncertainty in the accountability process of the performance of hospital agencies by developing contingency theory construction with motivational control in the application of good hospital governance. Second, situational environmental uncertainty makes regulators make decisions that contradict the standards due to contingencies in determining planning, and changes in management. Third, the performance of hospital institutions depends on the implementation of good hospital governance in expressing accountability and transparency for achieving quality performance. Fourth, contingent situational conditions make management experience risk exposure to deal with environmental uncertainty conditions in a health service industry.

The aim of the study is to analyze the significant influence together between environmental uncertainty, information technology, and hospital management control systems on the organization's organizational performance.

The research contribution is, first, as a study material for the development of contingency theory in a situation of uncertainty in a hospital. Second, understand the benefits and uses of SIMRS in contingency situations and use it as an alternative or basis for consideration for hospitals to take policies regarding environmental uncertainty by hospitals in tight or loose control.

## **LITERATUR REVIEW AND HYPOTHESIS DEVELOPMENT**

### **Contingency Theory**

Contingency theory states that all components of an organization must have a fit between one another. Contingency theory is based on the general premise that there is no universally appropriate control system that can be applied to all organizations in all circumstances (Otley, 1980). This means that the design of various system components depends on specific contingencies or it can also be said that there are allegations that there are other situational factors that are capable of influencing a particular condition. Contingency theory is used by researchers because they want to know the level of reliability of a management accounting system under various conditions. Also based on contingency theory, the suspicion arises that there are other situational factors that might interact with each other in influencing a particular condition.

Based on the contingency theory, it appears that the possibility of differences in the level of decentralization and environmental uncertainty can also cause differences in management accounting information needs. In uncertain environmental conditions a high degree of decentralization is needed (Waterhouse and Tiessen, 1978). Empirical evidence found by Gordon and Narayanan (1984) also found that information and decentralized organizational structure is a function of the environment. Decentralized organizational structure is able to influence the ability of organizations to process and gather information and information flow (Duncan, 1972).

### **Hospital Organizational Performance**

Company performance is an important component in a variety of empirical research, especially business policy (Dess and Richard, 1984). The company's performance is basically a complex phenomenon and is multidimensional in nature. Company performance includes marketing performance, financial performance, and human resource performance. Organizational performance is an indicator of the level of success in achieving company goals. For this reason, good company performance shows success and efficiency in corporate behavior (Suliyanto, 2009). Company performance is related to the information to be obtained. For this reason, in order to improve various information, especially relevant to internal information, a company performance measurement was further developed that combines financial and non-financial factors.

There are various indicators that can be used to measure company performance. Lee and Miller (1996) measure company performance by using indicators in the form of sales growth, revenue growth, market share growth, asset growth, new product development, employee morale and employee welfare. Agarwal, et al. (2003) measure company performance using two dimensions, namely objective and subjective performance. Objective performance is related to financial performance and marketing performance such as profitability and market share. Whereas subjective performance is based on measurements of customers and employees such as service quality, customer satisfaction and so on.

Govindarajan and Fisher (1990) provide several difficult reasons to measure company performance using objective measures, namely first; the same performance measures are difficult to use for different businesses, second; no objective performance measure can capture several factors critical to the success of strategy certainty, and third; objective performance data from business units being compared are difficult to measure. Therefore some researchers then use subjective performance. But according to Colvin and Slevin (1989) the use of subjective performance measures is based on management perceptions because to anticipate the unavailability of objective business performance data. Lee and Miller (1996) assume that subjective performance measures are very suitable if the research sample consists of several different industries. Another reason given by Covin and Slevin (1989) is because some researchers

have proven that subjective performance measures have very high levels of reliability and validity.

### **Management control system**

Management control systems, and organizational control are used interchangeably (Chenhall, 2003). Management Control Systems are defined by Anthony in Langfield-Smith (1997) as the process by which managers ensure that resources have been obtained and used effectively and efficiently in achieving organizational goals. Langfield-Smith (1997) states that the Management Control System is something very broad which includes controls based on accounting information from planning, monitoring activities, performance measurement and integrative mechanisms. The Management Control System is also created to artificially separate management control from strategic control and operational control. Simons (1987) who said that Management Control Systems are seen as formal procedures and systems that use information to achieve or change various patterns in an organization's activities. Management Control Systems include planning systems, reporting systems and monitoring procedures based on the use of information. There are three important things contained in this sense (Simons, 1987) first; attention to formal procedures and routines. Second; Management Control Systems must be based on information, and thirdly; the purpose of the Management Control System is to maintain or change important matters in management activities. While the Management Control System by Flamholtz, et al. (1985) is defined as a process for influencing behavior.

The purpose of the Management Control System is to provide useful information in decision making, planning, controlling, and evaluating (Kaplan, 1983; Widener, 2007). Starting from this goal, the Management Control System is a management tool for how to carry out management functions properly. Therefore, the Management Control System is basically a system composed of complementary components (Milgrom and Roberts, 1995; Otley, 1994; Widener, 2004). This means that the use of each SPM element must be used together in order to have strength in its implementation.

### **Environmental Uncertainty**

Environmental uncertainty is defined by Duncan (in Rabin et al., 2000: 204) as the inability of individuals to judge the probability of how much a decision made will fail or succeed because of the difficulty in predicting the likelihood that will occur. The concept provides the perception that environmental uncertainty indicates a lack of information on environmental factors relating to certain decision-making situations, lack of knowledge resulting from specific decisions, and an inability to determine the probability of environmental factors that influence the success and failure of a decision unit in carrying out its functions.

Milliken (in Rabin et al., 2000: 204) defines uncertainty as:

"An individual's perceived inability to predict an organization's environment accurately because of a lack of information or inability to discriminate between relevant and irrelevant data".

That is, environmental uncertainty is defined as a person's inability to accurately predict the environment.

Someone is in a state of uncertainty when someone feels he does not have enough information to make accurate

predictions, or when someone feels that he is not able to distinguish between relevant data with irrelevant data.

The owner identifies three types of environmental uncertainty, namely:

1. Uncertainty (state uncertainty).  
Someone feels the uncertainty of the situation if they feel the organization's environment can not be predicted, meaning that someone does not understand how the environmental components will change. A manager can feel uncertain about what actions should be taken in dealing with the dynamics of suppliers, competitors, customers, consumers, or feel uncertain about changes in relevant environments, such as changes in technology, culture, and demographics.
2. Uncertainty influence (effect uncertainty).  
This uncertainty is related to one's inability to predict the influence of the environment on the organization. A manager is in uncertainty if he feels uncertain about the event that affects the company (nature), how far the event affects (depth) and when

the influence will reach the company (time). The uncertainty of influence over events that occur in the future will become more prominent if the uncertainty of the environmental conditions is very high in the future.

3. Uncertain response (response uncertainty). This uncertainty relates to efforts to understand what response options are available to the organization and the benefits of each response that will be made. Thus, response uncertainty is defined as the absence of knowledge about response choices and the inability to predict the consequences that might arise as a result of response choices.

### Information Technology

Information technology has an understanding (Bodnar, 2006) states that information technology can be said to be a series of hardware and software designed to transform data into useful information. Information systems can also be technically defined as a unit of interconnected components that collect, process, and distribute information to support decision making and control within an organization. Information systems also present management solutions and organizers based on information technology, for a challenge that exists in their environment (Loudon and Loudon, 1998).

Technology can also refer to a term that is how an organization transfers input into output. According to Robbins (2015), Etty et al. (2014), Eliada (2015), Hasan et al. (2012) that all organizations have at least one technology to convert financial, human, physical resources into products or services. Technology users in general can be used to process data, process, store, obtain, display, and send in various forms and ways used to produce benefits that can be useful for the user. The information obtained is expected to help interested parties in identifying a problem, solving problems and evaluating them, so the information obtained must be of quality information. Quality information itself must be accurate, timely and relevant. Accurate means being free of errors, not biased because if a biased information can mislead the recipient or user of that information. Information technology has a

main function in the business world, namely information processing. Arsono and Muslichah (2002) state that there are five categories of information processing tasks that include capturing, delivering, creating, storing, and communicating.

### Hypothesis Development

Based on the above, the hypothesis proposed is as follows:

- H1: There is a significant simultaneous effect between environmental uncertainty, information technology, and hospital management control systems on the accountability performance of hospital institutions
- H2: There is a significant influence of environmental uncertainty on hospital management control systems.
- H3: There is a significant influence of information technology on hospital management control systems.
- H4: There is a significant influence of the hospital management control system on the organization's organizational performance.
- H5: There is a significant influence of environmental uncertainty on the accountability performance of hospital institutions.
- H6: There is a significant influence of information technology on the accountability performance of hospital agencies.

## RESEARCH METHODS

### Research Design

This research uses quantitative research methods with hypothesis testing. This type of research is a survey with an explanatory approach to causality research. The unit of analysis is individual medical and non-medical employees in the health services industry. Time horizon uses cross section. The sampling technique is systematic sampling. The sample used was 188. Data analysis using path analysis with AMOS software.

The variables in this study include two independent variables, namely environmental uncertainty and information technology; intervening variable, that is, management control system (Z), and the dependent variable is hospital performance (Y).

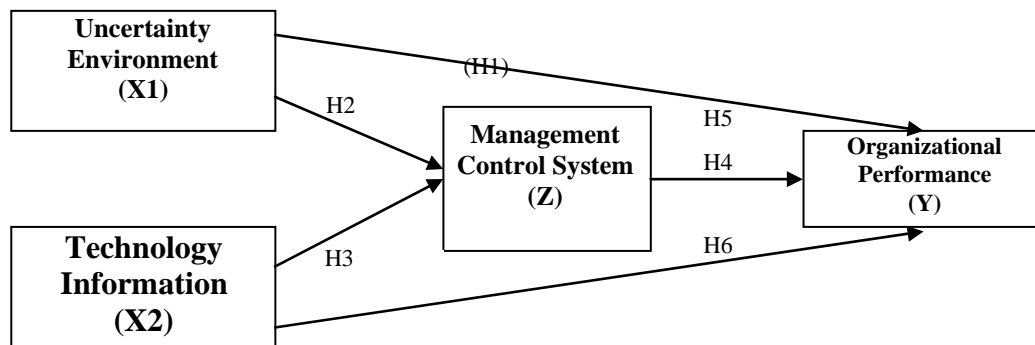


Figure 1. Research Model

## RESEARCH RESULTS AND DISCUSSION

### Descriptive statistical

Descriptive statistical results indicate the tendency of medical and non-medical

employees on the perception of being neutral in addressing the behavior of each variable

Table 1. Statistical Descriptive Test Results

Variabel	N	Minimum	Maksimum	Mean	Std Deviation
Uncertainty Environment (X1)	188	1.00	5.00	3.2528	.71744
Technology Information (X2)	188	3.00	5.00	3.8707	.65529
Management Control System (Z)	188	3.00	5.00	3.6898	.44722
Organizational Performance (Y)	188	2.00	5.00	2.9562	.59726
Valid N (listwise)	188				

Source: output SPSS 25, 2019

### Behavior in Situational Hospitals

The results of the description of respondents' answers about attitudes in behavior are shown in the behavior

matrix in table 2

Table 2. Matrix of Respondents' Behavior in *Three Box Methode*

No	Variabel	Posisi Three Box Methode			
		Low	Medium	High	Behavior
1	Uncertainty Environment (X1)		*		Predictive
2	Technology Information (X2)			*	Useful
3	Management Control System (Z)			*	Controlled
4	Organizational Performance (Y)		*		Efficient but ineffective

Source: Data, 2019

### Hypothesis test

Partial Test Results with Structural Equation Modeling are in table 3 as follows:

Table 3. *Path Analysis Regression Weights*

Variabel			Estimate	S.E.	C.R.	P	Label	Information
MCS	<---	UE	.166	.058	2.890	.004	par_1	H2 be accepted
MCS	<---	IT	.288	.063	4.562	***	par_2	H3 be accepted
OP	<---	MCS	.409	.126	3.249	.001	par_4	H4 be accepted
OP	<---	UE	.470	.071	6.623	***	par_5	H5 be accepted
OP	<---	IT	-.181	.083	-2.196	.028	par_6	H6 be accepted
Minimum was achieved						Squared Multiple Correlations (R <sup>2</sup> )		

<b>Chi-square = .000</b>	<b>SPM = 0,308</b>
<b>Degrees of freedom = 0</b>	<b>KO = 0,464</b>

Source: Data output AMOS 21, 2019

### Intervening Testing

Intervening testing of management control system variables is tested by comparing the value of direct influence with indirect effect. Intervening occurs if the value of the direct

influence is not greater than the value of the direct effect.

**Table 4. Standardized Direct Effects**

Variabel	Uncertainty Environment	Technology Information	Uncertainty Environment	Technology Information
	Direct Influence		Indirect Influence	
Management Control System	.267	.422	.000	.000
Organizational Performance	.564	-.099	.082	.129

Source: Data output AMOS 21, 2019

### Discussion

**Hypothesis 1: There is a significant simultaneous effect between environmental uncertainty, information technology, and hospital management control systems on hospital organizational performance.**

Hypothesis 1 is accepted because this very small Chi-square value indicates that there is no difference between theory and research models and the empirical data environment. This means that environmental uncertainty, information technology, and hospital management control system variables jointly influence the organization's organizational performance to strengthen theory testing.

These results indicate that the acceptance of the hypothesis has the support of environmental uncertainty variables that the revelation of employee perceptions shows how much to be able to predict the procurement of assets in the hospital, how much to be able to predict competition for the acquisition of skilled employees, how much to be able to predictability of service product pricing competition, how much to be able to predict changes in hospital management, and how much to be able to predict changes in state economic conditions, how much to be able to predict changes and developments in information technology, and How much to be able to predict the activities of your competitors over the past 5 years.

This result also received support from employees' perceptions about information technology that SIMRS can assist in obtaining information at its original place, SIMRS can

assist in processing data so that it can produce the form you want, SIMRS can help in producing information on time, SIMRS can assist in obtaining new information, SIMRS can assist in obtaining non-financial information or external information. SIMRS can help in combining information from other departments or departments, SIMRS can help you to save data or information that you have, and SIMRS can help you in communicating information to people or to other locations.

This result also received support from the employees' perception of the Management Control System that the preparation of customer service programs was carried out routinely and periodically. The hospital program that was carried out was the implementation of the strategy outlined in strategic planning. There was a customer service program that clearly to support the achievement of the goals and objectives of the hospital, Always reviewing a program in accordance with the demands and development of the hospital, Every time carrying out service activities to customers always use the principle of efficiency and effectiveness, the preparation of service programs the customer always considers the existing resources , the preparation of the program needs to carry out consultations with superior officials, the program has been made communicated to all personnel from the highest officials to the lowest officials, Supervision of the activities of employees customer service is always performed, and the

reporting system that is in the company is made based on timeliness.

The simultaneous influence of environmental uncertainty, information technology, and management control systems results in an efficient and ineffective operation of hospital organizations. This result is shown by the financial performance as a result of bringing the budget target together with the realization of the budget. Hospital efficiency information support in the form of reduced control of operational costs and investment costs, receipt of cash flow that is greater than the target, efficiency of human resource development and social affairs.

Cost efficiency results are not able to make effective organizational goals attainable. This is indicated by the financial performance that is not in accordance with the budgeted target in the form of a decrease in profit, a decrease in sales volume, a decrease in ROI.

The results showed support for the Contingency Theory. Contingency theory states that all components of an organization must have a fit between one another. In management accounting systems, contingency theory is based on the general premise that there is no universally appropriate control system that can be applied to all organizations in all circumstances (Otley, 1980). This means that the design of various components of the accounting system depends on specific contingencies or it can also be said that there are other situational factors that can influence a particular condition. Achievement of hospital performance is required to examine the relationship between the control system and work outcomes, Kenis (1979) suggests involving situational variables (such as personality, appropriate goals, reward expectancy, organizational and environmental variables) as mediating variables that affect the relationship between management control systems and work outcomes. Variables that influence in determining management control systems are environment, technology, organizational size and corporate strategy (Outley, 1995; Etty et al. 2014; Eliada, 2015; Hasan et al. 2012).

These results also support the theory of Hansen and Mowen (2009: 371) that the balance scorecard in the financial perspective sets short-term and long-term financial performance goals compared to its budget, financial perspective refers to the

consequences of global finance from three other perspectives with several indicators in financial performance are : revenue growth, changes in costs and use of assets.

The results of this study are supported by the results of studies from Gul and Chia (1994) that the availability of management accounting information will improve managerial performance under conditions of environmental uncertainty. Chia (1995) states that Decentralization is able to mediate the relationship between management accounting systems and managerial performance. Desmiyawati (2010) that the effect of decentralization on managerial performance is mediated by the use of management accounting systems in decision making. Sutoyo, Desta Mahardhika (2015), Etty et al. (2014), Eliada (2015), Hasan et al. (2012) that a management control system based on a boundary system and an interactive system does not affect the organization's performance, whereas a boundary system and a diagnostic system are carried out. In addition, organizational culture variables also do not affect organizational performance.

## **Hypothesis 2: Effect of environmental uncertainty on hospital management control systems.**

Hypothesis 2 is accepted because the significance level is 0.000 and shows that the environmental uncertainty variable has a significant positive effect on the Management Control System variable. This means that if the environmental uncertainty that is carried out by employees is sufficient to make predictions, the hospital management in controlling the hospital management can control, monitor, and evaluate easily.

These results indicate that there is support from the descriptive variable obtained by the average Environmental Uncertainty that lies in the adequacy of the ability to predict. This result is supported by the statement that employees can easily predict asset procurement planning in hospitals, How much to be able to predict competition for skilled employee acquisition, How much to be able to predict competition for pricing of service products, How much to be able to predict changes in hospital management, and How much to be able to predict changes in state economic conditions (Adhikara, 2010a), How much to be able to predict changes and



developments in information technology, and How much to be able to predict the activities of your competitors for 5 last year .

The above will have implications for the Hospital Management Control System that the hospital is able to control in the field of compiling customer service programs carried out routinely and periodically. The hospital program that has been implemented is the implementation of the strategy outlined in the strategic planning. a clear customer service program to support the achievement of hospital goals and objectives. A review is always carried out in accordance with the demands and development of the hospital. Every time carrying out service activities to customers always use the principles of efficiency and effectiveness, Preparation of customer service programs always consider the existing resources, Preparation of these programs need to carry out consultations with superiors, Programs that have been made are communicated to all personnel from the highest officials to the lowest officials, Supervision to customer service activities is always carried out, and the reporting system that is in the company is made referring to the timeliness.

The results of this study support the theory of management control systems (Anthony, 1997) which says that Management Control System are seen as formal procedures and systems that use information to achieve or change various patterns in an organization's activities.

The results of this study are supported by the results of a study by Reni Yustien, Andi Mirdah, Ratih Kusumastuti (2013) that the application of the management control structure has a positive effect on managerial performance in hospitals; The application of management control structure has a positive effect on managerial performance on; The application of management control processes has a positive effect on managerial performance on; and The application of management control structures has a positive effect on managerial performance in hospitals. Wirawan Endro Dwi Radianto (2015) study results show that informal control is more effective than formal control, especially in terms of motivating individuals. The informant revealed that there are several control mechanisms that are able to influence their behavior and even motivate them to work.

### **Hypothesis 3: Effect of Information Technology on Management Control Systems**

Hypothesis 3 is accepted because the information technology (SIMRS) variable has a significant positive effect on the variable Hospital Management Control System. This means that if the information technology (SIMRS) that is used is useful, it will be easy for hospitals to create a control system in monitoring and evaluating management.

This result also received support from employee perceptions about the usefulness of information technology implementation (SIMRS) in hospitals that information technology (SIMRS) helps in obtaining information at its original place, assisting in processing data so that it can produce the form you want, helping in producing precise information time, assist in obtaining new information, assist in obtaining non-financial information or external information, assist in combining information from other departments or departments, help you to save data or information that you have, and assist you in communicating information to people or to other locations.

The above will have implications for the Hospital Control System in monitoring and evaluating activities and programs in customer service carried out routinely and periodically, implementing strategies outlined in strategic planning, clear customer service to support the achievement of objectives and hospital targets, review of a program in accordance with the demands and development of the hospital, using the principle of efficiency and effectiveness, considering available resources, consultation with supervisors, communicated to all personnel from the highest officials to the lowest officials, oversight of customer service activities, and the reporting system at the company made according to timeliness.

Based on the results of the study above, the supported theory is information technology created by Haag and Cummings (1998). Information technology is a tool that is used to obtain data, store, process, send or display it in various forms that are expected to be useful for the ember of the user (Etty et al. (2014), Eliada (2015), Hasan et al. (2012). The results of this study are supported by the results of studies from Gul and Chia (1994) and Manuel et al., (2011) that the availability

of management accounting information will improve managerial performance under conditions of environmental uncertainty. The results of the Arsono and Muslichah (2002) and Dodi, 2011 that study are to identify that the characteristics of the Management Control System scope act as intervening variables in the relationship between information technology and managerial performance, interdependence and managerial performance.

#### **Hypothesis 4: Effect of Management Control Systems on Hospital Organizational Performance.**

Hypothesis 4 is accepted because the Management Control System variable has a significant positive effect on Hospital Organizational Performance variables. This means that if the management control system that is carried out by the hospital is low, but it results in a low organizational performance.

The results of this study are supported by the results of the Management control system test showing the level of support from employees' perceptions of the Management Control System that in monitoring and evaluating activities and programs in customer service routinely and periodically, the implementation of the strategies outlined in the strategic planning, clear customer service to support the achievement of hospital goals and objectives, review of a program in accordance with the demands and development of the hospital, using the principles of efficiency and effectiveness, taking into account existing resources, consultation with superiors, communicated to all personnel from the highest officials to the lowest officials, supervision of customer service activities, and the reporting system at the company is made based on timeliness.

The results mentioned above will have implications for the in the health services industry Organizational Performance that gives impact to the organization's organizational performance to be efficient and ineffective. This result is shown by the financial performance as a result of bringing the budget target together with the realization of the budget. Hospital efficiency information support in the form of reduced control of operational costs and investment costs, receipt of cash flow that is greater than the target,

efficiency of human resource development and social affairs.

Cost efficiency results are not able to make effective organizational goals attainable. This is indicated by the financial performance that is not in accordance with the budgeted target in the form of a decrease in profit, a decrease in sales volume, a decrease in ROI.

According to Schiff and Lewin's Theory (1970), stressing there are other factors that contribute to controlling the performance of public sector organizations, namely the budget and participation in its preparation. Along with the role of the budget, Argyris (1952) and Adhikara et al., (2014b) also states that the key to effective performance is when the objectives of the budget are achieved.

This result is also supported by the results of Sutoyo's study (2015), Etty et al. (2014), Eliada (2015), and Hasan et al. (2012) that management control systems based on boundary systems and interactive systems do not affect organizational performance, whereas boundary systems and diagnostic systems are implemented. In addition, organizational culture variables also do not affect organizational performance. Reni Yustien, Andi Mirdah, Ratih Kusumastuti (2013) showed the results that the application of the management control structure had a positive effect on managerial performance in hospitals(RSUD); The application of management control structure has a positive effect on managerial performance RSUD; The application of management control processes has a positive effect on managerial performance RSUD; and the application of management control structures has a positive effect on managerial performance in hospitals (RSUD).

#### **Hypothesis 5: Effect of Environmental Uncertainty on Hospital Organizational Performance.**

Hypothesis 5 is accepted because environmental uncertainty has a significant positive effect on Financial Performance variables. This means that if the uncertainty of the environment is predicted to be low, then the resulting organizational performance of hospitals is also low.

The test results are supported by descriptive results of the average descriptive test which shows that the acceptance of the hypothesis receives support from

environmental uncertainty variables that the revelation of employee perceptions is quite capable of predicting the environment in predicting the procurement of assets in the hospital, predicting competition for employee acquisition, experts, predictability of product price pricing competition, predictability of changes in hospital management, predictability of changes in state economic conditions, predictability of changes and developments in information technology, and predictability of your competitors' activities for the past 5 years (Adhikara et al., 2016c).

The results mentioned above will have implications for the in the health services industry Organizational Performance that gives impact to the organization's organizational performance to be efficient and ineffective. This result is shown by the financial performance as a result of bringing the budget target together with the realization of the budget. Hospital efficiency information support in the form of reduced control of operational costs and investment costs, receipt of cash flow that is greater than the target, efficiency of human resource development and social affairs.

Cost efficiency results are not able to make effective organizational goals attainable. This is indicated by the financial performance that is not in accordance with the budgeted target in the form of a decrease in profit, a decrease in sales volume, a decrease in ROI.

The results of research with moderate environmental uncertainty will improve financial performance that is being. This research is supported by the statement that employees still have commitment, loyalty, dedication and high responsibility to the AINI eyes hospital Prof. Dr. Isak Salim, also has never experienced difficulties in paying off his debts and is still able to meet operational costs and investment development.

These results also support the theory of Govindarajan and Fershey (1998) that in the perspective of overall financial performance set short-term and long-term financial performance goals compared to its budget, financial perspective refers to the consequences of global finance from three other perspectives with several indicators in financial performance are: growth income, changes in costs and use of assets.

The results of the study are also supported by the results of a study from Atria

Maharani (2011) and Manuel (2011) that The characteristics of management accounting information systems do not have a positive effect on managerial performance when environmental uncertainty is high. And the results of Gul and Chia's study (1994) that the availability of management accounting information will improve managerial performance under conditions of environmental uncertainty. Chia (1995) states that Decentralization is able to mediate the relationship between management accounting systems and managerial performance.

#### **Hypothesis 6: Effect of Information Technology on Hospital Organizational Performance.**

Hypothesis 6 is accepted because the Information Technology (SIMRS) variable has a significant negative effect on the variable performance of hospital Organization. This means that the use of Information Technology (SIMRS) in hospitals is useful, but the resulting organizational performance of the hospital decreases.

Information technology (SIMRS) used by hospitals shows benefits for organizations because information technology has helped hospitals in their operational activities. These results are obtained from the support of questionnaire answers that information technology (SIMRS) helps the hospital in obtaining information at its original place, helps in processing data so that it can produce the form you want, helps in producing timely information, helps in obtain new information, assist in obtaining non-financial information or external information, assist in combining information from other departments or departments, help you to store data or information that you have, and help you in communicating information to people or to other locations.

The use of information technology (SIMRS) is capable of capturing data, processing data, processing data, and disclosure / disclosure of information in reports. These results help hospitals to provide achievements in the form of overall organizational performance both in financial and non-financial information. Information on financial performance shows that there is a hospital profit result in ROI of 20% which is lower than the target profit of 25%. So it was concluded that the hospital was not effective in

achieving the hospital management goals. Even though the process of achieving the goal does not meet the target of 25%, the hospital still gets a profit of 20% so that it can be sustainable in hospital operations.

In terms of cost information, hospitals can control targeted costs of 15 Billion Rupiah, but can be controlled so that it decreases to an expenditure of 10 Billion Rupiah. These results indicate that the hospital managed to make a cost efficiency of 5 Billion Rupiah and can make optimal measurements in hospital spending. Implications of success in carrying out cost efficiencies but not effective in profit, the hospital managed to achieve a targeted increase in cash flow of 50 Billion Rupiah, increased to 75 Billion Rupiah. This result is able to improve hospital operational sustainability to keep going concern in achieving hospital survival.

The results showed support for the overall organizational performance theory of hospitals by Govindarajan and Fisher (1990). This theory shows that overall company performance will produce objective performance measures. The performance measures are return on investment (ROI), profit (profit), cash flow (cash flow), cost control, sales volume, human resource development, and social affairs. In addition, these results also support the theory of Hansen and Mowen (2009: 371) that the balance scorecard in the financial perspective sets the objectives of short-term and long-term financial performance compared to its budget, the financial perspective refers to the global financial consequences of the other three perspectives with several indicators in Financial performance is: revenue growth, changes in costs and use of assets.

The results of the study are also supported by the results of a study from Atria Maharani (2011), Etty et al. (2014), Eliada (2015), Hasan et al. (2012) that The characteristics of management accounting information systems do not have a positive effect on managerial performance when environmental uncertainty is high. And the results of Gul and Chia's study (1994) that the availability of management accounting information will improve managerial performance under conditions of environmental uncertainty. Chia (1995) states that Decentralization is able to mediate the

relationship between management accounting systems and managerial performance.

## Result

The results of this study indicate the strongest support for the pattern of mediation relationships that are run by management control systems on the influence of information technology (SIMRS) on the organization's organizational performance. The role played by the management control system is to reduce the effect indirectly on the influence of information technology (SIMRS) on the organization's organizational performance. This can make the premise in the results that the implementation of management control in budgeting is able to reduce cost control in hospitals to be very efficient, and achieving profit targets in ROI does not support the achievement of targets from 25% to the realization of 20%. This shows not effective in achieving organizational goals.

Information technology (SIMRS) support in the processing and presentation of accurate information is able to reveal the process of monitoring, monitoring, and evaluating the target towards budget realization. The results provided by information technology (SIMRS) are able to provide disclosure and presentation of hospital organization performance to be accurate and timely in decision making. Information technology (SIMRS) also helps in the process of budgeting/planning, implementing budget/planning, and reporting targets and budget/planning realization. Thus, being able to present full disclosure reporting and disclosure to produce hospital organization performance in a comprehensive measurement in the form of efficiency, effective and economical. These results conclude that the hospital carries out a budget preparation process with Optimistic techniques in determining organizational targets. Even though the profit and revenue target is not achieved, the hospital is operational in its operational activities. The hospital is also able to perform cost efficiency by setting a target for spending 15 Billion Rupiah to 10 Billion Rupiah.

These results provide findings in the health services industry occurs that management control is quite strict in monitoring and evaluating planning and implementation, which is caused by sufficient

human resource capability in predicting future events, the usefulness of information technology in supporting the company's operational activities to produce performance goals appropriate organization of the organization in planning or budgeting. This process results in the finding that strict control is able to perform cost efficiency but has not been able to produce effectiveness in achieving organizational goals.

## **CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS**

### **Conclusion**

Based on the results and discussion of hypothesis testing and research findings, the conclusions of this study indicate that there is a significant simultaneous influence between environmental uncertainty, information technology, and hospital management control systems on hospital organizational performance. These results indicate that there is no difference between theory and the empirical data environment. There is also a positive influence of environmental uncertainty on the Management Control System. Environmental uncertainty by employees increases, then the management control system by the hospital will increase. There is a positive influence of information technology on Hospital Management Control Systems. Improved information technology that is used is useful, then the management control system implemented by the hospital will increase. There is a positive influence on the Management Control System on Hospital Organizational Performance. If the management control system that is carried out by employees is low, then the resulting organization's organizational performance is also low. There is a positive influence of Environmental Uncertainty on Hospital Organizational Performance. If hospital employees predict that environmental uncertainty is low, then the organization's organizational performance will also be low. This study also concluded that there was a positive influence of Information Technology on Organizational Performance. Although the information technology produced by the hospital is very useful, the organizational performance of the hospital produced shows a decrease in the value of achievement.

### **Implication**

From the results of the research that has been done it is necessary to take steps to improve hospital management both in managerial and theoretical implications. Managerial implications that are carried out is making guidelines for the preparation of company budgets whose contents refer to the vision and mission of the hospital, as well as determining the hospital's goals and objectives. Increase the involvement of superiors and employees in the preparation of the budget in each unit by providing independence based on realistic budgeting, not pessimistic or optimistic. In addition, the process of controlling, monitoring, and evaluating budget activities continues in the quarterly or semester period for the control mechanism between targets and the realization of each unit. It is necessary to create a team that involves relevant employees to prepare a budget in the hospital so that it is more focused and committed in preparing the budget. Other managerial implications are that long-term and short-term strategic plans need to be made according to the hospital's vision and mission. This can later be used as a guideline in preparing the budget. Budgeting employees must be in accordance with their competencies and their preparation must be based on market analysis and activity based budgeting. Each individual employee must be able to achieve their respective key performance index so as to be able to achieve the organization's organizational performance and as an implication for managerial that the Board of directors and managers must explore the hospital's strategies and plans in order to be able to predict challenges, obstacles and threats for hospital sustainability.

Theoretical Implication of the results of research and in-depth study there is an opportunity to develop contingency theory by expanding both independent and moderating variables by adding new variables, namely: managerial performance, organizational commitment, mental budgeting, the benefits of financial information, opportunistic behavior in budgeting, and business unit strategy characteristics.

### **Suggestion**

Based on the results and discussion of hypothesis testing and research findings, so that the Management Control System is able to measure the efficiency and effectiveness of

hospital performance, the authors provide suggestions for hospitals to conduct market strategy training, business research, and consumer behavior in order to be able to improve their capabilities in market prediction, competitors and niche hospital industry for long-term goals. In addition the hospital must also be able to capture changes in regulations made by the monetary board to determine the level of investment that will be implemented in its organization and equip hospital human resources in the mastery of information in hospital management information systems to assist in processing non-financial information or external information. In addition, hospital management is guided by the budget must always carry out monitoring and evaluation for a review of a program in accordance with the demands and development of the hospital with the aim to reconcile the budget target with the realization of the budget. Management must be able to determine profit targets for the responsibility center on investment and revenue centers on a realistic basis so that performance targets can be realized. Then make efforts to increase hospital profits with marketing mix in order to achieve affordable prices, targeted promotions, strategic places and competitive products. Management must pay attention to changes in the global political and economic situation that can affect exchange rate fluctuations that have an impact on interest rates in the market. It aims at planning projections in hospital budgets.

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