

**PENGARUH TEKNOLOGI INFORMASI DAN SISTEM
AKUNTANSI MANAJEMEN TERHADAP KINERJA
MANAJERIAL DI POLITEKNIK KESEHATAN
KEMENKES RI MEDAN**

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ABSTRACT

The purpose of this study was to determine whether the Information Technology and Management Accounting Systems affect Managerial Performance at the Health Polytechnic of the Indonesian Ministry of Health, Medan. The type of research used is descriptive quantitative. The population in this study was the entire board of directors as the highest leadership, subdivision heads and unit heads who were in the organizational structure of the directorates and departments under the Health Polytechnic of the Indonesian Ministry of Health in Medan with a sample of 35 people including directors, heads of subdivisions, Commitment Making Officials, Coordinator (Budget Planning, SIMAK BMN, Remuneration & Performance Achievement), Head of Department and Head of Study Program. The type of data used in this research is quantitative data and the data source used is primary data. The technique of collecting data using a questionnaire. The data analysis technique used in this research is descriptive statistics. The primary data quality test, the researchers conducted validity and reliability tests, classical assumption tests, regression tests and hypothesis tests using the SPSS 21.0 2020 application. The results of this study indicate that individually the management accounting system has no effect on managerial performance while information technology individually has an effect on managerial performance, but the interaction between information technology and management accounting systems has a significant effect on managerial performance.

Keywords : *Information Technology, Management Accounting Systems, Managerial Performance*

CHAPTER I

INTRODUCTION

1.1 Background of Study

The management accounting system provides data in the form of financial and non-financial information to the leaders, managers, and employees in an organization. The management of accounting information is provided for specific decision-making purposes and it is rarely disseminated outside the organization. Due to the needs of decision makers in the organization to determine the scope and focus of management accounting, the scope of management accounting are more related to planning, organization, and controlling. (Simamora, 2015).

The development of information technology does not affect only the business world, but also other fields, such as in the fields of health, education, and the government environment. Since the invention of the computer in 1955, the world's civilization has brought it into the era of globalization. So, all this time people have begun to understand computer-based information processing, until people can use various software as a data processing tools to produce information now.

In the field of accounting itself, there are many systems for processing accounting information are offered that make accountants can more easily get reliable, relevant, timely, complete, and easy to understand.

By using the application of information technology, the management accounting system can provide information that suits to the management needs.

Information technology encourages the transmission of information delivery to

consumers and it obtains convenience in collecting consumer and market data information. When information technology is higher, it will make managerial performance in decision making easier. The availability of personal computers (PC) are supported by various software that is easy to operate, enabling managers to access information quickly and provide more reports.

There is a phenomenon caused by the unavailability of quality information technology and a management accounting system that is not professional in educational institutions. Trust in education is not only related to the quality of its graduates but also to systems and procedures, the use of technology, and human resources in giving services to students. One of the risk aspect that has not been anticipated until now is the failure to verify documents on time so that funds that fall more slowly through information technology (technology fraud), which in this case is categorized as operational risk.

In addition, information about the condition of the system in management accounting itself is at least or not all managers have the appropriate background as in the case is about accounting/finance economics, and the discrepancy between the budget that has been made which is approved by the government.

Seeing the high role of information in education and organization, the organization becomes very dependent on information technology and management accounting systems. The purpose of a management accounting system is to ensure that the information is high quality produced.

Nindy Frestila (2008:7) who has conducted a research on companies' banking sector in Padang, examines the use of information technology, the characteristics of management accounting information systems, and the impact of environmental uncertainty on management performance. The results of this study

indicated that the use of information technology, the characteristics possessed of management accounting information systems, and environmental uncertainty simultaneously affect managerial performance.

From the research that has been mentioned, there are differences in the results of these studies and also the phenomena that arise due to the poor quality of information technology, management accounting systems and the lack of quality in the application of management accounting systems to managerial performance. The description above is the basis for the writer to conduct a research at one of the educational institutions in Medan about information technology and management accounting systems.

This research replicates the research which has been conducted by Nindy Frestila (2008) and Lella Winety (2014) by adding information technology as a moderating variable to this research about the impact of Medan management accounting system on management performance.

Based on the background above, the purpose of this research is to determine whether information technology will affect managerial performance, whether the management accounting system will affect managerial performance and whether the interaction between management accounting systems and information technology will affect managerial performance. So the writer conducted a study entitled "The Influence of Information Technology and Management Accounting Systems on Managerial Performance at Politeknik Kesehatan Kemenkes RI Medan".

1.2 Formulation of Study

Based on the descriptions that have been explained in the background above, the writer formulates the problem as follows:

1. Does information technology affect managerial performance at Politeknik Kesehatan Kemenkes RI Medan ?
2. Does the management accounting system affect managerial performance at Politeknik Kesehatan Kemenkes RI Medan?
3. Do information technology and management accounting systems simultaneously affect managerial performance at Politeknik Kesehatan Kemenkes RI Medan

1.3 Objectives of Study

The Objectives of this study are:

1. To find out the effect of information on managerial performance at Politeknik Kesehatan Kemenkes RI Medan
2. To determine the effect of the management accounting system on managerial performance at Politeknik Kesehatan Kemenkes RI Medan
3. To determine the effect of information and management accounting systems simultaneously on managerial performance Politeknik Kesehatan Kemenkes RI Medan

1.4 Significance of Study

The benefits that can be obtained from this study are as follows:

1. For Researchers

The writing of this research is useful for applying the knowledge gained during lectures. As well as training to combine readings result from various sources, especially to learn more about "The Influence of Information Technology and

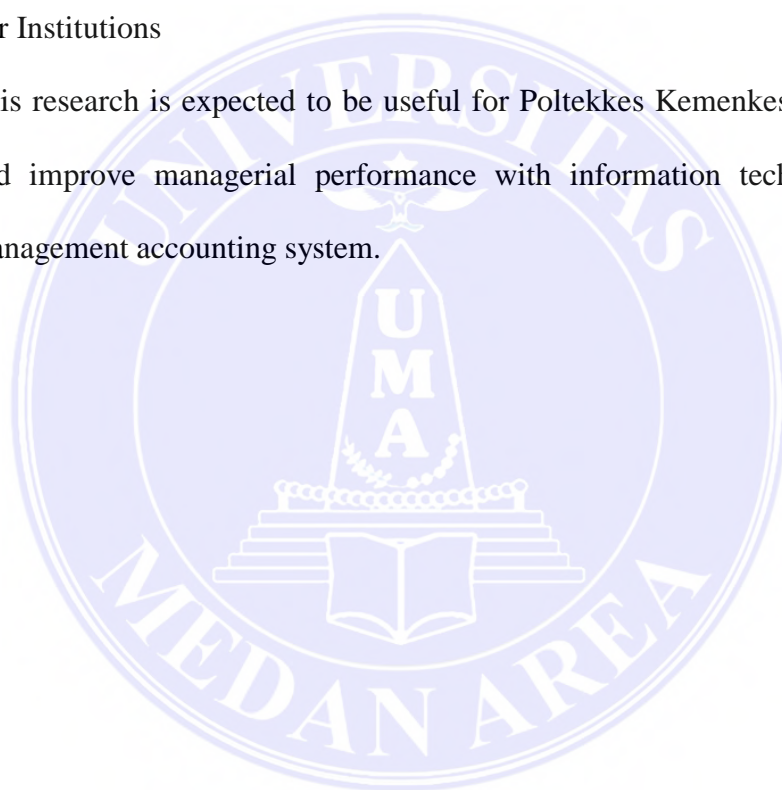
Management Accounting Systems on Managerial Performance at Poltekkes
Kemenkes RI Medan".

2. For Readers

This research is expected to contribute as input to add knowledge about the results of studies related to information technology and management accounting systems on managerial performance to be used as a reference for future research results.

3. For Institutions

This research is expected to be useful for Poltekkes Kemenkes RI Medan to control and improve managerial performance with information technology and a better management accounting system.



CHAPTER II

LITERATURE REVIEW

2.1. The Information Technology

Talking about information technology, Abdul Kadir (2014) said that it is used for corporate, personal use and government purposes, it is strategic information for decision making.

According to Daryanto and Abdullah (2013): "Information technology is the use of electronic devices based on a combination of computing and telecommunications to obtain, process, store and disseminate information in the form of numbers, letters, images and sound.

Based on the writer's understanding of the meaning above, information technology is a set of tools that helping us to obtain, process and store data information by operating a computer in which there is software and hardware to produce quality information that is useful for decision making.

2.1.1 Information Technology Indicators

Accordindg to Sutarman (2014), there are six indicators of information technology, they are as follows:

1. Capturing, it is the process of taking data that will become input data.
2. Processing
 - a. Detailed records of communication activities, such as receiving input from keyboard, scanner, microphone, etc.
 - b. Processing the received input data into information. Data processing can be realized by changing all forms of data and information (changing data into

other forms), analysis (conditional analysis), calculation, and synthesis.

1) Data processing, is the process of changing the data into information.

Information processing is a computer activity that is used to process a type/form of information and turn it into another type/form of information.

2) Multimedia system is a computer system that can process various types and forms of information.

3. Generate information or organize it into a useful form. For example reports, tables, graphs, etc.

4. Storage (Storage) is recording or storing data and information on media that can be used for other purposes.

5. Retrieve searches is taking information or copy data and save the information.

6. Transmission is sending data and information from one place to another through a computer network.

2.2 Management Accounting System

According to Irham Fahmi (2013), the management accounting system is a management tool that is used to support the companies' management in receiving, processing and managing the companies properly and systematically with the aim of supporting the creation of company performance.

Meanwhile Hansen and Mowen were translated by Deny Arnos Kwary (2010), management accounting systems provide the information that is needed to achieve management goals. Management accounting information system is a process described by activities, such as collecting, measuring, storing, analyzing, reporting and managing information.

Based on the understanding of the management accounting system above, it can be

concluded that the management accounting system is a system designed to process input

and process financial and non-financial data into output in the form of information for managers in carrying out managerial activities.

2.2.2 Management Accounting System Indicators

Ajeng Nurpriandyni and Titiek (2014) stated that there are 4 indicators of the management accounting system, namely:

a. Broad scope

Broad scope (broad scope) is used to carry out the management process. Management requires extensive information but it still at a reasonable level so that the benefit of information is bigger if compared with the costs of obtaining information. Broad scope information is information that pays attention to the dimensions of focus, time horizon, and quantification. Information that is broad in scope includes information which is related to the external environment (such as GNP, total sales, and market share) or non-economic (such as demographic factors, component desires, competitor actions, and technological advances). The broad scope of SAM will provide an estimation of the profitability measure.

b. Timeliness (on time)

Timeliness (on time) is showing the time span between the request for information with the presentation of information and the frequency of reporting systematically on the information collected. Timely information will affect the manager's ability to respond any incident or problem. On the other hand, if the information is not delivered in a timely manner, the information will lose its value in influencing the quality of managers' decisions. Timely information will also support managers in dealing with the uncertainties that occur in their work environment.

c. Aggregation

Aggregation information is information that pays attention to the application of

formal policy forms (such as discounted cash flow analysis for capital budgeting analysis, linear programming simulations in profit volume cost analysis budgeting app, and inventory control models) and periodic which is characterized functional information such as sales area, cost center, marketing, and production department. Aggregated management accounting information will become an important input in the decision-making process. This information can also be used to evaluate work compared to information that is not organized or still in the form of data.

d. Integration

Integration is an important aspect of controlling an organization as a segment in the sub-units of the organization. Integrated information includes the specification of targets, the effect of interactions between segments, and information about the impact of decisions in one area. The complexity and interrelationships or dependence of subunits with one another unit will be reflected in the integrated information. The more segments or subunits in the organization, it means there are more integrated information is needed.

2.3 Managerial Performance

Henry Simamora (2012) defines managerial performance as the result of the work or activities of a person or group in an organization that is influenced by various factors to achieve the organizational goals within a certain period of time. Meanwhile, according to Indra Bastian (2015), managerial performance is a description of the achievement level of the implementation an activity, program, or policy in realizing the goals, objectives, mission, and vision of the organization contained in the formulation of the organizational strategy scheme.

Besides that, Krismiaji (2011) also defines that managerial performance is managers who produce performance by mobilizing talents and abilities, as well as several other people's efforts that are different in their area of authority.

Based on some of the definitions above, it can be concluded that managerial performance is the result of work achieved by a person or group of people in an organization by mobilizing the talents and abilities of managers to achieve organizational goals.

2.3.1 The Indicators of Managerial Performance

Aceng Kurniawan (2014) stated that there are eight dimensions of managerial activity in managerial performance appraisal indicators, namely:

a. Planning

The meaning of planning activity is the ability to determine policies from a set of activities, to be further implemented by considering current and future conditions. Planning aims to provide guidelines and procedures for implementing goals, policies, budgeting, and work programs so that the implementation planning activity in accordance with the targets that have been set.

b. Investigating

The investigative activity is the ability to collect and prepare information for records, reports and accounts, measure results, determine inventory, and analyze work.

c. Coordination

The coordination activity means the ability to exchange information with people in parts of the other organization to link and adjust the program, inform others, and relation to other managers.

d. Evaluating

The evaluation is the ability to assess and measure proposals, observed or reported performance which includes employee assessments, assessment of results records, financial statement assessments, and product inspections.

e. Supervising

The supervisory activity means the ability to provide direction, guide, train, lead, and develop subordinates as well as explain the rules to subordinates, explain work objectives and handle employee complaints.

f. Staff Selection (Staffing)

Staff selection activity is the ability to retain the existing workforce in your department, recruit employees, interview them, select new employees, place in appropriate field, promote and transfer employees.

g. Negotiating

The negotiation activity is the ability to buy, sell or contract for goods and services, contact suppliers, and bargain with sellers, as well as bargain in groups.

h. Representative

The representation activity refer to the ability to attend meetings with other companies, meetings with business associations, representatives from organizations, speeches for community events, community engagement, and the ability to promote the company's main objectives.

According to Indra Bastian (2015), managerial performance measurement is divided into 3 (three) sub-dimensions as follows:

a. Efficiency

An action in which an organization or corporation can produce best output with minimum possible input.

b. Effectiveness

An action where the organization or corporation can produce an output is with the best outcome. The resulting output should be useful for everyone.

c. Economical

An action or behavior in which we can obtain inputs (goods or services) that have the best quality is at the lowest possible price level.

2.4 Previous Research

The previous research in this research can help the writer to be used as a reference material to see how much influence the relationship between independent variables and dependent variables is mediated by intervening variables that have similarities in a study, which then can be proposed as a hypothesis for several studies related to the variables that effect on managerial performance.

Table 2.1 Previous Research

No	Researcher	Title	The Result of Research
1	Jerry Hans Sumolang (Volume 2 Number 1, February 2015)	Effect of Information Technology and Interdependence on Performance Managerial with Characteristics of Management Accounting Systems as Intervening Variables <i>(Pengaruh Teknologi Informasi dan Saling Ketergantungan terhadap Kinerja Manajerial dengan Karakteristik Sistem Akuntansi Manajemen</i>	Information technology has an indirect effect on managerial performance through the characteristics of the management accounting system. Interdependence has a positive influence on managerial performance through the characteristics of the management accounting system.

		<i>sebagai Variabel Intervening)</i>	
2	Aceng Kurniawan (Volume 4 Number 1, 2014)	The Effect of Information Technology Utilization and Interdependence on the Characteristics of Management Accounting Information and Its Impact on Managerial Performance (<i>Pengaruh Pemanfaatan Teknologi Informasi dan Saling Ketergantungan terhadap Karakteristik Informasi Akuntansi Manajemen serta Dampaknya terhadap Kinerja Manjerial</i>)	The partial use of information technology has a positive and significant effect on characteristics of management accounting information Partially interdependence has a positive and significant effect on the characteristics of management accounting information. Characteristics of the management accounting system have a positive and significant effect to performance.
3	Sri Sulani dan Dedi (Volume 3, Number 2, July 2013)	Effect of Management Accounting System Characteristics on Managerial Performance (Case Study of BPR in Demak Regency) (<i>Pengaruh Karakteristik Sistem Akuntansi Manajemen terhadap Kinerja Manajerial (Studi Kasus BPR di Kabupaten Demak)</i>)	The characteristics of the management accounting system have an effect of 96.74% on managerial performance with a close relationship level of 0.956 is "Very Strong" and positive. The positive correlation between the two variables indicates that the increasing characteristics of the management accounting system, So, this increasing management characteristics will improve managerial performance.
4	Wahyu Meiranto, Kiki Widiastuti, Elen Puspitasari (Volume 2 Number 1, Mei 2013)	Role Characteristics Management Accounting System as a Variable that Mediating the Effect of Information Technology and Interdependence on Managerial Performance (Study on PD BKR BKK throughout Central Java) (<i>Peran Karakteristik Sistem</i>	Information technology has an indirect effect on managerial performance through the characteristics of the management accounting system. Interdependence has a positive influence on managerial performance through the characteristics

		<i>Akuntansi Manajemen sebagai Variabel yang Memediasi Pengaruh Teknologi Informasi dan Saling Ketergantungan terhadap Kinerja Manajerial (Studi pada PD BKR BKK se-Jawa Tengah)</i>	of the management accounting system.
5	Ajeng Nurpriandyni and Titiek Suwarti (Volume 15 Number 1, Tahun 2014)	The Influence of Technological Information, Interdependence, Characteristics of Management Accounting Systems on Managerial Performance (Case Study: Manufacturing Company in Semarang) <i>(Pengaruh Teknologi Informasi, Saling Ketergantungan, Karakteristik Sistem Akuntansi Manajemen terhadap Kinerja Manajerial (Studi Kasus: Perusahaan Manufaktur di Semarang)</i>	Information technology and interdependence have a positive effect on the management accounting system (SAM). Information technology and management accounting systems have an effect on managerial performance. To improve managerial performance will be more effective through information technology or direct interdependence compared to mediated by SAM.

No	Researcher	Similarities	Deferences
1	Jerry Hans Sumolang, (2015)	Both have information technology independent variables. The dependent variable is managerial performance. In addition, this study also used the same research method as that carried out by Jerry Hans Sumolang, it is using validity and reliability tests, multiple linear analysis tests, F tests and T tests.	The difference between the both of researches is in the addition of independent variables by Jerry Hans Sumolang, he added interdependence variables. Besides that, the addition of the multiple correlation method in this study and the addition of the classical assumption test method consisting of the test multicollinearity, test of heteroscedasticity, and normality test in this study.

			<p>And the basic difference between these two studies is the difference in the object of research and the period of observation between them. Jerry Hans Sumolang conducted a study in 2015 with the object of research being a banking company in the Riau province, while this study was conducted in 2020 with the object of research being decision-making officials in the financial sector at Politeknik Kesehatan Kemenkes RI Medan</p>
2	Aceng Kurniawan and Citra Nensih (2014)	Both of their researches used information technology independent variables	<p>The difference between both of them is in the addition of the independent variable by Aceng Kurniawan and Citra Nensih, namely adding the interdependence variable and the dependent variable, namely the characteristics of management accounting information and managerial performance as moderating variable.</p> <p>While the writers made the management accounting system as an independent variable and managerial performance as the dependent variable intervention</p>

3	Sri Sulani dan Dedi (2013)	Both of them used the dependent variable of managerial performance. The research methods used are also quantitative.	The difference between the two lies in the writer's use of information technology as an independent variable. The difference between the object of research and the period of observation between both of them is that Sri Sulani and Dedi conducted research on the object of research by the People's Credit Agency (BPR) in Demak, while this research was conducted with the object of research by decision-making officials in the financial sector at Politeknik Kesehatan Kemenkes RI Medan
4.	Wahyu Meiranto, dkk.(2013)	The similarity with this research is both of them used the independent variable of information technology and managerial performance as the dependent variable.	The difference between both of them is in the addition of the variable independent interdependence and intervening variables of management accounting information systems. While the writer used the management accounting system as an independent variable. The population of this study was micro banking service companies in the Central Java region, while the writers are all decision-making officials in the Politeknik Kesehatan Kemenkes RI Medan
5.	Ajeng Nurpriandyni, dkk.(2014)	Both of the researches used the independent variable of information technology and the dependent variable of managerial performance.	The difference between the two researches is in the addition of the variable independent of each other dependence carried out by Ajeng Nurpriandyni, et al. The writers used the management accounting system as an independent variable.

2.5 Conceptual Framework

2.5.1. The Effect of Information Technology on Managerial Performance

The use of computer-based information technology has a very important role in supporting company activities for processing and storing information as well as communication technology for information dissemination. Sitti Nurhayati, et al (2015) stated that by using computers, a large amount of useful information can be collected and reported to managers immediately. What is happening in various parts of world can be known in quick time. This allows management to make decisions more quickly.

In the other side, Evelyn and Herawati (2012) said that that the availability of information technology can affect managerial performance, enabling managers to make decisions appropriately and quickly which in turn improves the managerial performance.

This is also in line with Jogiyanto (2013) argued that companies which use computer software will certainly help them more easily organize, store, modify, and receive financial reports electronically. So that activities are done effectively and efficiently, and in the end will improve organizational performance and also affect the performance of its employees.

According to the writer's understanding of these theories that have been described above, that information technology has an influence on managerial performance. Because the use of computers in the company can obtain useful information quickly so that it helps managers to carry out their duties which it finally improves managerial performance.

2.5.2. The Effect of Management Accounting System on Managerial Performance

Information is needed by managers to carry out management processes such as planning, controlling, and decision making. The information is generated by the management accounting system.

Sri Sulani and Dedi (2013) stated that the availability of the characteristics of the management accounting system in the company will greatly assist the tasks that are faced by managers. So that it enables the provision of information in a certain form that will provide managers with additional information that will be useful in decision making. There are also more possible solutions to solve problems which allows the production or marketing manager to improve the quality of the decisions to be made. Thus, the availability of the characteristics of the management accounting system allows managers to make decisions appropriately and quickly which can improve managerial performance.

The influence of the management accounting system on managerial performance according to Kautsar and Farid, M (2016) is the company designs a management accounting information system to assist a company's performance through managers in terms of planning, organizing, directing, and decision-making. Managers need information support to carry out their activities. How much information support is needed by managers depends on the environmental variables of the task.

According to Hansen and Mowen that is translated by Deny Arnos Kwari (2010), management accounting information systems can help managers to identify a problem, solve problems, and evaluate performance to improve managerial performance.

Other researches also involving the relationship of management accounting information systems to managerial performance were carried out by Sri Sulani and Dedi (2013), and Aceng Kurniawan and Citra (2014) which showed that the characteristics of management accounting information had a positive and significant effect on managerial performance. From some of the

descriptions above, the writer take a conclusion that the existence of a management accounting information system will help the tasks possessed by managers. So that it will make additional information will be obtained easier for managers to plan, identify problems and make decisions quickly and precisely which will ultimately improve managerial performance.

2.5.3. The Influence of Information Technology and Management Accounting Systems on Managerial Performance

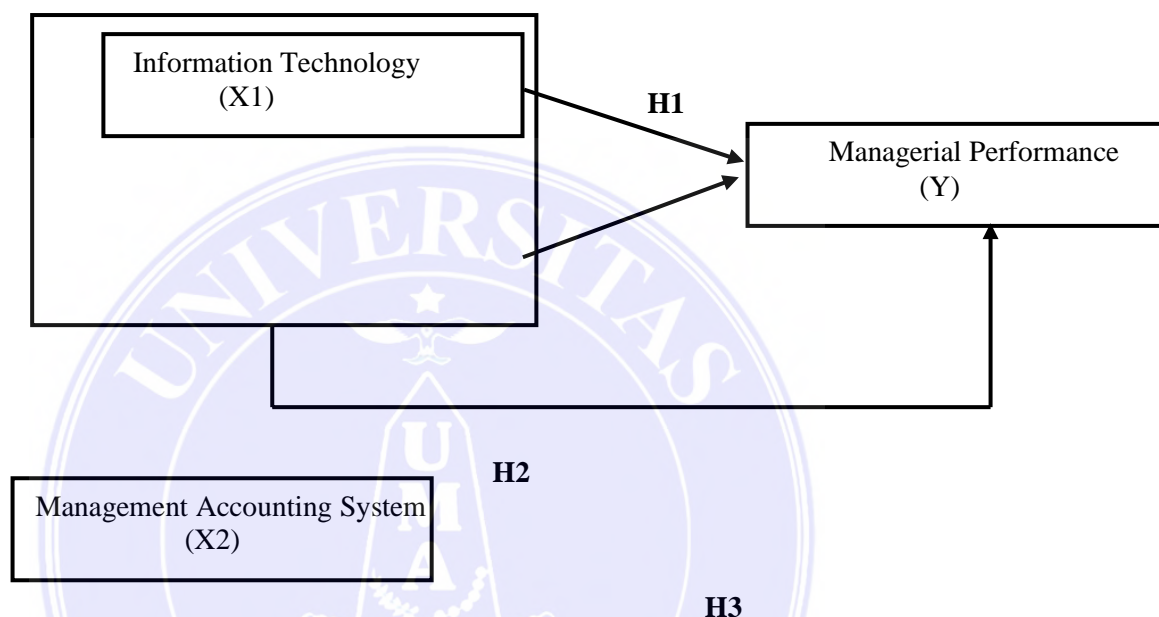
According to Singgih Sasongko (2017) information technology will be mediated by a management accounting system. So, the increasing application of information technology will make the increasing availability of management accounting system information. This will provide more alternative solutions that managers can consider in making decisions so that managerial performance can be improved.

Meanwhile, according to Wahyu Meiranto, et al (2013), computer technology with various software allows the characteristics of the management accounting system to present various formats, both formats that refer to formal decision models or the incorporation of functional and temporal information. This can be done because there is a database that allows old and new data to be available for management purposes. The availability of information technology that can affect the characteristics of the management accounting system, allows managers to make decisions appropriately and quickly to improve managerial performance.

Based on the writer's understanding of the description above, that information technology allows the characteristics of management accounting information systems to provide old and new data for the benefit of management. It is because with increasing information technology, the availability of management accounting information will also increase. So that it will provide many alternatives for managers in decision making and

managerial performance will increase.

Based on the theoretical framework and previous studies that already exist regarding to the effect of independent variables (information technology and management accounting systems) on the dependent variable (managerial performance described above, it can be developed in a conceptual framework as follows:



Gambar 2.1. Conceptual Framework

From the conceptual framework above, it can be seen that information technology and management accounting systems have a partial effect on managerial performance and both variables have a simultaneous effect on managerial performance.

2.6. The Research Hypothesis

According to Sugiyono (2014) the hypothesis is a temporary answer to the formulation of the research problem. Based on the problem formulation and conceptual framework, the hypotheses of the research that is proposed by the researchers are:

H1 : The information technology has a significant positive effect on managerial performance at Politeknik Kesehatan Kemenkes RI Medan.

H2 : The management accounting system has a significant positive effect on

managerial performance at Politeknik Kesehatan Kemenkes RI Medan.

H3 : The information technology and management accounting systems simultaneously have a significant positive effect on managerial performance at Politeknik Kesehatan Kemenkes RI Medan.



CHAPTER III

RESEARCH METHOD

3.1. Research Design

This type of research that used in this study is quantitative descriptive research through surveys. The data was collected by using a questionnaire. This study used statistical processing that was supported by using of multiple linear regression analysis models. According to Riduwan (2015), descriptive method is conducting study by describing the object of research at the present time based on the facts. Then, the data will be analyzed in the form of a developmental study. According to Sugiyono (2015), survey research is research that takes a sample from a population and uses a questionnaire as a basic data collection instruments

3.2 Location of research

To obtain the relevant data, this research was conducted at director's office of Politeknik Kesehatan Kemenkes RI Medan on Jamin Ginting Street, Km. 13.5, Kel. Lau Cih Vil, Medan Tuntungan and all existing departments, the researcher's place of work. Because it made the researcher more understand and recognize the conditions of the research location.

3.3 Time of Research

The time of this research was planned start from October 2019 to June 2020. There are details of the planned research activities that can be seen in table 3.1 as follows:

Table 3.1
Research Time Plan

Activity	Month(2019)			Month(2020)							
	Oct	Nov	Des	Jan	Feb	Mar	Apr	Mei	Jun	Juli	Agt
Title submission	■										
Compilation proposal		■	■	■	■						
Guidance proposal						■	■	■			
Seminar proposal									■		
Delivery questionnaire									■		
Return questionnaire									■		
Data analysis of research									■		
Compilation of results research									■		
Guidance Results of research									■		
Seminar Results Thesis										■	
Thesis Exam											■

3.4 The Population and Sample of Research

3.4.1. Population

According to Ahmad Dahlan (2014) population is the entire group of people, events, interests that the researcher wants to investigate, which have certain quantities and characteristics set by the researcher to be learnt and drawn the conclusions. Based on the opinion above, the population in this research was the entire of directors as the highest leadership, the head of sub-section and the head of the unit in the organizational structure of the directorate and departments under Politeknik Kesehatan

Kemenkes RI Medan for about 65 people. Here is the details information of population:

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Table 3.2
The Criteria of Population

No.	The Criteria of Population	Total
1	Director	1
2	Deputy of Director	3
3	Head of subsection	7
4	Commitment Making Officer	1
5	Coordinator	12
6	Head of Unit	5
7	Head of Major	7
8	Head of study program	15
9	Department Secretary	7
10	Assistant Recipient Treasurer	7
	Total	65

3.4.2 Sample

The sample is part of the characteristics number possessed by the population. In other words, not all elements of the population will form a sample (Dahlan, 2014). The sampling technique that used in this research was purposive sampling. According to Sugiyono (2014), purposive sampling is a sampling technique of data sources with certain considerations based on predetermined criteria, namely:

1. Employees who have worked 1 year in their field
2. Employees who are 30-55 years old
3. Employees who have positions as decision makers in the financial sector

Based on the sample criteria above, the total of samples in this study were 35 people consisting of:

Table 3.3
The Person who Meet The Criteria

No.	Who Meet The Criteria	Total
1	Director	1
2	Deputy of Director	1
3	Head of subsection	7
4	Commitment Making Officer	1

5	Coordinator (Budget Planning, SIMAK BMN, Remuneration & Performance Achievement)	3
7	Head of Major	7
8	Head of study program	15
	Total	35

3.5 Operational Definition of Variables and Their Measurement

Operational definitions should come from theoretical concepts and definitions or a combination of both, which are in the field of research.

3.5.2 Dependent Variable

According to Sugiyono (2015) the dependent variable (dependent variable) is a variable that influenced or the cause and effect of the independent variable. In this research the dependent variable is managerial performance.

- a. The dependent variable is managerial performance (Y)

Manager performance in this study was the ability or achievement that has been achieved by personnel or a group of people in an organization to carry out their functions, duties and responsibilities in doing company activities.

3.4.2. Independent Variable

According to Sugiyono (2015), the independent variable is a variable that affects the dependent variable, in this research the independent variables were Information Technology and Management Accounting Systems.

- a. Information Technology (X1)

According to Sutarman (2014) Information technology is technology that is not only limited to computer technology (hardware and software) used for processing and storing information, but it is also including communication technology for sending information.

- b. Management Accounting System (X2)

The Management Accounting System in this research was conceptualized as a formal system that is designed to provide information to all managers which used as a consideration in decision making.

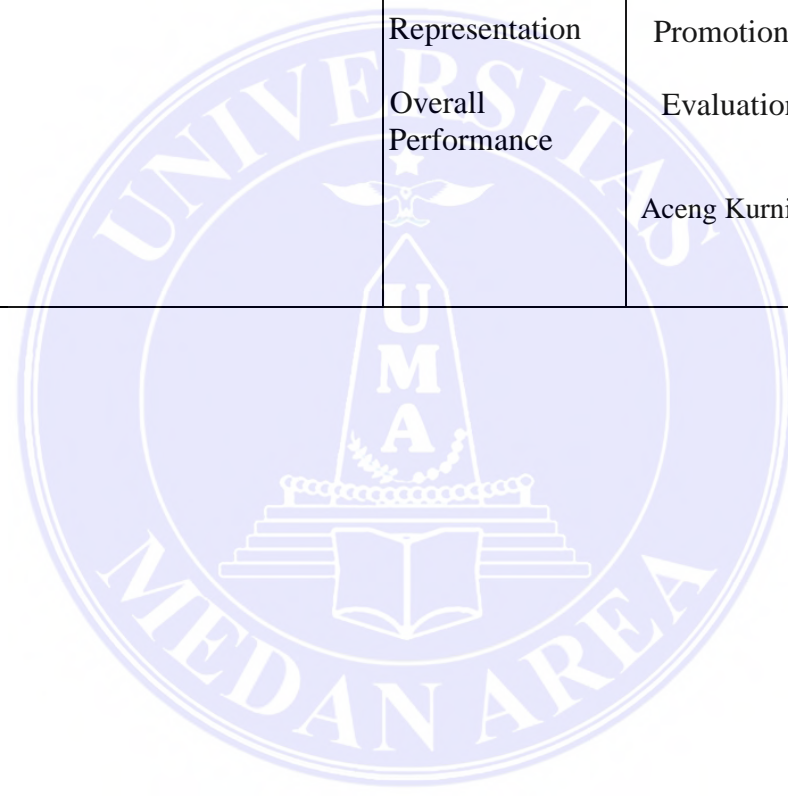


Table 3.4. Definition of Operational Variable and Each Indicators

NO	Variable	Defenition	Dimension	Indicator
1	Management accounting system	The management accounting system is a formal system that is effectively designed to provide useful information to managers. This indicator developed by Ajeng Nurpriandyni and Titiek (2014).	<p><i>Broad scope</i></p> <p><i>Timeliness</i></p> <p><i>Aggregation</i></p> <p><i>Integration</i></p>	<ol style="list-style-type: none"> 1. Internal. 2. External. 3. Economy. 4. Non economy. 5. Finance. 6. Non finance. <ol style="list-style-type: none"> 1. Speed. 2. Automation 3. Frequency of reports. <ol style="list-style-type: none"> 1. Functional. 2. Period of time. 3. Comparative analysis. 4. Decision model format. 5. Separation of costs. <ol style="list-style-type: none"> 1. Influence. 2. Target. 3. Impact of the decision. <p>Ajeng Nurpriandyni dan Titiek (2014).</p>

2	Information Technology	Information technology is a set of tools that help you work with information and perform tasks that have relation to information processing (Haag and Keen, 2009).	Operational effectiveness <i>Strategic positioning</i>	Efforts that do all the work properly by using all the potential resources they have. The company's actions to design products and marketing mixes to create a certain impression in the minds of consumers or the main factor in increasing customer service strength of the firm's market position. (Haag and Keen, 2009)
3	Managerial performance	The performance of individual members of the organization in managerial activities such as planning, investigation, coordination, supervision, staffing, negotiation and representation. These indicators were developed by Aceng Kurniawan and Citra (2014)	Planning Investigation Coordination Evaluation Supervision	Defining goals, policies and plans Collect and prepare information, in the form of records, reports and accounts Exchange information with managers in other sections Assess and measure proposals, observed performance or reported Directing, leading and develop subordinates

			Staff selection	Maintaining the workforce
			Negotiation	Purchase, sale of goods and services
			Representation	Promotion
			Overall Performance	Evaluation
				Aceng Kurniawan dan Citra (2014)



3.6. Type of Data and Sources

3.6.1. Type of Data

The type of data used in this study was the quantitative data. Noor (2014) explained that quantitative data is the data that is measured on a numerical scale (numbers) and Sugiono (2015) stated that quantitative data is numeric or numbers data that can be analyzed by using statistics.

3.6.2 Data Source

The data source used was the primary data source. Sugiyono (2015) explained that primary data is the data that obtained directly from questionnaires distributed based on the number of managers associated with this research at Politeknik Kesehatan Kemenkes RI Medan.

3.7. Technique of Data Collection

The technique of data collection used was a primary data collection technique by using a list of questions (questionnaires). Questionnaires here means a list of questions in the form of a questionnaire that is aimed to managers who are respondents at Politeknik Kesehatan Kemenkes RI Medan by using a Likert scale in the form of a check list.

3.8. The Technique of Analyzing Data

According to Sugiyono (2014), “Data analysis is an activity that carried out after the data of all respondents are collected. The activities in data analysis are grouping data based on variables and types of respondents, tabulating data based on variables for all respondents, presenting data from each variable researched, perform calculations to examine the hypotheses that have been proposed”. The technique of data analysis in this study was done by using the SPSS program. The following are the tests that carried out from the results of this study:

Descriptive statistics, provided a description of a data that was seen from the average value (mean), standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness (distribution deviation). Descriptive statistical analysis was used to provide an overview of the demographics of the respondents in the study and a description of the research variables.

To test the quality of the primary data, the researcher conducted a validity test and a reliability test.

3.8.1. Validity Test

Validity test is a test to state whether a questionnaire is valid or not. The questionnaire is said to be valid if the questions on the questionnaire able to reveal something that will be measured by the questionnaire. Pearson correlation is used to test it, if the Pearson coefficient obtained is not significant at a significant level of 0.05, it means that the data obtained is invalid.

3.8.2. Reliability Test

Reliability test is a test that aims to measure a questionnaire which is an indicator of a variable or constant. A questionnaire is said to be reliable if a person's answers to the questions are consistent from time to time. The way to measure this test is by using the Cronbach Alpha statistical test, a construct or variable is said to be reliable if it gives a Cronbach alpha value greater than 0.60 (Ghozali, 2011).

3.8.3. Normality Test

Normality test was used to test whether in the dependent variable of regression model and the independent variable both of them have a normal distribution or not. If the data spread around the diagonal line and follows the direction of the diagonal line, so the regression model will fulfill the assumption of normality. A good regression model is one that has a normal distribution or close to

normal.

3.8.4. Multicollinearity Test

Multicollinearity test is used to test whether there is a correlation between the independent variables (independent) in the regression model. A regression model does not have multicollinearity is one that has a correlation between independent variables, but it is smaller than 10 and has a tolerance greater than 0.1 or 10%. A good regression model is one in which there is no correlation between the independent variables (Gozali, 2011).

3.8.5. Heteroscedasticity Test

Heteroscedasticity test is used to test whether in the regression model there is an inequality of variance from the residuals of one observation to another observation. The guideline for a free regression model from heteroscedasticity is that there is no clear pattern and the points spread above and below zero on the Y-axis (Ghozali, 2011).

3.8.6. Multiple Linear Regression Test

Regression is a measuring tool in which used to measure the presence or absence of correlation between variables. Multiple linear regression is a linear relationship between two or more independent variables (X1, X2) and the variable (Y). This analysis was used to determine the direction of the relationship between the variables independent with the dependent variable whether each independent variable has positive or negative relation. The data in which usually used is an interval or ratio scale.

The formula for multiple linear regression analysis is as follows:

$$\hat{Y} = a + b_1X_1 + b_2X_2 + e$$

Description :

Y' : dependent variable (predicted value)

X : independent variable

a : Constant

b : Regression coefficient (increase or decrease value)

e : Residual or error

3.8.7. Hypothesis Testing

Statistical hypothesis testing was done to see whether the proposed of hypothesis was accepted or rejected. The effect testing was carried out through partial and simultaneous tests. Before the researcher did the test of hypothesis, so the design of hypothesis testing must be done first. The testing of hypothesis in this research was done to examine the effect of information technology (X_1) and management accounting systems (X_2) on managerial performance (Y), so this research by regressing the variables, both dependent and independent variables.

According to Sugiono (2013) from that test, we will obtain a p-value, which was a value that states the magnitude of the opportunity for research results. The conclusion of the results are interpreted by comparing the p value and alpha value ($\alpha = 0.05$). If the p value $\leq \alpha$, then the decision is H_a failed to be rejected, while if the p value $> \alpha$, then the decision is H_a is rejected. The hypothesis of this study is to prove the truth of H_a , it means that there is an influence of information technology and management accounting systems on managerial performance.

3.8.8. Partial Test (t-test)

Imam Ghozali (2011) explained that the t-test statistic aims to show how far the influence of one independent variable on the dependent variable by assuming the other independent variables constant. If the level of profitability is less than

0.05, it can be said that the independent variable has an effect on the dependent variable. The decision-making conditions are as follows:

- a) If $t \text{ count} > t \text{ table}$ and the level of significance (α) < 0.05 , then H_a is rejected (H_0 is accepted), it means that partially the independent variable has a significant effect on the dependent variable.
- b) If $t \text{ count} < t \text{ table}$ and significance level (α) > 0.05 , then H_a is accepted (H_0 is rejected), it means partially the independent variable has no significant effect on the dependent variable.

3.8.9. Determinant Coefficient (R^2 Value)

The coefficient of determination essentially measures how far the model's ability to explain the variations in the dependent variable. The value of the coefficient determination is between zero and one. A small value of R_2 means that the ability of the independent variable in explaining the variation of the dependent variable is limited. And when the value is close to one, it means that the independent variable provides almost all the information needed to predict the variation of the dependent variable. Ghozali (2013) explains that if in the empirical test the adjusted negative value is obtained, so the value of adjusted R_2 is considered to be zero. Systematically, if the value = 1 while the value of $R_2 = 0$, so adjusted = 1, whereas if the value = 0, then adjusted = $(1-k)(n-k)$. if $k >$, so adjusted will be negative.

CHAPTER V

CONCLUSION AND SUGGESTION

5.1. Conclusion

Based on the results of research and discussion about the influence of information technology and management accounting systems on managerial performance, the following conclusions can be drawn, such as:

1. Information technology has a significant positive effect on managerial performance at Politeknik Kesehatan Kemenkes RI Medan which means that the better information technology will make improves to the managerial performance.
2. The Management Accounting System has no effect on managerial performance at Politeknik Kesehatan Kemenkes RI Medan. In the significance test there was a significant level of 0.051 so that the management accounting system individually has no effect on managerial performance.
3. Information technology and management accounting systems simultaneously have a significant positive effect on managerial performance at Politeknik Kesehatan Kemenkes RI Medan which means that the higher of information technology application will increase the availability of management accounting system information to present information based on the needs of managers in decision making.

5.2. Suggestion

This research is expected to provide benefits in the development of management accounting practices in educational institutions in Indonesia,

especially in relation to the provision and users of information. However, information with certain characteristics will be very useful if it is used by the right information users. Looking at the increasing of information technology today, information can be obtained easily and quickly.

