The Impact of Business Environment and Organizational Culture on The Implementation of Management Accounting Information System in Some Hotels

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Abstract

This study aims to prove empirically: (1) The influence of the business environment on the implementation of Management Accounting Information System; (2) The influence of organizational culture on the implementation of Management Accounting Information System; and (3) the influence of the implementation of Management Accounting Information System to the quality of Management Accounting Information. The research method used is explanatory research. The target population is the sample in this research which is conducted by taking all the hotels service company in North Sumatra as the unit of analysis (census), whereas the respondents in this research are the hotel managers by using questionnaire instrument as a tool to collect the data. The results of this study indicate that the business environment has no effect on the implementation of Management Accounting Information System. Meanwhile the organizational culture affects the application of management accounting information systems as well as affect the quality of Management Accounting Information.

I. Introduction

The rapidly growing service sector is the hotel industry. The advancement of the hotel industry is greatly encouraged by the development of tourism industry, business, the ease of transportation access and supported by adequate infrastructure. It is also with the growth of the hotels industry in North Sumatra, this is evident from the increasing incessant business people to expand their wings to various regions by building new hotels in the potential areas and in tourism. The development of star hotels number in North Sumatra during the last three years as follows:

Table 1. Number of Star Hotels in North Sumatra

<table>
<thead>
<tr>
<th>Year</th>
<th>Star 1</th>
<th>Star 2</th>
<th>Star 3</th>
<th>Star 4</th>
<th>Star 5</th>
<th>Melati</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>23</td>
<td>26</td>
<td>25</td>
<td>16</td>
<td>6</td>
<td>693</td>
<td>789</td>
</tr>
<tr>
<td>2014</td>
<td>20</td>
<td>31</td>
<td>32</td>
<td>16</td>
<td>7</td>
<td>717</td>
<td>823</td>
</tr>
<tr>
<td>2015</td>
<td>22</td>
<td>31</td>
<td>36</td>
<td>17</td>
<td>7</td>
<td>735</td>
<td>848</td>
</tr>
</tbody>
</table>

Source: BPS of North Sumatera Province, 2016

Based on the Table 1, it shows that the number of hotel developments increases annually in North Sumatra. At first, the growth of the hotels industry was more focused on the development of the tourism sector. This can be seen from the establishment of the hotel resort that was established close to a tourist attraction. This type of hotel provides income in the form of foreign exchange for the country and for the surrounding community in the form of new job opening. But along with the development of science and economy, the
The hotel does not only serve as a supporter of the tourism industry but has shifted into a service-oriented business industry.

In understanding the challenges and opportunities in the hotels industry, the managers in this sector need relevant information for making decisions in order to make various breakthroughs and continuous innovations. Information that brings together financial and non-financial data is generated from management accounting information systems which the development is strongly influenced by the changes in the corporate environment. Some management decisions require information that unifies financial and non-financial data conventionally generated from the accounting information system (AIS) and the management information systems (MIS) that function independently. These two sets of data will then be integrated and reported to the manager. The task of providing integrated information managers will be inefficient and costly when the information support system is not integrated. Also, lack of coordination between financial and non-financial systems can result in poor management decisions.

Competition is getting globalized and the competition is the most important factor to be considered by management in running the company. For each product produced, the problems faced not just how the company can market it, but faced with an industry that will compete closely with similar industries that at all times always make new innovations.

The success or failure of a company is largely influenced by human executors. The same environment that a company perceives as uncertain and complex can be seen as a static environment and easily understood by other companies; even the managers in the same company see the environment in different ways. This distinction can arise based on the background, education, and functional part of the workplace manager. When individuals join an organization, they carry the values and beliefs they already have, and quite often those values and beliefs help the individual succeed in the organization, but they also need to learn how the company does something (Luthon, 2005).

The organizational culture is concerned with how the employees understand the characteristics of an organization, in which the organizational culture seeks to measure how employees view their organization so it is desirable that individuals of different backgrounds or at different levels within the organization will understand organizations with similar meanings (Robbin, 2007). Organizational culture involves the shared expectations, values, and attitudes, affecting individuals, groups, and organizational processes (Ivancevich et al., 2011). Organization is able to operate efficiently when there is a shared value among the employees (Ivancevich et al., 2011).

II. Review of Literature

2.1 Management Accounting Information System

Management accounting is an accounting that is intended to meet the needs of management in conducting the main functions of management, such as planning, supervision, motivation, control of corporate activities, performance appraisal, and as a basis for making decisions about the leading company or part.

Romney and Steinbart (2012) suggests the definition of a system is: "A system is a set of two or more interrelated components that interact to achieve a goal". Next, the Information Systems disclosed by Rainer and Cegielski (2011) are: "An Information System collect, processes, store, analyzes, and disseminates information for a specific purpose". Hansen and Mowen (2007) state that: "The management accounting information system are processes, they are described by activities such as collecting, measuring, storing, analyzing, reporting and managing information".
Based on the above definition, it can be said that management Accounting Information System is the process of identification, measurement, collection, preparation, interpretation, which produces information that helps managers meet organizational goals. The research of Chenhall and Morris (1986); Astuty (2012) reveal the empirical evidence of useful information characteristics according to the managers’ perceptions. The characteristics are broad scope, timelines, aggregation, and integration. The broad scope includes the information on both non-economic and economic issues, estimated future events and environmental aspects. The differences in the decentralization level will result in different information needs of the broad scope. The information of broad scope is useful to achieve better performance. Timeliness shows the speed or time range of the request and the frequency of reporting the desired information. Timely delivery of information will affect the ability of managers to make informed decisions. The timely information will support managers facing the uncertainty that occurs in their working environment (Gordon and Narayanan, 1984).

The aggregated information describes the areas for which the managers are responsible, which is in accordance with their function. In other words, the aggregated information will result the managers to be more accountable to the area of responsibility. With the clear information about the areas of functional responsibility of the managers, it will reduce the likelihood of conflict (Chenhall and Morris, 1986). The existence of aggregated information causes managers to respond more quickly to any problems that exist within the area of accountability and will further increase their responsibilities. This information can also be useful when used to evaluate performance.

The integrated information shows that there is coordination between the sub-unit segments and other sub-units. The integrated information also includes the aspects such as the target or activity requirements calculated from the process of interaction of segments within sub-units as well as between sub-units within the company. The complexity and interconnection or dependence of sub-units one with other sub-units will be reflected in the integrated information (Chenhall and Morris, 1986). The more segments in the sub-unit or the number of sub-units within the company, the more integrated information needed. The integrated information will be useful to the managers when they are faced with decision making activities that affect other sub units.

2.2 Business Environment

The environment has been extensively researched by the researcher in the areas of management accounting, behavior, and the strategy management. This variable adopts contingency theory. The research with contingency approaches especially the one that uses environmental uncertainty has been studied before, including Chong and Ming Chong (1997) found that environmental uncertainty has an effect on the design of management accounting and performance systems.

Hitt et.al (2003) divides the external environment in three major areas, namely the general environment, the industrial environment, and the competitor environment. Companies must be able to adjust to their environments. Adaptation process is a dynamic process. The position of the company over time moves as a result of strategic choice or changes in the external environment. Rapid environmental changes (turbulence) resulted in the high dynamics of the environment which further creates environmental uncertainty.

The general environment is a collection of elements in a wider society that affect an industry and the companies within it. Meanwhile the industrial environment is the elements or groups that are directly affected or influenced by the main operations of the organization. The general environment (Hitt et.al, 2003), also called the Societal
environment (Wheelen and Hunger, 2006), and the remote environment (Pearce and Robinson, 2003) law, economic power, technological power, social and cultural forces. The industrial environment model is derived from the five competing forces model of Porter (1985), namely: (1) Threat of new entrants; (2) Bargaining power of suppliers; (3) Bargaining power of buyers; (4) Threat of substitutes; and (5) Competition among existing companies (Intensity of rivalry).

2.3 Organizational Culture

Organizational culture describes how human resources learn to do something in an organization. Ivancevich et.al, (2011) define the organizational culture as: "Strong and complex aspects of organization that can affect members of the organization." Furthermore Malthis and Jackson (2008) provide the definition: "Organizational culture is the shape of values and beliefs in an organization".

According to Robbins and Judge (2007) the main characteristics of organizational values that are the essence of organizational culture, namely:
1) Innovation and risk taking: The degree to which employees are encouraged to be innovative and take risks
2) Attention to detail: The degree to which employees are expected to exhibit precision, analysis, and attention to detail
3) Outcome orientation: The degree to which management focuses on result or outcomes rather than on the techniques and processes used to achieve those outcome
4) People Orientation: The degree to which management decisions take into consideration the effect of outcomes on people within the organization.
5) Team Orientation: The degree to which work activities are organized around team rather than individuals.
6) Aggressiveness: The degree to which people are aggressive and competitive rather than easygoing
7) Stability: The degree to which organizational activities emphasize maintaining the status quo in contrast to growth.

The organizational culture is generally conducted within the mind frame of the organization members (Smith, 2004). According to Smith, this framework contains basic assumptions and values. Basic assumptions and values are taught to new members as a way to understand, think, feel, behave, and expect others to behave within the organization. Based on the above study it can be said that the organizational culture is the value of values, principles, traditions and ways of working shared by members of the organization and affect the way they act. Organizational communication is satisfaction of organizational member toward several communication aspects occurs within organization. Variable indicator of organizational communication would include organization perspective, personal feedback, organizational integration, direct superior communication, communication climate, horizontal communication, media quality and subordinate communication. (Syakur et al, 2020)
III. Research Methods

3.1 Object of Research

The objects and scope of this research is business environment, organizational culture, implementation of Management Accounting Information System and the quality of Management Accounting Information. Meanwhile the research method used in this research is explanatory research method. Explanatory research method is a research used to obtain description, description systematically, factual and accurate about facts, nature and relationship between variables studied (Sekaran and Bougie, 2010).

3.2 Variable Operation

In summary the operation of variables in this research are presented in Table 2 below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimension</th>
<th>Indicator</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business environment (Duncan, 1972) (X₁)</td>
<td>1. Internal environment</td>
<td>1. Organization personnel 2. Functional Organizations and staffing units 3. Ordinal organizational level</td>
<td>Ordinal</td>
</tr>
<tr>
<td>Organizational Culture (X₂) (Luthon, 2005; Champoux, 2003; Robbins and Judge, 2010)</td>
<td>1) Artifacts (Luthon, 2005; Champoux, 2003)</td>
<td>1. There is Interaction HR in the company by using the same terminology 2. The attitude of mutual respect in interaction 3. The presence of a conducive organizational climate, the presence of adequate physical layout 4. There are strict rules, to interact in Ordinal organization</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>2) Norms (Luthon, 2005)</td>
<td>There are behavior guidelines/standards; guidelines on the work to be done.</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>3) Dominant Value (Luthon, 2005; Champoux, 2003; Robbins and Judge; 2010)</td>
<td>1. Resulting the high quality products, 2. Having a low level of absenteeism, 3. There is high efficiency. 4. The degree where the employees are able to do the job aggressively and compete. Ordinal</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>4) Basic Assumption (Champoux, 2003)</td>
<td>1. There is a good relationship among the individuals, within the organization 2. There is a good relationship with the external environment elements organizations</td>
<td>Ordinal</td>
</tr>
<tr>
<td>Implementation of Management</td>
<td>1) System Quality (DeLone and McLane, 2008)</td>
<td>1. There is ease in using the system 2. There is reliability of system</td>
<td>Ordinal</td>
</tr>
<tr>
<td>Variable</td>
<td>Dimension</td>
<td>Indicator</td>
<td>Scale</td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>accounting information system (Y) (DeLone and McLane, 2008)</td>
<td>2) <em>Service Quality</em> (DeLone and McLane, 2008)</td>
<td>1. The ability of the system to respond the needs 2. System has timeliness in processing</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>3) <em>System Use</em> (DeLone and McLane, 2008)</td>
<td>1. Level of use 2. Destination of use</td>
<td>Ordinal</td>
</tr>
<tr>
<td>Quality of management accounting information (Z) (McLeod, 2007; Morris and Chenhal, 1985)</td>
<td>1) <em>Relevance</em> (McLeod, 2007)</td>
<td>There is consistency of information produced with the required</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>2) <em>Accuracy</em> (McLeod, 2007)</td>
<td>The resulting information reflects the true state of affairs.</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>3) <em>Completeness</em> (McLeod, 2007)</td>
<td>The information provided must be completed</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>4) <em>Timeliness</em> (McLeod, 2007; Morris and Chenhal, 1985)</td>
<td>Information is available or present when such information is required.</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>5) <em>Broadscope</em> (Morris and Chenhal, 1985)</td>
<td>Having information that can estimate future events to come</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>6) <em>Aggregation</em> (Morris and Chenhal, 1985)</td>
<td>The information is brief but completed</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>7) <em>Integration</em> (Morris and Chenhal, 1985)</td>
<td>The information reflects the interrelationships between the sections</td>
<td>Ordinal</td>
</tr>
</tbody>
</table>

### 3.3 Population and Sample

Target population is the sample in this research which is conducted by taking all the 13 star hotels in North Sumatera as a unit of analysis (census). Furthermore, the respondents in this study were the hotel managers by using questionnaires as a tool to collect the data.

### 3.4 Testing Research Instruments

Before the questionnaires were distributed to the hotel companies in North Sumatera, the research instrument was conducted first through validity testing and reliability test. Related to this activity the researcher conducted some activities, among others:

a. Trials by distributing questionnaires to 30 hotel companies in Medan.

b. After the results of the questionnaire collected data from each respondent, then the research instrument was tested through testing the validity and reliability test data.

Testing the validity of each instrument is freely by correlating each item of the question. Minimum requirement to meet whether each question is valid or invalid by comparing \( r_{\text{cor}} \) to \( r_{\text{table}} = 0.361 \) (see table r for \( N = 30 \)), where \( r_{\text{cor}} > r_{\text{table}} \). Based on the results of the questionnaire then all items of the instrument from question 1 to 8 to explain the business environment variables, questions no 9 up to 25 for organizational culture variables, questions 26 to 31 to explain the variables of management accounting information system, question no 32 to 42 to explain management accounting information quality variable declared valid and can be used, where overall \( r_{\text{count}} \) instrument observation > \( r_{\text{table}} \).
Furthermore the reliability test is used to see if the instrument used in this study is reliable, or in accordance with the standard set so that it is normal (If alpha > 0.50). Based on the result of instrument reliability test, the result is obtained as follows: for business environment variables seen Cronbach's Alpha value of 0.840, organizational culture variable has Cronbach's Alpha value of 0.966, the variable of management accounting information system has Cronbach's Alpha value of 0.672, and quality variable management accounting information has Cronbach's Alpha value of 0.943, so the instrument of business environment variable, organizational culture, application of management accounting information system, and the quality of management accounting information is declared reliable.

3.5 Analysis and Hypothesis Testing

This research was conducted with two types of analysis to obtain the results in accordance with the objectives of the study, namely: (1) Descriptive analysis to explain the characteristics of variables studied to help problem solving to obtain operational advice, (2) Analysis through structural equation modeling (Structural Equating Model - SEM) in order to answer the problem formulation and answer the hypothesis. Yamin and Kurniawan (2009) mention that SEM has the ability to estimate the relationships of multiple relationships formed in the structural model, able to describe the relationship pattern between unobserved and manifest variables (manifest variables or indicator variables) and able to measure the magnitude of direct influence, direct, and total influence between latent constructs.

IV. Results and Discussion

To answer the problem of research related to the influence of business environment and organizational culture on the application of management accounting information system and the influence of application of management accounting information system and the quality of management accounting information in this study used Structural Equation Modeling (SEM). The unit of analysis in this study is a star hotel scattered in northern Sumatra totaling 113 hotels. The results of the full model line diagram hypothesized are presented in Figure 1.

![Figure 1. Research Framework](source: AMOS Data Processing Results (2017))
Furthermore the results of the data analysis output are presented in Table 3 as follows:

**Table 3. Result of Output Data Analysis Regression Weights: (Group number1 - Default model)**

<table>
<thead>
<tr>
<th>Relationship between Variables</th>
<th>Estimate</th>
<th>P</th>
<th>Results</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of SIAM</td>
<td>&lt;---</td>
<td>Business environment</td>
<td>.001</td>
<td>.982</td>
</tr>
<tr>
<td>Implementation of SIAM</td>
<td>&lt;---</td>
<td>Culture</td>
<td>.994</td>
<td>.000</td>
</tr>
<tr>
<td>Quality of SIAM</td>
<td>&lt;---</td>
<td>Implementation of SIAM</td>
<td>.417</td>
<td>.013</td>
</tr>
</tbody>
</table>

Source: Results Data Processing (2017)

Based on the results of the analysis, it shows that the business environment does not significantly influence the application of Management Accounting Information System. The result of the analysis in the output table shows the significance value obtained is $p (0.982) > p$ value 0.05 which indicated that business environment does not give real and strong influence to the implementation of Management Accounting Information System. The value of influence given also seen from the estimate output result that is 0.001 which means the business environment has small contribution to implementation of Management Accounting Information System.

The results indicate that the business environment is not one of the factors that can play a role in determining the application of Management Accounting Information Systems. This is contrary to the opinion expressed by Ajibolade et al. (2010) and Astuty (2012) who state that environmental factors have an effect on the implementation and design of Management Accounting Information System. It is also expressed by Vijian (2005) that the implementation quality of management accounting emphasis on the ability of the organization to adapt to the changes in both internal and external corporate environment. The same is expressed Khandwalla (1972) in Vijian (2005) that the environmental uncertainty affect the Management Accounting Information System.

Furthermore, organizational culture has a positive effect significantly to the implementation of management accounting information system. The result of the analysis in the output table shows the significance value obtained is $p (0.000) > p$ value (0.05) which indicates that culture gives very real and very strong influence to the application of Management Accounting Information System. The value of influence given also seen from estimate output result that is 0.994) which means the organizational culture have big contribution to applying of Management Accounting Information System that is 99.40%.

Organizational culture is known as the variable that gives the strongest and most significant influence to the successful implementation of Management Accounting Information System. Cultural contribution is also the most important role in the implementation of Management Accounting Information Systems than the business environment. Therefore, organizational culture is the variable that has the most impact on
the successful implementation of Management Accounting Information System. Good and healthy organizational culture will have a very positive effect on the successful implementation of Management Accounting Information System, on the contrary when the organizational culture is not good and negative it will degrade the performance of application of Management Accounting Information System of a company.

These results indicate that organizational culture strengthens the implementation of Management Accounting Information Systems to hotel companies in North Sumatra. Organizational culture involves expectations, values, and attitudes together, it affects individuals, groups, and organizational processes with an organizational ability to operate efficiently when there is shared value among its employees (Pasaribu, 2015) The stronger organizational culture in an organization support the implementation of Management Accounting Information System. The organizational culture of the hotels company in North Sumatra supports the implementation of Management Accounting Information Systems, in which the Management Accounting Information System as a tool to provide coordination, control and achievement of business process efficiency in hotels companies. The results are in accordance with the opinion expressed by Granlund and Lukka in Drury (2005) who state that the differences in the nation and corporate culture can result in different management accounting practices across the country. This was supported by the statement of Wagdy Moustafa Abdallah (2001) that culture influences the selection of accounting system and practice. Similarly, according to Radebought and Gray in Mourik and C. Van (1993) which states Cultural values affect the development of national accounting system.

The implementation of Management Accounting Information System has a positive effect significantly on the quality of Management Accounting Information. The output of the analysis shows the significance value of p (0.013) < p (0.05). These results indicate that the application of Management Accounting Information System has a strong and significant impact on the quality of management accounting information. Implementation of Management Accounting Information System properly and accurately it will provide the quality of management accounting information better and more precisely, on the contrary if the implementation of Management Accounting Information System is done badly and improperly will decrease the quality of management accounting information.

The contribution of this Management Accounting Information System to the quality of Management Accounting Information can be seen on the estimate value in the output table that is 0.417. This means that the application of Management Accounting Information System gives influence or contribution to the quality of Management Accounting Information System of 41.70%. These results indicate that the quality of information refers to the quality of output generated by the information system, thus the better implementation of Management Accounting Information Systems can lead to the achievement of the quality of Management Accounting Information optimally.

V. Conclusion

The business environment does not affect the implementation of management accounting information system. Organizational culture affects the implementation of management accounting information systems. The implementation of management accounting information system affects the quality of management accounting information.
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