

CHAPTER I

INTRODUCTION

I.1 Background

Information technology is a set of tools which can help us to work with information and to do the tasks which is related to information processing (Haag & Keen, 1996). Information technology is always evolving according to the needs and circumstances of the time. IT development is involving the development in IT infrastructure, such as hardware, software, storage, and communication technology (Laudon and Laudon, 2006). This IT development gives influence in all aspects including business, health, education, government, etc.

The role of IT in business is as technology which is pointed on information system arrangement by using computer. IT can provide information for business requirements rapidly, timely, relevantly, and accurately (Wilkinson et. al, 1997). According to McFarlan et. al, (1983), application of IT for the company plays an important role and it can become the center of business strategy to gain competitive advantage.

IT gives an easy in providing information in a business. Information has to be available when it is needed, therefore company needs a system which can provide information whenever it is needed, which is called as information system. As we know, information system is a system that has function in providing information. The role of IT in information system is as a tool in developing that system. As well as Accounting Information System (AIS) in a company. IT is very useful in developing AIS in a company.

Accounting Information System (AIS) as one of information system in business which provides information in financial (e.g., net profit margin) and non-financial reporting (e.g., employee absenteeism rate) that are useful for managers in making decision (Maharsi, 2000; Boulianne, 2007). It can assist manager in identifying a problem, solving problem, and evaluating the performance, and also provide information for planning, controlling, evaluating, and continuously repairing. Organization invests in designing AIS for the fluency of business and to achieve higher performance, because AIS can help business to manage problems such as costing, expenditure and cash flow, by providing information to support monitoring and control (Ismail and King, 2005). It was designed with purpose to support the business mission, objective, and plans (Reich & Benbasat, 1996, 2000).

Additionally, Wilkinson et. al, (1997) has described business firms as system. They stated that a business firm exhibits several systems characteristics (objectives, environment, constraint, etc), and both the environment of the business firm and the firms characteristics contribute to the specific AIS designed to meet the needs of the firm. They also argued that environmental differences are very significant to the firm as their organizational structures and operations. Therefore there is a need to align the strategies and resource level to cope with these differences. And also, firm need to be responsive to changing conditions in highly competitive and dynamic industrial situations.

Organization implements strategy to achieve its missions, objectives, and plans. Strategy helps organizations in deciding what they will do and where is the

position in the industry. Organizations have to choose strategy that is appropriate with its operation environment. This strategy will help management to identify the information needed according to its strategy (Bandi, 2006), strategy will help in identifying the AIS characteristics that is needed. AIS was designed to support business activities in organization in implementing its strategy. Different strategy needs different AIS design. For example, when an organization implementing low cost strategy, they need to design AIS that will support this strategy. They need to design AIS that will monitor and control the activities in producing product with lower cost. Strategies in order to get competitive advantage need to be supported by appropriate organizational factors, including effective AIS (Ajibolade, et.al., 2010).

Besides that, organizational structure is also give effect in achieving an organization goal. We can define an organizational structure as the way to organize people and job so the activities can run well and organization can meet the goal. Robbins (2003) stated that an organization structure is a means to help management achieve its objective. Because objectives are derived from organization's strategy, therefore strategy and structure should be closely linked.

Furthermore, there is no strategy is universally superior, irrespective of the environmental or organizational context (Venkatraman, 1989). The strategy no longer great if there is no fit between strategy and organizational context (including structure and AIS). If an organization develop an AIS that is not appropriate with the strategy, so the result can not be maximized and wasting cost. It should be understood when implementing the AIS; it should be assessed for

compliance with business strategy. Inappropriate design and implementation of information systems has been very costly to firms in terms of time and money, suggesting the need for a careful examination of the fit between strategy and AIS design (Boulianne, 2007). Reich & Benbasat, (1996, 2000) argued that strategic alignment refers to the degree to which the IT mission, objective and plans support and are supported by the business mission, objective and plans.

When implementing IT in organization we also need an appropriate organizational structure to make use of IT efficiently (Peyman et. al, 2011), conversely we also need an appropriate IT in a certain organizational structure. We need to create structures that can process information quickly and correctly to get the feedback in order to achieve the organization objectives. For example, Robbins (2003) has defined centralization and decentralization as the type of organizational structure that lie on decision making authority. In centralized structure the decision making is concentrate at single point, while in decentralized structure more people can provide input in making decision. Both of these structures need different AIS design to provide information in order to make decision.

Thus, there is an important role of fit between business strategy, organizational structure, and AIS design in achieving organizational goal and best performance. Although an organization has excellent strategy, organizational structure, and AIS design, when there is no fit between them so it will be come useless. It is because the most important determinant of performance is the fit between its contextual variables (Jermias and Lindawati, 2004). That is why the

establishment of fit between contextual variables (including AIS, business strategy, and organizational structure) has been one of the key concerns of information system managers (Reich and Benbasat, 1996). Therefore, writer is interested in doing research of measuring the fit between strategy, organizational structure, and AIS design of manufacturing companies in West Sumatera. By doing this research, we hopefully can see how is the fit in different combination of AIS, business strategy, and organizational structure.

Actually there are previous researches that examine about the fit between AIS design, business strategy, and organizational structure in related to the performance. Those previous researches tried to explain how accounting systems affected by fit between contextual variables (Jermias and Lindawati, 2004). Abernethy and Guthrie (1994) had research that analyzes fit between strategy and management information systems design. They found that broad scope information has more positive function to performance for prospector firms rather than defender firms. Abernethy and Guthrie suggested that the finding of their research indicates that effectiveness of business unit is depends on fit between AIS design and strategy.

And then Gul and Chia (1994) found that decentralization as type of organizational structure and MAS information characteristics of broad scope and aggregation were associated with higher managerial performance under conditions of high PEU (Perceived Environmental Uncertainty). Naranjo-Gil, (2004) has conducted research that examined the fit between the prospector strategic-type of Miles and Snow (1978) with sophisticated AIS. The result of the research found

that sophisticated AIS are positively related to prospector strategy, while regarding the effect on performance sophisticated AIS affect performance indirectly, through a prospector strategy.

Those previous researches prove that there is a need for fit between AIS and contextual variables in organization. The fit between them will affect the performance of the organization. In other words, accountants need to adopt a wider vision in designing and implementing AIS (Otley, 1980).

In this research, we will use the theory of competitive advantage by Porter (1985). We use Porter typology because competitive advantage is the strategy that is based on market orientation. Organizations implement this strategy to determine their position in the market. It is very closely linked to manufacturing industry where the type strategy of the organization can be easily classified by using competitive advantage. This competitive advantage is a competitive strategy which provided by Porter to gain competitive advantage over competitors by offering greater value, by lower prices or by providing greater benefits and service that justifies higher prices. Porter distinguish the strategy by differentiate between Low Cost (Cost Leadership), Differentiation, and Focus.

We also use centralized and decentralized structures in analyzing the organizational structure. As stated by Fontaine (2007),

“Organizational structure is crucial component of the overall business strategy, just as important as planning, leading, and controlling an organization” (Fontaine, 2007, p. 3).

Fontaine also stated that organizational structure will help in answering the

questions “who does what”, “who reports to whom”, and “how to coordinate the people and duties”. By differentiate the organizational structure into centralized and decentralized we can see where the decision making and the authority within organization. As discussed before, centralization is type of organizational structure where the authority lies on single point, while decentralization is the type of organizational structure where the authorities are divided into sub units. Different type of authority of decision making cause different needs of information as it depends on the strategy. Soobaroeyen and Poorundersing (2008) stated that responsibilities have to be appropriate with “information flows and facilities to ensure appropriate management action and decision making” (p. 18). In other words, the differentiation of responsibilities point in centralization and decentralization need different information.

And then, we do the study at manufacturing companies in West Sumatera. As we know, manufacturing company is the company which performs its business activities in converting raw material into finished goods. In general, manufacture is a complex activity which involved raw material and product designing, purchasing, marketing, machinery and equipment, manufacturing, sales, process designing, production control, support service and customer service. Manufacturing companies are closely linked to Porter strategy where the process and how they operate is based on the type of strategy. Low-cost strategy operates differently with differentiation. Moreover, manufacturing companies can easily differentiate by using Porter’s strategy because it is focus on market orientation.

In manufacturing companies, they use AIS which provide information of

all manufacturing activities. This information came from the data of manufacturing operations and other data related manufacturing and its environment. It is used to support management in solving problem related to company's product. AIS is used to support overall activities which is related to planning and controlling process of producing product. In other words, AIS in manufacturing companies process data become useful information for management that will help in making decision in planning, leading, and controlling activities.

I.2 Problem Definition

As explain before, we will analyze the fit between AIS, business strategy, and organizational structure by measuring them. Therefore based on the background above, the issue can be formulated as follows:

“How is the fit between AIS, business strategy, and organizational structure?”

I.3 Research Questions

Based on previous problem definition, we elaborate the research questions as follows:

1. How is the fit between low-cost strategy, centralized structure, and the AIS characteristics of scope, timeline, aggregated, and integration?

2. How is the fit between low-cost strategy, decentralized structure, and the AIS characteristics of scope, timeline, aggregated, and integration?
3. How is the fit between differentiation strategy, centralized structure, and the AIS characteristics of scope, timeline, aggregated, and integration?
4. How is the fit between differentiation strategy, decentralized structure, and the AIS characteristics of scope, timeline, aggregated, and integration?

I.4 Research Objective

The objective of this research is to explore the fit between AIS, business strategy, and organizational structure of manufacturing companies in West Sumatera. We can describe the objectives of the research in detail, as follows:

1. To explore the fit between low-cost strategy, centralized structure, and the AIS characteristics of scope, timeline, aggregated, and integration.
2. To explore the fit between low-cost strategy, decentralized structure, and the AIS characteristics of scope, timeline, aggregated, and integration.
3. To explore the fit between differentiation strategy, centralized structure, and the AIS characteristics of scope, timeline, aggregated, and integration

4. To explore the fit between differentiation strategy, decentralized structure, and the AIS characteristics of scope, timeline, aggregated, and integration.

I.5 Research Benefit

1. For the writer, in addition to knowledge and information about the fit of AIS design, organizational structure, and business strategy in related to business performance.
2. For academics, this research is expected can be literature for the next researcher about contingency fit theory in business.
3. For related entity, this research results are expected to contribute to the related entity, particularly in achieving best performance by taking into account the fit between AIS design, business strategy, and organizational structure.

I.6 Previous Research

There are some previous studies that are concerned on fit between contextual variables. Those studies focused on contingency model where we have to define specific aspects which are match with certain circumstances (Otley 1980). This contingency fit model also has been used in analysis of management accounting information system. There are also some researchers who have

research about accounting information system and the contextual variables. These researches are done considering the problems of designing accounting information systems in accordance to the specific needs of the organization (Gordon and Miller, 1976). Here are some previous researches that are concerned on fit between contextual variables.

Table 1.1
Previous Researches

Researcher	Variables	Results
Gordon and Narayanan (1984)	Management Accounting System (MAS), Perceived Environmental Uncertainty (PEU), Organizational Structure	The result of the research shows that there is positive relationship between PEU to MAS as well as PEU and MAS to organizational structure.
Chenhall and Morris (1986)	PEU, Interdependence, Decentralization	Decentralization affect aggregate and integrate, PEU affect broad scope and timeliness, interdependence affect broad scope, aggregate, and integrate.
Abertnethy and Guthrie (1994)	Broad scope, Organizational Performance, Business Strategy	Broad scope positively affects the organizational performance that has prospector strategy rather than defender.
Gul and Chia (1994)	MAS, PEU, Decentralization, Managerial Performance	The combination of both variables interacting with MAS leads to higher performance
Chong and Chong (1997)	PEU, Strategy, MAS, Performance	Strategy and PEU are significant antecedent (positive) variables for MAS scope as well have indirect linkages to business unit performance through MAS

(Continued) Table 1.1

Previous Researches

Naranjo-Gil (2004)	AIS, Strategy, Performance	Sophisticated AIS affect performance indirectly through prospector strategy
Boulianne (2007)	Business Strategy, AIS Scope, Business Unit Performance	Results suggest that for prospector, and to a lesser extent for defender, broad scope is associated with higher performance.
Soobaroyen and Poorundersing (2008)	Task Uncertainty, MAS, Decentralization, Managerial Performance	Decentralization is confirmed as an important variable in MAS design which in turn leads to better performance.

Gordon and Narayanan (1984) was doing research in investigating management accounting systems, perceived environmental uncertainty, and organization structure in 34 companies in the major cities of the states of Kansas and Missouri. They found that the decision makers in greater environmental uncertainty tend to find external, non-financial and supporting information in addition to other types of information. It means that decision makers need wider information to face high environmental uncertainty.

On the other side, Chenhall and Morris also doing research about impact of structure, environment, and interdependence on the perceived usefulness of management accounting systems of 36 manufacturing companies in Sydney. The result of the research indicates that the organizational interdependence is important when designing MAS. In addition, decentralization affects aggregate and integrate, PEU affects broad scope and timeliness, interdependence affects

broad scope, aggregate, and integrate. While Abernethy and Guthrie (1994) analyze the relationship between strategy and management information systems design. They found that broad scope information has more positive function to performance for prospector firms rather than defender firms.

Gul and Chia (1994) investigated the interaction effects of perceived environmental uncertainty (PEU), decentralization, and management accounting systems (MAS) design on managerial performance. The result shows that decentralization and MAS information characteristics of broad scope and aggregation were associated with higher managerial performance under conditions of high PEU. Chong and Chong (1997) also doing research about the relationship among PEU, MAS, and performance, in addition strategy is also included in this research. Chong and Chong examined the role of MAS design on the relationship between strategic business unit (SBU) strategy and SBU performance, and PEU on SBU performance. The result indicates that SBU strategy and PEU are important antecedents of MAS design, and broad scope MAS information is an important antecedent of SBU performance.

And then, Naranjo-Gil (2004) examined the effect of accounting information design on the performance of organization pursuing different strategic priorities in 218 hospitals in Spain. The result indicates that there is indirect effect of sophisticated accounting information system on performance through prospector strategy. Boulianne (2007) also doing same research that re-examined the relationship between strategic choice, AIS design, and business unit performance. The results suggest that for prospector, and to a lesser extent for

defender, broad scope is associated with higher performance. And Soobaroyen and Poorundersing (2008) examined the availability and effectiveness of MAS for functional managers in Mauritius. They analyzed the relationship between task uncertainty, MAS, decentralization, and managerial performance. The result shows that decentralization is confirmed as an important variable in MAS design which in turn leads to better performance.