Supporting factors of IT business alignment at Indonesian IT companies

Clara Hetty Primasari¹*, Djoko Budiyanto Setyohadi²
¹,²Universitas Atma Jaya Yogyakarta, Indonesia
¹clara.hetty@uajy.ac.id*; ²djoko.budiyanto@uajy.ac.id
*Corresponding author: Clara Hetty Primasari

Abstract
Aligning IT with business strategies is the focus of attention of many IT and business leaders and managers. Many previous researchers have examined how to obtain or achieve this alignment. From that research we know, the Strategic Alignment Model, Integrated Architecture Framework, Luftman's Alignment Model, Reich & Benbasat Model, and other alignment models. However, most of the above studies were carried out in countries in the Americas. The difference in geographical location, culture, population and countries where the research is carried out influences on how companies in these countries achieve alignment. This study aims to determine the supporting factors of IT Business alignment of companies in Indonesia, especially in Yogyakarta. The study is based on the SAM model introduced by Henderson and Venkatraman and conducted with in-depth interviews with three companies in Yogyakarta followed by an analysis of the results of the interview. From this study, obtained factors supporting the alignment of IT and business from companies, among others: Products support Distinctive Competencies, Manager support supports Distinctive Competencies, Manager's softskill supports Distinctive Competencies, Vision and Mission statements support Business Scope, Partnership supports Business Scope, and Partnership supports the Organizational Process.

Keywords: factors; IT business alignment; SAM; strategic alignment

INTRODUCTION

Information Technology plays a strategic role and becomes very important for a company's business strategy (Alaceva & Rusu, 2015). Aligning IT with business strategies is a focus of attention of many IT leaders or managers. Various fields and needs also need IT and business alignment. IT and business alignment are needed in the field of Education (Seman & Salim, 2013), in the process of mergers and acquisitions of a company (Baker & Niederman, 2014), alignment between software systems and business processes (Aversano, Grasso, & Tortorella, 2016), and many more. The alignment of Information Technology and Business or often referred to as IT / Business Alignment has been proven by many researchers to help an institution or organization to assist organizations in various ways such as maximizing IT investment (Hu & Huang, 2005), maximizing the use of IT (Beimborn, Wagner, Franke, & Weitzel, 2007), and helping institutions to get to know the value of their IT (Tallon & Kraemer, 2007).

The lack of alignment between IT and business strategy is the main reason why an institution or company fails to realize the main potential of the IT investment they
make. Conversely, institutions, or companies that align IT with their business strategies, have excellent overall business performance (Hu & Huang, 2006). The absence of alignment also causes a loss of opportunity to gain competitive advantage, increased expenditure so that it can add to the adverse impact on IT investment (Velcu, 2010).

Recognizing the importance of aligning IT with these business strategies, many researchers have examined how to obtain or achieve this alignment. There are IT alignment models with well-known businesses such as the Strategic Alignment Model (SAM) proposed by Henderson and Venkatraman, Integrated Architecture Framework (IAF), Luftman's Alignment Model (LAM) introduced by Luftman, Reich & Benbasat Model (RBM), Sabherwal and Chan Alignment Model (SCAM), and Hu Huang Alignment Model (HHAM) (Kusrini, Pharmasetiawan, & Risca, 2017).

Henderson and Venkatraman, who introduced SAM, argued that the strategic alignment between IT and business could be achieved through integration between the IT and Business domains. The first integration is called strategic integration, which is the relationship between business strategy and IT strategy that reflects external components. This relates to the ability of IT functionality to support business strategies. The second integration is operational integration, which is the integration between infrastructure and organizational processes with IS infrastructure and processes. There are four perspectives of harmony in this model. First, business strategy is a trigger for organizational infrastructure and IS infrastructure design. Second, assessment of the implementation of business strategies through IT strategies and articulation of infrastructure and IS processes. Third, the exploitation of IT capabilities to impact products and services (business scope), influence key attributes of strategy (distinctive competencies), and develop new forms of relationships (business governance). Fourth, the need for an understanding of the external dimensions of IT strategy with IT infrastructure and processes (Chumo, 2016). Luftman suggested LAM with factors supporting alignment, such as communication, competency value, governance, partnership, scope and architecture, and skills (Belfo & Sousa, 2012). Reich and Benbasat analyze the social dimension of harmony and suggest the factors supporting harmony, such as Shared Domain Knowledge, IT implementation success, communication between IS and business executives, and connection between IS and business planning processes (Reich & Benbasat, 2000). Sabherwal and Chan argued that harmony affects perceptions of business performance in several organizations. Alignment seems to affect overall business success in the Prospector and Analyzer aspects but not in the Defender aspect (Sabherwal & Chan, 2001).

The majority of the above studies were conducted in countries in the Americas. Henderson and Venkatraman used sample companies such as Eastman Kodak, IBM, Baxter Healthcare, Procter & Gamble, and Walmart in America (Henderson & Venkatraman, 1999). Luftman used 25 companies from US fortune 500 companies (Luftman, 2003), Reich and Benbasat used a sample from the Canadian insurance company (Reich & Benbasat, 2000), Sabherwal and Chan used a sample from the North American financial services and manufacturing company (Sabherwal & Chan, 2001).

Differences in geographical location, culture, population, and countries where the research is carried out may or may not influence on how companies in these countries achieve harmony. IT problems faced by a country are likely to be influenced by economic structure, national culture, political/legal environment, and technological status (Chen,
Besides, in any research area, different participants can have diverse opinions (Mason, 2010). Cultural aspects have an impact on various assessment variables of IT Business Alignment maturity (A. J. Silvius, 2008). Countries with different cultures may obtain different alignment yields. Silvius developed a conceptual mapping of the effects of the Hofstede Cultural Dimension (A. J. Silvius, 2008) on the maturity of Business and IT Alignment and used it to measure the alignment maturity of two countries, namely Belgium and Netherlands (A. J. G. Silvius, De Haes, & Van Grembergen, 2009). Obtained differences in scores on the maturity aspects of governance and the maturity of skills that are influenced by local culture. Also, Chen, who in his research measured the harmony of companies in China, revealed that SI management from developed countries might not be easy to implement in China, so he adjusted the measurement instruments made by Sledgianowski et al. with cultural conditions in China (Chen, 2010).

Indonesia is a country rich in culture. Based on data from the Indonesian Ministry of Home Affairs published in the Indonesian Statistics Book, Indonesia has 16,506 islands, 1340 ethnic groups, and 1331 regional languages. In addition, Indonesia is a developing country, and the ICT sector is the trigger for Indonesia to be the 16th highest GDP winner over equivalent neighboring countries. According to the Digital Market Overview Report, one of the industry drivers in Indonesia are startups and small and medium scale companies that support digital adoption (Frost & Sullivan, 2019).

This diverse Indonesian culture influences the strategic alignment of companies in Indonesia. This was proven in a study conducted by Riandari, who concluded that the maturity of Business and IT Alignment was more influenced by Indonesian culture itself (Riandari & Pharmasetiawan, 2017). It is suspected that there is a possibility of change in the alignment model if we also see the influence of Indonesian culture that is so diverse on economic activity in companies in Indonesia.

There is still very little research related to alignment models in Indonesia, especially in Indonesia. This study aims to determine the supporting factors of the alignment of IT companies in Indonesia, especially in Yogyakarta. This study uses the basic alignment of the Strategic Alignment Model (SAM), which is the basis for investigating and extracting information from sources.

**RESEARCH METHODS**

This research used a qualitative approach. A qualitative approach was adopted because this research requires a detailed understanding of the issues discussed (Jasimuddin, Klein, & Connell, 2005). Samples were selected using convenience sampling method. There were three companies in Yogyakarta that were the object of research. Previously five companies were contacted to be the resource persons for this research, but only three were willing to be interviewed. Company A is a company specializing in providing ERP software solutions for medium to large scale businesses in the Manufacture, Distribution and Trade Industries, and Services. Company B is a provider of Training, Consultation, Certification, IT Solutions for institutions, or individuals who need help in the IT field. Company C is the IT Vendor of the largest motorcycle dealer in Kalimantan. The parties interviewed in this study were IT and business managers from each company.

Data collection was conducted from April to September 2019. Data were collected by conducting in-depth interviews with IT / Business managers from the three companies.
Interviews were conducted 2-3 times for each informant, with an average duration of two hours. Data collection was stopped when the data is saturated (saturated), or no new information is obtained (Indarti & Kusuma, 2016). All interviews were recorded and then transcribed. The validity of the interview depends on the willingness of the interviewees to openly express their views and opinions, and the interviewer's ability to understand it properly (Wang & Kess, 2006). In these cases, the interviewees have a long experience of the alignment of IT and business within the company.

The theory used as a basis for gathering information from sources was the Strategic Alignment Model from Henderson and Venkatraman. Before conducting the interview, the keywords were identified in each of the variables in the above theory. These keywords were used as a guide in conducting interviews. Interviews are conducted without using a list of questions but by discussing each keyword that is in each variable. The questions raised are open-ended. Resource persons are free to say anything in accordance with the keywords that had been identified previously. The results of the interviews that had been transcribed are then made into coding and then analyzed the pattern.

RESULTS AND DISCUSSION

From in-depth interviews with informants and the results of the pattern analysis of the coding it was found that there was a change from the alignment model formulated by Henderson and Venkatraman.

1. Products Support Distinctive Competencies

1.1. The products offered have distinctive features that are in line with customer needs. From the three companies we interviewed we concluded that the differentiating competence between these companies and other companies is on the features offered by the applications they make. They make applications that are more fully featured than similar competitors. This feature is also according to user needs.

“Company C system features are complete, already includes more complete features than other main dealers. Another new main dealer develops features for motorbike unit sales, but does not yet include spare parts and service.” – Company C

The completeness and suitability of this feature support differentiating competencies with similar competitors because product features that are in harmony with customer needs strengthen their popularity in the market and will have the opportunity to produce success at the next product release in the future (Tuarob & Tucker, 2015). Distinctive features of a product are the main prerequisites for a company's business and are usually not explicitly requested by the customer. The feature is also considered good if it can be implemented properly and is free from errors (Berger et al., 2015).

1.2. Although the product offered may be similar to the product offered by competitors, the company applies product differentiation. The advantages shown in the product features will be more complete if producers can differentiate their products in terms of appearance, advertising, consumer perception, or other things that can be differentiated. The buyer will be interested in buying the product even though the quality level is not higher than the undifferentiated product (Zaichkowsky, 2010). This is inline with what is expressed by one company that emphasizes that what they offer is the same
as its competitors. They offer same IT training services. However, this company emphasizes the delivery and different experiences that will be felt by customers who use their services.

“I think each company is unique. the target is different. Same in the IT field but different segments. Now I ask how is the experience, what distinguishes the experience there and here.”- Company B

1.3. Product Innovation matches and even outperforms competitors. Innovations are made so that the products offered are not inferior to competitors and even match those of popular products from abroad. With their innovations, many customers think that their products are foreign-made products.

“People think Company A has a license from foreign products and then only sells it. But apparently this is a homemade product. Because it's really complex.” – Company A

If there is an opportunity to carry out further research on the product currently being worked on, it will be welcomed even though it may not directly generate economic benefits. They believe that in the future, this research will be useful if one day encounters similar problems.

"... So what has been done does not necessarily lead to a contract. It doesn't matter because they feel they can get a free lab. Company A even sees this as profit. When later a similar project can be used as a reference. “– Company A

Product innovation is considered as one of the most important determinants of sustainable competitive advantage (De Massis, Frattini, Pizzurno, & Cassia, 2015).

2. Manager support supports distinctive competencies

2.1. Top Management's support for employee development will form an atmosphere or culture of learning new things in order to do their jobs and in the future stimulate innovation that supports the organization's unique competencies. The success of an organization depends on the knowledge, skills, and abilities of employees, mainly when they help build a set of core competencies that distinguish an organization from its competitors. Employee talent is valuable, rare, difficult to imitate, and organized. An organization can make an organization achieve a competitive advantage (Kalyani & Prakashan Sahoo, 2011). This can be achieved if management cares about employee development. In a study conducted by Wu [37], the success of a startup depends on the ability to develop its employees, and the mechanism for employee development.

“For HR development for all employees, there is training. There are two models, namely pre-determined training and based on request training.”- Company B

“We have internal training every day. The atmosphere is daily learning and brainstorming.” – Company A

Top management support positively influences the formation of technology skills, technology-specific competencies, and organizational learning; Typical technological competencies and organizational learning positively influence organizational performance, directly and indirectly through organizational innovation (Bolivar-Ramos, García-Morales, & García-Sánchez, 2012).
3. Manager’s softskill support distinctive competencies

3.1. Manager’s softskill affects project success. In addition to support for employee development, differentiating competencies from companies is also one of them determined by soft skills owned by managers. Soft skills include leadership, communication skills at various levels, verbal and written skills, attitudes, and abilities to deal with ambiguity and change (Stevenson & Starkweather, 2010). Muller and Turner, in their research, to identify the leadership competency profile of successful project managers in their projects, shows the results that successful project managers have IQ on one aspect, namely critical thinking, and EQ on three aspects, including influence, motivation and awareness (Müller & Turner, 2010). In the three companies interviewed, managers tried to be close and communicate both formally and informally with their subordinates. This shows that the soft skills of a manager also determine whether a company will have differentiating competencies with other companies or not.

4. Product pricing supports distinctive competencies

4.1. Customer-oriented product pricing strategy (Value-Based Pricing) allows companies to position how their products want to be seen by customers. The three companies have their own assessment of the products they offer. They believe that their products, with the features offered and the services they provide, are of high quality and are no less competitive with the products offered by competitors. They do the Value-Based Pricing strategy. Different views on how buyers perceive the value of their products make the prices different. As a result, Company B charges high prices for the applications and services offered, because it already feels that what it offers is definitely suitable for users. In addition, Company B also already has a middle to upper market target, so they dare to set high prices.

“Our class tends to be more expensive. Even our lower prices are still expensive. We are confident with that price because there aren’t many Authorized Learning Partners in Jogja” – Company B

In contrast to Company B, Company A and C set a lower price than competitors for what is offered but while maintaining the quality of their products.

“Proud of domestic products with functionality that is not inferior to foreign products. There is a marketing strategy that products that exist now are more expensive. We are cheaper with almost the same functionality. Responsive service. free for each user. while our competitors, there are additional costs for adding users.” – Company B

Differences in terms of how buyers perceive the value of the products offered, support the differentiating competencies of each company. This difference will cause price differentiation, which can be cheaper or higher, depending on how the company views how buyers will see the value of the products offered. If it is more expensive than competitors, the company will give customers an apparent reason to prefer their products to other less differentiated products (Wen-Cheng, Chien-Hung, & Ying-Chien, 2011).

The price associated with the differentiation strategy must be an essential component of every business plan. Prices help companies improve and take advantage of competitive advantages. According to (Stern, 1989), the right pricing strategy can increase revenue realization without sacrificing volume, changing customer buying
behavior for business profits, making desired responses in a competitive environment, increasing profitability and long-term business value.

Instead of price based on company costs, a buyer-oriented price value focus makes it suitable for use in this changing environment where customers are more demanding in terms of price, value, and quality. If used properly, this can provide the potential strength of price as an essential means of achieving and maintaining competitive advantage (Thompson & Coe, 1997). In addition, Hinterhuber in (Hinterhuber & Liozu, 2014) argued that innovation in pricing is a source of competitive advantage aimed at increasing customer satisfaction and company profitability. Companies that only place a strong emphasis on product innovation without regard to price innovation will lose a significant opportunity to capture value.


5.1. The Vision and Mission Statement states the company's positioning. The three companies already have the vision and mission that they put on the company's web. The three of them have targeted to become a company that is within the scope of a specific national minimum. Only one company has broader achievement targets, namely in the scope of Southeast Asia.

“Our vision is to become a trusted strategic partner in ERP Software solutions in Southeast Asia” – Company A

Vision and Mission statements are discussed as essential media to convey these values and emphasize uniqueness and difference. They position themselves rather than differentiate themselves by communicating personality attributes through mission and vision statements (Ingenhoff & Fuhrer, 2010). The mission statement introduces the organization to the public and distinguishes it from other organizations by emphasizing its unique characteristics and also to show differentiation from the competition (Rarick & Vitton, 1995). This supports the view that companies use these statements to position themselves on the Internet (Chun & Davies, 2001).

5.2. Vision and Mission supports strategic planning success. The success of a strategic plan depends on the formulation of the right mission and vision and broad participation in its formulation. Mission statements and visions also contribute to the creation of an organization's institutional identity (Özdem, 2011). Numerous studies show that having a vision and mission affects most aspects of a company's organizational performance. Business Week reports that companies with well-made mission statements have a 30% higher return on specific financial measures than companies that do not have these documents (Orhan, Erdoğan, & Durmaz, 2014). Erkan in (Özdem, 2011) found that managers of public sector institutions tend to think and act with short-term considerations, fail to differentiate their organizations from others, and, overall, experience difficulties in strategic planning and developing mission and vision statements.

6. Partnership supports Organizational Process

6.1. The company's business scope is getting more extensive with the partnership with other parties. In running their business, the three companies try to strengthen their business partnerships with other related parties. Company A uses a variety of vendor partners for the field of implementation and promotion. Company B opens partnership
opportunities for other fields that are not the core business of Company B. Company C partners with the motorcycle manufacturing company they sell and the Jogja IT Team as a system development team used in the subsidiaries' dealers. Strengthening their business partners can make them more focused on taking care of the core business of their company.

“Company A strengthens business partners that are truly settled and have an extensive network. This makes us not too tired.” – Company A

Partnership makes the company's business scope broader, increases the scale of the company's economic coverage (Holweg & Pil, 2012), and gives access to distribution channels that might not be accessed if it is not partnered (Wang & Kess, 2006).

7. Partnership supports Organizational Process

7.1. Partnership supports the organizational process by making the company more focused on the company's core business. The three companies open themselves to business partners to help run business processes that are not the core of the company's business. Strengthening their business partners can make them more focused on taking care of the core business of their company. Core activities are carried out internally within the company, and partnerships are used to carry out non-core activities (Ali & Khan, 2016).

“For example if someone wants to work here but doesn't have a label, we can accept it. Can be a cook or cleaning service. we will test first.” – Company C

Also, partnerships that trigger the company's focus on core competencies enable the development of new capabilities, improved processes in the organization, increased efficiency, and reduced costs (Ali & Khan, 2016; Ee, Abdul Halim, & Ramayah, 2013; Holweg & Pil, 2012).

CONCLUSION

Information Technology is a very strategic thing for a company's business strategy. Managers in the IT and business fields are now paying much attention to aligning IT with business strategies. The lack of alignment between IT and business strategy is the main reason why an institution or company fails to realize the main potential of the IT investment they make. Recognizing the importance of aligning IT with the business strategy, many researchers have examined how to obtain or achieve alignment, but research on the existing alignment model is predominantly conducted in countries in the Americas.

Differences in geographical location, culture, population, and countries where the research is carried out influence on how companies in these countries achieve harmony. This diverse Indonesian culture influences the strategic alignment of these companies in Indonesia. This study uses a qualitative method with in-depth interviews with three companies in Yogyakarta to investigate the factors supporting the alignment of IT and business in companies in Yogyakarta.
REFERENCES


Ee, O., Abdul Halim, H., & Ramayah, T. (2013). The effects of partnership quality on
business process outsourcing success in Malaysia: Key users perspective. Service Business. https://doi.org/10.1007/s11628-012-0152-z


