IT, BUSINESS MODEL AND ORGANIZATIONAL CAPABILITIES

Edhi Juwono & Adele B.L. Mailangkay
IKPI Perbanas, Jakarta, Indonesia
E-mail: edhi.juwono@perbanas.id, adele@perbanas.id

ABSTRAK: Peresmian Masyarakat Ekonomi Asean (Asean Economic Community/AEC) mendorong perusahaan untuk menyapihkan diri dalam menyongsong lingkungan baru dan menghadapi lingkungan AEC. Masalah yang harus dipecahkan berupa pencapaian adalah kapabilitas organisasional (Organizational capabilities). Tujuan penelitian ini adalah untuk: (1) mengetahui kemampuan kapabilitas organisasi untuk menghadapi model persaingan industri yang baru yang diregulasi oleh AEC, (2) mengetahui kemampuan teknologi informasi (information technology) dan model bisnis (business model) dapat menghasilkan kapabilitas organisasional, (3) membangun model penelitian yang dapat diimplementasikan sebagai solusi dan diterjemahkan menjadi sebuah model konseptual. Metode yang digunakan adalah studi keputusan dengan pendekatan deskriptif eksploratif. Hasil penelitian adalah: (1) menunjuk prediksi, kapabilitas organisasi tidak dapat menghadapi persaingan industri yang diregulasi oleh AEC, (2) teknologi informasi (information technology) dan model bisnis (business model) dapat menghasilkan kapasitas organisasional, (3) dapat diformulasikan model problem-solusi dimana kapabilitas organisasi adalah problem dan solusi yang dirancang untuk Teknologi Informasi dan model bisnis.
Kata kunci: kapabilitas organisasional, teknologi informasi, model bisnis

ABSTRACT: The inauguration of the Asean Economic Community (AEC) at the end of 2015 drives companies to discover its readiness for entering the new and challenging environment AEC environment. The problem that has to be solved in a form of achievement is organizational capabilities. The objective of this research are: (1) to find out if the organization capabilities capable enough in facing the new industrial competition model regulated by AEC, (2) to inform technology and business model which can perform an organizational capabilities, (3) to build a research methods and the solution which can be translated into a conceptual model. The methods used based on a library research with a descriptive, explorative approach. The conclusions are: (1) It can be predicted if companies cannot catch up with the AFI standard, they could be bounced out of the industry, (2) The information technology and business model can perform an organizational capabilities, (3) it can be formulated a problem-solution model where organizational capabilities are problems and the proposed solution is IT and Business model.

Keywords: organisational capabilities, information technology, business model

INTRODUCTION

The background of the research is that world business is always face some challenges and also opportunities like the deregulation, new technologies, economic pressures, political pressures, and increasing globalization and competition which has to be faced by the business world (Griffy-Brown and Chun, 2014:29, David and David, 2015:227). Actually, those challenges and opportunities impact to the organizations as actors of the business. This study is trying to explore the organizational capabilities, and how business model and information technology impact.

Until the beginning of 2015, the financial service industry in Indonesia looks good. Loans and receivable financing per January 2015 was recorded respectively 11.5% and 4.68% year by year. On the other hand, capital adequacy, as of January 2015, ratio was recorded in higher position; it reached 21.01% (http://ekonomi.metrotvnews.com/read/2015/03/12/370416/begini-kondisi-industri-jasa-keuangan-domestik-ri). Even there was a slowdown growth of economics in a first quarter of 2016 the Indonesian banking industry still showing growth trend and relatively strong resilience with credit risk, liquidity and market turmoil fairly controlled. This is reflected in the capital adequacy ratio (CAR) of commercial banks (conventional and Islamic), which is still far above the threshold of 8%, amounting to 21.76%, gross non performing loan (NPL) amounted to 2.83% (still below the threshold of 5%), return on assets (ROA) of 2.38%, and a loan to deposit ratio (LDR) of 89.52%. Both the Bank Conventional (BUK) and Islamic Banks (BUS), managed to increase its intermediary role well, despite the slowdown in credit growth of 1.42% (pts), which is in line with economic slowdown in the first quarter, 2016. (Otoritas Jasa Keuangan, 2016). It means a company needs to have capabilities to cope with those challenge and opportunity.

If the previous description can be considered as an opportunity, the next description can be considered as a challenge. In the short coming future, those challenges, especially economic and political pressure will approach Indonesian companies since ten countries of ASEAN, including Indonesia will inaugurate ASEAN Economic Community (AEC) in 2015, and it will transform ASEAN into a region with
free movement of goods, services, investment, skilled labor, and free flow of capital (ASEAN Secretariat 2008:5, 2014:3, Asian Development Bank, 2013:1). The goal of establishing the single market and production based ASEAN is to make ASEAN be more dynamic and competitive. Actually the formation of AEC is part of establishing ASEAN Community in 2020 (ASEAN Secretariat 2008:5). To support AEC, ASEAN needs to integrate its financial sector. In 2011, the ASEAN Central Bank Governors adopted the ASEAN Financial Integration (AFI) Frame work provide a general approach to the liberalization and integration initiatives under the AEC. The AFI Framework aims to have a semi integrated financial market by 2020. (http://www.bsp.gov.ph/downloads/Publications/FAQs/ASEAN.pdf).

One of industrial sectors that have to cope directly with the AFI Framework is banking industry, especially commercial banks. It means they have to achieve a certain business performance, which allows them to play their role in AEC, and the one that has to achieve its organization.

To solve the problem, it is needed to create a conceptual model of problem-solution system, which is going to be translated into a research model to conduct a study. The conceptual model in this study is constructed based on a literature review on previous studies.

According to Bayzidnejad, Kafche, & Shafeai, (2012:391), for more than 5 years the topic of information technology (IT) in relation to business became a major topic to be discussed. In the other word, IT Business alignment has been consistently ranked at the top among other contemporary IT related to top management concerns. In 2008 it was ranked on the first place based on the survey conducted by the Society for Information Management in 2011 on 275 US based organization, it was found that IT and business alignment still ranked at the top five management concerns can be seen at Table 1.

Specifically, IT needs to support the bank's business growth, and customer needs (Ikatan Bankir Indonesia, 2014:146). Moreover, IT is expected to transform the business model (Applegate, Austin, and Soule, 2009:68). Since IT and business model is still a hot topic for a top management, it is proposed to be a solution for organizational capabilities.

<table>
<thead>
<tr>
<th>No.</th>
<th>Management Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>IT and Business Alignment</td>
</tr>
<tr>
<td>2.</td>
<td>Business Agility and Speed to Market</td>
</tr>
<tr>
<td>3.</td>
<td>Business Process Re-engineering</td>
</tr>
<tr>
<td>4.</td>
<td>Business Productivity and Cost Reduction</td>
</tr>
<tr>
<td>5.</td>
<td>IT Strategic Planning</td>
</tr>
</tbody>
</table>


In conclusion, this study formulates a problemsolution model, where organizational capabilities are a problem and the proposed solution is IT and business model. The problem-model is a model to be translated into a conceptual model. Building a conceptual model needs a foundation, and the foundation of conceptual model is literature review.

**DISCUSSION**

To create a conceptual model, it is needed to review some literatures. There are three concepts to be built based on the literature review, i.e. organizational capabilities, information technology, and business model.

**Organizational Capabilities**

Although some studies put IT in relation to organizational performance or business performance (Croteau and Raymond, 2004, Chung, et.al., 2005, Zhang and Tansuhaj, 2007), there are studies concerning organizational capabilities and performance (Lu, 2006, Tuan and Yoshii, 2010, Benitez and Walczuch, 2012). It was found that executives faced two key organizational design challenges as they attempted to design organization and build capabilities (Applegate, Austin, and Soule 2009: 89). They put IT as an enabler to cope with the challenges (i.e. (1) agility and control, and (2) accountability and collaboration). So it can be concluded that organizational capabilities is defined as an ability of an organization or firm to exploit its resources in implementing strategies (Barney, 2007). Organizational capabilities deal with two dimensions: first is agility and control, and the second one is accountability and collaboration.

**Information Technology**

It has to be addressed here, that the information system (IS) and information technology (IT) is often used interchangeably (Xu, and Quaddus, 2013:2). According to Ward dan Peppard (2008:3), the
existence of IS does not depend on the technology. It means, IS refers to a system with or without the support of technology. On the other side, IT refers technology i.e. software, hardware, and networks: computational networks and telecommunication networks. IS refers to technology information based systems or previously is called computer based information systems (CBIS) (Laudon and Laudon, 2014:59, McLeod, Jr. and Schell, 2001:3). Strangely in the next edition (McLeod, Jr. and Schell, 2004), they did not mention CBIS, perhaps, IS does not only deal with computer, but also with telecommunication.

Information technology (IT) is defined as a technology, which is consisting of “all the hardware and software that a firm needs to use in order to achieve its business objectives (Laudon and Laudon, 2014:45). IT includes hardware, software, data management technology, and networking and telecommunication technology (Laudon and Laudon, 2014:51). Turban and Volonino (2011:8) defined IT as “the collection of computing systems used by an organization.”

Hendesson and Venkatraman’s (1999:476) Strategic Alignment Model, IT can be seen as a variable with two dimensions: (1) IT Strategy (technology scope, systemic competencies, and IT governance) and (2) IT Infrastructure and Processes (architecture, processes, and skills). In this study IT is defined as a set of computing systems including hardware, software, network, and telecommunication technology used by an organization.

**Business Model**

So far it cannot be found the study about business model and organisational capabilities, but since strategic management stages consist of strategy formulation, strategy implementation, and strategy evaluation (David, 2011:6), it is considered that business model is done in strategy formulation, and organizational capabilities is done in strategy implementation, and business performance is done in strategy evaluation. According to Applegate, Austin, Soule (2009:64) there are two dimensions of business model, i.e. strategy and capabilities (to execute strategy).

**Proposed Conceptual Model and Proposition**

**Conceptual Model**

The conceptual model represents the researcher beliefs on how concepts are related to each other and why they are associated one to another (Sekaran and Bougie 2013). Since performance is produced by the organization, the researcher believes that a company needs to pay attention on its organizational capability. Since most of industries are depending on information technology (IT), they could not design its business model by disobeying the present of IT. Therefore, the conceptual model put business model and IT as part of the solution.

Based on the literature review, it is proposed a conceptual model or theoretical framework is composed as shown in the exhibit 1.

**Figure 1. Conceptual Model 1**

**Propositions**

Since this paper is a conceptual paper, it proposed proposition. When it is transformed into a paper based on a field research, it can be transformed into hypotheses. Therefore, based on the con-ceptual model, it be proposed two hypotheses as follows.

P-1: IT impacts on organizational capabilities.

P-2: Business model impacts on organizational capabilities.

**Problem-Solution Model and Research Purpose**

The problem of this study is organizational capabilities. For solving the problem, it needs to create a problem-solving model. It is assumed that the problem-solution model will be implemented for a research in IT based industries, such as banking industry. Therefore, the proposed solutions are IT and business model.

Based on the problem-solving model, which is putting organizational capabilities as the problem; business model and information technology as solutions, it can be formulate research purpose as follows. The purpose of this study is identifying: (1) the condition of business capabilities, information technology (IT), and business model of companies in IT based industry, (2) the impact of IT on
organizational capabilities of companies in IT based industry, (3) the impact of business model on organizational capabilities of companies in IT based industry (4) the result of comparison between the impact of IT and business model on organizational capabilities of companies in IT based industry.

**Proposed Research Model**

It is assumed that this conceptual paper will be transformed into a paper based on the field research. Therefore, the conceptual model should be transformed into a research model. The concept is translated into variable. The concept of organizational capabilities is translated into a dependent variable, and is labeled a Variable Y. The concept of IT is translated into an independent variable, and labeled as Variable X1. The concept of business model is translated into another independent variable, labeled as Variable X2.

As a result it can be drawn a research model, as shown in exhibit 2.

![Figure 2. Research Model 1](image)

**Variables Operationalization**

Based on the conceptual model, those variables can be operationalized into dimensions and indicators as shown in table 2.

**Table 2. Variable Operationalization 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimension</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>IT Strategy</td>
<td>technology scope systemic competencies IT governance</td>
</tr>
<tr>
<td>Infrastructure &amp; Processes</td>
<td></td>
<td>processes skills</td>
</tr>
<tr>
<td>Business Model</td>
<td>Strategy</td>
<td>business scope distinctive competencies business governance</td>
</tr>
<tr>
<td>Capability to Execute Strategy</td>
<td>(Organizational Infrastructure &amp; Processes)</td>
<td>administrative infrastructure process skills</td>
</tr>
<tr>
<td>Organizational Capabilities</td>
<td>Agility &amp; Control Accountability &amp; Collaboration</td>
<td>agility control accountability collaboration</td>
</tr>
</tbody>
</table>

**CONCLUSIONS**

Indonesian companies is facing a more pressure from globalization, i.e. ASEAN Economic Community, with it ASEAN Financial Integration (AFI) system. So, they have to be ready for adjusting their organizational capabilities in coping with AFI standard, which will be implemented in 2020. It can be predicted if companies cannot catch up with the AFI standard, they could be bounced out of the industry. This is a reason why organizational capabilities is put as a problem for the study.

In management context, a problem has to be solved—it has to put in the problem-solution model. Since business-IT alignment is top concern of management in more than five years, the study put IT and business model as a solution. The next step, is translate the problem-solution model into a conceptual model. The proposed conceptual model is a reflection of problem-solution model where organization capabilities is considered as a problem to be achieved. Since the model is assumed to be implemented in IT based industry, such as banking industry research, the proposed solution is a combination of IT and business model.

Based on the the conceptual model, it can be formulated a research model. In the research model organizational capabilities is operationalized as dependent variable; IT and business model is operationalized as dependent variables.

**REFERENCES**


