

Review of Information Technology and Firm Capability

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Abstract

Develops the capability refers to the ability of the company to build a unique competence and the ability to maximize available resources. This paper was conducted to provide an overview Information Technology (IT) resources associated with a firm's capabilities using Resource Base View (RBV) model. RBV regards the company as a set of resources and capabilities, investigated the relationship between IT resources and capabilities of the company to achieve the company's performance. Content analysis and study case were used to review IT and firm capabilities, the data of this study was obtained from secondary data. The result shown that Resource (IT and organization) resources are positively associated with a firm's internal capabilities (IC) and external capabilities (EC).

Keywords: RBV; Information Technology, IC, EC

I. INTRODUCTION

Time and cost efficiency are the reasons a company applying Information Technology (IT). M. Dale A. Stoel and Waleed Muhanna in paper entitled IT Capabilities and Firm Performance explained that IT resources can improve the efficiency and effectiveness of business processes and increase the stability of the organization to become effective [1]. Resource IT can affect a company's capacity [2] there is a positive relationship between IT resources company with the capability of Information Systems [3]. So firms should follow IT trends. This trend is about investment in hardware and software [4].

Develops the capability refers to the ability of the company to build a unique competence and the ability to maximize available resources. Theory Resource Base View (RBV) regards the company as a set of resources and capabilities [5]. RBV approach through meta-analysis models [6] were used to study the relationship between IT resources and capabilities of the company to achieve the company's performance.

The study was conducted to review the relevance of IT to the firm's capability, as part of achieve firm performance. Case study taken in company engaged in food and soft drinks. The method used in this research is the RBV, viewpoint based on the company's resources. Data of this study was obtained from secondary data such as annual reports and other data related.

II. RESOURCE-BASED VIEW (RBV)

A. Concept of RBV

RBV is one approach to designing a strategy to achieve excellence (competitive strategy) using internal resources of the company. According to the RBV, Competitive Advantage of an organization is determined by the resources (resource) keys owned by the organization. [7] suggested that the IT resources in the form of knowledge and skills of employees in the IT unit provides indirect impact on companies.

Fig. 1 described the direct effect of IT on performance, improved by adding capabilities as an intermediary factor. This model is used to measure the effect of IT on performance through intermediaries internal capabilities [6].

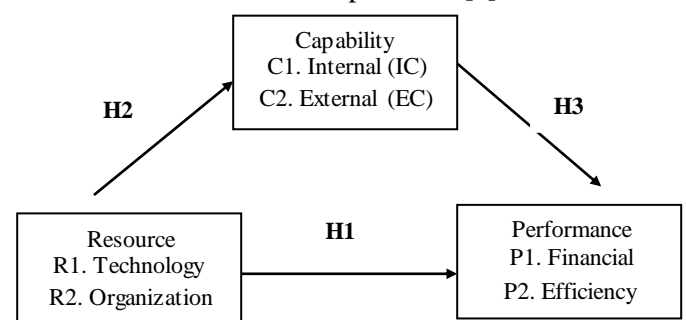


Fig. 1. RBV Model's [6]

[6] proposed the first hypothesis to examine the direct effect of resource on firm performance.

1) Direct-effect model

H1. IT resources are positively associated with firm performance (**H1a.** Technological resources are positively associated with the firm's financial performance; **H1b.** Technological resources are positively associated with the firm's efficiency Performance; **H1c.** Organizational resources are positively associated with the firm's financial performance; **H1d.** Organizational resources are positively associated with the firm's efficiency performance)

2) Indirect-effect model

H2. IT resources are positively associated with a firm's capabilities (**H2a.** Technological resources are positively associated with the firm's IC; **H2b.** Technological resources are positively associated with the firm's EC; **H2c.** Organizational resources are positively associated with the firm's IC; **H2d.** Organization resources are positively associated with the firm's EC.)

H3. A firm's capabilities are positively associated with its performance (**H3a.** The IC of a firm is positively associated with its financial performance; **H3b.** The IC of a firm is positively associated with its efficiency performance; **H3c.** The EC of a firm is positively associated with its financial performance; **H3d.** The EC of a firm is positively associated with its efficiency performance)

B. *IT Resources*

Liang et al in [6] suggested that technological resources consist of IT investment, IT infrastructure, IT assets, systems software applications; organizational resources consist of knowledge resources, human resources (the ability of employees, training of employees, number of employees); and financial resources.

Organizational resources capable of creating competitive advantage must have attributes which include valuable, rare, imperfectly imitable (can not be duplicated perfectly), and non-substitutable (irreplaceable) [8]. IT resources in the enterprise has an important role in the competition [9]. Therefore, IT can be incorporated as a unique resource companies. According to [10], the

resource-based IT can be classified into tangible resources (resources that can be measured), which consists of the IT infrastructure, HR IT (technical and managerial) and intangible resources (resources that can not be measured) such as knowledge assets, customer orientation and ability synergies.

Although IT was valuable resource that may improve the performance of companies, IT could not be used to build a sustainable company performance itself [7]. Effect of valuable resources for the sustainability of the performance of the company consists of many factors. One important factor was organizational capability. Organizational capability refers to the ability of the organization to assemble, integrate, and deploy valuable resources to build a unique organizational competencies [11]. [12] distinguishes between the company's resources and capabilities. Resources are assets that seems largely (but not always) tangible that can be assessed and traded independently. Meanwhile, the capability is not visible is intangible and can not be assessed independently and can only be changed hands as part of the whole unit.

C. *Capabilities*

According to the theory [6] Capability of an organization made up of two categories: Internal Capability (IC) and External Capability (EC). IC is the ability to regulate internal relations. Internal controls have an impact on the use of IT resources to reduce communication costs, improve efficiency and increase resource utility company. For example, use the email facility. While EC identify the capabilities of the infrastructure and systems to maintain good relations with business partners. For example, the company's website.

Internal capabilities include the following factors: (a) the management of internal relations, and (b) IT planning and change management. Measures used Liang et al for the management of internal relationships is one of them about sharing knowledge. IT as a technological resource is identified as the value of IT investments (measured through IT expenditure) and software and system application (measured from the ERP system adoption) [6]

Competitive advantage can be achieved by utilizing IT resources along with other resources effectively to produce IT capability. Strategic mechanism used to achieve competitive advantage

consists of two, namely resource picking and build capabilities. Resource picking refers to the ability of the company to sort out the appropriate resource to use.

III. RESEARCH MODEL

The purpose of this paper is to provide an overview IT resources are positively associated with a firm's capabilities. Based on RBV model and Liang et al meta-analysis in the form of a model the direct effect of IT on performance by utilizing the company's capability factor (Fig. 2).

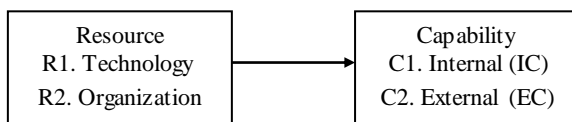


Fig. 2. Research Model [6]

Fig. 2 shown IT resources can significantly improve the internal and external capabilities of the company. This study review:

- Technological resources are positively associated with the firm's IC and EC,
- Organizational resources are positively associated with the firm's IC and EC.

IT resources were measured by the value of IT assets, and Software, system application. Meanwhile resource to measured through knowledge organization and Human Resource Resource (HR). Internal capabilities measured by the ability of sharing knowledge while the measured external capabilities of the customer or supply-side capability.

IV. RESULT

Based on the content analysis of secondary data in companies engaged in food and soft drinks, data showed that companies have used IT to improve the capability of the company in order to achieve firm performance. Secondary data were obtained from various public sources, which comes from internal and external companies. Internal data in the form of the Annual Report 2014. External data such as news on a public website and other related information.

In this section will review about IT resources are positively associated with a firm's capabilities based on the model RBV (Fig. 1)

A. Resource (R1)

1) R1. Technology

The company has been investing in IT to support the capability of the company in order to achieve the company's performance. The investment may be seen with the use of Enterprise Resource Planning (ERP) to support the company's business processes that System Analysis and Program Development (SAP). ERP is used to manage all the company's activities in all units. The company's business scope and increase in the future caused the ERP market is an important factor in the success of the company.

Company will expand the implementation of SAP HR in business units to enhance the SAP HR function as a central database to support our operational activities[13].

2) R2. Organization

The HR Function also plays a pivotal role in organizational development by providing support to all new businesses as well as existing organization, in order to attain maximum performance in supporting the achievement of the company's vision.

The management of the company based on the company's annual report 2014 consists of Board of Commissioners (8) and Directors (9 people). IT departments are under the Corporate Function [13].

Efforts to enhance human resources were initiated through various activities including training in both technical and soft skills. In order to optimize the results, the Company continuously review and refine training modules, add training materials, and provide certification for specific training, as well as conduct training programs in collaboration with recognized external parties. Company also conduct training and certification courses to comply with prevailing laws and regulation [13].

B. Capability

Liang states that TI significant effect on the company's internal capabilities (IC) is recognized as a variable internal management capabilities enterprise relationship with the item size information (knowledge) sharing.

Companies conducting information sharing through the HR division in the form of the use of IT into process of work. Company recognize the importance of a robust HR database to support

strategic analysis in HR management. The implementation of SAP HR had been increased in 2014, and was further enhanced through a yearly refresher course to equip all SAP HR users with up-to-date knowledge on system operation [13].

1) *Technological resources are positively associated with the firm's Internal Capability (IC)*

Liang predicted that the IT resources is closely related to the company's internal capabilities. This category includes the ability to utilize resources that can enhance internal controls capabilities, strengthen cooperation performance between the departments, and improve capacity of the system and development [6].

Technology resources provide a positive impact on capability. Distribution of integrated information be able to accelerate information flow while providing accurate data needed for each level of decision-making in each line of division.

Implementation of SAP delivers significant impact to the company in the form of increased cost efficiencies, reducing administrative costs through effective management methods integrated data archiving and distribution.

2) *Technological resources are positively associated with the firm's External Capability (EC)*

This category includes the ability to adapt to the external environment, the ability to work with external partners (such as upstream and downstream suppliers and manufacturers) for cooperation and information sharing, the capacity of facing the market, and customer needs [6].

ERP system the company started on planning ahead, aimed to expand its operations and increase cost efficiency. One of the business objective is to group customers with more accurate, then serve the group in accordance with the interests of each and will work more closely with distributors to retailers. This will allow for improved capacity planning and help increase efficiency and reduce costs. Open computing platform is absolutely necessary to support the integration of downstream systems, which will enable interoperability of applications including legacy systems and realtime data streams through a variety of ERP systems.

The progressive implementation of the SAP warehouse management system introduced in 2013 continued

across distribution centers. The initiative has enabled the Group to further optimize sales, increase efficiency and improve operational control. This has heightened the Group's ability to ensure the right inventory levels while identifying and replacing bad or expiring stock [13].

V. CONCLUSION

Major IT resource value as an intangible asset has been able to build internal capabilities of the company. The ability of management in the internal relations through information / knowledge sharing in the form of internal training that has been conducted in 2014.

Implementation of the SAP warehouse management system Introduced in 2013 continued across distribution centers adds value to the company's external capabilities.

Resources of Company (Technologies and Organization) can extend the capabilities of companies

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