Fortunate Business Review

HOW KNOWLEDGE MANAGEMENT, SUSTAINABLE TECHNOLOGY, AND INNOVATIONS ARE IMPACTING BUSINESS SUSTAINABILITY

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ABSTRACT

To ensure business sustainability, it's paying attention to the structure of the economic field and the organization itself. There are many critical aspects for the sustainable business landscape, that is to say, profit is no longer the only purpose of their existence. The present article takes a dimensional view of the process of the Business Models (BMs), knowledge management, sustainable technology, and innovations as sustainable business key factors. It can be argued that success in managing changes is crucial to any organization to sustain and succeed in the present highly competitive and continuously evolving business environment. Hence, the purpose of this article is to provide a critical review of some of the theories and approaches for a sustainable business nowadays. The article also concludes with recommendations for further research.

Keywords: business sustainability, knowledge management, sustainable technology, innovations

INTRODUCTION

Traditionally, the first parameter of a successful company is by its profit. Large companies marked as global political actors that have the ability to influence but also unaccustomed responsibilities (Bellucci et al., 2018; Bini et al., 2018). Previous standard that was only responsible to increase the value of shareholders now is unsustainable (Freeman, 1984; Friedman, 1970). Societies as their area of operation, expect that social and environmental performance is being noticed by the company (Bellucci et al., 2018; Deegan, 2002; Gray et al., 1996; Mitchell et al., 1997; Thorne et al., 2014). To be sustained, they prompt to take the needs and expectations of not only shareholders but also that stakeholders, generate shared value, and turn every part of the business to become sustainable (Bellucci et al., 2018).

The awareness of the need for sustainability elements in business models (BMs) greatly increases. Changing to the sustainable business needs to make over the structural based on integrating market as well as nonmarket strategies (Jakobsen & Clausen, 2016). Innovation, the utmost importance on making over the structural, could be explored by overseeing the distinction of drivers, scope, and resultant (Schumpeter, 2010). Specifically, the accentuation on resultant led to the separation of product innovation and process innovation. Product innovation is used to interpret either the product or service's objectification, while process innovation, used to show the exploitation of process on the products or services (Fagerberg, 2004; Moyano-Fuentes et al., 2018). Implementation of new working strategy and innovative process design in process innovation influenced by the complexity of human, technological, also dimensions of organizational (Moyano-Fuentes et al., 2018). Additionally, it could support companies to diminish the cost or even time needed for production and also enhance flexibility and quality (Davenport, 1993).

Organization is continuing to amend their strategy policies. In consequence of globalization, market changes so fast and the advancement of technology encourage the organizations to have the swift ability to adapt. Organization's knowledge management that meets standard can support them on the process of policy-making, implementing organizational strategies which brings to performance enhancement (Sundiman, 2018). Besides, empirical studies also indicate that applying knowledge management could strike stead profitability and the performance of the environment (Shaw et al., 2013). Knowledge management means being highly selective in the practice of applying knowledge from previous experiences on decision making to present or next decision making (Jennex & Olfman, 2006). With the foundation of previous literature, (Akram et al., 2019) study shows that knowledge management consists of three knowledge activities such as knowledge acquisition (KA), knowledge dissemination (KD), and responsiveness to knowledge (KR). Activities like knowledge creation, location, or finding of knowledge are known as knowledge acquisition. Meanwhile, knowledge dissemination is a substantial aspect in knowledge management which is the next activity after the knowledge acquisition, spreading that knowledge over with support of information technology also written communication. Hereafter, converting knowledge into intelligence that is applicable with the same purpose of using it in an organization is acquainted with responsiveness to knowledge. Another expert declared that by leaning on effective knowledge management gives direction to sustainable business performance (SBP) which covers the triple bottom line (TBL) (Bedford & Harrison, 2015; Durst et al., 2015). The success in implementing knowledge management depends on the knowledge infrastructure for instance culture, structure, and also technology (Gold et al., 2001).

Sustainable technology's goal is to bring on production methods for both goods and services that are environmentally friendly that generate less waste and emissions (Koltun, 2010). The usage of sustainable technology could against environmental degradation, decrease dependency on non-renewable energy resources (Noppers et al., 2014). Additionally, it can enhance the working condition, organizational image, and turn to more efficiency in providing the best opportunities (McMurray et al., 2014). Although sustainable technology takes high-cost or investment in terms of financial and human resources, the number of firms that interest in sustainable technology is increased and their intentions are growing rapidly owing to the development of local and international environmental standards, regulations, and expectations of the customer (Fargnoli et al., 2014; Forsman & Temel, 2011; Henriques & Catarino, 2015). Not only large firms that have a role in sustainability and responsibility but also small and medium-sized firms. Therefore, an eco-friendly environment is generated in the community.

LITERATURE REVIEW

Traditional shareholders proposed that expectations of shareholders have been the company's prioritization, whereas stakeholder method suggests that in the process of managing organization such employees, customers, suppliers, investors, and communities should involve some groups and individuals (Bellucci et al., 2018; Hinings & Greenwood, 2002). The stakeholder theory's structure consists of three different types of analysis which is descriptive, instrumental, and normative (Donaldson & Preston, 1995). Descriptive analysis indicates that stakeholder theory is used to show the particularities and behaviors of companies and other organizations, including the way they managed, how the board of director deal with the needs and demands of communities, the way they conduct and implement their management strategies, also inherent character of the organization. Meanwhile, the instrumental analysis

attempts to determine the subsistence of potential or effective connection between stakeholder management and accomplishment of organizational purposes and objective (Bellucci et al., 2018). It contains between better stakeholder management and environmental sustainability engagement, and in addition the increasement of organization's reputation in the communities. The analysis of normative expect that organizations responsible to determine and involve stakeholders who have definite interest in organization therefore, attracting attention to the guidance of moral or philosophical for the operation and management (Bellucci et al., 2018; Donaldson & Preston, 1995).

In fact, stakeholder theory defines that organizations or companies are not only responsible to the shareholders but also equalize the expectations and interests of stakeholders which are influenced or influenced by the organization's behavior (Freeman, 1984). In contrast with the past, currently managers are facing demands from several groups disgorging resources to social and environmental issues (Matten et al., 2003). Equalizing the expectations and interest of stakeholders is needed for organizations or companies. Accordingly, they can turn their strategic decisions to become more environmentally friendly, including calculating the needs for good or bad environmental externalities. By that, societies as their area of operation and environmental ecosystem can be their strategic stakeholders.

It's crucial for a company to grasp internal strategic decisions (also all processes of innovation) when analyzing the company's environmental sustainability engagement to internal and external stakeholders. When creating company's strategies, managers should be concerned about factors of organizational, economic and financial that needed to be sustained in the competitive environment (Kraatz & Zajac, 1996; Lee & Lounsbury, 2015). Besides that, paying attention to the institutional demands and pressures exerted by external stakeholders is also required (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Moyano-Fuentes et al., 2018).

Previous studies show that knowledge management is not a single unified influential force, but other activities that incoherently perform to knowledge also used for intelligence that are actionable (Jennex & Olfman, 2006). The connection between knowledge management and sustainable business performance pretends knowledge management as a one-dimensional construct and depends on a single variable to catch it. It will cause a lack of information because of inflexibility regarding the heterogeneity which could be existing in the aspects of knowledge management such as knowledge acquisition, knowledge dissemination, and responsiveness to knowledge.

Models constructed by society view that innately, knowledge management has a connection to society and the process of learning in the organization itself (Mcadam & Mccreedy, 1999; McAdam & McCreedy, 2000). The models' highlight is on the construction of scientific knowledge in the organization. With the basis of knowledge management's dimensions, every knowledge activity such as knowledge acquisition, knowledge dissemination, responsiveness to knowledge contribute inspiration at least one action of the model's aspects. Considering that knowledge placed as new organizational wealth, it is definitely significant to combine knowledge while developing the business, even the operations (Anderson & Mansingh, 2016).

The extent of the company's leader could hold the satisfaction of employees and customers and the outgrowth of finances in a long period of time is well known as sustainable business performance (SBP) (Kantabutra, 2014). The triple bottom line (TBL) standard for the essence of sustainability is by what companies' activities made an impact on the world (Savitz & Weber, 2006). Companies should give full effort to knowledge management as well as innovation for the sustainability of the organization (Gaziulusoy et al., 2013). Based on the

knowledge economy, sustainability's main sources depend on creation, sharing, and also knowledge utilization. Hence, implementation of knowledge management could determine sustainability, because of the needs like awareness of social and environmental, commutation of information, professional education, and conceptual management (Wu & Haasis, 2013).

(Bakar et al., 2020) studies show that sustainable technology adoption is influenced by organizational attitude and the organization's ethical belief. Attitude, the tendency of someone when receiving or denying something or in short, attitude is the valuing of result and behavioral beliefs' function (Ajzen & Fishbein, 2005). There are three categories of attitude, affective attitude (AA), behavioral attitude (BA), and cognitive attitude (CA). Affective attitude is the response was given by the human when engaged with others or an environment that has consequential relationships (Buijs & Lawrence, 2013). This kind of attitude approach tends to depend on emotions such as preferred, complacency, and the other that has sameness which already exists in the organization and points their concentration of awareness on the environment (Bhanthumnavin & Bhanthumnavin, 2014). Behavioral attitude is well known as the sense of responsibility that members in the organization have, to transform the behavior for something purposeful (Huijts et al., 2012). The ability of an employee in responding and carrying out something both to get in touch or dodge certain conditions is called behavioral instincts. This attitude can impact the socioeconomic system by decisions they made, and rearrangement of the regulations of structural organization (Bhanthumnavin & Bhanthumnavin, 2014; Klimova et al., 2016). And the last is cognitive attitude. This attitude consists of beliefs, ideas, and their thoughts closed to object goal, organization, or situation (Bhanthumnavin & Bhanthumnavin, 2014). CA is the belief of organizations that their behavior plays a significant part in making a more environmentally friendly environment. Even they didn't realize that their behavior could support the development of greater understanding and also adopting approaches that guide sustainability (Kortenkamp & Moore, 2001).

Ethical belief is about the perspective of people regarding right and wrong things. In previous studies, it was divided into three categories related to sustainability and environmental studies. First is anthropocentric belief, which organizations in this category, appreciate the environment for the resource and the advantages for humanity (Gagnon Thompson & Barton, 1994). Their awareness of the environmental issue is pretty high, especially the damageability issue. It encourages the organization to embrace the sustainable business model. The focus of the organization in this category is for present, short term (Morgan et al., 2015). The second category is eco-centric organizations. Eco-centric organizations concentrate on nature for the sake of their own and for its natural beauty (Gagnon Thompson & Barton, 1994). Preservation of the environment is their goal, focus on future advantages for a long term period (Corral-Verdugo et al., 2009). Individuals or organizations that have eco-centric behavior valuing the environment as integral living beings that require protection and appreciation. The last is altruism, valuing the cohesiveness of society. This category has been thought of as the key to success in adopting sustainability. Altruism organizations serve others with unselfish regard for the welfare of others (Corral-Verdugo et al., 2009; Gagnon Thompson & Barton, 1994; Morgan et al., 2015). Individuals or organizations that have a high awareness of altruism could open to changes and also caring to the environment (Hirsh, 2014). Altruism is linking up to a strong moral and inner feeling or voice viewed as acting as a guide to the rightness or wrongness of one's behavior (Hirsh, 2014; Pérez Bernardes de Moraes & Dos Santos Millani, 2014).

Hypothesis:

1. The significance of implementing knowledge management and empowering leadership to restructure business models;
2. Innovative process design influenced by sustainable technology leads to sustainable business performance;
3. Environmental sustainability engagement leads to sustainable business performance

DISCUSSION AND SUMMARY

Nowadays, we have seen companies emphasizing and focusing on sustainability in many areas, which means it is not only pointing to profit. The awareness of sustainability elements in Business Models (BMs) in companies is increasing. However, firms still have to be careful on potential challenges that might transform or reinvent their way of doing business. Business Models (BMs) innovation focuses on how to do business, hence they innovate in technology, product, and process (Zott & Amit, 2008). Resource efficiency is focused in Sustainable Business Models (SBM) which influences the company's value proposition by means of a considerable price reduction.

Theorists on Knowledge Management (KM) and related fields are highlighted as a strategic asset (Jennex & Olfman, 2006; Kankanhalli & Tan, 2005; Marouf & Khalil, 2015; Smith et al., 2010; Welschen et al., 2012). Knowledge Management (KM) is practice of decision making activities for the current and future by selectively implementing knowledge from previous experiences (Jennex & Olfman, 2006).

Empirical studies show that applying knowledge management could enhance profitability and the performance of the environment (Shaw et al., 2013). Existing literature posits knowledge management is not a monolith of one dimension only but also coherently performing knowledge to be used as actionable intelligence (Jennex & Olfman, 2006). Moreover, some studies have declared that relying on effective knowledge management leads to Sustainable Business Performance (SBP) that encompasses the Triple Bottom Line (TBL) besides mentioned benefits before (Bedford & Harrison, 2015; Durst et al., 2015). Referring to the extant literature, Knowledge Management (KM) is a combination of Knowledge Acquisition (KA), Knowledge Dissemination (KD), and Responsiveness to Knowledge (KR) activities.

Providing autonomy and empowerment to employees goes a long way in successfully carrying out these activities that can enhance the performance of firms. Empowering leadership is playing a role of knowledge management on performing sustainable business. Empowering leadership assumed great significance to KM (Bennis & Townsend, 1995; Shaw et al., 2013). Hence, it is important for firms to put knowledge management programs in place, and give employees autonomy as generated in their processes for better firm performance. More, the focus on employee the massive growth of autonomy and empowerment is understandable (Srivastava et al., 2006).

Industry 4.0 has contributed to overcome technological challenges and increase sustainable business performance. In Thai SMEs, Industry 4.0 factors, such as big data, IoT, and smart factories have relationships with products and services, giving an important effect on sustainable business performance. Various studies have proven Industry 4.0 has a positive effect on production (Brettel et al., 2014; Weyer et al., 2015; Zawadzki & Zywicki, 2016), which increases business performance. Generally, in implementing new technology, big data has the better advantage. There is a significant relationship to technology adoption (Dhar &

Mazumdar, 2014; Raguseo, 2018). It delivers better ways to store data efficiently in technology (Gu et al., 2014; Lynch, 2008).

Companies have been progressively putting more interest on environmental and social issues, also paying attention to devoting substantial social and environmental commitments (Bini et al., 2018; Deegan, 2002; Durst et al., 2015; Epstein, 2007; Kolk, 2008; Laine, 2010; Mcadam & Mccreedy, 1999). Although traditionally, profit is the first and only measurement of the success in the company, the public alters expect and encourage organizations to take social and environmental performance into consideration (Bellucci et al., 2018; Deegan, 2002; Gray et al., 1996; Thorne et al., 2014). We know there is a business community that has developed resource efficiency, creating value from waste, and the PSS approaches that used to implement Environment Sustainability (ES) engagement policies. Companies are framing environmental improvement in terms of resource productivity. Empirical evidence also shows the link between environmental performance and financial performance (Orlitzky et al., 2003; Waddock & Graves, 1997).

Innovation is an essential aspect for facilitating structural change (Schumpeter, 2010). In developing internal organizational activities, managers could utilize improved technological capabilities to reduce costs, curb resource consumption, boost energy efficiency, and reduce pollution-wasted resources (Cainelli et al., 2015; Costa-Campi et al., 2015; Cuerva et al., 2014; Horbach, 2019). A prevalent activity, process innovation deployed by companies to improve their competitive position, removing unnecessary costs and decreasing execution time (Davenport, 1993). Process innovation also implicates envisioning new work strategies and innovative process design, while discussing how the implementation is affected by complex technological, human, and organizational dimensions (Moyano-Fuentes et al., 2018). As a further matter, process innovation potentially helps companies in attaining major cost reductions or time production while producing quality and flexibility major improvements (Davenport, 1993).

There are governed regulatory systems (e.g. Business and finance law reforms) that need to be concerned beside the structured economic playing field to ensure sustainable development. There is a need to get a more comprehensive understanding of EU business and finance and the institutional-actor relationships that shape policy changes. There is, therefore, a potential to further analyze these fields of law in relation to sustainability whereas the performed mapping of the EU business and finance legislative landscape could be a useful reference point (Ahlström, 2019).

(Bakar et al., 2020) studies show that organizational attitudes and ethics have significant roles in an organization's decision-making for adopting technologies. It also indicates that enhancement in organization attitudes and organizational ethics is directly proportional with adoption of sustainable technology. Thus, essential elements above such organizational attitudes and organizational ethics contribute to the process of sustainable business in adopting sustainable technology.

No academic study is without limitations. So is not ours. However, the limitations are presented open avenues for further investigation in this area. Sustainable technology should be treated positively to prevent wasted time and effort. Surely success if a business has good Business Models (BMs), which apply knowledge management (KMs) practice; empowering leadership, utilize sustainable technology, engage environmental sustainability, and create innovation. Nor the human resources that have a greater sense of care for the environment, perceive the adoption of such technology, and strategic effort, guide, and design communication strategies to encourage SMEs. Thus we know, approaching employee

managerial methods need to be sought out to examine in future studies that might influence the government concerns using the proposed framework. Time by time, business has to adjust with the market-fit, either customer concerns or even sustainable technology development. Future studies can also explore what customer concerns are in a market trend, which could be innovation development to support a sustainable business.

Looking at the current technological growing recognition of environment issues, we are optimistic that further opportunities are expected to emerge in the near future for companies to embrace sustainable BMs.

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