Innovation Canvas: A Mind-Mapping Tool Restructuring Business Idea

Jonathan Gultom, Samuel Anindyo Widhoyoko

Abstract: This research aims to structure a framework mapping business innovation. Using literature review, this research is triggered by the facts on rapid changes of business trends and consumers’ behavior. Therefore, the model built bridges product innovation through 5-aspect of product innovation (i.e. Adding, Eliminating, Modifying, Replacing, and Utilizing) in order to gain new creation of product innovation. This model revises Bob Eberle’s SCAMPER (read: Substitute, Combine, Modify/Maximize/Minimize, Put-to-Another-Use, Eliminate, and Reverse) model based on a belief that there are overlaps in some parts which would likely to be a logical barrier to innovate. This innovation model is also grounded on Alex Osterwalder’s Business Model Canvas (BMC) in terms of its forms and operationalization. In terms of research output, both Tim Brown’s theory which are (1) prototype is adopted to actualize the practicality of the model and (2) socio-entrepreneurial cyclical is embedded as a form of model operationalization process [4]. The result offered by this model is not only an innovation of product but also its new value proposition as the heart of business model which provides a more efficient tool of innovation. Another advantage offered by this model’s philosophy is a structural guidance for innovation which is not only a practical tool but also a paradigm in idea restructuration.

Index terms: Business Model, Innovation, Value of Proposition.

I. INTRODUCTION

Recently market is more fragmented and demanding. It creates higher competition and require companies to provide the most compelling value proposition. Thus value proposition innovation is inevitable. The current complexity of product and services as value proposition become higher and companies need more understanding about it (Howells et al., 2003). Since the introduction of term “Value Proposition”, research on value proposition has been largely conducted and it is related to many business aspects (Lanning & Michaels, 1988) i.e. achieving competitive advantages (Drucker, 1985) and guiding idea to the business activities (Norton & Kaplan, 2004). In addition, Osterwalder and Pigneur (2010) put Value Proposition in the middle of another 8-block Form as the heart of business model canvas. Accordingly, every block coordinates to innovate value proposition (Osterwalder & Pigneur, 2010). Furthermore, data shown that implementation of innovation was beneficial for company’s performance (Gërguri-Kashiti t al., 2017). It is obvious that value proposition innovation has become compulsory since companies wish to maintain their existence in the industry.

Hence, the main issue is “how innovations are executed”. Many researches provide insights of innovation in any context of business. Some researches offers big conceptual and models of innovation process, on the other hand some research focus on innovation in specific business aspect i.e. several modifiable aspects contained in business model such as customers’ aspect, offering (value proposition), business process, channel and organization (Sawhney et al., 2007); several dimensions of value of proposition such as performance, consistency, using easiness, effectiveness and flexibility (Lindič & da Silva, 2011); and calculation on opportunity based on customer expectation in a form of opportunity map (Ulwick, 2002). Even though innovation has been widely researched, but for some companies, especially SMEs there are still limited simple-tools can be used to structure innovation activities, fulfilling customers’ needs. This research aims to offer a simple tool restructuring innovation in a systematic process. This research assumes its usefulness whereas, innovating value proposition is the key to new product creation with outstanding social value.

To develop the structure, it is important to deconstruct the innovation into its nature and translate it into several actionable keywords. Innovation is defined as a process of production, implementation, utilization of novelty idea in any aspect of business, in order to add economic value in both process and result (Crossan & Apaydin, 2010).

It is also a reflection of entrepreneurial, structural, and strategic thinking influenced by social problem (Brown, 2008). Scholars see innovation in many different point of views either diffusive (Rogers, 2010), opened (Chesbrough, 2006), or disruptive (Christensen, 2013). However, when it comes to the definition, there are two aspects must be covered: (1) novelty and (2) value added (Coursivanos, 2016). Schumpeter, the first person who coined the innovation in a business, emphasizes its novelton innovation by defining it as a process of creating: new products, new production process, new market segment and new supplier. He also differentiated innovation from invention by emphasizing commercialization aspect in innovation. (Hansén & Wakonen, 1997).

II. RESEARCH BACKGROUND AND PROBLEM ANALYSIS

A. Issues Related to Market Segmentation

Market segmentation is a useful tool for market penetration. This facilitates firms’ selling strategy to deliver
product with certain value providing satisfaction for customers. This also determines the product’s sustainability due to its perceived brand image (Ghosh, 2014). The first issue highlighted is how well firms capture the specific customers’ needs in certain areas. Accordingly, researches have proven marketing cases across regions centered on customers’ behavior which is influenced by varied phenomenon. Kotler and Keller (2006) presents this phenomenon in four areas: (1) geographic, (2) demographic, (3) behavioral, and (4) psychographic. Based on these types of segmentation, a business is expected to target a potential market with the least cost of failure e.g. adding product features to a market which does not actually demand and geographically require it. Furthermore, in terms of demographic classification, social portraits e.g. local culture, income rate, and social status. These two are the preliminary stages to determine types of penetrated market (Kotler & Keller, 2009).

Consumers’ behavior is affected by occasions and benefits experienced by customers. Hjort et al. (2013) argues that customers living in developing countries with high-density of specific culture spend more on the day of events celebrated (e.g. more clothes in Chinese new year and Ied Mubarak). Considering behavior, enterprises also need to consider other factors such as users’ satisfaction, loyalty, and usage rate. These aspects are factors creating attitudes towards product (Hjort et al., 2013). Another is how precise the product could influence market psychology. Variables related e.g. self-preference, lifestyle, and personality. Facing all these possible diversification, market segmentation can be viewed from two different perspectives. Indirectly, segmentation can be done through deep analysis started by forming, profiling, evaluating, and selecting target [5]. On the other hand, one can argue that this can be done concisely and directly to identification of customers’ needs and segments’ characteristics which result in market potential estimation. Both focuses on need identification and sales estimation [6].

Considering the disruptive changes, Christensen et al. (2006) recommend companies must take a closer view on a broader scope. Especially in a free-trade era, when all goods and services could penetrate the market, some products, instead of being opportunist, are creating its own market share with certain characteristics. Such market could likely to swipe customers from a big proportion of market (e.g. Apple Inc. vs market of gadget and Uber Inc. vs market of conventional taxi). In other words, the whole pie chart of market share is divided into conservative and conventional users. Hence, companies must define a factor indicating such choices (Christensen et al., 2006). In addition, market can also be split based on its classes: mass production vs high-end luxury products (e.g. watch: Seiko vs Hublot and passenger-car: Ford vs Cadillac). In terms of price, aligned with esteem and prestige offered, there are types of people with specific income and lifestyle who buy one product despite its similar function [7].

B. Issues Related to Customers’ Orientation

Recent issues surrounding product innovation are related to customers’ trends. Customers recently are becoming more critical in terms of viewing the beneficial aspect offered by the product. According to Dulaami (2005), such critical thinking is triggered by information disseminated due to real-time information provided by millennial tools of information and technology. As the use of internet and gadgets seem to be compulsory for its users, such facilities also put users in a bigger perspective towards any kind of information which cause them to be more intelligent. Responding to this, planning to react upon customers’ needs and expectations and review on current strategy and future market development are the solutions [8]. Products sold in the market are assumed to be able to fulfill social needs. However, Hamadu et al. (2011) suggests that any expectation expressed might indicate dissatisfaction. As recent trends on exposing a product’s deficiencies blatantly and independently has been growing on mainstream media, business analysis conducted must embrace this aspect carefully (Hamadu et al., 2011).

As the information stream is able to enhance human intelligence, so as to the rapid changes of orientation for both businesses and consumers. The concept of market orientation (MARKOR) as a fundamental contributor on company’s market measurement methods and criteria grounded on general value benchmarked from competitors is now being inconsiderably left behind [9]. In addition, similar accentuation on MARKOR’s characteristics are commitment to client and competitor orientation. These values are applied in after-sales programs which emphasizing on quantitative data collection (e.g. survey on customer satisfaction and expectation) and product quality assurance [10]. Furthermore, a more relevant approach offered by Ramani and Kumar (2008) called interaction orientation model (INTOR) emphasizes differently by engaging customers continuously expecting to understand changes within.

INTOR includes all MARKOR’s aspects by treating customers as the starting point of marketing strategy including psychological analysis on customer reaction [11]. These are important for both after-sales and new customer engagements.

The most transformational element brought by INTOR is the focus of the company on clients’ cost. Thus, this theoretical development is the representation of a fact requiring businesses to adjust in a new era of diagnosing market expectation. Latyshova et al. (2016) states that numerous attempts done to form client-oriented approach in order to align business management to customers’ interaction. This alignment will likely to enable solid business performance through a better place amongst market competition including fulfilling customers’ sense of being advantage [12][13][14]. This approach is applicable in two different areas: (1) a well-established (or a luxury) brand can focus on complimentary services compensated by higher profit taking (Fader, 2012) and a mass-production brand can emphasize on the fulfillment of social core needs in order to be perceived as a “value-for-money” brand (Day et al., 1979). Therefore, the customers’ perception towards a brand as social support is an important trigger for a customer-oriented innovation constructed by enterprise leaders [17][15][16].
III. LITERATURE REVIEW

A. The Ontology of Business Model Canvas (BMC)

Building a modern business model is viewed in one main perspective: to create customer value of proposition (CVP) as the core of business model. Johnson et al. (2008) argues that a corporate success is represented by its profound customer value. Accordingly, CVP can be created by offering another satisfaction and delivering it to specific customer. To do that, it is important for directors to consider surrounded insufficiencies on wealth, access, skill, and time. Carrying CVP along the way, business model is closely related to the spirits of innovation i.e. breaking the rules, identifying new competencies, and creating profit formula (Johnson et al., 2008). However, taking back to its origin, business model is explained by Osterwalder (2004) as an ontology depicting business process based on its constructing elements. The fundamental purpose of this model (called: BMC) is to align all supporting business projects in order to enhance decision making however, it is also projected that future development of this model could assist entrepreneurs in innovation [18].

Ontology as the “genesis” of the philosophy has a critical function: to portray a phenomenon based on its both surrounded elements and metaphysical beliefs [20]. Placing this in a logical inquiry, ontology is considered by Guba (1990) as the foundation of human paradigm. Accordingly, ontology has been proven consistent for both positivism (a phenomenon is triggered by its origin nature) and post-positivism (a phenomenon is built by critical-realisms) (Guba, 1990). Inspired by this philosophy, BMC is acknowledged as an ontology explaining the nature of business. The model lists the internal; natures: entrepreneurs, managers, and vendors including customers as target with the basic of fund resources (Osterwalder, 2004). As an ontology in the post-positivist era with rapid changes, business model is one flexible and adaptable model to be developed into two categories: (1) object-based (e.g. market, industrial, and revenue models) and (2) purpose-based (e.g. reference and stimulation)[1]. Hence, contextualizing business model in the scope innovation is not overly fictional.

In an extraordinary case[19] presents the adaptability of BMC mapped in the context of deconstruction of business scheme. Accordingly, a value of proposition can be created through interaction between internal and external. Meanwhile, financing aspect does not affect such process except, it gives managers a reference on corporate production capacity(Widhoyoko et al., 2018). Despite this irrelevance to the value creation, Johnson (2008) explains how building a proper business model cannot be separated from both revenue and cost structure due to the importance in gross margin and resource velocity projection presented on the model. In other words, business model must be able to explain how well a firm could generate economic value for itself [21][22]. Specifically, in order to produce a new value of preposition, and in the light of strategic management; a design thinking of new value must present product’s blueprint and prototype. This is pivotal to face the era of disruptive innovation [23].

B. The Role of Design Thinking in Innovation

Design thinking is a terminology used in business directed on innovation. This research reframes design thinking purposively to get both how an idea of product changes is built and a manner representing the output. Fundamentally, Brown (2008) subjectively grounds an understanding of design thinking on past experience. Design thinking is an ability to think and design-society-fitted modification. A good design thinker is as a person with empathy, integrative thinking, and optimism (perceived by Brown as intuitive ability). In spite of such abilities, design thinking requires analytical skills in both experimental and collaborative actions (Brown, 2008). In this research, the use of design thinking is considered to be relevant due to preliminary prioritization on customers’ perception towards products. In other words, the term empathy (by considering “people first”) confirms the emergence of analysis on customers’ reaction [24] throwing-off business self-centered approach. In a more purposive way, firms could consider to adjust their business processes with market expectation [40][42][41].

Another perspective is, Guba (1990) argues that if foregoing approach is considered positivistic, there is an emergence of presenting how a thing goes on. In other words, a framework containing elements integrated to one each other must represent the genesis of a theory (Guba, 1990). Brown (2008) presents design thinking in theoretically conforming such requirement. Design thinking contains three interrelated aspects i.e. implementation, inspiration, and ideation.

This epistemology starts on how everything got tweaked, brainstormed, and executed. Each steps contains (1) inspiration is started from market observation triggering business constraints, and interdisciplinary analysis, (2) ideation is emerged from the idea resulted in the end phase of inspiration which will be structured in the form of multiple scenarios in order to create a profound product definition, and (3) implementation is resulted from a clear description which is able to create a guidance for future production strategy [25].

This flow of mapping strategy is assumed to be contextual in any business model structure [44][43].

At last, the key point of a theoretical model is its operationalization. Therefore, in the context of innovation, design thinking provides an example on putting scenarios in sequence(Brown, 2008). This could be meant that, innovation must be triggered by, executed through, and placed in certain market zone following the customers’ behavior [26]. According to Guba (1990), this paradigm is by far, the most convenient telescope to use in the context of viewing a specific discipline. Moreover, taking innovation canvas into a new construct built on the foundation of reality (called: realism-constructivism) (Guba, 1990). However, there is a requirement in business to turn this model into a translatable language. Hence, both Drucker (1985) and Brown (2008) suggests a minor and supplementary element in order to create product perception in both sales managers and customers. Accordingly, this is a
useful tool to attract consumers which then, all constructed scenarios can be used as a marketing strategy [27][28][29].

IV. DISCUSSION

A. Building an Innovation Tool

Even though innovation is based on its process finding a novelty, it does not mean innovation merely about creating a radical product but it is to improve add value to the existing product [30][31]. The object of innovation itself does not only apply on tangible, but also intangible forms of existences; e.g., system (Hamadu et al., 2011), organization [47], customers’ feeling (Kohli & Jaworski, 2004), and perception [32][33]. Innovation is an end-form of a systematic changes. Kotler and Keller (2009) perceives innovation more as a choice. Any entrepreneur could choose to create goods or services which are either opportunistic (replicate to aim on minor income from huge customers) or idealistic (compete to aim to take over big portion of potential customers). Grounding on both points of view, strategies and plans are set up mainly for creating new value of segment, preposition, and network. These composite a new value chain creating customer value (Kotler & Keller, 2009).

A further subject to be discussed is how to build a systematic tool for innovation. Eberle (1996) presents a model called SCAMPER (an abbreviation of keywords: “Substitute”, “Combine”, “Modify/Maximize/Minimize”, “Put-to-Another-Use”, “Eliminate” and “Reverse”). In providing simple innovation brainstorming, SCAMPER is considered effective, many researches have shown the effectiveness of SCAMPER technique [3]. Another advantage is its versatility. SCAMPER is a tool that allows its users to think laterally and sporadically regarding to idea visualization [34][35][36]. This should not be interpreted as either illogical or unstructured rather, this tool organizes all ideas into a more readable form. Further, due to all these advantages, SCAMPER is considered useful for managerial decision making [37]. Despite its effectiveness, it seems that there are overlaps amongst keywords leading to confusion. Table 1 shows several keywords on SCAMPER model colliding to one each other as a basis to build new framework.

Table 1. How SCAMPER’s Elements Could Collide One Each Other

<table>
<thead>
<tr>
<th>Overlap Points</th>
<th>How it Overlaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modify/Maximize/Minimize</td>
<td>Adapt</td>
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</tbody>
</table>
| “Adapting” a product to serve another use has the same meaning with “Modify/Maximize/Minimize”.
| Put to another use | Adapt |
| “Put the another use” has the same meaning with “Adapt” a new context.
| Reverse | Modify |
| “Reverse” has the same meaning with “Modify” its sequence of the process.

To respond, this study proposes actionable thinking frameworks adopted from SCAMPER triggering innovation: Adding, Eliminating, Modifying, Replacing, Utilizing (AEMRU). The Figure 1 below shows definition for each element.

Innovation canvas is a tool to structure the innovation process based on customers’ needs. It is an iteration process where all blockshare interdependence and influencing each other. This canvas consists of three major section: (1) Segmentation, (2) Innovation and (3) Validation. Segment is a section where the innovation comes from. In this section, a group of customer is picked for their pain are to be exercised. In the middle of the stage, which is the core of the canvas, Information gathered from previous section become the inputs to the innovation process where AEMRU technique takes place. The result is to be confirmed through Prototype. It is built as a new value proposition that needs to be validated by the market.
The Innovation Canvas is operationalized consecutively from one section to the other whereas AEMRU is treated differently. AEMRU is a set of lists of idea of product change emerged laterally. Previous scholarships in business model built an ontological model attempting to portray business through elements constructing it [38][39]. Several researches also provide how business model is brought to epistemological perspective attempting to include issues related to business[2]. This model combines both style by treating AEMRU as ontology and the canvas cycle as chronological epistemology. Figure 3 shows how the design thinking of innovation canvas.

V. CONCLUSION

Both new players and market leaders are now facing the world without limit whereas, innovation can be initiated by any entrepreneurs unpredictably. Those apathetic players should not expect themselves to be sustainable. Business model offers tools in mapping general circumstances of business trends. However, this do not stimulate users to brainstorm possible changes which might elevate their product in another stage of excellence. A well-known tool provided for innovation mapping (SCAMPER) is acknowledged to be an ultimate framework solving the problem of innovation. However, there are inexistences of its backgrounds and outputs. In addition, this research perception towards SCAMPER brings another problem of terminological overlaps. Corresponding these circumstances, innovation canvas is made to bridge all these issues whereas, its cycle is its epistemology and its engine is its ontology. This framework enables entrepreneurs to think laterally for innovation as it has sporadic process. More importantly, this canvas is operationalized conveniently due to its chronological process. Its process containing the element of design thinking enables users to evaluate the product output accordance towards market expectation. This novelty is claimed to be one solution for current business requirement.

REFERENCES

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