Pertanika J. Soc. Sci. & Hum. 28 (2): 847 - 865 (2020)

PERTANIKA JOURNALS

SOCIAL SCIENCES & HUMANITIES

Journal homepage: http://www.pertanika.upm.edu.my/

Disruptive Business Model Innovation in Indonesia Digital Startups

Kurnadi Gularso[1]*, Tirta Nugraha Mursitama[2], Pantri Heriyati[3] and Boto Simatupang[4]

Management Department, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta 11480, Indonesia

ABSTRACT

Many studies have investigated how incumbents react to disruptive business model innovation. However, how digital (tech) startups as the initiator performs business model innovation that consciously or not disrupts incumbents from various industries, has not yet been widely analyzed empirically. This study employed a quantitative method with Partial Least Squares-Structural Equation Modeling (PLS-SEM) using SmartPLS 3 software to present and analyze the data. The sample of Indonesia digital startups was taken from the list managed by DailySocial, an Indonesia digital media startup. A self-administered questionnaire was distributed among the Founders and or C-Level of Indonesia startups adopting a random sampling technique. The findings of this study showed that startups apply disruptive business model innovation to survive and scale-up. This study also suggested some predictors of disruptive business model innovation. As an alternative to implementing dynamic capabilities, startups need to have transformation capability in the form of continuous reconfiguration capability; leadership aspects, especially entrepreneurship mentality, which are embodied in strategic orientation; and stakeholder management support.

Keywords: Continuous reconfiguration capability, disruptive business model innovation, startups, strategic orientation, stakeholder management

ARTICLE INFO

Article history:
Received: 18 December 2019
Accepted: 06 January 2020
Published: 26 June 2020

E-mail addresses:
kurnadi.gularso@binus.ac.id (Kurnadi Gularso)
tmursitama@binus.edu (Tirta Nugraha Mursitama)
pheriyati@binus.edu (Pantri Heriyati)
bsimatupang@binus.edu (Boto Simatupang)
* Corresponding author

INTRODUCTION

Digital (tech) startups (referred to "startups" in this study) have industrialized rapidly around the world, including in Indonesia, especially in the 4.0 Industrial Era, as many traditional industries are facing disruption. Many startups perform new business

ISSN: 0128-7702
e-ISSN 2231-8534

models to survive and scaling-up (Balboni et al., 2014; PricewaterhouseCoopers, 2013). As opposed to startups, incumbents prefer implementing sustaining innovation to disruptive business model innovation (shortened as "DBMI") because the latter is not financially interesting (Christensen, 2006).

Two kinds of generic strategies are used for responding to DBMI namely explorative adoption of a disruptive business model and exploitative strengthening of an existing business model (Osiyevskyy & Dewald, 2015). These two kinds of responses do not include the innovation of a business model but instead involve adaption and evolution (Foss & Saebi, 2016). Today, there are many studies on how incumbents respond to DBMI. However, there is little research on disruptive business model innovation conducted by a disruptor, especially by digital (tech) startups.

Previous research focused on how a firm responds to disruptive innovation, specifically DBMI (Habtay & Holmén, 2014; Karimi & Walter, 2016; Osiyevskyy & Dewald, 2015) and others. Several studies focus on a firm as an initiator of DBMI as well. However, most of these studies are simply literature/on desk studies as well as case studies, for instance, Attias (2017), Chu (2017), and Aminoff et al. (2017).

Dynamic capabilities are pivotal to respond to the rapid change of the business environment to enable the successful transformation that is called reconfiguration (Teece, 1997, 2007). Dynamic capabilities affect the company in creating disruptive innovation (Čiutienė & Thattakath, 2014). This study will investigate this reconfiguration capability as one of the antecedents of DBMI, which acts as a transformation capability.

This study focuses on how startups, which are from multiple industries, manage their businesses to sustain and achieve scale up by executing DBMI as disruptors. This study sets Indonesian startups as a specific object with empirical field research.

A research question of this study is, "What are the predictors of DBMI, and how do these enable Indonesia startups to attain DBMI, which makes their businesses sustainable and scale up?" The purpose of this study is to present guidance to entrepreneurs on either startups or incumbents on how to understand the way startups disrupt routine business, including how to implement DBMI.

The same as startups around the world who are facing a high failure rate as much as 90% (Patel, 2015), Indonesia startups have been facing such a problem as well, perhaps even worse. Some researchers conclude that the primary cause of startup failure, according to the founders, is because the business model is not viable (Truong, 2016). Aside from that, especially for Indonesia startups, they do not have an adequate ecosystem to nurture them. However, it is not a sustainable business issue that engenders the growth of the startups' number as the only challenging problem; thus, scaling up Indonesia startups is also another issue (Widjaja, 2017).

Literature Review

This literature review discusses disruptive business model innovation, predictors of DBMI, including continuous reconfiguration capability, stakeholder management, and strategic orientations focused on entrepreneurship orientation and strategic innovation orientation, including marketing orientation and technology orientation. A discussion of startups as a research context will precede this section.

Startups

There is no widely agreed definition of startups. According to Ries (2011), a startup is an organization dedicated to creating something new under conditions of extreme uncertainty. The definition of startups in this study refers to Ries (2011). This study defines a startup as "an organization with efficient resources and entrepreneurship mentality to persistently create something new in the VUCA (volatility, uncertainty, complexity, ambiguity) business environment, through good product/services innovation, process/technology innovation, and business model innovation to achieve a scalable, repeatable, profitable business model, which involve internal and external resources supported by relevant technology, which can give value to users of its products/services" (Blank & Dorf, 2012; Hall, 2011; Ireland, 2017; Robehmed, 2013; Ries, 2011; Sawers, 2011). Therefore, the purpose of startups is always to offer a better solution for targeted customers through the provision of products/services or another cutting-edge means through which business is delivered.

Startups are encouraged to consciously create existing business opportunities especially given broader funding (Kanze & Iyengar, 2017) by always meeting customers' needs, which have not been appropriately satisfied or have not yet been served at all. As a disruptor, it does not mean a negative connotation but rather to encourage and stimulate to find an alternative to the existing business model.

Triggered by inferior internal resources, startups can conduct DBMI to challenge incumbents by creating new opportunities (Christensen et al., 2015). Moreover, this situation can also support these startups to have an alliance with partners in targeting an ignored market such as the low-end market.

Disruptive Business Model Innovation

The definition of business model innovation remains unclear (Foss & Saebi, 2017). According to some literature, business model innovation appertains disruptive innovation (Markides, 2006; Voelpel & Leibold, 2004). According to Markides (2008), DBMI is fundamentally different from disruptive technology/product innovation. However, many scholars have argued that business model innovation is a new thing not only for firms but also for industries (Foss & Saebi, 2016).

This study defines disruptive business model innovation as "changes in the architectural design to include fundamentally different content, structure, and governance through resource reconfiguration of both tangible and intangible assets so that they can excel in the arena of competition

or competitive advantage and finally achieve value creation for a company and its stakeholders, namely customers, suppliers, and partners" (Amit & Zott, 2012; Casadesus-Masanell et al., 2013; Markides, 2006; Santos et al., 2009). Disruption related to the market includes two new dimensions: low-end foothold disruption and new-market foothold disruption (Christensen et al., 2015).

Many studies related to DBMI indicate that they are different from business model innovation in general. Those studies aimed to illustrate the incumbent adoption of this disruption. There has been little research on how startups from the perspective of startup entrepreneurs as new entrants act as initiators in conducting DBMI. Most DBMI implementation searches for opportunities from unserved customers through low-cost offerings, and eventually, they take over the incumbents' market share (Charitou & Markides, 2003; Markides, 1997, 1998, 2006).

Of the many studies about responding to DBMI, Zhang et al. (2017) studied DBMI as an initiator strategy. The authors used multiple comparative case studies on a single industry which are internet financial service firms in China. The study resulted in suggestions on how to drive the process to perform DBMI. Table 1 shows several recent studies on DBMI. It is different from those previous studies since this study focuses on DBMI as a first-mover strategy and its predictors via empirical research on Indonesia startups.

Predictors of Disruptive Business Model Innovation

The predictors of DBMI in this study include three aspects: 1) dynamic capabilities of an organization's predominant transformation capability; 2) leadership expressed in entrepreneurship mentality and embodied in strategic orientation; and 3) as a support, management of stakeholders that stress four primary stakeholders, including customers, partner, employees/talent, and government.

Startups should have dynamic capabilities to respond VUCA. Dynamic capabilities are "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments." And one of its dimensions that is reconfiguration capabilities is crucial because they encourage transformation (Teece, 2007). Reconfiguration should be done continuously because the continuous flow of dynamic capabilities enables organizations to take new strategic opportunities in the face of volatility in the environment (Vivas López, 2005), which include the capabilities to become active enablers of the creation of disruptive innovation (Čiutienė & Thattakath, 2014; Teece, 2018; Teece et al., 2009).

Continuous reconfiguration capability has relations with a strategic orientation, especially marketing orientation and entrepreneurial orientation (Kiiru, 2015; Kiiru et al., 2013). Various studies also show that strategic orientation comprises 1) entrepreneurial orientation, which is involved in dynamic capabilities, and 2) strategic innovation orientation, including marketing

Table 1
Studies on DBMI, previous and this research

Authors	Year	Title	Country & Industry	Research type	Description
Sabatier et al.	2012	When technological discontinuities and disruptive business models challenge dominant industry logics: Insights from the drugs industry	Europa: Drug industry with four types: software as a service, platform technologies, bundling, collaborative discovery	Qualitative & Case studies	The study found three triggers of change in high technology fields, technological discontinuities to disrupt an industry's dominant logic. It suggests initially entrants' business model that fits into the dominant logic and value chains remain unchanged, after technologies evolve and uncertainty decreases, disruptive business models may emerge.
Habtay & Holmén	2014	Incumbents' responses to disruptive business model innovation: The moderating role of technology vs. market-driven innovation	South Africa: Mobile communications, insurance, banking, and airline industries.	Comparative multiple case studies to build conceptual model	It is different from incumbents' response to disruptive technology innovations, incumbents response to market-driven innovations can succeed in managing both disruptive and sustaining innovations without setting up structurally separated business units.
Amshoff et al.	2015	Business model patterns for disruptive technologies	Germany: Engineering Companies	Conceptual paper	The study presents a methodology for pattern-based business model design simplifying the development and analysis of business models for disruptive technologies.
Osiyevskyy & Dewald	2015	Explorative versus exploitative business model change: The cognitive antecedents of firm-level responses to disruptive innovation	Canada: Real estate brokerage industry	Quantitative	Firms respond to DBMI by two generic strategies: (1) explorative adoption; and (2) exploitative strengthening of the existing business model. The study tested the cognitive antecedents of managerial intentions for both strategies. Some cognitive antecedents are found either positive or negative associations to the two kinds of adaptation.
Karimi & Walter	2016	Corporate Entrepreneurship, disruptive business model innovation adoption, and its performance: The case of the newspaper industry	USA: Traditional newspaper	Quantitative	Companies as incumbents respond to disruptive business model innovation by corporate entrepreneurship attributes. All attributes have positive associations with the extent of adoption of DBMI except innovativeness. Adoption shows a nonlinear association with business model performance.
Rusitschka et al.	2016	Disruptive potential and business model innovation through elastic Microgrid-As-A-Service (MAAS) platforms	Germany: MAAS	On desk/ literature study	The emerging "dynamic microgrids" becomes disruptive potential and business model innovation through microgrid-as-a-service (MAAS) providers.

Table 1 *(continue)*

Authors	Year	Title	Country & Industry	Research type	Description
Attias	2017	The autonomous car, a disruptive business model?	France: Automobile	On desk/ literature study	The development of self-driving car innovations and potentially disruptive business models by digital companies.
Chu	2017	Business model revolution: Four cases of the fastest-growing, disruptive companies of the twenty-first century	Worldwide: Four large digital (tech) startups	On desk/ literature study	The capability of business model innovation becomes key for long-term survival in a turbulent and fast-changing environment. Without BMI, competitive advantage is likely to become less and less sustainable in the future.
Aminoff et al.	2017	Exploring disruptive business model innovation for the circular economy	Finland: Industrial companies	On desk/ literature & conceptual study	The study develops a conceptual framework for shaping the industrial systems towards circular economy (CE) ecosystems through disruptive business model innovations and proposes value circles and co-creation of value are crucial aspects in enabling CE.
Zhang et al.	2017	Exploring the multi-phase driven process for disruptive business model innovation of e-business microcredit: A multiple case study from China	China: e-Business microcredit firms	Multiple comparative case study	There are three phases that drive the DBMI of e-business microcredit firms. Several integrated forces drive the process, i.e., market, technology, policy, competition, and entrepreneurs' groups.
Vorbach et al.	2017	Business model innovation vs. business model inertia: The role of disruptive technologies	Europa: N.A.	On desk/ literature study	It discusses the impact of disruptive technologies on BMI and the factors that hinder the adoption of new technological developments.
Watanabe et al.	2018	Digital solutions transform the forest-based bio-economy into a digital platform industry - A suggestion for a disruptive business model in the digital economy	USA and Finland: Online retail (Amazon) and forest-based bio-economy, pulp and paper and other bio-products (two Finland firms).	On desk case study	Study on effects of creative disruption in downstream on the market value increase in upstream firms. The impact of this digital-solution-driven transformation stream is dynamism transforming the forest-based bio-economy into a digital-solution-driven creative disruption platform. It also gives a significant impact on the whole value chain ecosystem of the forest-based bio-economy.
Gularso et al.	2018	Disruptive business model innovation in Indonesia digital startups	Indonesia: Digital startups	Quantitative empirical study	Study on how digital startups are initiating disruptive business model innovations. It shows three predictors: transforming capability as the enabler to innovation implementation, leadership embodied in entrepreneurship mentality, and stakeholder support.

orientation and technology orientation, with mixed dimensions, which has a positive relation with innovation, including business model innovation (Bouncken & Lehmann, 2016; Chomvilailuk, 2016; Mütterlein & Kunz, 2017; Teece, 2018; Tacheva, 2007; Vázquez et al., 2001).

The following two hypotheses express two relationships, i.e., between continuous reconfiguration capability and strategic orientation as well as DBMI:

H1: Continuous reconfiguration capability is positively related to disruptive business model innovation.

H2: Continuous reconfiguration capability is positively related to strategic orientation.

According to Geissdoerfer et al. (2017), the first stage of the business model innovation process is ideation, which includes the purpose of innovation and the definition of critical stakeholders. Stakeholder management is a dynamic and essential aspect of creating a value proposition. Porter argued that, if stakeholder management is aligned with the strategic positioning of firms, these firms will create a competitive advantage. However, to some extent, stakeholder cohesion may reduce the propensity for innovation and change (Minoja et al., 2010).

Startups who are conducting disruptive innovations will attract affected stakeholders' attention related to the concerned disruption either directly or indirectly. Instead of considering stakeholders who are affected due to the innovation, startups must focus on customers and products/services development to grow their business (Giardino et al., 2014; Rais & Goedegebuure, 2009). However, specific stakeholders cannot be avoided and will take up their focus when startups reach a particular stage in doing their business (Ter Halle & Ruel, 2016). A study conducted on Taiwanese service and manufacturing companies shows that pressure from competitors, governments, and employee conduct has a significant and positive effect on green innovation practices (Weng et al., 2015).

Following the "startups" definition of this study, we argued that startups are required to have a disruptive innovation mentality to be successful. It means that the implementation of a company strategy should base on stakeholders primarily: 1) targeted customers, 2) talents/employees who become enablers of innovation, 3) partners in operational as well as financial aspects, and 4) government generally ignored by startups in the early stages not to be inhibitors of innovation created. Thus, this study focused on those four stakeholders.

The relationship between stakeholder management and strategic orientation, as well as DBMI, are set out in the following two hypotheses:

H3: Stakeholder management is positively related to disruptive business model innovation.

H4: Stakeholder management is positively related to strategic orientation.

Some implications of strategic orientation are innovation capability/ innovation success and competitive advantage towards market performance. Further, various innovation capabilities are marketing innovation, product innovation, and process innovation (Tutar et al., 2015). While, two important types of innovation is radical and disruptive innovation those are aimed at dealing with an uncertain environment through product innovation, processes, and business models. The new business models eventually cannibalize a firm's prior business model (Obeidat, 2016). These studies have explained that the consequences of strategic orientation are business models innovation, which might have a disruptive impact.

Furthermore, the relationship between strategic orientation and DBMI is set out in the following hypothesis:

H5: The positive relationship exists between strategic orientation and disruptive business model innovation.

MATERIALS AND METHODS

The objective of this study was to examine how DBMI was organized and implemented in its antecedent of the VUCA business environment in the context of Indonesia startups. Based on the hypotheses, the relationship among potential variables was analyzed using partial least squares-structural equation modelling (PLS-SEM).

Research Design

This study employed a quantitative method with a cross-sectional survey using a questionnaire with a Likert four scale was used to avoid tendencies to centre answers. The questionnaire was formed using Google Forms and majority distributed online (more than 98%), either through email or WhatsApp, Line, and Telegram or for a relatively small portion (less than 2%) through offline by directly distributing the hardcopy questionnaire to Founders and or C-Level of Indonesia startups from January to May 2018. To ensure that the questionnaires were filled out by the intended respondents, the forms were distributed through related personal accounts.

The sample of 327 startups was taken randomly from the population of Indonesia startups, amounting to 772 within the list owned by DailySocial, an Indonesia digital media startup, as per 31 December 2017. A total of 62 startups from the sample could not be reached. Thus, the remaining 265 questionnaires were distributed. The total number of the returned questionnaires was 107 equals to 32.7% of the total sample or 40.4% of the distributed questionnaires.

Nulty (2008) suggested guidance to prevent the potential for systematic sample bias that under 'Stringent conditions' (3% sampling error and 95% confidence) for an online survey with data size between 750 and 1000, the required response rate was about 41% and 48%. Nulty (2008) also presented data based on several researchers; the average response rate for online surveys

was 33%. This study data collection rate above is moderately close to the required response rate and could be deemed as adequate.

The theoretical objective of this study was primarily to predict and identify the relationships between continuous reconfiguration capability and stakeholder management in achieving DBMI through strategic orientation, as depicted in Figure 1.

Partial least-squares structural equation modelling (PLS-SEM) was used to develop theories and to asses measurement (individual constructs) and structural (the relationships between constructs) models, especially when the sample size was small (Reinartz et al., 2009). The results of the multivariate analysis using this PLS-SEM were then confirmed by several small group discussions with some business communities of business people/managers and investors/venture capitalists.

RESULTS AND DISCUSSIONS

The data from 107 respondents were processed using SmartPLS 3 software and then analyzed using a two-step approach to assess the partial model structures using the measurement model (outer model) and the structural model (inner model). After that, an analysis using the importance-performance matrix analysis (IPMA) approach (Hair et al., 2014) was conducted to provide the findings for managerial actions and suggestions. Descriptive analysis, including discussions, results with Founders and or C-Level, and investors were added as an interpretative explanation of the result. Two highlights of respondents' profiles are types of startups and compound annual growth rates (CAGR). There are nine types of startups and other types (Figure 2). The most are startups are marketplace and e-commerce. Almost half of the total respondents admitted more than 50% of CAGR (Figure 3).

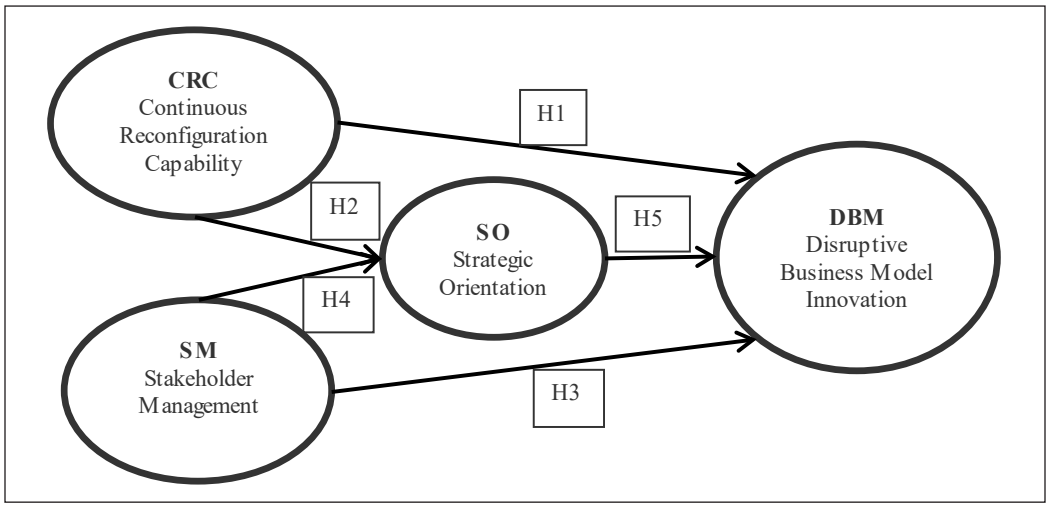

Figure 1. Conceptual model

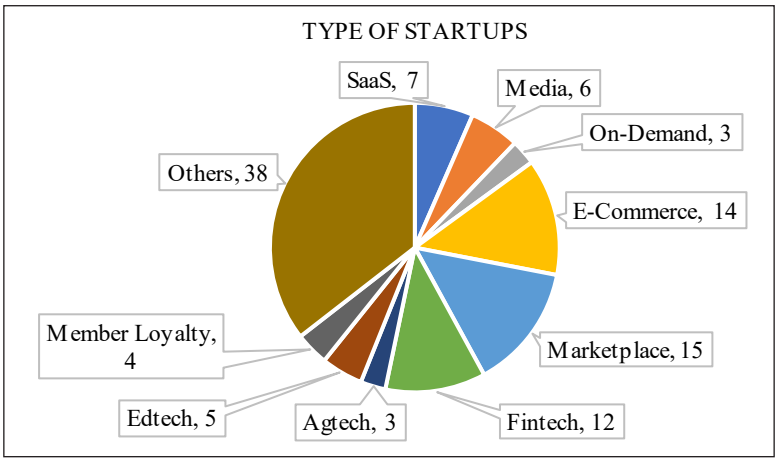

Figure 2. Type of startups

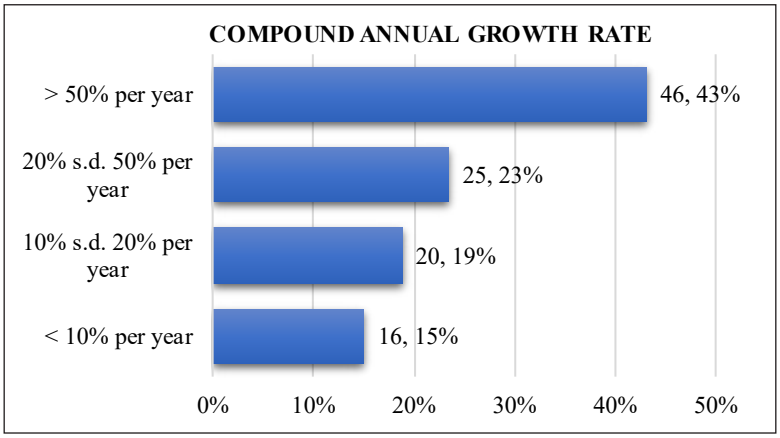

Figure 3. Compound Annual Growth Rate (CAGR)

This study applied structural equation modelling (SEM) for multivariate data analysis. All indicators in this study were reflective measures. Thus, they were analyzed based on internal consistency reliability and validity, including composite reliability, individual indicator reliability, average variance extracted (AVE) to evaluate the convergent validity, and cross-loadings as well as the Fornell-Larcker criteria to assess discriminant validity.

Instead of applying the Cronbach's alpha, Hair et al. (2014) recommended applying composite reliability to measure internal consistency, in which all result values were within and above a satisfactory range of 0.70 to 0.90 (Nunnally & Bernstein, 1994). The AVE values are all above the 0.50 threshold. Thus, the constructs explain more than half of the variance of its indicators. The reflective measurement models are presented in Table 2.

Table 2
Results summary for reflective measurement models

Latent variable	Indicators	Loadings	Indicator reliability	Cronbach Alpha	Composite reliability	AVE	Discriminant validity
CRC	*crc_1*	0.754	0.569	0.836	0.883	0.601	*Yes*
	crc_2	0.770	0.592				
	crc_3	0.793	0.629				
	crc_4	0.811	0.658				
	crc_5	0.747	0.558				
DBMI	*dbmi_1*	0.699	0.489	0.740	0.835	0.560	*Yes*
	dbmi_2	0.799	0.639				
	dbmi_3	0.744	0.553				
	dbmi_4	0.747	0.558				
SM	*sm_1*	0.765	0.585	0.858	0.898	0.639	*Yes*
	sm_2	0.721	0.519				
	sm_3	0.836	0.699				
	sm_4	0.825	0.680				
	sm_5	0.843	0.710				
SO	*so_1*	0.617	0.381	0.798	0.858	0.508	*Yes*
	so_2	0.522	0.272				
	so_3	0.691	0.477				
	so_4	0.830	0.689				
	so_5	0.816	0.666				
	so_6	0.750	0.562				

Subsequently, for the evaluation of structural models, Hair et al. (2014) suggested using the following key criteria: collinearity issues (VIF), the level of R^2 values, the f^2 effect size, the predictive relevance (Q^2), and the significance of the path coefficients. However, the goodness-of-fit (GoF) measurement is not applicable to this PLS-SEM. VIF results are within a tolerance value of 0.2 or lower and a value of 5 or higher, as shown in Table 3, which means all are free from collinearity problems.

Table 3
Evaluation of structural models

	DBMI				SO			
	Inner VIF	Path Coefficients	t-Value	f^2 Effect Size	Inner VIF	Path Coefficients	t-Value	f^2 Effect Size
CRC	1.188	0.120	1.429	0.020	1.104	0.233	2.087	0.077
SM	1.476	0.244	1.726	0.067	1.104	0.487	5.244	0.337
SO	1.565	0.399	3.145	0.169	-	-	-	-

R^2 values show that exogenous latent variables CRC and SM explain 36.1% of the variance in the endogenous latent variable SO. Likewise, latent variables CRC, SM, and SO explain 39.7% of the variance in the endogenous latent variable DBMI. Further, because the R^2 values are above 0.25, the number of sample size in this research (107) is adequate (Cohen, 1992). Meanwhile, all Q^2 values are higher than 0, which means that the exogenous construct has predictive relevance for the two endogenous constructs under consideration. The results of R^2 and Q^2 values are shown in Table 4.

Table 4
Results of R^2 and Q^2 values

Endogenous Latent Variable	R^2 Value	Q^2 Value
DBMI	0.397	0.183
SO	0.361	0.166

The effect size f^2 values are compared with thresholds of 0.02, 0.15, and 0.35, which indicate that the effects of an exogenous construct on an endogenous construct are small, medium, and large, respectively. From the f^2 values, it can be seen that CRC has a small effect on DBMI and relatively small to medium effect on SO. SM has also small to medium effect on DBMI. SO has a relatively medium effect on DBMI, while the SM variable has also a medium to large effect on the SO construct. The effect size of f^2 values is shown in Table 3.

The path coefficient values results (Table 3) are aligned with the *t*-value, which determines that the significance of the relationship between two variables with a threshold of ≥ 1.96 is significant using a two-tailed test with significance level = 5%. We find that all relationships in the structural model are significant, except CRC → DBMI and SM → DBMI.

The results confirm the significant roles of the two exogenous variables, the endogenous variable, as well as the final dependent variable that is a disruptive business model innovation that is shown in the research model. The implementation of disruptive business model innovation to the context of the research "startups" confirms the vital role of the business model in startup success, survive, and scale up as a former study by Balboni et al. (2014). Table 5 shows the summary results of hypothesis significance testing.

The study also proves that there are predictors as an alternative implementation of dynamic capability. The dynamic capability is made from the superposition of 1) continuous reconfiguration capability; 2) stakeholder management that focuses on customers, talents, partners (operational and financial aspects), and government to achieve 3) strategic orientation that focuses on entrepreneurial, marketing, and technology orientation. This alternative embodiment of dynamic capability had supported the previous studies namely Kiiru et al. (2013), Szymaniec-Mlicka (2016), Tutar et al. (2015), and Obeidat (2016).

From the results of the discussions, many startups recommend to not merely focus on profit-oriented but more oriented to customer need that is explicitly not been

Table 5
Results of hypothesis significance testing

Effect of Latent Variable	Hypothesis	Path Coefficient	t-Value	Conclusion
Continuous Reconfiguration Capability (CRC) has a positive relation with Disruptive Business Model Innovation (DBMI).	*H1: Continuous Reconfiguration Capability (CRC) is positively related to Disruptive Business Model Innovation (DBMI)*	*0.120*	*1.429*	*H1 is rejected, t-value is < 1.96, and there is no significant effect. Data do not support the hypothesis.*
Continuous Reconfiguration Capability (CRC) has a positive relation with Strategic Orientation (SO).	H1: Continuous Reconfiguration Capability (CRC) is positively related to Strategic Orientation (SO)	0.233	2.087	H1 is accepted, t-value is ≥ 1.96, and there is a significant positive effect. Data support both hypothesis and research model.
Stakeholder Management (SM) has a positive relation with Disruptive Business Model Innovation (DBMI).	*H1: Stakeholder Management (SM) is positively related to Disruptive Business Model Innovation (DBMI)*	*0.244*	*1.726*	*H1 is rejected, t-value is < 1.96, and there is no significant effect. Data do not support the hypothesis.*
Stakeholder Management (SM) has a positive relation with Strategic Orientation (SO).	H1: Stakeholder Management (SM) is positively related to Strategic Orientation (SO)	0.487	5.244	H1 is accepted, t-value is ≥ 1.96, and there is a significant positive effect. Data support both hypothesis and research model.
Strategic Orientation (SO) has a positive relation with Disruptive Business Model Innovation (DBMI).	H1: The positive relationship exists between Strategic Orientation (SO) and Disruptive Business Model Innovation (DBMI)	0.399	3.145	H1 is accepted, t-value is ≥ 1.96, and there is a significant positive effect. Data support both hypothesis and research model.

served by existing players/incumbents. One of Indonesia Unicorn startup founders argues: "In building startups, instead of focusing on the profit that we will get later, we focus on products/services those are needed by targeted customers." This assertion supports the role of strategic orientation as a guideline for all member of the organization as described above.

CONCLUSION

Organizations need DBMI to survive and grow. Its implementation requires its predictor, which is dynamic capabilities, in the form of entrepreneurial activities (Foss & Saebi, 2016). In this study, these activities appear in some predictor variables. This study is about predictors of DBMI, which tested the relationship between variables using a structural equation model in the context of Indonesia startups.

The strategic-orientation construct in startups focuses on entrepreneurship and strategic innovation orientation, including marketing and technology orientation. This focus is consistent with that of previous studies stating that startups focus on customers and products/services development to grow a business (Giardino et al., 2014). Entrepreneurship orientation is needed because scale-up is essential for startups. This orientation is following the startups' definition of this study, in which entrepreneurship mentality is essential to make a business grow by conducting DBMI which is something new that gives more value to customers. This characteristic also distinguishes startups with a small business owner (Carland et al., 2013) or large-scale incumbent, which tends to sustain innovation (Boons & Lüdeke-Freund, 2013; Christensen, 2006).

Besides evolution through sustainable innovation and adaptation by conducting adoption DBMI, an organization needs to set aside the allocation of its resources to respond to the VUCA environment by working to build a dynamic culture that is as the initiator of DBMI by looking for new opportunities for customers, especially neglected low-end customers.

It is interesting to note that the DBMI, which has predictor dynamic capabilities, in this research is not only in the form of continuous reconfiguration capability and strategic orientation variables but is also a stakeholder management variable. This study also offers insight for startups in underscoring the focus target of customers as well as talent/employees and partners at an early stage. Startups also need to harvest concern for stakeholder regulations/ government in the right momentum.

Limitations and Recommendations for Further Research

Due to the consideration of the number of startups, some of the possible influencing aspects are not measured as the limitations of this study. However, the results of this study are satisfactory as preliminary research to be followed up by further researches on strategy and growth management of digital startups. Future researches should consider aspects such as the age and scale of organization,

the existence of investors/venture capitals, and the maturity of Founders and or C-Level that can be used as control variables.

ACKNOWLEDGEMENT

We would like to express our gratitude to all parties who helped this study. They are the Ministry of Communication and Information Technology Indonesia (Kementerian Kominfo), Indonesian Agency for Creative Economy (Badan Ekonomi Kreatif Republik Indonesia), DailySocial, startups in Indonesia (Founders and or C-Level), incubators, investors, and/or venture capitals. Those parties have helped us by offering insights, answering questionnaires, and remaining active in discussions. We also sincerely thank Bina Nusantara University, especially the Doctor of Research in the Management Program Department and also the alumni who provided the necessary facilities.

REFERENCES

Aminoff, A., Valkokari, K., Antikainen, M., & Kettunen, O. (2017). Exploring disruptive business model innovation for the circular economy. In G. Campana, R. J. Howlett, R. Setchi, & B. Cimatti (Eds.), *Sustainable design and manufacturing 2017* (pp. 525-536). Cham, Switzerland: Springer.

Amit, R., & Zott, C. (2012). Creating value through business model innovation. *MIT Sloan Management Review, 53*(53310), 41-49. doi:10.2139/ssrn.1701660

Amshoff, B., Dülme, C., Echterfeld, J., & Gausemeier, J. (2015). Business model patterns for disruptive technologies. *International Journal of Innovation Management 19*(3), 1-22. doi:10.1142/S1363919615400022

Attias D. (2017) The autonomous car, a disruptive business model? In D. Attias D. (Ed.) *The automobile revolution* (pp. 99-113). Cham, Switzerland: Springer.

Balboni, B., Bortoluzzi, G., Tivan, M., Tracogna, A., & Venier, F. (2014). The growth drivers of start-up firms and business modelling: A first step toward a desirable convergence. *Management, 9*(2), 131-154.

Blank, S., & Dorf, B. (2012). *The startup owner's manual: The step-by-step guide for building a great company*. Pescadero, California: K&S Ranch, Inc.

Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. *Journal of Cleaner Production, 45*(1), 9-19. doi:10.1016/j.jclepro.2012.07.007

Bouncken, R. B., & Lehmann, C. (2016). The role of entrepreneurial orientation and modularity for business model innovation in service companies. *Katharina Fellnhofer, 8*(3), 237-260.

Carland, J. W., Hoy, F., Boulton, W. R., & Carland, J. A. C. (2013). Differentiating entrepreneurs from small business owners: A conceptualization. *Academy of Management Journal 9*(2), 354-359.

Casadesus-Masanell, R., & Feng, Z. (2013). Business model innovation and competitive imitation: The case of sponsor-based business models. *Strategic Management Journal, 34*(4), 464-482.

Charitou, C., & Markides, C. (2003). Responses to disruptive strategic innovation. *Sloan Management Review 44*(2), 55-63.

Chomvilailuk, R. (2016). Disruptive innovation, entrepreneurial marketing, and competitive advantages. *The International Journal of Business and Economics, 8*(1), 1-33.

Christensen, C. M. (2006). The ongoing process of building a theory of disruption. *The Journal of Product Innovation Management*, *23*(1), 39-55.

Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). *What is disruptive innovation?* Retrieved January 1, 2018, from https://hbr.org/2015/12/what-is-disruptive-innovation

Chu, R. (2017). Business model revolution: Four cases of the fastest-growing, disruptive companies of the twenty-first century. In A. Brem, & E. Viardot (Eds.), *Revolution of Innovation Management* (pp. 145-189). London: Palgrave Macmillan, London.

Čiutienė, R., & Thattakath, E. W. (2014). Influence of dynamic capabilities in creating disruptive innovation. *Economics & Business, 26*(1), 15-21. doi:10.7250/eb.2014.015

Cohen, J. (1992). Quantitative methods in psychology: A power primer. *Psychological Bulletin 112*(1), 155-159.

Foss, N. J., & Saebi, T. (2016). *Business model innovation: The organizational dimension*. Oxford, UK: Oxford University Press.

Foss, N. J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go? *Journal of Management, 43*(1), 200-227. doi:10.1177/0149206316675927

Geissdoerfer, M., Savaget, P., & Evans, S. (2017). The Cambridge business model innovation process. *Procedia Manufacturing, 8*(1), 262-269. doi:10.1016/j.promfg.2017.02.033

Giardino, C., Wang, X., & Abrahamsson, P. (2014). Why early-stage software startups fail: A behavioural framework. In *Software business. Towards continuous value delivery* (pp. 27-41). Cham, Switzerland: Springer.

Habtay, S. R., & Holmén, M. (2014). Incumbents' responses to disruptive business model innovation: the moderating role of technology vs. market-driven innovation. *International Journal of Entrepreneurship and Innovation Management, 18*(4), 289-309. doi:10.1504/IJEIM.2014.064211

Hair, J. F. J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). A primer on partial least squares structural equation modelling (PLS-SEM). *Long Range Planning, 46*(1-2), 1-12. doi:10.1016/j.lrp.2013.01.002

Hall, M. (2011). When is a startup no longer a startup? *Business Insider*. Retrieved from https://www.businessinsider.com/when-is-a-startup-no-longer-a-startup-2011-2/?IR=T

Ireland, T. (2017). *Welcome to the big leagues: At what point are you no longer a startup?* Retrieved March 2, 2019, from https://www.business.com/articles/at-what-point-are-you-no-longer-a-startup/

Kanze, D., & Iyengar, S. S. (2017). *Startups that seek to "Disrupt" get more funding than those that seek to "Build."* Retrieved March 2, 2019, from https://hbr.org/2017/11/startups-that-seek-to-disrupt-get-more-funding-than-those-that-seek-to-build

Karimi, J., & Walter, Z. (2016). Corporate entrepreneurship, disruptive business model innovation adoption, and its performance: The case of the newspaper industry. *Long Range Planning, 49*(3), 342-360. doi:10.1016/j.lrp.2015.09.004

Khanagha, S., Volberda, H., & Oshri, I. (2014). Business model renewal and ambidexterity: Structural alteration and strategy formation process during transition to a cloud business model. *R&D Management, 44*(3), 322-340.

Kiiru, G. (2015). Reconfiguration capabilities, entrepreneurial intentions and competitive advantage of small and medium youth retail enterprises in Kenya. *European Journal of Business and Management, 7*(25), 254-260.

Kiiru, G., Iravo, M., & Oloko, M. (2013). Mediating effect of strategic orientation on the relationship between dynamic capabilities and competitive advantage of small and medium retail enterprises in Kenya. *IOSR Journal of Business and Management*, *14*(2), 64-69.

Markides, C. (1997). Strategic innovation. *Sloan Management Review 38*(3),9-23.

Markides, C. (1998). Strategic innovation in established companies. *Sloan Management Review, 39*(3), 31-42.

Markides, C. (2006). Disruptive innovation: In need of better theory. *The Journal of Product Innovation Management*, *23*(1), 19-25.

Markides, C. C. (2008). *Game-changing strategies: How to create new market space in established industries by breaking the rules*. San Francisco, California: Jossey-Bass.

Minoja, M., Zollo, M., & Coda, V. (2010). Stakeholder cohesion, innovation, and competitive advantage. *Corporate Governance: The International Journal of Business in Society*, *10*(4), 395-405. doi:10.1108/14720701011069632

Mütterlein M. A. J., & Kunz, R. (2017). Influence of entrepreneurial and alliance orientation on business model innovation. *EMMA Conference, 49*(1), 1-13.

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: what can be done? *Assessment & Evaluation in Higher Education*, *33*(3), 301-314.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw-Hill.

Obeidat, B. Y. (2016). The effect of strategic orientation on organizational performance: The mediating role of innovation. *International Journal of Communications, Network and System Sciences, 9*(11), 478-505.

Osiyevskyy, O., & Dewald, J. (2015). Explorative versus exploitative business model change: The cognitive antecedents of firm-level responses to disruptive innovation. *Strategic Entrepreneurship Journal, 9*(1), 58-78. doi:10.1002/sej

Patel, N. (2015). *90% of startups fail: Here's what you need to know about the 10%.* Retrieved January 1, 2019, from https://www.forbes.com/sites/neilpatel/2015/01/16/90-of-startups-will-fail-heres-what-you-need-to-know-about-the-10/#4e1479056679

PricewaterhouseCoopers. (2013). *The startup economy: How to support tech startups and accelerate Australian innovation*. Sydney, Australia: PricewaterhouseCoopers.

Rais, S., & Goedegebuure, R. V. (2009). Stakeholder orientation and financial performance: Evidence from Indonesia. *Problems and Perspectives in Management, 7*(3), 62-75.

Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing, 26*(4), 332-344. doi:10.1016/j.ijresmar.2009.08.001

Ries, E. (2011). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses.* Retrieved January 1, 2018, from https://doi.org/23

Robehmed, N. (2013). *What is a startup?* Retrieved January 1, 2018, from https://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/#3ecedd604044

Rusitschka, S., Sturm, M., & Lehofer, M. (2016). Disruptive potential and business model innovation through elastic Microgrid-As-A-Service (MAAS) platforms. In *Proceedings of the CIRED Workshop* (0254). Helsinki, Finland: CIRED.

Sabatier, V., Craig-kennard, A., & Mangematin, V. (2012). Technological forecasting & social change when technological discontinuities and disruptive business models challenge dominant industry logics : Insights from the drugs industry. *Technological Forecasting & Social Change, 79*(5), 949-962. doi:10.1016/j.techfore.2011.12.007

Santos, J., Spector, B., & van der Heyden, L. (2009). *Toward a theory of business model innovation within incumbent firms.* Retrieved December 20, 2017, from http://org.business.utah.edu/opsconf/pages/vanderHeyden_Paper.pdf

Sawers, P. (2011). *Why Facebook is still a startup?* Retrieved December 20, 2017, from https://thenextweb.com/socialmedia/2011/04/22/why-facebook-is-still-a-startup/?amp=1

Szymaniec-Mlicka, K. (2016). Impact of strategic orientation adopted by an organization on its performance, as shown on the example of public healthcare entities. *Management*, *20*(2), 278-290.

Tacheva, S. (2007). *Top management team diversity: A multilevel exploration of antecedents and consequences* (Doctoral dissertation), University of St. Gallen, Switzerland.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350.

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning, 51*(1), 40-49. doi:10.1016/j.lrp.2017.06.007

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal, 18*(7), 509-533.

Teece, D., Pisano, G., & Shuen, A. (2009). *Dynamic capabilities and strategic management.* New York: Oxford University Press Inc.

Ter Halle, I., & Ruel, H. (2016). *How do start-ups engage with stakeholders?* Retrieved August 7, 2018, from https://www.researchgate.net/publication/ 309770780_How_do_startups_engage_with_ stakeholders

Truong, A. (2016). *After analyzing 200 founders' postmortems, researchers say these are the reasons startups fail*. Retrieved May 12, 2016, from https://qz.com/682517/after-analyzing-200-founders-postmortems-researchers-say-these-are-the-reasons-startups-fail/

Tutar, H., Nart, S., & Bingöl, D. (2015). The effects of strategic orientations on innovation capabilities and market performance: The case of ASEM. *Procedia-Social and Behavioral Sciences, 207*(1), 709-719.

Vázquez, R., Santos, M. L., & Alvarez, L. I. (2001). Market orientation, innovation and competitive strategies in industrial firms. *Journal of Strategic Marketing, 9*(1), 69-90.

Vivas López, S. (2005). Competitive advantage and strategy formulation: The key role of dynamic capabilities. *Management Decision*, *43*(5), 661-669.

Voelpel, S. C., & Leibold, M. (2004). The wheel of business model reinvention: How to reshape your business model to leapfrog competitors. *Journal of Change Management, 4*(3), 259-276. doi:10.1080/1469701042000212669

Vorbach, S., Wipfler, H., & Schimpf, S. (2017). Business model innovation vs. business model inertia: The role of disruptive technologies. *BHM Berg-und Hüttenmännische Monatshefte*, *162*(9), 382-385. doi:10.1007/s00501-017-0671-y

Watanabe, C., Naveed, N., & Neittaanmäki, P. (2018). Digital solutions transform the forest-based bio-economy into a digital platform industry - A suggestion for a disruptive business model in the digital economy. *Technology in Society*, *54*(1), 168-188. doi:10.1016/j.techsoc.2018.05.002

Weng, H.-H., Chen, J.-S., & Chen, P.-C. (2015). Effects of green innovation on environmental

and corporate performance: A stakeholder perspective. *Sustainability, 7*(5), 4997-5026. doi:10.3390/su7054997

Widjaja, N. (2017). *Opinion: Indonesia needs more scale-ups, not more startups.* Retrieved December 11, 2017, from https://www.forbes.com/sites/outofasia/2017/12/11/opinion-indonesia-needs-more-scale-ups-not-more-startups/#6d9fb4f2ee28

Zhang, W., Daim, T., & Zhang, Q. (2017). Exploring the multi-phase driven process for disruptive business model innovation of e-business microcredit: A multiple case study from China. *Journal of The Knowledge Economy, 10*(2), 590-617. doi:10.1007/s13132-017-0483-z