An Empirical Investigation Affecting of Disruptive Innovation Management on Performance of Thai-Listed Company

Sumittra Jirawuttinunt[1], AchariyaIssarapaiboon[2], TudsudaImsuwan[3], Jintaporn Muangkhiew[4]

Abstract:

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The objective of this study is to investigate theeffectofdisruptive innovation management on business performance via mediatingvariables such aseffective customer responsiveness and competitive advantageontherelationships. The data was collected by a questionnaire survey from 175executive managers of Thai-listed firms. The statistical analysis for testing the hypothesis is OLS multiple regression analysis. The results showed that four dimensions of disruptive innovation management, which are;digital technology feature utilization, low-end market disruption orientation, new market disruption focus andnew business model generation have positive impacts both as direct and indirect effects on business performance. All dimensions of disruptive innovation management can explain predication of effective customer responsiveness at35.90%, competitive advantageat44.60%andbusiness performanceat26.00%.Inaddition,the independent variable such as new market disruption focusfully supports the hypotheses. Overall ,this study contributes to large firm that consult and introduce effective strategy by exploring disruptive innovation management to create competitive advantage and business performance.

1. Introduction

According to the arrival of the digital era, information technology and various digital technologies have become important factor of business success. The advance of digital technologyconstantly transformed lifestyles of consumers and plays a critical role in creating harmony and comfort in people's lives(Nambisan, Satish, Wright & Feldman, 2019). With changing consumer behavior, firms need to find effective ways to pursue business practices in order to respond to consumer demands with the changes in the digital age. Many businesses realized that innovation is the critical success factor in maintaining a competitive advantagein the heart of economic development(Vlačić, 2018).Nowadays, disruptive innovation is one of several potential competitive factors that hasbeen found as an effective way to deal with environment dynamism. It can be confirmed from the literatures that a firm needs to develop and create innovative practices in regardingtodisruptive technologies, product innovations and business models in order to survive in a changing world. In addition, Christensen et al., (2015) summarized that disruptive innovation can renew and develop emerging market niches, cultivating it with time and ultimately succeeding with greater products and service in their traditional markets. The study of Lin, Zhang and Yu (2015)stated that disruptive innovation impact by creating new markets and is likely to enhance new opportunities for new profits with its innovations. Disruptive innovation with a potential procedure, as well as marketplace innovations may generate a new demand for novel technology and advantages over the rivals, and are built into new products and service that boosted greater business performance (Nakata, Park & Ha, 2006).

Disruptive innovation management is the specific process and capabilities of a firm that includes products, services or methods that develop existing markets, creates new user groups or changes in the business model by using technology to respond to unpredictable changes from inside and outside to gain a competitive advantage in a dynamic environment.Nowadays, one of the key success of the Thailand 4.0 strategy is to transform an industrial economy into an innovation-driven world. Even though innovation research has been widely practical for much researches, only a little research clearly clarifiesdisruptive innovation management such as in how and why disruptive innovation management can achieve business performance. Accordingly, the understanding of direct and indirect effects between disruptive innovation management and company outcomes should be measured. Thus, the objective of this research is to study the effects between disruptive innovation management and business performance via effective customer responsiveness and competence competitive advantage.

The main research question is how disruptive innovation management affects business performance. It is believed that development of disruptive innovation management specific to Thai-listed firms is particularly significant because of the high degree of complexity with stakeholders, more accessible capital management, know-how development, and technology enabled products that have a serious impact in achieving higher performance in this sector.In addition, the government policy focuses on promoting the Thailand 4.0 strategy. It can explain that Thai-list companies tend to continually upgrade disruptive innovation management to meet these challenges, especially in the international market.Therefore, this research focuses on Thai-Listed companiesinThailand as the target group. The results of this study can be used to increase the performance of Thai-listed companies and provide implications for disruptive innovation practices to

Thailand's business sector. This research contributes to the decision to use strategic focus through disruptive innovation operations. In addition, the literatures provide an understandings of how disruptive innovation management can cultivate their customer responsiveness, organizational competitive advantage and business performance.

2. Literature Review

According todisruptive innovation theory,itisargued thatnew market innovations create a new set of product features that generate: (a) a new demand and opportunities as well as challenges to business practitioners, and (b) low-end innovations that deliver technologies with similar characteristics to existing technologies but at a lower cost.Christensen & Bower, (1996)indicated that disruptive innovations will be appropriate and responsiveto customers because these products can reach current needs and expectations of customerswith new characteristics such as cheaper, smaller, faster and louder. However, disruptive innovation can low performance more than that of existing products while bringing other benefits to customers, such as accessibility,ease, or suitability or convenience; thus, reaching new customer and creating a new marketplace(Anthony et al., 2008). Moreover, Christensen et al., (2011)proposed that firms can achieve superior performance in a market by learning and developing needs for both low-end and high-end customers. Vlačić (2018) argues that disruptive innovation presents an opportunity for smaller players by attempting to provide more reasonable and available solutions to successfully compete against well-established companies. With respect to increased competition, firms try to improve their market position, business performance and competitive advantage by developing new business models through new technologies. In the new normal and dynamic environment, a company can discover the new ways to create and reinvent their business models. In this research, disruptive innovation is employed to describe the dimensions of disruptive innovation management such as;1) digital technology feature utilization, 2) low-endmarket disruption orientation, 3) new market disruption focus, and4) new business model generation. Using resource-based view (RBV) framework, successful businesses have been found that disruptive innovation tends to create effective customer responsiveness and competitive advantage which complete the business performance.Additionally, Jadesadalug & Ussahawanitchakit (2009) proposed that competitive advantage is created from four factors such as superior efficiency, quality, innovation and customer responsiveness. The study of Owuor (2018) proposed a positive and significant association between disruptive innovation and firm performance. Likewise, Aoko (2017) studied the effect of digital disruption to increase the financial performance of a bank in terms of industrial convergence, technological innovation and social digital trends. Accordingly, the study of Cucculelli& Bettinelli (2015) confirmed that business model innovation was positively associated with firm performance in small and medium enterprises. With clear understanding of the relationships, this research suggested a conceptual framework as shown in Figure 1.
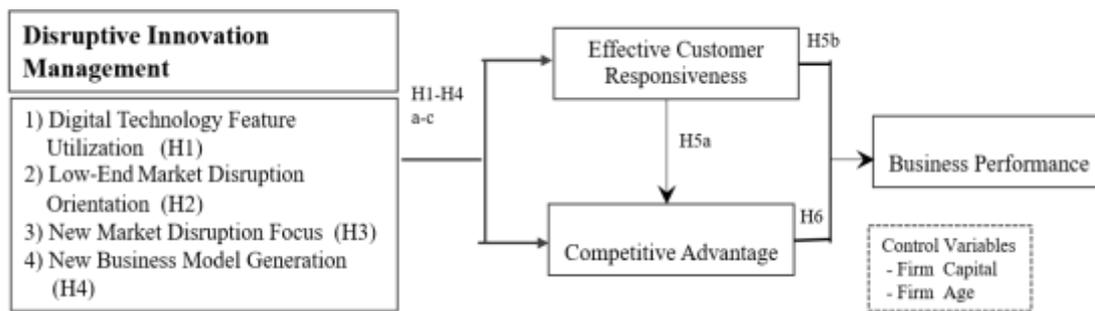
Figure 1: Conceptual Framework of disruptive innovation management and theOutcomes

2.1Disruptive innovation management,effective customer responsiveness, competitive advantage, and business performance

A number of researchers have explained disruptive innovation as having various meanings and dimensions. In this study, disruptive innovation management is defined as the specific process and capabilities of a firm that include products, services or methods that develop existing markets, create new user groups, or change the business model by using technology for responding to unpredictable changes from inside and outside, to gain a competitive advantage in a dynamic environment. Christiansen, (1997) presented the concept in two aspects:(1) management of low-end users with lower-cost products or business models, and (2), the serving of sustained innovation strategy by fundamentallycreating a better product into a new market. Likewise, Thomond & Lettice, (2002) proposed that disruptive innovations seem to have the three features that change marketplaces: (a) radical functionality, (b) discontinuous technical standards, and (c) an innovation's ownership. In the same line with Guo et al., (2019), disruptive innovations must possess distinctive characteristics in terms of technological features and outside marketplace dynamics to gain a competitive advantage in a dynamic

environment. Within the domain of innovation, Govindarajan&Kopalle (2006) proposed that disruptive innovation consists of five characteristics namely: (a) the innovation that underachieves on some characteristics and responses to normal customers value; (b) newexisting features that fascinate customers within niche markets; (c) innovation that tends to be modest and low-priced; (d) innovation that originally meets the demand of a low-end, value-sensitive customer sector; and (e) following expansions that increase performance on the features that ordinary consumers value to a level where the innovation starts to inhabit more shares of the normal market. In exploring the aspects of disruptive innovation for a Thailand context,this research emphasizesfour dimensions, namely: 1) digital technology feature utilization, 2) low-endmarket disruption orientation,3) new market disruption focus,and4) new business model generation(Guo et al., 2019; Christensen et al., 2018).Thisresearchconsidersthatdisruptive innovation management can improve and increase effective customer responsiveness,competitive advantage and business performance.A more detailed argument of these dimensions is provided below;

Digital technology feature utilization(DT) is defined as the capacity of a firm to create and use the advance of digital technology

to generate and develop new products and service for customer acceptance which capacity enhance competitive advantage. Digital technology appears to determine the attractiveness of a firm. In addition, digital technology learning in the organization creates great opportunity and brings low cost to the market (Prasad, Ramamurthy & Naidu, 2001). As a result, the capabilities of digital technology can create business growth, and new applications can develop new business model (Khin& Ho, 2020). Furthermore, digital technology creates a sustainable competitive advantage in long-term performance (Chepkemboi& Paul, 2019). Moreover, digital technology competence has improved technology and differentiated products and services to respond to market change (Zhou et al., 2005). Likewise, the study of Khin& Ho (2020) show that digital technology is the mediating variable on the relationship between technology orientation and financial and non-financial performance.Hence, this research proposes the following hypotheses:

Hypothesis 1: Digital technology feature utilization is positively related to (a) effective customer responsiveness, (b) competitive advantage and (c) businessperformance.

Low-endmarket disruption orientation(LM) is defined as the ability of business in transforming an existing product or service into a technology and enabling it to respond to customers effectively and making it accessible to many people. This means that creating products and services that are simple and reasonable to low-income segments is most crucial for adoption and success in a market. For example, companies are using social media to create easier access to products and services, such as Facebook, online reviews, blogs, social networks, and using big datato manage business to be more convenient

and efficient(Anderson &Billou, 2007). The study of Mobgen (2015) found that an airline's app enables customers satisfaction for those who use the application for activities such as booking, pay for flights, and other flight information. Likewise, Rodriguez-Donaire et al., (2020) indicated that a low-end-market disruptive innovation reduces the cost of design and manufacturing phases with lower prices and the creation of innovative services that not only open new market opportunities for new business models but also improve the space market performance. Similarly, Guo et al (2019) proposed that low-endmarket disruption reduce the cost of obtaining new function of service functions or products in the market. Hence, this research proposes the following hypotheses:

Hypothesis 2: Low-Endmarket disruption orientationis positively related to (a) effective customer responsiveness, (b) competitive advantage and (c) business performance.

New market disruption focus (NM) is defined as the activities related to the ability of a business to offer a product or service that has never been seen before by creating new demands using technology or innovation to help increase operational efficiency, as well as invent new products or services that have never been seen before. Zentner (2012) indicated that firms must focus on utilized technological innovation and advancement method to create relationships with existing consumers and link to new market. Prior research points out that health care industry leaders need new technology to decrease costs, progress in quality and increase access for new market with millions of people (Rodriguez-Donaire et al., 2020).Likewise, Sauramo (2014) indicated that the emergence of personal 3D printers supports the view of significant market expansion as a result of a disruptive

innovation's entry into a new market. Similarly, the achievement of Tesla in new market with high-priced electric vehicles that are acceptable to customers shows an increasing business performance (Dijk et al., 2016).The study of Yusheng & Ibrahim (2020)further revealed a direct and positive link between new market capability and firm performance. Hence, this research proposes the following hypotheses:

Hypothesis 3: New market disruption focus is positively related to (a) effective customer responsiveness, (b) competence competitive advantage and (c) business performance.

New Business model generation is defined as the ability of a firm to innovate or fully utilize corporate resources in significant changes to business operation to increase the value of their products and services for achieving superior performance. Tian et al., (2019)indicated that business model innovation plays a critical role as an important source of competitiveness of firm to create new opportunities, new markets, and new incomes whereas Aziz & Mahmood (2011) assess the relationship between the business model and changes in SMEs performance. In addition, Sahut&Hikkerova&Khalfallahs (2013)researched relationship by comparing the business models of internet banks versus the traditional banks. Moreover, Hartmann,Oriani& Bateman (2013)revealed that business model innovation shows a positive effect on their operational performance. Additionally, Latifi&Bouwman(2018) revealed that new business model innovation enhances organizational capabilities that lead to firm performance.Likewise, Khaddama et al., (2021) showed that business model had significant effects on firm performance. Hence, this research proposes the following hypotheses:

Hypothesis 4: New business model generation is positively related to (a) effective customer responsiveness, (b) competence competitive advantage and (c) business performance.

2.2 The Effect ofEffective Customer Responsiveness, Competitive Advantage and Business Performance

Effective customer responsiveness is defined as the ability of firms to deal successfully and quickly respond by seeking and keeping market needs, want, expectation, and preference to customer satisfaction(Lin et al., 2015). In today's turbulent marketplace, a company must meet an innovative challenge in order to achieve competitive success. With respect to the effect of responsiveness on performance, the research of Jermsittiparsert et al., (2019)revealed significant and positive relationships between customer responsiveness and supply chain performance. Likewise, Pehrsson (2019) showed that customer responsiveness is significantly and positively related to the performance of international firms. As a result, this research proposes the following hypotheses:

Hypothesis 5: Effective customer responsivenessis positively related to (a) competitive advantage and (b)businessperformance.

Competitive advantage is defined as the ability of a firm to sustain and manage the positioning of assets to achieve in business competition in terms of comparison with competitors. The study of Perry and Shao (2005) indicated that competitive advantage enhanced business performance.Hence, this research proposes the following hypotheses:

Hypothesis 6:Competitive advantage is positively related to business performance.

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3.Research Methodology

3.1SampleSelectionandDataCollectionProcedure

Thai-listed firms are selected as population and sample in this research for hypotheses testing because Thai-listed firms which are large firms that tend to implement disruptive innovation. Database in this research is gathered from The Stock Exchange of Thailand on its website: http://www/.set.or.th. Based on SET database, there were792 Thai-listed firms on April 22, 2020. The key participants in this study are the executive managers of each firm.A mail survey was used as an instrument for data collection. The questionnaires were sent to 792 firms, from which 182 responses were received. Due to four incomplete questionnaires, and response errors others, they were deducted from further analysis. Of the surveys completed and received, only 175 surveys were usable. The effective response rate is approximately 22.47 %. According to Aaker, Kumer&Day (2001),a 20% response rate for a mail survey, without an appropriate follow-up procedure, is adequate to confirm the evaluation.Accordingly, the non-response was tested for two independent samples. A comparison of early responses and late responses data is recommended byArmstrong &Overton (1977). T-tests comparing the characteristics of the firms did not find any significant differences between the two groups. Thus, it appears that a non-response bias does not pose a significant problem for this research.

3.2Variables

For the conceptual model, the research prepared by using a five-point Likert scale to measure all the variables, ranging from '1 = strongly disagree' to '5 = strongly agree'. *Business performance* provides the dependent variable in this research. It is calculated by usingfinancial performance, effectiveness of internal processes, outstanding service over competitor and customer acceptance. This construct is adapted from Chepkemboi& Paul (2019). *Digital technology feature utilization*is developed from the literature reviews. *Low-endmarket disruption orientation*and *new market disruption* are adapted from Lin, Zhang *and Yu (2015). New business model generation*is adapted from Latifi&Bouwman, (2018). *Effective customer responsiveness*and competitive advantage are adapted from (Jadesadalug, &Ussahawanitchakit, 2009).In addition, some literatures focus on firm age and firm capital which may affect firm performance (Latifi&Bouwman, 2018). Thus, firm age and firm capital are also used as the control variables.

3.3Validity and Reliability

To evaluate the content validity, the questionnaire was examined by three experts in the field of strategic management. All scores were equal to 0.5 or higher so as that the items were adequate (Hair et al., (2010). According to Nunnally &Berstein (1994), all factor loadings that are greater than the 0.40 cut-off are statistically substantial. Table 1 indicates the results for both factor loadings, being between 0.654 and 0.929, thus, indicating that there is construct validity. Regarding scale reliability, the Cronbach alpha coefficients are greater than 0.70, as recommended by Hair et al., (2010). Thus, in this study a Cronbach alpha coefficient between 0.732 and 0.890 is measured acceptable.

3.4 Statistic Test

All dependent variables and independent variables which are neither nominal data nor categorical data. Thus, The Ordinary Least Squares (OLS) regression analysis is an appropriate method of testing the hypotheses. The results are shown in Table 3.

Table 1: Results of Measure Validation

Items	Factor Loadings	Cronbach Alpha	Number of Items
Digital technology feature utilization (DT)	0.727-0.838	0.847	5
Low-Endmarket disruption orientation (LM)	0.706-0.862	0.856	5
New market disruption(NM)	0.856-0.886	0.890	4
New business model generation (NB)	0.694-0.886	0.847	5
Effective customer responsiveness (EC)	0.654-0.815	0.732	4
Competitive Advantage (CA)	0.849-0.929	0.843	5
Business performance (BP)	0.794-0.851	0.837	4

4. Results and Discussion
4.1 Result of Descriptive Statistics

Among the demographic characteristics of the 175 samples, about 58.29 percent of the respondents are male. The age is approximately between 40-45 years old (37.14 percent) and married (70.86 percent). The education levels are bachelor's degrees or lower (54.86 percent). For working experiences, 40.00 percent have been working withfirms10-15 years. Moreover, most respondents received the revenues of 50,000-100,000 Baht per month (67.43 percent). The current position of respondents is 48.00 percentgeneral manager and 32.57 percentexecutive manager. Mostbusiness type are agriculture and food products (18.29%). Registered capital is 200 million – 600 million Baht (36.57 percent). For number employees, most companies were comprised of are 500-1,000 persons (36.57 percent). The period of time, in operation, was mostly 16-20 years (47.67 percent). The period of time registered at stock exchange was 10-15 years (27.43%)

By employing Pearson's correlation coefficient, one can quantify the level of linear association between all pairs of variables, as shown in Table 2. Regarding potential problems of multicollinearity, all the correlation coefficients of independent variables are measured at less than 0.8. Therefore, there is no significant problem of multicollinearity of the independent variables in this model (Hair et al., 2010). Moreover, within the value of 10 as recommended by Hair et al. (2010),the VIF result was 1.126 – 3.598, indicating no correlation of the independent variables with each other. Finally, this means that there are no substantial multicollinearity problems within this study.

Table 2: The correlation matrix of all variables in the regression analysis.

Variables	DT	LM	NM	NB	EC	CA	BP
MEAN	4.070	3.970	4.219	4.090	4.051	3.900	4.039
S.D	0.524	0.600	0.589	0.582	0.486	0.734	0.569
LM	0.757**						
NM	0.617**	0.749**					
NB	0.608**	0.696**	0.723**				
EC	0.534**	0.582**	0.543**	0.474**			
CA	0.544**	0.623**	0.598**	0.597**	0.511**		
BP	0.495**	0.475**	0.445**	0.359**	0.501**	0.673**	

** $p < 0.01$

4.2Results of Hypothesis Testing and Discussion

Table 3 shows the OLS regression analysis of disruptive innovation management consist of four dimensions. The finding shows that digital technology feature utilization is positively and significantly related to effective customer responsiveness (b = 0.184, p < 0.10), and business performance (b = 0.322, p < 0.05), consistent with prior studies reviewed. However, digital technology feature utilization has no significant effects oncompetitive advantage(b = 0.125, p > 0.10). The insignificant results can be explained by the study of Lee &Falahat (2019) who found that digitalization has no direct impact on competitive advantage in either price, product, or service advantage This is because new digital technology feature is costly and often unable to harvest competitive and advantageous gains in short term. It can reduce expenses and increase benefits over the long-term depending on market acceptance. Thus, *Hypothesis1a, and 1c are supported whereas hypothesis 1b is not supported.*Secondly, low-endmarket disruption orientation is positively associated with effective customer responsiveness (b = 0.263,p < 0.05), competitive advantage (b = 0.234, p < 0.05) but is non-significant with business performance (b = 0.158, p > 0.10). The unaccepted result of low-endmarket disruption orientationand business performance linkage can be explained by the previous works of Abdellaoui&Pache (2019) which indicated a negative and meaningful results of disruptive innovation onfinancial performance. At the stage of a disruption announcement, a firm needs to take effective and corrective movements to deal with disruption change which may decrease stock price performance in the short term. However, drawing from the results, firms may increase business performance via effective customer responsiveness which creates competitive advantage to firm performance in long run(Guo & Xu, 2021). Thus,*Hypothesis2a,and 2b are supported but 2c are not supported.* Thirdly, the results show that new market disruption focushas a direct and significant effect on effective customer responsiveness (b = 0.212, p < 0.05) competitive advantage (b = 0.193, p < 0.05), and business performance (b = 0.189,p < 0.10), which is consistent the prior literatures. Thus,*Hypothesis3 is fully supported.* Fourthly, the results show that new business model generationhas a positive and significant impact oncompetitive advantage (b = 0.241, p <0.05), but has no significant effect on customer responsiveness (b = 0.021, p > 0.10) and business performance (b = -0.071,p > 0.10). The contrary results can explain by the study ofTian et al., (2019) who proposedthat new business model generation does not improve the overall business performance. This isbecause external and internal factors such as customer needs and change, government policy, strategic transformation and technological innovation are influenced tobuild success in new business model innovation in the Thailand context. In other words,business model generation does not directlyaffect on business performance but plays a critical role as an indirect effect via competitive advantage.*Thus,Hypothesis 4b is supported but 4a, and 4c are not supported*.

Accordingly, the research reveals that effective customer responsiveness has significant and positive effect oncompetitive advantage(b= 0.497, p< 05) and business performance (b= 0.567, p< 05), which result is similar to the literatures. Hence, *Hypothesis5a and 5b are supported*. Finally, the results show that competitive advantage is positively related to business performance (b= 0.243, p< 05).

Thus, ***Hypothesis6 is supported.*** Based on these results, it can be explained that effective customer responsiveness and competitive advantage are the mediating variables on the relationship between disruptive innovation management and business performance. Additionally, this research found that firm capital and firm age as control variables have no effect on the relationships in the study.

Table 3:The Results of Regression Analysis for Effects of dimensions on disruptive innovation management Its Consequences Constructs[a]

Independent Variables	Dependent Variables					Testing Results
	1 CU	2 CA	3 BP	4 CA	5 BP	
H1 :Digital technology feature utilization (DT)	0.184* (0.096)	0.125 (0.090)	0.322** (0.104)			Partial Supported
H2 : Low-endmarket orientation (LM)	0.263** (0.116)	0.234** (0.107)	0.158 (0.124)			Partial Supported
H3: New market disruption focus (NM)	0.212** (0.102)	0.193** (0.082)	0.189* (0.110)			Fully Supported
H4: New business model generation (NB)	0.021 (0.095)	0.241** (0.088)	-0.071 (0.102)			Partial Supported
H5a : CU→CA H5b : CU→BP				0.497*** (0.067)	0.209** (0.065)	Fully Supported
H6: CA→BP					0.567*** (0.064)	Fully Supported
FC	0.032 (0.146)	-0.218 (0.135)	-0.004 (0.156)	-0.039 (0.154)	0.101 (0.129)	
FA	0.018 (0.141)	0.052 (0.131)	-0.114 (0.152)	0.162 (0.141)	-0.066 (0.118)	
F	17.220	24.381	11.207	20.750	40.531	
Adjusted R^2	0.359	0.446	0.260	0.254	0.478	
VIF	3.598	3.598	3.598	1.248	1.398	

[a]Beta coefficients with standard errors in parenthesis, *** $p < 0.01$, ** $p < 0.05$, *$p<0.10$

The finding from this research study indicates that business in Thai-listed firm seems to be strong in new market disruption but rather weak in new business model generation. Currently, many firms develop disruptive innovation to attract consumers for new product performance in order to complete in new markets. The strong positive responses relating to new market focus indicate the importance of potential customers as the target for aiming disruptive innovations. Nonetheless, a company must also be capable oftransforming the intelligence and behavior of its staff in organizational culture change and administrative management platformin order to develop new business model. In addition, government should support with capitals and resources to upgrade companies in Thailand in the area of digital innovation in order to develop disruptive innovation management. Accordingly, the integration of various quick procedure such as digital technology feature utilization, low-end market, new market disruption and new business model is considered as the core force to achieve disruptive innovation and ultimately, increase business performance.

5. Conclusion and Recommendation

The main aim of this study is an empirical investigation of the effect of disruptive innovation management and business performance via effective customer responsiveness andcompetitive advantage. The results revealed that two dimensions of disruptive innovation management such as digital technology feature utilization and new market disruption have positive direct on business performance whereas low-end market orientation and new business model generation have positive indirecteffect on business performance via effective customer new market disruption is the most important dimensions to explain the effects of disruptive innovation management and business performance linkage. The results of this study support the notion that firms which actively cultivate and increase their disruptive innovation management are likely to improve firm performance. In addition, it can be concluded that effective customer responsiveness and competitive advantage seem to be the mediating effect between disruptive innovation management and business performance linkage. The findings of this research have important implications for firms by describingdisruptive innovation management in the line of disruptive innovation theory. These factors are increasingly being known as the key competitive advantages in dynamic environments.

Lastly, while the results of this research are interesting, some limitations should be recognized. The response rate of this research is a small sample size. Although, the results can be accepted, but if with larger sample size, the results may reveal a more reliable generalization. In addition, this research was conducted in all industry in Thai-Listed firm, in future research may focus in specific industry tobetter reflect more clarification. In summary, this research contributes significantly toward understanding Thai-listed firm creates disruptive innovation management which enhance customer responsiveness, competitive advantage and business performance.

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