

Dynamic Capability, Market Orientation and Innovation Capability: The Role of Digital Leadership for Indonesia Telecommunication Firms in Facing Disruptive Era

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Abstract

Indonesia Telecommunication market is the early stage of digital era. Digital transformation is required by incumbent firms through developing dynamic capability that focus on Customer value and Operation model. Customer value reflects to market orientation, while operation model is related to the capabilities of firms in formulating innovation. In disruptive era, the development of dynamic capabilities is driven by digital leadership. The study on the role of digital leadership in relation between dynamic capability and digital leadership, market orientation and innovation capabilities has not been explored, hence this study has aims to assess the effective path in developing dynamic capability, whether it will be direct or indirect through market orientation or innovation capability driven by digital leadership. The study was conducted with questionnaire survey of 88 senior leader respondents, with statistical data analysis used Smart-PLS application. The result explained that digital leadership has influence significant impacts both directly and indirectly through market orientation on developing dynamic capability. While the mediating role of innovation capability has not shown significant on relationship between dynamic capability and digital leadership.

Keywords

Digital leadership, market orientation, innovation capability, dynamic capability

1. Introduction

Indonesia in the early stage of digital Era (Das, Gryseels, Sudhir, & Tan, 2016). The competition is very tight in additional with these, global players, such as Google, Apple, What's Up, and other Over The top (OTT) players provides substitution product and services that threat existing incumbent product and services. Thus, it will impact to incumbent firms to sustain the existing business that rely on legacy business which is voice and SMS. Legacy business has disrupted by OTT players through attractive business model that simple and cheaper. In other hand, Indonesia has phenomenal growth in innovation, but it has lack in digital infrastructure development (IMD, 2017). Indonesia requires significant amount of digital infrastructure investment developed by existing incumbent firms, while the return become a question mark due to competition and digital disruption from emerging entries. The phenomenon of digital disruptive has been studied in Harvard business, the incumbent fail to maintain the sustainable business due to the agility to adapt the change (Christensen, 1997). In Digital era, The transformation is required to make over existing capabilities to enhance it become dynamic capabilities by renewing business model innovation (Chesbrough, 2010; Teece, 2017; Zott & Amit, 2017). Dynamic capability is defined as a holistic approach of the firm ability to integrate, build and reconfigure their resources and competence to address the changing of market environments (Teece, Pisano,

& Shuen, 1997). The capability to reconfigure will create innovation and change the paradigm of management firm. This capability hereinafter referred to as a transformation.

In digital era, digital transformation is defined as a changing paradigm for all aspects from existing paradigm based on legacy expertise to become digital capability. digital transformation consist of changing of operation model and customer value (Berman, 2012). Operation model is related with an innovation capabilities especially in business models applied in all aspects of human society (Stolterman & Fors, 2004). While the customer value is related with market orientation (Martelo, Barroso, & Cepeda, 2013). Innovation capabilities in digital era can appearance in two faces: digital opportunity and efficiency (Raivio & Luukkainen, 2011). The digital opportunity can be seen in case of book retail like borders in book industry is example of digital transformation from physical books to e-books (Liu, Li, & Yang, 2012). While the efficiency can be applied through digitization that dealing with technological innovation (Kagermann, 2015). Those operating model will be a basis in developing business model innovation and transform the existing business (Berman, 2012).

The customer value is part of customer journey. In digital era, the customer value can be reflected through customer experience as part of human approach related with emotional, cognitive, sensory and social methods (Dean, Griffin, & Kulczynski, 2016; Prahalad & Ramaswamy, 2000; Ramaswamy, 2011). Customer experience will be the input for the firms to develop the market orientation capabilities. Market orientation could drive the organization learning to support service excellence to customers (Hurley, R.F., Hult, 1998). This capability will support the agility of the firms in adapting the changing market.

Both capability in innovation and market orientation are related with the human approach. The innovation is part of human society and market orientation is part of human customer experience. In response to the requirement in developing human factors, the leadership is taken significant important role. The leader brings a vision to set up the direction and guidance for long term in optimizing and reconfiguring digital technology. The digital leadership has been introduced as the combining of culture and competence of leader in bringing new archetype in exploring the benefit of use digital technology (Ravichandran, Taylor, & Waterhouse, 2016; Rudito, Priyanto, F.N, & M.B.A, 2017).

The study on relationship of digital leadership in developing dynamic capability, market orientation and innovation capability has not yet been explored, hence, in this study aims to assess the role of digital transformation in development of dynamic capability directly or indirectly? If it is directly not significant, what is the effective path as a mediating variable in formulating dynamic capability? Does it through innovation capabilities or market orientation?

This paper is organized as follows: the literature review will be discussed in Section 2, thus section 3 describes the research methodology. The results, Discussion are presenting in section 4 and Section 5 respectively. Finally, section 6 will explain the conclusion.

2. Literature Review

2.1 Dynamic Capability (DC)

DC theory addresses the issues associate with the inertia, routines activities and rigidities of strategic firm resources and competences. It has been discussed and studies extensively since started published in science literature. DC is defined as the firm's ability to integrate, build, renew and reconfigure resources and competencies either internal or external to adapt with the changing of environments (Teece et al., 1997). The study of DC was forming the use of DC as a process of organization learning to create new market by integrating, reconfiguring, gaining and releasing resources (Eisenhardt & Martin, 2000).

This DC concept is aligned with the need of incumbent firm to have agility in adapting change of market and environment in disruptive market. In organization theory the dynamic capability is the organization capability to have the ability for learning and change. In response to learning and change, the incumbent firm can build innovation capability by alignment of exploration and exploitation (Čirjevskis, 2016), discontinuous change (Michael Shamiyeh, 2014) and on radical innovation capabilities (Ansari & Krop, 2012) as part of adaptive capability. The intangible of knowledge and learning is part of distinct management capability that enable the organization to have adaptive capability by building on the stock of existing knowledge in new domains (Cattani & Ferriani, 2008) as part of management capability. The leadership and strategic vision are important to ensure the alignment, integration and interaction between top-management cognition in building strategic decision-making and for reconfiguring the firm resources base (Martin, 2011) as part of strategic capability.

Based on the literature above, this paper will use dimension of adaptive capability with basis of ambidexterity theory, management capability with basis of organization learning and strategic capability with basis of leadership and visioning capability.

2.2. Digital Leadership

In Digital transformation, the role of leader is a central to driving fast decision-making process and propelling the change (Kohli & Johnson, 2011). Digital leadership is combination of leadership style of transformation leadership and the uses of digital technology. Digital Leadership is defined as the combination of culture and competence of leader in optimizing the use of digital technology to create value to the firms (Rudito, Priyanto et al., 2017).

It has the leadership characteristics as follow: technology leadership, digital visioning and digital execution. Another study found that There are 5 characteristics: creative leader, though leader, global visionary leader, inquisitive leader and profound leader (Zhu, 2015). Since the competition become tight and hyper and complex dynamic of ecosystem due VUCA (volatility, uncertainty, complexity and ambiguity) factors, hence the leader is required to be creative and always thinking innovative through in build capability or collaboration (Sandell, 2013). The Global Visionary Leader is required to provide direction and to become an orchestra in transforming the digital business transformation. the digital technology based on internet and cloud drive the knowledge base, hence the leader has to have ability Inquisitive learning and has profound ability in knowledge and understand in depth in learning and change.

In disruptive era, the role of digital leadership has impact in driving the innovation and (Wasono & Furinto, 2018). Hence based on the literature review, the dimension use for this study are creative, deep knowledge, Global vision and collaboration, thinker, inquisitive.

2.3. Market Orientation

The market orientation has been studied extensively as the framework concept of the ability of firm to create value to the firm by focusing on customer, competitors, and coordination across function (Narver & Slater, 1990). The market orientation concept consists of behavior and cultural approach (Gaur, Vasudevan, & Gaur, 2011). In behavior approach, market orientation is defined as activities focus on increasing customer satisfaction and improve marketing capability using high technology (Dutta, Narasimhan, & Rajiv, 1999), and in cultural approach, it defines as values and believe of the firm to put customer as first orientation.

In disruption era, the market orientation, especially customer orientation is critical in sustaining the business, the use of analytical application is required to customize and personalize service to match with customers (Kandampully, Zhang, & Bilgihan, 2015). The business model development is formulated based on the input from the market, since the input is dynamic the capabilities developed become intelligence capabilities in term of information generation and dissemination of learning into respective responsible unit in organization. The analytical data can provide intelligent generation of customer profile and also has intelligent dissemination based on customer profiling hence the company has ability to learn and response to the environment and market change (Protcko & Dornberger, 2014).

This study uses the dimension as Intelligence generation, Intelligence dissemination, and Responsiveness align with study done by Protcko and Dornberger (2014) in response to disruptive era and digital transformation.

2.4. Innovation Capability

Christensen and Bower (Christensen & Bower, 1996) argue that although incumbents have innovation capabilities, they fail to sustain business when disruptive technologies emerge due to resource allocation and organization, and the process of innovation is not appropriately allocated to the target of customers. In disruptive era, innovation in business model is the main focus on the context, content and governance innovation to create novelty and value (Amit & Zott, 2015).

Tidd and Bessant (Tidd, 2015) argue that innovation is generally driven by the ability to see relationships, opportunities and take advantage of those opportunities. Companies that get their market share and increase their profitability are innovative. Based on his opinion, innovation capability including Product innovation - changes in the things (products/services) that an organization offers; Process innovation - changes in the ways in which they are created and delivered; Position innovation - changes in the context in which the products/services are introduced; and Paradigm innovation - changes in the underlying mental models which frame what the organization does.

Hence according to literature review the dimension constructs of Innovation Capability consists of process innovation, position innovation, and paradigm innovation

2.5. Hypothesis Development and Research Model

The relation of digital leadership with Innovation capability and dynamic capability has been found in study on the non-linearity pattern of innovation capability as part of Human Resources role (Lopez-Cabrales, Bornay-Barrachina, & Diaz-Fernandez, 2017). The impact of leadership to market orientation and customer was discussed in previous study as well (Petrick, Scherer, Brodzinski, Quinn, & Ainina, 1999). In disruptive the relation of digital leadership to

dynamic capability in Indonesia market is studied by Wasono and Furinto (2018). Based on this, the hypothesis is formulated as following:

Hypothesis 1: Digital leadership has direct impact to dynamic capability, Innovation capability, and market orientation in Indonesian telecommunication industry.

The previous showed the mediation role of partnership on relationship of leadership and dynamic capability (Lopez-Cabrales et al., 2017) as well as the role of intervening of Market orientation (Dmour, Basheer, & Amin, 2012). According to these studies, the hypothesis is formulated as the following:

Hypothesis 2: Digital Leadership has indirect impact on Dynamic capability by mediating variable of market orientation in Indonesian telecommunication industry.

Hypothesis 3: Digital Leadership has indirect impact on Dynamic capability by mediating variable of Innovation capability in Indonesian telecommunication industry.

Hence, Figure 1 below demonstrates the current research model.

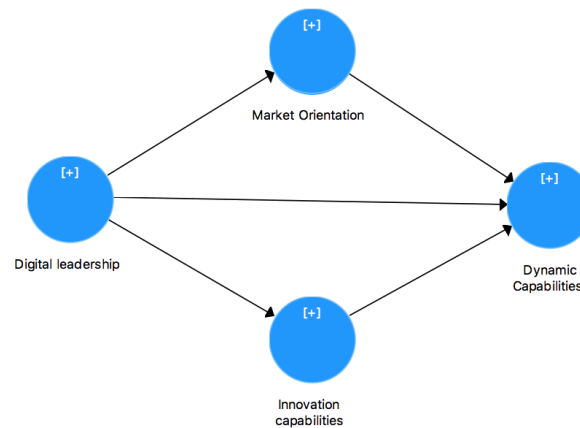


Figure 1. Research Model

3. Methodology

This study uses a quantitative research design. The units of analysis in this study are telecommunication firms in Indonesia with the management of these firms as the observed unit. The sampling method used is purposive sampling. The questionnaire survey was conducted since November 2017 until January 2018, where 75% of them represented by General manager and manager leaders and 25% is VP and Board leader. According to Hair, et al (Hair, Ringle, Sarstedt, & Vinzi, 2014) the recommended sample size is 52 respondents for the model with an endogenous construct has 2 arrows directed, 0.05 significance level, 80% statistical power and minimum $R^2 = 0.25$. The sample size of this research is 88 respondents. That is more than recommended sample size. 88% respondents are men and 12% are women. 83% respondents come from network provider, while 17% from service providers. Data were collected via self-assessment through an online questionnaire and distributed through messenger, WhatsApp, Telegram and email. Since there is a limitation of data sample, the statistical tool of analysis is SmartPLS.

4. Result

4.1. Evaluation of Measurement (Outer Model)

The analysis of the outer model specifies the relationship between latent variables and their indicators. Tests performed on outer models include:

- Convergent Validity. The value of convergent validity is the value of loading factor on the latent variable with its indicators. The expected value is above 0.7.
- Discriminant Validity is a value of cross loading factor that is useful to assess whether the constructs have

adequate discriminant by comparing the loading value on the intended construct is greater than the loading value with other constructs.

- Composite Reliability. Data that has composite reliability over 0.7 considered as highly reliable.
- Average Variance Extracted (AVE), expected to be more than 0.5.
- Cronbach Alpha. Reliability test reinforced with Cronbach Alpha. The result is expected to have value of more than 0.6 for all constructs.

Table 1: Construct Validity and Reliability Test

	Cronbach's Alpha	rho_A	Composite Reliability	AVE	Result
Digital leadership					
Creative	0.872	0.874	0.912	0.723	Valid
Deep Knowledge	0.913	0.916	0.939	0.794	Valid
Global Vision and Collaboration	0.931	0.933	0.951	0.830	Valid
Thinker	0.915	0.915	0.946	0.854	Valid
Inquisitive	0.945	0.946	0.960	0.858	Valid
Market Orientation					
Intelligent Generation	0.876	0.879	0.907	0.619	Valid
Intelligent Dissemination	0.791	0.821	0.866	0.622	Valid
Responsiveness	0.920	0.927	0.935	0.646	Valid
Innovation Capabilities					
Paradigm Innovation	0.855	0.863	0.932	0.873	Valid
Position Innovation	0.906	0.907	0.955	0.914	Valid
Proses Innovation	0.961	0.961	0.975	0.927	Valid
Dynamic Capabilities					
Adaptive Capabilities	0.917	0.918	0.948	0.858	Valid
Management Capabilities	0.915	0.922	0.940	0.797	Valid
Strategic Capability	0.851	0.865	0.900	0.694	Valid

Table 1 above shows that AVE value > 0.5, Cronbach Alpha > 0.6 and composite reliability > 0.7, which indicates that research variables have good reliability for all variables and dimensions.

Table 2: Discriminant Validity

	Digital leadership	Dynamic Capabilities	Innovation capabilities	Market Orientation
Digital leadership	0.822			
Dynamic Capabilities	0.794	0.828		
Innovation capabilities	0.735	0.809	0.884	
Market Orientation	0.755	0.744	0.820	0.894

Discriminant validity is shown in Table 2 with the diagonal bold numbers indicating the square root of AVE. This shows that all dimensions have good discriminant validity.

The value of convergent validity is the value of the loading factor of outer path analysis where t-value > 1.96 and p-value < 0.05. This means that each indicator is valid

Table 3: Outer Path Analysis

Dimensions	Path	Standard Deviation	T Statistics	P Values	Result
AC1 <- Adaptive Capabilities	0.952	0.011	84.084	0.000	Valid
AC2 <- Adaptive Capabilities	0.922	0.020	47.202	0.000	Valid
AC3 <- Adaptive Capabilities	0.904	0.027	33.304	0.000	Valid
ID1 <- Intelligent Dissemination	0.595	0.093	6.426	0.000	Valid
ID2 <- Intelligent Dissemination	0.842	0.041	20.486	0.000	Valid
ID3 <- Intelligent Dissemination	0.886	0.029	30.113	0.000	Valid
ID4 <- Intelligent Dissemination	0.798	0.046	17.255	0.000	Valid
IG2 <- Intelligent Generation	0.746	0.057	13.126	0.000	Valid
IG3 <- Intelligent Generation	0.841	0.032	26.695	0.000	Valid
IG4 <- Intelligent Generation	0.756	0.044	17.233	0.000	Valid
IG5 <- Intelligent Generation	0.801	0.054	14.844	0.000	Valid
IG6 <- Intelligent Generation	0.799	0.040	20.235	0.000	Valid
IP1 <- Process Innovation	0.963	0.014	68.288	0.000	Valid
IP2 <- Process Innovation	0.962	0.010	93.455	0.000	Valid
IP3 <- Process Innovation	0.964	0.011	87.366	0.000	Valid
IPAR1 <- Paradigm Innovation	0.942	0.015	64.779	0.000	Valid
IPAR2 <- Paradigm Innovation	0.926	0.028	32.996	0.000	Valid
IPOS1 <- Position Innovation	0.954	0.012	76.553	0.000	Valid
IPOS2 <- Position Innovation	0.958	0.010	97.619	0.000	Valid
IT1 <- Inquisitive	0.917	0.020	46.545	0.000	Valid
IT2 <- Inquisitive	0.940	0.018	51.419	0.000	Valid
IT3 <- Inquisitive	0.903	0.021	42.937	0.000	Valid
IT4 <- Inquisitive	0.946	0.015	63.970	0.000	Valid
K1 <- creative	0.756	0.042	17.948	0.000	Valid
K2 <- creative	0.910	0.020	44.447	0.000	Valid
K3 <- creative	0.864	0.042	20.603	0.000	Valid
K4 <- creative	0.865	0.046	18.757	0.000	Valid
MC1 <- Management Capabilities	0.918	0.018	50.853	0.000	Valid
MC2 <- Management Capabilities	0.861	0.033	25.996	0.000	Valid
MC3 <- Management Capabilities	0.881	0.032	27.449	0.000	Valid
MC4 <- Management Capabilities	0.910	0.021	42.831	0.000	Valid
P1 <- Thinker	0.916	0.018	50.178	0.000	Valid
P2 <- Thinker	0.930	0.015	63.221	0.000	Valid
P3 <- Thinker	0.927	0.018	50.682	0.000	Valid
PM1 <- Deep Knowledge	0.844	0.036	23.432	0.000	Valid
PM2 <- Deep Knowledge	0.901	0.027	33.855	0.000	Valid
PM3 <- Deep Knowledge	0.913	0.019	48.782	0.000	Valid
PM4 <- Deep Knowledge	0.905	0.024	37.979	0.000	Valid
R1 <- Responsiveness	0.768	0.052	14.735	0.000	Valid

R2 <- Responsiveness	0.873	0.037	23.664	0.000	Valid
R3 <- Responsiveness	0.698	0.070	9.900	0.000	Valid
R4 <- Responsiveness	0.899	0.024	37.885	0.000	Valid
R5 <- Responsiveness	0.870	0.034	25.624	0.000	Valid
R6 <- Responsiveness	0.777	0.062	12.519	0.000	Valid
R7 <- Responsiveness	0.831	0.048	17.193	0.000	Valid
R8 <- Responsiveness	0.687	0.094	7.283	0.000	Valid
SC1 <- Strategic Capability	0.879	0.022	39.340	0.000	Valid
SC2 <- Strategic Capability	0.902	0.023	39.387	0.000	Valid
SC3 <- Strategic Capability	0.773	0.050	15.537	0.000	Valid
SC4 <- Strategic Capability	0.770	0.064	11.958	0.000	Valid
VG1 <- Global Vision and Collaboration	0.925	0.020	45.178	0.000	Valid
VG2 <- Global Vision and Collaboration	0.921	0.018	49.800	0.000	Valid
VG3 <- Global Vision and Collaboration	0.879	0.052	16.926	0.000	Valid
VG4 <- Global Vision and Collaboration	0.918	0.017	53.148	0.000	Valid
IG1 <- Intelligent Generation	0.771	0.047	16.498	0.000	Valid

Table 4 shows that all constructs have a path coefficient score with t-statistics >1.96 and p-value = 0.000 <0.05, which means that all constructs have significant effects on their respective dimensions.

4.2. Structural Model (Inner Model)

Based on the blindfolding score results, Q2 was obtained for Innovation capabilities = 0.551, market orientation = 0.287, and dynamic capability = 0.510. If Q2 >0, it indicates that the structural model has adequate predictive relevance. Hence, the model is robust and hypothesis testing can be done. The complete finding can be shown in Figure 2.

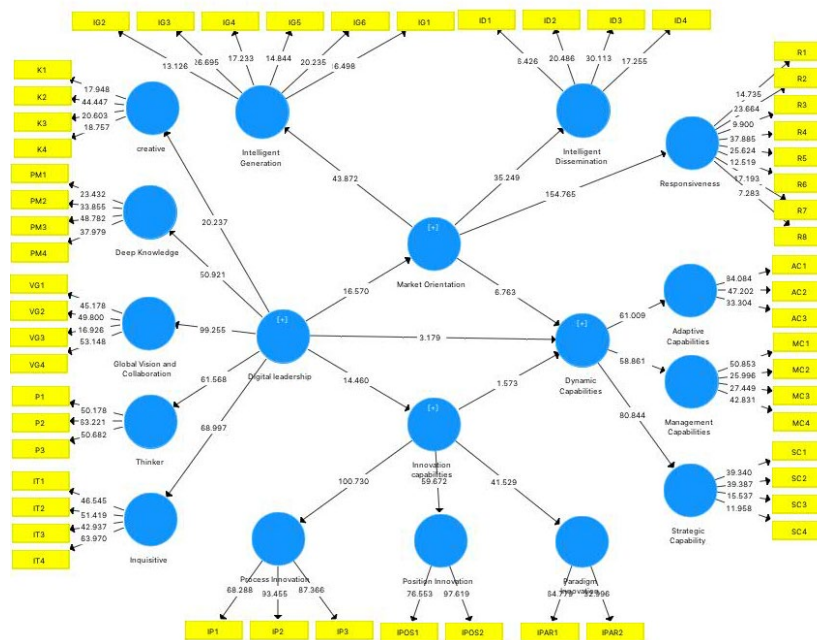


Figure 2. Path Diagram of Research Model

4.3. Hypothesis Testing

The hypothesis testing can be accomplished through partial Test and simultaneous test to know the impact of respective Variable and dimension. The result of hypothesis testing can be shown in Table 4.

Table 4: Testing of Hypothesis

Partial Test

	Path	Standard Deviation	T Statistics	P Values	Result
Digital leadership -> Dynamic Capabilities	0.235	0.074	3.174	0.001	Supported
Digital leadership -> Innovation Capability	0.735	0.051	14.460	0.000	Supported
Digital leadership -> Market Orientation	0.755	0.046	16.570	0.000	Supported
Innovation Capability -> Dynamic Capabilities	0.140	0.089	1.573	0.116	Not Supported
Market Orientation -> Dynamic Capabilities	0.605	0.089	6.763	0.000	Supported

* significant at $\alpha=0.05$ (T statistics > 1.96)

Simultaneous Test

	Path	Standard Deviation	T Statistics	P Values	Result
Digital leadership -> Market Orientation -> Dynamic Capabilities	0.457	0.073	6.499	0.000	Supported
Digital leadership -> Innovation capability -> Dynamic Capabilities	0.103	0.067	1.524	0.128	Not Supported

* significant at $\alpha=0.05$ (T statistics > 1.96)

Table 4 shows that within the degree of confidence of 95% ($\alpha=0.05$), where $T>1.96$ and $p<0.05$, there is supportive influence of digital leadership on Innovation capability, digital leadership on dynamic capability, digital leadership on market orientation and market orientation on dynamic capability, whereas innovation capability has no direct significant effect on dynamic capability. On simultaneous test, it shown that digital leadership indirect significant impact on dynamic capability mediated by market orientation and not indirect significant effect on dynamic capability if intervened by innovation capability

The direct effect test shows that the relationship between digital leadership and dynamic capability has a path coefficient score of 0.235 with t-statistics = 3.174 and p-value = $0.001<0.05$. This means that H_0 is rejected and H_1 is accepted. This proves that digital leadership has a significant impact on dynamic capability. The second assessment is the relationship between digital leadership and Innovation capability has a path coefficient score of 0.735 with t-statistics = 14.460 and p-value = $0.000<0.05$. This means that H_0 is rejected and H_1 is accepted. This proves that digital leadership has a significant impact on Innovation capability. The assessment on relationship digital leadership on market orientation has shown has a path coefficient score of 0.755 with t-statistics = 16.570 and p-value = $0.000<0.05$. This means that H_0 is rejected and H_1 is accepted. This proves that digital leadership has a significant impact on market orientation. While the relation between innovation capability with dynamic capability has a path coefficient score of 0.140 with t-statistics = 1.573 and p-value = $0.116>0.05$. This means that H_0 is accepted while H_2 is rejected. There is also no significant impact of innovation capability on dynamic capability. Lastly, the relationship between market orientation and dynamic capability has a path coefficient score of 0.605 with t-statistics = 6.763 and p-value = $0.000<0.05$. This means that H_0 is rejected and H_1 is accepted. This also proves that market orientation has a supportive impact on dynamic capability.

The indirect effect test shows that the mediating role of market orientation has a path coefficient score=0.457 with t-statistics = 6.499 and p-value = 0.000. This means that H_0 is rejected and H_1 is accepted. This proves that market orientation has significant impact as mediating role on relationship between dynamic capability and digital leadership. While, the mediating role of Innovation capability has a path coefficient score of 0.103 with t-statistics =

1.524 and $p\text{-value} = 0.1289 > 0.05$. This means that H_0 is accepted while H_2 is rejected. There is also no significant impact of innovation capability in mediating role on relationship between dynamic capability and digital leadership.

4. Discussion

The results are aligned with the study on disruption technology and innovation conducted by previous study (Christensen, 1997; Lopez-Cabrales et al., 2017; Markides, 2006)(1997), where the incumbent firm should adapt the changing of customer and market to sustain and driving digital transformation. digital leadership has a direct and indirect to dynamic capability mediated by market orientation. Global vision and collaboration bring significant value to digital leadership followed by inquisitive, deep knowledge and thinker. This finding supports Rudito (2017) and Wasono and Furinto (2018), who found that digital leadership supporting innovation capability in disruptive era. This finding brings the implication for incumbent firms to use digital leadership to establish dynamic capability through direct and indirect mediated by market orientation. While, the mediating role of innovation capability is not impact on relationship between dynamic capability and digital leadership.

Market orientation is formulated by dominant responsiveness followed by intelligent generation and intelligent dissemination capability. These findings indicate that in term of market orientation, the culture and behavior of the management and firms that adaptive to the change and responsive to the market create the value to customer and firms themselves. This finding aligns with the study before done by, Protcko and Utz Dornberger (2014) and Narver and Slater (1990).

The dynamic capability is dominant influenced by strategic capability, followed by management capability, adaptive capability and innovation capability. It means that the long-term view of management and firm in anticipating the market dynamic is important for incumbent firms. This is indicating that the long-term view through transformation is taken priority for incumbent firm in facing disruptive era.

The Innovation capability as mediating role was not supporting in relationship of dynamic capability and digital leadership. This finding shown the important in development of internal capability, it will optimal by integrating and focus on market and customer. Based on resources-based view that provide the distinctive organization capability is important through providing internal resources that valuable, rare, imperfectly imitable, and on-substitutable capabilities (Barney, 1991). Incumbent firms are required to develop the core competence to compete with new entrance in disruptive era.

5. Conclusion

Based on the results of hypotheses testing, it can be concluded that digital leadership has direct and indirect impact to dynamic capability, where the market orientation has a mediating role, while, the innovation capability was not a mediating role in the relationship of dynamic capability and digital leadership. Further study can be explored using a more extended sampling, industry and with consideration of markets outside of Indonesia. A longitudinal research design should also be done to assess direct and indirect impact of digital leadership into dynamic capability to provide value to the firms.

References

- Amit, R., & Zott, C. (2015). Crafting Business Architecture: The Antecedents of Business Model Design. *Strategic Entrepreneurship Journal*, 9(1), 331–350.
- Ansari, S., & Krop, P. (2012). Incumbent performance in the face of a radical innovation: Towards a framework for incumbent challenger dynamics. *Research Policy*, 41(8), 1357–1374.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
- Berman, S. J. (2012). Digital transformation: Opportunities to create new business models. *Strategy and Leadership*, 40(2), 16–24.
- Cattani, G., & Ferriani, S. (2008). A Core/Periphery Perspective on Individual Creative Performance: Social Networks and Cinematic Achievements in the Hollywood Film Industry. *Organization Science*, 19(6), 824–844.
- Chesbrough, H. (2010). Business model innovation: Opportunities and barriers. *Long Range Planning*, 43(2–3), 354–363.
- Christensen, C. M. (1997). *Innovator 's Dilemma*. Harvard Business School Press.
- Christensen, C. M., & Bower, J. L. (1996). Customer Power, Strategic Investment, and the Failure of Leading Firms. *Strategic Management Journal*, 17(3), 197–218.
- Čirjevskis, A. (2016). Innovative Ambidexterity and Dynamic Capabilities Perspectives. *Journal of Security and Sustainability Issues*, 6(2), 211–226.
- Das, K., Gryseels, M., Sudhir, P., & Tan, K. T. (2016). Unlocking Indonesia's Digital Opportunity. *McKinsey & Company*, (October), 1–28.
- Dean, A. M., Griffin, M., & Kulczynski, A. (2016). Applying Service Logic to Education: The Co-creation Experience and Value Outcomes. *Procedia - Social and Behavioral Sciences*, 224(August 2015), 325–331.

- Dmour, H. H. A., Basheer, E., & Amin, A. (2012). The Effect of Market Orientation on Service Innovation : A Study on the Information and Communication Technology (Ict) Sector in Jordan. *International Journal of Humanities and Social Science*, 2(19), 232–253.
- Dutta, S., Narasimhan, O., & Rajiv, S. (1999). Success in High-Technology Markets: Is Marketing Capability Critical? *Marketing Science*, 18(4), 547–568.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic Capabilities: What are They? *Strategic Management Journal*, 21(1), 1105–1121.
- Gaur, S. S., Vasudevan, H., & Gaur, A. S. (2011). Market orientation and manufacturing performance of Indian SMEs: Moderating role of firm resources and environmental factors. *European Journal of Marketing*, 45(7), 1172–1193.
- Hair, J. F., Ringle, C. M., Sarstedt, M., & Vinzi, E. (2014). Editorial Partial Least Squares Structural Equation Modeling : Rigorous Applications , Better Results and Higher Acceptance. *Long Range Planning*, 46(1–2), 1–12.
- Hurley, R.F., Hult, G. T. (1998). Innovation_Market_Orientation_and_Organization Learning: An Integration and Empirical Examination. *Journal of Marketing*, 62(July 1998), 42–54.
- IMD. (2017). IMD World Digital Competitiveness Ranking 2017, 180.
- Kagermann, H. (2015). Change through digitization-value creation in the age of industry 4.0. In *Management of Permanent Change* (pp. 23–32).
- Kandampully, J., Zhang, T. (Christina), & Bilgihan, A. (2015). Customer loyalty: a review and future directions with a special focus on the hospitality industry. *International Journal of Contemporary Hospitality Management*, 27(3), 379–414.
- Kohli, R., & Johnson, S. (2011). Digital Transformation in Latecomer Industries: CIO and CEO Leadership Lessons from Encana Oil & Gas (USA) Inc. *MIS Quarterly Executive*, 10(4), 141–156.
- Liu, D., Li, S., & Yang, T. (2012). Competitive business model in audio-book industry: A case of china. *Journal of Software*, 7(1), 33–40.
- Lopez-Cabrales, A., Bornay-Barrachina, M., & Diaz-Fernandez, M. (2017). Leadership and dynamic capabilities: the role of HR systems. *Personnel Review*, 46(2), 255–276.
- Markides, C. (2006). Disruptive Innovation : In Need of Better Theory † Business-Model Innovation. *Harvard Business Review*, 23, 19–25.
- Martelo, S., Barroso, C., & Cepeda, G. (2013). The use of organizational capabilities to increase customer value. *Journal of Business Research*, 66(10), 2042–2050.
- Martin, J. A. (2011). Dynamic Managerial Capabilities and the Multibusiness Team: The Role of Episodic Teams in Executive Leadership Groups. *Organization Science*, 22(1), 118–140.
- Michael Shamiyeh. (2014). Discontinuous Change and Organizational Response: Exploring the Moderating Effects of Resources and Capabilities – the Case of Kodak.
- Narver, J. C., & Slater, S. F. (1990). Narver and Slater.Pdf. *Journal of Marketing*. Retrieved from [http://www.jstor.org/stable/1251757%5Cnfile:///C:/Users/kzzwcy/NOTTINGHAM/Dropbox/Woon Chin's Masters/Semester 1/Marketing Management/notes/session1/session1 \(4\).pdf](http://www.jstor.org/stable/1251757%5Cnfile:///C:/Users/kzzwcy/NOTTINGHAM/Dropbox/Woon Chin's Masters/Semester 1/Marketing Management/notes/session1/session1 (4).pdf)
- Petrack, J. A., Scherer, R. F., Brodzinski, J. D., Quinn, J. F., & Ainina, M. F. (1999). Global leadership skills and reputational capital: Intangible resources for sustainable competitive advantage. *Academy of Management Perspectives*, 13(1), 58–69.
- Prahalad, C. K., & Ramaswamy, V. (2000). Co-Opting Customer Competence. *Harvard Business Review*, 78(1), 848–881.
- Proteko, E., & Dornberger, U. (2014). The impact of market orientation on business performance - The case of Tatarstan knowledge-intensive companies (Russia). *Problems and Perspectives in Management*, 12(4), 225–231.
- Raivio, Y., & Luukkainen, S. (2011). Mobile networks as a two-sided platform - case Open Telco. *Journal of Theoretical and Applied Electronic Commerce Research*, 6(2), 77–89.
- Ramaswamy, V. (2011). It's about human experiences...and beyond, to co-creation. *Industrial Marketing Management*, 40(2), 195–196.
- Ravichandran, A., Taylor, K., & Waterhouse, P. (2016). *DevOps for Digital Leaders*.
- Rudito, Priyanto, P. ., F.N, M., & M.B.A, S. (2017). Digital Mastery “Membangun Kepemimpinan Digital Untuk Memenangkan Era Disrupsi.” Jakarta: PT Gramedia Pustaka.
- Sandell, S. (2013). *Digital leadership how Creativity in Business Can propel your Brand & Boost your results*. Rochester, UK: Allen house publishing Company limited.
- Stolterman, E., & Fors, A. C. (2004). *Information Technology and the Good Life*. (B. et al Ed. Kaplan, Ed.), In:

- Information Systems Research: Relevant Theory and Informed Practice. London: Kluwer Academics Publisher.
- Teece, D. J. (2017). Business models and dynamic capabilities. *Long Range Planning*, 1–10.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509–533.
- Tidd, J. (2015). *Managing Innovation : Integrating CO Managing Innovation*, (January 2011).
- Wasono, L. W., & Furinto, A. (2018). The effect of digital leadership and innovation management for incumbent telecommunication company in the digital disruptive era (Vol. 7, pp. 125–130).
- Zhu, P. (2015). *Digital Master : Debunk the Myths of Enterprise Digital Maturity*. Lulu Publishing Service rev.
- Zott, C., & Amit, R. (2017). Business Model Innovation: How to Create Value in a Digital World. *GfK Marketing Intelligence Review*, 9(1), 18–23.

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