

THE EFFECT OF DIGITAL LEADERSHIP MEDIATED BY BUSINESS MODEL INNOVATION ON ORGANIZATIONAL PERFORMANCE AT TELKOM INDONESIA GROUP

SETYO BUDIANTO¹, UBUD SALIM², WAHDIYAT MOKO³ and NUR KHUSNIYAH
INDRAWATI⁴

^{1, 2, 3, 4}Doctoral Program in Management, Faculty of Economic and Business, Universitas Brawijaya, Malang, Indonesia. ¹Email: setyobudianto@gmail.com

Abstract

This research in the background interests researcher to the phenomenon where occur drop performance organization company, especially on product existing (voice and SMS), revolution Industry 4.0 brings challenges new for the old company for anticipating the new business models offered by player new, the current Covid -19 pandemic since April 2020 has been speeding up the market shift towards digital, digital transformation is needed by incumbent (Telkom Indonesia) for developing business model innovation product and service based on dynamic changes to stay competitive a long time, digital transformation into movement transformation organization thorough covers change aspects other crucial like strategy, process, HR and culture, to leadership. The study was conducted at the Telkom Indonesia Group Company. The sample study is leaders and leaders of child existing companies in Telkom Indonesia as many as 50 respondents. Study this test hypothesis Business Model Innovation Becomes novelty mediation that proves influence among variable digital leadership towards performance organizations that have not found in the study previously with use method Generalized Structures Components Analysis. Finding study this discloses that the hypothesis being tested can be accepted. Hypothesis about Influence Mediated Digital Leadership Business Model Innovation to Performance Organization could be accepted. Role business model innovation on significant digital leadership positive to performance organization, though mediation character partial. Culture Company as variable moderation proven digital leadership capable moderate performance organization. Business Model Innovation Becomes novelty mediation that proves influence among variable digital leadership towards performance organizations that have not been found in the study before.

Keywords: Digital Leadership, Business Model Innovation, Performance Organization.

A. INTRODUCTION

This research in the background interests researcher to the phenomenon where occur drop performance organization company, especially on product existing (voice dan SMS), revolution Industry 4.0 brings challenges new for the old company for anticipating the new business models offered by player new, the current Covid -19 pandemic since April 2020 has been speeding up the market shift towards digital, digital transformation is needed by incumbent (Telkom Indonesia) for developing business model innovation product and service based on dynamic changes to stay competitive a long time, digital transformation into movement transformation organization thorough covers change aspects other crucial like strategy, process, HR and culture, to leadership. Because it is necessary existence Influence Mediated Digital Leadership Business Model Innovation to Performance Organization.

B. LITERATURE REVIEW

Sandell (2013) defines digital leadership as the capability and available capacity to provide environment creativity with optimizing technology and digital capabilities. Frankenberger et al., (2013) define Business Model Innovation as a business model modification for catch creation value. Business model innovation used by large in chain score business, including processes and integration with existing business processes. Business Model Innovation Becomes novelty mediation that proves influence among variable digital leadership towards performance organizations that have not been found in the study before. Oyemomi et al., (2019) define Performance Organization as the ability organization to reach specified goals for maintaining profit, having power competitive profit, increasing share market, and conserving period long continuity life, which depends on the use strategy of the right organization and plans practically.

C. METHODS

Approach study positivist (quantitative) with survey method. Object Study: Telkom Group. Object study this is an organization at Telkom Indonesia represented by the leader as many 50 respondents Data was collected from a survey and deployment questionnaire. The analysis used is Generalized Structures Components Analysis.

D. RESULTS AND DISCUSSION

Digital Leadership -> Business Model Innovation -> Organizational Performance	2.237	0.013
---	-------	-------

The testing on the effect of Digital Leadership Mediated by Business Model Innovation on Organizational Performance hypotheses in this study shows that the digital leadership constructs mediated by business model innovation have a positive (t-value=2.237) and significant (p-value=0.013<0.05) effect on organizational performance. In other words, this research can prove that digital leadership mediated by business model innovation affects organizational performance at Telkom Indonesia.

Based on the results of hypothesis testing, it can be concluded that digital leadership has a direct and indirect effect on organizational performance. The indirect pathway is mediated by business model innovation. This finding has implications for a digital transformation model where digital leaders play an important role in ensuring digital transformation based on their vision and ambition, performance management based on digital maturity, and the development of company fundamentals based on digital operational excellence and digital culture.

The impact of industry 4.0 on telecommunication companies is described as digital transformation. This topic has been discussed intensively and resulted in the concept of Telco 2.0 (Yoon, 2007). The transformation model allows telecommunications operators to have a two-sided model called Open Telco, where partners or customers consist of partners or customers (Raivio & Luukkainen, 2011) The Telco 2.0 concept focuses on customer-centered

and innovative organizations to provide collaboration and openness of innovation models business. The basis of digital transformation is based on an innovation framework (Tidd, 2015; Khan & Ali, 2017; Cossiga, 2018).

In the telecommunications industry of established companies, transformation can be carried out through the exploration of integrated innovation with existing core competencies, there are four transformation models for established Telcos that have heavy infrastructure investments (World Economic Forum, 2016), namely:

1. The Connectivity Provider of the Future focuses on developing ICT infrastructure to enable other enterprises and OTTs across industries, by investing in and virtualizing networks. This includes investments in software-defined networks, cybersecurity, and extended connectivity.
2. Beyond the pipe, integrating IoT and digital services adds value-added services. Capability in business model innovation is also required to generate new revenue on top of existing infrastructure.
3. Redefinition of customer engagement is carried out through customer loyalty and mindshare to create a better customer experience and improve services to suit other industries.
4. Bridging the innovation gap. This is done by transforming the capabilities of the innovation model and by increasing the capabilities of talent to work digitally and collaborate to create shared value with stakeholders. This requires collaborative strategic capabilities and co-creation partnerships to accelerate and leverage existing assets.

The business model is the main driver in the industrial era 4.0(Li, 2018; Prem, 2015). Digital technology enables the creation of innovative business models (Schwertner, 2017). A business model is a complex structure that involves organizational behavior to create, deliver, and capture value. The business model is the process of creating value creation (Osterwalder, 2004). Business model innovation is the modification of a business model to capture value creation. Business model innovation is widely used in business value chains, including processes and integration with existing business processes (Frankenberger et al., 2013) as part of open innovation (Berglund & Sandström, 2013; Chesbrough, 2012). part of the implementation strategy in the context of sustainability for incumbent companies (Massa & Tucci, 2014). Business model innovation plays an important role in the digital economy (Lee & Vonortas, 2004) and is a driver for providing two-sided models such as the Telco 2.0 digital model (Eksell & Harenstam, 2017). In addition, business model innovation aims to create value and is part of strategy implementation within the strategic management framework (Amit & Zott, 2010, 2012; Zott & Amit, 2017). Business model innovation is part of the digital transformation that is carried out by rearranging business activities that are more valuable than before by optimizing new digital technologies (Berman, 2012; Prem, 2015). Business model innovation is a new, holistic, integrated, and systematic way for organizations to provide innovation operations for the automotive industry which has dynamic market characteristics (Abdelkafi et al., 2013).

In the Industry 4.0 era, Upper Esselon's theory (Hambrick & Mason, 1984) is still relevant. Digital leadership plays an important role in driving organizational transformation as a result of disruptive technology and innovation for incumbent companies (Christensen & Bower, 1996; Markides, 2006). The findings show that digital leadership has a direct and indirect influence on business model innovation as part of digital transformation (Berman, 2012; Li, 2018; Prem, 2015). The findings show that digital leadership is shaped by global characteristics, deep, creative, and resilient, which is in line with the phenomenon of change in Industry 4.0, where the enterprise ecosystem is required to be more innovative, standardized, modular, interoperable, decentralized, real-time, and service-oriented (Ibarra et al., 2017). In the digital era, digital leaders must act in a global mindset to connect and be more creative to support the culture of innovation in each company. They must always think of new ways of doing business and they have a deep and deep knowledge of taking risks and making decisions to make companies more innovative, modular, and decentralized. In other words, digital leaders must facilitate the company's digital capabilities to be integrated into the development of culture and competence (Rudito & Sinaga, 2017). The role of digital leadership must encourage innovation in optimizing digital technology (De Waal et al., 2016). These findings suggest that incumbent companies should apply digital leadership to build good customer experiences (Cinquini et al., 2013; Ravichandran et al., 2016; Yoong, 2009) and create innovative business models (Kreutzer et al., 2017; Wasono & Furinto, 2018; Wasono et al., 2018). The findings of the Customer Experience Orientation show a strong relationship in the development of business model innovations in industry 4.0. This shows that due to digital disruption, customers are an important factor in maintaining a competitive advantage. In this digital era, customer experience is an input for value chain development to develop business model innovations.

With a strong reputation, the company can control and attract valuable customers and stakeholders to create more value in a series of activities. The development of strong customer relationships is considered in personalizing customer needs. These findings emphasize the importance of personalization due to digital technology and virtualization (Henfridsson et al., 2014; Parise et al., 2016). What's interesting about this finding is that prices in customer experience development are less prioritized in Industry 4.0. This shows that in the digital age, customer experience can be prioritized with strong customer relationships and personalization. In other words, when the customer experience is satisfied by the company, the customer will not consider the company's price and brand. Business model innovation is shaped by the structure and content innovation. This is in line with previous research that business model development is supported by value creation or can be commercialized by creating future cash flows (Bascéanu, 2014; Cinquini et al., 2013; Zott & Amit, 2017). Meanwhile, the government is still considered important, but it is less prioritized than the content and structure of innovation because of the development content and context of business model innovation, government innovation is an integrated part of the business model innovation process. The indirect test shows that customer experience acts as an intervening variable in the relationship between business model innovation and digital leadership. This finding supports findings in the research that leadership through collaboration will strengthen innovation in business models (Gilmore & Pine, 2002; Ramaswamy, 2011; Randall et al., 2013). This finding has implications for the

importance of companies in digital transformation models to strengthen digital leadership. Digital leadership becomes the center of transformation with the support of digital technology, competence, and culture of digital leaders to drive transformation based on vision and mission.

Heikkila, M., Bouwman, H., and Heikkila, J. (2018) stated that business model innovation will affect company performance if it focuses on efficiency. Their findings confirm the results of previous research from Zott, C., Amit, R. (2007), which showed that the design of an efficiency-oriented business model has an impact on the overall company performance. Business model innovation improves performance not only by reducing production costs but also by utilizing available resources more effectively. Chesbrough, H. (2007). The research of Gronum, S., Steen, J., Verreyne, ML (2016) and Wei, Z., Song, X., and Wang, D. (2017) also found that business model design that focuses on efficiency improves company performance by reducing inventory costs, thereby benefiting customers and suppliers, and reducing marketing, sales, and other operating expenses. According to Lin and Chen (2007), the determining aspect of company performance, in an increasingly fierce competition environment, of which is innovation. Fast technology and high product variety in determining organizational performance is one of the impacts of product innovation changes (Hartini, 2012). Aini et al. (2021) in their research prove that business model innovation affects modest fashion business performance. Business model innovation enables SMEs to take advantage of limited opportunity recognition by engaging in a range of activities such as comprehensive organizational design, networking, and knowledge management. This study proves that business innovation directly has a significant effect on organizational performance.

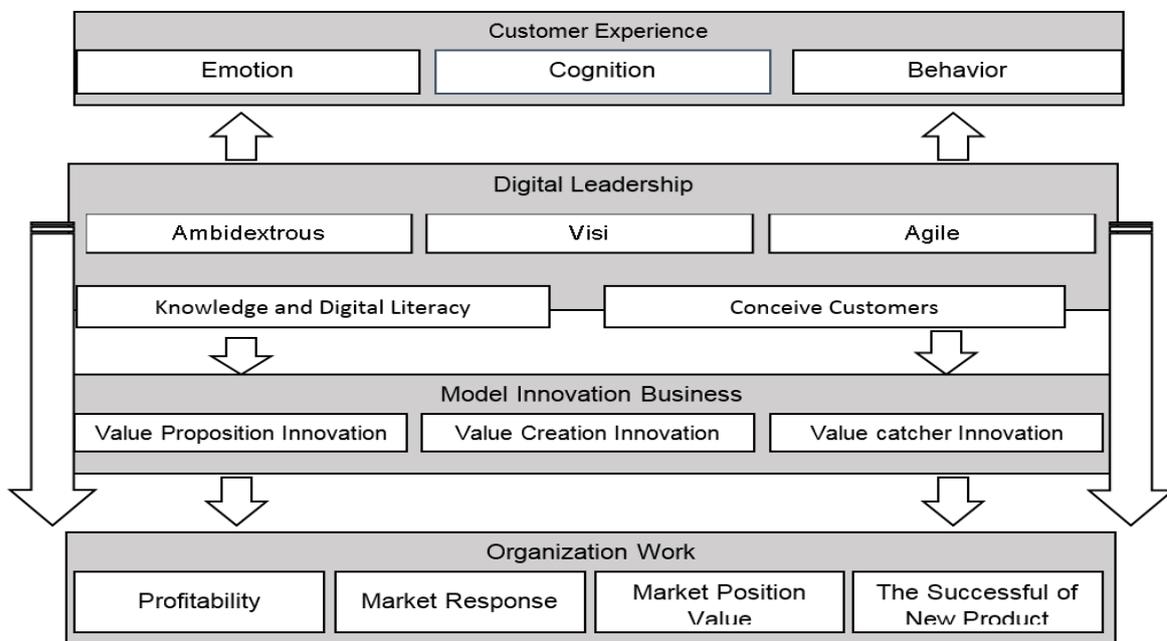


Figure 1. Digital Leadership in Organizational Performance Framework

E. CONCLUSION

Based on the results of hypothesis testing, it can be concluded that digital leadership has a direct and indirect effect on organizational performance. The indirect pathway is mediated by business model innovation. This finding has implications for the digital transformation process in companies where digital leadership plays an important role in ensuring digital transformation based on the company's vision and mission, performance management based on digital maturity, and fundamental enterprise development based on digital operational excellence and digital culture.

This study has limitations related to time and sample. Therefore, it is recommended that further research covers the following matters: (1) to examine in more depth and develop indicators and variables in the context of digital leadership, business model innovation, and organizational performance, and (2) to expand the number of samples from each telecommunications company in Indonesia, (3) to determine better different modeling, and statistical analysis using better statistical applications; and (4) as well as conducting longitudinal research on companies that are already in the stages of the digital transformation process.

References

- Berglund, H., & Sandström, C. (2013). Business model innovation from an open systems perspective: structural challenges and managerial solutions. *International Journal of Product Development*, 18(3/4), 274.
- Bouwman, H., Nikou, S. and de Reuver, M. (2019) Digitalization, business models, and SMEs: How do business model innovation practices improve performance of digitalizing SMEs?, *Telecommunications Policy*, Elsevier, vol. 43(9). DOI: 10.1016/j.telpol.2019.101828
- Bouwman, H., Nikou, S., Molina-Castillo, F. J., and de-Reuver, M. (2018). The impact of digitalization on business models. In *Digital Policy, Regulation and Governance*, Vol. 20(2): 105–124.
- Chesbrough, H. (2007) Business model innovation: it's not just about technology anymore, *Strategy and Leadership*, Vol. 35(6), 12–17.
- Chesbrough, H. (2012). OI: Where we've been and where we're going. *Research-Technology Management*, 55(4): 20-27.
- Chesbrough, H. and Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change*, 11: 529-55.
- Chesbrough, H.W. (2010). Business Model Innovation: Opportunities and Barriers. *Long Range Planning*, 43, 354-363.
- Crossiga, G. A. (2018). Signals from the world of economics. The price constant and the democratic issue. *International Journal of Social and Administrative Sciences*, Vol. 3(1): 1-21.
- Frankenberger, K., Weiblen, T., Csik, M. and Gassmann, O. (2013) the 4I-framework of business model innovation: a structured view on process phases and challenges. *International Journal of Product Development*, 18: 249-273.
- Khan, S.N., and Ali, E.I.E. (2017). The moderating role of intellectual capital between enterprise risk management and firm performance: A conceptual review. *American Journal of Social Sciences and Humanities*, Vol. 2(1): 9-15.

Li, F. (2018). The digital transformation of business models in the creative industries: A holistic framework and emerging trends. *Technovation*.

Osterwalder, A and Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers dan Challenger's*. New Jersey: John Wiley & Sons, Inc.

Osterwalder, A. (2004) the business model ontology a proposition in a design science approach. Université de Lausanne, Faculté des hautes études commerciales.

Oyemomi, O.; Liu, S.; Neaga, I.; Chen, H.; and Nakpodia, F. (2019) how cultural impact on knowledge sharing contributes to organizational performance: Using the fsQCA approach. *J. Bus. Res.* 94: 313–319.

Prem, E. (2015, December). A digital transformation business model for innovation. In *ISPIM Innovation Symposium* (p. 1). The International Society for Professional Innovation Management (ISPIM).

Raivio, Y., & Luukkainen, S. (2011). Mobile networks as a two-sided platform-case Open Telco. *Journal of Theoretical and Applied Electronic Commerce Research*, Vol. 6(2): 77–89.

Sandell, S. (2013). *Digital leadership how Creativity in Business can propel your Brand & Boost your results*. Rochester, UK: Allen house publishing Company limited.

Schwab, and Klaus. 2016. *The Fourth Industrial Revolution*. World Economic Forum. ISBN-13: 978-1-944835-01-9.

Schweitzer, J. (2013). 'Leadership and Innovation Capability Development in Strategic Alliances', *Leadership and Organization Development Journal*, 35(5): 442-469

Schweitzer, J. (2013). Leadership and innovation capability development in strategic alliances. *Leadership and Organization Development Journal*, 35(5): 442-69.

Schwertner, K. (2017) Digital transformation of business. *Trakia J. Sci.* Vol. 15: 388–393.

Tidd, J. (2015). *Managing Innovation: Integrating CO Managing Innovation*. Wiley: UK.

Venkatraman, N. and Ramanujam, V. (1986) Measurement of Business Performance in Strategy Research: A Comparison of Approaches. *Academy of Management Review*, 11, 801-814.

Wang, C.L. and Ahmed, P.K. (2007) Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews*. Vol. 9(1): 31-51.

Yoon, J.-L. (2007). Telco 2.0: A new role and business model. *IEEE Communications Magazines*, Vol. 1(1): 10–13.

Zott, C., Amit, R. and Massa, L. (2011). The business model recent developments and future research. *Journal of Management*, 37: 1019-42.