PROPOSING INNOVATION MANAGEMENT MODEL IN LARGE CORPORATION

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ABSTRACT

When business enters industry 4.0 era, emerging technologies are evolving and utilized to promote business performance. This signifies disruption among companies especially in large corporations due to its stiffness and slowness in response while startups or small companies are prone to response quickly. Previous studies suggest innovation to overcome this condition so that those large corporation could still enhance its performance in this industry era. Thus, several studies of them have been considered to propose an Innovation Management Model in Large Corporation. The result shows that in order to promote business performance, there are several factors needed to be considered such as: 1) Leadership, 2) Culture, 3) Support, 4) Innovation Process and 5) Business Performance. This study offers an interesting innovation management model to achieve business performance in large corporations is driven by innovation process. Meanwhile, in promoting this process, those large corporations need to promote leadership and culture. This model also suggests support for accelerating the process. This finding and contribution may give an opportunity for researchers to test the model for their future research.

Keyword: Innovation, Innovation Management System, Innovation Management Model

1. INTRODUCTION

Industry revolution 4.0 has signifies disruption especially for large corporations. These organisations tend to be slower in response to this disruption compared to small ones while startup and small companies are prone to response quickly. Previous studies has given insights that innovation is needed to help those large corporations to overcome the disruption. Although many large corporations have realized that they need to innovate in every aspect of their way of doing business, however, some of them fail to keep this movement consistently and others find it extremely difficult to get it done. It is mainly due to lack of system or model that they can approach the movement. Besides that, managing innovation at firm level is more complex due to the existence of multiple interrelationship and cooperative activities in that firm level [1].

Furthermore, reference [2] also states that implementation of innovation management system is a complex task regarding to company's specific requirements. Therefore, a thorough investigation on appropriate system or model is urgently required so that those large corporations can systematically approach the innovation movement.

After screening previous studies, unfortunately, there is a lack of knowledge on a proper innovation management model especially for large corporation. Therefore, this research aims to propose innovation management model as guidance for large corporations to implement and promote innovation management model in their corporations.

To propose this model, innovation management system by ISO 56002: 2019 has been served as basic model to propose this innovation management model for large corporation.

2. RESEARCH METHOD

Several studies are thoroughly reviewed. Reference [3] introduces several factors such as strategic support, climate, leadership, and commitment to innovation.

Other reference [4] shows two most frequently assessed constructs including "organizational climate" and "readiness for implementation." [4]. Meanwhile, reference [5] introduces several factors of innovation management system such as organizational context, leadership, planning, support, operations, performance evaluation, and improvement.

For this study, there are five components to be investigated to be proposed as an innovation management model such as 1) leadership, 2) culture, 3) support, 4) innovation process, and 5) business performance.

By definition, the process of social influence to maximize effort of others towards the achievement of a goal is regarded as leadership [5]. Commitment from this leadership from top management is needed to function the IMS [5]. Its behaviors are important specially to give clarity about direction of their organization [6]. Reference [7] suggests that leadership impacts employee's innovative behavior in hospital context.

Those behaviors according reference [5] are 1) vision is directed by leader to guide his organization to the future, 2) necessary trust and safety that are required for better creativity are enabled by leader, 3) the status quo is challenged by leader to enable change, 4) crises and new opportunities are well handled and capitalized by leader, 5) data and research methods are used by leaders when they make decision, 6) teamwork, collaboration and putting self-interest aside are our leaders' values, 7) diversity and differences are recognized to promote creative, and 8) expertise in what leaders do and being curious related to technology are important for us.

In order to show leadership commitment to innovation, the action that needs to be taken is the leadership engagement in promoting culture [5]. Culture means background, history, heritage, religion, and beliefs [5].

To promote culture, five principles are needed including: 1) promoting intervention and accessibility by using community resources, 2) strategizing communication, 3) working through cultural or religious values, 4) overcoming barriers to promote accessibility and participation, and 5) accommodating various cultural identification [5].

The success of IMS is influenced by the support. Such support covers: 1) resources and capabilities, 2) people and teams' development, 3) knowledge management, 4) funding and financial issues, 5) infrastructure, 6) innovation competency framework, 7) tools and methods, 8) Strategic intelligence management, and 9) Intellectual property management [5].

Innovation initiative can be taken by referring to actions based on ISO 56002:2019 [5]. By this standard, any programs, initiatives, or suggestions can focus on innovation as long as it has novelty dimension [5]. It should also add value to stakeholders. Therefore, any action addressing new or emerging issue is regarded to innovation initiative by ISO 56002:2019 [5]. Especially in turbulence era, innovation along with metamorphosis coupled by entrepreneurship is needed to promote strategic resilience [8]. Organization configures the processes to match innovation [5].

The process consists of: 1) opportunity identification, 2) concept creation, 3) concept validation, 4) solution development, and 5) solution deployment.

Performance evaluation is a critical step based on ISO 56002: 2019. It helps leader to understand innovation contribution to achieve strategy and its alignment inside organization [5]. Reference [9] shows that innovation impacted successful performance of a hospital unit. Business performance can be evaluated using nine indicators such as: 1) higher sales growth, 2) more profitable, 3) growing more rapidly, 4) better service quality, 5) higher customer satisfaction, 6) growing quantity of employees, 7) growing innovative products, 8) growing innovative processes, and 9) growing qualified products [10].

3. RESULTS AND DISCUSSION

After reviewing several literatures regarding innovation management especially in large corporations, this research proposes the following conceptual framework as shown in figure 2. This framework has generated as insight from IMS by ISO 56002: 2019 [11] as shown in Figure 1.

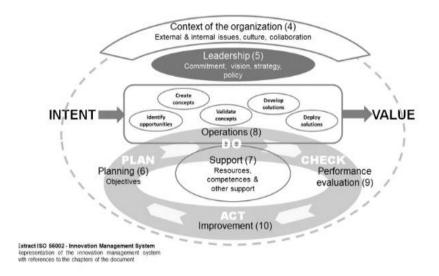


Figure 1. IMS based on ISO 56002: 2019 [11]

Reference [12] suggests that adopting ISO 56002:2019 will promote the achievement of sustainable development goal for the organization. This system is believed to have the ability for boosting various types of innovation, increasing innovativeness, and creating value for the firms [13].

As shown in Figure 1, the system consists of several clauses such as: 1) organizational context, 2) leadership, 3) planning, 4) support, 5) operations, 6) performance, and 7) improvement [11].

Furthermore, five factors identified in previous studies are connected as a proposed model shown in figure 2 based on Innovation Management System ISO 56002:2019 as shown in Figure 1.

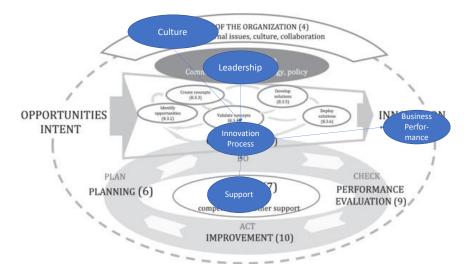


Figure 2. Theoretical Framework

Thus, this system serves as basic model for proposing this innovation management model as shown in Figure 2.

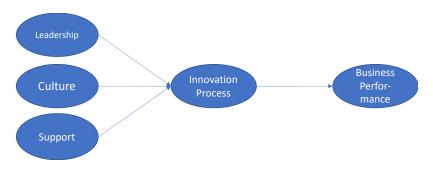


Figure 3. Conceptual Framework

From Figure 3 above, the model consists of five components. From this proposal, business performance in large corporations can be proposed to be driven by innovation process. Meanwhile, in promoting this process, those corporation needs to promote leadership and culture. This model also suggests support for accelerating this process. There are several propositions that can be described in the following section.

Previous study found authentic leaders positively promote organisational learning capability which in turns promotes innovation success [14]. Another study stresses that leadership is important especially in proposing and implementing innovative ideas [15]. Moreover, reference [16] has also positively impacted innovation management through technology transfer. Leadership also has proven to have impacted sustainable competitive advantage from company not only innovation management [17]. This innovation performance also can be positively impacted by leadership style [18]. On top of this style, ethical leadership also has indirect impact on individual creativity even stronger when employees work in innovative climate. This factor is especially needed if organization want to increase exploration initiatives through senior leadership [19].

Previous study shows that organizational culture along with other factors drives organizational attractiveness and employee's innovative behaviours [20]. [21] indicates that there is significant impact from culture to innovation and economic growth of the organization. This factor is especially needed for organizations that want to drive radical innovative strategy [22]. Organizational climate together with the factor are also believed to be centre of innovation development and effectiveness in human services [23]. It also has positive impact on intrapreneurship [24].

Previous study found that the support of the upper management the organizational, strategic, cultural and knowledge infrastructures are need to support innovation process [2]. Support in terms of technology transfer has positive impact on innovation management [16]. Other support such as collective intelligence also significantly impacts collective innovation and sustainability [25]. This knowledge capability has increased the probability that a company is technology and innovation-based company [26]. Moreover, radical innovative management, learning and knowledge-based organization along with financial aspect has impact radical innovation efforts [27].

On the other hand, knowledge management has also contributed on company innovation directly or indirectly [28]. Besides that, training for experience and involvement in this practice has also impacted innovation [29].

Previous studies have shown that innovation impacts the business performance positively [30] and firm size moderates this relationship [10] especially in the larger company [31]. In other studies, innovation efforts positively drove innovation impacts in form of new products [32], financial impacts [33] and company's sustainability [34].

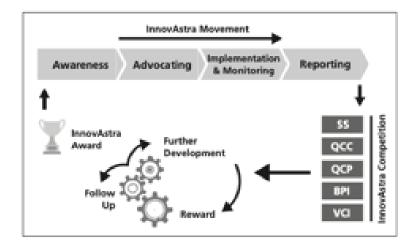


Figure 4. InnovAstra [35]

The proposed innovation model as shown in Figure 2 has also been observed in one of large corporations in Indonesia. The large corporation which serves as case study for this innovation management system is Astra. This corporation fulfils the criteria as large corporations with conglomerate structure as this paper mention earlier. Unlike the other large corporations, this large corporation has already its own innovation management system called InnovAstra [35].

By using this system, Astra, as one of large corporations in Indonesia, has also promoted innovation as its weapon to promote its business performance. This activity has been effectively managed through its called InnovAstra, an innovation management system at Astra. In this system, there are three pillars such as movement, competition, and award [35].

In movement, leader's commitment is required by deploying facilitators to oversee innovators' projects. This pillar also serves as culture where all Astra people conducts innovation process facilitated by dedicated facilitator. This innovation process consists of awareness, advocating, implementation and monitoring and reporting [35].

In competition, all innovators are encouraged to share their innovation projects. Board of judges are also provided to determine which projects are eligible to get award from the company [35].

Lastly, in award pillar, those selected projects by board of judges are supported by reward, further development and follow up [35].

This case certainly serves description on how the proposed innovation management model was actually implemented in Astra as one of Indonesian large and conglomerate corporation [35].

4. CONCLUSIONS AND SUGGESTIONS

This model has many obstacles. Firstly, adequate respondent sampling is needed to confirm it. Secondly, becoming organizational guidance requires valid model by suitable methodology. Thus, future research needs a careful handling to generate a valid one.

Previous studies gave insights to build a model to guide organization for innovation management. This study serves as basic theory for any effort to develop a proper model for innovation management in large corporations.

REFERENCES

- [1] M. Cortimiglia et al., "A Systematic Literature Review on Firm-Level Innovation Management Systems," International Association for Management of Technology IAMOT 2015 Conference Proceedings, 2015.
- [2] Ç. Üçler and R. I. Yavuz, "Implementation of Innovation Management Systems in Large Companies of Different Typologies," İŞLETME ARAŞTIRMALARI DERGİSİ JOURNAL OF BUSINESS RESEARCH-TURK, vol. 11, no. 1, pp. 189–201, 2019, DOI: 10.20491/isarder.2019.592.
- [3] M. W. van den Hoed, R. Backhaus, E. de Vries, J. P. H. Hamers, and R. Daniëls, "Factors contributing to innovation readiness in health care organizations: a scoping review," BMC Health Serv Res, vol. 22, no. 1, Dec. 2022, DOI: 10.1186/S12913-022-08185-X.
- [4] J. D. Allen et al., "Meausures of organizational characteristics associated with adoption and/or implementation of innovations: A systematic review," BMC Health Serv Res, vol. 17, no. 1, Aug. 2017, DOI: 10.1186/S12913-017-2459-X.

- [5] H. J. Harrington, A Practical Guide for Implementation and Building a Culture of Innovation. by Routledge/Productivity Press, 2021. Accessed: Oct. 20, 2022. [Online]. Available: https://www.routledge.com/Using-the-ISO-56002-Innovation-Management-System-A-Practical-Guide-for/Benraouane-Harrington/p/book/9780367701406
- [6] J. Zenger, "Nine Behaviors That Drive Innovation," 2015. https://www.forbes.com/sites/ jackzenger/2015/05/14/9-behaviors-that-drive-innovation/?sh=7cf8da917593 (accessed Oct. 23, 2022).
- [7] T. Slåtten, B. R. Mutonyi, and G. Lien, "The impact of individual creativity, psychological capital, and leadership autonomy support on hospital employees' innovative behaviour," BMC Health Serv Res, vol. 20, no. 1, pp. 1–17, Dec. 2020, DOI: 10.1186/S12913-020-05954-4/TABLES/5.
- [8] M. Morais-Storz, R. Stoud Platou, and K. Berild Norheim, "Innovation and metamorphosis towards strategic resilience," International Journal of Entrepreneurial Behaviour and Research, vol. 24, no. 7, pp. 1181–1199, Nov. 2018, DOI: 10.1108/ IJEBR-11-2016-0369/FULL/HTML.
- [9] W. J. Glover, N. Nissinboim, and E. Naveh, "Examining innovation in hospital units: A complex adaptive systems approach," BMC Health Serv Res, vol. 20, no. 1, pp. 1–12, Jun. 2020, DOI: 10.1186/S12913-020-05403-2/FIGURES/2.
- [10] R. Farooq, S. Vij, and J. Kaur, "Innovation orientation and its relationship with business performance: moderating role of firm size," Measuring Business Excellence, vol. 25, no. 3, pp. 328–345, 2021, DOI: 10.1108/MBE-08-2020-0117.
- [11] L. Morel and J. Claire, "Innovation Management: A New Serious Game Aligned With ISO 56002: 2019 - Innovation Management System," Proceedings of the 23rd International Conference on Engineering and Product Design Education, E and PDE 2021, 2021, DOI: 10.35199/EPDE.2021.93.
- [12] P. A. Khan, S. K. Johl, and S. K. Johl, "Does adoption of ISO 56002-2019 and green innovation reporting enhance the firm sustainable development goal performance? An emerging paradigm," Bus Strategy Environ, vol. 30, no. 7, pp. 2922–2936, Nov. 2021, DOI: 10.1002/BSE.2779.
- [13] M. C. Idris and A. Durmuşoğlu, "Innovation Management Systems and Standards: A Systematic Literature Review and Guidance for Future Research," Sustainability 2021, Vol. 13, Page 8151, vol. 13, no. 15, p. 8151, Jul. 2021, DOI: 10.3390/SU13158151.
- [14] E. Domínguez-Escrig, F. F. Mallén Broch, R. Chiva, and R. Lapiedra Alcamí, "Authentic leadership: boosting organisational learning capability and innovation success," Learning Organization, vol. ahead-of-print, no. ahead-of-print, 2022, DOI: 10.1108/TLO-01-2021-0007/FULL/PDF.
- [15] S. Batistič, R. Kenda, M. Premru, and M. Černe, "HR systems and leadership attachment affecting idea generation and implementation: An experiment and two-source multi-level study," European Management Journal, vol. 40, no. 4, pp. 532–545, Aug. 2022, DOI: 10.1016/J.EMJ.2021.09.005.

- [16] G. I. Sonmezturk Bolatan, A. Giadedi, and T. Daim, "Innovation leadership through technology transfer: Case of Turkish industry," Technol Soc, vol. 68, p. 101909, Feb. 2022, DOI: 10.1016/J.TECHSOC.2022.101909.
- [17] W. Banmairuroy, T. Kritjaroen, and W. Homsombat, "The effect of knowledge-oriented leadership and human resource development on sustainable competitive advantage through organizational innovation's component factors: Evidence from Thailand 's new S- curve industries," Asia Pacific Management Review, vol. 27, no. 3, pp. 200–209, Sep. 2022, DOI: 10.1016/J.APMRV.2021.09.001.
- [18] F. Cui, H. Lim, and J. Song, "The Influence of Leadership Style in China SMEs on Enterprise Innovation Performance: The Mediating Roles of Organizational Learning," Sustainability 2022, Vol. 14, Page 3249, vol. 14, no. 6, p. 3249, Mar. 2022, DOI: 10.3390/SU14063249.
- [19] S. Baškarada and J. Watson, "Managing the exploitation-exploration tradeoff: how leaders balance incremental and discontinuous innovation," Development and Learning in Organizations, vol. 31, no. 4, pp. 13–16, 2017, DOI: 10.1108/DLO-10-2016-0096/ FULL/XML.
- [20] B. R. Mutonyi, T. Slåtten, G. Lien, and M. González-Piñero, "The impact of organizational culture and leadership climate on organizational attractiveness and innovative behavior: a study of Norwegian hospital employees," BMC Health Serv Res, vol. 22, no. 1, pp. 1–19, Dec. 2022, DOI: 10.1186/S12913-022-08042-X/TABLES/6.
- [21] P. C. Kostis, "Culture, innovation, and economic development," J Innov Entrep, vol. 10, no. 1, pp. 1–16, Dec. 2021, DOI: 10.1186/S13731-021-00163-7/TABLES/14.
- [22] T. Büschgens, A. Bausch, and D. B. Balkin, "Organizational Culture and Innovation: A Meta-Analytic Review," Journal of Product Innovation Management, vol. 30, no. 4, pp. 763–781, Jul. 2013, DOI: 10.1111/JPIM.12021.
- [23] C. Glisson, "The Role of Organizational Culture and Climate in Innovation and Effectiveness," Hum Serv Organ Manag Leadersh Gov, vol. 39, no. 4, p. 245, Aug. 2015, DOI: 10.1080/23303131.2015.1087770.
- [24] A. Gürsoy and P. Güven, "Effect of Innovative Culture on Intrapreneurship," International Journal of Business and Social Science, vol. 7, no. 1, 2016, Accessed: Nov. 09, 2022. [Online]. Available: www.ijbssnet.com
- [25] K. S. Al-Omoush, S. Ribeiro-Navarrete, C. Lassala, and M. Skare, "Networking and knowledge creation: Social capital and collaborative innovation in responding to the COVID-19 crisis," Journal of Innovation & Knowledge, vol. 7, no. 2, p. 100181, Apr. 2022, DOI: 10.1016/J.JIK.2022.100181.
- [26] S. Camisón-Haba, J. A. Clemente-Almendros, and T. Gonzalez-Cruz, "How technologybased firms become also highly innovative firms? The role of knowledge, technological and managerial capabilities, and entrepreneurs' background," Journal of Innovation & Knowledge (JIK), vol. 4, no. 3, pp. 162–170, Jul. 2019, DOI: 10.1016/J.JIK.2018.12.001.

- [27] V. Tiberius, H. Schwarzer, and S. Roig-Dobón, "Radical innovations: Between established knowledge and future research opportunities," Journal of Innovation & Knowledge, vol. 6, no. 3, pp. 145–153, Jul. 2021, DOI: 10.1016/J.JIK.2020.09.001.
- [28] E. Ode and R. Ayavoo, "The mediating role of knowledge application in the relationship between knowledge management practices and firm innovation," Journal of Innovation & Knowledge (JIK), vol. 5, no. 3, pp. 210–218, Jul. 2020, DOI: 10.1016/J.JIK.2019.08. 002.
- [29] G. Avby and S. Kjellström, "LearnOvation: An intervention to foster exploration and exploitation behaviour in health care management in daily practice," BMC Health Serv Res, vol. 19, no. 1, pp. 1–9, May 2019, DOI: 10.1186/S12913-019-4152-8/TABLES/1.
- [30] E. R. Lestari, D. S. N. Rodhiyah, and E. S. Najah, "Drivers of innovation and its impact on business performance," IOP Conf Ser Earth Environ Sci, vol. 475, no. 1, May 2020, DOI: 10.1088/1755-1315/475/1/012045.
- [31] O. Zizlavsky, "The use of financial and nonfinancial measures within innovation management control: Experience and research," Economics and Sociology, vol. 9, no. 4, pp. 41–63, 2016, DOI: 10.14254/2071-789X.2016/9-4/3.
- [32] J. A. Saliba de Oliveira, L. F. Cruz Basso, H. Kimura, and V. A. Sobreiro, "Innovation and financial performance of companies doing business in Brazil," International Journal of Innovation Studies, vol. 2, no. 4, pp. 153–164, Dec. 2018, doi: 10.1016/J.IJIS.2019.03. 001.
- [33] M. Yang, R. Sulaiman, Y. Yin, V. Mallamaci, and H. Alrabaiah, "The effect of business intelligence, organizational learning and innovation on the financial performance of innovative companies located in Science Park," Inf Process Manag, vol. 59, no. 2, Mar. 2022, DOI: 10.1016/J.IPM.2021.102852.
- [34] S. H. Jin and S. O. Choi, "The effect of innovation capability on business performance: A focus on it and business service companies," Sustainability (Switzerland), vol. 11, no. 19, Oct. 2019, DOI: 10.3390/SU11195246.
- [35] Y. Liman, "Astra on becoming Pride of the Nation," Gramedia, 2015. https://www. goodreads.com/book/show/34403660-astra-on-becoming-pride-of-the-nation (Accessed on Nov. 04, 2022)