



Towards Co-creation Strategy and Organizational Agility based on Customer Experience Orientation to Shape Transformational Performance

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Industry 5.0 is a step after digitalization and digitation has been accomplished. The collaboration, service orientation, agility and customer experience become a critical in this dynamic environment. Hence, the firm strategy has shifted from a competition strategy to a col-laboration strategy. Collaboration with customers is effected through co-creation Strategy (CCS). It could enable the firms in accelerating digital transformation. This study of the development of co-creation strategy focuses on customer experience orientation (CXO) and organization agility (OA) to support transformational performance (TP) in terms of relationship among variables and an empirical study has been conducted. Hence, in this paper, we propose a model of digital transformation for ICT Industry based on co-creation of strategy focused on customer experience orientation and organization agility. The study is based on an empirical study of 195 Indonesian ICT firms. The findings from this analysis reveal the concept of Service Dominant logic (S-D Logic) where the Co-creation capability and organizational agilities can suffice.

Keywords: Customer experience orientation, Co creation strategy, organization agility, transformational performance

Introduction

Improving customer experience and the digitalization process as part of operational capability are the top priorities in digital transformation within industry 4.0. The next industry resolution, industry 5.0 would allow customers to customize what they want into the Internet of Things (IoT). This would enable smart facilities that utilize cognitive computing to connect via cloud servers. When IoT, robotics and the whole automatic era comes, the characteristic of firm management would have to shift its focus onto collaboration. This



requires personalized services through big data and agile capability to cater to customer experience (Özdemir & Hekim, 2018).

Digital transformation requires a new paradigm and capabilities to be set up while it also requires big investment and new competence, whereas the development of customer experience does not directly affect performance. Therefore, a firm would need to setup the new model of transformation in order to link customer experience mapping with organizational agility to enable companies to focus on key parts of their customer needs and effectively place investments.

Previous studies have shown that organization agility constructs are quite well-suited in anticipating the changes in an era of disruption (Bello, Jikan-Jatum & Inuwa, 2017; Worley & Pillans, 2018). The service-dominant logic concept represents a developing and collaborative effort to create a better understanding of value and exchange, where customers take on the role of the co-creator of value. This is important as their experience and perception are essential in determining value (Payne, Storbacka, & Frow, 2008). However, it is evident that organization agility could adopt customer experience inputs to enable collaboration with partners in co-creation. It remains unclear whether they can perform better in capturing business opportunities. In this paper, we propose customer experience as a central element and introduce a co-creation organizational agility model to boost transformational performance. With empirical cases and implication models based on discussions with three ICT leaders, we suggest how this model may provide some benefits to transform digital capability not only to anticipate Industry 4.0 but also Industry 5.0.

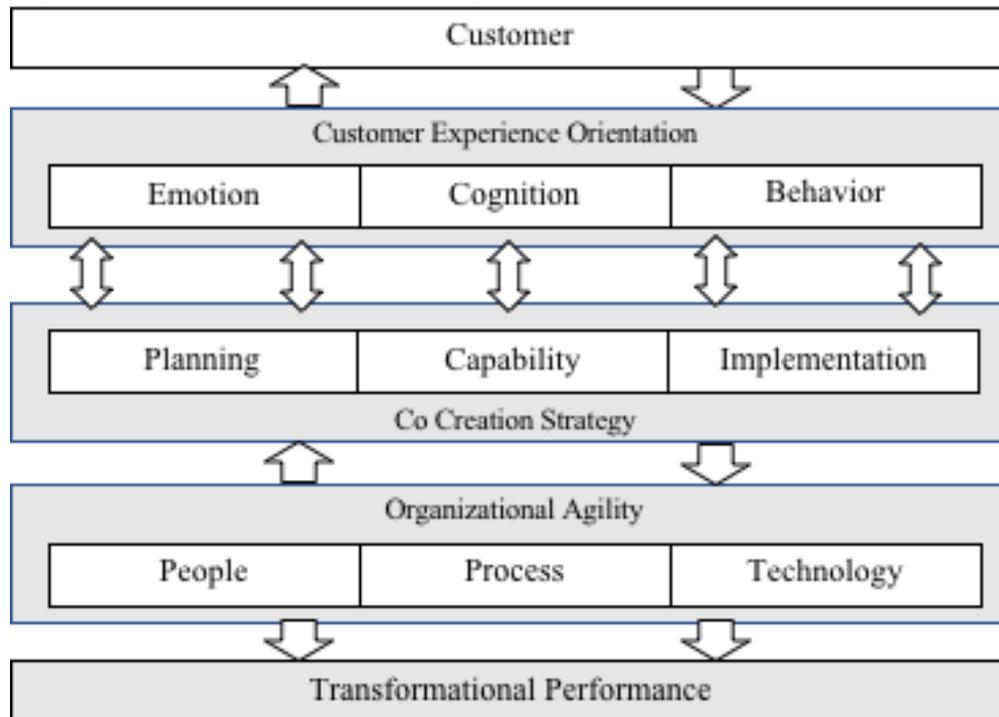
The paper first reviews recent literature regarding customer experience, organization agility, co-creation and transformational performance. It also covers the research model, hypotheses, methodology, research finding, discussion and implications of the findings followed by a conclusion. It also includes the limitations and suggestions for future studies.

Literature Review

Co-creation and business agility support the phenomenon of service logic that emphasizes dynamic resources as less tangible and rather involves the emotions, cognition, and behavior of customers (Lusch & Vanco, 2006). The new paradigm requires the new capabilities to drive the transformation of customers from passive to active orientation (Priyanka Shrivastava, 2016). Customer transformation starts from labor to customer service orientation (e.g. self-service in supermarket), then to online purchase and involving customer experience that shapes a new form of value creation on personalized experiences (Schmitt, Joško Brakus, & Zarantonello, 2015; Bessie et al, 2016). Therefore, the development of personalized

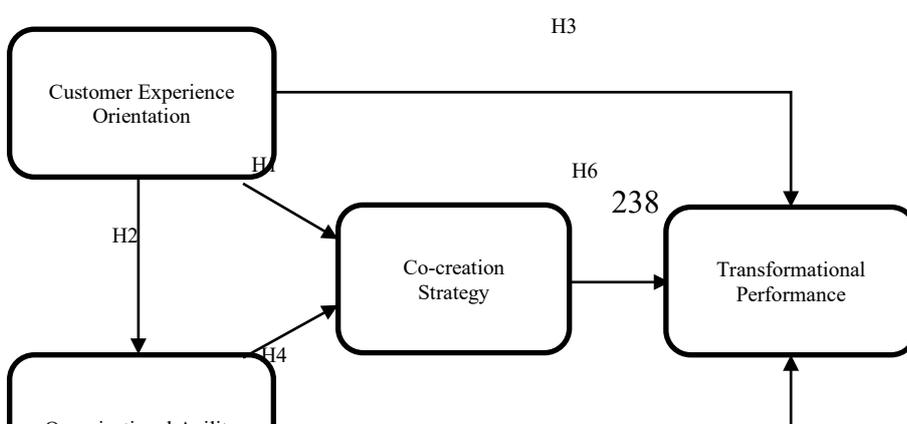
experience can be strengthened through collaborations with customers. This could also be effected through co-creation, which includes co-design, co-development, and co-promotion (Frow, Nenonen, Payne, & Storbacka, 2015). The framework in managing co-creation value is based on a service-dominant logic (Lusch & Vanco, 2006). The framework consists of integration among customer experience orientation, co-creation strategy, and organizational agility, which is shown in Figure 1 below.

Figure 1. The framework of SD-Logic based on co-creation



SD-Logic based on co-creation can be developed through customer experience orientation (Ramaswamy & Ozcan, 2013) in alignment with the shift of customers from passive to active. To support the implementation of co-creation that is based on customer experience, an agile organization is required to drive management and organizations to take risks in facing the more dynamic business environment (Hemel & Rademakers, 2016). The framework of literature that is used to develop the research model is shown in Figure 2 below.

Figure 2. The Research Model





Past studies have found that customer experience is related to the development of co-creation strategy (Dean, Griffin, & Kulczynski, 2016; Ramaswamy & Ozcan, 2013; Sjödin & Kristensson, 2012). The development of agile organization is also strongly related to customer experience, which helps the creation of a customer-centric organization (Hemel & Rademakers, 2016; Rigby, Sutherland, Noble, & Sutherland, 2018). Organizational agility leads customer experience to play a significant role in the development of firm performance, especially during transformation in order to shape the performance (Fatma, 2014; Stuart & Tax, 2004). Hence, The relationship between the latent variables of customer experience orientation (CXO), Organizational agility (OA), co-creation strategy (CCS), and transformation performance (TF) can be formulated into the following hypotheses:

Hypothesis 1: CXO has significant effects on BMI

Hypothesis 2: CXO has significant effects on OA

Hypothesis 3: CXO has significant effects on TP

Past studies have also found that organizational agility plays an important role in driving co-creation (Loss & Crave, 2011; Mihardjo, Sasmoko, Alamsjah, & Elidjen, 2018). Whereas, organizational agility has also been found to directly impact the performance of firms in the transformational stage (Chakravarty, Grewal, & Sambamurthy, 2013; Rockmann, Weeger, & Gewalt, 2014). Co-creation has also been found to have a significant influence in driving firm performance (Hamidi & Shams Gharneh, 2017; Mihardjo, Alamsjah, Elidjen, & Sasmoko, 2018). Hence, the formulation of the following hypotheses:

Hypothesis 4: OA has significant effects on BMI

Hypothesis 5: OA has significant effects on TP

Hypothesis 6: CCS has significant effects on TP

Research Methodology

The study uses purposive sampling methods with 195 respondents from Indonesian telecommunication firms out of a population of 377 taken from Internet service and network providers. The research model needed to be validated with a higher amount of samples than the minimum required sample. According to Cohen (1992), the minimum sample of 32 respondents come from the research model with an endogenous construct with 2 arrows directed, 5% probability error, 80% statistical power and minimum $R^2 = 0.25$. Based on Slovin (1960) the sampling requested of 377 population was 195 samples. Data was collected via self-assessment through an online questionnaire distributed through social media platforms such as Messenger, WhatsApp, Telegram, and email. Due to the limitation of data sample, Smart PLS (Partial Least Square) was used as the statistical tool for analyses. To validate the result, an interview with three telecommunications company leaders consisting of CMOs, CTOs and CFOs was conducted.

Result

Outer and inner model tests were conducted to measure the validity and reliability of latent variables, dimensions, and indicators. This was conducted before the testing of hypotheses, and results indicate that all variables, dimensions, & indicators are valid as shown in Table 1 below.

Table 1: validity and reliability test

Latent Variable	Cronbach's Alpha	rho_A	Composite Reliability	AVE	Remarks
Co Creation Strategy	0.933	0.943	0.945	0.658	Valid
Brand Performance	0.908	0.912	0.935	0.784	Valid
Customer Relation	0.792	0.793	0.878	0.707	Valid
Price	0.705	0.705	0.871	0.772	Valid
Trust Personalisation	0.793	0.815	0.880	0.712	Valid
Organizational Agility	0.912	0.918	0.929	0.593	Valid
people Agility	0.729	0.749	0.880	0.785	Valid
culture Agility	0.809	0.808	0.888	0.725	Valid
Process Agility	0.792		0.906		Valid

		0.792		0.828	
Co Creation Strategy	0.933	0.943	0.945	0.658	Valid
Planning	0.950	0.951	0.975	0.952	Valid
Capability Process	0.807	0.821	0.886	0.721	Valid
Implementation	0.846	0.852	0.896	0.684	Valid
Transformational Performance	0.897	0.905	0.920	0.622	Valid
Current Perf	0.800	0.805	0.883	0.716	Valid
Potential_Perf	0.932	0.932	0.956	0.880	Valid
Ecosystem	0.759	0.761	0.861	0.675	Valid

Discriminant validity is demonstrated in Table 2 below, the values should be higher than 0.6.

Table 2: Discriminant Analysis

Latent Variable		1	2	3	4
1	Customer Experience Orientation	0.850			
2	Organizational Agility	0.742	0.808		
3	Co Creation Strategy	0.710	0.770	0.811	
4	Transformational Performance	0.678	0.789	0.755	0.856

R2 and Q2 of co-creation strategy and transformational performance obtained score of 0.631 and 0.692 for R2 respectively, with Q2 = 0.340 and 0.349 respectively. This indicates that the structural model has fitted, and adequate predictive relevance and hypotheses testing can be conducted.

Table 3 below demonstrates the direct relationships within the study as part of hypothesis partially test

Table 3: Hypothesis Partially Test

Hypothesis		Path	Standard Deviation	T-statistics	P-values	Remarks
H1	Customer Experience Orientation - > Co Creation Strategy	0.557	0.134	4.159	0.000	Significant
H2	Customer Experience Orientation - > Organizational Agility	0.742	0.074	10.095	0.000	Significant



H3	Customer Experience Orientation -> Transformational Performance	0.001	0.190	0.003	0.997	No Significant
H4	Organizational Agility -> Co Creation Strategy	0.395	0.125	3.167	0.002	Significant
H5	Organizational Agility -> Transformational Performance	0.472	0.147	3.216	0.001	Significant
H6	Co Creation Strategy -> Transformational Performance	0.463	0.173	2.684	0.007	Significant

The simultaneous testing of the hypotheses shows the significance of the effects of variables, listed in Table 4 below.

Table 4: Simultaneous Hypotheses Test Results

indirect Hypothesis	Path	SD	T Statistics	P Values	Remarks
Customer Experience Orientation -> Co Creation Strategy -> Transformational Performance	0.258	0.120	2.157	0.031	significant
Customer Experience Orientation -> Organizational Agility -> Transformational Performance	0.350	0.112	3.111	0.002	significant
Customer Experience Orientation -> Organizational Agility -> Co Creation Strategy -> Transformational Performance	0.186	0.070	1.985	0.049	significant

Table 3 and Table 4 demonstrate that with a confidence level of 95%, where $T > 1.96$ or $p < 0.05$, customer experience has an indirect, significant influence on transformational performance through co-creation strategy and organizational agility.

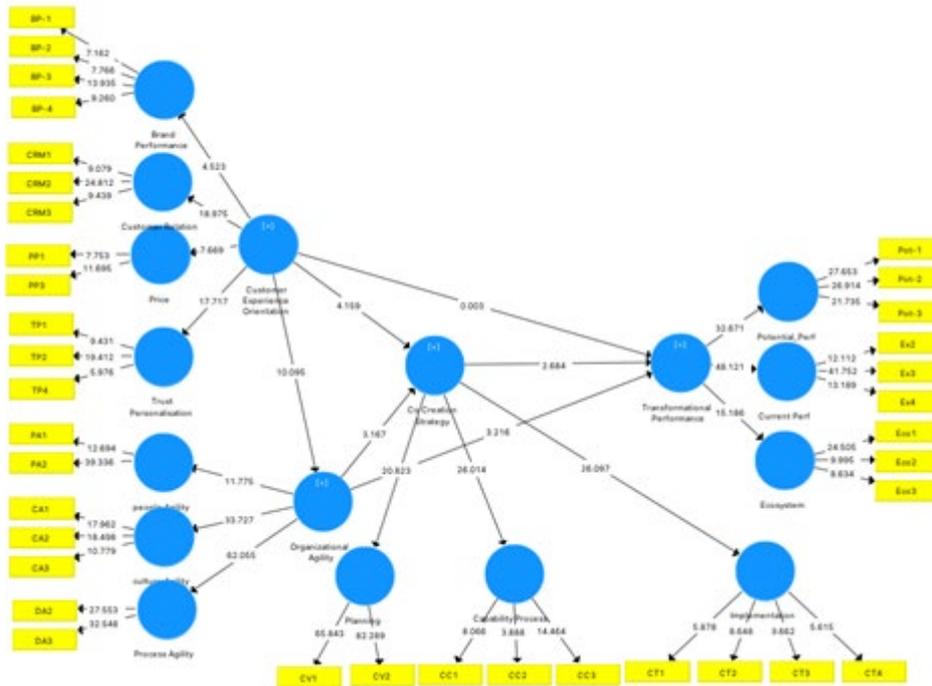


Figure 3 shows that first, trust personalization and customer relations dominantly shape the reflective variable of customer experience orientation. Secondly, process agility and culture agility dominantly shape organization agility. Lastlu, potential performance dominantly shapes the implementation of co-creation and transformational performance in co-creation strategy.

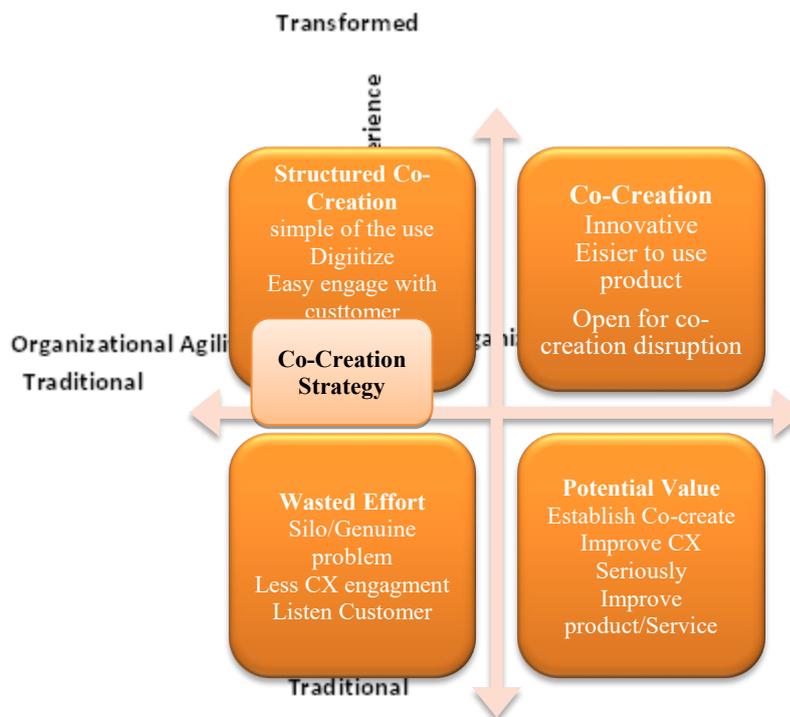
Discussion and Implication

The findings on reflective dimensions in supporting latent variables align with the trends within industry 5.0. The trend leans more towards collaboration, service orientation, and customer experience that focus on personalization and other intangible assets such as organizational agility. The digital industry also has a complex environment that involves massive collaboration efforts. This leads to a shift of focus towards personalization of products and services, as well as customer relations, which now take on a more important role in the development of customer experience. Whereas, organizational agility relies on process agility to align with the basic foundations of an organization based on the balance scorecard framework, which is fundamental for firms in the long run (Kaplan and Norton, 2004).

In the co-creation of services, collaboration with customers and co-creators could be a reliable proof of acceleration in innovation. This is based on exploitation to support the current and transformational performances, which predominantly defines the potential performance.

Findings of this study allow us to map the relationship between organizational agility and customer experience orientation to come up with the matrix of co-creation strategy as shown in Figure 4 below.

Figure 4. co-creation-agility model



Co-creation strategy consists of 4 possible scenarios:

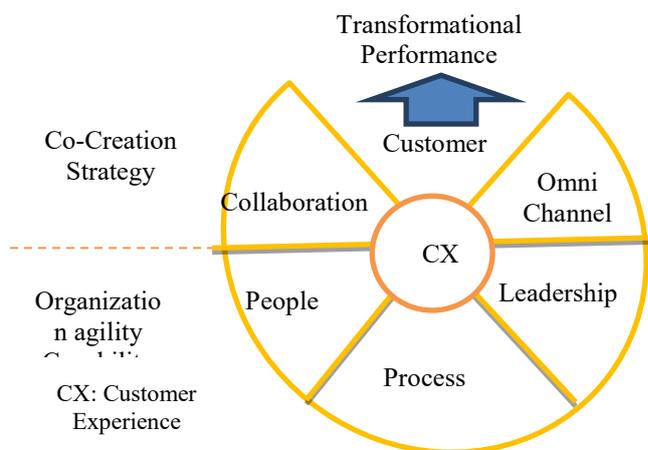
1. Co-creation scenario, when both customer experience orientation and organization agility has transformed capabilities.
2. Structured co-creation, when customer experience orientation is transformed but organization agility is still at a traditional stage.
3. The potential value to better leverage co-creation when organization agility is already transformed but customer experience orientation is still at a traditional stage.
4. Wasted efforts co-creation if both customer experience orientation and organization agility is still at a traditional stage.

Based on the four scenarios of co-creation agility based on customer experience orientation, we propose its implementation based on Seppanen and Laukkanen's model (Seppanen & Laukkanen, 2015) to shape innovation capabilities toward co-creation capability as shown in Figure 5 below.

Customer experience block defines what kind of experience customers are expected to receive. Customer experience also indicates that all business model-building capabilities affect customer experience. In the development of customer experience, all interactions with customers could be done through multi or omni-channels directly or indirectly through the digital society. The interactions through Omni channels are critical, as empirical studies on customer experience show that it dominantly comes from customer interactions (Mosquera, Olarte Pascual, & Juaneda Ayensa, 2017).

The organizational agility building block consists of people, culture and leadership, which defines the activities that adaptively align with customer experience feedback and value propositions. However, it should be noted that not all activities are directly connected to interactions with customers. The people, culture, and leadership refer to all tangible and intangible assets that allow the implementation model to take place. The co-creation strategy building block defines the kind of relationships of the firms with customers and co-creators. Its coverage includes the activities involved in collaboration, open innovation and crowdsourcing. Co-creation focus on joint designing of products, services, and solutions together with customers and co-creators in a way that customers and co-creators could participate in creating value and its chain processes.

Figure 5. Co-creation Agility Implementation Model



All activities in the implementation model of co-creation shape the transformational performance, which includes the current performance, ecosystem development performance,



and potential performance. This brings an implication to the theory and practice related to the importance of co-creation and organizational agility based on customer experience in order to transform to digital capabilities.

Conclusions

This study has found the key role of customer experience orientation in developing organizational agility and co-creation based on the service-dominant logic framework. Customer experience has no direct influence on transformational performance, however it has an indirect influence through co-creation strategy and organizational agility. The findings have implications on the managerial aspects in terms of the need to develop the capabilities, which are based on customer experience orientation. This needs to be done in order to extend the value chain from co-creators, which should also include agility as an important factor in shaping transformational performance.

The study has limitations in its sample and model, therefore future studies are suggested to expand in terms of sample, industry, variables in research model, and statistical tool.

REFERENCES

- Bello, H. Y., Jikan-Jatum, A. M., & Inuwa, N. (2017). An Appraisal of Socio-Economic Impacts of Commercial Motorcycles in Gombe State, Nigeria. *International Journal of Asian Social Science*, 7(6), 480-488.
- Bessie, S., Beyene, F., Hundie, B., Goshu, D., & Mulatu, Y. (2016). Land use/land cover change and its effects on bamboo forest in benishangul gumuz region, Ethiopia. *International Journal of Sustainable Development & World Policy*, 5(1), 1-11.
- Chakravarty, A., Grewal, R., & Sambamurthy, V. (2013). Information technology competencies, organizational agility, and firm performance. *Information Systems Research*, 24(4), 976–997.
- 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.
- Fatma, S. (2014). Antecedents and Consequences of Customer Experience Management- A Literature Review and Research Agenda. *International Journal of Business and Commerce*, 3(6), 32–49.



- Frow, P., Nenonen, S., Payne, A., & Storbacka, K. (2015). Managing Co-creation Design: A Strategic Approach to Innovation. *British Journal of Management*, 26(3), 463–483.
- Hamidi, F., & Shams Gharneh, N. (2017). Impact of co-creation on innovation capability and firm performance: a structural equation modeling. *AD-Minister*, (june), 73–90.
- Hemel, C. van den, & Rademakers, M. F. (2016). Building Customer-centric Organizations: Shaping Factors and Barriers. *Journal of Creating Value*, 2(2), 211–230.
- Loss, L., & Crave, S. (2011). Agile Business Models: an Approach to support collaborative networks. *Production Planning & Control*, 22(5–6), 571–580.
- Lusch, R. F., & Vanco, L. (2006). Service-Dominant Logic What It Is, What It Is Not, What It Might Be. In *The service dominant logic of marketing: Dialog, debate and directions* (pp. 43–56).
- Mihardjo, L. W. W., Alamsjah, F., Elidjen, E., & Sasmoko, S. (2018). Digital Transformation in the Age of Industry 4 . 0 : Acceleration of Transformational Performance through Business Model Innovation and Co-Creation Strategy in Indonesian ICT Firms Transformación digital en la era de la industria 4 . 0 : Aceleración del. *Opcion*, 86(86), 2145–2159.
- Mihardjo, L. W. W., Sasmoko, S., Alamsjah, F., & Elidjen, E. (2018). the Role of Distinctive Organisational Capability in Formulating Co-Creation Strategy and Business Model Innovation. *Polish Journal of Management Studies*, 18(2), 197–208.
- Mosquera, A., Olarte Pascual, C., & Juaneda Ayensa, E. (2017). Understanding the customer experience in the age of omni-channel shopping. *Revista ICONO14 Revista Científica de Comunicación y Tecnologías Emergentes*, 15(2), 92.
- Özdemir, V., & Hekim, N. (2018). Birth of Industry 5.0: Making Sense of Big Data with Artificial Intelligence, “The Internet of Things” and Next-Generation Technology Policy. *OMICS: A Journal of Integrative Biology*, 22(1), 65–76.
- Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1), 83–96. <https://doi.org/10.1007/s11747-007-0070-0>
- Priyanka Shrivastava. (2016). Effect of Co-Creation on Customer Experience, Trust and Brand Loyalty. *International Journal of Sales & Marketing Management Research and Development (IJSMMRD)*, 6(6), 1–14. Retrieved from <http://www.tjprc.org/view-archives.php>



- Ramaswamy, V., & Ozcan, K. (2013). Strategy and co-creation thinking. *Strategy & Leadership*, 41(6), 5–10.
- Rigby, D. K., Sutherland, J., Noble, A., & Sutherland, J. (2018). Agile at scale: how to go from a few teams to hundreds. *Harvard Business Review*, (May-June), 1–10.
- Rockmann, R., Weeger, A., & Gewald, H. (2014). Identifying Organizational Capabilities for the Enterprise-wide usage of Cloud Computing. In *Pacis 2014 Proceedings*.
- Schmitt, B., Joško Brakus, J., & Zarantonello, L. (2015). From experiential psychology to consumer experience. *Journal of Consumer Psychology*, 25(1), 166–171.
- Seppanen, M., & Laukkanen, I. (2015). Business model innovation: Focus on customer experience. In *2015 IEEE International Conference on Engineering, Technology and Innovation/ International Technology Management Conference, ICE/ITMC 2015*.
- Sjödin, C., & Kristensson, P. (2012). Customers' experiences of co-creation during service innovation. *International Journal of Quality and Service Sciences*, 4(2), 189–204.
- Ślusarczyk, B., Haseeb, M., & Hussain, H. I. (2019). Fourth industrial revolution: a way forward to attain better performance in the textile industry. *Engineering Management in Production and Services*, 11(2), 52-69.
- Stuart, F. I., & Tax, S. (2004). Toward an integrative approach to designing service experiences Lessons learned from the theatre. *Journal of Operations Management*, 22(6), 609–627.
- Worley, C., & Pillans, G. (2018). Organization Agility, Performance, and the Role of the HR Function. In *Überlebenselixier Agilität* (pp. 121–142). Springer Fachmedien Wiesbaden. <https://doi.org/10.1007/978-3-658-18897-9>