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COLLECTIVE LEADERSHIP AND INNOVATIVE VALUE CREATION RELATIONSHIP UNDER INFLUENCE OF TECHNOLOGICAL TURBULENCE

Mustafa Dayioğlu (a)*, Fatma Küskü (b)
*Corresponding author

(a) Management Engineering, Istanbul Technical University, Istanbul, Turkey, dayoglum@itu.edu.tr
(b) Management Engineering, Istanbul Technical University, Istanbul, Turkey, kuskufa@itu.edu.tr

Abstract

In recent years, technological changes and new paradigms, emerging countries such as Turkey, where micro and small scale organizations dominated is also crucial. If so, organizations must be ready for both opportunities and threats in the face of these developments. The study focused on the questions that "What will the impact of collective leadership on the organization's innovative value creation" and "how do technological turbulence affect this relationship?". Data from 372 questionnaire forms collected from the Turkish organizations received an incentive through TUBITAK and KOSGEB. The data and models analyzed using AMOS and SPSS. According to this study, the positive relationship between collective leadership and innovative value creation about the internal dynamics of the organization examined. Furthermore, the positive effect of technology turbulence also examined innovative value creation. It also examined the negative moderation effect of technology turbulence between collective leadership and innovative value creation. We think that these findings contribute to literature that examines the relationship between collective leadership, technology turbulence and innovative value creation.

Keywords: Collective Leadership, Value Creation, Technology Turbulence

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1. Introduction

Destructive technologies (information and communication technologies, artificial intelligence, energy, and genetics) have emerged in recent years. Radical innovations that these technologies have affected human behavior, market structures, and the culture of organizations (Geels, 2002). Organizations such as Amazon, Skype, and Uber, as a result of the development of information and communication technologies and the Internet, will be able to revolutionize existing industries by providing revolutionary innovations and offering business models (Gassmann et al., 2016). Amazon is the largest bookseller in the world without having any store. Uber has become the world's largest taxi transportation company without having its car and taxi driver (Gassmann et al., 2016). Skype is also the world's largest telecom operator in the world without having any telecom operator infrastructure. Radical innovations are also profoundly changing the meaning of the traditional concept of competition (Casadesus-Masanell & Ricart, 2010). These innovations are transforming sectors into competitive situations of organizations and are becoming to affect their sustainability (Lee et al., 2011; Ocasio, 1997; Wirtz et al., 2010). In this case, the traditionally existing sectors change, and the lives of the organizations involved in these sectors endangered.

2. Problem Statement

The chances of survival of organizations that do not react to the threats and opportunities brought by the changes in the sociotechnical environment and cannot produce appropriate strategies for adapting to these changes (Heracleous & Werres, 2016). It does not exist today successful and global organizations such as Nortel (1895 — 2013) and Worldcom (1983 - 2006) because of the wrong strategy timely (Heracleous & Werres, 2016). Technological advances such as the increasing globalization of the business environment (Lee, Shin, & Hong, & Kim, 2011) or Web 2.0 (Wirtz et al., 2010) drive organizations to renew and transform the established value logic. In today's world, where the open environment becomes even more transparent, organizations can update the value logic to adapt to environmental changes. They can survive and need to create innovative value. Organizations that cannot keep up with change will have no chance to live, but organizations that react towards change will continue their lives. Developing countries have lower technology industries than in developed countries (Zawislak et al., 2013). Environmental turbulence brings by a short product life cycle, a dynamic market structure with rapid inputs and outputs, rapid know-how loss, and rapid change in customer expectations. These changes can be opportunities for organizations or threats. In particular, organizations with high structural inertia cause risk their lives by being helpless in the face of technological developments.

3. Research Questions

Organizations in developing countries (transition economies) have close ties with organizations in developed countries. Especially communication channels in the world evolved, accelerated, and facilitated. These kinds of developments also affect organizations in developing countries more. Especially in recent years, technological changes and new paradigms, emerging countries such as Turkey,

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where micro and small scale organizations dominated is also crucial. If so, organizations must be ready for both opportunities and threats in the face of these developments. The impact of this situation is increasing, especially in the business lines of evolving technologies. In the world conditions where competition is increasing, and profitability is reducing. Furthermore, technological innovation paradigms that bring industry transformations, how organizations in developing countries can change this is becoming a matter of importance that will keep up. In this context, “What will the impact of collective leadership on the organization's innovative value creation” and “how do technological turbulence affect this relationship?” uncertainties are gaining importance in terms of management.

3.1. Literature Review

The open and robust dialogue environment explains collective leadership within the organization, and the organization has a homogeneous perspective (Doz & Kosonen, 2010; Lewis et al., 2014). In complex and dynamic environments where change is high, uncertainties and risks are also very significant. As business model innovations affect the value structure of the organization, the decisions taken within the scope of these innovations can be complicated and risky decisions for employees in the organization. For the decisions taken by senior management to be successful, it is important to be owned by the whole organization and to produce arguments that will support these decisions. Organization employees as a whole produce argument that will support the decision-making process of top management entails collective commitment in the organization. Collective leadership is one of the keys to the operation of carrying out changes. The most crucial factor in accelerating innovative value creation is the provision of collective leadership in organizations that want to react quickly to changes in the external environment. Collective leadership is mostly the ability of the top management team to integrate with the organization and understand each other and trust each other. In cases where trust, empathy, and dialogue increased between managers and individuals in the organization, personal agendas eliminated and received in terms of adaptation to dynamic changes from the external environment. Strategic decisions taken by the whole organization as a single whole (Doz & Kosonen, 2010).

Conceptually technological turbulence is defined as irregular and unpredictable rapid technical fluctuations in the environment where organizations operate (Didonet et al., 2012). Emerging markets are the target market for the implementation of radical innovations and disruptive technologies (Stuart & Christensen, 2002). While strong technological turbulence promotes product innovation in developed countries (Dosi et al., 2015), emerging markets become a natural customer of disruptive technologies (Vezzoli et al., 2015). These technologies play a crucial role in creating service-based value in developing countries (Reynoso et al., 2015).

3.2. Theoretical Framework

In this study, the theory of dynamic capabilities explains our basic questions and is the basis for the hypotheses created. The theory of dynamic abilities emphasizes that organizations need to respond dynamically to competitive environments with intrinsic capabilities such as collective leadership (Teece & Pisano, 1994). The theory of dynamic capabilities is interested not only in the selection of resources and the preservation of a competitive advantage but also in the collection, development, and renewal of

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resources. According to this theory, these capabilities must be identified, used, and renewed by the organization. Teece et al. (1997, p. 516) describe dynamic capabilities as "the ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments." In parallel with other scholars in the field, Eisenhardt and Martin (2000, p. 1105) identified dynamic capabilities in a range of specific and definitive process sequences such as product development, strategic decision-making, and alliance.

Dynamic capabilities are the concepts of innovative value creation, business models and strategy, and related to each other. The strength of the dynamic capabilities of the organization is essential in shaping business model design and thus creating value for the organization (Teece, 2018). Accordingly, the organization needs to develop capabilities and structures such as decentralized decision structure, creative organizational culture to facilitate innovative value creation (Bock et al., 2012). Accordingly, collective leadership as dynamic capabilities depends on the organizational structure of an organization.

3.3. Hypothesis Development

Organizations create innovative value; in other words, updating value logic, human, physical, and capital resources to serve new value creation purposes (Zott & Amit, 2010). Innovative value creation in organizations initiates through new technologies, process innovation, and product innovation (Chesbrough, 2010). Organizations with high perception are in a better position to initiate the innovative value creation process (McCann et al., 2009). Organizations not only need to obtain information from the external environment but also include the ability to identify opportunities by acquiring new knowledge and develop an action plan for opportunities (Teece, 2007). External sources, such as changes in consumer demand, competition, and market information, including general economic market data, are inspired by innovative value creation. (Doz & Kosonen, 2008). Organizations' ability to perceive changes in the external environment is essential for creating innovative value, especially in fast-changing situations (Teece, 2010). Therefore, to successfully launch these changes and encourage innovative value creation, management must create collective wisdom and synergy among all employees (Doz & Kosonen, 2010). Achtenhagen et al. (2013) connects the success of innovative value creation to collective leadership mainly along with guidance and a sense of mutual commitment among employees. To demonstrate and explain these relationships, two primary hypotheses determined in this study.

Hypothesis 1: Collective leadership positively affects the organization's innovative value creation.

Technological turbulences bring irregular and unpredictable rapid changes in the environment where organizations operate, accompanied by rapid changes in customer expectations, bring and shorten the product life cycle. Specifically, it requires investment to create innovative value related to products or services. In a state of intense technological turbulence, this issue presents opportunities and poses a threat to organizations. Organizations are more likely to create innovative value in the face of threats than opportunities from the environment (Saebi et al., 2017). In this case, technology turbulence is an opportunity for organizations that have not yet taken action or a threat to organizations that have just made their investments. Technological turbulence has a moderating effect on the relationship between

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collective leadership and innovative value creation in terms of technological fluctuation brings threats and opportunities from the environment.

Hypothesis 2: Technology turbulence has a moderating effect on the relationship between collective leadership and the organization's innovative value creation (Figure 01).

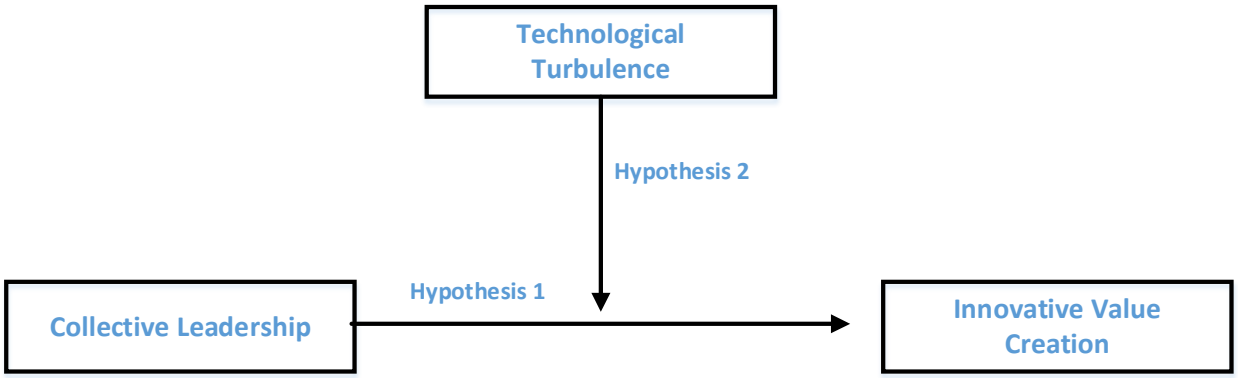

Figure 1. Model for Collective Leadership and Innovative Value Creation

4. Purpose of the Study

In the academic literature, such studies conducted in Brazil and China, but these countries are only in the developing class. Our country is the bridge that connects western and eastern civilization. Therefore, it associates with both the West and the East for centuries. Its institutional environment influenced by relations with both cultures. Similarly, our organizations also affected by this situation. Since it is a developing country with the intersection of different geographies and cultures, carrying out this work in organizations in our country will make serious contributions to the academic literature.

5. Research Methods

5.1. Sampling and Data Collection

Scientific and Technological Research Council of Turkey (TUBITAK) and the Presidency of Small and Medium Enterprises Development and Support Administration (KOSGEB) give to the private sector in Turkey R&D innovation coordinates their incentives.

In this context, any organization must fill out a detailed project proposal form to benefit from incentives. The project proposal form includes not only data on technical content, but also data on commercialization and sustainability of the proposed innovation idea after the project. Therefore, with the idea that they will have the most information about the research topic, the research data for this study based on innovation from state sources in various sectors of the Turkey industry. So it was decided to gather data from people who work in enterprises that deserve to receive incentives that applying for incentives through TUBITAK and KOSGEB.

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A link to the question form portal sent via email to the owner and senior management of 7509 businesses in these lists, and the question answered forms were delivered to us online. In the process, 891 questionnaire forms answered.

However, 519 questionnaire forms containing incomplete responses and outlier responses were excluded from the sample, so that the data obtained does not decrease the validity and reliability levels.

As a result, responses from 372 enterprises considered as sampling, and the research model tested with this sample. This number is an acceptable sample at a 95% reliability level (Gürbüz & Şahin, 2016). Table 1 specifies the characteristics of the organization that are responding.

Table 1. General Characteristics of Responding Organizations

Profile	Category	Frequency	Ratio (%)
Area of activity	National / Local	121	32.53
	International / Global	251	67.47
Industry	Information Technology	118	31.72
	Defense	21	5.65
	Manufacturing	133	35.75
	Wholesale / Retail	45	12.1
	Others	55	14.78
Size	Micro (10 >=)	84	22.58
	Small (50 >= ve > 10)	95	25.54
	Medium (250 >= ve > 50)	112	30.11
	Big (> 250)	81	21.77
Age	Young (0 < 9)	84	22.58
	Old (>9)	288	77.42

5.2. Reliability and Validity Measures

Content Validity (Content Validity) is an indication of whether the items of the scale provide a representative sampling of the component intended to be measured. Our research aims to cover the subjects targeted to be measured.

Each factor in the measurement model developed based on the relevant article, and the subject is pre-tested by experts. The validity of the content accepted due to the consensus of relevant questions and factors during the pilot test stages. Variables for these scales are given in Table

Convergent validity measured by factor loads, Cronbach alpha value, composite reliability value, and average extracted variance values (Hair et al., 2014).

The structural equation model created in this context shows that all variables except CL8, OP4, IVC3, and IVC4 have a factor load of 0.7 and above (Table 2). Although the value of AVE and CR is above 0.5 and 0.7, respectively. These variables (CL8, OP4, IVC3 ve IVC4) also used in the structural equation model.

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Table 2. Measures and Validation

Items	Loadings
Collective Leadership (Alpha = 0.912 ; CR = 0.931; AVE = 0.572)	
1. There is a mutual communication between management and employees in our organization.	0.844
2. The senior management evaluates the ideas produced by the employees in the decisions	0.791
3. There is an open information sharing environment in our organization.	0.794
4. Our employees clearly express their ideas everywhere.	0.779
5. Our employees think that they are taken care of and understood by their top management.	0.736
6. All our employees know the objectives, priorities, and strategies of our organization.	0.703
7. The messages that top management gives to employees are precise and clear.	0.715
8. Our employees are the most crucial resource for our business.	0.673
Technology Turbulence (Alpha = 0.849 ; CR = 0.819; AVE = 0.535)	
1. Technology is changing very quickly.	0.795
2. Technological changes create great opportunities.	0.846
3. Technological discoveries lead to the emergence of new product ideas.	0.788
Innovative Value Creation (Alpha = 0.844 ; CR = 0.844; AVE = 0.535)	
1. We have updated our resources and processes for innovative value creation.	0.914
2. We have acquired new resources and processes related to innovative value creation.	0.878
3. Apart from our existing stakeholders, we have also developed new collaborations.	0.575
4. Apart from our current market, we have developed products and services for new markets.	0.449

As a result of correlation analysis for discriminant validity, the extracted average variance value of each diagonal of matrix (see in Table 3) must be higher than the square root of correlation between the factors (Hair et al., 2014; MacKenzie et al., 2011). Table 3 shows the presence of discriminant validity.

Table 3. Construct correlations and discriminant validity

	TF	IVC	CL
TF	0.810		
IVC	0.393	0.731	
CL	0.422	0.495	0.756

The accepted value of the Goodness of Fit Index for the sample number (372) and the number of variables (15) describes in Table 4 (Hair et al., 2014; MacKenzie et al., 2011). In this context, the values observed in the model are consistent with the values specified in academic literature.

Table 4. Goodness of Fit Index

Indices	Fits	Value
X2/df	1< X2/df=<3	**1.959**
RMSEA	<0.06	**0.051**
SRMR	<0.08	**0.037**
GFI	>0.95	**0.926**
TLI	>0.95	**0.957**
CFI	>0.95	**0.963**

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6. Findings

According to the regression Model 1 (see in Table 5) in question, Hypothesis 1 is supporting the degree of meaning of 1‰. Hypothesis 2 was also tested using Model 2 (see in Table 5) and Model 3 (see in Table 5) for the moderator effect of the Technology Turbulence between Collective Leadership and Innovative Value Creation. In this model, the Collective Leadership x Technology Turbulence (CLxTT) added to Model 3 for testing the interaction effect. In this model, the CLxTT variable was significantly significant in 5%. Hypothesis was accepted in the degree of meaning, at 2, 5%. Collective leadership and technological turbulence have a positive effect on innovative value creation. The interaction effect, called CLxTT, is minus.

Table 5. Regression and Interaction Moderation Analysis

	Innovative Value Creation (IVS)		
	Model 1	Model 2	Model 3
Firm Size	0.05	0.047	0.042
Firm Age	0.055	0.067	0.062
Collective Leadership	0.467***	0.39***	0.363***
Technology Turbulence		0.203***	0.191***
CLxTT			- 0.097*
F	34.112***	31.007***	25.847***
R2	0.211***	0.244***	0.261***

* Significant at 5 %; ** Significant at 1 %; *** Significant at 1‰

7. Conclusion

Organizations are legitimate with the value they interact with their environment (Czinkota et al., 2014). Technological turbulence and the new value paradigms offered by fluctuations affect the legitimacy of organizations by radically changing the value relationships provided by organizations. Therefore organizations need to update the values they offer to the environment according to emerging technologies and innovations to ensure their sustainability in their environment. Significant models to be proposed in issues related to the adaptation of organizations to the environment, maintain their legitimacy, responding to environmental changes, and sustainability will be essential.

Organizations can conduct environmental analysis and position themselves in their environment and make better decisions about how to behave against competitive conditions and threats, and competitively develop strategies. In this study, collective leadership had a significant impact on creating innovative value as a result of defeating structural stability within the organization. Technological turbulence has a positive effect on innovative value creation. However, the relationship between technological turbulence, collective leadership, and innovative value creation is weakening.

In this study, the relationship between collective leadership and innovative value creation about the internal dynamics of the organization examined. Especially in this context, balancing between the structural inertia of organizations and outside opportunities are crucial for predicting proactively

unpredictable changes in the environment and react quickly to these changes (Weber & Tarba, 2014). The additional constructs (sensing changes in the external environment and resource management of the organization) are better to explain the concept of innovative value creation and the moderation effect of technology turbulence. Doz and Kosonen (2010) stated that structural inertia arising from defending the status quo within the organization is a significant challenge encountered during innovative value creation. Doz and Kosonen (2010) combined the capabilities of collective leadership as well as strategic sensitivity and resource fluidity called these capabilities strategic agility.

In cases of technological turbulence, defeating structural inertia is of great importance for the sustainability of organizations. To maintain their sustainability, organizations need to meet new customer demands by adapting their resources and capabilities to changes in the environment (Buchanan et al., 2009; Glick et al., 1990). Organizations need to update their value creation logic to ensure its sustainability (Bock & George, 2011). In this study, it is crucial to examine the relationship between the performance of the organization of innovative value creation concept. In addition to technological turbulence, the intensity of competition is considered to be particularly important in terms of external influences that may come from the environment. Especially in subsequent studies, testing the effect of moderating relationships of competitive intensity will contribute to academic writing. Testing the model to be created under the mentioned issues according to the size and scales of organizations (micro, small, medium, and large-scale) is essential for observing the moderation effect on the proposed new model.

Technological turbulence brings opportunities and threats. In this study, the concept of technological turbulence as a constraint discussed in general. In this regard, the moderation effect observed in general. Special moderation effects on threats and opportunities from the environment cannot work. Another issue is that organizations are operating in our country, mainly as R&D centers generally work in the field of IT, defense industry, and production. In particular, the defense and production industries are one of the areas with a high entry barrier, which requires capital investment. Therefore, organizations in these areas cannot be easy to defeat the status quo within themselves. In the next work, especially for the defense and production industry will be vital for the contribution of the results of the study to academic literature.

References

Achtenhagen L. & Melin L. & & Nald, L. (2013). Dynamics of business models-strategizing, critical capabilities and activities for sustained value creation. *Long Range Planning, 46*(6), 1–25. https://doi.org/10.1016/j.lrp.2013.04.002

Bock, A. J., & George, G. (2011). The Business Model in Practice and its Implications for Entrepreneurship Research. T*heory and Practise, 35*(1), 83–111. https://doi.org/10.1111/j.1540-6520.2010.00424.x

Bock, A. J., Opsahl, T., George, G., & Gann, D. M. (2012). The effects of culture and structure on strategic flexibility during business model innovation. *Journal of Management Studies, 49*(2), 279–305. https://doi.org/10.1111/j.1467-6486.2011.01030.x

Buchanan, J., Davis, M., & Wight, L. (2009). Death of the Combatant Command: Toward a New Interagency Approach. J*oint Force Quarterly, 52*(1), 92–96.

Casadesus-Masanell, R., & Ricart, E. J. (2010). Competitiveness: business model reconfiguration for innovation and internationalization. *Journal of the Iberoamerican Academy of Management, 8*(2), 123-149. https://doi.org/10.1108/1536-541011066470

Chesbrough, H. (2010). Business model innovation: opportunities and barriers. L*ong Range Planning, 43*(2-3), 354–363. https://doi.org/10.1016/j.lrp.2009.07.010

Czinkota, M., Kaufmann, H. R., & Basile, G. (2014). The relationship between legitimacy, reputation, sustainability and branding for companies and their supply chains. *Industrial Marketing Management, 43*(1), 91–101. https://doi.org/10.1016/j.indmarman.2013.10.005

Didonet, S., Simmons, G., Díaz-Villavicencio, G., & Palmer, M. (2012). Firms with capability to leverage substantial technological resources to come up innovation. *Marketing Inteligence & Planning, 30*(7), 757-779. https://doi.org/10.1108/02634501211273841

Dosi, G., Grazzi, M., & Moschella, D. (2015). Technology and costs in international competitiveness: from countries and sectors to firms. *Research Policy, 44*(10), 1795-1814. https://doi.org/10.1016/j.respol.2015.05.012

Doz, Y. L., & Kosonen, M. (2008). *Fast Strategy: How Strategic Agility Will Help You Stay Ahead of the Game.* Wharton School Publishing.

Doz, Y. L., & Kosonen, M. (2010). Embedding Strategic Agility: A Leadership Agenda for Accelerating Business Model Renewal. *Long Range Planning, 43*(2-3), 370-382. https://doi.org/10.1016/j.lrp.2009.07.006

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal, 21*(10-11), 1105-1121. https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E

Gassmann, O., Frankenberger, K., & Sauer, R. (2016). *Exploring the Field of Business Model Innovation: New Theoretical Perspectives.* Palgrave Macmillan.

Geels, F. W. (2002). Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Research Policy, 31*(8-9), 1257-1274. https://doi.org/10.1016/S0048-7333(02)00062-8

Glick, W. H., Huber, G. P., Miller, C. C., Doty, D. H., & Sutcliffe, K. M. (1990). Studying Changes in Organizational Design and Effectiveness: Retrospective Event Histories and Periodic Assessments. *Organization Science, 1*(3), 213 – 337. https://doi.org/10.1287/orsc.1.3.293

Gürbüz, S., & Şahin, F. (2016). Sosyal bilimlerde araştırma yöntemleri. [Research Methods In Social Sciences]. Seçkin Publishing.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis Seventh Edition.* Pearson Education Limited.

Heracleous, L., & Werres, K. (2016). On the Road to Disaster: Strategic Misalignments and Corporate Failure. *Long Range Planning, 49*(4), 491–506. https://doi.org/10.1016/j.lrp.2015.08.006

Lee, J. H., Shin, D. I., Hong, Y. S., & Kim, Y. S. (2011). Business model design methodology for innovative product-service systems: a strategic and structured approach. *Annual SRII Global Conference,* 663-673. https://doi.org/10.1109/SRII.2011.72

Lewis, M. W., Andriopoulos, C., & Smith, W. K. (2014). Paradoxical Leadership to Enable Strategic Agility. *California Management Review, 56*(3), 58-77. https://doi.org/10.1525/cmr.2014.56.3.58

MacKenzie, S. B., Podsakoff, N. P., & Podsakoff, P. M. (2011). Construct measurement and validation procedures in MIS and behavioral research: integrating new and existing techniques. *MIS Quarterly, 35*(2), 293-334. https://doi.org/10.2307/23044045

McCann, J., Selsky, J., & Lee, J. (2009). Building agility, resilience and performance in turbulent environments. *People and Strategy, 32*(3), 44–51. http://agilityconsulting.com/resources/Strategic%20Agility%20Institute/HRPS-BuildingAgility.pdf

Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal, 18*(S1), 187-206. https://doi.org/10.1002/(SICI)1097-0266(199707)18:1+<187::AID-SMJ936>3.0.CO;2-K

Reynoso, J., Kandampully, J., Fan, X., & Paulose, H. (2015). Learning from socially driven service innovation in emerging economies. *Journal of Service Management, 26*(1), 156-176. https://doi.org/10.1108/JOSM-11-2013-0313

Saebi, T., Lien, L., & Foss, N. J. (2017). What Drives Business Model Adaptation? The Impact of Opportunities, Threats and Strategic Orientation. *Long Range Planning, 50,* 567-581. https://doi.org/10.1016/j.lrp.2016.06.006

Stuart, L. H., & Christensen, M. C. (2002). The great leap: Driving innovation from the base of the pyramid. *MIT Sloan Management Review, 44*(1), 51-56. https://doi.org/10.1201/b14335-10

Teece, D. J., & Pisano, F. (1994). The Dynamic Capabilities of Firms: an introduction. *Industrial and Corporate Change, 3*(3), 537-556. https://doi.org/10.1093/icc/3.3.537-a

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal, 18*(7), 509-533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350. https://doi.org/10.1002/smj.640

Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning, 43*(2-3). 192 – 194. https://doi.org/10.1016/j.lrp.2009.07.003

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning, 51*(1), 40-49. https://doi.org/10.1016/j.lrp.2017.06.007

Weber, Y., & Tarba, S. Y. (2014). Strategic agility: a state of the art. *California Management Review, 56*(3), 5–12. https://doi.org/10.1525/cmr.2014.56.3.5

Wirtz, W. B., Schilke, O., & Ullrich, S. (2010). Strategic Development of Business Models: Implications of the Web 2.0 for Creating Value on the Internet. *Long Range Planning, 43*(2), 272-290. https://doi.org/10.1016/j.lrp.2010.01.005

Vezzoli, C., Ceschin, F., Carel, J., Dieh, J. C., & Kohtala, C. (2015). New design challenges to widely implement 'Sustainable Product–Service Systems'. *Journal of Cleaner Production, 97,* 1-12. https://doi.org/10.1016/j.jclepro.2015.02.061

Zawislak, P. A., Zen, A. C., Fracasso, E. M., & Reichert, F. M. (2013). Types of innovation in low-technology firms of emerging markets: an empirical study in Brazilian Industry. *RAI, 10*(1), 212 – 231. https://doi.org/10.5773/rai.v1i1.1105

Zott, C., & Amit, R. (2010). Business model design: an activity system perspective. *Long Range Planning, 43*(2-3), 216–226. https://doi.org/10.1016/j.lrp.2009.07.004