Journal of Global Strategic Management | V. 15 | N. 1 | 2021-June| isma.info | 005-014 | DOI: 10.20460/JGSM.2021.295

STRATEGY AND SOCIAL INNOVATIVENESS IN SOCIETY 5.0

⁎Lutfihak ALPKAN *(Orcid Id. 0000-0002-7925-7102)*[1]
⁎Onur DEMIREL *(Orcid Id. 0000-0002-0026-2786)*
⁎Ceren ŞAHIN *(Orcid Id. 0000-0002-5852-7820)*
⁎⁎Serap YALCINYIGIT (Orcid Id. 0000-0002-6928-7172)
⁎⁎⁎Ecenaz DEMIRCI *(Orcid Id. 0000-0002-3958-2939)*
⁎Istanbul Technical University
⁎⁎Yıldız Technical University
⁎⁎⁎ Marmara University

ABSTRACT

Society 5.0 is a human-centric initiative to exploit cutting edge communication and automation technologies for the sake of the whole society with the collaboration of stakeholders from public, civil and private sectors. Social innovativeness plays an important role in this social initiative whose common strategic goal is to generate benefits both in social and economic terms in order to build a super smart society that continuously provides people with new value offerings. In this concern, the organized members of the society, i.e. public, private and civil sector organizations as the real providers of these social values need to craft innovative strategic approaches to adapt the newer contingencies of Society 5.0. The aim of this study is to develop propositions on such critical strategic choices pertaining to strategy selections, combinations, revisions, and reconfigurations.

Keywords: *Society 5.0, Social Innovativeness, Combination Strategy, Strategic Flexibility, Learning Capabilities, Strategic Reconfiguration*

INTRODUCTION

Recent technological developments, especially within the last decade brought new perspectives on both the industry and the society. The concept of Industry 4.0, also known as the fourth industrial revolution was first introduced at Hannover Fair in 2011 (Xu et al., 2018). Aiming to establish intelligent, self-regulating, and interconnected (Müller et al., 2018), namely smart factories, Industry 4.0 can also be accepted as the combination of key technologies such as, cyber-physical systems (CPSs), the industrial internet of things (IIoT), artificial intelligence (AI), cloud computing, cognitive computing (Lampropoulos et al., 2019), big data and advanced data analytics. Again, in 2011, the U.S.A launched the Advanced Manufacturing Partnership (AMP) that aims to create collaboration between academia, industry and government and catalyze development and investment in the emerging technologies, which will enable high quality manufacturing and enhance global competitiveness. In the further step, the U.S. also launched the National Network for Manufacturing Innovation (NNMI) Program in 2013 (Fukuda, 2019) while Germany announced a strategic initiative to take a pioneering role in the industries that are revolutionizing the manufacturing sector in the same year (Xu et al., 2018). All these developments in general serve as digitalized production and communication tools and networks that can act autonomously and control efficiently most of the complex operations to attain related strategic goals (Erol et al., 2016). These key elements of digital transformation all together seem to trigger both positive effects to utilize and negative effects to try to avoid in our business and social lives (Alpkan, et al., 2017). Accordingly, Japan paid attention to the U.S.A's and Germany's policies (Fukuda, 2019), also focused on taking the transformation beyond industry. Society 5.0 was announced as a core concept in the 5th Science and Technology Basic Plan that was adopted by the Japanese Cabinet in January 2016 (Önday, 2019), aiming to build a super-smart society in which new knowledge and values are continuously created to contribute to economic growth and social welfare (Fukuda, 2019). The Japanese concept of Society 5.0 tries to make use of the positive effects of this digital transformation for the sake of the whole society with the objective of forming a human-driven society where individuals can appreciate a completely dynamic and agreeable high caliber

[1] Corresponding author

of life (Önday, 2019). In such a new social and business setting, each member of the society would expect and demand customized innovative solutions with affordable prices; and those strategists and entrepreneurs who can shape, adapt, evolve, and respond effectively to this new normal would survive. Opportunities in the dynamic local and global markets are abundant; and rapid developments in automation technologies enable firms to develop at the same time quality improvement, cost reduction and customized flexible production leading to a much higher performance. Meanwhile, automated work procedures decrease the value of human labor leading to deskilling and unemployment (Alpkan et al., 2020). Organizations need to reconfigure their strategic mechanisms and perspectives accordingly.

These recent developments based on advanced research and innovation launched a new era that made innovativeness a must for future competitiveness and prosperity for both business and social purposes. In fact, strategy and innovativeness coupled and supported each other for decades before Industry 4.0 and Society 5.0. However, nowadays and afterwards in parallel with the penetration of advanced digital technology in our daily transactions, operations and activities within the societal and organizational life, the role of strategic decisions, patterns, choices, and implementations directly related to innovativeness become much more important. Innovativeness is a precondition for the ideal of super smart society where strategists concern not only with their firms' financial viability but also with the protection of the natural environment and the just distribution of societal wealth (Serpa, 2019). Firm-specific innovation potential and performance, therefore need to be enhanced via appropriate strategic configurations to produce innovative solutions for the sake of the whole society and sustain their own competitive superiority.

Social innovations seem to be an integral part of Society 5.0 since they are addressing nowadays the unmet needs of the disadvantaged members of the society by making use of creative recombinations of advanced digital technological developments. Innovations in Society 5.0 need to be more sensitive to societal and environmental problems, in the form of more responsible i.e. sustainable, frugal, openness, and social innovations (Salgues, 2018). Indeed the digital revolution or Industry 4.0 brought about a disruption in classical operations that increases on one hand the cost efficiency, speed of delivery, quality, flexibility, innovativeness, profitability etc., in general. However, on the other hand, it has already begun to wipe out some classical jobs, creating some newer ones with short-term employment contracts and diminishing social security commitments of the employers especially since the recent global crisis in 2008-2009 and afterwards. Then some newer but permanent problems occurred in employment, social security, purchasing power, tax collection, public and household debts, etc. The opportunities brought by newer technologies and threats posed by permanent global recessions could be balanced with a possible synergy that could be created by newer social collaborations among different societal stakeholders. In this concern, social innovations, i.e. newer solutions to social problems in the form of new ideas, projects, models, processes, products, services, etc., especially for the sake of disadvantaged people are the fruits of a six-step process. These steps are as follows: (1) diagnosing the social problems and their root causes; (2) development of new ideas in response to these social needs; (3) testing and evaluation of the effectiveness of new solutions in meeting social needs; (4) sustaining, (5) scaling up of effective social innovations and (6) a systemic change. The resulted social innovations may include open source software for education, crowd source investments for development, co-produced care for the elderly, wearable solutions for disabled people etc. (Mulgan, 2006; Murray, Caulier-Grice, Mulgan, 2010; Alpkan and Karaçay, 2019).

Strategy development to enhance social innovativeness of the strategic decision units is a critical issue in Society 5.0. Comprehensive and collaborative approaches are very important. In order to develop organizational social innovation capacity, strategists need to concentrate on combined flexible strategies with learning and reconfiguration abilities. The present study in this concern aims to develop propositions about the relation of strategy making styles to innovativeness at the age of Society 5.0 especially pertaining to combined strategic choice, flexibility, learning and configuration.

COMBINATION STRATEGY AND SOCIAL INNOVATIVENESS

A combination strategy is the joint pursuit of categorically alternative strategic choices. According to Parnell (2010) if successfully combined, seemingly contradictory or alternative generic strategies or strategic typologies may utilize synergies to overcome any tradeoffs; otherwise, Porter (1980) warns us to be stuck in the middle. Since the concept of innovation itself has already been defined as the recombination of existing bodies of knowledge, appropriate combination of -for instance- generic competitive strategies of low cost and differentiation may help firms produce social innovations to satisfy the ideals of Society 5.0. According to Pertusa-Ortega, Molina-Azorin, Claver-Cortes, (2009) this hybrid strategy approach may

lead to higher performance, especially when innovation differentiation is one of the combined strategic options. Moreover, the same researchers in another study emphasize that process or product innovations may favor both cost reduction (more efficient processes) and differentiation (Claver-Cortes, Pertusa-Ortega, Molina-Azorin, 2012). Meanwhile Agyapong and Amanor, (2016) indicate that generally those firms having internally higher past performance and present potential i.e superior organizational capabilities and facing externally lower amount of competition in a growing marketplace are likely to adopt such types of hybrid or combined strategies.

Reconciliation of alternative strategic options is an inevitable necessity when opportunities and threats are simultaneously abundant in the highly dynamic marketplace. Especially at the age of Society 5.0 combination strategies can be developed and implemented to satisfy the unmet needs of disadvantaged members of the society where resources are limited but technological opportunities and solutions are rapidly developing. Following only the differentiation strategy may also produce beneficial results concerning the specific needs of different societal groups; however, it would be very difficult to improve and sustain the quality of the newly provided social value, if it is not cost efficient for the producers and affordable by the users. In addition, the price premium that is necessary to be collected from the buyers that prefer differentiated products and services would not be sufficient in every segment. Therefore, differentiation alone is not sustainable especially when innovations are done for the sake of the disadvantaged groups of users with limited purchasing power. Moreover, some radical innovations with much higher price premium are firstly and mostly used by a limited group of privileged buyers within the society; and they can only very lately penetrate low cost focus segments. In this concern, thanks to the digital technologies, available today, firms can concentrate at the same time once seemingly contradictory dual capabilities to pursue combination strategies effectively and efficiently. For instance, even without economies of scale, unit costs can be controlled by new material, design, manufacturing, promotion and delivery methods that might also increase speed and flexibility. In addition to these inner synergies, inter-organizational collaboration to supplement and complement necessary innovative capabilities for a common social cause would contribute to social innovativeness. Accordingly, the joint pursuit of low cost and differentiation strategies by different independent but collaborating strategic decision units of the same society i.e. public, private and third sector organizations seems to be able to produce at the same time exploitative and exploratory innovations to contribute to the formation of a human-centered super smart society where public or private monopolies, networks or platforms do not dominate. Therefore, we propose that:

P1: Firms that implement combination strategy will be more socially innovative than firms that follow only differentiation strategy in Society 5.0

STRATEGIC FLEXIBILITY AND SOCIAL INNOVATIVENESS

Strategic flexibility is the ability to cycle between implementation and formulation in order to be able to increase organizational adaptability to the rapidly changing external environment by taking a few tentative steps, and then to refine the strategic plans in line with the feedback received (Sharfman and Dean, 1997). This flexibility in strategy and operations can enable organizations to respond quickly and effectively to the foreseen or unforeseen changes in the competitive marketplace without sacrificing efficiency (Golden and Powell, 2000). Likewise the concept of innovation itself is by nature unpredictable and can only be facilitated by a flexible approach to strategic planning (Barringer and Bluedorn, 1999; Dibrell, Craig, Neubaum, 2014). Especially flexible plans and implementations leading to episodes of trial and learning from failures (Alpkan and Doğan, 2008) and accordingly, taking preventive and corrective actions would both trigger incremental improvements and provoke radical innovations.

The already well-established recent literature on the strategic planning flexibility-innovativeness relation can also be extended to social innovativeness in the much more dynamic and unpredictable era of Society 5.0. Nowadays, firms should rapidly respond to the day-by-day changes in their ecosystems at a tremendous speed (Harayama, 2017). According to Fukuda (2020) there has been a continuous global trend of organizational flexibility to cope with this rapid change since the beginning of this century in the form of modularity, downsizing, open innovation, spin offs, outsourcing, etc. Together with re-organization efforts regarding the internal structure and culture, organizations nowadays try to establish also strategic partnerships with their counterparts to get more agile and flexible in their operations and produce innovative solutions. This necessitates both intra-organizational and inter-organizational flexible and joint data processing and planning. Present technological solutions including cloud computing, big data analytics, blockchain governance systems, real-time planning, etc. provide vast opportunities to plan and implement

flexibly. The resulting flexible cycle of rapid decision making, planning, implementing, revising, re-implementing, etc. can be effectively managed not only relying on the ability to plan with advanced tools and techniques but also on the ability to get and share big data with different societal stakeholders. Accordingly, public-private-third sector collaboration for social innovativeness can be very beneficial if joint flexible plans are rapidly revised and improved during implementation. Social innovation can be attained and sustained at the end if strategic partners can dedicate time and concentration to discuss and make sense about the social impacts of their plans and actions just for the sake of the society before rushing for a new phase of planning. Therefore we propose that:

P2: Firms that adopt flexible strategic planning will be more socially innovative than firms that follow rigid strategic planning in Society 5.0

STRATEGIC LEARNING AND SOCIAL INNOVATIVENESS

Strategic learning is one of the critical abilities behind innovative achievements. The ability to learn faster than the competitors may be the only sustainable competitive advantage; and organizational learning (i.e. collective learning and shared understanding) contributes to the emergence of some unique combinations of organizational skills that make it possible to utilize them in multiple applications, in developing new products and entering new markets (De Geus, 1988). According to Prahalad and Hamel (1990), a core competency is a harmonized combination of multiple resources and skills that distinguish a firm in the marketplace, and unlike physical assets, competencies do not deteriorate as they are applied and shared; quite the contrary they grow. Organizations are not combination of departments or product units, but sets of skills and capabilities that should not be outsourced (Prahalad and Hamel, 1990). Organizational need to process knowledge to improve organizational performance and also to change behavior to reflect the new cognitive state in response to environmental changes (Jerez-Gomez et al., 2005). Moreover, it is important for companies to have dynamic capabilities in an ever-changing and developing environment. According to resource-based view, human capital and social capital are critical organizational resources that are inimitable and valuable (Delery and Roumpi, 2017). Adapting to drastic changes at the Society 5.0, also requires using these resources and capabilities effectively.

According to Teece et al. (1997) dynamic capabilities are the firm's ability to reshape competition by integrating, building, and reconfiguring competences, by addressing rapidly changing environments, and by achieving innovative forms of competitive advantage. Presence of both high uncertainty and high complexity at the same time demands a range of capabilities (Tidd, 2001), as in the Society 5.0. For instance, sensing capability is a distinctive capability of a firm to sense and identify opportunities and options in its scanning, searching and exploring across technologies and markets for its new product development (Teece, 2007). Once a market opportunity is identified, it must be addressed with new products, which require a decision to update existing operational capabilities with learning, and new knowledge and skills (Pavlou and El Sawy, 2011). Sensing new opportunities by scanning the market trajectories, technological developments, and supplier competitor responses and by understanding latent demand and the structural evolution of industries and markets is very beneficial to be innovative (Zhou et al., 2019). However it is also necessary then to seize opportunities (by renewing value offerings within the business model and by capturing completely possible profits from innovation) and to manage threads and reconfiguration (by co-specializing of complementary assets and by improving incentive and knowledge sharing procedures) (Teece, 2007).

According to Mintzberg et al. (1999), "analysis" (sensing) should be reserved for organizational management in a relatively stable environment, whereas "synthesis" (emergent learning) should be used in a dynamic and turbulent environment. In terms of innovativeness, a firm should be open to internalizing new concepts, products, and procedures, ready to transform and adopt latest technology and trends (Alshanty and Emeagwali, 2019). Innovation occurs as a result of using new knowledge and technologies. While sensing capabilities help analyzing the market with existing knowledge and create potential actions, learning capabilities enable firms taking innovative actions by adding new knowledge learned to the existing. According to Lin et al (2013) learning capability is the combination of practices that promote intra-organizational learning among employees, partnerships with other organizations that enable the spread of learning, and an open culture within the organization that promotes and maintains sharing of knowledge. This ability to learn is difficult to imitate by the competitors; and it leads to both innovation and competitive advantage (Weerawardena, 2003; Lin et al., 2013). As can be seen, both capabilities provide companies an advantage in terms of innovation. However, in a dynamic environment such as Society 5.0, where today's

innovation practices will not be relevant, developing continuous learning capabilities will open up more innovation avenues than just developing sensing capabilities. Opportunities for social collaboration, information-sharing, open innovation, etc. are abundant at Society 5.0 and those organizations that cannot seize them cannot sustain also their social innovativeness if any. Therefore, we purport that:

P3: Firms that develop learning capabilities will be more socially innovative than firms that develop only sensing capabilities in Society 5.0

STRATEGIC RECONFIGURATION AND SOCIAL INNOVATIVENESS

Core capabilities if not reconfigured and upgraded may turn one day into core rigidities that hinder new knowledge integration and innovation since they are so deeply rooted in the organizational culture and memory that managers cannot even attempt to change them because of path dependency (earlier specialization and well established routines), competency trap (over relaying on current capabilities and over concentration on familiar technologies, current expertise), or biased evaluations about external developments e.g. new technologies, changing customers' expectations (Leonard-Barton, 1992; Carli , 2012). However to be able to address emerging threats and opportunities, organizations need to develop an ability to reconfigure existing assets and develop the new skills (O'Reilly and Tushman, 2008).

Galbraith et al. (2001) argue that dynamism necessitates successful management of strategic reconfigurations by redesigning the four critical aspects of organizational functioning. First, the organizational structure to serve the creation and capture of intended value proposition via either one or combination of function, geography, product or customer centered structures, and secondly the processes and lateral capability to supplement vertical relations with horizontal coordination and teamwork mechanisms should be redesigned. Then, the salary and reward systems to ensure that members of the organization are aware and motivated to achieve strategic goals (and not to provoke unintended behaviors), and fourthly, the HR Practices to appease the inevitable employee concerns during the reorganization process by designating competent managers and upgrade staff abilities to handle new challenges should be reconfigured.

Similarly, according to Lam (2011) organizational and managerial processes—integrating, learning and reconfiguration—are the core elements that underpin firms' innovative performance by rapid reconfiguration of human resources to align with shifting market requirements and technological changes; this may be possible only with the ability to reconfigure the knowledge base rapidly to deal with high levels of technical uncertainty, and to create new knowledge in order to produce novel innovations in emerging new industries. Successful reconfigurations may be assumed also as a kind of organizational innovation that would lead also to process and product innovations. If done just for the sake of the societal stakeholders these rearrangements may trigger new types of social consortia, collectives or project organizations. The ability to coordinate complex societal relations to create synergies out of scarce resources necessitates beforehand openness to change, social intelligence, human capital, and dedication among different collaborators within the society. The resulting innovation is social before organizational. Otherwise keeping existing positions based on closed innovations may condemn organizations to fade away. Therefore, we assert that:

P4: Firms that can reconfigure their position and structure will be more socially innovative than firms that prefer to keep them unchanged in Society 5.0

CONCLUSION

Society 5.0's main goal is to attain a society where both economic and social problems are solved with a human-centered approach (Fukuyama, 2018). This may be possible only if organizations put socially innovative efforts to get this common goal together. Organizations, as the building blocks of the societies (Baum and Rowley, 2002), and holding a variety of forms, goals and strategies, members, technologies, size, culture, etc. (Daft, 2010), should be managed in a synergetic and voluntary coordination for a higher advancement through Society 5.0.

As social innovation practices require both differentiated and accessible solutions for each segment and/or even each member of the society, generation and implementation of most suitable strategies are very critical. Satisfactory results would be brought by the adoption of a dynamic combination of seemingly

alternative strategies. On the other hand, the organizations that aim to deliver both incremental and radical innovations for the variety of social problems, would also be open to face with a high level of uncertainty, even in their daily-basis decisions. In that sense, strategic flexibility has to be assumed as a core asset in responding the uncertainty and rapid changes that will take place in the environment and within the organizations. As another result of the instable environmental conditions, internal dynamics, and open resources of knowledge at the age of big data, organizations need to gather and process new knowledge continuously. In this concern, only joint and continuous learning capabilities can trigger and develop social innovativeness. However, over relying on current capabilities may lead to develop core rigidities that might underpin path dependency and local embeddedness. Therefore, a collaborative environment with necessary organizational and/or inter-organizational abilities to reconfigure strategic positions and organizational structures should be accepted as a suitable milieu where social innovations can flourish and sustain.

In the pursuit of Society 5.0, a human-centric society, where stakeholders enjoy a high quality of life (Fukuyama, 2018), organizations should develop above mentioned strategy-related characteristics to solve economic and social challenges with social innovations. Firstly, organizations need to formulate combination strategies which are innovative fusions of already developed generic options. Secondly, they have to adapt and revise their strategies flexibly to the merits of the changing situations. Thirdly, learning capabilities and fourthly reconfiguration capabilities would bring sustainable social innovations. To conclude, the formula of social innovativeness combines and revises, then learn and reconfigure the organizational strategy for the sake of not only the organization but also the society.

REFERENCES

Agyapong, A., Amanor, K. (2016), Antecedents to the Implementation of Hybrid Strategy in a Dynamic Business Environment-An Econometric Analysis of Business Decisions in Ghana. Journal of Developmental Entrepreneurship, 21(4), pp.1-24.

Alpkan, L., Belgemen, M., Şenel, A. (2017), A Discussion about the Effects of Artificial Intelligence on the Social Life, 7th International Conference on Leadership, Technology, Innovation and Business Management, Marmaris, Turkey, The European Proceedings of Social & Behavioural Sciences, 287-296.

Alpkan, L., Doğan, T. (2008), Stratejik Planlama Süreci Bileşenlerinin Firma Performansına Etkileri, Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 16(1), pp.21-47.

Alpkan, L., Karacay, G. (2019), Social Innovation in the Digital Era: A Remedy for the Threads of Unemployment and Dejobbing, 5th International Conference in Management Studies, (EUROKD) İstanbul, (Keynote speech).

Alpkan, L., Karacay, G., Erten, H., Malaj, A., Doğan, A., Yıldız, A.O. (2020), Social Entrepreneurs' Strategy Making in Society 5.0, Journal of Global Strategic Management, 14 (1), pp.45-54.

Alshanty, A.M., Emeagwali, O. L. (2019), Market-sensing capability, knowledge creation and innovation: The moderating role of entrepreneurial-orientation, Journal of Innovation & Knowledge, 4(3), pp.171-178.

Barringer, B., Bluedorn, A. (1999), The relationship between corporate entrepreneurship and strategic management, Strategic Management Journal, 20, pp.421-444.

Baum, J.A., Rowley, T. J., (2002), Companion to organizations: An introduction, The Blackwell Companion to Organizations, Blackwell Publishers Ltd., Oxford, United Kingdom, pp.1-34.

Carli, G., (2012), From core rigidities to dynamic capabilities: the role of external knowledge. A multiple case study, Unpublished doctoral dissertation, Unıversıtà Di Bologna.

Claver-Cortés, E., Pertusa-Ortega, E., Molina-Azorín, J. (2012), Characteristics of organizational structure relating to hybrid competitive strategy: Implications for performance, Journal of Business Research, 65(7), pp.993-1002.

Daft, R. L., Murphy, J., Willmott, H. (2010), Organization theory and design (Vol. 10). Mason, OH: South-Western Cengage Learning.

De Geus, A. (1998) Planning as Learning, Harvard Business Review, March-April, pp.70-74.

Delery, J. E., Roumpi, D. (2017), Strategic human resource management, human capital and competitive advantage: is the field going in circles?, Human Resource Management Journal, 27(1), pp.1-21.

Dibrell, C., Craig, J.B., Neubaum, D.O. (2014), Linking the formal strategic planning process, planning flexibility, and innovativeness to firm performance, Journal of Business Research, 67(9), pp.2000-2007.

Erol, S., Jäger, A., Hold, P., Ott, K., Sihn, W. (2016), Tangible Industry 4.0: a scenario-based approach to learning for the future of production. Procedia CiRp, 54(1), 13-18.

Fukuda, K. (2020), Science, technology and innovation ecosystem transformation toward society 5.0., International Journal of Production Economics, 220, pp.1-14.

Fukuyama, M. (2018), Society 5.0: Aiming for a new human-centered society, Japan Spotlight, 1, pp.47-50.

Galbraith, J., Downey, D., Kates, A., (2001), Designing Dynamic Organizations: A Hands-on Guide for Leaders at All Levels, Thomas Nelson, Nashville, TN, USA.

Golden, W., & Powell, P. (2000). Towards a definition of flexibility: in search of the Holy Grail?. *Omega*, *28*(4), 373-384.

Harayama, Y. (2017), Society 5.0: Aiming for a New Human-centered Society, Hitachi Review, pp.554-555.

Lin, H.E., McDonough III, E.F., Lin, S.J., Lin, C.Y.Y. (2013), Managing the exploitation/exploration paradox: The role of a learning capability and innovation ambidexterity, Journal of Product Innovation Management, 30(2), pp.262-278.

Jerez-Gomez, P., Cespedes-Lorente, J., Valle-Cabrera, R. (2005), Organizational learning capability: a proposal of measurement, Journal Of Business Research, 58(6), pp.715-725.

Lam, A. (2011), Innovative Organizations: Structure, Learning and Adaptation In Innovation. Perspectives for the 21st Century. In DIME final conference, Madrid: BBVA.

Lampropoulos, G., Siakas, K., Anastasiadis, T. (2019), Internet of Things In The Context Of Industry 4.0: An Overview, International Journal of Entrepreneurial Knowledge, 7(1), pp.4-19.

Leonard-Barton, D. (1992), Core Capabilities And Core Rigidities: A Paradox In Managing New Product Development Strategic Management Journal, 13(S1), pp.111-125.

Mintzberg H., Ahlstrand B., Lampel J. (1999), Strategy Safari: The Complete Guide Through the Wilds of Strategy Management, Prentice Hall, London, United Kingdom.

Mulgan, G. (2006), The process of social innovation, Innovations: Technology, Governance, Globalization, 1(2), pp.145-162.

Murray, R., Caulier-Grice, J., Mulgan, G. (2010), Social Innovator Series: Ways to Design, Develop and Grow Social Innovation, the Open Book of Social Innovation, The Young Foundation. The Lab NESTA Innovation public services.

Müller, J.M., Buliga, O., Voigt, K.I. (2018), Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0., *Technological Forecasting and Social Change*, *132*, pp.2-17.

O'Reilly III, C. A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in organizational behavior*, *28*, 185-206.

Önday, Ö. (2019), Japan's Society 5.0: Going Beyond Industry 4.0, Business and Economics Journal, 10(2), pp.1-6.

Parnell, A. (2010), Strategic clarity, business strategy and performance, Journal of Strategy and Management. 3(4), pp.304-324.

Pavlou, P.A., El Sawy, O.A. (2011), Understanding the elusive black box of dynamic capabilities. Decision sciences, 42(1), pp.239-273.

Pertusa-Ortega, E., Molina-Azorin, J.F., Claver-Cortes, E. (2009), Competitive Strategies and Firm Performance: A Comparative Analysis of Pure, Hybrid and Stuck-in-the-middle Strategies in Spanish Firms, British Journal of Management, 20, pp.508-523.

Porter, M.E., (1980), Competitive Strategy: Techniques for Analyzing Industries And Competitors, New York: The Free Press, USA.

Prahalad, C. H., & Hamel, G. (1990). G.(1990).-"The Core Competence of the Corporation". *Harvard Business Review*, *68*(3), 295-336.

Salgues B., (2018), Society 5.0: Industry of the Future, Technologies, Methods and Tools, Wiley, New Jersey, USA.

Serpa, S. (2019), Society 5.0 and Sustainability Digital Innovations: a Social Process, Journal of Organizational Culture, Communications and Conflicts, 23(1), pp.1-14.

Sharfman, M. P., & Dean Jr, J. W. (1997). Flexibility in strategic decision making: informational and ideological perspectives. *Journal of management studies*, *34*(2), 191-217.

Teece, D. J. (2007). The role of managers, entrepreneurs and the literati in enterprise performance and economic growth. *International Journal of Technological Learning, Innovation and Development*, *1*(1), 43-64.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, *18*(7), 509-533.

Tidd, J. (2001), Innovation management in context: environment, organization and performance. International Journal of Management Reviews, 3(3), pp.169-183.

Weerawardena, J. (2003), Exploring the role of market learning capability in competitive strategy. European journal of marketing, 37(3/4), pp.407-429.

Xu, L.D., Xu, E.L., Li, L. (2018), Industry 4.0: state of the art and future trends. International Journal of Production Research, 56(8), pp.2941-2962.

Zhou, S.S., Zhou, A.J., Feng, J., Jiang, S. (2019), Dynamic capabilities and organizational performance: The mediating role of innovation. Journal of Management & Organization, *25*(5), pp.731-747.