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A STUDY OF THE FACTORS AFFECTING THE GENERATION AND REINFORCEMENT OF AMBIDEXTERITY IN ORGANIZATIONS

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ABSTRACT

Organizational ambidexterity refers to the capability of an organization in attending to two dimensions of exploration and exploitation of opportunities simultaneously. Today, ambidexterity has positive effects on organizations' functions, and leads to sustainable performance, survival, and long lasting success of the organization. This is possible only when the utmost capabilities can be benefitted from through reinforcing factors affecting ambidexterity on one hand, and discovering new opportunities and abilities on the other. This research aims at studying factors affecting the generation and reinforcement of ambidexterity in organizations. This article benefits from library and descriptive search in explaining the concept of ambidexterity in organizations. Results have shown that management, participation on decision making, organizational identity, knowledge management, absorptive capacity, psychological safety, age of organization, size of organization, environmental dynamism, market orientation, and competitive intensity cause elevation of ambidexterity in organizations.

Keywords: *Ambidexterity, Organizational Ambidexterity, Exploration, Exploitation, Innovation*

INTRODUCTION

Intensity of competition, rapid changes, chaotic environments, numerous technological changes, and shortened life cycle of the products are the features of different industries in a world economy, and force companies to continuously change and readjust the structures and processes in order to maintain the present business and create innovation to either meet or create future needs. This is especially the case in hi-tech companies. Merging the present businesses, and finding new opportunities are often the only option such companies have. (Wang & Rafiq, 2014). Increasing customer expectations, globalization, and frequent changes in the environments, have urged organizations to directly create new forms of competitive advantages (March, 1991; Schulze et al., 2008). Adapting to these circumstances requires discovering new ideas and processes, and offering new products and services to emerging markets. Yet, to leverage their present merits and exploiting services and products, companies need to be stable. (Benner & Tushman, 2003). Therefore, organizational ambidexterity has drawn the attention of organizations (March, 1991; Schulze et al., 2008). Ambidexterity means the capability of a company to pursue two different things at the same time. (Gibson & Birkinshaw, 2004). An

ambidextrous company is capable of exploiting present merits as well as discovering new opportunities with equal swiftness and skill (Lubatkin et al., 2006). Benefiting from the strategy of ambidexterity, a company can act economically and meet the needs of the customers. Thus they can survive and guarantee their success. Yet, if a company is after ambidexterity, they must pay due attention to some basics to support this strategy.

As O'Reilly & Tushman (2013) define it, organizational ambidexterity is the capability of a company in exploring and exploiting opportunities aiming at being competitive in mature technologies and markets where welfare, control, and increasing improvement are targeted. Moreover, in new technologies, and competitive markets where flexibility, independence, and experimentation are among the requirements, organizational ambidexterity is considered as a dynamic capability. Organizational ambidexterity has turned to a central research trend in organizational science, seeking to find the answer to this question: How can long-term survival of organizations happen? (O'Reilly & Tushman, 2008, 2013)

Gibson and Birkinshaw (2004) believe that ambidexterity includes structural and contextual ambidexterity. Structural ambidexterity refers to the management of contradiction (between exploration and exploitation, or alignment and accord) by the management of the organization through a certain structure. Contextual ambidexterity refers to the atmosphere made in an organization where the staff members too – not only managers – allocate time and effort to contradictory business needs (exploration and exploitation) (Gibson & Birkinshaw, 2004).

Review of Related Literature:

- *Organizational Ambidexterity*

The word ambidexterity comes from two Latin words (Ambi) meaning 'two-way' and (Dexterity) meaning 'skill' (swiftness). This term was first brought forward by Robert Duncan as a way to describe twofold structures. He believes that, to launch and apply innovation which are different activities, organizations are in need of twofold structures. To define ambidexterity, his focus is on organizations' needs in making twofold structures in order to manage innovation (Birkinshaw & Gupta, 2013; Gupta et al., 2006).

Ever since Tushman and O'Reilly conducted their research in 1996, sources related to management and organization have discussed the issue of ambidexterity. They have defined it as follows: The organizational capacity which makes the simultaneous management of two paradoxical poles and tensions possible. These paradoxical poles and tensions include: alignment against adaptability, ease of the past against uncertainty of the future, exploration of knowledge against exploitation of knowledge, gradual innovation against radical innovation. The ability to solve these paradoxical tensions, which is in fact the very ambidexterity, is considered to be a kind of superior performance (Junni et al., 2013).

Ambidexterity is defined as, "The organizational capacity to manage paradoxical activities and tensions through simultaneous access to a higher level of both, which eventually act as a solution to this problem. (Nosella et al., 2012).

Ambidexterity emphasizes the inclination of companies in concentrating on exploration and exploitation abilities. While the exploitative companies aim at gaining better efficiency, for example through concentrating on production and normalization, the explorative companies aim at creating flexibility in organizations through an approach open to learning (Gibson & Birkinshaw, 2004).



Ambidexterity is in fact a twofold orientation between exploration and exploitation which accelerates the balance between short-term and long-term objectives in an organization, and leads to the improvement of the organization's performance (Gedajlovic *et al.*, 2012).

Researchers use different definitions to conceptualize organizational ambidexterity. Although ambidexterity in general is the capability of an organization in pursuing two different things at the same time, yet the vast area of meaning does not admit a comprehensive definition of organizational ambidexterity in the literature. A general agreement made in the literature on ambidexterity is that a company can be referred to as ambidextrous when it is able on both dimensions of exploiting present merits and exploring new ones. Achieving ambidexterity enables organizations to elevate their performance and competitiveness; yet conceptualizing ambidexterity is still very ambiguous (Cao *et al.*, 2009; Raisch *et al.*, 2009).

Some researchers believe that ambidexterity is an integrated structure of exploration and exploitation (Chang *et al.*, 2011; Gupta *et al.*, 2006; He & Wong, 2004; Kitapçı & Çelik, 2014; Li & Huang, 2012; Stadler *et al.*, 2014).

In March 1991, for the first time, organizations' needs in matching opposite forces of exploitation and exploration was recognized. This capability was eventually introduced as organizational ambidexterity (Tushman & O'Reilly III, 1996) while ambidexterity causes organizational tensions and contradictory needs which can hardly be managed (W. K. Smith & Tushman, 2005). There is a growing number of empirical evidence indicating the higher long-term performance in ambidextrous companies (Lubatkin *et al.*, 2006).

- **Exploration**

Exploration is the process of recognizing, evaluating, and formulating, opportunities (Hitt *et al.*, 2011; Webb *et al.*, 2010). Exploration is linked to seeking new opportunities, internalizing and employing modern knowledge. The concept of exploration is influenced by relativity, because it must be defined from the view point of an organization. A certain field of knowledge, a technology, or a market may be new to an organization but unfamiliar to another. Therefore, exploring an organization to one may be equal to exploiting it to another. There is also another problem that whether organizations with developed knowledge are in a better situation, as far as exploration is concerned, than those which have evaluated the value of external knowledge and have internalized it (Cohen & Levinthal, 1990). Finally, exploration aims at achieving variety of products, internationalization, making changes in organizational forms, or testing a new field of knowledge (Panagopoulos, 2016).

- **Exploitation**

Exploitation is the process emphasizing speed, precision, and focus on present merits (Hitt *et al.*, 2011; Klein *et al.*, 2013). During exploitation, organizations develop their daily activities. This improves them through repetition in addition to the present merits they already possess. Exploitation is related to organizational focus, experiences, and variety. As a result, exploitation, as compared to exploration, seems to be more reliable especially in a short term. Exploration makes present activities more effective; yet short-term enthusiasm can lead to an opportunity trap (Leonard, 2011) which shall eventually lead the organization toward adapting itself to the present situation. In such cases, organizations focus more on exploration, and thus get afflicted by organizational inertia, and trapped in a semi-optimal balance which causes problems adapting (Levinthal & March, 1993).



Factors Influencing Organizational Ambidexterity:

- **Management**

Managers, as leaders of organizations, play an important role in developing ambidexterity. Tushman and O'Reilly (1997) state that management team internal processes accelerate ambidexterity. Choices made by management of organizations affect their tendency to explore rather than exploit. Managers who do not take risks participate in exploitation, since its advantages are moderate and secure, and therefore are preferred by the decision makers who by nature doubt things more (Lewin et al., 1999). On the other hand, the hope to survive, as well as performance motivate managers who take risks (March & Shapira, 1992). Optimal management of balance between exploration and exploitation, which is required for organizations to survive, is different for every organization, and depends on their strategies (Panagopoulos, 2016).

- **Participation in Decision Making**

Participation in decision making supports ambidexterity both through exploration processes and through exploitation. This performance is important for exploration to take place, because it establishes motivation for the new ideas to be created (Cohen & Levinthal, 1990). On the other hand, common decision making regularizes new ideas which have been proposed more realistically. In this process, it is very important for the leaders, who can explain the need for reorientation of the team, and boost the commitment in exploring new methods of doing tasks, to participate in doing tasks (Raisch & Birkinshaw, 2008).

- **Organizational Identity**

Organizational objectives and dominant logic steer exploitative and explorative activities of every organization (Miles et al., 1978). Organizational culture, experiences, ideas, and values influencing members of an organization affect their tendency in pursuing exploration and exploitation purposes. Sorenson (2002) shows that organizations with stronger culture, whose members share a strong body of norms, stay in known areas and participate in exploitation more, while cultures open to change, usually enjoy exploration (Panagopoulos, 2016).

- **Knowledge Management**

Knowledge sharing, as a knowledge management stage, helps ambidexterity in organizations. Researchers show (Smith et al., 2005; Van Den Hooff & De Ridder, 2004) that knowledge management assists ambidexterity in organizations. Success in such an area, depends on the ability to participate in creating and seeking knowledge, and on the ability to share knowledge (Riege, 2007). Knowledge sharing helps organizations capture the knowledge inside and outside the organization. Merging the internal and external knowledge, increases the capacity of the staff members to develop and offer new products, services, and processes (S. Wang & Noe, 2010), and provides opportunities in acquiring sustainable competitive advantages, and developing the performance of the organization (Smith et al., 2005; Tsai, 2001). In fact, efficient knowledge sharing, encourages the staff members to share their ideas and leads them towards making innovation in organizations (Reagans & McEvily, 2003). Spreading knowledge shall lead to ambidexterity provided that the company is endowed with the capacity to absorb knowledge. Company's absorption capacity, potential, and capability to seek, absorb, change, and employ sources of knowledge are defined to provide grounds for dynamic abilities to emerge.

Capacity to absorb more, and making efforts to make improvement, improves innovation and elevates the capability of the company to effectively manage innovation (Zahra & George, 2002).



- ***Absorptive Capacity***

Organizations' capability to explore is related its absorptive capacity, i.e., the ability to evaluate the value of external knowledge, to internalize and employ it (Cohen & Levinthal, 1990). Absorptive capacity improves the interaction of the organization with environment (Rosenkopf & Nerkar, 2001) and elevates the learning taken place within or among its subsidiary units. Therefore absorptive capacity enables the organization to actively perform and explore emerging technologies and market opportunities (Rothaermel & Alexandre, 2009).

- ***Psychological Safety***

Psychological safety is related to the extent of safety staff members of an organization feel in taking interpersonal risks. Risks which may cause mistakes can be used to weaken exploration efforts (Edmondson, 1999). It maybe difficult for the staff members to share or implement their new ideas because ther are not confident about their jobs. Exploration is risky, and little psychological safety can accompany the fear of ebing punished for foreseen results. Moreover, exploration in environments insecure for taking risks is difficult (in oter words, in financial sector) (Panagopoulos, 2016).

- ***Age of Organization***

Startups tend to invest in eploration, because they have not yet created organizational roles and have not structured relationships. Moreover, they intend to explore new opportunities which distinguish them from their competitors. Even though, they still need to participate in exploration, since they are usually subject to threats which make them vulnerable against failure (Stinchcombe, 2000). New commitments arise because of lack of certain sources, limited number of customers and required investment. On the other hand, older organizations face problems in adapting themselves to technological dvelopments, because they depend on daly activities and skills which accelerate internal pressure, and rely on available knwoledge and experiences in reacting to responsible behavior against environmntal challenges. Thus, they would prefer to participate in exploration more than exploitation (Lavie et al., 2010).

- ***Size of Organization***

Researches show that the inertia of an organization increases with its size. Accordingly innovation and change will be more difficult to occur. Rotermal and Deeds (2004) confirm that the small size has a positive relation ith exploitation. Other researchers suggest that larger organizations are in better position to perform exploration because they are able to benefit from their internal resources in supporting exploration more easily (Sidhu et al., 2004).

- ***Environmental Dynamism***

Environmental dynamism has been defined as the unpredictable change limit in an organization's environment (Dess & Beard, 1984). In dynamic environments, products easily become old-fashioned, rules constantly change, and organizations need to explore. In general, organizational uncertainty increases as the innovation required for survival increases, and investment of the organization in exploration increases accordingly. Exploration enjoys a higher chance to survive in stable environments, while chaotic environments support organizations that can benefit from emerging opportunities better and leave unsustainable certainties (Hannan & Freeman, 1984). On the contrary, it is possible for organizations which would like to that market uncertainty to be in search of external resources from their similar or familiar competitors (Beckman et al., 2004).



- **Market Orientation**

Market orientation refers to the capability of an organization in giving top priority to customer satisfaction considering the interests of their shareholders. This can be reflected in three dimensions of customer orientation, competitor orientation, and interperformance coordination (Kohli & Jaworski, 1990). Market orientation leads managerial decisions in allocating resources to exploiting abilities of innovation in products, and to developing innovation abilities simultaneously (Atuahene-Gima, 2005). As organizations penetrate into accumulated experience, and establish connections with sellers, customer, and beneficiaries, they become more efficient (Penrose, 1959).

- **Competitive Intensity**

In general, competitive intensity rises as the number of competitors increases. This leads to lower prices and harder margins (Lavie & Rosenkopf, 2006). Under such circumstances, it is necessary to improve products or services. Accordingly, exploration will become insufficient in renouncing competition after a while, and turn out to be to make changes and show new competitive advantages. Motivation to exploit becomes dominant when competitive tension is eliminated and organizations establish a reasonable return on investment through exercising influence on products, services, and technologies without imposing exploration risks (Panagopoulos, 2016).

CONCLUSION

Organizational ambidexterity needs companies to consider exploration and exploitation at the same time. Given the fact that methods of exploring and exploiting opportunities in organizations are of paradoxical nature, it is vital to elevate factors influencing organizational ambidexterity. This article, through studying factors influencing the establishment and reinforcement of ambidexterity, concluded that senior executive managers, as main leaders of organizations, play an important role in establishing and developing ambidexterity. Participation in decision making can help organizations explore organizational ideas and opportunities. Knowledge management can also help organizations in the process of ambidexterity through participating in creating and seeking knowledge, and increasing the capability to participate in sharing knowledge. This shall lead to ambidexterity when the company has an appropriate absorptive capacity. Higher absorptive capacity improves organization's capability to explore. Increasing psychological safety as a factor influencing organizational ambidexterity can be helpful through decreasing the risk of non-participation of the staff members in exploration. Age and size of organizations can be effective in choosing the strategy of organizations. Startups intend to invest in exploration, and older companies tend to invest in exploitation. On the other hand, smaller organizations are in better positions to exploit, while larger organizations have a better chance to explore. Environmental dynamism can force organizations to move in line with exploration and thus increase ambidexterity. Market orientation and market intensity are also among other factors influencing the increase in ambidexterity capacity in two dimensions of exploration and exploitation. As organizations try to keep up with the speed of changes, they need to employ ideas or processes which lead to the development of new products or services. Moreover, they must also benefit from present abilities in exploiting available products and services. Future researchers are suggested to investigate more factors influencing the establishment and reinforcement of organizational ambidexterity. It is further suggested that



some research be conducted on prioritizing these factors in organizations to concentrate more on high priority factors through related techniques.

References

- Atuahene-Gima, K. (2005). Resolving the capability—rigidity paradox in new product innovation. *Journal of Marketing*, 69(4), 61–83.
- Beckman, C. M., Haunschild, P. R., & Phillips, D. J. (2004). Friends or strangers? Firm-specific uncertainty, market uncertainty, and network partner selection. *Organization Science*, 15(3), 259–275.
- Benner, M. J., & Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of Management Review*, 28(2), 238–256.
- Birkinshaw, J., & Gupta, K. (2013). Clarifying the Distinctive Contribution of Ambidexterity to the Field of Organization Studies. *Academy of Management Perspectives*, 27(4), 287–298. <https://doi.org/10.5465/amp.2012.0167>
- Cao, Q., Gedajlovic, E., & Zhang, H. (2009). Unpacking organizational ambidexterity: Dimensions, contingencies, and synergistic effects. *Organization Science*, 20(4), 781–796.
- Chang, Y.-Y., Hughes, M., & Hotho, S. (2011). Internal and external antecedents of SMEs' innovation ambidexterity outcomes. *Management Decision*, 49(10), 1658–1676.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 128–152.
- Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly*, 52–73.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383.
- Gedajlovic, E., Cao, Q., & Zhang, H. (2012). Corporate shareholdings and organizational ambidexterity in high-tech SMEs: Evidence from a transitional economy. *Journal of Business Venturing*, 27(6), 652–665. <https://doi.org/10.1016/j.jbusvent.2011.06.001>
- Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47(2), 209–226.
- Gupta, A. K., Smith, K. G., & Shalley, C. E. (2006). The interplay between exploration and exploitation. *Academy of Management Journal*, 49(4), 693–706.
- Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American Sociological Review*, 149–164.
- He, Z.-L., & Wong, P.-K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization Science*, 15(4), 481–494.



- Hitt, M. A., Ireland, R. D., Sirmon, D. G., & Trahms, C. A. (2011). Strategic entrepreneurship: creating value for individuals, organizations, and society. *The Academy of Management Perspectives*, 25(2), 57–75.
- Junni, P., Sarala, R. M., Taras, V., & Tarba, S. Y. (2013). Organizational ambidexterity and performance: A meta-analysis. *The Academy of Management Perspectives*, 27(4), 299–312.
- Kitapçı, H., & Çelik, V. (2014). The Relationship between Ambidexterity, Organizational Learning Capacity and Firm Quality Performance: An Empirical Study. *Procedia-Social and Behavioral Sciences*, 109, 827–836.
- Klein, P. G., Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2013). Capabilities and strategic entrepreneurship in public organizations. *Strategic Entrepreneurship Journal*, 7(1), 70–91.
- Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: the construct, research propositions, and managerial implications. *The Journal of Marketing*, 1–18.
- Lavie, D., & Rosenkopf, L. (2006). Balancing exploration and exploitation in alliance formation. *Academy of Management Journal*, 49(4), 797–818.
- Lavie, D., Stettner, U., & Tushman, M. L. (2010). Exploration and exploitation within and across organizations. *Academy of Management Annals*, 4(1), 109–155.
- Leonard, D. A. (2011). Core capabilities and core rigidities: A paradox in managing new product development. In *Managing Knowledge Assets, Creativity and Innovation* (pp. 11–27). World Scientific.
- Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14(S2), 95–112.
- Lewin, A. Y., Long, C. P., & Carroll, T. N. (1999). The coevolution of new organizational forms. *Organization Science*, 10(5), 535–550.
- Li, Y.-H., & Huang, J.-W. (2012). Ambidexterity's mediating impact on product development proficiency and new product performance. *Industrial Marketing Management*, 41(7), 1125–1132.
- Lubatkin, M. H., Simsek, Z., Ling, Y., & Veiga, J. F. (2006). Ambidexterity and performance in small-to medium-sized firms: The pivotal role of top management team behavioral integration. *Journal of Management*, 32(5), 646–672.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87.
- March, J. G., & Shapira, Z. (1992). Variable risk preferences and the focus of attention. *Psychological Review*, 99(1), 172.



- Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. (1978). Organizational strategy, structure, and process. *Academy of Management Review*, 3(3), 546–562.
- Nosella, A., Cantarello, S., & Filippini, R. (2012). The intellectual structure of organizational ambidexterity: A bibliographic investigation into the state of the art. *Strategic Organization*, 10(4), 450–465.
- O'Reilly, C. A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, 28, 185–206.
- O'Reilly, C. A., & Tushman, M. L. (2013). Organizational Ambidexterity: Past, Present, and Future. *Academy of Management Perspectives*, 27(4), 324–338. <https://doi.org/10.5465/amp.2013.0025>
- Panagopoulos, G. (2016). Aspects of Organizational Ambidexterity. *Journal of Global Strategic Management*, 1(10), 5–5. <https://doi.org/10.20460/JGSM.20161022382>
- Penrose, E. T. (1959). 1995. *The Theory of the Growth of the Firm*. Oxford: Oxford University Press.
- Raisch, S., & Birkinshaw, J. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. *Journal of Management*, 34(3), 375–409.
- Raisch, S., Birkinshaw, J., Probst, G., & Tushman, M. L. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organization Science*, 20(4), 685–695.
- Reagans, R., & McEvily, B. (2003). Network structure and knowledge transfer: The effects of cohesion and range. *Administrative Science Quarterly*, 48(2), 240–267.
- Riege, A. (2007). Actions to overcome knowledge transfer barriers in MNCs. *Journal of Knowledge Management*, 11(1), 48–67.
- Rosenkopf, L., & Nerkar, A. (2001). Beyond local search: boundary-spanning, exploration, and impact in the optical disk industry. *Strategic Management Journal*, 22(4), 287–306.
- Rothaermel, F. T., & Alexandre, M. T. (2009). Ambidexterity in technology sourcing: The moderating role of absorptive capacity. *Organization Science*, 20(4), 759–780.
- Schulze, P., Heinemann, F., & Abedin, A. (2008). BALANCING EXPLOITATION AND EXPLORATION. In *Academy of Management Proceedings* (Vol. 2008, pp. 1–6). Academy of Management.
- Sidhu, J. S., Volberda, H. W., & Commandeur, H. R. (2004). Exploring exploration orientation and its determinants: Some empirical evidence. *Journal of Management Studies*, 41(6), 913–932.
- Smith, K. G., Collins, C. J., & Clark, K. D. (2005). Existing knowledge, knowledge creation capability, and the rate of new product introduction in high-technology firms. *Academy of Management Journal*, 48(2), 346–357.



- Smith, W. K., & Tushman, M. (2005). Senior teams and managing contradictions: On the team dynamics of managing exploitation and exploration. *Organization Science*, 16(5), 522–536.
- Stadler, C., Rajwani, T., & Karaba, F. (2014). Solutions to the exploration/exploitation dilemma: Networks as a new level of analysis. *International Journal of Management Reviews*, 16(2), 172–193.
- Stinchcombe, A. L. (2000). Social structure and organizations. In *Economics Meets Sociology in Strategic Management* (Vol. 17, pp. 229–259). Emerald Group Publishing Limited. [https://doi.org/doi:10.1016/S0742-3322\(00\)17019-6](https://doi.org/doi:10.1016/S0742-3322(00)17019-6)
- Tsai, W. (2001). Knowledge Transfer in Intra-Organizational Networks: Effects of Network Position and Absorptive Capacity On Business Innovation and Performance.
- Tushman, M. L., & O'Reilly III, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(4), 8–29.
- Van Den Hooff, B., & De Ridder, J. A. (2004). Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of Knowledge Management*, 8(6), 117–130.
- Wang, C. L., & Rafiq, M. (2014). Ambidextrous organizational culture, contextual ambidexterity and new product innovation: a comparative study of UK and Chinese high-tech firms. *British Journal of Management*, 25(1), 58–76.
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, 20(2), 115–131.
- Webb, J. W., Ketchen, D. J., & Ireland, R. D. (2010). Strategic entrepreneurship within family-controlled firms: Opportunities and challenges. *Journal of Family Business Strategy*, 1(2), 67–77.
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), 185–203

