

# A Conceptual Model: The Role of Social Networking in Indonesian SMEs during COVID-19 Pandemic

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## Abstract

At this time, SMEs are facing the COVID-19 pandemic that results in changes in market demands and the conditions in society. Current conditions require SMEs to survive not only by exploiting their existing businesses, but also by trying to explore new opportunities. Companies will have better performance if they are able to balance exploration and exploitation. For SMEs with limited resources, demand for exploration and exploitation are difficult considering that they are usually family enterprises with limited resources and capabilities. To overcome the lack of internal resources and capabilities, SMEs need to collaborate with external parties and form social networks. Social networks can provide additional resources for SMEs that could be in the forms of social support, friendship, time, information, expertise, money, business transactions, activities, and so on. This article discusses the characteristics of social networks that can influence the exploration and exploitation competences of SMEs. At the end, SMEs that are able to explore new things and at the same time exploit their current business will have good performance and survive.

## Keyword:

Exploitation, Exploration, Dynamic Environment, Social Network.

## 1. Introduction

COVID-19 has caused problems for SMEs. The first problem is about supply chain (Kuckertz et al., 2020; Lu et al., 2020; Papadopoulos et al., 2020). The distribution of goods and factory production, which has been hampered due to the COVID-19 pandemic, has resulted in the SMEs experiencing shortages in the supply of materials. Problems in the supply chain caused problems with raw materials and production (Lu et al., 2020; Papadopoulos et al., 2020). The second problem is regarding the existence of social restrictions to prevent transmission of the COVID-19 virus. This change results in a change in the pattern of demand in the market (Lu et al., 2020). Current conditions require SMEs to survive not only by exploiting their existing businesses, but also by trying to explore new opportunities and ways of doing business. Companies will have better performance if they are able to balance exploration and exploitation (Hughes, 2018; Hughes et al., 2017).

For SMEs with limited resources, demands for exploration and exploitation are difficult (Hughes et al., 2017). To overcome the lack of internal resources and capabilities, SMEs need to collaborate with external parties and form

social networks to get additional resources (Majid et al., 2020; Tehseen & Sajilan, 2016). Ioanid et al. (2018) stated that social networks can improve the performance of SMEs because social networks can provide opportunities for SMEs to gain new customers, new resources, and new market opportunities.

Resources that SMEs get from external partners can be the same resources as those owned by SMEs, and they can also be new resources for SMEs (Indarti & Postma, 2013). When partners in social networks provide the same resources as the resources that SMEs currently have, it will increase the exploitation capabilities of today's businesses (Indarti & Postma, 2013; Zhang et al., 2018). On the other hand, when partners in social networks provide new resources, it will increase the ability of SMEs to explore new things, thereby increasing innovation (Indarti & Postma, 2013; Soto-Acosta et al., 2018). To increase the ability to explore new things, not just exploit a business that currently exists, SMEs need to determine external partners to work with (Indarti & Postma, 2013; Wu & Wu, 2016).

The literature on a social networking perspective focuses more on large companies. However, Bengtsson & Johansson (2014) and Gnyawali (2016) argue that the need for social networks is greater in the context of SMEs. SMEs can create value and strengthen their position of power through collaboration (Gnyawali & Park, 2009, 2011). Further, partners in social networks can help SMEs to access, obtain, and increase important resources for innovation (Ahuja, 2000). Therefore, this article discusses the characteristics of social networks that can influence the exploration and exploitation competences of SMEs.

### **1.1 Objectives**

This research is expected to have a theoretical or conceptual contribution, namely being able to provide an understanding of the integration between a resource-based perspective (RBV), and social networking theory to address resource problems in SMEs in the application of exploration and exploitation (Hughes, 2018; Russo & Vurro, 2010). The resource-based perspective can only explain internal resources that can improve company performance, but is not able to explain how to overcome resource shortages (Lavie, 2006). SMEs need to strengthen internal resources through collaboration with external parties by creating social networks (Ahuja, 2000). Through social networks, resources can be mobilized and acquired to achieve the goals of network members (Burt, 1992; Coleman, 1988; Granovetter, 2005; Williams & Durrance, 2008).

## **2. Theoretical Background**

In SMEs, often due to limited resources, there are difficulties in carrying out exploration and exploitation optimally. SMEs are often more prone to exploitation than exploration (Hughes et al., 2017). This happens because SMEs are mostly family companies, so they have limited capabilities (Bengtsson & Johansson, 2014; Carney, 2005; Hughes et al., 2017). To discuss the problems faced by SMEs regarding resource limitations, especially to improve their exploration capabilities, this article will first analyze the meaning of exploration and exploitation and the underlying theory.

There are several definitions of exploration and exploitation based on various literatures. Table 1 is a summary of the various definitions of exploration and exploitation and the underlying theory. Some literatures define exploration as research capabilities, discovery of new things, taking risks, flexibility, discovery, capabilities to make radical innovations, uncertainty in terms of results, and the search for new technologies. Exploitation is product improvement capabilities, production, efficiency, implementation, improvement of existing competencies, incremental innovation, predictable and positive results, improvements to existing technology (Benner & Tushman, 2015; Gnyawali et al., 2016; March, 1991). Another literature defines exploration as learning obtained through the experimental process and studying the various variations that arise. Exploitation as lessons learned by companies through experiences, improvements that have been made, and selecting routines that currently exist (Baum et al., 2000).

Table 1. Exploration/Exploitation Definition and the Underlying Theory

Author	Exploration	Exploitation	Theory
(Benner & Tushman, 2015; Gnyawali et al., 2016; March, 1991)	Taking risks, research capabilities, discovery of new things, flexibility, discovery, capabilities to make radical innovations, uncertainty in terms of results, and the search for new technologies.	Product improvement capabilities, production, efficiency, implementation, improvement of existing competencies, incremental innovation, predictable and positive results, and improvements to existing technology.	Resource Based View.
(Baum et al., 2000)	Learning obtained through the experimental process and studying the various variations that arise.	Lessons obtained through experiences, improvements that have been made, and selecting routines that currently exist.	Resource Based View and Knowledge Based View.
(Bengtsson & Johansson, 2014; Vermeulen & Barkema, 2001)	Capability to seek new knowledge.	Capability to use existing knowledge.	Resource Based View
(He & Wong, 2004; Voss & Voss, 2013)	Company strategy that emphasizes the development of new products, technology, and product capabilities, to attract new customers and enter new markets.	Company strategy that emphasizes increasing income from existing product capabilities, and marketing programs designed to increase purchases from existing customers and existing market.	Resource Based View.
(Beckman et al., 2004; Granovetter, 1985, 2005; Hoffmann, 2007; Indarti & Postma, 2013; Shiri et al., 2015; Stadler et al., 2014; Sun & Lo, 2014; Wilden et al., 2018)	Build relationships with new partners.	Increase the strength of relationships with existing partners.	Resource Based View and Social Network Theory.

There is also literature that defines exploration as capability to seek new knowledge, while exploitation as capability to use existing knowledge (Bengtsson & Johansson, 2014; Vermeulen & Barkema, 2001; Wilden et al., 2018). He & Wong (2004) and Voss & Voss (2013) define exploitation as company strategy that emphasizes the development of new products, technology, product capabilities, and strategies to attract new customers and enter new markets. Exploitation as company strategy that emphasizes increasing income from existing product capabilities, emphasizing marketing programs designed to increase purchases from existing customers. Only a small amount of the literature discusses exploration and exploitation as having relationships with partners in social networks. Exploration is the act of an organization adding new partners and relationships to its network, while exploitation is the act of strengthening the relationships with existing partners (Beckman et al., 2004; Granovetter, 1977; Hoffmann, 2007; Indarti & Postma, 2013; Lavie et al., 2011; Lavie & Rosenkopf, 2006; Shiri et al., 2015; Stadler et al., 2014; Sun & Lo, 2014; Wilden et al., 2018).

The concept of exploration and exploitation in SMEs is widely discussed in a resource-based perspective (Rivkin & Siggelkow, 2003). This causes SMEs to only focus on their internal resources and capabilities, they become closed-off, and emphasize competition rather than cooperation (Lavie & Rosenkopf, 2006). When SMEs only rely on their

internal resources, shut themselves off, and emphasize competition more than cooperation with other parties, the implementation of exploration and exploitation will be constrained by resource problems (Lavie, 2006). This suggests that SMEs can not only conserve internal resources for SMEs, but need to seek external resources (Hoffmann, 2007; Indarti & Postma, 2013). One way to establish good relations with external parties is by creating social networks with the external parties so that they can access and obtain resources from each other (Ahuja, 2000; Hilman et al., 2009; Sherer & Lee, 2002; Tehseen & Sajilan, 2016).

### 2.1 Integration of Resource-Based Perspective (RBV) and Social Networks

The concept of exploration and exploitation competence in SMEs is widely discussed in a resource-based perspective that emphasizes the company's internal resources and capabilities (Rivkin & Siggelkow, 2003). Broadly speaking, the resource-based perspective states that the source of a company's sustainable competitive advantage is a resource that is valuable, scarce, cannot be replicated, has no substitute, is heterogeneous, and immobile (Barney, 1991; Warnerfelt, 1984).

The resource-based perspective causes SMEs to only focus on internal resources and capabilities, is closed, and emphasizes competition rather than cooperation (Lavie & Rosenkopf, 2006). The possession of this bundle of resources and capabilities enables the firm to gain competitive advantage (Agyapong et al, 2018). The resources referred to include all assets, capabilities, organizational processes, company characteristics, information, knowledge, and other resources (Barney, 1991; Warnerfelt, 1984). If exploration and exploitation in SMEs is discussed only using a resource-based perspective, it will cause a problem of lack of resources to carry out (Lavie, 2006). Therefore, SMEs need a perspective that can overcome the shortage of internal resources. In this study, a social networking perspective was used. Table 2 shows the comparison of the RBV and social networking perspectives.

From Table 2, it can be seen that organizational success according to RBV is based on the internal resources of the company (Barney, 1991; Warnerfelt, 1984). From the RBV perspective, resources are used by the organization to gain competitive advantage that enable the organization to improve performance (Agyapong et al., 2018). Social network perspective have different measurement of success. Success in social network perspective is measured based on the relationships that companies can make and the knowledge that companies can get from networks (Coleman, 1988; Datta, 2001; Granovetter, 2005; Tichy et al., 1979). RBV is a company perspective that focuses on internal conditions to face competition from external parties. The social perspective of the network uses a different focus, namely emphasizing relationships and cooperation with external parties, forming networks to obtain additional resources so that they can perform better (Granovetter, 2005; Indarti & Postma, 2013; Rogan & Mors, 2015).

Table 2. Comparison of Resource-Based Perspectives (RBV) and Social Networks

Indicator	Perspective	
	Resource-Based View (Barney, 1991; Warnerfelt, 1984)	Social Network (Coleman, 1988; Datta, 2001; Granovetter, 2005; Tichy et al., 1979)
Organizational Success	Organization has a resource that is valuable, rare, cannot be imitated, and there is no substitute for it.	The organization gains a competitive advantage through relational rent.
Measure of Success	Resources are valuable, scarce, cannot be replicated, and have no substitute for it.	The number of partners, the number of close relationships with partners, and the knowledge gained in the network.
Characteristics of Decision Making	The organization determines the strategy it will carry out in accordance with the internal resources and capabilities of the organization.	The organization identifies local and global patterns, looks for influential partners, on the continuity of the organization and examines the dynamics of the network.
Unit of Analysis	Organization (unit)	Organization (unit)

The integration of RBV and Social Network will make SMEs not only focus on internal resources, but also seek external resources through building networks with other parties (Burvill et al., 2018). Figure 1 shows the integration of the RBV and social networking perspectives. The network provides various types of resource inputs that

compensate for a firm's lack of strength in particular areas (Ioanid et al., 2018). Networking thus enables SMEs to use external resources and implement strategies that cannot be done if only relying on internal resources (Agyapong et al., 2018; Burvill et al., 2018).

During the COVID-19 pandemic, cooperation with other parties is urgently needed by SMEs (Kuckertz et al., 2020). The combination of internal resources with external resources obtained from the network will be able to increase the exploration and exploitation of SMEs. When the ability of exploration and exploitation increases, performance will increase. SMEs will be able to innovate to face changes at this time and at the same time improve the business they own (Wilden et al., 2018).

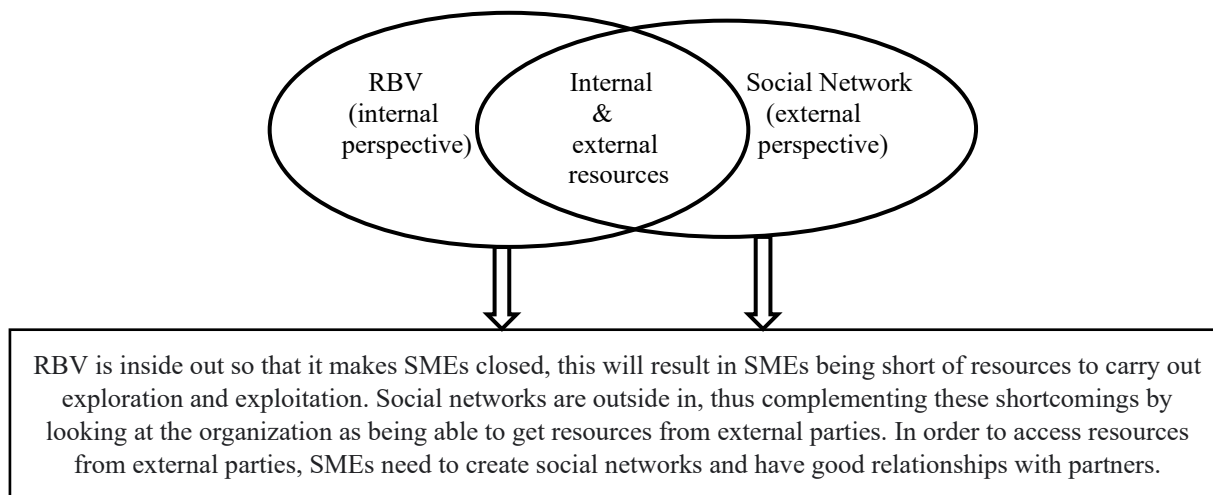


Figure 1. Integration of Resource-Based Perspectives (RBV) and Social Networks

### 3. Research and Methodology

A theoretical approach is used for designing the conceptual model based on the currently available literature. There are several stages of a literature review (Tranfield et al., 2003). The first stage of the research methodology is formulating the problem statement of the research. Based on previous research, it is known that the limited resources and capacity of SMEs are obstacles to carrying out exploration and exploitation (Carney, 2005; Hughes et al., 2017). This study synthesizes the literature in order to obtain a resource and capacity to implement on exploration and exploitation competences in SMEs. The second stage is conducting an article review. This stage involved identifying, selecting, evaluating, and synthesizing pre-existing research. A literature study was conducted by collecting several studies that have studied the social network and SMEs performance. The third stage is mapping and making reports on the results and themes of journal articles to propose a research model.

### 4. Finding and Result

In this paper, another perspectives was discussed, that was a social network theory (Bengtsson & Johansson, 2014; Burt, 1992; Datta, 2001) to complement the RBV perspective when to implement exploration and exploitation in SMEs. This is necessary so that SMEs not only focus on their internal resources and capabilities but can also access and obtain resources from partners in their social networks (Ahuja, 2000; Pfeffer & Salancik, 2003; Tehseen & Sajilan, 2016; Voss & Voss, 2013). Two configurations in social networks, namely diversity and tie intensity (Borgatti & Halgin, 2011; Hoffmann, 2007; Indarti & Postma, 2013; Rothaermel & Deeds, 2004) can provide a flow of resources for SMEs, thereby increasing their ability to implement exploration and exploitation (Expósito-Langa & Molina-Morales, 2010; Indarti & Postma, 2013; Tuli et al., 2010).

### 5. Model and Proposition

Cooperation between organizations is needed when facing a dynamic environment. Currently, the COVID-19 pandemic has caused major changes in the environment, so that SMEs cannot rely solely on their internal resources

to deal with it. (Hillman et al., 2009; Papadopoulos et al., 2020). SMEs face the demands for innovation and at the same time continue to develop existing businesses (Lu et al., 2020; Papadopoulos et al., 2020). In order for SMEs to be explorative and exploitative, SMEs need to collaborate well with external parties in order to access and obtain external resources (Hillman et al., 2009; Tehseen & Sajilan, 2016). These allow SMEs to forge long-term good relationships with external parties (Mehdikhani & Valmohammadi, 2019). This can occur if SMEs form social networks and have access to partner resources in a network (Gnyawali & Park, 2009, 2011).

A social network is a series of social relationships between individuals or groups in the network (Borgatti & Halgin, 2011; Granovetter, 1983; Sun & Lo, 2014). Social networks allow the exchange and flow of resources between members in the network, with the aim of increasing performance (Expósito-Langa & Molina-Morales, 2010; Sun & Lo, 2014). Yli-teno et al. (2001) argues that companies can use their social networks to acquire and exploit knowledge, determined by their partners and social interactions. Through social interaction, companies can increase tangible and intangible resources (Borgatti & Halgin, 2011).

In the social network there are two components namely diversity and ties intensity (Borgatti & Halgin, 2011; Hoffmann, 2007; Indarti & Postma, 2013; Rothaermel & Deeds, 2004). Diversity shows the variety of external parties involved in interactions with the company. The diversity also shows the company's interactions with external parties with different core businesses or geographies (Shiri et al., 2015). In addition, the diversity also shows important information and knowledge for the company that is obtained from external parties (Indarti & Postma, 2013). The second component, ties intensity shows the amount of interaction time (frequency), emotional intensity or level of closeness of the relationship, and a mutually beneficial relationship (Expósito-Langa & Molina-Morales, 2010; Granovetter, 1977; Indarti & Postma, 2013). Figure 2 shows the research model and propositions.

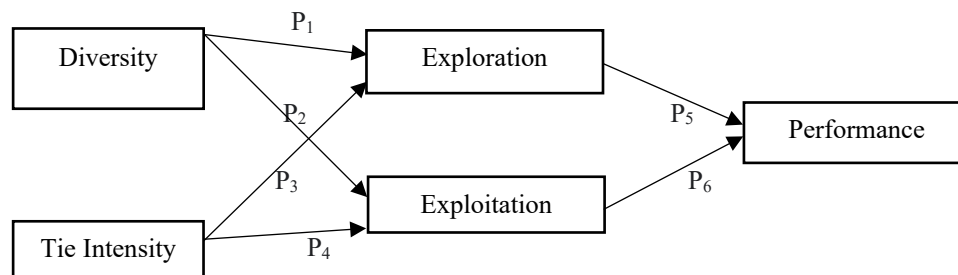


Figure 2. Research Model

## 5.1 Diversity

Diversity of ties indicates the company's relationship with outsiders that can provide resources that are not redundant (Parida *et al.*, 2015). De Leeuw (2013) and Shiri *et al.* (2015) states that the diversity of ties shows the company's ties with heterogeneous partners. Heterogeneous partners can contribute to providing various resources, information, and knowledge for SMEs (Datta, 2001; Indarti & Postma, 2013; Rogan & Mors, 2015; Shiri et al., 2015). There are various external parties that can make ties with SMEs, namely competitors, suppliers, consumers, consultants, business associations, religious associations, universities, and government agencies (De Leeuw et al., 2013; Indarti & Postma, 2013; Van Beers & Zand, 2013).

The higher the diversity of ties with external partners owned by SMEs, the more diverse knowledge and information that SMEs can obtain (Expósito-Langa & Molina-Morales, 2010; Indarti & Postma, 2013; Shiri et al., 2015). Diverse knowledge and resources allow companies to explore, namely creating new combinations of technology, producing new experiments, inventions, and product variations (Lazer & Friedman, 2007; McEvily & Zaheer, 1999; Rodan & Galunic, 2004; Shiri et al., 2015; Wang & Rafiq, 2014). Conversely, ties with partners that are not too diverse will make the company exploit, namely strengthening and expanding existing knowledge and information, increasing efficiency, increasing production, and improving current products (March, 1991; Rodan & Galunic, 2004; Rogan & Mors, 2015). Based on the previous literature, this paper formulated the following propositions:

P<sub>1</sub>: Partner diversity has a positive effect on exploration.

P<sub>2</sub>: Partner diversity has a negative effect on exploitation.

## 5.2 Tie intensity

Tie intensity indicates the amount of interaction time (frequency), intensity of emotions, intimacy of relationships, and relationships that are mutually beneficial (Expósito-Langa & Molina-Morales, 2010; Kamboj et al., 2017; Rowley et al., 2000). The more interaction time between partners, the more possibilities for sharing and accessing knowledge from other parties (Granovetter, 1977, 1983; Indarti & Postma, 2013; Molina-Morales & Martínez-Fernández, 2010). As the ties become more intensive, the quality of knowledge exchange increases, so they become stronger ties (Granovetter, 1983, 2005). SMEs can form ties with various partners, namely ties to competitors, suppliers, consumers, consultants, business associations, religious associations, universities, and government agencies (De Leeuw et al., 2013; Indarti & Postma, 2013; Liu et al., 2011; Van Beers & Zand, 2013).

Strong ties between individuals facilitate the flow of information and knowledge, but will lead to redundant information and knowledge (Gedajlovic et al., 2013; Ibidunni et al., 2020). This will increase the accumulation of existing knowledge or lead to exploitation of existing knowledge and information. Conversely, a weak ties will provide more diverse information, giving rise to exploration for the discovery of new ideas (Granovetter, 1985, 2005). The weaker the relationship between SMEs and partners, the greater the opportunities for exploratory learning and acquiring new knowledge (Burt, 1992; Gedajlovic et al., 2013). Based on the previous literature, this paper formulated the following propositions:

P<sub>3</sub>: Tie Intensity has a negative effect on exploration.

P<sub>4</sub>: Tie Intensity has a positive effect on exploitation.

## 5.3 Exploration and Exploitation

March (1991) and Wilden (2018) argued that exploitation without exploration causes SMEs to be unable to respond to changing demand and fail to recognize product and process improvements that are needed. On the other hand, SMEs that focus too much on exploration will face high costs, risk of failure, and reduced profits from exploiting the products they currently have (Lavie et al., 2011; Lavie & Rosenkopf, 2006; Wilden et al., 2018).

Therefore, SMEs need to reduce excessive dependence on exploration or exploitation alone (Lavie & Rosenkopf, 2006). The company's performance will increase, when SMEs are able to explore and exploit existing businesses (Lavie, 2006; Lavie & Rosenkopf, 2006). Exploitation will strengthen existing businesses, while exploration will enable SMEs to undertake new opportunities in business (Lavie, 2006; Lavie et al., 2011; Wilden et al., 2018). Based on the previous literature, this paper formulated the following propositions:

P<sub>5</sub>: Exploration has a positive effect on performance.

P<sub>6</sub>: Exploitation has a positive effect on performance.

## 6. Conclusion

The current situation of the COVID-19 pandemic has resulted in the demand for SMEs to be able to adapt to the new conditions, with limited resources (Papadopoulos et al., 2020). SMEs face the challenge of exploring new opportunities and while simultaneously exploiting their existing businesses in order to survive (Lu et al., 2020). This can be done if the owners or managers of SMEs view the organization as an open system and assumes that the external environment can provide the essential resources needed by the organization (Hilman et al., 2009; Pfeffer & Salancik, 2003; Tehseen & Sajilan, 2016; Zhang et al., 2018).

From the analysis of the literature, it is known that the implementation of exploration and exploitation by small and medium-sized enterprises cannot rely solely on their internal resources and the use of a resource-based view perspective alone. SMEs need to build social networks so that they get opportunities to access and obtain external resources from partners in their networks (Gnyawali et al., 2016; Gnyawali & Park, 2009, 2011). The support and cooperation of partners in the networks will be able to help the SMEs overcome the challenges and pressures created by the current pandemic (Kuckertz et al., 2020; Papadopoulos et al., 2020).

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## References

- Agyapong, A., Mensah, H. K., & Ayuuni, A. M., The Moderating Role of Social Network on The Relationship between Innovative Capability and Performance in The Hotel Industry, *International Journal of Emerging Markets*, vol. 13, no. 5, pp. 801–823, 2016.
- Ahuja, G., The Duality of Collaboration: Inducements and Opportunities in the Formation of Interfirm Linkages, *Strategic Management Journal*, vol. 21, pp. 317–343, 2000.
- Barney, J., Firm Resources and Sustained Competitive Advantage, *Journal of Management*, vol. 17, pp. 99–120, 1991.
- Baum, J. A. C., Li, S. X., & Usher, J. M., Making The Next Move: How Experiential and Vicarious Learning Shape the Locations of Chains' Acquisitions, *Administrative Science Quarterly*, vol. 45, pp. 766–801, 2000.
- Beckman, C. M., Philips, D. J., & Haunschild, P. R., Friends or Strangers? Firm-Specific Uncertainty, Market Uncertainty, and Network Partner Selection, *Organization Science*, vol. 15, pp. 259–275, 2004.
- Bengtsson, M., & Johansson, M., Managing Coopetition to Create Opportunities for Small Firms, *International Small Business Journal: Researching Entrepreneurship*, vol. 32, no. 4, pp. 401–427, 2014.
- Benner, M. J., & Tushman, M. L., Reflections on the 2013 Decade Award: Exploitation, Exploration, and Process Management: The Productivity Dilemma Revisited Ten Years Later, *Academy of Management Review*, pp. 1–36, 2015.
- Borgatti, S. P., & Halgin, D. S., On Network Theory, *Organization Science*, vol. 22, no. 5, pp. 1168–1181, 2011.
- Burt, R. S., *Structural Holes: The Social Structure of Competition*, Harvard University Press, 1992.
- Burvill, S. M., Jones-Evans, D., & Rowlands, H., Reconceptualising The Principles of Penrose's (1959) Theory and The Resource Based View of The Firm: The Generation of A New Conceptual Framework, *Journal of Small Business and Enterprise Development*, vol. 25, no. 6, pp. 930–959, 2018.
- Carney, M., Corporate Governance and Competitive Advantage in Family-Controlled Firms, *Entrepreneurship Theory and Practice*, vol. 29, pp. 249–265, 2005.
- Coleman, J. S., Social Capital in the Creation of Human Capital, *American Journal of Sociology*, 94 (Supplement), S95–S120, 1988.
- Datta, A., Review and Extension on Ambidexterity: A Theoretical Model Integrating Networks and Absorptive Capacity, *Journal of Management and Strategy*, vol. 2, no. 1, pp. 2–22, 2001.
- De Leeuw, T., Lokshin, B., & Duysters, G., Returns to Alliance Portfolio Diversity: The Relative Effects of Partner Diversity on Firm's Innovative Performance and Productivity, *Journal of Business Research*, vol. 67, no. 9, pp. 1839–1849, 2014.
- Expósito-Langa, M., & Molina-Morales, F. X., How Relational Dimensions Affect Knowledge Redundancy in Industrial Clusters, *European Planning Studies*, vol. 18, no. 12, pp. 1975–1992, 2010.
- Gedajlovic, E., Honig, B., Moore, C. B., Payne, G. T., & Wright, M., Social Capital and Entrepreneurship: A Schema and Research Agenda. *Entrepreneurship Theory and Practice*, vol. 37, no. 3, pp. 455–478, 2013.
- Gnyawali, D. R., Madhavan, R., He, J., & Bengtsson, M., The Competition–Cooperation Paradox in Inter-firm Relationships: A Conceptual Framework, *Industrial Marketing Management*, vol. 53, no. 7–18, 2016.
- Gnyawali, D. R., & Park, B. Y. R., Coopetition and Technological Innovation in Small and Medium Sized Enterprises: A Multilevel Conceptual Model, *Journal of Small Business Management*, vol. 47, no. 3, pp. 308–330, 2009.
- Gnyawali, D. R., & Park, B. Y. R., Coopetition between Giants: Collaboration with Competitors for Technological Innovation, *Research Policy*, vol. 40, pp. 650–663, 2011.
- Granovetter, M. S., The Strength of Weak Ties. In *Social Networks*, Elsevier, pp. 347–367, 1977.
- Granovetter, M. S., The Strength of Weak Ties: A Network Theory Revisited, *Sociological Theory*, vol. 1, pp. 201–233, 1983.
- Granovetter, M. S., Economic Action and Social Structure: The Problem of Embeddedness, *American Journal of Sociology*, vol. 91, no. 3, pp. 481–510, 1985.
- Granovetter, M. S., The Impact of Social Structure on Economic Outcomes, *Journal of Economic Perspectives*, vol. 19, no. 1, pp. 33–50, 2005.
- He, Z. L., & Wong, P. K., Exploration vs. Exploitation: An Empirical Test of the Ambidexterity Hypothesis, *Organization Science*, vol. 15, no. 4, pp. 481–494, 2004.
- Hillman, A. J., Withers, M. C., & Collins, B. J., Resource Dependence Theory: A Review, *Journal of Management*, vol. 35, no. 6, pp. 1404–1427, 2009.
- Hilman, A. J., Withers, M. C., & Collins, B. J., Resource Dependence Theory: A Review, *Journal of Management*, vol. 35, no. 6, pp. 1404–1427, 2009.
- Hoffmann, W. H., Strategies for Managing A Portfolio of Alliances, *Strategic Management Journal*, vol. 28, no. 8, pp. 827–856, 2007.



- Hughes, M., Organisational Ambidexterity and Firm Performance: Burning Research Questions for Marketing Scholars, *Journal of Marketing Management*, vol. 34, no. 1–2, pp. 178–229, 2018.
- Hughes, M., Filser, M., Harms, R., Kraus, S., Chang, M. L., & Cheng, C. F., Family Firm Configurations for High Performance: The Role of Entrepreneurship and Ambidexterity, *British Journal of Management*, vol. 29, no. 4, pp. 595–612, 2017.
- Ibidunni, A. S., Kolawole, A. I., Olokundun, M. A., & Ogbari, M. E., Knowledge Transfer and Innovation Performance of Small and Medium Enterprises (SMEs): An Informal Economy Analysis, *Heliyon*, vol. 6, no. 8, pp. 1–9, 2020.
- Indarti, N., & Postma, T., Effect of Networks on Product Innovation: Empirical Evidence from Indonesian SMEs, *Journal of Innovation Management*, vol. 1, pp. 140–158, 2013.
- Ioanid, A., Deselnicu, D. C., & Militaru, G., The Impact of Social Networks on SMEs' Innovation Potential, *Procedia Manufacturing*, vol. 22, pp. 936–941, 2018.
- Kamboj, S., Kumar, V., & Rahman, Z., Social Media Usage and Firm Performance: The Mediating Role of Social Capital, *Social Network Analysis and Mining*, vol. 7, no. 1, pp. 51, 2017.
- Kuckertz, A., Brçandle, L., Gaudig, A., Hinderer, S., Arturo Morales Reyes, C., Prochotta, A., Steinbrink, K. M., & Berger, E. S. C., Startups in Times of Crisis—A Rapid Response to the COVID-19 Pandemic, *Journal of Business Venturing Insights*, vol. 13, pp. 1–13, 2020.
- Lavie, D., The Competitive Advantage of Interconnected Firms: An Extension of the Resource-Based View, *The Academy of Management Review*, vol. 3, no. 13, pp. 638–658, 2006.
- Lavie, D., Kang, J., & Rosenkopf, L., Balance Within and Across Domains: The Performance Implications of Exploration and Exploitation in Alliances, *Organization Science*, vol. 22, no. 6, pp. 1517–1538, 2011.
- Lavie, D., & Rosenkopf, L., Balancing Exploration and Exploitation in Alliance Formation, *Academy of Management Journal*, vol. 49, no. 4, pp. 797–818, 2006.
- Lazer, D., & Friedman, A., The Network Structure of Exploration and Exploitation, *Administrative Science Quarterly*, vol. 52, pp. 667–694, 2007.
- Liu, X., Wang, J., & Ji, D., Network Characteristics, Absorptive Capacity and Technological Innovation Performance, *International Journal Technology, Policy and Management*, vol. 11, no. 2, pp. 97–116, 2011.
- Lu, Y., Wu, J., Peng, J., & Lu, L., The Perceived Impact of The Covid-19 Epidemic: Evidence From A Sample of 4807 SMEs in Sichuan Province, China, *Environmental Hazards*, vol. 19, no. 4, pp. 323–340, 2020.
- Majid, A., Yasir, M., & Yousaf, Z., Network Capability and Strategic Performance in SMEs: The Role of Strategic Flexibility and Organizational Ambidexterity, *Eurasian Business Review*, vol. 24, 2020.
- March, J. G., Exploration and Exploitation in Organizational Learning, *Organization Science*, vol. 2, no. 1, pp. 71–87, 1991.
- McEvily, B., & Zaheer, A., Bridging Ties: A Source of Firm Heterogeneity in Competitive Capabilities, *Strategic Management Journal*, vol. 20, no. 12, pp. 1133–1156, 1999.
- Mehdikhani, R., & Valmohammadi, C., Strategic Collaboration and Sustainable Supply Chain Management: The Mediating Role of Internal and External Knowledge Sharing, *Journal of Enterprise Information Management*, vol. 32, no. 5, pp. 778–806, 2019.
- Molina-Morales, F. X., & Martínez-Fernández, M. T., Social Networks: Effects of Social Capital on Firm Innovation, *Journal of Small Business Management*, vol. 48, no. 2, pp. 258–279, 2010.
- Papadopoulos, T., Baltas, K. N., & Balta, M. E., The Use of Digital Technologies by Small and Medium Enterprises during COVID-19: Implications for Theory and Practice, *International Journal of Information Management*, vol. 55, pp. 1–4, 2020.
- Parida, V., Patel, P. C., Wincent, J., & Kohtamaki, M., Network Partner Diversity, Network Capability, and Sales Growth in Small Firms, *Journal of Business Research*, pp. 1–5, 2015.
- Pfeffer, J., & Salancik, G. R., *The External Control of Organizations: A Resource Dependence Perspective*, Stanford University Press, 2003.
- Rivkin, J. W., & Siggelkow, N., Balancing Search and Stability: Interdependencies among Elements of Organizational Design, *Management Science*, vol. 49, no. 3, pp. 290–311, 2003.
- Rodan, S., & Galunic, C., More Than Network Structure: How Knowledge Heterogeneity Influences Managerial Performance and Innovativeness, *Strategic Management Journal*, vol. 25, no. 6, pp. 541–562, 2004.
- Rogan, M., & Mors, M. L., A., Network Perspective on Individual-Level Ambidexterity in Organizations, *Organization Science*, vol. 25, no. 6, pp. 1860–1877, 2015.
- Rothaermel, F. T., & Deeds, D. L., Exploration and exploitation Alliances in Biotechnology: A System of New Product Development, *Strategic Management Journal*, vol. 25, no. 3, pp. 201–221, 2004.

- Rowley, T., Behrens, D., & Krackhardt, D., Redundant Governance Structures: An Analysis of Structural And Relational Embeddedness in The Steel and Semiconductor Industries, *Strategic Management Journal*, vol. 21, pp. 369–386, 2000.
- Russo, A., & Vurro, C., Cross-Boundary Ambidexterity: Balancing Exploration and Exploitation in The Fuel Cell Industry, *European Management Review*, vol. 7, pp. 30–45, 2010.
- Sherer, P. D., & Lee, K., Institutional Change in Large Law Firms: A Resource Dependency and Institutional Perspective, *Academy of Management Journal*, vol. 45, no. 1, pp. 102–119, 2002.
- Shiri, G., Sauvée, L., & Abdirahman, Z. Z., Bridge and Redundant Ties in Networks: The impact on Innovation in Food SMEs, *European Journal of Innovation Management*, vol. 18, no. 3, pp. 355–379, 2015.
- Soto-Acosta, P., Popa, S., & Martinez-Conesa, I., *Information Technology, Knowledge Management and Environmental Dynamism as Drivers of Innovation Ambidexterity: A Study in SMEs*, pp. 1367-3270, 2018.
- Stadler, C., Rajwani, T., & Karaba, F., Solutions to the Exploration/Exploitation Dilemma: Networks as a New Level of Analysis: Exploration/Exploitation Dilemma, *International Journal of Management Reviews*, vol. 16, no. 2, pp. 172–193, 2014.
- Sun, B., & Lo, Y. J., Achieving Alliance Ambidexterity Through Managing Paradoxes of Cooperation: A New Theoretical Framework, *European Journal of Innovation Management*, vol. 17, no. 2, pp. 144–165, 2014.
- Tehseen, S., & Sajilan, S., Network Competence Based on Resource-Based View and Resource Dependence Theory, *Int. J. Trade and Global Markets*, vol. 9, no. 1, pp. 60-82, 2016.
- Tichy, N. M., Tushman, M. L., & Fobrun, C., Social Network Analysis for Organizations, *Academy of Management Review*, vol. 4, no. 4, pp. 507–519, 1979.
- Tranfield, D., Denyer, D., & Smart, P., Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review, *British Journal of Management*, vol. 14, pp. 207–222, 2003.
- Tuli, K. L., Bharadwaj, S. G., & Kohli, A. K., Ties That Bind: The Impact of Multiple Types of Ties with a Customer on Sales Growth and Sales Volatility, *Journal of Marketing Research*, XLVII, pp. 36–50, 2010.
- Van Beers, C., & Zand, F., R&D Cooperation, Partner Diversity, and Innovation Performance: An Empirical Analysis, *Journal of Production and Innovation Management*, vol. 31, no. 2, pp. 292–312, 2013.
- Vermeulen, F., & Barkema, H., Learning Through Acquisitions, *Academy of Management Journal*, vol. 44, pp. 457–478, 2001.
- Voss, G. B., & Voss, Z. G., Strategic Ambidexterity in Small and Medium-Sized Enterprises: Implementing Exploration and Exploitation in Product and Market Domains, *Organization Science*, vol. 24, no. 5, pp. 1459–1477, 2013.
- Wang, C. L., & Rafig, L., Ambidextrous Organizational Culture, Contextual Ambidexterity and New Product Innovation: A Comparative Study of UK and Chinese High-tech Firms, *British Journal of Management*, vol. 25, pp. 58–76, 2014.
- Warnerfelt, B., A Resource-based View of the Firm, *Strategic Management Journal*, vol. 5, pp. 171–180, 1984.
- Wilden, R., Hohberger, J., Devinney, T. M., & Lavie, D., Revisiting James March (1991): Whither Exploration and Exploitation? *Strategic Organization*, pp. 1–18, 2018.
- Williams, K., & Durrance, J. C., Social Networks and Social Capital: Rethinking Theory in Community Informatics. *Journal of Community Informatics*, pp. 1–31, 2008.
- Wu, Y., & Wu, S., Managing Ambidexterity in Creative Industries: A Survey, *Journal of Business Research*, vol. 69 no. 7, pp. 2388–2396, 2016.
- Yli-Renko, H., Autio, E., & Sapienza, J. H., Social Capital, Knowledge Acquisition, and Knowledge Exploitation in Young Technology-Based Firms, *Strategic Management Journal*, vol. 22, no. 6–7, pp. 587–613, 2001.
- Zhang, L., Wang, Y., & Wei, Z., How Do Managerial Ties Leverage Innovation Ambidexterity for Firm Growth? *Emerging Markets Finance & Trade*, pp. 1–13, 2018.

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