The Moderating Role of Trust in Managers Between Strategic Innovation and Firm Performance

Bulent Akkaya and Simona-Andreea Apostu

Abstract The objective of this research is to emphasize the importance of trust in managers in moderating the relationship between strategic innovation and firm performance in Turkish service firms. The data was gathered at random from 340 employees. Structural Equation Modeling (SEM) was used to examine the data, which was done with the AMOS SPSS program. According to the study findings, there is a considerable association between trust in managers and firm performance, as well as strategic innovation and firm performance. The study also discovered that trust in managers acts as a moderator between strategic innovation and firm performance. This study adds to the advancement of scientific research, notably in terms of testing the model's content, as well as the variables and factors influencing them. Furthermore, this study demonstrated the need for firms to practice trust in management and strategic innovation in order to increase company performance. Strategic innovation and trust in managers are crucial to improving company performance, and high levels of strategic innovation may lead to higher firm performance, since service companies' trust in managers is frequently more directly related to firm success. Additionally, managers should account for manager trust when examining the link between strategic innovation and firm performance.

Keywords Trust in managers · Strategic innovation · Firm performance · Partial least squares structural equation model

B. Akkaya
Manisa Celal Bayar University, Manisa, Turkey

S.-A. Apostu (✉)
Bucharest University of Economic Studies and Institute of National Economy, Bucharest, Romania
e-mail: simona.apostu@csie.ase.ro

A. M. Dima and E. R. Danescu (eds.), *Fostering Recovery Through Metaverse Business Modelling*, Springer Proceedings in Business and Economics,
https://doi.org/10.1007/978-3-031-28255-3_18

1 Introduction

In today's globalized world, the requirement of customers' expectations in a hyper dynamic market is increasingly important. Thus, business organizations are subject to fierce competition (Lee et al. 2015); the solution is to meet these expectations by having a competitive advantage from the organizations (Gallego-Alvarez et al. 2011) that can be achieved through innovation (Serrano-Bedia et al. 2012). Thus, innovation represents a critical issue in business organizations, being one of the most important factors of survival and success (Nonaka and Takeuchi 1995).

Innovation increases the financial performance of organizations (Adams-Price 1994), a crucial role being established by trust in the organization and its management. The organizational trust is strengthened by empowerment (Brunetto and Farr-Wharton 2007), which is an important parameter of innovation (Golipour et al. 2011). In this context, trust can be perceived as a mediator between empowerment and organizational performance (Berraies et al. 2014).

Therefore, strategic innovation and trust in managers are crucial to improve company performance, high levels of strategic innovation leading to higher firm performance. Since service companies' trust in managers is frequently more directly related to firm success, this study aims to investigate if the trust in managers has a crucial role in the relationship between strategic innovation and firm performance, being worthy of consideration by scholars and policy makers. Thus, this study demonstrated the need of firms practicing trust in management and strategic innovation to increase company performance. There is much research on innovation and firm performance in the literature. However, limited investigation was applied on the role of trust in managers, strategic innovation, and firm performance. Therefore, the aim of the current study is to determine the impact of both strategic innovation and trust in manager on firm performance, the scope of the research being to establish the moderating role of trust in managers on the relationship between strategic innovation and firm performance.

The rest of the paper is organized as follows: Sect. 2 presents the problem statement in light of the most important papers in the field, and Sect. 3 introduces the research questions and the aims of the research. Section 4 presents data and research method, and Sect. 5 presents the main findings. Concluding observations and discussions are provided in the last part of the paper.

2 Problem Statement

In order to achieve economic growth, a key factor is represented by innovation, a basis of economic development (Prifti and Alimehmeti 2017). Innovation impacts growth and business development and ensures competitiveness within the marketplace (Bigliardi et al. 2020).

According to the definition provided by the OECD and Eurostat (2005), innovation represents implementing something new, such as an improved organizational product, process, or marketing technique. Hurley and Hult (1998) defined innovation as a characteristic of a firm's culture and openness to new ideas. Innovation originates from developing marketable products through invention, generating business performance targets (Aboulnasr et al. 2008).

According to Kazuyuki (2016), innovation is positively correlated with firm performance, being an ongoing research theme in the literature (Vaccaro et al. 2010). Performance represents the ability of measuring organizational effectiveness, productivity, profitability, quality, continuous improvement, work quality, and social responsibility (Al Naqbia et al. 2020).

Market orientation and organizational performance are linked to innovation (Han et al. 1998). Firm performance is difficult to measure. Two significant determinates of firm performance are market power and industry structure (Dubey et al. 2012).

Managerial strategic innovation is important for firm performance (Zhou et al. 2005). For this, organizations have to adapt (Mahoney 2005) and create value (Zahra et al. 2006). Innovation leadership demonstrates trust in organizational members, a strategic fit that mediates the relationship between innovation and firm performance (Carmeli et al. 2010).

Trust represents the key to manage complexity (Luhmann 1979). It reflects the confidence between two parts without exploiting the other's vulnerability (Sabel 1993), for benefits from interactions with others (Koohang et al. 2017). Trust promotes adaptive organizational forms, building social network relations, and reducing harmful conflict (Salam 2017). Trust significantly impacts the economies, facilitating the transactions between the society members (Pratono 2018). In order to interact and share knowledge, trust in management and among individuals is vital (Renzl 2008).

Trust in management leads to increasing organizational effectiveness (Dirks 2000) and organizational performance (Sharkie 2009). Trust in management was positively related to innovation behavior (Michaelis et al. 2009), trust being necessary in order to make outsourcing relationships work because the role of trust is important in the management of outsourcing relationships in perspective of Information Systems outsourcing (Hoecht and Trott 2006).

There is a gap regarding the connection between all three variables (firm performance, innovation, and trust). In this context, our study filled the gap by indicating the association between trust in managers and firm performance, as well as strategic innovation and firm performance, highlighting the role of trust. Thus, this study adds to the advancement of scientific research, notably in terms of testing the model's content, as well as the variables and factors influencing them. Furthermore, this study demonstrated the need of firms practicing trust in management and strategic innovation in order to increase company performance.

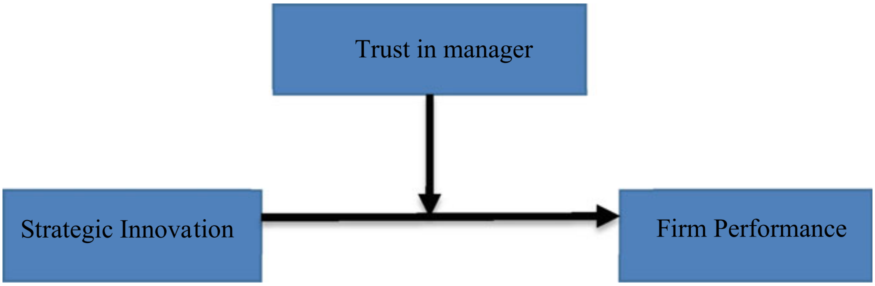

Fig. 1 Research model. *Source* Authors

3 Research Questions

As the above research obviously demonstrates, different researchers have reached different conclusions on the crucial element that influences company success and firm performance. However, there are few studies in the literature that examine the link between trust in managers, strategic innovation, and firm performance. In this context, this study seeks to connect the three variables by attempting to address the problem of whether trust in managers has a moderating role in the relationship between organizational innovativeness and firms perceived success and performance. As a result, we created the research model (Fig. 1) and developed three hypotheses listed below.

In this context, the hypotheses of the model are as follows:

H1: Strategic innovation has a statistical impact on firm performance in service companies.

H2: Trust in manager has a statistical impact on firm performance in service companies.

H3: Strategic innovation has a statistical impact on firm performance with moderating role trust in manager in service companies.

4 Data and Research Methods

4.1 Research Sample Selection and Data Collection

Simple random sampling was used to get data from 340 workers in service companies from January to April 2022. "The simple random sample means that every case of the population has an equal probability of inclusion in sample" (Taherdoost 2016, p. 21). The data was collected using three questionnaires. The first one was Strategic innovation developed by Wang and Ahmed (2004). The second one was Trust in manager developed by Mayer and Davis (1999). The last scale developed by Tseng and Lee (2014) measures a firm's perceived performance. All items are measured on a five-point Likert-type scale (1 = strongly disagree to 5 = strongly agree).

4.2 Descriptive and Frequency

In this study, the frequency analysis revealed that most of the respondents are male (69.4%). Most of the participants have a bachelor's degree (23.5%). A large sample works in marketing department (36.5%), in R&D (23.2%), accounting (14.1%), HRM (12.4%), while (13.8%) work as salesman out of their firms. The mean of participants' age is 35.10 ± 6.78, the youngest age being 22 while the eldest is 52. The mean of participants' working duration (year) is 10.44 ± 7.03, the minimum year being 1 while the maximum is 30.

4.3 Validity and Reliability

The Cronbach's alpha coefficient is used to test the internal consistency for all scales of the research and reliability. (Strategic innovation 0.713; Trust in managers 0.892 and Firm performance 0.973) All scales are in an acceptable range (0.70) (Hair et al. 2013). According to Bougie and Sekaran (2019) criteria, the mean value of strategic innovation (m = 3.582 ± 0,50) is in the category of medium, while trust in managers (m = 4.009 ± 0,98) and firm performance (m = 4.033 ± 0,95) have a high mean score.

4.4 Validity and Reliability

PLS-SEM analysis is imperative to check the severity of the data, but it is not strict to the data normality (Hair et al. 2013). However, we tested the normal distribution of the data. Hair et al. (2013) has recommended applying Skewness and Kurtosis tests to check the normal distribution in the research. Data is normally distributed providing values of skewness and kurtosis in the range of +2 and −2 (George and Mallery (2019). The data is normally distributed. Furthermore, Pearson's correlation was applied to test the correlation between variables. According to Table 1 the three variables present positive and significant correlations.

Table 1 Data distribution and correlation analysis

	N	Skewness		Kurtosis		Correlations		
	Statistic	Statistic	Std. Error	Statistic	Std. Error	1	2	3
Strategic innovation	340	−0.034	0.132	−0.154	0.264	1		
Trust in managers	340	−1.163	0.132	0.744	0.264	0.152**	1	
Firm performance	340	−1.408	0.132	1.576	0.264	0.158**	0.727**	1

** Correlation is significant at the 0.01 level (2-tailed)
Source Authors

5 Results Interpretation

PLS-SEM analysis of the relationship between independent variables and the dependent variables was applied to test and verify the research hypotheses by the AMOS program. The hypotheses tested the impact of both strategic innovation and trust in manager on firm performance and the moderating role of trust in the manager between strategic innovation and firm performance.

According to Table 2, the estimate value from strategic innovation to firm performance is 0.90 and p value is 0.001. This finding had a statistical significance (p value) of 0.001, indicating the acceptance of the H1.

This finding showed a positive and significant relationship between strategic innovation and firm performance. In other words, the probability of getting a critical ratio as large as 37.872 in absolute value is less than 0.001. Thus, the regression weight for Strategic Innovation in the prediction of Firm Performance is significantly different from zero at the 0.001 level (two-tailed).

According to Table 3, the estimate value from trust in manager to firm performance is 0.92 and p value is 0.001, the probability of getting a critical ratio as large as 41.800 in absolute value is less than 0.001. In other words, the regression weight for trust in the manager in the prediction of firm performance is significantly different from zero at the 0.001 level (two-tailed). This finding had a statistical significance (p value = 0.001) showing that H2 is accepted. This finding showed a positive and significant relationship between trust in the manager and firm performance (Table 4).

The probability of getting a critical ratio as large as 9.136 in absolute value is less than 0.001. In other words, the regression weight for Strategic Innovation in

Table 2 H1 hypothesis results

			Estimate	S.E.	C.R.	P	Label
Firm performance	<---	Strategic innovation	0.899	0.024	37.872	***	par_1

Source Authors

Table 3 H2 hypothesis results

			Estimate	S.E.	C.R.	P	Label
Firm performance	<---	Trust in manager	0.915	0.022	41.800	***	par_1

Source Authors

Table 4 Regression weights

			Estimate	S.E.	C.R.	P	Label
Firm performance	<---	Strategic innovation	0.268	0.029	9.136	***	par_2
Firm performance	<---	Trust in manager	0.407	0.026	15.627	***	par_3
Firm performance	<---	Interaction	0.348	0.033	10.602	***	par_4

Source Authors

the prediction of Firm Performance is significantly different from zero at the 0.001 level (two-tailed). The probability of getting a critical ratio as large as 15.627 in absolute value is less than 0.001. In other words, the regression weight for Trust in Manager in the prediction of Firm Performance is significantly different from zero at the 0.001 level (two-tailed). The probability of getting a critical ratio as large as 10.602 in absolute value is less than 0.001. In other words, the regression weight for Interaction in the prediction of Firm Performance is significantly different from zero at the 0.001 level (two-tailed). These results show that this model is statistically significant, which shows that H3 is accepted.

This study has investigated the role of trust in the manager as a moderator between strategic innovation and firm performance. Data analysis has concluded that trust in the manager significantly strengthens the relationship between strategic innovation and firm performance ($\beta = 0.348$, $p < 0.05$). Therefore, the moderating role of trust in the manager is confirmed. The results are shown in Table 5.

When Strategic Innovation goes up by 1 standard deviation, Firm Performance goes up by 0.268 standard deviations. When Trust in Manager goes up by 1 standard deviation, Firm Performance goes up by 0.407 standard deviations. When Interaction goes up by 1 standard deviation, Firm Performance goes up by 0.348 standard deviations.

Based on the data analysis, this study has also presented the graphical results of moderator-trust in manager (Fig. 2).

Table 5 Standardized regression weights: (group number 1—default model)

			Estimate
Firm performance	<---	Strategic innovation	0.268
Firm performance	<---	Trust in manager	0.407
Firm performance	<---	Interaction	0.348

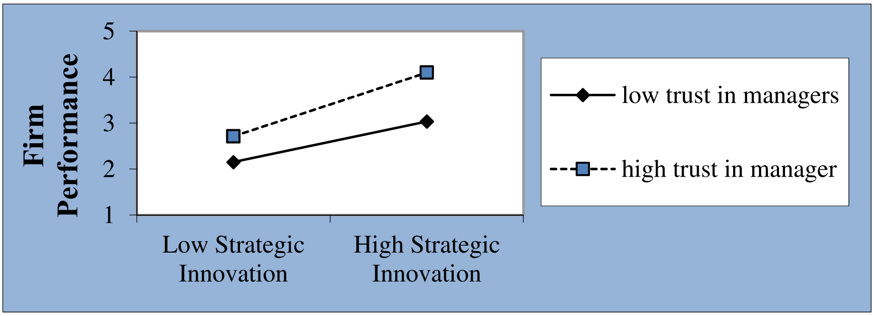

Fig. 2 Moderating role of Trust in manager. *Source* Authors projection

The graphical analysis shows that, in the presence of greater trust in the manager, strategic innovation amplifies its impact on the firm performance of service companies.

6 Discussion and Conclusions

We argue that the link between innovation and firm performance does not happen by accident and that it benefits from removing difficulties to collaboration among different departments of organizations (Garcia et al. 2008), in addition to establishing deep trust in employees and managers in their organization (Lewicki and Bunker 2006). Therefore, this study tested the moderating role of trust in manager between strategic innovation and firm performance of service companies in Turkey.

Our findings contribute to the scholarly discussion of internal relationships between employees and managers about the performance effects of innovation. Firms' innovation endeavors can be more successfully transformed into performance outcomes through a healthy interaction among company members to the extent that functional departments obtain more quality outcomes through management. This relationship is important in transforming new market growth prospects into organizational performance (Alegre and Chiva 2008). Furthermore, trust strengthens the good in managing between innovation and organizations' performance. When business managers have complete trust in one another's honesty and sincerity, they engage more in creative exchanges that will benefit the firm's innovative endeavors (Dayan et al. 2009).

Our results regarding organizational innovation and performance are similar to those of the existing literature, the relationship being positive and significant (Song et al. 2011; Al Naqbia et al. 2020). Regarding the impact of trust in managers, there are studies according to which organizational trust led to performance (Longwei et al. 2011; Cheng et al. 2014) and innovation (Ruppel and Harrington 2020; Wang et al. 2011; Cheng et al. 2014), but to our knowledge, there are no studies concerning the impact of trust on the relationship between organizational performance and innovation. So, our findings are valuable, both for academics, managers, and policy makers, highlighting the importance of confidence in management. There is also a need for managers and policy makers to train the workers on innovation strategies technologies and through trust in supervisors in service companies.

Despite the interest and importance of the research subject, the authors encountered some limitations. One of these limitations is represented by the lack of data; our topic being analyzed based on data availability, restricting the research sample to service companies limits the scope of the findings. Further research directions should include an examination of the relationship between organizational performance and innovation in different countries and departments, an in-depth examination of respondents' perceptions using also qualitative tools.

References

Aboulnasr, K., Narasimhan, O., Blair, E., Chandy, R.: Competitive response to radical product innovations. J. Mark. **72**, 94–110 (2008)

Adams-Price, C.: Can artificial intelligence explain age changes in literary creativity? Behav. Brain Sci. **17**(3), 532–532 (1994)

Al Naqbia, E., Alshuridehb, M., AlHamadc, A., Al, B.: The impact of innovation on firm performance: a systematic review. Int. J. Innov. Creat. Change **14**(5), 31–58 (2020)

Alegre, J., Chiva, R.: Assessing the impact of organizational learning capability on product innovation performance: an empirical test. Technovation **28**, 315–326 (2008)

Berraies, S., Chaher, M., Yahia, K.B.: Employee empowerment and its importance for trust, innovation and organizational performance. Bus. Manag. Strat. **5**(2), 82–103 (2014)

Bigliardi, B., Ferraro, G., Filippelli, S., Galati, F.: The influence of open innovation on firm performance. Int. J. Eng. Bus. Manag. **12**, 1847979020969545 (2020)

Bougie, R., Sekaran, U.: Research methods for business: a skill building approach. Wiley & Sons (2019)

Brunetto, Y., Farr-Wharton, R.: The moderating role of trust in SME owner/managers decision-making about collaboration. J. Small Bus. Manage. **45**(3), 362–387 (2007)

Carmeli, A., Gelbard, R., Gefen, D.: The importance of innovation leadership in cultivating strategic fit and enhancing firm performance. Leadersh. Q. **21**(3), 339–349 (2010)

Cheng, K.C., Chen, T.C., Shih, N.S.: The influence of budgetary participation by R&D managers on product innovation performances: the effect of trust, job satisfaction and information asymmetry. Asia Pac. Manag. Rev. **19**(2) (2014)

Dayan, M., Di Benedetto, C.A., Colak, M.: Managerial trust in new product development projects: its antecedents and consequences. R&D Manage. **39**(1), 21–37 (2009)

Dirks, K.: Trust in leadership and team performance: evidence from N.C.A.A. basketball. J. Appl. Psychol. **85**, 1004–1012 (2000)

Dubey, A.K., Dubey, A.K., Agarwal, V., Khandagre, Y.: Knowledge discovery with a subset-superset approach for Mining Heterogeneous Data with dynamic support. In: 2012 CSI Sixth International Conference on Software Engineering (CONSEG), pp. 1–6. IEEE (2012, September)

Gallego-Alvarez, I., Prado-Lorenzo, J.M., Garcıa-Sanchez, I.M.: Corporate social responsibility and innovation: a resource-based theory. Manag. Decis. **49**(10), 1709–1727 (2011)

Garcia, N., Sanzo, M.J., Trespalacios, J.A.: New product internal performance and market performance: evidence from Spanish firms regarding the role of trust, interfunctional integration, and innovation type. Technovation **28**, 713–725 (2008)

George, D., Mallery, P.: IBM SPSS statistics 26 step by step: a simple guide and reference. Routledge (2019)
Golipour, R., Gholamreza, J., Mirzaei, M.A., Roshandel, A.T.: The impact of organizational trust on innovativeness at the Tehran oil refinery company African. J. Bus. Manag. **5**(7), 2660–2667 (2011)
Hair, J.F., Ringle, C.M., Sarstedt, M.: Partial least squares structural equation modeling: rigorous applications, better results and higher acceptance. Long Range Plan. **46**(1–2), 1–12 (2013)
Han, J.K., Kim, N., Srivastava, R.K.: Market orientation and organizational performance: is innovation a missing link? J. Mark. **62**(4), 30–45 (1998)
Hoecht, A., Trott, P.: Innovation risks of strategic outsourcing. Technovation **26**(5–6), 672–681 (2006)
Hurley, R.F., Hult, G.T.M.: Innovation, market orientation, and organizational learning: an integration and empirical examination. J. Mark. **62**(3), 42–54 (1998)
Kazuyuki, M.: Innovation and entrepreneurship: a first look at the linkage data of Japanese patent and enterprise census. Seoul J. Eco. **29**(1), 69–94 (2016)
Koohang, A., Paliszkiewicz, J., Goluchowski, J.: The impact of leadership on trust, knowledge management, and organizational performance: a research model. Ind. Manag. Data Syst. **117**(3), 521–537 (2017)
Lee, D., Dedahanov, A., Rhee, J.: Moderating role of external networks and mediating effect of innovation performance on the relationship between technology orientation and firm performance. Asian J. Technol. Innov. **23**, 321–334 (2015)
Lewicki, R., Bunker, B.: Developing and maintaining trust in work relationships. Trust in organizations: frontiers of theory and research. In: Tyler, T., Kramer, R. (eds.) Thousand oaks. Sage, CA, pp. 114–139 (1996)
Longwei, W., Jeff, H.Y., Yeung, M.Z.: The impact of trust and contract on innovation performance: the moderating role of environmental uncertainty. Int. J. Prod. Econ. **134**(1), 114–122 (2011)
Luhmann, N.: Trust and power. Wiley, New York, NY (1979)
Mahoney, J.T.: Economic foundations of strategy. Sage, Thousand Oaks, CA (2005)
Mayer, R.C., Davis, J.H.: The effect of the performance appraisal system on trust for management: a field quasi-experiment. J. Appl. Psychol. **84**(1), 123–136 (1999)
Michaelis, B., Stegmaier, R., Sonntag, K.: Affective commitment to change and innovation implementation behavior: the role of charismatic leadership and employees' trust in top management. J. Chang. Manag. **9**(4), 399–417 (2009)
Nonaka, I., Takeuchi, H. (eds.): The knowledge-creating company. Oxford University Press, New York (1995)
OECD, Eurostat: Oslo manual: guidelines for collecting and interpreting innovation data. Paris, SP, p. 46 (2005)
Pratono, A.H.: From social network to firm performance: the mediating effect of trust, selling capability and pricing capability. Manag. Res. Rev. **41**(6), 680–700 (2018)
Prifti, R., Alimehmeti, G.: Market orientation, innovation, and firm performance–an analysis of Albanian firms. J. Innov. Entrep. **6**(1), 1–19 (2017)
Renzl, B.: Trust in management and knowledge sharing: mediating effects of fear and knowledge documentation. Omega **36**(22), 206–231 (2008)
Ruppel, C.P., Harrington, S.J.: The relationship of communication, ethical work climate, and trust to commitment and innovation. J. Bus. Ethics **25**(4), 313–328 (2000)
Sabel, C.F.: Studied trust: building new forms of cooperation in a volatile economy. Hum. Relat. **46**(9), 1133–1170 (1993)
Salam, M.A.: The mediating role of supply chain collaboration on the relationship between technology, trust and operational performance. Benchmarking Int. J. **24**(2), 298–317 (2017)
Serrano-Bedia, A.M., Lopez-Fernandez, M.C., Garcia-Piqueres, G.: Complementarity between innovation activities and innovation performance: evidence from Spanish innovative firms. J. Manuf. Technol. Manag. **23**(5), 557–577 (2012)

Sharkie, R.: Trust in leadership is vital for employee performance. Management Research News (2009)

Song, M., Im, S., Bij, H., Song, L.Z.: Does strategic planning enhance or impede innovation and firm performance? J. Prod. Innov. Manag. **28**, 503–520 (2011)

Taherdoost, H.: Sampling methods in research methodology; how to choose a sampling technique for research. How to choose a sampling technique for research (April 10, 2016)

Tseng, S.M., Lee, P.S.: The effect of knowledge management capability and dynamic capability on organizational performance. J. Enterp. Inf. Manag. **27**(2), 158–179 (2014)

Vaccaro, A., Parente, R., Veloso, F.M.: Knowledge management tools, inter-organizational relationships, innovation and firm performance. Technol. Forecast. Soc. Change **77**(7), 1076–1089 (2010)

Wang, C.L., Ahmed, P.K.: The development and validation of the organizational innovativeness construct using confirmatory factor analysis. Eur. J. Innov. Manag. **7**(4), 303–313 (2004)

Wang, L., Yeung, J.H.Y., Zhang, M.: The impact of trust and contract on innovation performance: the moderating role of environmental uncertainty. Int. J. Prod. Econ. **134**(1), 114–122 (2011)

Zahra, S.A., Sapienza, H.J., Davidsson, P.: Entrepreneurship and dynamic capabilities: a review, model and research agenda. J. Manage. Stud. **43**, 917–955 (2006)

Zhou, K.Z., Yim, C.K., Tse, D.K.: The effects of strategic orientations on technology- and market-based breakthrough innovations. J. Mark. **69**(2), 42–60 (2005)