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Entrepreneurial networks, entrepreneurial orientation, and performance of small and medium enterprises: are dynamic capabilities the missing link?

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Abstract

Performance of small and medium enterprises (SMEs) has been addressed widely in the literature. Both developed and developing countries are highly concerned about the growth and performance of SMEs. The literature exploring performance is abundant, however, has certain controversies. To identify the reasons behind those controversies, this study was conducted with the aim being to identify the mediating role of dynamic capabilities which are developed by entrepreneurial networks and entrepreneurial orientation. The study collected the data from a sample of SMEs based in Jordan which were connected through a closed network and were the part of groups. The data was collected via an electronic questionnaire, and100 SMEs were contacted and invited to participate in the survey on a purposive sampling basis. Structural equation modelling was applied to identify the direct impacts and the mediating impact. The findings identified that amongst the chosen firms, entrepreneurial networking has an insignificant impact; however, entrepreneurial orientation has shown a significant positive impact. Furthermore, the mediating role of dynamic capabilities was significant in both the relationships. The findings suggested that the sector should develop strong networks and should consider strategic alliances to gain competitive edge. Future researchers are guided to implement the same framework along with the dimensions of the variable.

Keywords: Performance, Entrepreneurial network, Entrepreneurial orientation, Dynamic capabilities

Introduction

Since the arrival of social media and online networking, the importance of entrepreneurial networking has significantly increased, and entrepreneurial networks have received increasing attention in the management research (Barroso-Méndez et al. 2015). In achieving better performance, entrepreneurial orientation and entrepreneurial networks are both considered to have a significant impact (Cho and Lee 2018). However, in the literature, several authors have tried to focus on understanding whether the

advantages of entrepreneurial networks outweigh the disadvantages from a theoretical perspective, yet the results are sometimes inconsistent (Barringer and Harrison 2000).

The literature on entrepreneurial networks from the perspective of resource dependency theory has also received increasing attention (Abu-Rumman 2018); however, the literature on entrepreneurial networks and the consequences of entrepreneurial networks is vague and diversified because of a lack of identification of their role. When it comes to firm performance, the findings are divergent and have certain inconsistencies (Watson 2007; Li et al. 2015; Jiang et al. 2018). When examining closed entrepreneurial networks, the literature shows even more diversified results. Closed entrepreneurial networks, commonly known as closed interorganizational relationships, involve the whole social interaction within the firm's network and includes diversity and strength of the network (Zaheer et al. 2017). Therefore, a closed network is one where every member of the SMEs in the group is connected to others in the network. Such forms of entrepreneurial networks are very controversial, because of having the capability of providing tacit knowledge, creative ideas, and new opportunities (Li et al. 2015), while containing restrictions in identifying and accessing new ideas due to myopia, inertia, and lock-in, which can cause significant effects on firm performance (Håkansson and Ford 2002). Therefore, the literature identifies pros and cons about closed entrepreneurial networks; however, the gap is there to resolve the divergent effects.

Entrepreneurial orientation can be observed in the processes of an organization and the organizational environment. Entrepreneurial orientation is considered as key to obtaining better performance. Entrepreneurial orientation helps firms to develop better solution through differentiation for enhancing adoption to the environmental complexities (Shah and Ahmad 2019). This, as a result, weakens the ability to compete in turbulent market environments.

Past literature on entrepreneurial networks, entrepreneurial orientation, and firm performance is very confusing as it shows positive, negative, insignificant, and U-inverted results (Vega-Vázquez et al. 2016; Yoon and Solomon 2017; Cho and Lee 2018; Masa'deh et al. 2018; Hernández-Linares et al. 2019; Shah and Ahmad 2019; Taheri et al. 2019). Several scholars have suggested conducting further research on the issue in order to identify the factors that cause these controversies in the findings.

It is argued that organizations require mechanisms to exploit the knowledge acquired through closed networks by utilizing entrepreneurial orientation for gaining high performance. Over the last two decades, the importance of dynamic capabilities has been continuously increasing (Bitencourt et al. 2020). Dynamic capabilities include the ability of the firm to integrate, build, and reconfigure internal and external competencies to meet the challenges associated with the dynamic environment (Wu et al. 2016). Therefore, it can be proposed that dynamic capabilities help firms to achieve strategic objectives which lead to increased competitive advantage. Thus, it is suggested that dynamic capabilities play a key role in bridging the link between entrepreneurial orientation and firm performance as well as closed entrepreneurial networks and firm performance.

Previous literature claims that strategic orientation is dependent on developed capabilities; however, at the same time, prior studies also claim that closed entrepreneurial networks link the firm with the environment and help them in the development of socially constructed capabilities. Therefore, entrepreneurial networks help in gaining external knowledge and transforming it into internal capabilities, which is essential for

the development of new products and services (Al-Abbadi et al. 2019). Thus, the argument that is built here is that entrepreneurial networks can become helpful in gaining high profits, if they can support the development of dynamic capabilities. Secondly, taking on board the suggestion of Jiang et al. (2018) to reconsider entrepreneurial orientation along with network resources, this study incorporates dynamic capabilities, exploring the missing link which causes ambiguities in relationships (Mikalef et al. 2019). Therefore, the main contribution of this study is to fill the gap in the literature by exploring the mediating role of dynamic capabilities between entrepreneurial orientation and performance. Furthermore, the research will also explore the mediating role of dynamic capabilities between entrepreneurial networks and performance. This paper is theoretically significant by combining the three theories of social capital, resource-based view, and dynamic capabilities. All the theories have been aggressively addressed in the literature separately. However, this study is going to combine the theories for analysing the combined effect on firm performance.

Literature review

Entrepreneurial orientation

Entrepreneurial orientation can be described as the processes, practices, and decision-making that lead to a firm to introduce new products, services, innovations, markets, or business models that were not already in existence (Covin et al. 2019). Research on entrepreneurial orientation is not new; however, several authors have identified the need for several moderating and mediating variables to be added along with entrepreneurial orientation for it to gain the optimal and positive impact. Entrepreneurial orientation is considered as a basis for gaining competitive advantage as it clarifies how firms can renovate their operations for new growth trajectories. Entrepreneurial orientation is the process through which owners take the decisions for disseminating the mission of the organization.

The term entrepreneurial orientation continues to grow with the passage of time, and new dimensions have continuously been added sequentially (Covin and Lumpkin 2011; Covin and Wales 2012; Luu and Ngo 2019). Innovativeness, which is the creative capability of the firm resulting to new product development, was followed with proactiveness which involves anticipating and planning to address those anticipations in advance. Later, risk taking was added as a further dimension, along with competitive aggressiveness which involves challenging the competitor rather than following them which involves high risk (Luu and Ngo 2019). The dimension of autonomy was also added, which involves giving independence to employees to take decisions based on situational factors, but is not very common in developing countries.

The variable of entrepreneurial orientation has been taken unidimensionally as well as multidimensionally by several researchers (Cho and Lee 2018). Some researchers used all the dimensions and even added additional dimensions, whereas others used only three dimensions. The determination of the dimensions appears to be based purely on the country and the state of SMEs in the country. Therefore, considering the situations and state of the SMEs in Jordan, and in accordance with the view of Asad et al. (2020), in the current study, entrepreneurial orientation is taken as a unidimensional variable (Abu-Rumman 2019).

Current literature surrounding the topic of entrepreneurial orientation has identified a positive relationship between entrepreneurial orientation and firm performance (Jiang et al. 2018). However, some authors have also detected a negative or curvilinear impact, or even a U inverted and contingent impact of entrepreneurial orientation on performance (Yoon and Solomon 2017; Cho and Lee 2018; Taheri et al. 2019). Thus, to overcome the confusion of this controversial relationship, this study explored the mediating role of dynamic capabilities between entrepreneurial orientation and firm performance.

Social capital, resource-based view and resource dependence theory

In recent years, the resource-based view has been used as a primary paradigm to direct inquiry into the antecedents of entrepreneurship (Li 2019). The resource-based view (RBV) theory asserts that a firm's competitive advantage and superior performance emanates from the firm-specific resources and capabilities (Kiyabo and Isaga 2020). The RBV strategic resources are those which are valuable, non-substitutable, and rare, and identified as being the key differentiators between those firms that have advantages as compared with those that do not (Kellermanns et al. 2016). In this way, the RBV approach emphasizes the resources of a firm as a critical element in determining its level of competitive advantage in its market. Resource dependence theory (RDT) is based on the principle that a firm must engage in transactions with others operating in its environment in order to acquire the resources it needs to differentiate itself from its competitors (Orakwue and Iguisi 2020). It asserts that one of the motivations behind a firm's attempts to build relationships with stakeholders is the need to acquire the resources that those stakeholders possess (Frączkiewicz-Wronka and Szymaniec 2012). Similar to the RBV and RDT, social capital theory (SCT) emphasizes the importance of the acquisition and retention of valuable and rare resources for SMEs to gain competitive advantage. Social capital is a vital component of entrepreneurial activities and is heavily impacted by a firm's level of access to entrepreneurial networks (Kanini and Muathe 2019). Therefore, the RBV, RDT, and SCT all propose that in order for SMEs to successfully obtain the crucial resources they need, network competence is key (Tehseen and Sajilan 2016).

Closed entrepreneurial networks

An 'entrepreneurial network' can be described as an organized formal or informal association of entrepreneurs whose purpose is to support its members to increase the effectiveness of their business activities. A 'closed entrepreneurial network' is one where membership is open only to those who operate within a certain boundary or who meet defined membership criteria (Stone 2018). The advantages of closed networks for SMEs are that they facilitate the free flow of information, provide a safe space for meaningful and authentic discussion and engagement, and trust amongst members is usually high.

The structure of closed networks is focused on the strength of strong ties and dense networks. The strength of ties within a closed network is determined by a number of factors including time, intensity, and reciprocal services that characterize the relationship of members. This benefits members of the closed network by facilitating the free flow of high-quality information and the exchange of tactic knowledge and access to specific resources. The level of density in the dense network approach refers to the

degree of connection between members. Higher density levels generate trust which subsequently improves knowledge sharing by reducing the threat of losing competitive advantage (Martínez-Pérez and Beauchesne 2018). Closed entrepreneurial networks are developed over time because of the cooperation of the entrepreneurs amongst them, and through their collective efforts (Zaheer et al. 2017). RDT supports this argument for developing competitive advantage through closed networks (Zaheer et al. 2017) and is embedded within the RBV approach to understand the potential available to SMEs through closed networks. Closed networks provide that hidden knowledge which is not readily available to SMEs. Thus, the provision of latest and new information improves the possibility of SMEs to identify relevant challenges in the business environment and to develop their ability to adapt accordingly (Wu et al. 2016).

However, even though closed networks are generally associated with positive outcomes, several commentators have also emphasized their limitations, namely the costs of maintaining connections, redundancy of information, inertia, and myopia ((Zaheer et al. 2017). These redundancy, inertia, and myopia can occur as firms fail to pay sufficient attention to the activities of competing firms that are out of the closed network (Inkpen and Tsang 2005).

Mediating effect of dynamic capabilities

The concept of 'dynamic capabilities' refers to the ability of a firm to integrate, develop, and reconfigure its internal and external competencies to respond effectively to fast-changing environments, and 'networked dynamic capabilities' have been described as how firms use networks to obtain and improve these dynamic capabilities (Priyono et al. 2020). The literature confirms dynamic capabilities and networks are positively associated, and it has been argued that through networking, firms can predict and manage environmental vulnerabilities more effectively, which is one of the distinguishing features of dynamic capabilities (Pinho and Prange 2016). Dynamic capability theory posits that in order for firms to maintain a sustainable competitive advantage, they need to have the capability to dynamically and proactively identify and respond to opportunities and threats that arise from operating in a non-static environment, and be able to flex and adapt the ways they do this and capture value in order to obtain and sustain competitive advantage (Sari et al. 2019). In this way, dynamic capabilities are aligned with the RBV and RDT (Mikalef et al. 2020; (Helfat and Martin 2015).

Initially, a major challenge to overcome was how to measure dynamic capabilities. Dynamic capabilities are mainly composed of three dimensions: integration, learning, and reconfiguration (Wu et al. 2016). Despite being different in nature, the three capabilities are highly correlated. Learning capability and reconfiguration capability, along with integration capability, is developed and refined due to closed entrepreneurial networks because of the tacit knowledge that can potentially be acquired through them. Furthermore, the proactiveness and risk-taking ability of entrepreneurial SMEs help them further to develop dynamic capabilities which ultimately can lead to higher performance. In this study, the variable of dynamic capabilities was taken as a unidimensional variable. The main argument being that when SMEs orient their closed entrepreneurial networks towards developing dynamic capabilities, they overcome the disadvantages of closed entrepreneurial networks.

Based on the review of the above literature, it is argued that dynamic capabilities pay a significant mediating role as when firms succeed in developing dynamic capabilities, through their entrepreneurial nature and closed networks; they enhance their performance. The study therefore aimed to explore the notion that SMEs which develop strong dynamic capabilities through their closed entrepreneurial networks develop competitive advantage and improved performance as a result of being entrepreneurially oriented.

Performance of SMEs

The performance of SMEs is a widely researched area, yet there is no consensus on how performance should be measured because a key issue with SMEs is informality (Shah and Ahmad 2019). Financial records are often not properly maintained, and even if the accounts are maintained, they are usually not audited. Therefore, the question of reliability of the accounts can never be resolved. Secondly, the other measures that are commonly used are also informal and are based on perception of respondents who are mostly entrepreneurs or the employees. Usually, performance is measured in terms of perception of the owners regarding increases in sales, profit levels, escalation of assets, expansion in customer base, and so forth. Therefore, questionnaires are most frequently used to measure the performance of SMEs based on the perception of the entrepreneur.

The performance of SMEs is dependent on several factors including access to finance, entrepreneurial orientation, market orientation, quality management, supply chain, training of employees (Helfat and Martin 2015; Almomani et al. 2019), entrepreneurial networking (Li et al. 2015), and many more. The majority of the studies support the argument that entrepreneurial orientation and entrepreneurial networking are very important for improving performance (Jiang et al. 2018). However, studies on entrepreneurial orientation have identified inconsistencies. Whilst the majority of the studies conducted on the relationship between entrepreneurial orientation and performance have shown a positive impact (Alkhazali et al. 2020), other researchers have contradicted the findings and highlighted that the relationship between entrepreneurial orientation and performance is insignificant (Cho and Lee 2018; Shah and Ahmad 2019; Hernández-Linares et al. 2019), has least influence (Vega-Vázquez et al. 2016; Masa'deh et al. 2018), is negative (Taheri et al. 2019), or curvilinear (Yoon and Solomon 2017), or even has an inverse U-shaped relationship (Luu and Ngo 2019). This shows that the findings are inconclusive, which provides justification for analysing the construct again. Furthermore, it is argued that if the relationship has inconsistencies, this indicates the presence of some other variable between the relationship whose presence or absence causes inconsistencies (Baron and Kenny 1986).

Likewise, the findings about entrepreneurial networks are not linear. Few researchers have identified that entrepreneurial networking has a direct impact over performance, whereas others have identified the role of entrepreneurial networking as a moderator. Thus, the literature on entrepreneurial networking also needs further expansion. Considering the inconsistencies in the literature of entrepreneurial orientation, the ambiguous impact of entrepreneurial networking, and based on the recommendations of Bitencourt et al. (2020), it is argued that dynamic capabilities have a significant mediating role which causes inconsistencies. Furthermore, many studies have identified that

dynamic capabilities have a significant impact or mediating impact over firm performance (Li-Ying et al. 2016; Wu et al. 2016; Mikalef et al. 2019; Mikalef et al. 2020).

Methodology

The study aimed to understand the mediating role of dynamic capabilities between entrepreneurial orientation, closed entrepreneurial networks, and performance of SMEs. SMEs were chosen because of their significant contribution in employment, GDP, and private ownership in the country. According to OECD (2019), Jordanian SMEs account for over half of employment in the business economy and claim that SMEs and entrepreneurs have the potential to become significant drivers of change and future development in Jordan.

In this regard, empirical analysis was conducted on data collected from a purposive sample of 100 SMEs operating in Jordan and which were part of an identified closed network. This included SMEs operating within sectors such as professional services, real estate, wholesale, and retail. Owners of the identified SMEs were invited to participate by the research team through the completion of an online questionnaire survey. The questions contained within the survey were developed following a critical review of the literature and used selected themes of questioning from previous studies that were felt to be most applicable to this study. In this way, nine questionnaire items for entrepreneurial orientation and eight items for entrepreneurial networking were chosen from the study undertaken by Li et al. (2015). Seven items for the variable of dynamic capabilities were chosen from Lin and Wu's (2014) study, and eight items covering the performance of SMEs were taken from the study undertaken by Jiang et al. (2018). The selected items were adapted to reflect the policy and economic context in which SMEs in Jordan operate and were sufficiently generic to apply to different sectors, whilst simultaneously being specifically focused on the core phenomena of entrepreneurial networks, entrepreneurial orientation, SME performance, and dynamic capabilities. Respondents were asked to indicate their agreement or disagreement to each of the questions using a 7-point Likert scale. The structure of the questionnaire was designed in accordance with the guidelines provided by Dillman (2007) in order to secure the required response rate. The questionnaires were sent to the owners and managers of SMEs electronically (and securely) to get the appropriate response. Alternative formats and languages were also offered to ensure the study was accessible to all members of the target population. In order to test the direct and mediation effects of independent and mediating variables, Partial Least Squares (PLS) and Strutural Equation Modelling (SEM) were used.

Consideration was given to the size of the sample to ensure the methodology was robust. According to Cavana et al. (2001), a minimum sample size of 30 would have sufficed for a study like this. However, following the recommendations of Lei and Lomax (2005), a sample size of 100 was used as it is considered to be more appropriate for structural equation modelling. To identify that the sample was representative, a mean difference test was also conducted.

Results

In this study, a structural equation modelling technique was employed using SMART PLS, as it is considered as best for theory building and predictive purposes. In order to

attain reliable results from the inner model, it is compulsory to analyse the outer model first; also known as measurement model. Figure 1 illustrates the measurement model:

The measurement model, which is first step towards structural equation modelling. Figure 1 shows that only one of the eight items of entrepreneurial networking has been removed; all other items showed factor loading above the threshold level of 0.7 (Hair et al. 2013). The item loadings of all the variables are mentioned in Table 1 below.

Through the measurement model, construct reliability and validity are also measured, and the results are listed in Table 2 below. The threshold level for the measures of reliability and validity are 0.6, 0.7, and 2.5 for Cronbach's alpha, composite reliability, and average variance extracted respectively (Henseler et al. 2015).

The calculated values of all the measures of reliability and validity are above the threshold level. After ensuring the construct reliability and validity, it was necessary to measure the discriminant validity which shows that items of the variable measure the variable more than measuring any other variable. The results are listed in Table 3 below and are as per the criteria set by Henseler et al. (2015).

From Table 3, the discriminant validity is established. After ensuring the outer model, the next step was to ensure the structural model or the inner model. Figure 2 illustrates the direct impact of entrepreneurial networking and entrepreneurial orientation over the performance of SMEs.

Direct Path Coefficients' impact analyse the direct relationship between the independent and dependent variables. The findings are listed in Table 4 below:

In Table 4, the direct impact of entrepreneurial orientation and entrepreneurial networking on the performance of SMEs has been analysed, which shows that entrepreneurial orientation has a significant impact (β = 0.522, t = 2.483, P = 0.013); however, entrepreneurial networking has an insignificant impact (β = 0.144, t = 1.020, P =

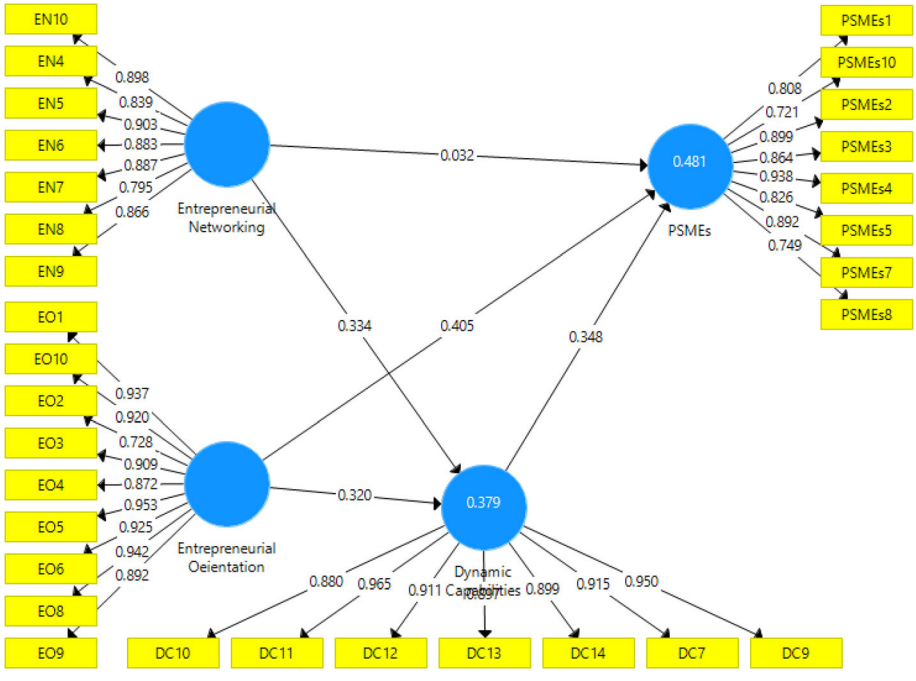

Fig. 1 Measurement model

Table 1 Item loadings

Items	Dynamic capabilities	Entrepreneurial networking	Entrepreneurial orientation	PSMEs
DC10	0.880			
DC11	0.965			
DC12	0.911			
DC13	0.897			
DC14	0.899			
DC7	0.915			
DC9	0.950			
EN1		0.657		
EN10		0.898		
EN4		0.839		
EN5		0.903		
EN6		0.883		
EN7		0.887		
EN8		0.795		
EN9		0.866		
EO1			0.937	
EO10			0.92	
EO2			0.728	
EO3			0.909	
EO4			0.872	
EO5			0.953	
EO6			0.925	
EO8			0.942	
EO9			0.892	
PSMEs1				0.808
PSMEs10				0.721
PSMEs2				0.899
PSMEs3				0.864
PSMEs4				0.938
PSMEs5				0.826
PSMEs7				0.892
PSMEs8				0.749

0.308). After identifying the direct impact, the next step was to check the mediating effect. Figure 3 below illustrates the algorithms of mediating effect.

Mediating effect in this study was analysed using the method provided by Baron and Kenny (1986). From Fig. 3, it is clear that effect on performance of SMEs has increased,

Table 2 Construct reliability and validity

Variables	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Dynamic capabilities	0.968	0.974	0.841
Entrepreneurial networking	0.945	0.955	0.753
Entrepreneurial orientation	0.970	0.974	0.810
PSMEs	0.939	0.950	0.706

Table 3 Discriminant validity

Variables	Dynamic capabilities	Entrepreneurial networking	Entrepreneurial orientation	PSMEs
Dynamic capabilities	0.917			
Entrepreneurial networking	0.581	0.868		
Entrepreneurial orientation	0.578	0.772	0.900	
PSMEs	0.600	0.546	0.630	0.840

as the indirect effect has increased from 40 to 48%. This demonstrates the significance of the mediating effect because of mediation by dynamic capabilities. The bootstrapping results of the mediation tests are presented in Fig. 4 below.

In this study following Hayes and Preacher (2010) and Hair et al. (2013), the product of the two significant path coefficients have been divided with the product of standard error to analyse the significance of mediation through t values. The t values of both shows significant mediating impact as shown in Table 5 below.

After ensuring that the mediation holds, another important detail was to establish the predictive relevance of the model; the predictive relevance has been established using blindfolding. The results of the analysis are listed in Table 6 below.

The results of predictive relevance which have been measured through blindfolding showed that the model has significant predictive relevance.

Discussion

In this research study, the main contribution was to enrich the resource-based view along with resource dependency theory and dynamic capability theory for achieving

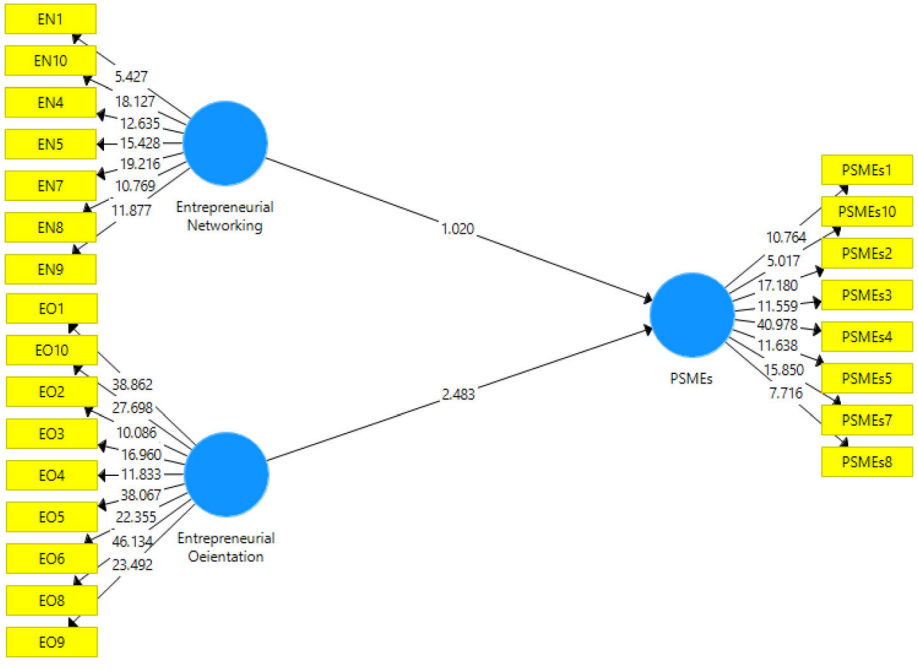

Fig. 2 Direct Relationships Bootstrapping

Table 4 Direct path coefficients

	Original Sample(O)	Sample mean (M)	Standard deviation (STDEV)	t statistics (|O/STDEV|)	P values
Paths					
Entrepreneurial networking → PSMEs	0.191	0.225	0.187	1.020	0.308
Entrepreneurial orientation → PSMEs	0.486	0.447	0.196	2.483	0.013
R^2 = .415					

better performance. The study was helpful in further understanding the appropriate use of closed networks and entrepreneurial orientation. The study conducted one-tailed analysis and identified the positive impact of all the variables on performance including dynamic capabilities. The study was conducted in an economy that is considered as ideal for SMEs. Thus, the researchers identified the mediating role of dynamic capabilities between entrepreneurial orientation, entrepreneurial networking, and performance of SMEs. Dynamic capabilities have shown a positive and significant mediating impact between the relationships which is consistent with prior studies where the mediating impact of dynamic capabilities was analysed (Helfat and Martin 2015; Li-Ying et al. 2016).

The main issue under discussion was the identification of the influence of closed networks. In order to do this, the sample included SMEs which were the part of a closed network, because such SMEs are at risk of developing a locked in inertia, along with suffering from information redundancy, which may act as a hurdle in achieving high performance in competitive and dynamic environments. It is clearly evident from the study that SMEs drive their closed networks to enhance dynamic capabilities and hence enhance performance.

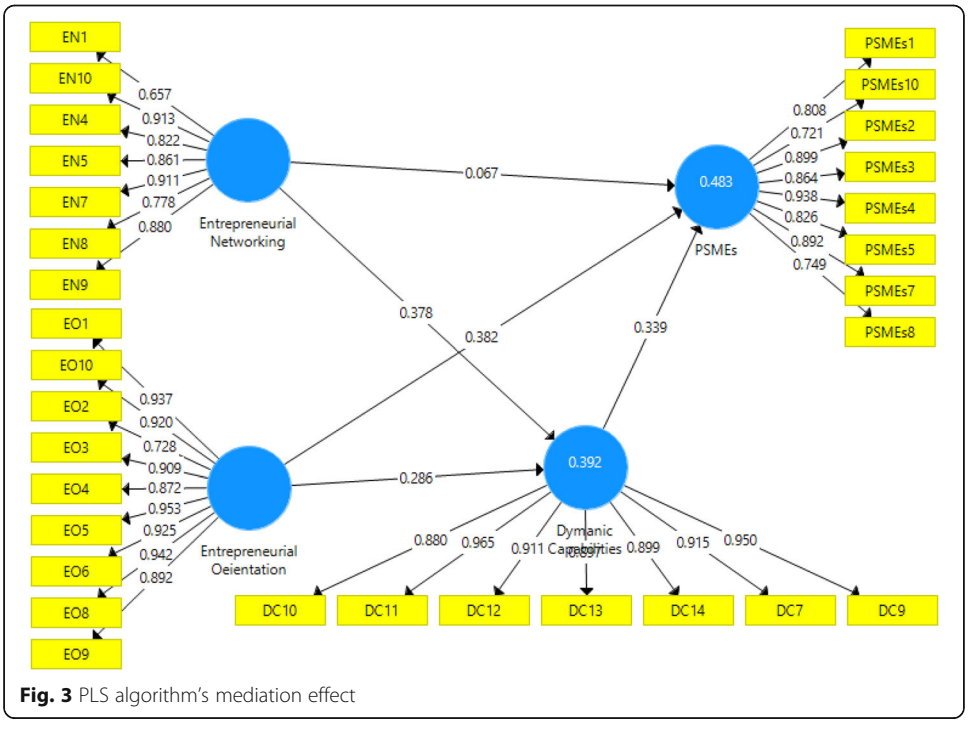

Fig. 3 PLS algorithm's mediation effect

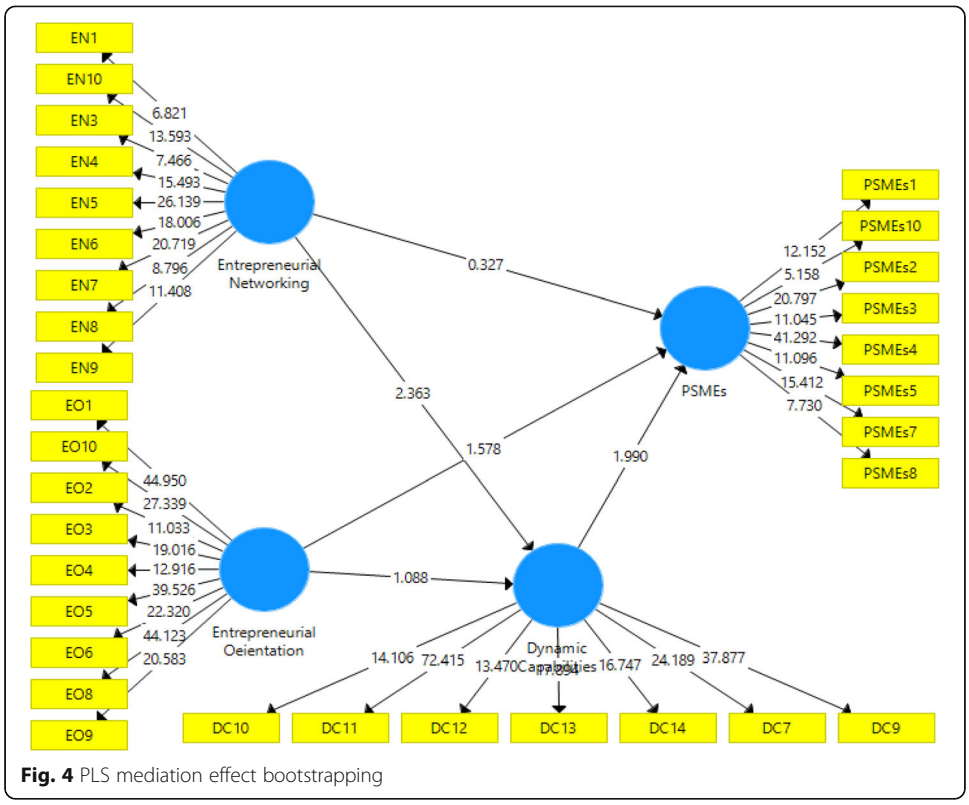

Fig. 4 PLS mediation effect bootstrapping

The findings of the study also identified that the firms' entrepreneurial network was not significant; however, the mediation of dynamic capabilities was significant. Secondly, entrepreneurial orientation was found to have a direct positive impact (Asad et al. 2020) as well as mediation which is also significant. Furthermore, the value of explained variation has also showed that dynamic capabilities play a significant mediating role and enhances the performance of firms (Wu et al. 2016). All the findings are consistent with previous literature except the one that shows that entrepreneurial networking does not hold any direct impact. Finally, the predictive relevance is also significant which shows the strength of the model, which further supports the argument that if firms succeed in developing dynamic capabilities through their closed networks, they can achieve high performance.

Conclusions

The findings and discussion in the light of current data suggest that the study is relevant for both managers as well as academicians. Primarily, the development of closed

Table 5 Mediation effect bootstrapping

Paths	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	t statistics (|0/STDEV|)	P values
Entrepreneurial networking → Dynamic capabilities → PSMEs	0.116		0.036	3.219	0.000
Entrepreneurial networking →Dynamic capabilities → PSMEs	0.111		0.039	2.841	0.000

Table 6 Construct cross-validated redundancy

	SSO	SSE	Q^(= 1 − SSE/SSO)
Dynamic capabilities	693.0	486.265	0.298
PSMEs	792.0	552.998	0.302

entrepreneurial networks is essential for entrepreneurial mind grooming which enhances performance. The findings provided new arguments over the controversial relationship between entrepreneurial networking and performance. They further clarified that entrepreneurial orientation has a direct positive impact over performance of SMEs because of risk taking and proactivity, but also highlighted that the positive impact is because of dynamic capabilities because firms that are entrepreneurially oriented develop dynamic capabilities which are necessary to gain high performance.

The study also confirmed that unidimensionality of the construct of dynamic capability is also possible, especially for SMEs which are not very formal and are operating in developing economies. The findings further identified that dynamic capabilities are the missing link between entrepreneurial networking and performance, and that the presence or absence of dynamic capabilities causes controversial results. Furthermore, the findings also confirmed that dynamic capabilities are the major bridge between entrepreneurial orientation and SME performance. Those SMEs that operate entrepreneurially and fail to develop dynamic capabilities mostly end up with a decline in performance.

The study identified that capability construction becomes stronger when augmented with the social networks of the entrepreneurs, because of social learning. The learning of entrepreneurs from their social network helps the SMEs to get affected from the negativities of the complex environment. Finally, the study linked three theoretical approaches together, i.e. dynamic capability theory, resource-based view, and resource dependency theory which is the major theoretical contribution of the research.

Practitioners should benefit from the findings of the study in relation to assessing the propensity to maintain imitating reactive and risk-averse behaviour of the closed loop of the SMEs. Firms in closed networks prefer to enhance the intensity of their closed links which are characterized by a greater level of interaction. Therefore, the SME sector should concentrate on developing larger networks and should get the mutual benefits rather than entering fierce competition which may ultimately lead to the closure of some firms. They should believe in shared knowledge for identifying new opportunities and for catering these opportunities collectively.

Limitations of the study

While conducting this research, dynamic capabilities showed a correlation with entrepreneurial orientation, which further confirms that entrepreneurial SMEs in closed networks develop dynamic capabilities. Likewise, the correlation between the items of dynamic capabilities was also high. The limitation of cross-sectional data was also observed, and a need for a longitudinal study has been identified.

Furthermore, while reviewing the literature, it was also observed that dynamic capabilities is a vast field and a study taking all the dimensions of dynamic capabilities can make a significant contribution to the body of knowledge. Furthermore, the biasness

that needs to be controlled cannot be eliminated as the study did not use any controlling effects of any controlled variable. A small sample size was another limitation of the study which was ignored because of the use of a nonparametric test.

Future directions

Future researchers in the field of SMEs are suggested to identify the impact of strategic alliances rather than only focusing only on closed networks or interorganizational relationships. Furthermore, it is also suggested that dynamic capabilities need to be researched in organized economies with all the dimensions to identify those which are the most influential. Finally, a longitudinal study over a panel of SMEs is also recommended to enhance understanding in this field of investigation.

Abbreviations

SME: Small and medium enterprise; SMEs: Small and medium enterprises; RBV: Resource-based view; RDT: Resource dependency theory

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Declarations

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Authors' contributions

Ayman Abu-Rumman, Al-Ahliyya Amman University, is the first and corresponding author. He is a research team leader and responsible for literature review, analysis, critical comments, and supervision. Ata Al Shraah, the Hashemite University, is the second author. His contributions were in the methodology, software, validation, investigation, data analysis and curation. Faisal Al-Madi is the third author, the Hashemite University. His contributions were writing discussion and analysis. Tasneem Alfalah - the fourth author- Garman Jordanian University, her contributions were in writing abstract, revision, finalizing of figures and tables, and conclusions. The authors have read and approved the final manuscript.

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Ayman Abu-Rumman, PhD, is the Head of Department and Lecturer in Business Administration at Al-Ahliyya Amman University, Jordan, and specializes in Total Quality Management Project Management Strategic Management Entrepreneurship Organizational Behavior and crisis management. He has a vast amount of management and research experience both within Jordan and in the UK.

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Availability of data and materials

All data generated or analysed during this study are included in this published article as well as based upon publicly available data.

Competing interests

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