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International Journal of Data and Network Science

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Impact of dynamic capabilities on competitive performance: A moderated-mediation model of entrepreneurship orientation and digital leadership

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C H R O N I C L E

Article history:
Received: February 20, 2023
Received in revised format: April 12, 2023
Accepted: June 25, 2023
Available online: June 25, 2023

Keywords:
Dynamic capabilities
Competitive performance
Entrepreneurship orientation
Digital leadership, Jordan

A B S T R A C T

This research aims to provide a logical and experimental framework that helps organizations achieve goals in turbulent environments by examining the impact of dynamic capabilities on competitive performance with the conditional indirect effect of entrepreneurship orientation and digital leadership. A conceptual framework was derived from well-established theories in strategic management, along with empirical evidence based on a survey conducted on a sample of 102 leaders and managers in the entrepreneurial companies in Jordan. This study demonstrates the positive impact of dynamic capabilities in developing competitive performance. Moreover, the entrepreneurship orientation mediates the relationship between dynamic capabilities and competitive performance and digital leadership has a positive moderating role in this relationship. This research recommends leaders and managers in entrepreneurial organizations to define clear standards for measuring competitive performance that enable identifying and correcting deviations in a timely manner and invites them to focus on creating value in turbulent environments by exploiting advanced technological capabilities and adopting innovative strategies and business models.

1. Introduction

Since the beginnings of the third industrial revolution, known as the digital revolution, the focus has increased on appropriate methods to integrate the tremendous capabilities provided by modern technology into organizations' strategies and business models. With the launch of the Fourth Industrial Revolution (4IR), which the digital revolution had paved, it began to draw lineaments and broad lines for the future based on the phenomenon of "digital creativity," where (Tariq et al., 2022; Alserhan & Shbail, 2020; Schwab & Davis, 2018; Al-Alwan et al., 2022; Eldahamsheh et al., 2021) indicated that this revolution will blur the line between physical, digital and biological by intensifying the exploitation of big data, industrial intelligence and Internet of things on the different aspects of life.With this new reality, the organizations' common goal revolves around achieving the highest possible returns and improving business performance, especially competitive performance, which has become a priority for strategic thinking due to the increase in competition and the trend towards globalizing markets (Al Shbail et al., 2022; Lin et al., 2020; AlTaweel & Al-Hawary, 2021; Al-Nawafah et al., 2022). However, clarity of future lineaments does not help organizations to predict changes and challenges in the business environment without the availability of the necessary capabilities to discover these changes which produce a set of opportunities and threats that organizations should rapidly cope with to ensure their survival. Dynamic capabilities view (DCV) has gained the attention of many researchers in the strategic field as a developing of the resource-based view (RBV), where (Teece et al., 2016) expressed it as "the firm's capacity to innovate, adapt to change, and create change that is favourable to customers and unfavourable to

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ISSN 2561-8156 (Online) - ISSN 2561-8148 (Print)

doi: 10.5267/j.ijdns.2023.6.017

competitors". Dynamic capabilities provide a practical framework on the mechanism of interaction between the internal and external environment, as well as the collection and coordination of routine procedures in order to flexibly respond and rapidly anticipate for the business context (Al-Hawary & Al-Syasneh , 2020; Mostafiz et al., 2019; Al-Hawary & Al-Rasheedy, 2021). The theoretical arguments and empirical studies confirmed that dynamic capabilities are an effective strategy for achieving sustainable competitive advantage (Chukwuemeka & Onuoha, 2018; Karman & Savanevičienė, 2020; Naguib et al., 2017; Zhonghua et al., 2019) and improving organizational performance (Chiarelli, 2021; Eikelenboom & de Jong, 2019; Fainshmidt et al., 2016; Mostafiz et al., 2019; Zhou et al., 2017).

Amidst these developments, entrepreneurship orientation (EO) emerged as a strategic pattern adopted by organizations in order to improve their innovation capability (Bedoya et al., 2018; Genc et al., 2019; Yuliansyah, 2018), achieve high levels of performance (Erista et al., 2020; Nuvriasari et al., 2020) and reach sustainability (Criado-Gomis et al., 2017; Sung & Park, 2018). (Lumpkin & Dess, 2015) argued that the entrepreneurship orientation reflects the tendency of organizations to exploit the opportunities of the business environment, where it is said that the organization is entrepreneurial if it can innovate new products, has the courage to take risks, and is proactive in adjusting demand for new products. while (Frederick et al., 2019) considered it as a strategy to create wealth by engaging in the search for opportunities that achieve a competitive advantage by following behaviours, management methods and philosophies that help in innovating products and services and accepting the risks associated with offering them in the market before the competitors. Furthermore, digital transformation has radically accelerated the pattern of business, where it has become widely recognized that organizations that do not orientate towards digitalization will be less efficient and flexible in the future and lose their ability to compete (Sasmoko et al., 2019; Zeike et al., 2019). In this context, organization leaders struggle to adapt to the reality of digital change in the nature and requirements of work and new resources, as the study of (Gierlich-Joas et al., 2020) showed that digitally successful organizations require unique leadership capabilities to envision and drive transformation. Thus, digital leadership (DL) is the set of capabilities that leaders possess to create clear visions and convert them into operational strategies that commensurate with the organization's digitization process. For the success of the digital transformation process, (Toduk & Gande, 2016) indicated a set of characteristics of digital leadership which are: (1) creativity, (2) deep knowledge (3), strong network and collaboration, (4) and loyal participation via vision. This fits with what (Zhu, 2015) found about the qualities of digital leaders: (1) creative, (2) thinkers, (3) global visionaries and willing to collaborate, (4) inquisitive leaders, (5) and profound leaders. Several studies have recognized the dynamic capability's view (DCV) as a strategy for adapting to changes in the contemporary business environment. However, its significance and influence on competitive performance have not been discussed in depth in terms of the possibility of activating sensing capability about striking work environments, seizing appropriate opportunities, and reconfiguration the organization in line with digital innovation. Moreover, the role of the entrepreneurship orientation in enhancing the competitive position of the organization should be explored, especially with regard to innovative products and services compatible with the current technological progress. Hence, this research discusses the impact of dynamic capabilities on competitive performance through the mediating role of the entrepreneurship orientation and the moderating role of digital leadership based on the conditional indirect impact model within the Arab business environment, of which Jordan is the best representative due to its keen interest in supporting entrepreneurship and the trend towards digitizing business.

2. Research Framework and Hypotheses Development

2.1 Dynamic capabilities and competitive performance

The logic of (Schumpeter, 1939) about creative destruction coupled with the resource-based view (RBV) shape the theoretical basis for dynamic capabilities that enable organizations to integrate and build their competencies and reconfigure them to face turbulent business environments (Al-Awamleh et al., 2022; Teece, 2007; Alolayyan et al., 2022). In this context, dynamic capabilities were considered as strategic options that contribute to the renewal of the operational capabilities of the organization when the opportunity or need arises (Aityassine et al., 2022; Helfat & Raubitschek, 2018; AL-Zyadat et al., 2022), where they are directed towards strategic change for harmonizing of the uncertainty work environment (Kurdi et al., 2023; Furnival et al., 2019). Empirical studies confirmed that dynamic capabilities have an effect on firms' performance through market transformation processes (Alshawabkeh et al., 2022; Eikelenboom & de Jong, 2019; Rahamneh et al., 2023; Mostafiz et al., 2019), technological capability development (Čirjevskis, 2019; Attiany et al., 2023; Pezeshkan et al., 2016; Al-khawaldah et al., 2022) and the initiation of organizational change (Fainshmidt et al., 2016; AlBrakat et al., 2023; Zhou et al., 2017). Moreover, they play a pivotal role in organizations gaining competitive advantage and supporting their market position through sensing for the work environment changes, seizing the opportunities, and reconfiguration organizational resources (Chukwuemeka & Onuoha, 2018; Zahran et al., 2023; Correia et al., 2020; Karman & Savanevičienė, 2020; Mohammad, 2020; Naguib et al., 2017). Hence, dynamic capabilities help organizations increase delivery speed, respond in a timely manner to customer demands changes, improve operational flexibility and better split costs, which enhance the potential for customer retention and prosperity in highly competitive environments. Therefore, the first research hypothesis was:

H_1: *Dynamic capabilities positively impact on competitive performance.*

2.2 Mediation impact of entrepreneurship orientation

Entrepreneurship orientation (EO) is considered a fundamental strategy in the decisions-making approach and practices that reveal current and potential market opportunities for controlling them before competitors enter new markets (Lumpkin & Dess, 2015). Strategic literature depicts entrepreneurship orientation as a synthetic construct consisting of three core

dimensions: innovativeness, risk-taking, and proactiveness (Covin & Slevin, 1991; Genc et al., 2019; Nuvriasari et al., 2020). Innovativeness refers to the extent of the organization's commitment to adopting new and creative ideas that lead to the introduction of new products, services, and processes (Lim & Kim, 2019). Risk-taking is the prominent feature of entrepreneurs, as it expresses the willingness to make great obligations of effort, time, and money to reach a specific goal despite the reasonable chance of costly failure (Caseiro & Coelho, 2018). As for proactiveness, (Rezaei & Ortt, 2018) defined it as the organization's ability to take advantage of market opportunities before competitors.

The dynamic capability's view supports the entrepreneurship orientation strategy of organizations, especially in developing countries (Zahra et al., 2006), where sensing capability enables to follow market opportunities and identify changes in customer desires that stimulate innovation processes to adapt to these changes (Likoum et al., 2020) and helps in identifying threats facing the organization when entering new markets (Chiarelli, 2021). Seizing capability determines the most appropriate opportunities that accompany the requirements of the business environment and can be exploited proactively than competitors (Furnival et al., 2019). Reconfiguration capability has a significant role in restructuring and arranging the organization's resources and directing them quickly in order to obtain new market opportunities, which in turn make the organization entrepreneurial in meeting the customers aspirations (Čirjevskis, 2019; Mostafiz et al., 2019). Hence, the second research hypothesis was proposed as follows:

H_2: *Dynamic capabilities positively impact on entrepreneurship orientation.*

Moreover, many organizations in developing countries used the entrepreneurship orientation strategy to reach a competitive advantage, where it is considered the starting point for formulating and implementing a competitive strategy (Zeebaree & Siron, 2017). Innovativeness gives the necessary flexibility for organizations to respond to customer demands by creating products and services that satisfy their aspirations (Lim & Kim, 2019) and / or following contemporary business models that ensure maximum benefits from current products and services (Dwijendra et al., 2023; Frederick et al., 2019). Entrepreneurial organizations tend to be faster and more efficient in obtaining the largest market share as being proactive in launching new offers (Majdy et al., 2023; Nuvriasari et al., 2020), in addition to obtaining a distinguished competitive position as a result of adopting a risk-taking approach for providing innovative products and services and entering new markets (Genc et al., 2019). Accordingly, the third research hypothesis was formulated as follows:

H_3: *Entrepreneurship orientation positively impacts on competitive performance*.

The Jordanian business environment is seen as one of the most open and attractive in the Middle East for investments due to the economic reform policies pursued by successive governments (Alrousan et al., 2020; Pallathadka et al., 2023; Fernandez et al., 2020). Consequently, organizations that carry out their activities in Jordan or aspire to enter this context of business have become aware of the difficulty of achieving planned competitive performance without taking into consideration possessing the necessary dynamic capabilities that help them keep pace with rapid changes and respond to them in appropriate ways (Abazeed, 2020; Muda et al., 2022; Alshirah et al., 2021; Harahap et al., 2022). Further, organizations should be entrepreneurial in providing innovative products and services to customers despite the great risk for organization's resources, in order to achieve competitive advantage within a business environment of dynamic and supportive nature of competition based on the ability to meet customer desires (Neam & Alwar, 2020). Therefore, the fourth research hypothesis indicated:

H_4: *Dynamic capabilities positively impact on competitive performance through entrepreneurship orientation.*

2.3 Moderation impact of Digital Leadership

The concept of leadership has a long historical extension and is deeply rooted in many managerial theories, as it was defined as coordinating relationships between employees and exercising authority that aims to organize tasks in the organization and achieve goals at the operational and strategic levels (Brett, 2019). Over the years the concept of leadership and its theories have evolved, where in the 1920s an emphasis was placed on determining the personality traits of leaders. Later in that century the theories shifted to focus on contextual factors and the characteristics of followers. Recently, leadership theories have sought to treat external contexts by merging the concept of leadership with successive technological developments, which led to the emergence of digital leadership concept (Gierlich-Joas et al., 2020).According to (Kieser, 2017), who defined digital leadership as the leader's awareness of the digital context when formulating the organization's strategies and developing its business models that are relying on digital unique resources to value creation.

Cabrales et al. (2017) argued that the perceptions of the organizations' leaders influence their behaviours towards renewing their resource base, as it is necessary to understand what leaders realize about the business environment to make decisions related to the fate of the organization. Hence, digital leadership can be considered one of the critical catalysts which leads the organization towards dynamic interaction with the business environment, which is characterised by volatility, uncertainty, complexity, and ambiguity (VUCA) through influencing the practices and policies to develop capabilities that increase the organization's agility, improve its response to fluctuations, and rapidly deal with changes in customer desires to achieve a competitive advantage. Accordingly, the following hypothesis is formulated:

H_{5a}: *Digital leadership moderates the direct relationship between dynamic capabilities and competitive performance, such that this relationship will be more positive at a high level of digital leadership.*

Besides, the business environment has forced organizations to constantly re-determine their markets, restructure their operations and resources, and modify their business models through learning thinking skills and adopting an entrepreneurial business strategy to achieve competitive advantage (Erista et al., 2020; Tiekam, 2019). In order for entrepreneurship to be exploited in the organization as a strategy, its principles should be deeply rooted in the organizational fabric of administrative levels of the whole organization. (Morris et al., 2011) Stressed the importance of leaders 'awareness of the need of the entrepreneurial requirements that were created by the new conditions of the competition environment, where the minimum response or superficial commitment to this strategy leads to its failure. Thus, digitization factors may be sufficient to motivate the organizations' leaders to adopt an entrepreneurship strategy for the organization based on establishing a digital culture that promotes creative processes and ideas, improving their digital competencies and skills to deal with potential risks efficiently, as well as developing visions and strategies compatible with digital changes to command competition market and achieving planned performance. Accordingly, the following hypothesis is formulated:

H_{5b}: *Digital leadership moderates the indirect relationship between dynamic capabilities and competitive performance through entrepreneurship orientation, such that this relationship will be more positive at a high level of digital leadership.*

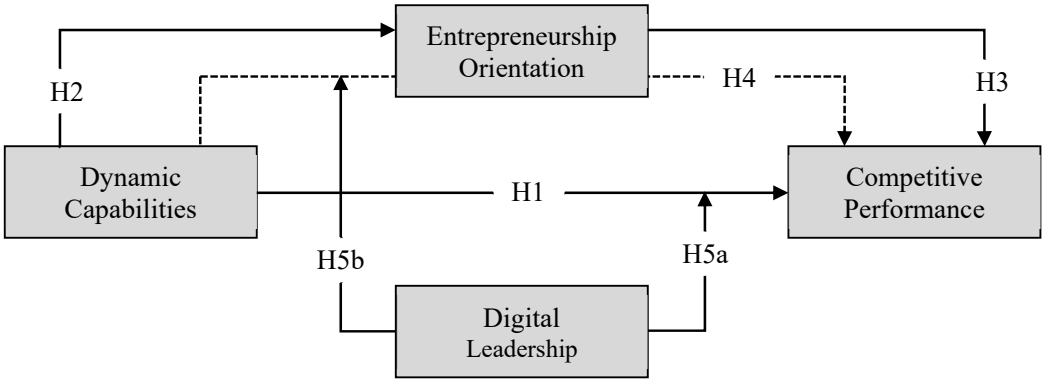

Fig. 1. The research conceptual model

Research hypotheses can be highlighted through the research model shown in Fig. 1, which shows the relationship between the independent variable (dynamic capabilities), the dependent variable (competitive performance), the mediator variable (entrepreneurship orientation), and the moderator variable (digital leadership).

3. Research Methodology

3.1 Population and sample

The Jordanian business environment has emerged as one of the most successful models in the MENA region through continuous efforts to accelerate economic growth and stimulate investment projects based on innovation in competitive products and services. Moreover, its inclusion in the second rank according to the report of the World Economic Forum for the countries' environments most supportive of entrepreneurship contributed to enhancing its position and ability to attract foreign entrepreneurial investments. Hence, the current research targets the entrepreneurial companies that practice their activities in Jordan to suit the kind of variables under study. According to the report issued by the Company Registration Department at the Jordanian Ministry of Industry and Trade, the number of companies classified as entrepreneurial and practicing their business in Jordan reached (81). These companies employ approximately (1950) employees at various administrative levels. Therefore, the research data was collected through a self-report electronic questionnaire sent via e-mail, based on a complete census method for all leaders and managers in the higher management positions of these companies, who were (142) leaders and managers.

The total responses to the questionnaires sent were (125), where a comprehensive review and evaluation of all these responses were conducted and it was found that (23) were not suitable for conducting statistical analysis due to lack of accuracy in filling them out. Consequently, the number of analyzed questionnaires reached (102), which constitutes a response rate (71.83%). It was found that the percentage of males in the research population reached (62.12%) compared to females whose percentage was (37.88%), and it was also found that most of the respondents hold postgraduate degrees at a percentage (49.37%). Besides, they mostly belong to the age group "from 30 to 40 years", where they formed a percentage of (41.53%) from the total responses compared to the lower age group "more than 50 years", which formed a percentage (5.80%) of responses.

3.2 Measures

To achieve the goal of the research, a theoretical model was built that contains four main structures. These structures were represented by the independent variable (i.e., dynamic capabilities), the dependent variable (i.e., competitive performance),

the mediating variable (i.e., entrepreneurship orientation), and the moderating variable (i.e., digital leadership). All the items of the data collection tool were developed based on studies in the English language and then translated into Arabic through the help of a legal translator to ensure the accuracy of the translation process and the clarity of the phrases. After completing the data collection, the phrases were returned to the English language for use in research.

3.2.1 Dynamic capabilities

Dynamic capabilities were considered as a second-order construct that is measured using 12 items distributed among three first-order constructs: sensing capability, seizing capability, and reconfiguration capability which corresponds to (Čirjevskis, 2019; Teece et al., 2016). Sensing capability was measured through 4 items including "e.g., our company provides training programs to improve observation skills.", seizing capability was measured through 4 items including "e.g., our company seeks to enhance its managers' ability to identify appropriate business opportunities.", and reconfiguration capability was measured using 4 items including "e.g., we have the ability to perform operations in proportion to providing unique services to the target groups.". Respondents answered all these items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.2.2 Competitive performance

Competitive performance was considered as a first-order construct that is measured using 10 items corresponding to (Irfan & Wang, 2019; Vilkas et al., 2020). The items have been developed to include questions "e.g., our company offers exceeding expectations of its customers, our company products and services are of high quality, ...etc.". Respondents answered all these items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.2.3 Entrepreneurship orientation

Entrepreneurship orientation was considered as a second-order construct that is measured using 9 items distributed among three first-order constructs: innovativeness, proactiveness, and risk-taking which corresponds to (Genc et al., 2019; Rezaei & Ortt, 2018). Innovativeness was measured through 3 items including "e.g., our company focuses on continuous development of all services and products provided to customers.", proactiveness was measured through 3 items including "e.g., our company seeks to be the first to introduce new products and services to its sectors.", and risk-taking was measured using 3 items including "e.g., our company usually takes a bold stance towards uncertainty decisions.". Respondents answered all these items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.2.4 Digital leadership

Digital leadership was considered as a second-order construct that is measured using 20 items distributed among four first-order constructs: digital culture, digital insights, digital competencies, and digital strategy which corresponds to(Sultan & Suhail, 2019). Digital culture was measured through 5 items including "e.g., our company motivates us for interaction through social platforms.", digital insights was measured through 5 items including "e.g., our company objectives are formulated according to future aspirations by analysing big data collected.", digital competencies was measured using 6 items including "e.g., our company provides us with training to refine skills related to dealing with new technologies.", and digital strategy was measured using 4 items including "e.g., our company seeks to transfer towards a digital environment through the long-term integration between activities and technology.". Respondents answered all these items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.2.5 Control variables

Previous research suggested that there is likely a correlation between demographic characteristics and the dependent variable (Irfan & Wang, 2019; Vilkas et al., 2020). Therefore, the research tool was included with three demographic variables: gender, educational level, and age group. All these variables are categorical, where the gender is classified into two categories (i.e., male and female). The educational level is classified into three categories (i.e., diploma or less, bachelor's, and postgraduate). As for the age group, it included four categories (i.e., less than 30 years, from 30 to less than 40 years, from 40 to less than 50 years, and 50 years and older). The results showed no correlation between demographic variables and the dependent variable; thereby they were not included in the results tables.

4. **Research Results**

4.1 Measurement models evaluation

The research used determined scales and thus sought to confirm the suitability of the constructs through validity and reliability tests. Therefore, confirmatory factor analysis (CFA) was conducted using Amos 24, whose results are demonstrated in **Error!**

Reference source not found. for identifying the factors loadings levels, convergent and discriminant validity, and composite reliability.

Table 1
Descriptive statistics, correlations, validity, and reliability of scale variables

Variables	Mean	SD	Loading Range	AVE	MSV	CR	Correlation			
							DC	EO	CP	DL
DC	3.71	0.864	0.637-0.773	0.517	0.485	0.928	**0.719**			
EO	3.52	0.912	0.622-0.814	0.520	0.367	0.906	0.34**	**0.721**		
CP	٣.٦٨	0.739	0.638-0.827	0.529	0.405	0.918	0.30**	0.44*	**0.727**	
DL	3.49	0.927	0.619-0.824	0.522	0.436	0.956	0.26*	0.42**	0.39*	**0.723**

*Note:*N=102;DC: dynamic capabilities; EO: entrepreneurship orientation; CP: competitive performance; DL: digital leadership; The bold fonts indicating to square root of average variance extracted. * p<0.05; ** p<0.01; *** p<0.001.

It is evident from Table 1 that the values of the factors loadings on their construct were greater than the minimum permissible 0.50 recommended by (Al-Hawary & Al-Syasneh, 2020), and the convergent validity was demonstrated because all the values of the average variance extracted (AVE) were greater than 0.50 according to Crego and Widiger (2016). The discriminant validity was also achieved because of all the maximum shared variance (MSV) values being smaller than the average variance extracted (AVE) values and the square root average variance extracted values higher than the correlation with other constructs which studies have agreed (Al-Lozi et al., 2018; Souza et al., 2017). As for the composite reliability, the results showed that all the values were within the domain (0.906-0.956) and were greater than the minimum threshold of 0.80 which is recognized by studies (Antunes et al., 2017; Bebba et al., 2017), thereby the constructs were characterized by reliability.

Table 2
Comparison of measurement models

Models	$\chi 2$/df	CFI	GFI	TLI	RMSEA
Baseline four-factor model (DC, DL, EO, CP)	1.584	0.937	0.951	0.924	0.028
Three-factors model (DC+DL, EO, CP)	6.415	0.714	0.792	0.814	0.092
Three-factors model (DC, DL, EO+CP)	4.339	0.825	0.783	0.804	0.087
Tow-factors model (DC+DL, EO+CP)	5.024	0.662	0.752	0.698	0.105
One factor model (DC+DL+EO+CP)	7.543	0.815	0.801	0.795	0.135

Note: N=102;DC: dynamic capabilities; EO: entrepreneurship orientation; CP: competitive performance; DL: digital leadership.

Besides, comparisons were made between the proposed four-construct model (dynamic capabilities; entrepreneurship orientation; competitive performance; and digital leadership.) and the remaining possible models to verify the accuracy of the measurement model. The results presented in Table 2 showed the superiority of the four-constructs model ($\chi 2$/df= 1.584; CFI= 0.937; GFI= 0.951; TLI= 0.924; RMSEA= 0.028) on the first three-constructs model ($\chi 2$/df= 6.415; CFI= 0.714; GFI= 0.792; TLI= 0.814; RMSEA= 0.092) and the second three-constructs model ($\chi 2$/df= 4.339; CFI= 0.825; GFI= 0.783; TLI= 0.804; RMSEA= 0.087). Moreover, this model was also superior to the two-construct model ($\chi 2$/df= 5.024; CFI= 0.662; GFI= 0.752; TLI= 0.698; RMSEA= 0.105) and the one-construct model ($\chi 2$/df= 7.543; CFI= 0.815; GFI= 0.801; TLI= 0.795; RMSEA= 0.135), and this indicates that the four search constructs are unique and different from each other.

4.2 Descriptive results

The means, standard deviations, and pairwise correlations are presented in Table 1, where it was found that dynamic capabilities (M= 3.71; SD= 0.864) and competitive performance (M= 3.68; SD= 0.739) were at a high level, while entrepreneurship orientation (M= 3.52; SD= 0.912) and digital leadership (M= 3.49; SD= 0.927) were at a moderate level. Further, the results indicated that competitive performance significantly correlated with dynamic capabilities (r= 0.30; p< 0.01), entrepreneurship orientation (r=0.44; p< 0.05), and digital leadership (r= 0.39; p< 0.05). Dynamic capabilities were positively associated with entrepreneurship orientation (r=0.34; p< 0.01) and digital leadership (r=0.26; p< 0.05), as well as digital leadership which has a positive correlation to entrepreneurship orientation (r= 0.42; p< 0.01). Hence, the multicollinearity was excluded in the research data set, as all correlation values were less than 0.80, which is the highest value of the permissible correlation indicated by (Hair et al., 2017). Therefore, the multicollinearity problem could not affect the validity of the research results.

Table 3
Hierarchical multiple regression for testing hypotheses

Variables	Entrepreneurship Orientation			Competitive Performance			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
DC	0.359***	0.261***	0.409***	0.257***	0.145**	0.119*	0.208***
EO					0.310**	0.240***	0.175**
DL		0.350***	0.218***			0.183***	0.142*
DC×DL			0.315***				0.152**
R^2	0.12	0.23	0.34	0.09	0.22	0.26	0.29
ΔR^2		0.11	0.11		0.13	0.04	0.03

Note: N= 102; DC: dynamic capabilities; EO: entrepreneurship orientation; CP: competitive performance; DL: digital leadership. * p<0.05; ** p<0.01; *** p<0.001.

4.3 Hypotheses testing

The Structural Equation Modelling (SEM) technique was used to verify the hypothesized relationships between research constructs by Amos 24, where it is considered a multi-construct technique that contributes to explaining the relationship between various research constructs whose results are listed in Table 3. The first hypothesis (H1) predicted that dynamic capabilities have a positive impact on competitive performance as the results support this hypothesis (B= 0.257; p= 0.000< 0.001). Moreover, the second hypothesis (H2) predicted that dynamic capabilities have a positive impact on entrepreneurship orientation, and the results indicated support for this hypothesis (B= 0.359; p= 0.000< 0.001). The third hypothesis (H3) expected that the entrepreneurship orientation has a positive impact on competitive performance, where the results indicated that this hypothesis was supported (B= 0.310; p= 0.002<.210.01). Moreover, the fourth hypothesis (H4) predicted that entrepreneurship orientation plays a mediating role in the relationship between dynamic capabilities and competitive performance, where the results obtained are consistent with this hypothesis based on the indirect effect of dynamic capabilities on competitive performance through entrepreneurship orientation (B= 0.111; p= 0.006< 0.01).

Table 4
Results of moderation effects in different levels of DL

	Estimate	SE	t	95% CI	
				LLCI	ULCI
Moderation effect of DL in the direct effect of DC on CP					
Low	0.0298	0.065	0.458	-0.0976	0.1572
High	0.7881	0.053	14.869	0.7777	0.7984
Moderation effect of DL in the indirect effect of DC on CP through EO					
Low	0.0163	0.047	0.346	-0.0758	0.1084
High	0.4324	0.058	7.455	0.3187	0.5460

Note: N= 102; DC: dynamic capabilities; EO: entrepreneurship orientation; CP: competitive performance; DL: digital leadership.

Regarding the hypothesis (H5a), which predicted that digital leadership moderates the direct relationship between dynamic capabilities and competitive performance, where the relationship is more positive at the high level of digital leadership. The results in Table 4 show that the interaction between digital leadership and dynamic capabilities to impact competitive performance was positive and statistically significant at the high level of digital leadership (estimate= 0.7881; 95% CIs= [0.7777-0.7984]), while it is not statistically significant at the low level of digital leadership (estimate= 0.0298; 95% CIs= [-0.0976-0.1572]). Consequently, this hypothesis was confirmed, as Fig. 2 illustrates the results that were reached. The last hypothesis (H5b) predicted that digital leadership moderates the indirect relationship between dynamic capabilities and competitive performance through entrepreneurship orientation, where the relationship is more positive at the high level of digital leadership.

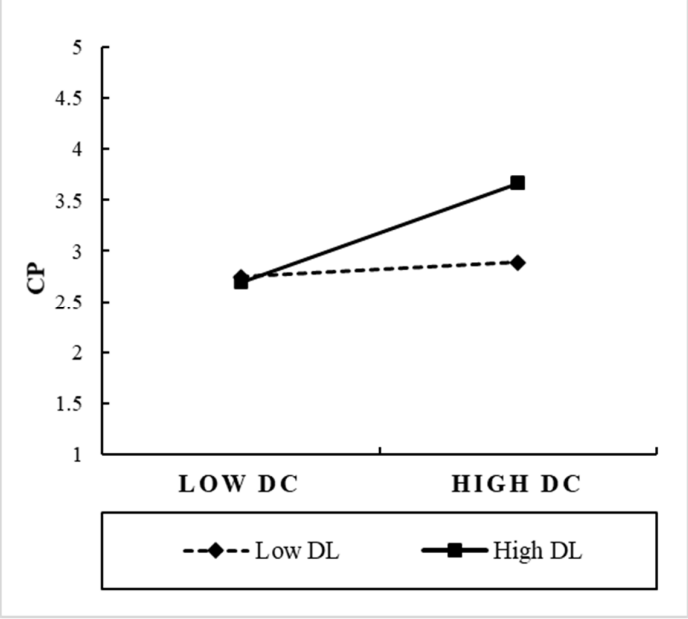

Fig. 2. Conditional interaction of DL on the direct relation of DC on CP

Note: DC: dynamic capabilities; EO: entrepreneurship orientation; CP: competitive performance; DL: digital leadership.

The results in Table 4 showed that the conditional indirect effect was positive and statistically significant at the high level of digital leadership (estimate= 0.4324; 95% CIs= [0.3187-0.5460]), while it is not statistically significant at the low level of digital leadership (estimate= 0.0163; 95% CIs= [-0.0758-0.1084]). Consequently, this hypothesis was confirmed, as Fig. 3 illustrates the results that were reached.

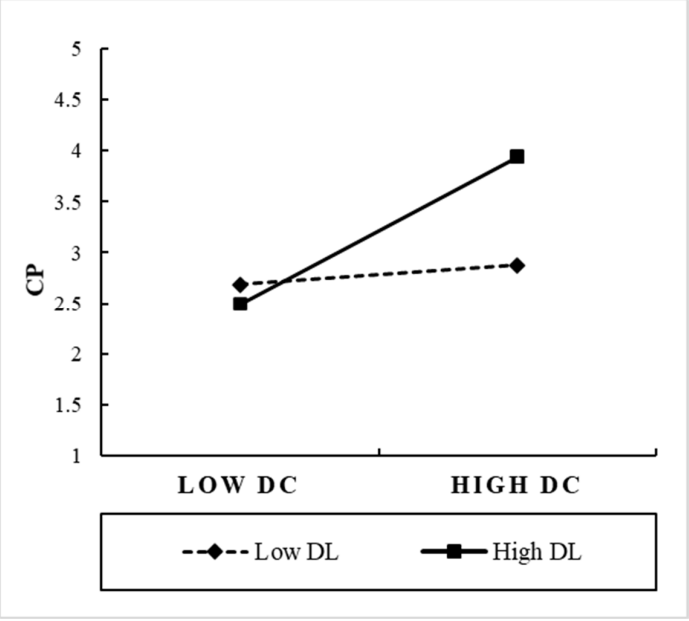

Fig. 3. Conditional interaction of DL on the indirect relation of DC on CP through EO

Note: DC: dynamic capabilities; EO: entrepreneurship orientation; CP: competitive performance; DL: digital leadership.

5. Discussion and Conclusion

The main purpose of this paper was to test the impact of dynamic capabilities on the competitive performance of entrepreneurial companies in Jordan through the mediating role of the entrepreneurship orientation and moderating role of digital leadership. It is evident from the results of the statistical analysis that the level of competitive performance was high. Therefore, companies' management is aware of the importance of competition based on responding to customer desires by providing high-quality products and services at appropriate prices in order to be able to aggrandize their market share and rapid growth. The level of dynamic capabilities in these companies was high, where this result indicates clear trends towards adapting to the changes in the business environment by enhancing the ability to sense changes and seize opportunities that are commensurate with the available resources to make the company more agile in facing the uncertainty of the business environment. However, the results showed a moderate level of entrepreneurship orientation. Consequently, the management of the entrepreneurial companies in Jordan is participating in global trends towards adopting business models focused on supporting innovation in products and services, despite its overwhelming awareness of accepting the risks associated with adopting such models to achieve the proactiveness in a highly sensitive and competitive business environment. As for digital leadership, the results indicated a moderate level for this variable. Thus, the management of these companies focuses on the theory of change in dealing with one of the most important factors affecting business development and harmony with technological advancement, by creating a digital culture at all administrative levels based on formulating transformational leadership strategies and supporting visions and competencies that contribute to the company's transition of intensity in applying new technology.

Moreover, dynamic capabilities have a significant positive impact on competitive performance, which is consistent with (Gyemang & Emeagwali, 2020; Mikalef & Pateli, 2017). This result explains the companies' reliance on developing their capabilities to understand and perceive changes in customer's desires that create new opportunities that these companies seek to seize by resetting their resources and directing them to exploit business environment opportunities. Enhancing these capabilities lead to improving the competitive position and responding to the customer's desires through offering products and services that are commensurate with their financial capabilities that meet the required quality levels. Besides, the entrepreneurship orientation mediates the positive relationship between dynamic capabilities and competitive performance, which is commensurate with the findings of (Abbas et al., 2019; Arend, 2014). Consequently, companies exploit their ability to adapt to the changing business environment through a proactive strategy focused on supporting innovation and accepting the risks associated with uncertainty. This strategy enhances the development of the competitive performance of the company by increasing the chances of overcoming competitors and entering new markets with innovative products and services that meet the customers' desires. Digital leadership has also a moderating impact on improving the relationship between dynamic capabilities, entrepreneurial orientation, and competitive performance. Therefore, the formulation of strategies that enhance the digital

culture that focuses on achieving goals by adopting foundations and methods that support the digital competencies of leaders, contribute to increasing awareness of the critical factors that lead to directing efforts and resources towards achieving excellence in the business environment and long-term success.

6. Research Implications

6.1 Theoretical implications

The results of this research provide several contributions to develop the dynamic capabilities view and transformational leadership within emerging business environments. First, most previous studies dealt with dynamic capabilities as an emergency strategy to face changes in the context of turbulent environments (Albort-Morant et al., 2018; Bitencourt et al., 2018; Violinda & Jian, 2016). Accordingly, this research argues that the potential value of dynamic capabilities can be exploited as a basic strategy for improving competitive performance and a supportive strategy for orienting organizations toward entrepreneurship, which is in line with the theory of change. Secondly, this research framework tries to complement previous research on aspects of competition between organizations, where the impact of dynamic capabilities on competitive advantage was tested in several experimental studies (Chukwuemeka & Onuoha, 2018; Correia et al., 2020). Indeed, the competitive advantage ensures the survival of the organization in the markets by exploiting its strengths to confront the threats that occur in a business environment, but access to a competitive advantage requires a long term that may lead to the faulty depletion of the organization's resources. This leads to one of the most important contributions of this research, which is the proposal to examine the impact of dynamic capabilities on the competitive performance that the organization can continuously monitor the development of its competitive advantage by providing appropriate standards to determine the accomplishment degree of competitive goals and recognize deviations and treat them in a timely manner. Finally, researchers dealt in several studies such as (Braf & Melin, 2020; Freitas Junior et al., 2020; Larjovuori et al., 2018; Promsri, 2019) the theoretical aspects of digital leadership, which is referred to as a fundamental development in transformational leadership to keep pace with the developments of the fourth industrial revolution. However, this research was conducted to highlight the practicalities and benefits of adopting digital leadership in organizations that may enable them to achieve their goals in volatile business environments.

6.2 Managerial implications

This research rivets the attention of managers and leaders of organizations to the significance of using clear criteria for determining competitive performance based on the speed of response to changing customer desires, accurate identification of the required quality, and an exhaustive realization of cost aspects of pricing the products and services competitively. Moreover, it provides managers and leaders with an insight into the areas where they should focus on improving the organization's ability to create value by relying on an early investment in learning capabilities and by overcoming uncertainty through developing technical and managerial manners that enhance their ability to discover the business environment and identify appropriate opportunities to direct the organization's resources towards exploiting them.

Besides, it provides solutions to integrate technological progress with the leadership style used in an organization to achieve its goals, where it improves the managers' and leaders' awareness of the necessity to transform the prevailing culture into a digital culture that enables the efficient and effective exploitation of employees' capabilities, and motivates them to develop their competencies to fit the era of digitization through intensive training on mechanisms to formulate and achieve the strategic goals which harmonize with the digital age. Further, this research helps them develop their organizations' entrepreneurship orientation by focusing intensely on research and development activities and motivating employees to provide ideas about the creative products and services which can proactively offer to control new market sectors, as well as contribute to enhancing their consideration of the risks associated with providing the creative products and service in hyper-competition markets.

7. Limitations and Future Research

Despite the theoretical and practical contributions that this research has indicated, it is not without some limitations that should be mentioned to tackle future research. First, this research was applied to the leaders in the entrepreneurial organizations who represented the research population. During the in-depth conduct of this research, it became clear that there are organizations seeking to modify their working mechanisms to be able to keep pace with the practical realities, before becoming entrepreneurial. Therefore, we recommend conducting future research to identify the substantiality of research variables in such organizations. Second, this research dealt with leaders who practice their activities in Jordanian organizations which are classified within the emerging Arab business environments. Hence, we suggest conducting similar future research within developed business environments and comparing their results with what this research achieved, in order to broaden the scope of results generalization in the event of different levels of economic development. Finally, the basis of this research is to study four variables in the strategic management field. Therefore, more future research based on the theory of change can be conducted in various strategic, organizational, or marketing aspects (e.g., market orientation, digital human resource management, and sustainable competitive advantage).

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