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The role of personal connections Wasta on early-stage entrepreneurial orientations: empirical evidence from Saudi Arabia

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Wasta (Nepotism) is a controversial concept and practice used in the Arab world, which is an informal networking style. A good number of studies have been published in this field, but concerning Wasta in relation to entrepreneurial orientation, "EO" is very limited. Based on institutional theory, this quantitative research aims to analyze the relationship between Wasta from the provider and receiver sides as an informal institution and the EO of entrepreneurs in three main regions of Saudi Arabia. Using the STATA program, Exploratory Factor Analysis and Multilevel regression models were applied to test the study propositions with a sample of Saudi early-stage entrepreneurs. Results reveal two significant findings: (1) the respondents in the Western region of Saudi tend to have a significant relationship with Receiving Wasta Activities as an independent factor and EO dimensions in terms of Innovativeness and Proactiveness, Autonomy and Risk-taking, while respondents in the Central region, only found to be significant with Autonomy and Risk-taking; and (2) the evidence shows that Competitive Aggressiveness, was only found to be significant in Providing Wasta Activities. This study contributes to the current knowledge by empirically finding the significant relationship between Wasta activities from the provider and receiver sides and the four dimensions of OEs amongst early-stage entrepreneurs in Saudi Arabia. The findings also are significant for policymakers and organizations to advocate their communication and networking channels. Limitations and future research lines are discussed.

Introduction

Entrepreneurs are a sustainable source of economic and social development in any nation. In this context, the Entrepreneurial orientation (EO) has received a speculative review from scholars, even with debate on its measurements and dimensions (Lyon et al. 2000; Josien, 2012; Aloulou, 2018; Yazdanpanah et al. 2023). This high level of interest is raised to measure the significant influence of entrepreneurial activity on economics and social development. In this sense, EO can be defined as the willingness of organizations to discover and pursue new opportunities and to seek to change business life (Morris et al. 2011). The concept relates to firm-level processes to achieve competitive advantage (Rauch et al. 2009; Covin and Wales 2012).

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However, It can be said that even if an entrepreneurial orientation is linked to the firm level, startup characteristics are still based on the founder or individual's level (Alshagawi et al., 2021). The relationship between entrepreneurship and EO is that entrepreneurship links to new entry, while EO represents "the entrepreneurial process, namely how entrepreneurship is undertaken—the methods, practices, and decision-making styles used to act" (Lee and Peterson 2000, p. 405; Lumpkin and Dess 1996; Zehir et al. 2015).

There are several empirical works highlighted the interrelations among informal institutions factors of entrepreneurs such as Wasta (Cunningham and Sarayrah 1993; Hutchings and Weir 2006; Al-Ramahi 2008; Loewe et al. 2008; Fidler et al. 2011; Mohamed and Mohamad 2011). The concept of 'Wasta' is similar to that of 'guanxi' in China (Yeung and Tung 1996; Luo and Chen 1997; Carlisle and Flynn 2005; Ledeneva 2008; Miao et al., 2022), 'blat' in Russia (Ledeneva 2008; Williams and Onoshchenko 2015; Ledeneva and Efendic 2021) and 'jeitinho' in Brazil (Smith et al. 2011; Fischer et al. 2022), which means that use of personal connections and links with others to achieve goals (Smith et al. 2011). Although, it can also be defined as "favors that privilege individuals based on personal connections" regardless of rights or qualifications (Mohamed and Mohamad 2011, p.412). However, these esteemed works are primarily conducted in Western and Latin America, with a few focusing on Eastern regions, including the Middle East (Aljarodi et al. 2022). The prior works build a foundation to explain this phenomenon, but getting the empirical explanation of Wasta's provider and receiver sides on EO wasn't clear, particularly in the context of Arab nations such as Saudi Arabia. The research objective is to fill this gap by empirically finding the interrelation between Wasta from the provider and receiver sides as an informal institution and the EO dimensions of entrepreneurs.

To achieve this objective, this study adapts Institutional Economics as a theoretical framework for understanding the relevance of environmental factors and recognizing the internal factors involved in the start-up characteristics based on the founder or individual's level (North 1990; 2005). Recently, an increasing number of studies on entrepreneurship have been grounded in institutional theories, especially in the sub-field of entrepreneurship (Welter 2011; Williams and Shahid 2014; Williams and Vorley 2015; Shahid et al. 2022). Notwithstanding, a few publications have studied the relationship between Wasta and EO by applying institutional theory (Cunningham and Sarayrah 1993; Loewe et al. 2007; Barnett et al. 2013). The seminal work of North (1990) divides institutions into formal institutions (laws and regulations) and informal institutions (norms, traditions and habits). These institutions might support entrepreneurial behavior and actions or challenge and constrain them (Welter and Smallbone 2011; Chen and Liu 2023). In this paper, Wasta is considered an informal institutional practice, and using the institutional theory can advance the meaning of the findings (Klofsten et al. 2019; Urban 2019).

The expected outcome of this research can yield several contributions. This paper precisely addresses the relationship between early-stage entrepreneurship and receiving and providing Wasta activities. Secondly, it tests the role of Wasta practices on EO dimensions, which include innovativeness and proactiveness, autonomy, risk-taking and competitive aggressiveness from a high collective society that is non-western nations (Welter 2011; Aljarodi et al. 2020). Third, Wasta, as a socio-cultural phenomenon, can help scholars in the area of entrepreneurship from a similar context to know more about different aspects of society such as people's relationships, power, tribes and clans, laws and regulations, and religious teachings, and entrepreneurs are part of all those aspects. Fourth, a range of reform policies have recently been put in place in Saudi Arabia to improve the society's well-being and economic development of the country under a strategic plan called Vision 2030 (Saudi Council of Economic and Development Affairs 2016), providing a contextualize policy implications should be alert the policies makers. Lastly, this study provides a more comprehensive and nuanced understanding of both the theorization and the practice of Wasta within the institutional and socio-cultural context of an Islamic society.

This paper is organized as follows: the following section introduces the literature review along with developing the objectives of the study; section 3 describes the methodology used to identify the relationship among the factors that related to informal institutions Wasta and entrepreneurial orientation; section 4 outlines the findings; section 5 reports the discussion and implications; and section 6 summarise the paper and pointed out the limitations that provide a recommendation for future research.

Literature review

Several scholars have sought to shed light on the relationship between EOs and the institutional environment (Guerrero & Urbano 2012; Klofsten et al. 2019; Urban 2019; Salamzadah et al. 2022). These research objectives are to assist different nations in sustaining their regional economics and societal needs. On the one hand, EOs, which is the concept, relate to firm-level processes to achieve competitive advantage (Rauch et al. 2009). EOs explain the process of entrepreneurs practices and decision-making (Lee and Peterson 2000, p. 405; Zehir et al. 2015; Lumpkin and Dess 1996). On the other hand, the institutional environment. For instance, North (1990; 2005) provides a theoretical advance, suggesting that institutions shape, organize and reduce the uncertainty of individual progress in each society. North (1990; 2005) distinct institutional into two dimensions: first, formal institutions that represent the government's written constitutions; second, informal institutions that epitomise the unwritten codes that drive social behaviors.

Entrepreneurial orientations. The previous study showed that three dimensions represent EOs: innovativeness, risk-taking, and proactiveness (Miller 1983). In the late 1990s, two additional dimensions were added by the scholars Lumpkin and Dess (1996): autonomy and competitive aggressiveness.

The first dimension of Eos is Risk-taking. According to the theoretical work by Lumpkin and Dess (1996), risk-taking refers to a readiness to enter uncertain markets, and without adequate resources, to pursue and generate futuristic opportunities, even while the expectation of failure is high. The second dimension of the OEs indicates a firm's willingness to boost innovation and produce novel products or services alongside its newness and technological management in developing new processes (Lumpkin and Dess 2001). Spreading connections among individuals in a society could lead to innovation and new potential markets and investors (Aldrich and Auster 1986; Wales, Covin and Monsen 2020; Li et al. 2023). The third is proactiveness, which can be defined as a process of taking actions in the present that are forward-looking and intended for future benefit. Entrepreneurs should be the market leaders, creators and pioneers of opportunities by introducing new products and entering new places. Proactiveness is also related to the speed of innovation (Shan et al. 2016). Additionally, this dimension suggested by Miller (1983) is linked to entrepreneurs' willingness to compete with business rivals (Lumpkin and Dess 1996) to achieve a good position or to enter new markets (Walter et al. 2006). The work conducted by Kingsley and Malecki (2004) revealed that informal networks motivate the desire to compete and stimulate

development for small firms. Lastly, Canavesio and Martinez (2007) mention that flexible networks can make up autonomous organizations. Elo (2005), however, states that interconnections can create problems and reduce a firm's autonomy and independence to make decisions.

Wasta and institutions. Wasta can be conceived as an informal institution that is not formally written or codified but is part of social norms and values (North 1990). Those practicing Wasta rely on connections, trust, power and feelings to achieve their goals. An interaction between formal and informal institutions, including cultures, norms, laws and regulations, shapes how Wasta is perceived and practiced within organizations (Zhang et al. 2021; Adham 2022; AlHussainan et al. 2023). Viewed through an institutional lens, tribes are also informal institutions and, in a Saudi context, play an essential role in mediating individuals' interactions with formal institutions (government laws and regulations). To achieve personal goals such as recruiting tribe members in high positions or allowing them to win contacts, 'Wasta' is a central mechanism to achieve this (Cunningham and Sarayrah 1993; Sidani and Thornberry 2013; Weir 2020; Abosag and Ghauri 2022). Wasta overcomes the problem of scarce information in that businesspeople attempt to use their networks and informal information to compensate for the imperfection of markets and their regulations (Ahlstrom and Bruton 2006; Puffer et al. 2010; Estrin et al. 2012; Webb et al. 2014; Alhussainan et al. 2023). Sidani and Thornberry (2013, p. 73) conceive of Wasta as an institutional mechanism to "control the organization, distribute wealth and riches among family members, or to sustain a family legacy." Due to the collective nature of Arabic nations (Hofstede et al. 1990) and the lack of a well-developed legal system, members of society depend on their families or in groups to achieve their goals (Sidani and Thornberry 2013). In other words, if governments do not develop formal laws and regulations, it leaves space open for other social conventions to play a role. In a Saudi context, personal connections and Wasta are essential social conventions that business organizations follow, using wider networks with other private or public institutions to win contracts or gain financial benefits (Sidani and Thornberry 2013). According to Kropf and Newbury-Smith (2016), new institutional theory can be used to articulate how Wasta provides a way to deal with weak formal institutions and bureaucracy.

Therefore, this paper adapts Institutional Economics as a theoretical framework for understanding the relevance of environmental factors and recognizing the internal factors involved in the start-up characteristics based on the founder or individual's level. According to Brandstaetter et al. (2016, p. 75), society comprises various economic institutions. They use the term society deliberately instead of state, as this places the focus of the analysis not only on regulations but also on cultural determinants and how individuals and organizations navigate both formal and informal institutions to achieve their goals (North 1990).

Thus, the relationship between EOs and personal connection has been studied by academic writers from different perspectives, such as the effect of network capability and EO on university spin-offs (Walter et al. 2006); EO, marketing and networks in developing economies (Boso et al. 2013; Lichy et al. 2021); networks, EO and the scope of internationalization (Falzensztein et al. 2015); EO and social embeddedness in ethnic minorities (Wang and Altinay 2012), and EO and social capital and the internationalization of SMEs (Zhang et al. 2012). This study proposes that Wasta appears as a part of the network, which needs to be investigated from receiving and providing sides to fully understand its relationships with entrepreneurial orientation at the individual level. Therefore, the study proposes the following Objectives:

- The role of Wasta in terms of Receiving and Providing in developing Entrepreneurial orientation.
- The impact of Wasta in terms of Receiving and Providing on developing entrepreneurial orientation.
- The relationship between Wasta in terms of Receiving and Providing and each dimension of entrepreneurial orientation.

Methods

Sample and data collection. The study begins with conducting a pilot test by distributing the questionnaires to 42 entrepreneurs. Only 25 were completed (11 paper copies and 14 web-based questionnaires). Slight adjustments have been made to several questions and statements for simplicity and to better fit the Saudi context (DeTienne & Chandler 2007; Aljarodi et al. 2022). Since the entrepreneurs spoke Arabic as their first language, translated the questionnaire was the initial first step (Aljarodi et al. 2022). To do so, two Saudi bilingual Ph.D. candidates and an entrepreneur fluent in both languages were consulted to provide feedback on the translation of the questionnaire. In the final step in the translation process, a Saudi who has been teaching Arabic for 21 years was asked to check the last version of the questionnaire.

However, researchers in social sciences have increased the use of the four sampling techniques: probability, purposive, convenience and mixed methods sampling (Teddlie and Yu 2007). The study used the mixed method sampling due to the difficulties of distributing questionnaires amongst individuals and organizations in many developing and emerging countries, including Saudi Arabia (Zapalska et al. 2017), and the method can be an effective means to minimize non-response rates (Kaplowits et al. 2004).

First, a purposive sampling technique was adopted to choose the selected sample of early-stage entrepreneurs formally registered as business owners to discover their level of formality, and that was sought to link that to the role of Wasta. This method is consistent with previous studies in entrepreneurship for selecting a specific group (Abu-Rumman et al. 2021). In this stage, the sample has been collected via a structured web-based (online) and paper questionnaire. Researchers frequently use these channels because they offer flexibility (Denscombe 2014) and the probability of a higher response rate (Kaplowitz et al. 2004). The targeted sample was Saudi early-stage entrepreneurs (i.e., those who were starting a business or had started a business within the past 3.5 years) in the following three large regions: the Western region, where the Islamic and commercial cities are located; the Middle region where the capital city Riyadh is located; and thirdly the Eastern region where industrial and oil companies are primarily operating (Almobaireek et al. 2014; Aldossari and Robertson 2016). The sample was emailed to a list provided by formal institutions such as the Chamber of Commerce, the Ministry of Commerce and the Ministry of Labor. However, after three emails and reminders to 447 respondents, 201 participants completed questionnaires.

In order to increase the sample size, the snowball sampling strategy was used (Shahid et al. 2016; Ram et al. 2008). The strategy can be defined as an informal technique used to find a target population (Atkinson and Flint 2001; Browne 2005). This sampling strategy focuses on the chosen sample and seeks a deeper understanding of individuals' lives (Browne 2005). Snowball (convenience) sampling is convenient, but it will likely

lead to selection bias due to its dependence on the researcher's personal networks (Atkinson and Flint 2001; Van Meter 1990). This was avoided in this study since the snowball sampling supplemented the list-based approach rather than being the sole sampling strategy. In this phase, 100 hard copies were distributed to friends who offered to circulate them to entrepreneurs in the three areas under study, and 35 responses were collected.

Response rate and bias. Sufficient responses are required to ensure the quality of any research and its statistical analysis. The data collection began in February 2017 and finished in June 2017. The total number of respondents who started the questionnaire was about 550, and 236 were completed (35 hard copies and 201 online). The sample size is at least ten observations per variable, as suggested by previous studies (Austin and Steyerberg 2015; Aljarodi et al. 2022). The final sample represents a 43% response rate, considered adequate based on the suggested rule. In the current study, there are seven predictors and a number of 236 completed questionnaires; therefore, it is considered acceptable based on the above suggestion.

Reliability analysis. The survey items were established based on benchmarking of previous studies (e.g., Hughes and Morgan 2007; Onoshchenko and Williams 2014; Shan et al. 2016; Franic and Williams 2017). To give more meaning to the collected data, the questions that indicate the same meaning were computed. For independent variables, the new variables are (Receiving Wasta Activities; using connections to receive Wasta) and (Providing Wasta Activities; using connections to provide Wasta for others) while for dependents variables, four new factors established to measure EOs, such as "innovativeness and proactiveness," "risk-taking," "competitive aggressiveness" and "autonomy". Cronbach's Alpha is recommended to determine the Internal consistency of the Likert scale items to see the scale's reliability (Gliem and Gliem 2003). According to Tavakol & Dennick (2011), a limited value of 0.7 or higher is acceptable for a reliable construct, although 0.6 is acceptable, especially for new scales (Nunnally and Bernstein 1978) or "in the early stages of research" (Hair et al. 2010, p. 2037). Based on the test conducted on the main six independent and dependent scales, the results revealed that most of the constructs were consistent with Cronbach's alpha limit of 0.7, apart from three of the scales close to this value, which will be discussed later in the findings.

Variables. All the questions were measured and answered using a five-point scale of 1 (strongly disagree) to 5 (strongly agree), apart from the demographic questions, which were measured using tick or multiple tick answers (Stone 1993). The questionnaire aimed to investigate the role Wasta plays in the Saudi entrepreneurial environment. The survey items were established based on benchmarking of previous studies (e.g., Hughes and Morgan 2007; Onoshchenko and Williams 2014; Shan et al. 2016; Franic and Williams 2017).

So, to achieve the objective of this research and based on previous studies (Hughes and Morgan 2007; Shan et al. 2016), the dependent variable is EO, which is measured with fifteen items Likert type scales, represented by the five dimensions of innovativeness, proactiveness, risk-taking, competitive aggressiveness and autonomy.

Receiving and providing Wasta practices served as the independent variables for this study. Based on the previous work of Onoshchenko and Williams (2014) and Franic and Williams (2017), the receiving and providing Wasta activities were established based on a 5-point Likert-type scale with 19 items computed to two new factors.

Consistent with previous studies, control variables incorporated demographic information from the participants. The respondents were asked about their age, gender, education level and business location. Drawing on the Global Entrepreneurship Monitor report (2017), the age group of entrepreneurs was between 18 to 64 years old. The levels of education included all the degrees, which were harmonized into two groups (the individual with a bachelor's degree and higher and zero for otherwise) to seek the influence of higher education on entrepreneurial action (Aljarodi et al. 2022). Regarding the location, this study aimed to concentrate on the three main regions of Saudi Arabia, which are Western, Eastern and Central, due to their historical and economic significance (Almobaireek et al. 2014; Aldossari and Robertson 2016; Aloulou and Alarifi 2022). Notwithstanding, the study focuses on early-stage entrepreneurship and businesses established between 0 and 42 months (Global Entrepreneurship Monitor, 2017).

It is recommended that before undertaking more detailed analysis, there is a need to perform a descriptive statistical analysis of the entrepreneurs. A descriptive technique was calculated to review the data and link it to the research questions, using frequency, percentage, mean and standard deviation.

Table 1 presents the descriptive analysis. This descriptive analysis indicates a dominance of male entrepreneurs in the sample, mostly aged between 18 to 36 years old. The majority of entrepreneurs also have at least a Bachelor's degree or higher, 73%, primarily located in Saudi's Western and Central regions. However, for dependents and independent factors, the results show that their value ranges from a minimum value of 2.99 to a highest of 3.95, indicating that most respondents agree with the statements provided by the study.

Analysis. The study applied three types of analysis: explanatory factor analysis for latent variables, descriptive analysis for the whole questionnaire, and multivariate regressions to test the relationships between dependent and independent variables.

First, EFA was undertaken to prepare the dataset for testing (Conway and Huffcutt 2003) and evaluate the measurements by reducing the variables and analyzing their interrelationship (Hair et al. 2010; Field 2013). Before this, two tests were conducted to examine the suitability of the dataset for factor analysis: Kaiser–Meyer–Olkin (KMO) and Bartlett's Test of Sphericity (BTS) (Field 2013). As a result, Table 2 shows that the final factor analysis results led to four *entrepreneurial orientation dimensions: innovativeness and proactiveness, autonomous risk-taking, and competitive aggressiveness*, with all values arranged by size. Each of these dimensions was gathered in a separate component, supported in the literature (Hughes and Morgan 2007; Shan et al. 2016), except for Innovativeness and Proactiveness, which were combined in one dimension. Exploring this a little more fully, the first set of components (1) had six statements linked to *innovative and proactive* actions, such as "*We initiate actions to which other organizations respond," "Our business seeks out new ways to do things*" and "*We excel at identifying opportunities.*" In the literature review, these items in the first component were separated, whereas here, they resulted in one group, with KMO values of 0.869, Cronbach's α of 0.860 and a significant value of BTS at 588.693. This suggests that both *Innovativeness and Proactiveness* have similarities in the way that respondents answered these questions, probably linked to the idea of taking the initiative. Regarding Autonomy, the four items that came together were related to providing employees with the freedom to act and communicate, namely, "*Employees are permitted to act and think without interference" and "Employees are given the freedom to communicate without interference,"* The results show a

Table 1 Description of variables.

Condition	Description	Mean /Freq	SD	Minimum	Maximum
Dep. Binary Variable: Entrepreneurial Orientation					
Innovativeness & Proactiveness	Q1: Our business seeks out new ways to do things Q2: Our business is creative in its methods of operation Q3:We excel at identifying opportunities Q4:We always try to take the initiative in every situation (e.g., against competitors, in projects and when working with others. Q5: We introduce improvements and innovations in our business Q6: We initiate actions to which other organizations respond	3.96	0.68	1	5
Autonomy	Q6: Employees are given freedom to communicate without interference Q7: Employees are given freedom and independence to decide on their own how to go about doing their work Q8: Employees have access to all vital information Q9: Employees are permitted to act and think without interference	3.38	0.86	1	5
Risk-Taking	Q10: The term 'risk taker' is considered a positive attribute for people in our business Q11: People in our business are encouraged to take calculated risks with new ideas Q12: Our business emphasizes both exploration and experimentation for opportunities	3.95	0.67	1	5
Competitive Aggressiveness	Q13: In general, our business takes a bold or aggressive approach when competing Q14: We try to undo and out-manoeuvre competition as best as we can Q15: Our business is intensely competitive	3.64	0.79	1	5
Independent variable					
Receiving Wasta Activities "RWA"	Q16: Receiving Wasta for Winning contracts Q17: Accelerating procedures Q18: Taking customers from competitors Q19: Finding business opportunities Q20: Receiving special bank service Q21: Receiving funds from supportive institutions Q22: Receiving services without queuing Q23: Buying cheaper services and products Q24: Making rules or laws work Q25: Circumventing rules-bureaucracy	3.28	0.89	1	5
Providing Wasta Activities "PWA"	Q26: Helping others to win contracts Q27: Helping others to Receive funds from supportive institutions Q28: Helping them to Receive special bank service Q29: Helping others to receive services without queuing Q30: Helping others to find a job Q31: Making rules or laws work Q32: Circumventing rules-bureaucracy Q33: Helping others to buy cheaper services and products Q34: Being introduced to useful people	2.99	0.91	1	5
Control variables					
Age	The respondents asked to identify their age. Harmonized into four groups				
18 to less than 27 years		0.25	59	18	27
27 to less than 36		0.36	85	27	36
36 to less than 45		0.23	55	36	45
45 and higher		0.16	37	45	64
Gender	Take value one when the participants selected male gender, zero for female	0.80	0.39	0	1
Higher education	The respondents asked to identify their education. (harmonized into 1 for who attained secondary education and higher; zero otherwise)	0.73	0.44	0	1
Region	The respondents asked to identify their region				
Western		0.43	0.49	0	1
Eastern		0.22	0.41	0	1
Central		0.35	34	0	1

KMO value of 0.743, α 0.800 and a BTS that was also significant at $p < 001$.

The third dimension of EO is called *risk-taking*, measured by three statements. The KMO test result was 0.658, α at 0.748 and BTS at 176.160. Firstly, the statement *"The term 'risk taker' is considered a positive attribute for people in our business"* had the highest value of all the dimensions with 0.871. The second statement, "People in our business are encouraged to take calculated risks with new ideas," also had a high loading of 0.797. In contrast, the third item, *"Our business emphasizes both exploration and experimentation for opportunities,"* had a lower value of 0.787, although this was still considered acceptable.

Table 2 The values of (EO) components' loadings and Cronbach's alpha (α).

Construct	Loadings	Factor Analysis		Reliability Analysis
		KMO	Bartlett test	Cronbach's α
EO: Innovativeness & Proactiveness		0.869	588.693	0.860
Q1: Our business seeks out new ways to do things	0.839			
Q2: Our business is creative in its methods of operation	0.791			
Q3: We excel at identifying opportunities	0.774			
Q4: We always try to take the initiative in every situation (e.g., against competitors, in projects and when working with others	0.772			
Q5: We introduce improvements and innovations in our business	0.761			
Q6: We initiate actions to which other organizations respond				
EO: Autonoma		0.743	321.525	0.800
Q6: Employees are given freedom to communicate without interference	0.861			
Q7: Employees are given freedom and independence to decide on their own how to go about doing their work	0.834			
Q8: Employees have access to all vital information	0.773			
Q9: Employees are permitted to act and think without interference	0.703			
EO: Risk-taking		0.658	176.160	0.748
Q10: The term 'risk taker' is considered a positive attribute for people in our business	0.871			
Q11: People in our business are encouraged to take calculated risks with new ideas	0.797			
Q12: Our business emphasizes both exploration and experimentation for opportunities	0.784			
E: Competitive Aggressiveness		0.600	118.330	0.666
Q13: In general, our business takes a bold or aggressive approach when competing	0.856			
Q14: We try to undo and out-manoeuvre competition as best as we can	0.811			
Q15: Our business is intensely competitive	0.628			

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

The fourth dimension was called the *Competitive Aggressiveness* dimension, which had only three items ranging from 0.628 for *"Our business is intensely competitive"* to 0.855 for "*We try to undo and out-manoeuvre competition as best as we can*" and 0.811 for *"In general, our business takes a bold or aggressive approach when competing."* All these three statements link to the idea of competition, with KMO value of 0.600, α 0.666 and BTS value of 118.330. The factor loading scores were all sufficiently high to mean that all three statements could be retained.

Second, regarding the independent variables, factor analysis was performed for receiving Wasta activities. Prior to running the analysis, this scale had 13 items. It can be seen in Table 3 that the sample was adequate, with a KMO value of 0.899 and a BTS that was highly significant at $p < 0.001$. Regarding the Eigenvalues, the first item explained 50.65% of the total variance. Using Principal Component Analysis, after extracting three items (Receiving Wasta to get information, being introduced to important people and developing customer relations) due to high cross-loading or low values, the thirteen items became ten in just one component. The items "Accelerating procedures" reached the highest loadings (0.756 and 0.751), respectively, whereas "Circumventing rules-bureaucracy" had the lowest loading of 0.621. Regarding the reliability of receiving the Wasta activities scale, Cronbach's Alpha of the ten remaining items value was high at $\alpha = 0.889$.

Similarly, a factor analysis test was conducted for the scale Providing Wasta Activities. The KMO measure of sample adequacy was 0.905, which is very good according to the criteria of Hutcheson and Sofroniou (1999). Bartlett's measure was also significant with $p < 0.001$, meaning the variable is ready for factor analysis testing. Nine of the eleven items were included, two were removed due to their low loadings, and all nine items were gathered in one-factor component. It also showed Cronbach's alpha value of $\alpha = 0.887$.

Lastly, to respond to the objectives, multivariate regression analysis explains the extent to which independent variables predict the dependent variable. This type of analysis has several techniques, such as standard, hierarchical and multiple regressions (Pallant 2013). The use of multivariate regression is due to multiple dependent and independent factors. A multiple regression test was conducted to find the best predictors to interpret the outcome variables (Field 2013). Discovering statistics using STATA 14.1 (Table 3).

Results

Correlation between variables. Table 4 reports the nature of the correlations between the dependent and independent variables, setting out the statistical significance of relationships between variables. RWA presents a positive relationship to each dimension of Entrepreneurial Orientation, while PWA shows only a positive correlation to Autonomy and Competitive Aggressiveness. For instance, there is a positive correlation between *Providing Wasta activities* and *autonomy* $r\ (236) = 0.17$, $p = 0.001$, which means the more Wasta activities are provided, the more autonomy is adopted. In reality, this means that owners and entrepreneurs who have autonomy within start-ups could give them the independence, power, and ability to help and support other people by providing favors. However, the multicollinearity test was conducted using the variance inflation factor (VIF), showing that multicollinearity is not a problem to be considered in our data, and we have an acceptable level to proceed (Hair et al. 2010).

Multivariate regression. Table 5 includes the results of Multiple linear regressions to predict each dependent variable within OEs: Innovativeness and Proactiveness, Autonomy, Risk-taking and Competitive aggressiveness. In a separate linear regression, each of these variables was tested in relation to the following predictors: Receiving Wasta Activities "RWA" and Providing Wasta Activities "PWA."

Model 1 reports a multivariate regression test, which was performed to predict Innovativeness and Proactiveness. The model explained 6.57% of the variances in the DV ($R = 0.0657$),

Table 3 The values of (RWA) and (PWA) components' loadings and Cronbach's alpha.

Construct	Loadings	Factor Analysis		Reliability Analysis
		KMO	Bartlett test	Cronbach's α
Receiving Wasta Activities "RWA"		0.899	1010.146	0.889
Q16: Receiving Wasta for Winning contracts	0.756			
Q17: Accelerating procedures	0.751			
Q18: Taking customers from competitors	0.747			
Q19: Finding business opportunities	0.721			
Q20: Receiving special bank service	0.716			
Q21: Receiving funds from supportive institutions	0.714			
Q22: Receiving services without queuing	0.713			
Q23: Buying cheaper services and products	0.697			
Q24: Making rules or laws work	0.671			
Q25: Circumventing rules-bureaucracy	0.622			
Providing Wasta Activities "PWA"		0.905	922.302	0.887
Q26: Helping others to win contracts	0.775			
Q27: Helping others to Receive fund from supportive institutions	0.770			
Q28: Helping them to Receive special bank service	0.770			
Q29: Helping others to receive services without queuing	0.764			
Q30: Helping others to find a job	0.728			
Q31: Making rules or laws work	0.726			
Q32: Circumventing rules-bureaucracy	0.700			
Q33: Helping others to buy cheaper services and products	0.649			
Q34: Being introduced to useful people	0.639			

Extraction Method: Principal Component Analysis.
a. 2 components extracted.

and this model was found to be a significant fit to the data F (8227) = 0.0491, $p < 0.01$. After observing all the independent variables, the regression model shows a positive and significant relationship between Receiving Wasta activities and both innovativeness and proactiveness at (B = 0.165, $p = 0.01$). Regarding control variables, the West region displays a significant negative sign (B = −0.175, $p = 0.10$). These results explain that higher scores on Receiving Wasta Activities predict higher scores on entrepreneurs' Innovativeness and Proactiveness. It was noticed that those entrepreneurs who started businesses in the West are more likely to have low scores in innovativeness.

Model 2 shows a regression test, which was run to predict the entrepreneurial orientation dimension "Autonomy." The model was found to explain 7.60% of the variances in entrepreneurial Autonomy (R-square = 0.0760), and the model was found to be a significant fit to the data F (8227) = 0.0261, $p < 0.01$. By observing all the predictors, the second regression model indicated that only three independent variables were statistically significant: Receiving Wasta Rewards (B = 0.135, $p < 0.1$), Western Region of Saudi (B = −0.253, $p = 0.01$), and Central Region of Saudi (B = 0.301, $p < 0.1$). This explains that higher scores on Receiving Wasta Rewards predict higher scores on entrepreneurial orientation (Autonomy) and that Saudi entrepreneurs living in the Central Region have higher scores on autonomy. In contrast, the ones in the Western region perceive a lower autonomy score.

Similarly to models 1 and 2, a third regression analysis was conducted to predict Risk Taking, which was found to explain 9.38% of the variances in the DV (R-square = 0.0938), and the third model was found to be a significant fit of the data F (2227) = 0.0048, $p < 0.001$. It was found that the regression model provided a strongly significant and positive relationship between Receiving Wasta Activities and Risk-taking (B = 0.208, $p = 0.001$). Regarding the control variables, the results indicate a negative and significant relationship of the higher age group above 45 years old (B = −0.246, $p = 0.1$). Regarding the region, it was found that the entrepreneurs who live in the Western region have a negative and significant relationship in the model at (B = −0.214, $p = 0.01$) while a positive and significant relationship of the ones who live in the Central region (B = 0.229, $p = 0.01$). This explains that higher scores on Receiving Wasta Activities predict higher scores on Risk Taking.

Lastly, in order to predict entrepreneurs' Competitive Aggressiveness, the fourth regression test performed showed that the final model was found to explain 8.34% of the variances in the Competitive Aggressiveness (R-square = 0.0834), and the model was found to be a significant fit to the data F (8227) = 0.0358, $p < 0.01$. By observing all the predictors, the final regression model provided only one significant predictor: Providing Wasta Activities (B = 0.120, $p = 0.1$). This explains that higher scores on Providing Wasta Activities predict higher scores on Competitive Aggressiveness.

As a result, four regression tests were conducted with every dimension of entrepreneurial orientation to explain the role of Wasta practice. The first dimensions of EO are Innovativeness and Proactiveness, which were significant with Receiving Wasta Activities and the West Region. In respect of the second and third dimensions, Autonomy and Risk-taking, both Receiving Wasta Activities in Western and Central Saudi had a significant relationship. Lastly, the fourth dimension, Competitive Aggressiveness, was only found to be significant in Providing Wasta Activities.

Discussion

This research examines the interrelation between Wasta from the provider and receiver sides, as an informal institution and the EO dimensions of entrepreneurs. The findings of the relationship between Wasta activities and entrepreneurial orientation are divided into four parts.

The first indicates the significant relationship between Wasta as an independent and dependent factor of innovativeness and proactiveness as the first dimension of entrepreneurial orientations. The regression findings revealed that receiving Wasta activities can predict and increase the innovativeness and

Table 4 Bivariate correlation.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	VIF
DV: Innovativeness &Proactiveness	1												1.57
DV: Autonomy	0.31***	1											1.27
DV: Risk-Taking	0.54***	0.35*	1										1.58
DV: Competitive Aggressiveness	0.37***	0.29***	0.28***	1									1.26
IV: RWA	0.16**	0.19***	0.16**	0.18***	1								1.94
IV: PWA	0.08	0.17***	0.03	0.19***	0.67***	1							1.94
Age	−0.099	−0.013	−0.13*	0.01	0.02	−0.03	1						1.06
Gender	0.02	0.04	−0.08	0.05	0.09	0.07	0.09	1					1.06
Higher education	−0.01*	−0.09	−0.14**	−0.02	0.14	0.21	−0.16	−0.10	1				1.17
Region/Western	−0.11*	−0.09	0.14**	−0.02	0.14**	0.21***	−0.02	0.01	0.11*	1			1.86
Region/Eastern	0.07	−0.03	0.01	−0.01	−0.07	−0.09	−0.06	−0.07	−0.29***	−0.46***	1		1.38
Region/Central	0.06	0.12*	0.14**	0.02	−0.08	−0.12**	0.06	0.04	0.13**	−0.63***	−0.39***	1	1.84

***Significant at p # 0.001; **significant at p # 0.01; *significant at p # 0.10.

proactiveness of entrepreneurs. This finding reflects those of Aldrich et al., (1986), who demonstrate that individuals with wide networks have a higher potential to be innovative. An explanation for this might be that Wasta's activities can motivate him/her to meet different people, encounter and solve various problems, and lead to innovative and proactive ideas and actions. Surprisingly, the participants in the country's Western region had a significant negative correlation with innovativeness and proactiveness. It might be related to the fact that most of the ministries' accelerators and supporting institutions are located in the capital city, Riyadh, which is the Central Region of Saudi Arabia; this might act as a barrier for participants in the Western part to be more innovative.

Secondly, the results show that the relationship between Wasta activities and the entrepreneurial orientation 'autonomy' is significant with a positive relationship. This finding broadly supports the work of Canavesio and Martinez (2007) in this area, linking networking with autonomy, and Elo's (2005) work, which suggested that networking could lead firms to be dependent. This result may be explained by the fact that when entrepreneurs receive Wasta and compensate the providers for this favor, this might make the entrepreneurs feel that Wasta providers will not wait for any reward or exchange. In other words, it was like a completed deal between two parties. The entrepreneurs in the Central Region also showed a positive and significant relationship with autonomy, while the Western Region found it to be negatively significant.

Thirdly, the finding of the relationship between Wasta practices and the third EO, 'risk-taking,' revealed that receiving Wasta activities predicts a higher level of risk-taking. This finding is consistent with that of Motoyama and Knowlton (2017), who stress that having more networking will lead to increased risk-taking. An interpretation of this can be that having spread networks will motivate entrepreneurs to take higher risks and give them some courage to do so. In other words, when entrepreneurs own wide connections, particularly in different organizations, they might think that if something serious were to happen, those connections would be there to support them. Like Autonoma, entrepreneurs in the Central Region showed a positive and significant relationship, unlike the ones in the Western Region.

Finally, an interesting finding showed that when entrepreneurs provide Wasta activities to others, this positively predicts the fourth entrepreneurial orientation dimension of 'competitive aggressiveness.' This result may be explained by the interpretation that when entrepreneurs help others in activities like finding a job, buying cheaper services and products or making rules or laws work, this might provide entrepreneurs some implicit power to be aggressive by expecting that those people who have received Wasta will support them to enter new markets (Walter et al. 2006), and that depends on the influence of the people they helped. This is in line with previous studies (Álvarez et al. 2009; Husain et al. 2016), which each confirm that networking can maximize the competitiveness of start-ups.

Implications. This study's results and discussion sections reveal how the widespread phenomenon of 'Wasta' is perceived and practiced amongst Saudi early-stage entrepreneurs. The research focused on the role of Wasta in aspects of EOs. This phenomenon is affected and surrounded by Islamic teachings and social, economic and cultural considerations, and it is crucial that it is given further empirical research and attention. Religious, economic, psychological and social scholars should, therefore, play an increasing role in clarifying the positive and negative aspects of Wasta, including its relationship to corruption and illegal practice and its relationship to the positive facet of social networking and

Table 5 Multivariate regression results of Entrepreneurial Orientation.

VARIABLES	Model 1 (Innovativeness & Proactiveness)		Model 2 (Autonomy)		Model 3 (Risk Taking)		Model 3 (Competitive Aggressiveness)	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Dependent variables								
RWA	0.165**	0.067	0.135*	0.084	0.208***	0.065	0.084	0.077
PWA	−0.037	0.066	0.089	0.083	−0.095	0.064	0.120*	0.078
Control variables								
Age								
27 to less than 36	0.041	0.117	0.047	0.148	0.007	0.115	0.197	0.136
36 to less than 45	−0.034	0.129	−0.030	0.163	−0.148	0.126	−0.024	0.150
45 to less than 65	−0.225	0.143	−0.071	0.180	−0.246	0.140	0.178	0.166
Gender	−0.012	0.113	0.067	0.142	−0.154	0.111	0.012	0.131
Education	−0.012	0.107	0.174	0.135	0.047	0.100	−0.158	0.119
Region								
Western	−0.175*	0.102	−0.253**	0.115	−0.214**	0.090	−0.081	0.107
Eastern	−0.028	0.126	−0.138	0.155	−0.009	0.113	−0.014	0.133
Central	0.028	0.127	0.301**	0.128	0.229**	0.092	0.095	0.109
Observations	236		236		236		236	
R-squared	0.0657		0.0760		0.0938		0.0834	
Adjusted R2	0.0284		0.0392		0.0619		0.0164	

The reported coefficients are marginal effects. ***Significant at p # 0.001; **significant at p # 0.01; *significant at p # 0.10.
The reference group for age is 18 to less than 27 years old.

communication skills, so as ultimately to arrive at an understanding of how Wasta can be practiced ethically.

Since start-ups encounter various challenges, especially regarding registration and formality, policymakers should continuously revise and improve the laws and regulations for start-ups. Firstly, the Small and Medium Enterprises General Authority (Monshaat) has to play a more active and supervisory role in developing and supporting Saudi start-ups by easing and reducing requirements for doing business, facilitating the laws and regulations issued by other government institutions, providing entrepreneurial firms with consultancy and advice services, and also ensuring that it continuously receives feedback from start-ups. Secondly, the Council of Ministers has to study the asymmetry between the laws and implementations in the private sector, make further efforts to improve both the laws and regulations as formal institutions and enhance the norms and notions in society. To conclude, a more integrated focus among government institutions to deal with the issues of entrepreneurial firms will increase mutual trust between the government, entrepreneurs and members of society.

At the entrepreneurial level, start-up owners should pay more attention to building and developing their networks and relationships with customers, suppliers, and stakeholders, in addition to close connections. Related to this, entrepreneurs should give attention to social acceptance and legitimacy and the prosperity of society and avoid practices considered corrupt or harmful and infringe others' rights. Entrepreneurs need to recognize and understand their employees' behavior, attitudes, and practices of Wasta within start-up transactions, and what activities of Wasta are consistent with business ethics and what are not. Entrepreneurs should develop their managerial and leadership skills and make further efforts to be independent and informed about the legal system.

Conclusions

This research has investigated the relationships between Wasta practices and entrepreneurial orientation. An online questionnaire was designed and distributed to entrepreneurs in three main regions, with 236 completed responses. STATA was used to analyze the data through explanatory factor analysis, Cronbach's alpha, descriptive analysis, correlation and multiple linear regressions to test the relationships. The study tested the relationships between Wasta in the demand and supply sides and entrepreneurship, representing EOs. Receiving Wasta activities and being in the Western region were found to be significantly related to innovativeness and proactiveness, autonomy and risk-taking dimensions, while Receiving Wasta activities and being in the Central region were significant with autonomy and risk-taking. However, providing Wasta activities was only significant with competitive aggressiveness.

Limitations and future research. It notices some limitations this research faces, which will provide avenues for future studies. The study noticed the limited number of literature on Wasta in the context of Saudi Arabia. The limited number turned to relying on earlier studies and incorporated them. Consequently, an extensive research gap exists in terms of linking Wasta to entrepreneurship, and it would be interesting to extend the scope of this study beyond Saudi Arabia to include other countries in the Middle East and further afield. It would also be interesting to examine if there were any differentials according to gender, especially in parallel with recent Saudi state decisions to empower the role of women in society.

As mentioned earlier, the field of entrepreneurship is still new in most developing and Arabic regions, so the researcher concentrated on studying the early-stage entrepreneurs (0–42 months) in three main regions in Saudi Arabia. This limitation prevented the researcher from meeting and surveying entrepreneurs who started their entrepreneurial projects more than 42 months prior to the data collection. It is proposed that scholars study how Wasta and its practices can influence firm performance in later entrepreneurship stages and the success or failure of entrepreneurial firms.

As reported in the regression analysis results, the weakness in significance values of relationships between independent and dependent variables suggests a need to study the other factors affecting Wasta and EOs for entrepreneurs more deeply. For instance, studying the socio-cultural, political, psychological, and

economic factors might reveal supportive and complementary roles that would help to develop a fuller understanding of the phenomenon of Wasta and its effect on society.

The response rate was another issue due to the length of the questionnaire, more than 400 entrepreneurs started to answer the questionnaire but did not complete it. The returned completed responses were 236 copies. The researcher attempted to resend messages to all respondents to encourage them to complete the questionnaire and provide them some time, but there was no significant response. Therefore, it suggests that future research from similar contexts apply different tools and techniques to reach their targeted sample size.

Data availability

The datasets used for the current study are available in the attached supplementary file.

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Author contributions

All authors have read and approved the final manuscript and agree to be accountable for all aspects of the research.

Competing interests

The authors declare no competing interests.

Ethical approval

NAA requested ethical approval from Sheffield University. On 17th November 2015, Sheffield University granted ethical approval to the research. Therefore, the research study was conducted in accordance with ethical guidelines and principles, and the research protocol and procedures were reviewed and approved by Sheffield University/Prof. Colin Williams and Dr. Peter Rodgers. The approval from the IRB/EC ensures that the study design, data collection methods, and ethical considerations meet the necessary standards for conducting research involving human participants. If there is any question, you can contact Prof. Colin Williams.

Informed consent

NAA (the study's first author) conducted the informed consent process before any study-related procedures. He asked participants for explicit consent for their data to be shared in this way, and if they agreed, he ensured that the data collected about them was untraceable back to them before allowing others to use it. This statement was identified before the survey started for participants to do the survey. He has also included it in the supplementary file of ethical approval. Thus, the consent process and documentation were designed to prioritize the protection of participants' rights, autonomy, and welfare throughout the study and followed the guidelines of Sheffield University. The author ensures that all the information and data are collected for academic purposes to participants. They will be handled, kept and stored strictly in confidentiality and anonymity within the research team who are aware of the research ethics.

Additional information

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