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Article

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How entrepreneurial competencies influence the leadership style: A study of Saudi female entrepreneurs

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Abstract: This study examines a group of women entrepreneurs of small and micro businesses in Hail, Riyadh and Eastern regions of Kingdom of Saudi Arabia. The study aims to identify the particular style of leadership displayed by these women entrepreneurs; and whether all their competencies have the same or different influence on their task-oriented or people-oriented leadership styles. The respondents were initially identified through various organizations such as Wa'ed (Aramco's entrepreneurship centre), MISK Foundation and Monsha'at. Subsequently, we finalized female-owned small businesses that are operating for minimum two years in their respective business area as our target respondents. The survey questionnaire was sent to 310 women entrepreneurs after obtaining their approval. A total of 211 filled surveys were received. The responses having repetition or missing data were deleted which resulted in 174 surveys which were analyzed using SPSS. Surprisingly, the results indicate that our respondents exhibit a higher score of task-oriented leadership style. The female entrepreneurs who possess high degrees of business and management, relationship, entrepreneurial and human relation skills are found to incline towards task-oriented leadership style. The relationship and entrepreneurial competencies show a positive influence on the people-oriented

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leadership style. On the other hand, business and management, as well as entrepreneurial and human interactions, show a positive influence on task-oriented style of leadership.

Subjects: Social Entrepreneurship; Leadership

Keywords: Female entrepreneurs; entrepreneurial leadership; entrepreneurial competencies; leadership competencies; leadership style; Saudi Arabia

1. Introduction

In order to address the ever-changing and competitive design of current organizations, entrepreneurial leadership has been applied as a relatively emerging model. Successful entrepreneurial leadership is seen as a foundation of competitive edge as the market situation becomes more challenging, uncertain, and diverse (Küpers & Weibler, 2008), predominantly crucial for development of small business (Thorpe et al., 2009). Because of its significance in enhancing productivity, performance and development of all types of companies, this leadership style has received increased attention from both academicians and managers (Bagheri et al., 2020; C. Harrison et al., 2016, 2018; Cai et al., 2018; Clark et al., 2019; Gupta et al., 2004; Huang et al., 2014; Karol, 2015; Koryak et al., 2015; Leitch et al., 2013; Newman et al., 2018; Renko et al., 2015). By focusing on identification of opportunities and innovation, particularly in extremely dynamic, unstable and unpredictable markets, entrepreneurial leaders produce new ideas to resolve the business problems, and also lead the process of opportunity recognition and innovation in their company (Bagheri & Akbari, 2018; Bagheri et al., 2020; Bagheri, 2017; C. Harrison et al., 2018; Chen, 2007; Fontana & Musa, 2017; Kim et al., 2017; Omeihe et al., 2020).

In order to define the dominant presence of men in leadership roles, entrepreneurial leadership research is frequently depicted as male (Hamilton, 2013; Henry et al., 2015; R. Harrison et al., 2015). Such strategy limits our tacit perception of the distinctive entrepreneurial know-hows and achievements of females and other minority groups' (Brush et al., 2009; Welter, 2011) and leads to contradictory images of women entrepreneurial leaders (Chasserio et al., 2014; Diaz-Garcia and Welter 2013).

Although there is substantial evidence for adopting the contextual integration perspective in entrepreneurship research, limited consideration is given to the experiences of female entrepreneurs in various countries, and to the use of feminism in entrepreneurship research (A. Rehman & Elahi, 2012; De Bruin et al., 2007; Welter, 2011). The social and cultural settings of Saudi Arabia are different from other nations in various respects (A. U. Rehman, 2017, 2021). Although there appear to be universal challenges for female entrepreneurs, the unique culture of the Saudi Arabia poses a unique set of obstacles (A. Rehman & Alnuzhah, 2022). The issue needs exploration as women's role is distinctively separated from men in the tribal and male-dominated culture of Saudi Arabia, and traditionally falls within the family domain where women are considered less competent and assertive than men (Hofstede, 2001). Regarding women in the workforce, the organizational environment of the Arab region, particularly Saudi Arabia, is passing through a period of significant transition. Women from metropolitan areas have shown a significant improvement in education, employment, and social participation in Arab countries (A. U. Rehman & Fazli, 2022; El-Ghannam, 2002). The Saudi Vision 2030 has placed a lot of emphasis on encouraging female participation in the work force and boosting the percentage of women in the labor force from 22% to 30%. However, according to research on women in top executive positions in the Middle-East, notably the UAE, Oman, and Bahrain, these women faced obstacles such as unfriendly work environments, cultural challenges, negative attitudes toward working women, and a lack of trust and confidence in women managers (Wilkinson, 1996). According to research, female entrepreneurs face a variety of difficulties brought on by many internal and external variables (Singh & Singh, 2008b). Due to their traditional family values, Muslim women encounter challenging problems, although the economic climate is favorable to new businesses (Itani et al., 2011).

In the context of the Middle-east, where social and cultural norms are regularly noted to have a significant influence on the entrepreneurial experiences of Arab women and impede their development, this gap is particularly apparent (Alreshoodi et al., 2022; Tlaiss 2015a; Al Dajani & Marlow, 2010). Therefore, we intend to examine how Saudi female entrepreneurs identify with and view themselves in relation to the idea of entrepreneurial leadership. This research takes a significant step towards addressing the intricacy and individuality of the experiences of Middle-eastern women as entrepreneurial leaders.

While previous studies have shown that leading and managing style is formed on the basis of personal traits and characteristics of a leader, there are limited studies which provide solid links between leader's competencies and leadership style. By specifically exploring the contribution of competencies in defining the leadership style of female leaders using a quantitative approach, the current study bridges this gap. Recognizing that similarities between women's groups will allow a better understanding of gender processes in this perspective (De Bruin et al., 2006), our study examines a group of women entrepreneurs in the Hail, Riyadh and Eastern regions of Kingdom of Saudi Arabia using a quantitative survey, and provides a detailed analysis of their competencies and leadership styles. This study specifically focuses on the particular leadership styles displayed by female leaders, and the degree to which these styles are affected by the precise competencies demonstrated by these women entrepreneurs.

The experiences of female entrepreneurs in various geographical and cultural contexts, as well as the application of feminist theories in entrepreneurship studies, has received very little attention, despite the compelling evidence for adopting the perspective of contextual embeddedness (De Bruin et al., 2007; Singh, 2012; Welter, 2011; Zahra & Wright, 2011). This disparity is particularly pronounced in the Arab context, where societal values are often reported to have a significant impact in Arab women's entrepreneurial experiences and restricts their growth (Al Dajani & Marlow, 2010; Al-Mamary & Alraja, 2022; Tlaiss, 2015b). Women's roles in Arab nations, particularly Saudi Arabia, are understudied when it comes to gender research, and the majority of those studies focus on women's household responsibilities, political engagement, and health issues rather than their management and leadership styles (Budhwar & Mellahi, 2006; Hutchings et al., 2010). Despite the remarkable role Arab women are playing in driving the transformation process in Arab societies and their ongoing efforts to achieve equality and take positions of leadership in workplace organizations, it is observed that the majority of available and ongoing gender research examines women's roles and management style in Western societies rather than in Arab societies (World Bank, 2013). This study attempts to fill this knowledge gap and offer fresh perspectives on Arab women in this area.

We provide two unique additions to the existing research in this study. First, we offer fresh understanding into the leadership styles embraced by Saudi women leaders. For this study, a female entrepreneur is defined as the leader of a business which is wholly or mostly owned and operated by women (Carter & Shaw, 2006). Second, we particularly examine the contribution of the competencies of owners in defining the leadership style. We use inferences from the general leadership research bodies, the recently developed entrepreneurial leadership studies, and the literature on gender psychology to develop our understanding because of the restricted existing research on the subject of small business and gender literature. We provide a complete view of the female entrepreneurial leadership within small businesses, after synthesizing these various strands of literature.

This study responds to (Calás et al., 2009) appeal for the inclusion of feminist theories in the field of entrepreneurship, where entrepreneurship can be re-conceived as "a social action" as opposed to "an economic activity," and as a result, "social change" can take place. We chose to investigate how this process of negotiating resources is linked to identity construction and, therefore, a social phenomenon using an antenarrative process by giving voice to the marginalized voices (Rosile

et al., 2013), even though prior research has acknowledged the barriers that women entrepreneurs face in Arab Middle Eastern societies (Haan, 2004; Tlaiss, 2014).

Studying Arab women's struggles from a gender perspective can help in their economic development and bring a major social change for them. Additionally, providing information on the situation of working women in Arab society could aid in improving comprehension of their management style, especially given that the popular misconceived notion portrays them as unqualified, socially excluded, and oppressed women. Finally, giving data that is supported by evidence and derived from this study could broaden the scope of global comparative research in this area.

1.1. Theoretical framework

According to the resource-based view (RBV) theory, a firm's competitive advantage is created by its distinctive set of resources (Barney, 2001). These resources include organizational practices, management skills, and knowledge (Barney, 1991). A resource must be valuable (worth something), rare (unique), inimitable (cannot be readily sold or exchanged), and non-substitutable in order to maintain competitive advantage (Barney, 1991). Entrepreneurial competencies are a crucial resource to gaining such a competitive advantage (Mitchelmore et al., 2014).

This study, which incorporates the relationship, conceptual, business and management, entrepreneurial, and human relations competencies, focuses on the idea of entrepreneurial competencies using the framework of the resource-based view (RBV) of new ventures. We focus on the use of various entrepreneurial competencies in an emerging economy, in this case Saudi Arabia, and address the extent to which women entrepreneurs possess these competencies to improve the performance of their businesses.

2. Literature review

2.1. Entrepreneurial leadership: definition and theory

Entrepreneurial leadership is at the center of entrepreneurship and leadership and is seen as an amalgam of entrepreneurship, entrepreneurial orientation, and entrepreneurship management (R. Harrison et al., 2015). Entrepreneurial leadership is a highly context-dependent, multifaceted and dynamic task in which the individuals' awareness of himself and his social context directs his actions and identity formation. Research in the fields of leadership and entrepreneurship is significant and has spanned many decades. Entrepreneurship and leadership still remain vague terms, despite extensive work in both areas. Some studies describe entrepreneurship as a narrowly defined type of leadership (Vecchio, 2003), and there are significant intersections and similarities, both theoretically and historically, between entrepreneurship and leadership (Clark & Harrison, 2018; Cogliser & Brigham, 2004; Galloway et al., 2015). These studies have contributed to a new model known as Entrepreneurial Leadership (Bagheri & Pihie, 2011; C. Harrison et al., 2018; Kuratko, 2007).

Present day organizations exist in settings which are both dynamic and volatile. In order to sustain their effectiveness in a globalised market, entrepreneurial leadership has been advocated as a particular type of leadership that leaders should adopt (C. Harrison et al., 2016) b (C. Harrison et al., 2018; Fernald et al., 2005). In addition, entrepreneurial leadership has been empirically shown to be positively connected to organizational efficiency (Agus & Hassan, 2010; C. Harrison et al., 2018). In today's marketplace, an entrepreneurial leader who is different from other kinds of leaders is needed (C. Harrison et al., 2018). Such leadership becomes all the more important when organizations are dependent on limited resources to avoid decline and there is struggle for limited resources (Santora et al., 1999).

Attention on entrepreneurial leadership is greater among researchers due to the recognized importance of this new type of leadership in improving organizational effectiveness. This becomes

evident from numerous definitions given for entrepreneurial leadership, which is defined as a form of leadership that creates far-sighted settings used to gather and organize a group of participants (Gupta et al., 2004).

(Surie & Ashley, 2008) have concentrated on the contribution that entrepreneurial leaders make in the course of developing and directing innovation and they describe entrepreneurial leadership as leadership which is capable of achieving adaptation and innovation in fast paced and unstable business settings. Researchers have emphasized on the capacity of entrepreneurial leaders to recognize and exploit opportunities (Bagheri, 2017; C. Harrison et al., 2018) and to solve intricate organizational, environmental and social issues (Greenberg et al., 2013).

(Gupta et al., 2004) focused on the individual and functional challenges faced by entrepreneurial leaders and provided a conceptual framework for this leadership style. The personal competencies of entrepreneurial leaders empower them to create an innovative agenda for their organization while their functional skills support them to encourage their subordinates to embrace innovativeness in their work (Leitch et al., 2013).

2.2. Gender, entrepreneurship, and leadership

The importance of gender in leadership styles and attributes has long been considered in leadership research, with leader image typically considered to be male (Koenig et al., 2011). Some characteristics and capacities for successful leadership (and entrepreneurial success) have previously been proposed in the literature as being usually related with men (Jones, 2014; Marlow & Strange, 1994). Still, the observed indication is unsatisfactory till now.

Many researches in small and micro business and entrepreneurship have been undertaken since the 1980s on the assumption that female entrepreneurs follow distinct styles of leadership (Ahl, 2006). (Alimo-Metcalfe, 1995) found that women leaders are interactive, transformational and give priority to delivery of services and team management. A meta-analysis of 45 studies of transformative, transactional, and laissez-faire leadership styles revealed that women were more transformational, and deeply interested in contingent reward which is associated with transactional leadership (Eagly et al., 2003). Another study has shown that female leaders consider themselves to be more transformational as compared to male leaders (Carless, 1998).

In addition, female entrepreneurs possess human capital that adds to their competencies and they can also understand the deficiencies in their own human capital skills (Lerner & Almor, 2002) because they view their deficiency of business expertise and management skills as a key limitation (Heilbrunn, 2004).

However, there are other contrasting researches which suggest that women entrepreneurs these days are viewed as stronger when compared to other women (Ahl, 2006), indicating that 21st century women leaders do not comply to conventional female leaders' image or that broader cultural beliefs do not reveal the real experiences of women leaders.

In reality, differences between female leaders are of particular importance (Gundry & Welsch, 2001) and may be correlated with factors other than gender (Eagly & Johannesen-Schmidt, 2001; Elahi & Rehman, 2013). For instance, age and education variables are proposed as a significant facet of leadership style and its perceptions (A. U. Rehman & Fazli, 2022; Barbuto et al., 2007). In their leadership style, elderly leaders are known to be more transformational as compared to those with a higher education (Barbuto et al., 2007).

A common trait of women entrepreneurs and women leaders is that both prefer to follow a flexible job routine to maintain their family obligations (Kirkwood & Tootell, 2008; Lee-Gosselin & Grise, 1990). The support levers that an entrepreneur may have, such as a co-entrepreneur within the company (e.g. a family member), as well as external supporting networks which can

generate and promote social capital, are important elements to sustain this flexibility (Eddleston & Powell, 2012).

The standards and values in women's entrepreneurship involvement are influenced by social, cultural, and political institutions as studied in various social and cultural contexts (Bamiatzi et al., 2015; Yousafzai et al., 2015). Gender identity, according to Diaz-Garcia and Welter (2013), is a vigorous procedure in which female entrepreneurs use intricate techniques in their daily work, switch roles, and assume different leadership styles based on the circumstances.

Leadership skills are critical for long-term business survival and competitive edge (Luthans & Youssef, 2007). The importance of effective leadership in SMEs is presumably very crucial as compared to bigger organizations, especially because the boundary between leadership and management tasks in smaller enterprises is unclear (Storey et al., 1994). The limited research on leadership in small and medium business reveals that the role and influence of leader is critical for business survival (Küpers & Weibler, 2008).

One of the most valued talents for entrepreneurial leader is their capacity and expertise in attracting effective and competent team members, as an effective entrepreneurial team is highly linked to the high growth prospects of a startup company (Watson et al., 1995). Finally, the various methods and styles of leadership adopted by small and micro business executives have received some attention. Ardichvili et al. (1998) found that small and micro business executives consult peers and not subordinates when making decisions. They also show high situational and some authoritarian leadership styles.

2.3. Entrepreneurial competencies and leadership style

The leader's personal competencies impact the company's performance and success to a large extent. While it has been acknowledged that the types of competencies needed to manage small businesses is completely different from competencies required in big organizations (Johnson & Winterton, 1999), there has been little empirical study on the interplay of small and micro leader competencies and business leadership (Jensen & Luthans, 2006).

In spite of the growing attention on entrepreneurial competencies, research on women entrepreneurs is scarce. Previous research has focused on only a few areas of female entrepreneurial competencies, and many of them have been conducted in comparison to male leaders. Women entrepreneurs are often better in social astuteness and interpersonal abilities than male entrepreneurs (Birley et al., 1987; Hisrich & Brush, 1984), but lack the budgeting and financial skills (Collerette & Aubry, 1990; Stevenson, 1986). They are more concerned with the growth of their teams, empowering and motivating their employees' accomplishments (Gundry et al., 2002), as well as collaboration, networking, long term planning (Lerner et al., 1997), and innovation (Hisrich & Brush, 1984; Sexton & Bowman-Upton, 1990).

Numerous researchers have made an effort to comprehend the connection between personal traits and leadership style. Studies have found that competencies combine with other variables to influence the leadership style. Stogdill (1974) found that compared to non-leaders, leaders typically exhibit higher levels of adaptability, environmental sensitivity, ambition, achievement, assertiveness, cooperation, decisiveness, energy, persistence, self-confidence, independence, stress tolerance, drive to exercise initiative, and willingness to accept responsibility.

The studies on personality and leadership have been advanced by a number of researchers (A. F. F. Hussein & Al-Mamary, 2019). Their findings indicated a significant association between these characteristics. As an illustration (Hogan et al., 1994), proposed that personality attributes are crucial element of successful leadership. The value and utility of personality trait measurement as a predictor of leadership can be improved by adopting the Five Factor Model of personality. Additionally, it is also believed that a leader's personality will have a predictable impact on how

well a team performs. Leadership emerged with the association of cognitive capacity, followed by conscientiousness, extraversion, and emotional stability (A. Hussein et al., 2017; Taggar et al., 1999).

Entrepreneurs with conceptual competency are able to recognize essential underlying issues in diverse, difficult situations as well as trends or scenarios. Mitchelmore & Rowley (2013) found evidence of conceptual competency in two of their competency clusters, in their study of competencies important to women entrepreneurs. As their analytical thinking is more methodical and logical when addressing crucial business issues to realize their vision, such entrepreneurs also tend to make better choices, which may improve the performance of their companies. Thus, conceptual competency is found to have an influence on the leadership style of women entrepreneurs.

Divergent and unorthodox thinking, imagination, creativity, and uniqueness are traits of entrepreneurial competency. Previous studies have revealed evidence of a high level of innovativeness among women entrepreneurs (Hisrich & Brush, 1984; Sexton & Bowman-Upton, 1990). For instance (Mitchelmore & Rowley, 2013), research on Female Entrepreneur Competence (FEC) discovered evidence of innovation competency in the entrepreneurial competencies cluster. Thus, entrepreneurial competency is found to have an influence on the leadership style of women entrepreneurs.

Successful entrepreneurs take risks and make things happen (Brinckmann, 2006). Women entrepreneurs have business and management skills, according to earlier studies on women's entrepreneurial competencies (Mitchelmore & Rowley, 2013). These entrepreneurs take proactive steps to make sure they have the knowledge and experience they need to put value-creating ideas into action. They are concentrated on putting strategies into place to manage resources in order to realize their vision. Entrepreneurs with management and business competency are therefore more likely to guide their company toward improved performance. Thus, business and management competency is found to have an influence on the leadership style of women entrepreneurs.

The capability to establish and use networks with partners, including investors, technology and marketing partners, and other stakeholders, is referred to as human relation competency (Brinckmann, 2006). An area where women entrepreneurs may excel above men, according to prior studies, is in their capacity to forge solid interpersonal connections (Daniel, 2004; Fuller-Love et al., 2006; Singh & Singh, 2008b). Successful women business owners have been found to be adept at integrating human relation skills into their strategic planning (Ahmad et al., 2010; Lerner et al., 1997; Morris et al., 2006; Singh et al., 2009). Entrepreneurs must be able to capitalize on their relationships with others in order to advance their enterprises. This is more significant than simply having ties with people (Al-Mamary et al., 2021; Baron & Markman, 2003). Thus, human relations and relationship competency is found to have an influence on the leadership style of women entrepreneurs.

The relationship between the MLQ leadership behaviors developed by (Bass & Avolio, 2004) and the PMCD personal competencies (achievement and action, helping and human service, impact and influence, managerial, cognitive, and personal effectiveness) developed by (Project Management Institute PMI, 2002) shows that the entire set of personal competencies has a strong positive influence on the leadership style. Various studies have examined and found that the various competencies affect the leadership style of entrepreneurial leaders (Madlock, 2012; Wirawan et al., 2019; Zheng et al., 2020).

Based on these studies, we propose the following hypotheses:

H01: There is no significant difference across the level of each competence against the task-oriented leadership style of Saudi female entrepreneurs

H02: There is no significant difference across the level of each competence against the people-oriented leadership style of Saudi female entrepreneurs.

H03: All competencies have a positive influence on the task-oriented leadership style of Saudi female entrepreneurs.

H04: All competencies have a positive influence on the people-oriented leadership style of Saudi female entrepreneurs.

Recognizing the growing attention on women entrepreneurship and the role of females in the international economic context, this study focuses on the impact of competencies in forming female entrepreneurs' leadership styles and addressing critical literature gaps.

3. Methodology

3.1. Study sample

Micro and small women-led startups that are operating for minimum two years in their respective business area are our target respondents. Because 40% of all new ventures fail during the first year, the first two years of a company are critical for success (Shepherd et al., 2000). As a result, we did not include fresh startups in our study to ensure that the results were comparable. We targeted female-owned small businesses, which make up the majority of female-owned firms in Saudi Arabia.

To create an adequate study sample, we employed a combination of judgment and snowballing sampling (Goodman, 1961). We identified respondents initially through various organizations such as Wa'ed (Aramco's entrepreneurship centre), MISK Foundation and Monsha'at. These identified female entrepreneurs were approached individually to obtain their permission to participate in the survey. The survey questionnaire was given to them once they gave their approval.

3.2. Survey design and methods

The questionnaire survey was divided into three sections. The first section was dedicated to various details of the entrepreneur such as their age, years of business experience and qualifications.

The second section of the survey asked questions related to entrepreneurial competencies. Female Entrepreneur Competence Framework developed by (Mitchelmore & Rowley, 2013) was adopted for this study, which includes both entrepreneurial and managerial competencies. Five competencies were surveyed, namely Relationship, Conceptual, Business and Management, Entrepreneurial, and Human Relations competencies.

The third section measured Saudi women entrepreneurs' leadership style. For this purpose, we used the Task-People Leadership Questionnaire by (Pfeiffer & Jones, 1974). This leadership survey had 15 statements that measured the "people" style of leadership and 20 statements that measured the "task" style of leadership. There were total 35 questions comprising of "task" and "people" styles' statements.

The objective of this study is:

- (1) To study the leadership style demonstrated by Saudi female entrepreneurs.
- (2) To study the influence of competencies in molding the leadership style of Saudi female entrepreneurs'.

The pilot test of the questionnaire survey with a small group of 25 women entrepreneurs indicated no precise concerns, requiring only slight changes to the questionnaire. The final questionnaire was distributed to target population through e-mail. Within one month of the first contact, a second questionnaire accompanied by a reminder letter was sent. In total, 211 surveys were filled out in both rounds, generating a total of 174 usable responses. These surveys were analyzed using SPSS Statistics version 22 software.

4. Data analysis and results

The demographic data of our female entrepreneurs and their businesses is given in Table 1. In terms of the demographics of the women entrepreneurs that participated in the survey, we notice that the sample is extremely diverse. In terms of education, majority of the respondents (61.5%) are graduate followed by under-graduate (21.8%) and diploma (13.8%). The majority of our respondents (55.7%) are between 17–25 years of age followed by 26–35 years old (35.1%). In terms of the firms age, majority in the sample are at least 2 to 5 years old (43.68%), with a good number of firms (29.31%) working for more than 11 years in the industry.

In Table 2, we look at the women entrepreneurs who were surveyed and their styles of leadership. We go over the composition of the respondents' leadership styles in particular. According to Bass and Avolio's guidelines (1997), we totalled the respective scores on individual items to get the score for each leadership style per respondent. The examined female entrepreneurs are defined as task-oriented leaders rather than people-oriented leaders, since task-oriented leadership style (1.9655) scored slightly higher than people-oriented leadership style (1.9195).

Finally, in Table 3 we examine major categories of competencies, namely Relationship, Conceptual, Business and management, entrepreneurial and human relations. In our sample, all of the items evaluate distinct aspects of each category with high reliability. Cronbach's alphas ranges from 0.726 (Relationship) to 0.910 (business and management) and thus, Inter-item correlations for each group are quite strong. The factor means in all cases are higher than the scale midpoint, with conceptual competencies having the highest score (3.6888) and business and management competencies scoring the lowest (3.4576). Exploratory Principal Components Analysis was conducted, although it was not reported, and it confirmed the convergence and discriminant validity of the above factors, with all relationship, conceptual, business and

Table 1. Respondents demographic

Demographics		Frequency	Percent
Education	Under-graduate	38	21.8
	Graduate	87	50
	Post-graduate	25	14.4
	Diploma	24	13.8
Age	17–25 years old	97	55.7
	26–35 years old	61	35.1
	36–45 years old	13	7.5
	46–55 years old	2	1.1
	Over 55 years old	1	.6
Age of firm	Less than 2 years	31	17.8
	From 2 to 5 years	76	43.68
	From 6 to 10 years	11	6.31
	11 to 15 years old	51	29.31
	Over 15 years old	5	2.9

Table 2. Leadership style of female entrepreneurs

	Mean	Median	S.D.	Min	Max	Low (Percentage)	Moderate (Percentage)	High (Percentage)
People Oriented Leadership Style	1.9195	2.0000	.86310	1.00	3.00	41.4	25.3	33.3
Task Oriented Leadership Style	1.9655	2.0000	.81103	1.00	3.00	34.5	34.5	31.0

Table 3. Competencies of female entrepreneurs

S. No.	Statement	Mean	S.D.	Min	Max	Cronbach's α	Competencies	Mean	S.D.
1	I use Interpersonal skills (the ability to communicate or interact well with other people) in my work	3.74	.534	2	4	0.726	Relationship	3.5805	0.52191
2	I use oral communication skills (the ability to express ideas through the medium of speech) in my work	3.44	.786	1	4				
3	I use relationship building (the ability to identify and initiate working relationships and to develop and maintain them) with the people I meet in my work	3.58	.707	1	4				
4	I use Networking (the ability to exchange information and ideas among people with a common profession or special interest) with various stakeholders	3.56	.764	0	4				

(Continued)

Table3. (Continued)

S. No.	Statement	Mean	S.D.	Min	Max	Cronbach's α	Competencies	Mean	S.D.
5	I maintain Integrity (doing the right thing in all circumstances) in all my dealings.	3.64	.627	1	4	0.808	Conceptual	3.6888	0.41748
6	I display Self-confidence in all my dealings	3.75	.629	0	4				
7	I use Self-motivating skills in various situations	3.67	.602	0	4				
8	I use Political competence (the ability to understand what you can and cannot control, and how to get others on your side and lead conditions) in my work	3.42	.799	1	4				
9	I like being active in all my work areas	3.76	.558	1	4				
10	I have a desire to succeed in my assignments	3.91	.377	2	4				
11	I use Perseverance (the ability to keep doing something in spite of obstacles) in my work	3.67	.619	0	4				

(Continued)

Table3. (Continued)

S. No.	Statement	Mean	S.D.	Min	Max	Cronbach's α	Competencies	Mean	S.D.
12	I use Budgeting skills in my work	3.45	.787	0	4	0.910	Business and management	3.4576	0.67341
13	I use Business operational skills (the ability to think analytically, communicate effectively, and execute efficiently) in my work	3.60	.751	0	4				
14	I develop management systems (managing the interrelated parts of a business in order to achieve its objectives) in my work	3.56	.786	0	4				
15	I formulate and implement strategies for exploiting opportunities	3.56	.764	0	4				
16	I engage in Business plan preparation and writing	3.54	.757	0	4				
17	I engage in development of operational systems (a system that is used to process the day-to-day transactions of an organization)	3.32	1.003	0	4				
18	I engage in Planning of business activities	3.49	.838	0	4				
19	I engage in Managing finance of the company	3.13	1.112	0	4				

(Continued)

Table3. (Continued)

S. No.	Statement	Mean	S.D.	Min	Max	Cronbach's α	Competencies	Mean	S.D.
20	I engage in Idea generation in my work	3.49	.831	0	4	0.856	Entrepreneurial	3.5204	0.52386
21	I use Innovation skills (the ability of exploring new ideas for the purpose of gaining social or economic value) in my work	3.50	.838	0	4				
22	I use Visioning (the ability to form a mental image in order to set goals, make plans, and solve problems that guide the organization into the future) in my work	3.63	.665	0	4				
23	I envision opportunities in my work	3.74	.526	1	4				
24	I engage in Product innovation (creating new products or improved versions of existing products that increase their uses) in my work	3.38	.903	0	4				
25	I use creativity in my work	3.67	.582	1	4				
26	I am willing to take risks in my work	3.54	.718	1	4				
27	I scan environments for opportunities	3.70	.529	2	4				
28	I am risk taking in my work	3.04	1.119	0	4				

(Continued)

Table3. (Continued)

S. No.	Statement	Mean	S.D.	Min	Max	Cronbach's α	Competencies	Mean	S.D.
29	I engage in Employee development (supporting employees in various training programs to enhance their knowledge and skills) in my work	3.57	.715	0	4	0.900	Human relations	3.5881	0.52661
30	I manage employee performance	3.30	.940	0	4				
31	I use Human relation management skills (the ability to understand human behavior, to communicate effectively with others, and to motivate individuals) in my work	3.64	.689	1	4				
32	I use Employee relations (creating and maintaining a positive relationship with its employees) in my work	3.74	.578	1	4				
33	I use Hiring skills in my work	3.49	.751	1	4				
34	I use Leadership skills in my work	3.53	.750	0	4				
35	I Motivate others to achieve their objectives	3.75	.540	0	4				
36	I use a Management style (particular way managers go about accomplishing their objectives) in my work	3.58	.739	0	4				
37	I use Management skills (being able to run the business by making the right choices) in my work	3.68	.579	1	4				

management, entrepreneurial, and human relations items loading on a single dominant principal component.

We used a mix of univariate and multivariate tests to examine the survey data. The results of t-test for the comparison of mean differences in leadership style across the five entrepreneurial characteristics are presented in Table 4. As indicated in Table 2, we divided the sample based on the scores of each leadership factor, using the median of every individual factor as a cutoff point (low for below median scores and high for equal to or above the median scores).

As shown in Table 4, we discovered that all competencies do not have the same influence on leadership style. For task-oriented leadership style, it is obvious that relationship, business and management, entrepreneurial and human relation skills are notably different between the high and low groups. This result suggests that women entrepreneurs who consider themselves to have high degrees of relationship, business and management, entrepreneurial and human relation skills are more likely to use a task-oriented leadership style. The perceived level of conceptual skills, on the other hand, appears to have little or no influence on task-oriented leadership style. For the people-oriented leadership style, no significant differences exist between the high and low groups in the five entrepreneurial competencies. Thus, no competency seems to influence people-oriented leadership style.

However, the earlier findings must be verified in a multivariate setting that examines the cumulative effects of every competency on influencing leadership behavior and style while controlling for external factors. In Table 5, the score of each entrepreneur on the different leadership styles is the dependent variable in the two models (people oriented and task oriented). The scores on each competency factor are the independent variables, while the respondent's gender, education, age, and experience are the control variables.

Although relationship, business and management, entrepreneurial and human relation skills were found to univariately affect all factors, when these coefficients are analysed together, some are no longer considered significant. Table 5 shows that relationship and entrepreneurial competencies have a positive influence on the people-oriented leadership style. Relationship and entrepreneurial competencies create a supportive ambience which helps a people-oriented leader to lead effectively. On the other hand, business and management, as well as entrepreneurial and human interactions, have a positive influence on task-oriented leadership style. Thus, the presence of business and management, entrepreneurial and human relation skills creates a conducive atmosphere for the task-oriented leader to lead effectively. In terms of control variables, the entrepreneur's education has a negative effect on the people-oriented leadership style. Entrepreneurial age has a positive impact on people-oriented leadership style. The goodness of fit and explanatory power are satisfactory for all specifications. Finally, there are no issues about collinearity because all models' mean variance inflation factors (which are not shown here) are less than 2.

5. Discussion

The initial aim of our study was to give a thorough leadership profile of the women entrepreneurs. Results illustrated in Table 2 do not reveal a significant difference between the mean scores of female entrepreneurs' task-oriented and people-oriented leadership style. A mean score of 1.9655 in "task" leadership and a mean score of 1.9195 in "people" style of leadership, can show that women entrepreneurs' tend to embrace "task-oriented" and "people-oriented" leadership styles. The result of our study shows that in contrast to previous studies (Alzougool et al., 2015; Buttner & Moore, 1997; Buttner, 2001; Eagly & Carli, 2003; Eagly & Karau, 1991; Eagly, 2013; Hussin & Sabri, 2012), our women entrepreneurs tend to adopt both task-oriented and people-oriented leadership approach. In contrast to previous studies that women's leaderships style is more focused on human relations and is participative in nature (Brush, 1992; Chaganti, 1986), our respondents exhibit a higher score of task-oriented leadership style. Thus, Saudi female entrepreneurs' are

Table 4. Mean competencies comparison by management style

		Competencies				
		Relationship	Conceptual	Business and management	Entrepreneurial	Human relations
People-oriented Leadership style	Low ^a	2.8978	3.0017	2.9139	3.0174	1.6436
	High	3.3554	3.3472	3.3889	3.4077	2.3014
	Difference	0.4576	0.3455	0.475	0.3903	0.6578
	T-Test	6.070	4.575	6.580	5.258	5.341
Task-oriented Leadership style	Low	3.0081	3.0737	2.9667	3.1250	3.1035
	High	3.5371	3.5719	3.6181	3.6237	3.6877
	Difference	0.529*	0.4982	0.6514***	0.4987**	0.5842***
	T-Test	7.234	7.028	10.141	7.038	8.629

Note: ^aThe cutoff point between Low and High is the median of each Leadership Style.

*, **, ***Significant at 0.1, 0.05, and 0.01, respectively.

Table 5. Regression models of female entrepreneurship competencies and leadership styles

DV	People Oriented Leadership Style			Task Oriented Leadership Style		
	Unstandardised coefficient	t	Sig.	Unstandardised coefficient	t	Sig.
Constant	1.074	3.259	.001***	.392	1.527	.129
Relationship	.248	2.586	.011**	.098	1.318	.189
Conceptual	.035	.295	.768	.144	1.558	.121
Business and Management	.038	.354	.724	.183	2.191	.030**
Entrepreneurial	.368	2.608	.010**	.219	1.998	.047**
Human relations	-.090	-.667	.506	.187	1.775	.078*
Gender	.092	1.012	.313	.012	.106	.916
Education	-.144	-3.789	.000***	-.067	-1.474	.142
Age	.014	.254	.031**	-.063	-.976	.330
Age of firm	-.029	-.697	.487	-.026	-.514	.608
F	2.294			1.312		
R ²	0.290			0.575		
Adj. R ²	0.269			0.562		

Note: *, **, ***: Significant at 0.1, 0.05, and 0.01, respectively.

focused on attaining organizational objectives, task-achievement as well as building good relationships amongst employees.

The female entrepreneurs were found to possess a high level of conceptual skills specifically integrity, self-confidence, self-motivation, desire to succeed and perseverance. They also displayed high score in interpersonal skills, visioning, foresee opportunities, creativity, human relation management skills and motivating skills. However, they scored lower on business and management skills specifically budgeting, operational skills, planning and financial aspects of business which finds support in previous studies (Heilbrunn, 2004). These female entrepreneurs are not confident of their business planning, financial and operational skills.

Our study contradicts previous studies (Sexton & Bowman-Upton, 1990) which stressed that constraints like gender discrimination and lack of education create barriers for women to attain leadership roles. The female entrepreneurs in our study are well-educated and are restricted by their own perceived skill to lead an organization which is similar to study by (Langowitz & Minniti, 2007). It should be kept in mind that Saudi Arabia has a different social and cultural atmosphere compared to other countries as evident from similar studies conducted previously (A. U. Rehman & Fazli, 2022; A. U. Rehman, 2021).

The competencies of female entrepreneurs did not have the same influence on defining their leadership style (Table 4). The women entrepreneurs who possess high degrees of relationship, business and management, entrepreneurial and human relation skills are found to incline towards task-oriented leadership style. The conceptual skills do not appear to have much influence on task-oriented leadership style. Thus, hypothesis H01 is rejected. Moreover, no competency was found to influence the people-oriented leadership style in these women participants. Thus, hypothesis H02 cannot be rejected.

The relationship and entrepreneurial competencies have a positive influence on the people-oriented leadership style (Table 5). Relationship and entrepreneurial competencies create a supportive ambience which helps a people-oriented leader to lead effectively. Thus, hypothesis H03 is rejected as only two competencies are found to positively influence the people-oriented leadership style. On the other hand, business and management, as well as entrepreneurial and human interactions, have a positive effect on task-oriented leadership style. Thus, the presence of business and management, entrepreneurial and human relation skills creates a conducive atmosphere for the task-oriented leader to lead effectively. Thus, hypothesis H04 is rejected as only three competencies are found to positively influence the task-oriented leadership style.

Education and age were found to be important factors that affect the management style in various studies (A. U. Rehman, 2020; Calori et al., 1997). On the contrary, our study found that entrepreneur's education has a negative effect on the people-oriented leadership style. This implies that the female entrepreneurs having higher education are less inclined towards people-oriented leadership style, and don't attach much importance to human relations while leading their employees. On the other hand, the age of the female entrepreneurs in our study has a positive effect on people-oriented leadership style, which implies that the experience gained with their age taught them to value human relations while leading their organization.

6. Implications of the study

6.1. Theoretical implications

This study adds to the limited previous studies on the competencies of female entrepreneurs and offers insight into the leadership style of Saudi women entrepreneurs. This study's goal is to investigate the entrepreneurial competencies of women entrepreneurs that predict their leadership style in order to improve the selection of women entrepreneurs and build more effective

training programs. This is because the current understanding of women entrepreneurs' entrepreneurial competencies as predictors of their leadership style is incomplete.

The outcomes of this study have various theoretical ramifications. This study contributes to the development of theories on how entrepreneurial leadership affects the process of innovation and opportunity recognition by highlighting the dimensions of entrepreneurial leadership. This study can be used by educators to help women entrepreneurial leaders to learn the necessary competencies in order to boost the quantity and quality of such leaders. Finally, educators can use the dimensions of entrepreneurial leadership that came out of this study to create programs for developing more meaningful and effective entrepreneurial leadership skills in students and aspiring business owners.

Additionally, the findings of this study assist in raising awareness of gender research in Arab nations, which is necessary to comprehend women's attitudes and behaviors in organizations. However, to better understand how gender differences in work values affect leadership style in Arab organizations, more research is needed. The development of comparative research in international gender studies would be significantly aided by the availability of data on working women in Saudi Arabian and Arab society.

6.2. Practical implications

The results of this study are expected to help policy makers in Saudi Arabia to recognize the capabilities of women and appoint them for leadership roles in various organizations. Since entrepreneurial competencies have a positive impact on both the people-oriented and task-oriented leadership style, policymakers may perhaps allot resources to develop programs for boosting the entrepreneurial competencies such as idea generation, product innovation, etc.

Moreover, since our female entrepreneurs scored lower on business and management skills specifically budgeting, operational skills, planning and financial aspects of business, it is suggested that policymakers should initiate support programs targeting these skills which the entrepreneurs find challenging. Support programs focused on equipping the female entrepreneurs with budgeting, operational skills, planning and financial aspects of business will not only strengthen them to successfully run their businesses but also give them the necessary confidence to complete their tasks.

The skills and behaviors of entrepreneurial leadership that have emerged from this study can be used by leaders of all types of businesses, from large corporations to small new ventures (Renko et al., 2015), to assess their capabilities and pinpoint their strengths and weaknesses with regard to each aspect of their leadership style. Business consultants can help aspiring and established entrepreneurs to operate their companies successfully by providing them with the entrepreneurial competencies and leadership styles highlighted in this study.

The practical application of this study is that entrepreneurial education programs for women small business owners should focus on developing identity and characteristic adaptations in addition to skills. This study is intended to help business professionals who are interested in management of Saudi Arabian and Arab organizations. The empirical findings presented in this study may aid Saudi Arabian policy makers and human resource specialists in acknowledging the potential of women and taking them into consideration for leading positions in Saudi enterprises. When considering women for advancement to executive and leadership positions, such acknowledgment is crucial. Due to the similarities of the cultural and economic backgrounds, the current study also creates social implications for policymakers in the Arab countries, notably in the Gulf region.

7. Conclusions

One of the significant results and findings from the 2012 GEM research on women entrepreneurs is that women are more likely to believe in the existence of entrepreneurial opportunities if they believe they possess the skills or competencies necessary for entrepreneurship. As a result, this research can assist in competency profiling and help women in identifying their entrepreneurial shortcomings and strengths. It can also serve as a platform for creating educational initiatives to support female entrepreneurs. Long-term profitability and company growth are both influenced by entrepreneurs' capacity to enhance their entrepreneurial skills (Cushion, 1996; Gray, 1997). Therefore, the government in its quest of economic development, particularly for training purposes, and female entrepreneurs themselves in their goal of business success are the main benefactors of this research.

The creation of theoretical models of competencies that predict the leadership styles of women entrepreneurs is a crucial area for future research. Such models have a significant impact on education because they let program designers decide which competencies should be developed further to support entrepreneurship.

The present research is unique to study the influence of Saudi female entrepreneurs' competencies on their leadership style. The findings reveal that in contrast to popular beliefs, female entrepreneurs in Saudi Arabia use both people-oriented leadership style as well as task-oriented leadership style. Thus, the examined Saudi female entrepreneurs' are focused on achieving organizational objectives, accomplishing the tasks as well as building good relations among employees.

The studied female entrepreneurs possess a high level of conceptual skills such as integrity, self-confidence, self-motivation, desire to succeed and perseverance. They also demonstrate high score in visioning, foreseeing opportunities, interpersonal skills, creativity, human relation management skills and motivating skills. However, it was observed that they are not confident of their business planning, financial and operational skills. Although they rate themselves highly on other skills, they are unsure of their technical and planning skills. This is an interesting finding given the fact that they are well- educated. They try to compensate this weakness by hiring employees who possess these skills, or outsourcing these tasks. This study revealed that entrepreneur's education has a negative effect on the people-oriented leadership style. The more educated the female entrepreneur is, the less people-oriented her leadership style becomes.

Considering the increasing interest in multicultural research on women leadership, we cannot claim that our sample of women entrepreneurs represents all the Saudi women engaged in entrepreneurial ventures. Future studies on a large-scale should test the results of this study before it can be validated in the Saudi Arabian as well as Arab world context. It must be admitted that the women in different Arab country face different set of challenges and circumstances, therefore separate studies are required to examine the relationship between competencies and leadership style. Such further studies on a larger population would reveal important understandings to essential connection between the two constructs.

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