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Social media adoption by women entrepreneurial small businesses

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Abstract

Purpose – The purpose of this study is to evaluate the factors related to the adoption of social media by women entrepreneurial small businesses (ESBs).

Design/methodology/approach – Using a structured survey instrument, this study gathered data from 101 women entrepreneurs in Yemen. Descriptive statistics were used to analyze the data.

Findings – The results confirm that social media has been widely applied by women ESBs in Yemen and has made a significant contribution to different business strategies and processes, mainly marketing, promotion and communication. Social media adoption is linked mainly with nontechnical obstacles and challenges, in specific, those "soft" factors such as management attitude, as well as "hard" technical obstacles and challenges involving cost and other practical aspects regarding social media nature.

Practical implications — This study contributes to the increase in awareness of the impact of social media among female ESB owners. A greater understanding of the impact of social media will eventually lead to better use of the tool to increase performance.

Originality/value — This study highlights the perceived benefits and challenges that give Yemeni female business owners strong decision-making power in their businesses. This study provides insight into the numerous drivers that affect owners/managers' decisions to adopt and continuously use social media in the future.

Keywords Social media adoption, Women entrepreneurship, Small businesses, Benefits and challenges for using social media, Technical factors, Nontechnical factors

Paper type Research paper

1. Introduction

The paradigm of entrepreneurship is crucial for improving a country's economic prosperity (Saoula *et al.*, 2023). Entrepreneurship is not a quality or way of thinking; rather, it is the deliberate promotion of transformation and the grasping of job opportunities (Al-Mamary and Alshallaqi, 2022). It is "how, by whom and with what effects opportunities



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to create future goods and services are discovered, evaluated and exploited" (Shane and Venkataraman, 2000, p. 218). It involves the identification of business potential through a process of using current, new or a recombination of resources in an innovative and imaginative manner (Ratten, 2023).

Because changes are constant, businesses must adjust to them and take appropriate action to help people deal with issues frequently. A higher rate of company failure has been linked to the COVID-19 pandemic's disruption and displacement of businesses, persons and markets. Women were 6.4% more likely than males to close their enterprises in 2020 as a result of COVID-19 (Huang *et al.*, 2022).

Consumers want prompt solutions to constantly changing needs and demands (Al-Aghbari and Alhakimi, 2021). Many small business entrepreneurs use social media in many ways. In general, small businesses have different marketing circumstances and conditions than larger companies. As a result, this phenomenon demonstrates how small business owners have realized social media's potential as a potent marketing tool due to its ease of use, efficacy and affordability. It shows how flexible organizations are in the digital age, both in terms of technology and market situations.

Women-owned businesses have been steadily increasing in number, making substantial contributions to job creation, innovation and economic development (World Bank, 2021). However, they face unique challenges in accessing resources, building networks and promoting their ventures effectively (Franzke *et al.*, 2022; Ghouse *et al.*, 2021; Kelly *et al.*, 2020).

In recent years, social media platforms have emerged a powerful tool for business growth and engagement, revolutionizing the way companies connect with their target audiences. This transformative impact is particularly significant for women entrepreneurial small businesses, which play a vital role in the global economy. While previous research has recognized the value and importance of social media adoption for small business (Atanassova and Clark, 2015; Azimi, 2014; Chaker and Zouaoui, 2022; Iqbal, 2020; Mallios *et al.*, 2023; Milwood and Maxwell, 2020; Thompson-Whiteside *et al.*, 2018), there are several researches gap the need to be addressed to gain deeper understanding of how women entrepreneurs specifically engage with and benefit from these platforms.

One research gap pertains to the unique barriers and challenges faced by women entrepreneurs in adopting and effectively using social media. There is a need to examine factors such as gender biases, limited access to resources and industry-specific challenges. Another research gap lies in exploring the specific benefits and outcome that women entrepreneurial small business can achieve through social media (i.e. women empowerment, network building and business growth). The specific mechanisms through which social media facilitates resources access and network building for women entrepreneurs remain unexplored.

The adoption of social media by Yemeni entrepreneurs and small businesses (ESBs) has shifted from an additional or optional tool to an essential tool. In Yemen, small and medium-sized enterprises (SMEs) play a significant role in growth and have the ability to spark socioeconomic change. Considering the amount of capital invested and the overall number of employment they generate in comparison to other businesses, SMEs tend to be very labor-intensive (MPIC, 2021). The economic situation in Yemen keeps enlarging the financial loads on the people, and owners nowadays start to close their shops or decrease their working hours because of the high financial obligations, lack of electricity and basic requirements.

Due to Yemen's perceived high-risk environment, there are many risks to which entrepreneurs' initiatives are exposed. These risks threaten the continued success of already-completed initiatives (Hibah and Alhakimi, 2021). As a result, some businesses

made modifications to sustain themselves in the market and started to alter their processes to rely more on social media.

Although entrepreneurship and social media are topics that have been broadly discussed in many recent studies (Atanassova and Clark, 2015; Azimi, 2014; Durkin *et al.*, 2013; Genç and Öksüz, 2015; Mallios *et al.*, 2023; Nakara *et al.*, 2012), there is still a shortage of research investigating these topics and their relationships in depth in communities similar to those in the Arab world, specifically Yemen, which has a different social structure than other countries. Religious and cultural variations between the north and south of the country have an impact on the social structure as well.

Due to the economic recession and political circumstances since 2011 in Yemen, many small business entrepreneurs and start-up businesses have adopted and relied more on social media as their main marketing tool to continue their performance. Their usage of social media is mainly used as a place where businesses can market, promote and sell their products or services, communicate with their actual and potential customers and learn more about their buying habits and preferences. Social media have also been used to publicize brands and increase brand awareness among consumers. Moreover, it has been an ideal tool to conduct market research that helps owners understand the market's needs to make the right decisions and meet customers' expectations. Female entrepreneurs in Yemen have diverse circumstances in terms of the challenges they face, factors that drive them to adopt social media and even their educational levels that help them start up their businesses in the first place.

Based on the above discussion, the research gap in the context of Yemen and the purpose of the study, the researchers developed several research questions. These research questions serve to further define the problem that needs to be solved and to direct and structure the information gathering and analysis processes to achieve the objectives of the study:

- RQ1. What are the effects of social media on women ESBs operations and financial performance?
- RQ2. What are the perceived benefits and challenges of using social media?
- RQ3. What are the personal factors of owners/managers that determine social media adoption?
- RQ4. What are the attitudes of owners/managers of ESBs toward using social media?

This paper is divided into seven sections. Section one gives a brief overview of the research problem and objective. Section two offers a comprehensive analysis of the field's current theories and research. The research strategy and data collection techniques are described in section three. The data analysis was presented in Section four and the results and commentary outline the significance of the empirical findings were discussed in Section five. The research's theoretical and practical implications are also discussed in Section six, and the paper recommends areas for future investigation in Section seven.

2. Literature review

In this section, we will discuss how business owners are using social media. We will examine the factors that influence social media adoption, the benefits of SMEs adopting social media and the associated challenges. We will also look at the difficulties SMEs have using social media marketing. Finally, we will examine the factors that affect SMEs in developing nations' usage of social media.

2.1 Social media adoption by entrepreneurs and small businesses

Social media adoption offers a promising avenue for these women entrepreneurs to overcome their hurdles and leverage the numerous benefits provided by these digital platforms. First, social media platforms allow for cost-effective marketing strategies (Chaker and Zouaoui, 2022; Iqbal, 2020). Second, social media adoption offers a unique opportunity for women entrepreneurs to build and nurture valuable networks with customers and industry influencers, creating a supportive ecosystem for knowledge-sharing, collaboration and mentorship (Mallios *et al.*, 2023; Milwood and Maxwell, 2020). Finally, through social media, women entrepreneurs can establish a personal brand, self-expression, demonstrate their expertise, engage in targeted networking and further business growth (Azimi, 2014; Thompson-Whiteside *et al.*, 2018).

2.2 Factors determining social media adoption

When examining how personal factors influence social media adoption by women small business, theory of planned behavior (TPB) can be used. The TPB is a well-known psychological theory used to understand human behavior, including technology adoption. The TPB suggests that behavioral intentions are influenced by three factors, attitude, subjective norms and perceived behavioral control (Ajzen, 1991; Rehman *et al.*, 2023). In the context of women small businesses, factors such as motivation, goal/ambitiousness and experiences can shape their attitude toward using social media platforms. Moreover, subjective norms can be explored by examining the influence of social networks, mentors and peers on business owners' decisions to adopt social media. In addition, personal factors such as knowledge, skills, resources and experience influence how business owners perceive their level of control over using these platforms effectively.

Shang (2014) assumed that the adoption of new technologies by small businesses is not always a rational managerial decision but can be associated with personal characteristics. Age (Sinha, 1996; Kristiansen *et al.*, 2003), gender (Mazzarol *et al.*, 1999) and level of education and experience (Sinha, 1996) are examples of personal characteristics that have been discussed by many researchers as affecting the decision to adopt. Brown and Kaewkitipong (2009) identified, in a similar study, owners-managers' eagerness and motivations, along with their willingness to adopt technologies, as critical drivers that directly influence their decision-making.

Paudel and Hossain (2008) identified awareness and knowledge as the main drivers of business development through electronic technology. Papachristos *et al.* (2012) pointed out that many small businesses are not in a hurry to adopt social media due to several obstacles. Some of these were related to the personal characteristics of owners/managers, such as negative opinions about their practicality and unfamiliarity with technology.

2.3 Benefits and challenges for using social media by small and medium-sized enterprises Social capital theory provides a useful framework for understanding how individuals connect with one another in social networks to gain psychological and tangible advantages (Yen et al., 2020). It suggests that social connections and interactions can provide access to resources, information and opportunities. In the context of women small business, this theory can explore how social media platforms facilitate networking, collaboration and the creation of social capital. It can also shed light on the potential benefits of social media in terms of accessing mentorship, business advise and support networks.

Today, consumers rely more on social media for consumption-related tasks, such as receiving feedback on a product, complaining about a brand or sharing bad/good purchase experiences. As the evolution of social media brought new opportunities to businesses, it

also brought new challenges. It complicated the tasks for marketing managers, who need to be ready to deal with sudden issues that are difficult to control in this field (Hofacker and Belanche, 2016). ESBs are no different, as the emergence of social media has exposed them to real benefits as well as threats. The different functions of social media utilization and how businesses greatly benefit from them, such as marketing, promotion and communication, have been discussed previously. Several studies have found that social media offer small firms. The first is the ability to deliver quick and affordable information. The adoption and usage of social media by businesses requires only small expenditures, as noted by Kaplan and Haenlein (2010) and Barnes (2010). Another advantage of social media is that it provides highly liquid information, which means that it flows easily with no limits or regulations. This enhances the possibility of establishing closer relationships with customers and motivating them to become involved in the advertising process and participation in the firm's activities (Parveen et al., 2015).

Social media provides entrepreneurs with an opportunity to create their own photo portfolios and make them accessible not only to those who are interested but also to everybody else who might become potential consumers. Genç and Öksüz (2015) asserted that social media platforms, in particular Instagram's structure, which emphasizes direct photos, give users the ability to share content with people from different areas who are not personally acquainted with one another and to use the platform as a portfolio for those who wish to showcase their work to others. E-commerce helps business owners grow beyond their boundaries and overcome the disadvantages of smallness, as it can help them function internationally (Consoli, 2012). Businesses can also take advantage of crowdsourcing possibilities to resolve various problems or impediments and obtain inspiration from outside problem solvers (Howe, 2006). Social media also allows businesses to observe customers' satisfaction, as it provides insight into how to develop their services and products to meet their customers' expectations and earn their trust.

In terms of potential concerns for small enterprises, Durkin et al. (2013) were concerned that this technological advancement would hurt these companies. Several studies have focused on possible threats generated by the random use of social media. Mazzarol (2015) and Nakara et al. (2012) observed that small entrepreneurs, in particular, commonly develop their networks in an undefined or organized manner, taking advantage of their unstructured and spontaneous nature. Such attitudes have been described in many studies as informal, fortuitous, unstructured, spontaneous and reactive (Gilmore et al., 2001; Reijonen, 2010; Lu and Lu, 2004). The lack of a well-defined marketing strategy may expose entrepreneurs to wrong decisions as they respond to immediate and specific customer needs without considering other factors. Moreover, according to previous research, social media acts as an open source of information, which might lead to the imitation of competitors' products, services and ideas. Another issue is that many social media platforms have complicated features that make it difficult for businesses to effectively handle them. Social media complicates the job for managers because it permits massive amounts of information to be shared in a short time with thousands of users without any limitation, which might expose managers to losing control over their business reputation (Shang, 2014).

Obviously, social media aided women entrepreneurs in overcoming the challenges of entrepreneurship and had a favorable influence on their professional careers (Chaker and Zouaoui, 2022). However, small businesses face many challenges when using social media, as they are still unfamiliar with the technology and know little about it. Ma et al. (2003) noted that the attitudes and behaviors of business owners or managers toward the adoption of new technologies and modifications are directly influenced by their social media expectations. For example, having low confidence and knowledge of the technology and its

benefits and being pleased with the present situation will definitely become a barrier that hinders social media adoption. Thus, one of the major barriers for small businesses is the lack of time, knowledge and experience necessary to start and maintain a web or social media presence (Zhang and Morrison, 2007). However, these barriers are not difficult to overcome, as more website developers target small businesses by creating less complicated sites with simple and, most importantly, inexpensive features (Guarino, 2013).

3. Methodology

The topic of social media and women's ESBs in Yemen has still not been precisely defined. The researchers of this study conducted an exploratory and primarily descriptive study. Because not all women entrepreneurs in Yemen were recognized and reachable, a nonprobability sampling method was chosen. Feild *et al.* (2006) highlighted that "nonprobability sampling is a term referring both to samples of convenience as well as to more purposive methods of selection" (p. 567). According to Roscoe (1975), sample sizes between 30 and 500 are adequate for most investigations. Using a structured survey instrument, this study gathered data from 101 women entrepreneurs in Yemen. The questionnaire consisted of 23 questions divided into five sections.

A test for an instrument's validity evaluates how effectively it measures what it is designed to measure (Bougie and Sekaran, 2016). A pilot study was conducted before completing the questionnaire. The goal of the pilot study was to ensure that the questionnaire would not take an excessive amount of time to complete and that no issues would arise. Six entrepreneurs participated in the pilot study, and the results were as follows: the time to complete the survey was suitable (approximately 15 min).

The reliability test demonstrated that all measures were reliable (see Table 1). The reliability of the dimensions was examined using Cronbach's alpha test. The results showed that all Cronbach's alpha values were greater than 0.70, indicating that the dimensions were reliable and internally consistent. Moreover, the normality assessment of all Kurtosis and Skewness values is between -1 and +1, indicating that normality is not a concern in the study of continuous variables (see Table 2).

Dimension	Cronbach's alpha	No. of items
Importance	0.780	8
Barriers	0.749	8
Factors	0.704	7

Source: Table by authors

Table 1. Cronbach's alpha values

	N	Ske	wness	Kurtosis		
Dimension	Statistic	Statistic	Std. error	Statistic	Std. error	
Importance	101	-0.529	0.240	0.643	0.476	
Barriers	101	-0.611	0.240	0.746	0.476	Table 2.
Factors Source: Table by	101 authors	-0.476	0.240	0.716	0.476	Normality assessment

4. Data analysis

Of the 101 respondents, 50.5% were aged between 20 and 30 years, 42.6% were aged between 31 and 40 years, 5% were aged between 41 and 50 years and only 2% were aged over 50 years. It could be concluded that the majority of women who own ESBs are aged between 20 and 40 years. Moreover, 66.3% had bachelor's degrees, 15.8% had secondary school education levels, 8.9% had master's degrees, 7.9% had diplomas and only 1% had PhDs. Of these, 89.1% were managers and owners of the business and less than 11% were either managers or owners. The type of business shows that 10.9% of the businesses work in photography, 19.8% in design, 12.9% of them work in bakery, 8.9% in trading, 5.9% of them work in beauty centers, 3% in tailoring and fashion and 38.6% in other types of businesses. The results of the age of the business were close, with 16.8% for each option of less than a year and 2 years and 5 years, 19.8% for each option of 3 and 4 years and 9.9% for the option of one year.

Regarding the number of employees, the majority of the businesses investigated in this study had fewer than 10 employees (93.1%), 5% had 10–20 employees and only 2% had more than 20 employees. The largest percentage of start-up capital was obtained from personal savings (48.5%), followed by family (29.7%), and 18% from other sources. On the other hand, only 2% of business partners responded, and only 1% responded that capital was obtained from bank loans. As stated by Ahmad and Xavier (2011), perhaps the reason is that women are not being taken seriously and because of the traditions and customs of such countries that stand as obstacles for women to approach different banking processes. Regarding the evaluation of the previous year's turnover, 58.4% stated that it was neither good nor bad, 34.7% stated that it was very good and 6.9% stated that their return was bad.

To investigate the impact of social media and the extent to which it is being used within ESBs, four questions regarding e-commerce were asked:

- (1) First, the highest rated activities and practices were the following: online ordering and reservation, with a percentage of 71.4 of the total cases, communication with customers, with a percentage of 58.2, and marketing activities, with a percentage of 54.1, while "cash flow monitoring" was the most unpopular e-activity for ESBs in Yemen.
- (2) Second, we asked questions regarding the use of social media; 88% of the respondents confirmed that they had used social media.
- (3) Third, the most popular social media form is social networking websites such as Facebook, with a percentage of 62.1, while broadcast websites such as YouTube have the lowest percentage of 4.5. Marketing and promotion were the most common functions (36.6%), followed by communication and brand awareness (8.7%). This suggests three strategies for the successful use of social networking sites: marketing through creative content, communication with customers and engaging them, and brand image.
- (4) Fourth, a question on ESB's financial and operational performance following the adoption of social media was posed to evaluate the influence of social media on ESB's overall company performance. According to the findings, almost 94.4% of ESBs who use social media concur that doing so has enhanced their "number of consumers." As for the overall business turnover, 75.3% of the sample stated that their turnover increased, 14.6% stated that it remained the same and 10.1% stated that they did not know (see Table 3).

As for the benefits of using social media, "promotion and marketing" has the highest rank of importance (mean = 4.4059, standard deviation = 0.70962, t = 19.911, p < 0.05).

Dimension	No.	9%	Social media adoption
Number of customers Increased	84	94.4	_
Remained as it is Decreased	$\frac{3}{0}$	3.4 0	
I don't know Total	2 89	2.2 100.0	165
Overall turnover Increased Remained as it is Decreased I don't know Total	67 13 0 9 89	75.3 14.6 0 10.1 100.0	Table 3. Turnover and number of customers after the adoption of
Source: Table by authors			social media

"Monitor customer satisfaction" and "provide better and easier access to information on products and services" were ranked second and third highest benefits, while "finding more business partnerships" was found to be the least important benefit, or rather the non-important benefit, of adopting social media in ESBs (mean = 3.0495, standard deviation = 1.27574, t = 0.390, p > 0.05) (see Table 4).

Regarding the challenges, "the lack of confidence in the benefits of social media" was the most important barrier to the adoption of social media in ESBs (mean =4.0297, standard deviation =0.99454, t=10.405, p<0.05). The "lack of awareness of using social media" and "limited knowledge of available technology" come then. The last and least affecting barrier in the adoption of social media in ESBs is "the extra costs for promoting the content in social media" (mean =3.5050, standard deviation =1.22983, t=4.126, p<0.05) (see Table 5).

ESB's owner/managers stated that the most crucial aspect of using social media for the company is "motivation to use social media," with the highest mean score of 4.59 when it comes to the personal elements involved with the effective adoption and implementation of social media. The two factors of "goal/ambition for business" and "owner/manager's knowledge and technology acceptance" come together. As both age and gender had statistically significant negative *t*-values, which means that their computed means were lower than their predicted means, these characteristics were not connected to the effective adoption and implementation of social media. In addition, "age" was less important than

Item	Rank	Mean	SD	t	Þ
Promotion and marketing	1	4.4059	0.70962	19.911	0.000
Monitor customer satisfaction	2	4.2772	0.82606	15.539	0.000
Provide better access to information on product	3	4.2574	0.70219	17.997	0.000
Convenience	4	4.1881	0.82113	14.541	0.000
Providing interactive communication	5	4.1683	0.78828	14.895	0.000
Improve image and public recognition	6	4.0396	0.84759	12.327	0.000
Interacting with other business	7	3.5743	1.10767	5.210	0.000
Found more business partnership	8 (not important)	3.0495	1.27574	0.390	0.697

Table 4.
Benefits regarding the adoption of social media in ESBs

Source: Table by authors

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"gender." Moreover, all other associated factors were significantly important, as all their t-values were statistically significant and positive. To conclude with ranking these factors from the most important to the least important, it is found that "motivation of using social media" is the most important associated factor (mean = 4.5941, standard deviation = 0.73727, t = 21.727, p < 0.05), while "education" was the least important factor (mean = 3.31, standard deviation = 1.4066, t = 2.264, p < 0.05) (see Table 6).

In addition, there are several important factors that owners and managers consider when adopting social media. The following three questions were asked: In response to the first question, which is about whether they agree with the statement that the advantages gained from adopting social media are greater than the cost they have to give up to social media, the results show that the majority of 75.3% agreed and strongly agreed with the statement, 8.9% gave a neutral response and only 15.9% disagreed or strongly disagreed with this statement.

In addition, the findings indicate a combined 97.1% of responses of "Definitely Yes" and "Probably Yes" to the second and third questions about their desire to use social media in the future, which indicates that 98 respondents had such plans. Nevertheless, 27.8% of respondents have not yet set plans for the next 12 months, or they are still unsure about it. Their uncertain responses and delayed plans to adopt social media can be attached to the complex decision process that owners and managers have to undergo, which is affected by the different factors and challenges surrounding social media adoption, as discussed in previous studies.

ESBs can be clustered into different groups according to their owners/managers' demographic characteristics and business profiles. The first relation that was tested with Kruskal–Wallis was the relation between these sets and their evaluation of their last year's

Item	Rank	Mean	SD	t	Þ
Lack of confidence in benefit of social media	1	4.0297	0.99454	10.405	0.000
Limit knowledge of existing technology	2	4.0099	0.99494	10.201	0.000
Lack of awareness of using social media	3	3.9802	1.09526	8.994	0.000
Fear of change and adopting new methods	4	3.9307	0.99255	9.424	0.000
Social media develop and change too fast	5	3.8119	1.09282	7.466	0.000
Imitation by competitors	6	3.7228	1.34995	5.381	0.000
Difficulties in controlling negative comments	7	3.6733	1.22563	5.521	0.000
Extra costs for promoting the content in social media	8	3.5050	1.22983	4.126	0.000

Table 5. Challenges regarding the adoption of social media in ESBs

Source: Table by authors

Factor	Rank	Mean	SD	t	Þ
Motivation	1	4.5941	0.73727	21.729	0.000
Goal/ambitiousness	2	4.4841	0.76391	20.971	0.000
knowledge and technology acceptance	3	4.3168	0.94795	13.961	0.000
Experiences in the internet and social media	4	4.2268	0.84771	15.611	0.000
Education	5	3.3168	1.40663	2.264	0.026
Gender	6	2.2475	1.44503	-5.233	0.000
Age	7	2.1584	1.40522	-6.019	0.000

turnover, whether it was good, bad or neither good nor bad. The results revealed an association between the "type of businesses" and "turnover" ($\chi^2 = 21.633$; p < 0.05). This could be related to the market demand for some products or services.

There was also an association between the "number of staffs" members and "turnover" ($\chi^2 = 11.652$; p < 0.05). This generally means that businesses with more employees are more likely to have a higher turnover rate. Lastly, there is an association between "education" and "turnover" ($\chi^2 = 19.915$; p < 0.05), which means that ESBs with a larger turnover will probably have highly educated owners. In contrast, no other statistical differences were noticed in terms of other measures of age, age of the project or start-up capital with turnover.

To test the type of social media adoption in relation to owner/managers' characteristics as well as their business characteristics, another Kruskal-Wallis examination was conducted. The findings demonstrated that there was a statistically significant variation in YouTube usage by age (p = 0.05). An independent Kruskal-Wallis analysis determined where differences occurred. The age groups (41–50 years) and (>50 years) use YouTube more than the other two groups. There were also statistically significant differences in the use of Twitter according to the project type (p < 0.05). It was highlighted that the differences are in favor of beauty centers over all other types of projects. Moreover, there were statistically significant differences in the use of YouTube and Twitter based on the number of staff members (p < 0.05). It was highlighted that the differences between groups on Twitter were in favor of 10-20 staff and >20 staff over fewer than 10 staff, and the differences between groups on YouTube were in favor of 10-20 staff and >20 staff over fewer than 10 staff. There were statistically significant differences in the use of Facebook according to education level. The differences between groups are in favor of the master's degree over secondary school and PhD. In contrast, there were no statistically significant differences in the use of different types of social media, position, age of the project and startup capital (p > 0.05).

More statistical variances between each of the benefits and challenges of social media adoption and the demographic characteristics of the respondents, as well as their business profiles, were accomplished through another series of Kruskal–Wallis tests. Among the different roles of respondents, whether they are owners, managers or owners and managers at the same time, only "interacting with other businesses" is significant. Regarding age diversity, most of the benefits are statistically insignificant except for "providing better and easier access to information on products and services." According to the type of project, three benefits were considered significant, which are "improve image and public recognition," "provide convenience for customers" and "establish an interactive relationship with customers." Regarding the age of the project, only "improving image and public recognition" was significant. Moreover, in terms of "education," "start-up capital" and "number of staffs within this business," no statistical significance was found, which means these items do not impact the perceived benefits and challenges of social media in ESBs.

In terms of the differences related to the numerous factors related to the use of social media, it is noted that the difference in the educational level of business owners or managers presents statistical differences across one factor, which is the goal/ambition of the business ($\chi^2 = 10.703$, $\rho = 0.030 < 0.05$). This is possibly related to their working preferences, objectives and power in decision-making. No statistically significant differences were observed.

5. Results and discussion

It was found that a wide range of women owners/managers of ESBs are involved in different kinds of e-commerce activities, most of which are handled through social media, such as "online ordering and reservation," "communication with customers" and "marketing activities." The majority of respondents confirmed that they used social media websites within their businesses to perform several activities and strategies. However, not every platform is as popular as other platforms.

The findings confirm the literature, which indicates that small business owners favor Facebook over all other social media platforms (Genc and Öksüz, 2015). Facebook continues to act as a key communication channel for companies, particularly small ones. Every female owner/manager in this study confirmed using it in their businesses, and it is being extensively used to perform marketing and promotion strategies, as well as communication. Picture and video websites such as Instagram and Snapchat, with a slightly different priority, as owners/managers prefer to use such platforms for marketing and increasing brand awareness rather than communicating. It was also noted that other types of social media that have been used by small businesses around the world are merely used in Yemen, such as broadcasts and media websites such as YouTube. This type of platform relies heavily on the speed of the internet, which can be an obstacle in Yemen owing to the weak and low connection speed, which makes it difficult to download, upload or even watch the media presented. Nevertheless, it was noted by the bivariate analysis results that businesses that use media websites, such as YouTube, are larger businesses with 10 employees or more. Although the results are not precise because the number of respondents was still relatively low, it can be explained that larger businesses have more aspirations to grow in different areas, and they try to reach their potential customers from diverse directions and platforms.

It was also noticed by the extra responses to the question "To name three social media websites that are being mostly used in their business" that the WhatsApp app was among the most ranked applications after Facebook, although WhatsApp is not classified as one of the social media types that is officially used in businesses, as it functions as a "messenger" kind of app. Nevertheless, many female business owners and managers confirm using it for more than just communication. They also take advantage of their different features to create groups of people who are interested in their products and services, and then they can perform some of their business activities and social media functions within these groups.

After explaining how different types of social media are used in ESBs, the researchers investigated the different functions of social media. According to the literature review, five comprehensive functions of social media can be applied to small businesses, as identified in previous research. Those functions are marketing and advertising, brand awareness, communication, product distribution and market research (Schmallegger and Carson, 2008; Leung et al., 2013). However, not all are favored by owners/managers. Functions such as conducting market research and selling and distributing products turned out to be functions with little uptake compared to other functions by most of the respondents. Perhaps, it is due to either a lack of knowledge, experience and resources to effectively implement these strategies within the business processes or because these functions are not considered a priority by the owners or managers, as they are being taken for granted and considered normal results for their efforts in marketing strategies.

Overall, the findings of the study that targeted female ESBs in Yemen confirmed the findings of previous research highlighting that social media, when implemented in businesses, makes a significant contribution to different business strategies, namely "communication," "marketing" and "increasing brand awareness" (Kudeshia, and Mittal, 2015; Schmallegger and Carson, 2008).

Regarding the impact on business performance, most respondents to the questionnaire approved the increase in yearly turnover and number of customers as they began to use social media. Only a small number mentioned that they noticed a slightly lower effect, and

none of them confirmed a reduction in revenue or in the number of customers because of the use of social media. These results confirm what Evans (2012) mentioned previously in the literature: social media is a tool to impact customers and cluster them into one community that supports business performance.

The results also revealed that female owners and managers of ESBs in Yemen are aware of the capability of social media to improve business performance, either financially or operationally. However, it was difficult to evaluate this impact precisely based only on these answers for two reasons. First, it can be misleading for owners and managers to track the source of an increased number of customers and turnover and relate it to social media and not to any other factors. Second, to test the impact of social media, the number of customers and revenue must be monitored in alignment with their effective practices, the quality of their social media presence and how frequently they use social media. Some might evaluate social media as an ineffective tool in their business, but this is because their use of social media and their efforts spent on social media are not as effective or goal oriented. Gretzel et al. (2000) illustrated that the impact of using social media does not rely on the technology itself but rather on the approach being used by the business. Moreover, respondents who were asked to evaluate their performance and who answered "I do not know" were unable to precisely evaluate the impact, probably because either their businesses were less than a year old or because, as suggested by Atanassova and Clark (2015), they did not have a clear idea of how to measure performance.

The results of the bivariate analysis indicated important relationships between the demographic characteristics of owners and managers and their business profiles in relation to turnover. The first relationship is between the type of business and turnover, which means that certain groups with the same business type recorded the same results in their business turnover. The researchers attributed this to market demand for products or services and customer behavior. The other significant relationship was between the number of staff members and turnover. The results show that businesses with more employees have higher turnover rates. The third relationship is that between education and turnover. Business owners and managers with higher education have higher business turnover related to the adoption of social media.

One of the most significant primary advantages of adopting social media is marketing and promotion coupled with customer satisfaction monitoring. This is especially true, given that social media adoption costs little money or is essentially free (Kaplan and Haenlein, 2010; Barnes, 2010). Another core benefit suggested by Parveen et al. (2015), which was also reported by female owners/managers, is that social media provide better and easier access to information on products and services. In a society such as Yemen, convenience is a major priority for women in general, whether they are business owners or customers. As women are often unable to go wherever and whenever they want, with social media, the task becomes much easier, and businesses owned by women can be managed from home most of the time. This advantage provides more opportunities for ESBs. Another advantage is the ability to establish interactive relationships and trust customers. Owners/managers may communicate their brands and product updates and enhance their public awareness using social media after an engaged relationship has been established. In addition, with other managerial aspirations, social media provides female ESBs with a chance to interact with other businesses and expand their business relationships but without getting involved in partnerships, as this advantage proved to be insignificant to female owners/managers. Opinions differed according to the positions of the respondents, whether they were owners or managers. In the researchers' opinion, this is due to the fact that partnerships with other businesses require a higher level of trust than social media can provide. This explains why

managers, in particular, do not rely on social media alone to create new partnerships, as they have better managerial experience. There were more advantages confirmed by some owners and managers, and they were not among the benefits mentioned in the literature review.

First, they confirmed that they learned something every day from what is posted on social media, whether to avoid certain mistakes or adopt new techniques. Second, they keep an eye on their competitors' work, which helps them improve. The research also proved that certain characteristics of the business profile influence the perception of the perceived benefits, for example, business type. A group that shares the same business type rated some advantages higher than others because they are considered important to their type of business in particular.

According to the research, the first four obstacles are the most significant that female ESB owners and managers in Yemen must overcome. These include a lack of confidence in the benefits of social media, limited knowledge of available technology, lack of awareness of using social media and fear of change. The results are similar to previous research on the barriers of social media sites, which create fragmented media that businesses find difficult to manage efficiently (McLeod, 2010). The findings confirm those of many studies that have investigated the barriers and challenges faced by different types of businesses. Paudel and Hossain (2008) propose three barriers that may hinder business development. The first is the lack of awareness of the benefits of social media. The second is limited knowledge, and the last is the absence of confidence in social media by managers. Such barriers were identified by some researchers as "soft" barriers, as they are internally related to the manager/owner's personality, experience and knowledge.

The second significant four challenges were related to external or "hard" factors that are not attached to the owners/managers' personal characteristics or knowledge, such as the nature of social media that develops and changes too fast, imitation by competitors, difficulties in controlling negative comments and extra costs for promoting the content in social media. This group of barriers was also proven to be significant by female owners and managers, which also confirms the literature (Shang, 2014; Ma et al., 2003; Lu and Lu, 2004; Zhang and Morrison, 2007).

To summarize the findings, it is proven that social media adoption is linked mainly with nontechnical obstacles and challenges, in specific, those "soft" factors such as management attitude, as well as "hard" technical obstacles and challenges involving cost and other practical aspects regarding social media nature. However, soft barriers proved to be a major concern for female owners/managers in social media adoption. The results confirm Durkin et al.'s (2013) statement that social media could be destructive, specifically to small businesses and entrepreneurs, as they lack knowledge and act randomly with no plans.

The findings revealed several personal factors that influence social media adoption, namely, motivation, business growth and goals, owner/manager knowledge and technology acceptance, previous experiences of using the internet and social media and education. These outcomes were supported by Brown and Kaewkitipong (2009), Zhang and Morrison (2007), Paudel and Hossain (2008) and Sinha (1996).

According to Karanasios and Burgess (2008), SMEs' owners/managers enable change because they naturally hold decision-making power. Nevertheless, the decision itself is not sufficient to guarantee the success of businesses once social media has been adopted. ESBs' female owners/managers need further effort to keep up with online activities to respond to customers and interact with them periodically. The vague and unclear plans and goals of social media applications are a general issue for small businesses. Shang (2014) clarified that this is associated with their inability to estimate the cost they have to give up to invest in social media, their "wait and see" approach and their prior failed experiences. In addition,

some researchers claim that new technology adoption and business success are related to and affected by owner/manager's personal characteristics, such as age (Sinha, 1996; Kristiansen et al., 2003), gender (Mazzarol et al., 1999) and education level (Sinha, 1996). Such factors are presented in previous research, as they may have an impact on owners and managers' work styles, management skills and experience, which might accordingly influence business strategic goals and owners and managers' decisions. However, in this study, only education was proven to be significant, while no evidence was found regarding gender and age.

Owners' and managers' vacillating attitudes can be explained by factors that might affect their decisions. For example, challenges and barriers may play a significant role in moderating and controlling attitudes. Another example is the owner's or manager's attitude, which changes with their confidence in benefiting from social media. Another factor is their personal traits, such as whether they have a creative and motivated personality or conservative and cautious personality. In addition, other factors include their level of experience and business goals, which provide the owner/manager with a vision toward new technologies' acceptance in comparison to others with less experience who use social media only because everybody else does.

6. Theoretical and practical implications

This study brought a valuable image of the power of social media on women's ESBs in Yemen and the factors that accompany social media adoption. The research findings provided insight into the usage of social media by female managers and owners of ESBs in Yemen. It emphasized that owners and managers are aware of and motivated to improve their use of social media within their businesses. A collective response proved that social media has a positive impact on businesses regardless of barriers or disadvantages. Therefore, it is recommended that owners and managers avoid the random usage of social media and adopt plans that include responding to customers, tracking their behavior, encouraging their involvement and discussing and organizing their thoughts on how to present their businesses.

The results of the research also propose that nontechnical challenges are the main reason for the delay in businesses' adoption of social media. In particular, the challenges include "soft" factors such as the narrow familiarity of available technologies and lack of awareness of social media rather than "hard" ones, including expenses and external matters (imitation by competitors). Therefore, in general, ESBs must take these "soft" factors into consideration when thinking of social media adoption to overcome such barriers because the attitude and decision of owners and managers to adopt social media are connected to their rising knowledge and experience gained through their business and nonbusiness activities.

7. Limitations and future directions

There were certain limitations to this study that should be addressed in future studies. First, only data from Yemen was used in this study. Future research using cross-cultural analysis can be used to investigate the cultural factors that influence social media adoption among women entrepreneurs across different countries and regions. Comparing adoption patterns, barriers and outcomes can help identify cultural differences and develop context-specific strategies to promote social media adoption. Second, there was no longitudinal follow-up with the sample in this study; instead, it used cross-sectional data. Future research can conduct longitudinal studies to provide insights into the sustainability of the benefits and challenges derived from social media platforms.

The impact of social media on ESBs changes over time, and it is possible that the attitudes of owners and managers will change due to their growing knowledge and diverse experiences. Consequently, additional research is essential to explain how the knowledge and experience of owners and managers may directly impact social media implementation over time. Second, qualitative research, which includes in-depth interviews, is required to explain why female owners and managers are not looking to create partnerships through social media, illustrate their social media strategic plans for the future and explain their method of evaluating their performance.

In addition, further research is required to address how often ESBs use social media and to what extent owners and managers are satisfied with their efforts and social media presence to obtain more precise results on social media's impact on their businesses. More investigation regarding business characteristics must be taken into consideration, as it might sway and mediate owners' and managers' perspectives on social media benefits and challenges.

Finally, market research, which is one of the social media functions used by businesses, needs to be tested through interviews, as the questionnaire in this research provided only surface-level information on how ESBs benefit from this function. Moreover, the internal function of social media within business staff can be highlighted in future research.

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