Print ISSN: 2008-448X
Online ISSN: 2538-3310

International Journal of Business and Development Studies

University of Sistan and Baluchestan

Homepage: https://ijbds.usb.ac.ir

Virtual Social Networks and Rural Women Entrepreneurship

Kurosh Rezaei-Moghaddam[1] **Fatemeh Badzaban**[2] **Mahsa Fatemi**[3]

[1] Professor, Department of Agricultural Extension and Education, School of Agriculture, Shiraz University, Shiraz, Iran. (Corresponding Author). Email: rezaei@shirazu.ac.ir.
[2] Former Graduate Student, Department of Agricultural Extension and Education, School of Agriculture, Shiraz University, Shiraz, Iran. Email: fatemeh.badzaban@yahoo.com.
[3]Associate Professor, Department of Agricultural Extension and Education, School of Agriculture, Shiraz University, Shiraz, Iran. Email**:** mahsafatemi@shirazu.ac.ir.

ARTICLE INFO

Article type:
Research

Article history
Received: 20.05.2023
Accepted: 24.10.2023

Keywords:
Virtual social networks Word,
Entrepreneurship,
Business,
Rural Women.

JEL Classification:
E5, H2, C21.

Abstract:

Objective: Virtual social networks can be considered as an opportunity to improve women entrepreneurship. Women entrepreneurs use virtual social networks in their professional relationships. These relationships with higher quality leads to better performance in their businesses. The present study aimed to analyze the effects of virtual social networks on improving rural women's entrepreneurship.
Methods: The statistical population of the study included all members of the Agricultural Development Specialized Holding Companies in Fars province in Iran. The study was conducted using survey and stratified random sampling methods with 269 individuals participated via questionnaires.
Results: The results indicated that virtual social networks had a favorable effect on rural women's businesses. There was a significant difference between women in the different studied counties regarding the effects of virtual social networks on business. In addition, a significant difference was observed between women in various groups regarding the effect of virtual social networks on business. In addition, greater effect of virtual social networks on women's businesses led to higher business resilience among the women entrepreneur and their businesses, which resulted in increasing the women's information about business activities and their entrepreneurial activities in their businesses.
Conclusions: Further, more use of social networks by the women led to more use of marketing methods and strategies. Therefore, it is suggested that Agricultural Development Specialized Holding Companies use the functions of virtual social networks in order to information transfer, networking and online training for members when necessary. Also provide the necessary training in the application of appropriate marketing methods and strategies to rural women entrepreneurs using these networks.

Cite this article: K. Rezaei-Moghaddam, F. Badzaban and M. Fatemi (2023). Virtual Social Networks and Rural Women Entrepreneurship. *International Journal of Business and Development Studies*, 15 (2), 83-100. DOI: 10.22111/ijbds.2024.47635.2086.

© The Author(s).
Publisher: University of Sistan and Baluchestan

1. Introduction

Researchers believe that entrepreneurship is considered as one of the most important rural development efforts (Rezaei-Moghaddam and Masoumi, 2018). Entrepreneurship development creates new job opportunities, encourages new businesses and economic, social and welfare development in rural areas, and improves the quality of the villagers' life. Entrepreneurship among rural women is one of the important strategies for utilizing the capacities and abilities of the local community in which appropriate policies and planning can be a big step toward sustainable development (Khosravipoor and Jaberi, 2017). Since the beginning of the century, women have been playing an important and ever-expanding role in the business world, with the world facing a socio-economic phenomenon called women's economic participation in out-of-home jobs. The presence and participation have become one of the indicators of human development since women's economic activity has a direct relationship with poverty reduction and social welfare (Akhavansarraf and Arasteh, 2007). According to the Global Entrepreneurship Monitor (GEM), entrepreneurship attempts should be made to create new businesses or expand the existing ones invested by an individual, a group, or a business (Dabson, 2001). Rural entrepreneurship is the innovative use of rural opportunities to exploit for business opportunities (Sternberg, 2004). In addition, the women entrepreneur is a person who starts a business alone or with the participation of one or more partners, and gets involved in managing the affairs accepting financial, managerial and social risks and responsibilities (Bird and Brush, 2003).

The growth of women's entrepreneurship in recent years has played a major role in enhancing innovation and enriching economies (Brush et al., 2006). However, women enter the entrepreneurial arena with major challenges such as accessing to information, capital, markets, networks, and credit. Some studies identified new communication technologies as an opportunity to overcome the problems and obstacles which women face (Schwartz-DuPre, 2006). Studying the opportunities which ICT and Web 1.0 and 2.0 services offer entrepreneurship and the competitiveness of firms such as virtual social networks can help for knowledge development (Bablan et al., 2014). Further, considering its benefits to women, it can facilitate many of the challenges women entrepreneurs face and increases their entrepreneurial power (Akhavansarraf and Arasteh, 2007). Additionally, the growth of social networks and types of virtual communities has been remarkable over the past few years and has had increasing impacts on economic, marketing, social, and educational activities (Chiu et al., 2006). Virtual social networks, internet, and other new communication technologies enable entrepreneurs to access wider networks and resources previously unavailable geographically and socially, thereby giving entrepreneurs the opportunity to connect with customers, suppliers, contacts and networks (Chen and Wellman, 2009).

Social networks have different meanings in different contexts and applications. Boyd and Ellison (2007) consider virtual social networks as web-based facilities allowing individuals to create public or semi-public profiles in a restricted system, make their own contact list with other users, and view and follow their own and other users' directories. Virtual social networks, which are places to gather people with common interests and activities, have become powerful channels for entrepreneurship, competitiveness and corporate marketing activities (Bablan et al., 2014). In addition, the widespread use of social networks such as Telegram, Instagram, What's App and LinkedIn has made it possible to access information at any time and place via smartphones (Kwahk & Park, 2016). Virtual social networks are very important for organizations in the modern environment since social interactions are regarded as the source of creativity and innovation. Social networks foster learning, creativity, and collaboration in virtual communities and facilitate the creation, sharing, and access to knowledge at a lower cost in both financial and temporal contexts (Garrigos et al., 2011). Women are increasingly using these communication tools to maintain personal and professional contacts (Weiser, 2000). Women`s activities in social networks has become increasingly in recent years, whereby women have been able to exchange their entrepreneurial information online and increase their awareness (Banazadeh, 2018). Using these networks and virtual communities helps to realize current changes in the business environment, enhances innovation at all stages of the value chain, and facilitates management tasks and decision-making processes across a variety of organizations (Garrigos-Simon et al., 2012). Therefore, the networking potential enhances by new innovations (Kalpic and Bernus, 2006). Networking helps men and women entrepreneurs gain valuable information and advice, find opportunities, and access important resources for job creation and entrepreneurial retention, development and success (Hampton et al., 2009). Based on the previous studies, virtual social networks play an important role in creating and sustaining a competitive advantage for companies (Bablan et al., 2014). Further, virtual social networks increase the resilience of women's businesses by helping to create a sustainable competitive advantage in small and medium-sized businesses. Thus, developing and managing virtual social networks are crucial for managing knowledge, enhancing learning, promoting innovation, and improving businesses resilience among rural women.

2. Literature review

Some studies indicated that virtual social networks play a major role in improving the performance of businesses. Zali et al. (2012) reported a positive correlation between business profitability and entrepreneurial social networks interconnectedness. According to Jensen and Greve (2002), the number of entrepreneurial relationships increases entrepreneurs' access to financial and

information resources, leading to the improvement of businesses. Harris and Rae (2009) studied new technologies in 30 small businesses in west London and indicated that social networks play an important role in the future of marketing. According Imani et al. (2017), social networks have a positive and significant effect on the development of digital entrepreneurship and the content of social relationships, information transfer, and social information resources have had the utmost impact on digital entrepreneurship. Maleki Minbashzargah and Shahriari (2017) reported interaction and customer relationship building, social networking, word-of-mouth marketing, guerrilla marketing, branding, economic, socio-cultural and technology-related factors as social networking application opportunities in business. Social networks can act as marketing tools in creating the competitive advantage (Jafari and Loqmanestraki, 2015).

Despite the benefits of using virtual social networks in businesses, some studies showed that small and medium-sized businesses are unaware of the wide range of social networking opportunities (Jafari and Loqmanestraki, 2015), while women entrepreneurs face limitations for interacting in networks (Garrigos-Simon et al., 2012). Agricultural Development Specialized Holding Companies, as a non-governmental fund in 2010 and 2011, in collaboration with the Agricultural Development Investment Support Fund was established as a pilot in 10 counties of Iran (Namjooyanshirazi et al., 2014). They are registered as the first non-governmental funds for rural and nomadic women in the country and by law enjoy all the benefits of non-governmental funds. The funds of Shiraz, Marvdasht and Estahban located in Fars province, have been operating for about eight years. Entrepreneur women in these funds work individually, in groups, and in the family in the fields of agriculture, livestock, poultry, handicrafts, conversion industries and service activities. In this regard, the fund provides women with facilities and training programs which were continuous over the last few years. One of the potentials of these funds in the field of virtual social networks is supporting women entrepreneurs in removing their limitations of using these networks in entrepreneurial activities. In addition, the funds can play an important role in improving women's entrepreneurial performance by increasing their awareness of the practical use of virtual social networks. Thus, the present study aimed to analyze the impact of virtual social networks on improving the entrepreneurship of rural women members of these companies.

3. Research Methodology

The present study was conducted using a survey method. The statistical population included the members of the three Agricultural Development Specialized Holding Companies in Marvdasht, Shiraz and Estahban in Fars province of Iran. The sample size was 269 individuals based on Krejcie and Morgan table. Stratified random sampling method was used and each company was assigned a percentage of the sample size proportional to the total number of

its corporate members (Krejcie and Morgan, 1970). Research variables included the effect of virtual social networks, business information, entrepreneurial activity, marketing strategies application, marketing methods use, individual resilience and business resilience. Firstly, 16 items were considered to analyze the impact of social networks on women's entrepreneurship activity. The International Connor-Davidson Individual Resilience Scale (CD-RISC) was applied to measure women's individual resilience (Connor and Davidson, 2003), and the Business Life Resilience Scale (LRS-B) was used to measure women's business resilience (Ferguson et al., 2010). In order to evaluate marketing strategies (Salavou & Halikias, 2009), marketing methods and the amount of business information (Rezaei-Moghaddam et al., 2019) 15, 14 and 7 items were used, respectively. Entrepreneurial activity was measured based on the components provided by Rezaei-Moghaddam and Izadi (2019). The variables were measured in a five-level Likert scale. Questionnaire was used to collect data. The face validity of the questionnaire was confirmed by the agricultural extension and education professors of Department of Agricultural Extension and Education of Shiraz University. The reliability of the questionnaire was calculated using Cronbach's alpha coefficient (Table 1), conducting a pilot study outside the main sample with 30 women entrepreneur members of Agricultural Development Specialized Holding Companies in Shiraz, Bandamir village, Zarghan. After the required modifications, the main sample was studied and the data were analyzed by SPSS 24 software.

Table 1. Cronbach's alpha coefficient of the research variables

Variable	Cronbach's alpha coefficients
Effects of virtual social networks	0.98
Business resilience	0.87
Individual resilience	0.88
Business information	0.92
Entrepreneurial activity	0.96
Marketing methods use	0.90
Marketing strategies application	0.95

4. Results and Discussion

The mean age of the participants was 40 years. The majority of the women were married (89.6%), while the average education level among all was about 8 years. Based on the results, the studied women use mostly WhatsApp in their business, Telegram and Instagram have the least popularity, respectively. The average rate of women accessing their business information is 24.15 in the range of 7-35 (Table 2). Accordingly, the average women's access to business information was upward. Among the items of this variable, the highest means were related to women's information on customer needs and preferences (3.65), market price

information (3.59) and raw material market information (3.55). The results indicate that women have relatively high information on marketing their products. The lowest means were related to competitors' information on the market (3.27) and information on business loans (3.18).

Table 2. Frequency distribution of rural women's business information

Business Information	Means Rank	Rank
Information on customer needs and preferences	3.65	1
Market price information	3.59	2
Raw material market information	3.50	3
Business-specific information	3.49	4
Product market information	3.43	5
Competitors' information on the market	3.27	6
Information on business loans	3.18	7

Range of business information: 7-35 Mean of component: 24.15

The effect of virtual social networks:

The results indicated that the mean of the effect of virtual social networks on women's entrepreneurial activity (50.97) ranges 16-80 and above the average, indicating the favorable effect of virtual social networks on women's entrepreneurial activities and businesses (Table 3). In addition, virtual social networks have the highest impact on customers' satisfaction and trust. With the advent of virtual social networks, targeting potential customers has become easier than before (Akhavan, 2017). Using social networks in small and medium-sized businesses empowers the users to influence the behavior of others (Jafari and Loqmanestraki, 2015). Women entrepreneurs can gain customer satisfaction and trust through advertising and effective verbal communication on virtual social networks. Since then, the impact of virtual networks has been increasing social relationships and women's ability to grow their businesses. By focusing on communicating and interacting with participants and building relationships between members, cyberspace helps produce knowledge in specific areas, enables participants to perform common tasks, learn from each other, collaborate and collectively build on that knowledge (Lin et al., 2008). Improving the social relationships of women entrepreneurs in virtual communities enables them to use the experiences of others to benefit fully from their own experiences. While companies have not been using social media for a long time to maintain customer engagement, evidence suggests that these networks play a significant role on the business life of companies. These networks not only drive entrepreneurial activity but also affect the economic performance and entrepreneurial outcomes (Zali et al., 2012). Virtual social networks play an important role in enhancing the ability of women entrepreneurs to expand their businesses by promoting sales, increasing customers and boosting the economic performance of businesses. Women entrepreneurs stated that by joining different virtual groups,

in addition to connecting with their entrepreneur friends, they were able to reach out to new people and place them within their customers. Their presence in these networks, according to the women, has improved the quality of their relationships with fund and company managers and made them more aware of the announcements about educational and cultural programs. They said that they were able to gain customers trust and expand their customer reach by sharing images and the benefits of their products online.

Creating a positive attitude towards customer acquisition, offering more diverse products to customers, providing multiple customers with concurrent communication and delivering products to customers' taste are considered as the important effects of other virtual social networks. People's behavior on social media is influenced by their attitude (Kotler and Turnr, 2006). Positive electronic word-of-mouth advertising enhances the relationship between consumers' emotional trust and their willingness to shop online (Cheung et al., 2009). Thus, women entrepreneurs in rural areas can promote a positive attitude towards their products using advertisements on virtual social networks. Rural women entrepreneurs' use of virtual social networks in business activities makes it easier to identify and access customer information, thereby increases their ability to produce more diverse products based on customer needs. Web-based social networks allow one person to communicate with hundreds or even thousands of others about products and companies (Mangold and Faulds, 2009). Rural women entrepreneurs can connect to a large number of their customers via virtual social networks to market and sell their products. Using social media, advertisers will be able to identify their target audience based on location, age, and user interests. Advertisers can access consumer information through social networks (Leung et al., 2015). Virtual social networks allow women entrepreneurs to identify and deliver products based on customer preferences. According to women entrepreneurs, using virtual social networks in entrepreneurial activities is time-saving. They argue that the use of these networks allowed them to spend more time on home and family activities alongside entrepreneurial activities, leading to a balance between work and family. The use of networks, in addition to making it easier for them to communicate with customers, has helped identify customers with different tastes, producing more diverse products and deliver products based on customers' tastes.

Further, registering product orders is easier through the networks. One of the benefits of cyberspace for small businesses is buying and selling products online, making it easier and faster for entrepreneurs to take orders, and sell products and services. Virtual social networks then have a favorable impact on faster and easier product sales, increased customer engagement, the ability to find product buyers and selling more products. Long duration of product launches is considered as one of the problems of rural women entrepreneurs. Women

entrepreneurs need to spend a relatively long-time marketing and selling their products in the market (Golkarfard and Rezaei-Moghaddam, 2019). Virtual social networks as a marketing tool (Jafari and Loqmanestraki, 2015) allow rural women entrepreneurs to find a sales market, thus sell products faster and easier. Most companies use social media to interact with outsiders such as customers, vendors, and the general public, and manage their relationships with their partners and customers (Wyld, 2008). Social networks are where the customers are gathered, virtual social networks allow women entrepreneurs to reach out to their customers and be able to communicate effectively with them regardless of their location. The use of social networks in small and medium-sized businesses enables users to advertise (Jafari & Loqmanestraki, 2015). Rural women entrepreneurs can find and attract buyers of their products through advertising, which results in increasing the number of their customers. The geographical isolation of rural areas created some restrictions on accessing to the sales market for women entrepreneurs, reducing access to their real customers, and consequently decreasing product sales. The use of virtual social networks widens the scope of product sales markets for rural women, thereby increasing product sales. Women entrepreneurs claim that access to virtual networks has made product marketing easier. According to them, the use of these networks made it possible to find customers in the farthest reaches, thus sell their products in the farthest parts of the province and country. They said getting more orders helped produce more products and sell them faster.

Accessing business materials more easily, advertising at lower costs, and possessing the increased ability to compete with other businesses were considered as other effects. Social networking, in addition to being a highly cost-effective tool for reaching new audiences, enables the users to communicate with others including experts, specialists and competitors, on the one hand, and facilitate the access to resources and information, on the other hand, which result in developing small businesses (Jafari and Loqmanestraki, 2015). Therefore, virtual social networks greatly help women entrepreneurs find their target audience including raw material salespeople. Reducing marketing costs is one of the benefits of using cyberspace for businesses. In the cyberspace, heavy advertising and branding budgets through mass media and print media are not required (Akhavan, 2017). Advertising on social networks is cheaper than the traditional media (Leung et al., 2015), which is regarded as one of the advantages of virtual social networks that rural women entrepreneurs can use to reduce the cost of advertising their products. In a modern age when organizations, products, relationships, activities and their businesses in general are virtualized and electronic, and such drastic changes minimize the lifespan of technologies and products, creating and sustaining a competitive advantage based on old and traditional competences and efficiencies are not enough to succeed in competitive environment and markets. However, it requires new approaches and

competencies based on information and communication technology and in the virtual world (Aqazadeh and Esfidani, 2008). In order to adapt their business to these changes and compete with other businesses, women entrepreneurs need to be present on virtual social networks and use the capabilities of these networks to their business advantage. The studied women entrepreneurs stated that using virtual networks reduced their advertising costs, time and transportation in their businesses. In addition to communicating effectively with customers, virtual social networks helped women connect with their raw material retailers and competitors. Thus, they have been able to gain useful insights from their rivals which have made them better competitors.

Table 3. Frequency distribution of the effects of virtual social networks on rural women's business

Virtual social networks	Means Rank	Rank
Customers' satisfaction and trust	3.46	1
Increasing social relationships	3.38	2
Increasing ability to grow their businesses	3.35	3
Creating a positive attitude towards customer acquisition	3.30	4
Provide more diverse products to customers	3.28	5
Providing multiple customers with concurrent communication	3.26	6
Delivering products to customers' taste	3.25	7
Easier to registering product orders	3.33	8
Faster and easier product sales	3.18	9
Increased customer engagement	3.14	10
Ability to find product buyers	3.14	10
Selling more products	3.14	10
Accessing business materials more easily	3.06	11
Advertising at lower costs	3.02	12
Increased ability to compete with other businesses	3.01	13
Brand productivity	2.77	14

Range of the effects of virtual social networks: 16-80 Mean of component: 50.97

Based on the results, virtual social networks have a favorable impact on entrepreneur women marketing activities along with helping to improve women's social relationships and ability to expand their businesses. The lowest mean was related to the effect of virtual social networks on brand productivity (2.77). Social media business activities can be used to increase brand awareness. These activities rely on social networks (Ashley and Tuten, 2015). Increasing brand awareness and popularity is considered as the biggest advantage of cyberspace marketing (Akhavan, 2017). Women entrepreneurs can use virtual social networks to create, introduce, and increase brand awareness for their products.

Effects of virtual social networks on women's business: Comparison in the studied counties: As shown in Table 4, the results of one-way ANOVA indicated that women's entrepreneurship activities in Shiraz, Marvdasht and Estahban play a significant role on virtual social networks on business (P = 0.0001). The results of LSD test showed a significant difference between the mean effect of virtual social networks in Estahban with Shiraz and Marvdasht. The effect of virtual social networks among women entrepreneurs in Estahban has a lower mean (42.13) than those in Shiraz and Marvdasht, meaning social networks have a better effect on faster and easier sales of products, easier provision of business materials, cheaper advertising costs, easier ordering of products, and satisfaction and trust of customers in Shiraz and Marvdasht than those in Esteban. These networks greatly empower women entrepreneurs in Marvdasht and Shiraz to expand their businesses, connect with customers, compete with other competitors, find buyers of products, sell products, deliver products to customers' tastes, offer more diverse products, provide concurrent communication with multiple customers, create positive attitude toward the product in the buyer and form social relationships in entrepreneurial activities. The results of the LSD test indicated no significant difference between the mean effect of virtual social networks on women in Shiraz and Marvdasht. Although the average effect of virtual social networks on women's businesses in Estahban is less than the other two counties, but this effect has not been limited to one area. Women in all three counties agreed that being in virtual network has helped them increase customer engagement, production improvement as well as information and communication increase. Therefore, it has been effective in improving the performance of their businesses.

Table 4. One-way ANOVA results of comparing the virtual social networks on women's businesses in the studied counties

Variable	Group	mean	SD	F	Sig
Virtual social networks	Shiraz	52.21[b]	16.67	14.05	0.0001
	Marvdasht	55.68[b]	16.37		
	Estahban	42.13[a]	18.69		

*The means of the same letters denote no significant difference at a significance level of 0.05.

Effects of virtual social networks on women with different entrepreneurial activities: Based on the results of one-way ANOVA in Table 5, a significant difference was observed between the women with conversion and handicraft activities, service activities, livestock and poultry and agricultural activities in terms of the effect of virtual social networks (P = 0.0001). The results of LSD test indicated a significant difference between the mean of social networks effect on women with livestock and poultry activities with women in three other groups, namely service activities, handicrafts and agricultural activities. The

mean in the case of women with livestock and poultry farming (43.44) was less than the other three groups, thus virtual social networks had less effect on women with livestock and poultry activities. Virtual social networks played a significant role on improving the business function of women in handicraft and conversion, service and agriculture activities. In addition, no significant difference was observed between the effect of virtual social networks on women with handicraft and conversion, service, and agricultural activities. According to women entrepreneurs, virtual social networks use has also contributed to the prosperity of various businesses. A number of women said that they have gained their information about various types of businesses by participating in these networks which has led to their job diversity and earning money in all seasons. According to women, online shopping, marketing and online ordering have made it easier to do business, and they have been able to expand their businesses. Therefore, it can be said that activation in virtual social networks has been effective in improving the performance of various types of entrepreneurial women's businesses.

Table 5. One-way ANOVA results of comparing the virtual social networks on four group of women's activities

Variable	Group	Mean	SD	F	Sig.
Virtual social networks	Service activities	50.96[b]	17.79	6.50	0.0001
	Livestock and poultry activities	43.44[a]	17.95		
	Conversion and handicraft activities	52.00[b]	16.94		
	Agricultural activities	56.16[b]	17.07		

*The means of the same letters denote no significant difference at a significance level of 0.05.

Comparing of the women groups regarding different effects of virtual social networks: As shown in Table 6, the results of one-way ANOVA indicated a significant difference (P = 0.0001) between women in the three groups with low, medium, and high impact of virtual social networks in terms of entrepreneurial activities improvement. In addition, the results of LSD test showed a significant difference between the mean of entrepreneurial activity development in the three groups of women regarding the effect of different virtual networks. The mean was higher for the group with the most effect of the virtual social networks (107.03) than that for the other two groups. In the group with average social network impact (82.29), entrepreneurial activities have a higher average than the low impact group (72.2). Therefore, the greater the impact of virtual social networks on women's business, the greater their entrepreneurial activity, which is consistent with the results of the studies by Banazadeh (2018), and Jafari and Loqmanestraki (2015). Further, a significant difference was observed between women in the three groups with different impacts of virtual social networks on business resilience (P = 0.0001). Based on the LSD test results, the mean is

higher for women who use more virtual social networks (26.66) than that of the other two groups. Accordingly, the greater impact of virtual social networks on women's business leads to the greater amount of information they receive from business-related activities. The results are in line with the study of Jensen and Greve (2002). Furthermore, a significant difference was observed between women in the three groups with different impacts of virtual social networks on business (P = 0.0001). Additionally, the LSD test results indicated a significant difference between the mean of business resilience in the three groups of women with different impacts of virtual networks. Thus, the mean was higher for women who were more influenced by virtual social networks in their entrepreneurial activities (140), than that of the two groups with low and medium effects. Further, women who have been moderately influenced by virtual social networks (123.57) have a higher mean than the low-impact group (113.03). Therefore, the greater impact of virtual social networks on the business of women leads to higher resilience of their business.

The results of one-way ANOVA in Table 6 indicate a significant difference between women in the three groups with different impacts of virtual social networks on individual resilience (P = 0.0001). The results of LSD test showed a significant difference between the mean of individual resilience in the three groups of women with the effect of virtual networks. The mean was higher than the other two groups for the women who had more influence of virtual social networks on their individual resilience (103.88). Furthermore, the women who have been moderately influenced by social media networks (94.72) have a higher mean than the low-impact group (89.89). Therefore, the greater the impact of virtual social networks on women's business, the greater their individual resilience. A significant difference was observed between women in the three groups with different impacts of virtual social networks in terms of marketing strategies use (P = 0.0001). The results of LSD test showed a significant difference between the mean of marketing strategies used by the three groups of women regarding the effect of virtual social networks. Thus, the mean is higher for the women who have been more influenced by virtual social networks (58.60) than that for the other two groups. Additionally, the group of women whose social media has moderate impact on their entrepreneurship (51.77) had a higher mean than the low-impact group (48.5). Accordingly, the greater impact of virtual social networks on the business of women leads to more marketing strategies they apply. The result is consistent with the results of Harris and Rae (2009).

Table 6. One-way ANOVA results of comparing women groups regarding the effects of virtual social networks use on their business

Variable	Low		Medium		High		F	Sig.
	Mean	SD	Mean	SD	Mean	SD		
Entrepreneurship activity	72.29[c]	13.4	82.29[b]	13.99	107.03[a]	13.84	73.01	0.0001
Business information	22.02[b]	5.27	23.40[b]	4.63	26.66[a]	4.80	20.98	0.0001
Business resilience	113.03[c]	17.09	123.57[b]	16.45	140[a]	18.31	53.52	0.0001
Business resilience	89.89[c]	10.48	94.72[b]	10.72	103.88[a]	10.53	39.43	0.0001
Marketing strategy application	48.50[c]	10.12	51.77[b]	8.31	58.60[a]	8.16	44.48	0.0001
Marketing methods use	23.11[c]	5.85	31.31[b]	7.02	40.58[a]	7.72	120.30	0.0001

*The means of the same letters denote no significant difference at a significance level of 0.05.

The results of LSD test indicated a significant difference between the mean of marketing methods by the three groups of women. Thus, the mean is higher for women who are more influenced by virtual social networks (40.58) than that for the other two groups. Consequently, the greater impact of virtual social networks on women's business leads to the use of more marketing techniques. The finding is in line with the results of the study conducted by Maleki and Shahriari (2017) which emphasized social networks as an opportunity for marketing methods.

5. Conclusion and Recommendations

Nowadays, virtual social networks have attracted a great deal of attention due to their ever expanding and shared influence on organizational behaviors. Women entrepreneurs use virtual social networks for their professional relationships. In addition, more quality of these relationships leads to better business performance. Thus, virtual social networks can be considered as an opportunity to improve women's entrepreneurship. Further, it is necessary to consider how the functions of virtual social networks can be used to improve entrepreneurship among rural women. The results indicated that virtual social networks had a favorable impact on rural women's businesses. Based on the results of the comparisons of women in the four groups of agriculture, poultry, conversion and handicrafts and service activities, women with livestock and poultry have been less influenced by virtual businesses than the others. Virtual social networks have had a greater impact on improving the business activities of women in handicrafts, conversion, service, and farming activities. Comparing the research variables on the impact of virtual social networks on women's businesses indicated that the greater use of virtual social networks in women's businesses leads to greater business resilience among women entrepreneurs, and accordingly greater amount of their information about business activities. Furthermore, the results indicated that more use of social networks by women leads to more use of marketing methods and strategies.

Additionally, the results indicated the enormous contribution of virtual social networks in improving the individual and business resilience of women entrepreneurs and enhancing entrepreneurial activities, the amount of business information, marketing methods and strategies, and ultimately improving their entrepreneurship. In order to improve rural women entrepreneurship, responsible authorities may prepare entrepreneur women to best utilize virtual social networks of business to improve their business conditions through proper training on the functions and culture of using those networks. Due to the application of these networks in accelerating communication and strong information, it is suggested that Agricultural Development Specialized Holding Companies use the functions of virtual social networks in term of information transfer, networking and online training for members when necessary.

Encouraging women entrepreneurs to network online can be effective in women's use of experiences and access to each other's information and advice. Strengthen marketing activities is considered as one of the most important functions of virtual social networks, so it is recommended that the required training in the application of appropriate marketing methods and strategies be provided for rural women entrepreneurs.

References

1. Akhavan, A. M. (2017). The impact of cyberspace on the improvement and development of the business environment. *Journal of Preventive Approach*, 1 (3), 46-54 (In Persian).
2. AkhavanSarraf, A., and Arasteh, M. (2007). Women's entrepreneurship and information and communication technology. *National Conference on Higher Education and Entrepreneurship Past*, *Present, Future*, 1. Retrieved from: https://www.sid.ir (In Persian).
3. Aqazadeh, H., and Esfidani, M., R. (2008). Application of information technology (IT) in sustainable competitive advantage, A case study of iran's top manufacturing companies. *Journal of Business Research*, 46, 89-117 (In Persian).
4. Ashley, C., and Tuten, T. (2015). Creative strategies in social media marketing: An exploratory study of branded social content and consumer engagement. *Psychology & Marketing*, *32*(1), 15-27.
5. Bablan, A, Z, Moeinikia, M, Ariani, A, and the Creator, A. (2014). Virtual social networks provide an opportunity to promote entrepreneurship and a platform for competitiveness. *National Conference on Entrepreneurship and Competitiveness*, Retrieved from: https://www.civilica.com/Paper-ESAC02-ESAC02_080.html (In Persian).
6. Banazadeh, A. (2018). *Social Capital and Entrepreneurship of Rural Women: The case of Fars province Agricultural Development Specialized Holding Companies*. M.Sc. thesis of department of Agricultural Extension and Education, School of Agriculture, Shiraz University (In Persian).
7. Bird, B., and Brush, C. (2003). A gendered perspective on organizational creation. *Entrepreneurship theory and practice*, *26*(3), 41-65.
8. Boyd, D. M., and Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of computer-mediated Communication*, *13*(1), 210-230.
9. Brush, C., Carter, N., Gatewood, E., Greene, P. and Hart, M. (2006). Growth-oriented women entrepreneurs and their businesses, A Global Research Perspective. Retrieved from: https://www.amazon.com.
10. Chen, W., and Wellman, B. (2009). Net and jet: The Internet use, travel and social networks of Chinese Canadian entrepreneurs. *Information, Communication & Society*, *12*(4), 525-547.
11. Cheung, C. M., Lee, M. K., and Thadani, D. R. (2009). The impact of positive electronic word-of-mouth on consumer online purchasing decision. *In World Summit on Knowledge Society* (pp. 501-510). Springer, Berlin, Heidelberg.
12. Chiu, C. M., Hsu, M. H., and Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision support systems*, *42*(3), 1872-1888.
13. Connor, K. M., and Davidson, J. R. T. (2003). Development of a new resilience scale: the Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety*, *18* (2), 76–82.

14. Dabson, B. (2001). Supporting rural entrepreneurship. *Exploring policy options for a new rural America*, 35-48.
15. Ferguson, C., Cohen, L., Pooley, J. A., and Harms, C. (2010). *Resilience in small business owners*. Unpublished Manuscript, Edith Cowan University. Perth, WA.
16. Garrigos, F., Gil, I. and Narangajavana, Y. (2011), "The impact of social networks in the competitiveness of the firms", in Beckford, A.M. and Larsen, J.P. (Eds) .Competitiveness: Psychology, Production, Impact and Global Trends, Nova Science Publishers, Hauppauge, NY.
17. Garrigos-Simon, F. J., Lapiedra Alcami, R., and Barbera Ribera, T. (2012). Social networks and Web 3.0: their impact on the management and marketing of organizations. *Management Decision*, *50*(10), 1880-1890.
18. Golkarfard, M., and Rezaei-Moghaddam, K. (2019). Relationship Entrepreneurship with the dimensions of rural women's empowerment in Fars province. *Entrepreneurship Strategies in Agriculture*, 6 (11), 10-1 (In Persian).
19. Hampton, A., Cooper, S., and McGowan, P. (2009). Female entrepreneurial networks and networking activity in technology-based ventures: An exploratory study. *International Small Business Journal*, *27*(2), 193-214.
20. Harris, L., and Rae, A. (2009). Social networks: the future of marketing for small business. *Journal of business strategy*, *30*(5), 24-31.
21. Imani, A., M., Hosseiniehfar, A., and Mubaraki, M. (2017). The impact of social networks on digital entrepreneurship in knowledge-based companies. *Journal of Smart Business Management Studies*, 6 (22). 1-22 (In Persian).
22. Jafari, I, and Loghmanestraki, S. (2015), The role of social networks in creating and developing small and medium businesses, *2nd International Conference on Management Management and Culture*, Retrieved from: https://www.civilica.com/Paper-ICOM02-ICOM02_406.html (In Persian).
23. Jenssen, J. I.; Greve, A. (2002), "does the degree of redundancy in social networks influence the success of business start-ups?" *International Journal of Entrepreneurial Behavior & Research*, (8), 148-169.
24. Jenssen, J., and Greve, A. (2002). Does the degree of redundancy in social networks influence the success of business start-ups? *International Journal of Entrepreneurial Behavior & Research*, *8*(5), 254-267.
25. Kalpic, B., and Bernus, P. (2006). Business process modeling through the knowledge management perspective. *Journal of Knowledge Management*, *10*(3), 40-56.
26. Khosravi Pour, B. and S. Jaberi. (2017). Women's entrepreneurship - key to achieving sustainable rural development. *Scientific Journal of Research Approaches in the Social Sciences*, 3 (11): 130-131 (In Persian) (In Persian).
27. Kotler, Philip, and Turnr, Ronald E. (2006). *Marketing management. Analysis, Planning and Control*. Prentice Hall. Eaglewood Cliff.
28. Krejcie, R.V. and D.V. Morgan. 1970. Determining sample size for research activities. Educational and Psychological Measurement, 30(3): 607-610.

29. Kwahk, K. Y., and Park, D. H. (2016). The effects of network sharing on knowledge-sharing activities and job performance in enterprise social media environments. *Computers in Human Behavior*, *55*, 826-839.
30. Leung, X. Y., Bai, B., and Stahura, K. A. (2015). The marketing effectiveness of social media in the hotel industry: A comparison of Facebook and Twitter. *Journal of Hospitality & Tourism Research*, *39*(2), 147-169.
31. Lin, F. R., Lin, S. C., and Huang, T. P. (2008). Knowledge sharing and creation in a teachers' professional virtual community. *Computers & Education*, *50*(3), 742-756.
32. Maliki Min Bashzargah, M., and Shahriari, M. (2017). Using social media for business in Iran: Challenges and opportunities. *World Journal of Media-Persian Edition*, 12 (2), 89-108 (In Persian).
33. Mangold, W. G., and Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business horizons*, *52*(4), 357-365.
34. Namjooyanshirazi, Z. (2014). Capability of microfinance funds for rural women in the development of entrepreneurship and small businesses. *Journal of Entrepreneurship in Agriculture*, 1 (3). 65-68 (In Persian).
35. Rezaei-Moghaddam, K. and H. Izadi. 2019. Entrepreneurship in small agricultural quick impact enterprises in Iran: Development of an index, effective factors and obstacles. *Journal of Global Entrepreneurship Research*, 9 (17).1-21.
36. Rezaei-Moghaddam, K., & Masoumi, A. (2018). Sustainable rural entrepreneurship: A response to the implications of unlimited rural entrepreneurship development in rural areas. *Journal of Entrepreneurship in Agriculture*, 5 (2), 83-104 (In Persian).
37. Rezaei-Moghaddam, K., Karami, O., and Fatemi, M. (2019). The Comparative Analysis of Marketing Activities among Rural Women Entrepreneurs in Fars Province, Iran. Journal of Global Entrepreneurship Research, 9 (1), 1-20.
38. Salavou, H. E. and J. Halikias. 2009. Strategy types of exporting firms: A view on the basis of competitive advantage. *European Business Review*, 21 (2): 144-158.
39. Schwartz-DuPre, R. L. (2006). Women in debate: from virtual to material. *Contemporary Argumentation and Debate*, *27*, 106-120.
40. Sternberg, R. J. (2004). Successful intelligence as a basis for entrepreneurship. *Journal of Business Venturing*, *19* (2), 189-201.
41. Weiser, E. B. (2000). Gender differences in Internet use patterns and Internet application preferences: A two-sample comparison. *Cyberpsychology and behavior*, *3*(2), 167-178.
42. Wyld, D. C. (2008). Management 2.0: a primer on blogging for executives. *Management Research News*, *31*(6), 448-483.
43. Zali, M., Shot, T., Kordayaj, A., & Najafian, M. (2012). The impact of social networks on business performance: The moderating effect of role model and entrepreneurial motivation (evidence based on GEM data from Iran, Croatia and Denmark). *Iranian Journal of Management Research*, 16 (2), 91-111(In Persian).

شبکه‌های اجتماعی مجازی و کارآفرینی زنان روستایی

چکیده

شبکه‌های اجتماعی مجازی را می‌توان به عنوان فرصتی برای بهبود کارآفرینی زنان دانست. زنان کارآفرین از شبکه‌های اجتماعی مجازی در روابط حرفه‌ای خود استفاده می‌کنند و هرچه کیفیت این روابط بهتر باشد به تبع آن کسب‌وکارهای آن‌ها نیز عملکرد بهتری خواهد داشت. این تحقیق با هدف کلی تحلیل تأثیر شبکه‌های اجتماعی مجازی در بهبود کارآفرینی زنان روستایی انجام گرفت. جامعه آماری تحقیق شامل کلیه اعضاء شرکت‌های مادر تخصصی حمایت از توسعه فعالیت‌های کشاورزی استان فارس در ایران بود. این پژوهش با بهره‌گیری از روش پیمایش و روش نمونه‌گیری تصادفی طبقه‌ای با تعداد ۲۶۹ نفر با استفاده از پرسشنامه انجام شد. نتایج نشان داد که شبکه‌های اجتماعی مجازی تاثیر مطلوبی بر کسب‌وکارهای زنان روستایی داشته است. بین زنان در شهرستان‌های مورد مطالعه از نظر تأثیر شبکه‌های اجتماعی مجازی در کسب‌وکار، تفاوت معنی‌داری وجود دارد. همچنین بین زنان درگروه‌های فعالیتی مختلف از نظر تأثیر شبکه‌های اجتماعی مجازی در کسب‌وکار، تفاوت معنی‌داری وجود دارد. نتایج نشان داد که هرچه تأثیر شبکه‌های اجتماعی مجازی در کسب‌وکارهای زنان بیشتر باشد، تاب‌آوری فردی و تاب‌آوری کسب‌وکارهای زنان کارآفرین بالاتر است و میزان اطلاعات زنان از فعالیت‌های مربوط به کسب‌وکار و میزان فعالیت‌های کارآفرینی آن‌ها در کسب‌وکارها بالاتر است. بر طبق نتایج هرچه زنان شبکه‌های اجتماعی را بیشتر بکارگیرند، روش‌ها و استرتژی‌های بازاریابی را نیز بیشتر به کار می‌گیرند. در نهایت پیشنهادهایی برای ارتقای کارآفرینی زنان روستایی ارائه گردیده است.

کلمات کلیدی: شبکه‌های اجتماعی مجازی، کارآفرینی، کسب‌وکار، زنان روستایی.