

What are the Entrepreneurship Opportunities in Electronic Business? (Case study from a Developing Country)

Tayebeh Rahimipour

Faculty of Management and Economics, University of Sistan and Baluchestan, Zahedan, Iran

Mohim Sheihaki Tash

Faculty of Management and Economics, University of Sistan and Baluchestan, Zahedan, Iran

Mohsen Yaghoubi¹

Faculty of Management and Economics, University of Sistan and Baluchestan, Zahedan, Iran

Abstract

The purpose of this study is to identify entrepreneurship opportunities in the field of electronic business in Zahedan, Iran. The present research is based on the mixed-method approach using a sequential exploratory design. The statistical population includes managers of related companies in the Science and Technology Park in Zahedan, Iran. The researchers employed unstructured interviews with 14 managers for the sampling purposes in the qualitative phase. After coding the data, respective electronic business opportunities were identified in different dimensions and questionnaire items were extracted accordingly. Then, the questionnaire was distributed among the managers of all working companies. In the qualitative phase, 29 items were identified and were classified into five areas of electronic tourism, electronic transportation, electronic content production, electronic services, and electronic commerce. The results showed that all the identified items were statistically significant except for the two components of virtual tour in electronic tourism and electronic toll payment in electronic transportation. Moreover, the findings showed that electronic transportation was regarded as the first priority opportunity, followed by producing electronic content and electronic commerce while electronic services were reported as having the least priority.

Keywords: Identifying Opportunities, Entrepreneurship, Electronic Business, Mixed Method

1 . Corresponding author(mohsen.yaeghoubi@gmail.com)

1. Introduction

Information technology and communications, especially the Internet, has had a significant impact on business processes among small and medium-sized companies (Ongori & Migiro, 2010) and business management in general. Internet-related technologies and electronic businesses provide new opportunities for companies to compete in the global market and play a crucial role in the world economy (Čiarnienė & Stankevičiūtė, 2015). These businesses have experienced unprecedented growth in the last few decades, and it is expected to witness the same trend in future as well. Highlighting electronic businesses can effectively result in creating job opportunities (Mary George, et al., 2016) and resolving the unemployment problem. It is particularly important because unemployment is one of the biggest challenges of developing countries, which is the source of many other problems. According to the Iranian Statistics Center report published on May 29 (2022), the country's unemployment rate for the active population (18 to 35 years old) was reported at 16.5% of the population for the winter. Besides, about 10% of the working population were worked fewer than 44 hours a week, and the unemployment rate was about 40% for the graduates. According to a Selection of Labor Force Survey Results (2022), the International Monetary Fund considers unemployment as one of the major reasons for brain drain in countries like Iran, which causes more problems to the economy (Carrington & Detragiache, 1999).

Due to the constant expansion of Internet activities, there are greater opportunities for the Internet-based businesses (Kwilinski, et al., 2019). According to the World Bank, about 60 percent of the world's population had access to the Internet in 2020, where the statistics suggested about 84 percent of the population in Iran are using the Internet in 2022 (Individuals using the Internet (% of population), 2022). Thus, as it is believed that the entrepreneurial chances exist “out there” (Ramoglou & Tsang, 2016), Iran has a good potential in the development of e-commerce and e-business. Nevertheless, Sistan and Baluchistan province is regarded as one of the deprived regions of Iran with the highest population growth rate in the country. Moreover, given the available young educated workforce and the long engagement of the majority of this population in trading, this province should have a good potential to establish e-businesses. Entrepreneurship refers to the set of solutions presented to resolve this global problem, which can play a pivotal role as a trigger for the economic development of countries in creating job opportunities, promoting social welfare, and dealing with major environmental and social challenges (Vedula et al., 2022). People's tendency to identifying entrepreneurship opportunities has been investigated by several studies within the

past three decades (Mary George et al., 2016). Meanwhile, there are a few researches on the detection of e-business opportunities. Accordingly, this research seeks to identify the entrepreneurship opportunities in the field of electronic business in Zahedan, Iran. Furthermore, Zahedan's Science and Technology Park aims to increase wealth in society by encouraging the innovation culture and promoting competitive advantage among companies and institutions and which are managed by professional experts. Hence, the statistical population of the present study includes the companies in this science and technology park.

2. Literature Review

Opportunity identification is often advised as the very beginning of the entrepreneurship procedure (Cohen et al., 2021). The review of previous researches in the field of identifying opportunities indicates that most studies focus on explaining the relationship and impact of related factors (e.g., Mary George et al., 2016; Nieto & González-Álvarez, 2016; Wang et al., 2013). Nevertheless, the study by Ardichvili et al. (2003) was an exception because it explained the main factors of the opportunity identification process in the form of a model (Ardichvili et al., 2003). Similarly, Varzeshkar et al. (2021) proposed a model to identify and exploit entrepreneurship opportunities with a focus on online retail in the context of Iran. In addition, most Iranian studies have focused on quantitative methods (e.g., Hajizadeh et al., 2014; Nikraftar & Hosseini, 2017), which have only explained the relationship and impact of respective factors. On the other hand, only a few qualitative or mixed- methods researches have been conducted in Iran. Therefore, this study is considered innovative given that it attempts to identify entrepreneurship opportunities in the form of a sequential exploratory plan, which is discussed in detail in the methodology section.

Identifying opportunities refers to the process of understanding the viability of a new profitable business or a new product and service. In other words, an opportunity cannot be exploited unless it is identified (Barringer & Ireland, 2019). Baron and Shan (2007) believed that opportunity identification is the first step in the entrepreneurship process, which is influenced by various factors. Hence, starting an entrepreneurship business requires the identification of related opportunities (Cohen, et al., 2021). Then, the entrepreneur should turn this identified opportunity into a business idea. It is believed that identifying and exploiting the opportunities in the business environment while performing daily activities is the most crucial ability of a successful

entrepreneur. Besides, opportunity identification is a process through which entrepreneurs search for and improve new ideas leading to business opportunities (Gundry & Kickul, 2007) and substantial gains (Grégoire et al., 2010).

The term “electronic business” was first coined by IBM in 1990 in its advertising campaigns. Accordingly, it was defined as the transformation of the main business processes using the "Internet technologies". Although this term has become used more frequently since 1990, the origin of this phenomenon dates back to much earlier times. It means that the e-business has not been focused only on the “dot-com” and Internet-based companies, rather it has involved the transformation of organizations' current businesses through the innovative use of the Internet and related technologies. The gradual evolution of e-business has been well-documented since the mid-1990s.

E-business has been defined as the implementation of electronic tools in order to manage internal and external business of any organization (Jelassi & Enders, 2005). The definition of the internal electronic business activities of the organization, such as the communication of employees with each other through the intranet (the network within the organization), includes promoting the process of sharing information by employees, facilitating knowledge in the organization, and supporting the management’s reporting system.

The evolution of e-business can be categorized into the following four eras (Jelassi & Enders, 2005):

The first era occurred before the widespread use of the Internet in business affairs, which was called the origin of e-business by Jelassi and Enders. The implementation of electronic data exchange in some sectors in business, such as similar services and technologies (Minitel in France), dates back to several decades prior to the use of the Internet in business matters.

The Internet development, as the second era, began with the arrival of Amazon in 1995. This period was characterized by the abundance and the belief in the unlimited potential of the Internet. The underlying belief was that the Internet would dramatically increase value creation by lowering expenses and increasing customer profits, which would lead to rapid expansion of market capacity. Since 1995 and the dot-com companies crash in March 2000, investors and managers literally overrated the market size for these companies and ignored many critical issues that led to their subsequent collapse. Instead, other parameters, such as the click rate or the number of unique visitors to a website were the main determinants of the success of the stock market and its media

coverage. Various companies disregarded the fundamental issues of the business and sought to increase their growth rate and market share, which ultimately led to the sudden crash among dot-com companies in 2000 and 2001.

The unlikely market crash was not unexpected, but the turmoil before the crash and some other circumstances would lead to an unbearable situation. During the development of the Internet, many of the investors were not necessarily optimistic about the future of their initial investments; however, there was hope that as the stock market continued to rise and people were willing to buy Internet-based companies' stocks, they could always sell the stock to someone else for a higher price. Such misleading motivations dramatically inflated the Internet belief. This era has been referred to as the third era of e-business evolution.

The fourth era, the stabilization phase, began in the late 2000s following the formation of the Internet bubble. All the major stakeholders, including investors, entrepreneurs, managers, and the media, were forced to reflect on the unfortunate realities and reasons behind many of the unusual failures of the Internet-related businesses and the reason behind the failure of the anticipated profits. Returning to business principles and critical issues, such as cost, efficiency, increasing revenue, and business models (e.g., customer retention and most importantly profit) gained popularity. Since 2002 and 2003, the majority of survivors of the dot-com crash have become profitable and the stock market has continued to develop and improve.

E-business is a secure, flexible, and integrated approach to achieving value in different businesses by integrating systems and processes that are based on core business activities while maintaining simplicity and using Internet technology (Pavic et al., 2007).

After conducting a comprehensive literature review, the following components were identified for electronic business in the present research:

Electronic tourism (ET): it includes direct reception of electronic tourism services using information technology directly, along with organizational design and ON-LINE preparation of main information with regard to tourism sites, tourism industry, and communication technology.

Electronic Transportation: The US Department of Transportation proposed the official definition of ITS as systems for collecting, maintaining, processing, and distributing the information related to the transfer of goods and passengers. However, the ITS strategic plan of the state of Victoria, Australia defined it as the purposeful implementation of information and communication technology (ICT) to create an efficient and secure transportation system.

Electronic service: It refers to the service that is provided online in order to provide services and perform all the tasks quickly, without the need to be physically present in the place.

Electronic content: It refers to any information unit that is presented on digital platforms and can be managed electronically. This content can be provided to the public in the form of web services, images, videos, animations, documents, PDF files, and information stored in databases. In general, any type of content that can be viewed and transmitted through a computer is called the electronic content. For this purpose, Acrobat Reader, Powerpoint, Presenter are used to produce text and Sngit, Photoshop, Photoimpact are used to produce photos.

E-commerce: It can be defined as the ability to perform any kind of business online and through the Internet. E-commerce refers to any transaction, where goods or services are bought and sold over the Internet and lead to the import or export of such goods or services. E-commerce is not just confined to selling and buying on-line; nevertheless, it usually has a wider application including purchasing, listing goods, managing production, supplying, distributing, and transferring goods, as well as providing follow-up services (Turban & Gehrke, 2000).

3. Methodology

The main research question was "What are the entrepreneurship opportunities in the field of electronic business in Zahedan?". Therefore, a mixed-method research based on sequential exploration was used to find the answer to this question. Initially, the qualitative data are collected and analyzed in the sequential exploratory approach. Then, the quantitative data are used to strengthen the qualitative data. Data analysis for these two types of data is usually inter-related, and the integration occurs in the interpretation and discussion phase. This design is used to explain relationships when the study variables are not determined in advance, as well as to modify and test the theory and design measurement tools (Creswell et al., 2003). As a result, this research employs a method to investigate the managers' characteristics and personal perceptions (attitudes, beliefs, opinions, and preferences) through the analysis of the answers given to the questionnaire items. Hence, it is exploratory and survey in terms of nature and method. On the other hand, this research is an applied study in terms of purpose, which has been carried out in a cross-sectional manner. Since the present research is applied, the results can be used in creating entrepreneurship opportunities in the field of electronic business. The statistical population includes active

entrepreneur managers in the Science and Technology Park in Zahedan, Iran. The statistical sample of the qualitative part included 14 active managers of electronic businesses in the Science and Technology Park. Accordingly, unstructured interviews were conducted to collect the data. Guest, Bunce, and Johnson (2006) claimed that conducting interviews with 12 people would be sufficient in qualitative studies. However, it is suggested to continue the interview until the researcher perceives the theoretical saturation (Guest et al., 2006). The major question in the interview section was "what are the entrepreneurship opportunities in electronic business in Zahedan?". At first, the answers were transcribed by the managers. After coding the data, electronic business opportunities were identified in different dimensions. Then, the validity of these opportunities was examined based on the opinions of four experts. Finally, a questionnaire was developed including 29 items in five dimensions based on the review of the background related to each dimensions extracted from the interview and other evaluations on the managers' answers in the interview. In addition, the face validity of the questionnaire was confirmed by the experts. A researcher-made questionnaire was used for the quantitative phase; given the limited statistical population, the census sampling method was used and the 5-point Likert scale questionnaire was distributed among all active managers (30 individuals). Since one of the researchers was present at the science and technology park of Zahedan for several consecutive days, the completion rate for the questionnaires was 100%. The reliability of the entire questionnaire was obtained using Cronbach's alpha coefficient (92%). Eventually, the data obtained from the questionnaire were analyzed using SPSS software and applying the parametric single-sample T-test.

4. Findings

Overall, 29 e-business components were extracted from the interviews with managers. Then, these components were divided into five dimensions of e-tourism, e-transportation, e-content, e-services, and e-commerce based on the experts' opinion and the literature review. Table 1 shows the components and questions of the questionnaire.

Table 1. The Questionnaire Dimension and Items Extracted from the Qualitative Phase and Literature *Review*

a) To what extent do you find these electronic tourism opportunities important and effective?	
1	Tourism sites

2	Electronic tourism services (hotel and ticket reservation), on-line purchase of transportation tickets (airway, marine, railway, and roads)
3	Virtual tours
4	Electronic payment (using credit cards, buying tickets on-line, and paying visa fee)
b) To what extent do you find these electronic transportation opportunities important and effective?	
1	Electronic toll
2	Smart payment cards (transportation system and drivers)
3	Smart surveillance system in the road
4	On-line news and information regarding transferring goods and passengers
5	On-line information regarding the facilities, such as restaurants, gas stations, and medical centers
6	Electronic cargo documents
7	On-line taxi system
8	Smart transportation system
c) To what extent do you find these electronic content production opportunities important and effective?	
1	On-line games
2	Mobile applications
3	Graphic advertisement
4	Educational software
5	Designing websites
6	Optimizing websites
7	Animation
d) To what extent do you find these electronic services opportunities important and effective?	
1	Food delivey services
2	On-line consultation
3	Typing and on-line translation
4	Internet advertisement and pay-per-click system, mobile application advertisement, social media advertisement (Telegram, Instagram, ...)
e) To what extent do you find these electronic commerce opportunities important and effective?	
1	Electronic shops
2	Electronim markets
3	Electornic sales
4	On-line display of traditional shopping centers
5	On-line display of exhibition products
6	Electronic international trade

Moreover, the descriptive statistics related to the dimensions of entrepreneurship opportunities in the field of e-business in Zahedan will be discussed accordingly. Table 2 shows the mean and standard deviation for these variables.

Table 2. Mean and (standard deviation) Dimensions of Entrepreneurial Opportunities in the Field of Electronic Business

Dimensions	Mean	Standard Definition
Electronic Tourism	15.68	2.01

Electronic Transport	30.47	6.25
Electronic Content Production	26.77	4.43
Electronic Services	14.03	3.55
Electronic Commerce	22.50	5.30

The results of Table 2 show that the highest mean scores belong to the two areas of electronic transportation and electronic content production, which indicates the attractiveness of the opportunities of these two dimensions for the active managers in the technology park of Zahedan. In addition, the single-sample parametric T-test was used to evaluate the mean score of each component. For this purpose, different assumptions, such as independence of observations, normality of the data, linearity of the relationship between two variables, and equality of variances, were examined to ensure the validity of the results. These assumptions must be observed in order to use parametric tests. The pre-determined value for the t-test was considered 3 according to the 5-point nature of the Likert scale.

Evaluating the First Question:

- To what extent do you find each of the electronic tourism opportunities components effective and important?

To answer the above question, a single-sample t-test was used whose results are shown in Table 3.

Table 3. One-Sample T-test Results of Electronic Tourism Opportunities Dimension

Items	Mean	Standard Deviation	T-test	Sig Level
Tourism Site	3.71	1.08	3.48	0.002
Internet Travel Services	3.93	1.01	3.83	0.000
Virtual Tours	3.32	1.27	1.33	0.194
Electronic Payment	4.29	1.04	6.48	0.000
Electronic Tourism	15.68	2.01	33.22	0.000

The results of Table 3 indicated that the mean score of electronic tourism is significantly higher than the average value ($t=22.33, P<0.05$). As a result, the efficiency of this dimension is confirmed with a probability of 95%. The investigation of tourism components showed that the mean scores of tourism sites ($t=48.3$), electronic tourism services ($t=83.4$), and electronic payments ($t=48.6$) are fairly acceptable. However, the efficiency of the virtual tour component was not confirmed

because the significance level was greater than 0.05. The highest mean score belonged to the dimension of electronic payment, which showed its greater attractiveness over other components.

Evaluating The Second Question:

- To what extent do you find each of the electronic transportation opportunities components effective and important?

To answer the above question, a single-sample t-test was used whose results are shown in Table 4.

Table 4. The Results of the One-Sample T-test for Electronic Transportation Opportunities

Items	Mean	Standard Deviation	T-test	Sig Level
Electronic Toll	3.37	1.06	1.88	0.070
Smart Card	3.83	1	4.44	0.000
Intelligent Device for Registering Violations	3.76	1.15	3.53	0.001
Online News and Information about Moving Goods	4.07	1.01	5.75	0.000
Online Information about the Way	4.07	1.14	5.11	0.000
Issuance of Electronic Bills of Lading	3.93	0.86	5.88	0.002
Intelligent Taxi Request System	3.83	1.05	4.33	0.000
Smart Urban Transportation	3.87	1.04	4.55	0.000
Electronic Transport	30.47	6.25	24.06	0.000

The results of Table 4 indicated that the mean score of electronic transportation is significantly higher than the average value ($t=24.06$, $P<0.05$). As a result, the efficiency of electronic transportation is confirmed with a probability of 95%. Examining the mean scores of the components showed that smart cards ($t=3.83$), smart surveillance device ($t=3.76$), online news and information about transferring goods ($t=4.07$), online information about the roads ($t=4.07$), electronic cargo ($t=3.93$), smart taxi system ($t=3.83$), and smart urban transportation ($t=3.87$) are effective. Nevertheless, the efficiency of the electronic toll component ($t=37.3$) was not confirmed because the mean score was greater than 0.05. The most efficient components were online news and information about transferring goods as well as online news and information about the road.

Evaluating the Third Question:

- To what extent do you find each of the electronic content production opportunities components effective and important?

To answer the above question, a single-sample t-test was used whose results are shown in Table 5.

Table 5. One-Sample T-test Results of Electronic Content Production Opportunities

Items	Mean	Standard Deviation	T-test	Sig Level
Online Games	3.59	0.78	4.04	0.000
Mobile Application	4.20	0.84	7.76	0.000
Graphic Advertising	3.87	0.93	5.06	0.000
Educational Software	3.76	1.02	3.99	0.000
Web Design	4.00	0.91	6.02	0.000
Website Optimization (E.G., SEO)	3.77	1.25	3.35	0.002
Animation	3.83	0.95	4.80	0.000
Electronic Content Production	26.77	4.43	29.37	0.000

The results of Table 5 showed that the mean score of the production of electronic content is significantly higher than the average value ($t=76.23$, $P<0.05$). As a result, the efficiency of electronic content production is confirmed with a probability of 95%. Examining the mean scores of the components revealed that online games ($t=59.3$), mobile application ($t=20.4$), graphic advertisements ($t=87.3$), educational software ($t=3.76$), site design ($t=4.00$), site optimization ($t=77.3$), and animation ($t=3.83$) had an acceptable level of effectiveness ($P<0.05$). The most efficient components was the mobile application component.

Evaluating of the Fourth Question:

- To what extent do you find each of the electronic service opportunities components effective and important?

To answer the above question, a single-sample t-test was used whose results are shown in Table 6.

Table 6. The Results of The One-Sample T-test on the Dimensions of Electronic Service Opportunities

Items	Mean	Standard Deviation	T-test	Sig level
Order and Deliver Food	3.57	1.13	2.73	0.011
Online Counseling	3.33	1.12	1.62	0.115
Typing, Duplicating and Translating Online	3.50	0.97	2.81	0.009
Electronic and Click Ads Online	3.63	1.09	3.15	0.004
Electronic Services	14.03	3.55	16.98	0.000

The results of Table 6 indicated that the mean score of electronic services is significantly higher than the average value ($t=16.98$, $P<0.05$). As a result, this hypothesis is confirmed with a probability of 95%. Examining the results and the mean scores of the components showed that food delivery services ($t=73.2$), typing and on-line translation ($t=2.81$), as well as electronic and pay-per-click advertisements ($t=15.3$) have an acceptable level of efficiency. However, the efficiency of the online consultation component ($t=1.62$) was not confirmed in electronic transportation because the mean score was greater than 0.05. The highest mean score belonged to the component of electronic and pay-per-click advertisements.

Evaluating the Fifth Question:

- To what extent do you find each of the electronic commerce opportunities components effective and important?

To answer the above question, a single-sample t-test was used whose results are shown in Table 7.

Table 7. One-Sample T-test Results of E-commerce Opportunities

Items	Mean	Standard Deviation	Ttest	Sig level
Electronic Stores	3.67	1.18	3.08	0.004
Electronic Markets	3.67	1.21	3.01	0.005
Electronic Auctions	3.9	1.02	4.79	0.000
Showing Traditional Shopping Centers Through the Internet	3.7	1.05	3.63	0.001
Presentation of Exhibition Products Through the Internet	3.7	1.05	3.63	0.001

International Electronic Trade	3.87	1.10	4.29	0.000
Electronic Commerce	22.5	5.30	20.11	0.000

The results revealed that the mean score of e-commerce is significantly higher than the average value ($t=11.20$, $P<0.05$). As a result, the efficiency of e-commerce is confirmed with a probability of 95%. Examining the mean scores of the components showed that electronic shops ($t=3.08$), electronic markets ($t=3.01$), electronic sales ($t=79.4$), display of traditional shopping centers through the Internet ($t=3.63$), presentation of exhibition products through the Internet ($t=3.63$), and international electronic commerce ($t=29.4$) have an acceptable level of efficiency. The highest mean score belonged to the component of electronic sales showing the greater attractiveness of this field.

Overall, electronic transportation has had the highest priority among different dimensions of entrepreneurship opportunities in the field of e-business with an average of 30.47, which is followed by electronic content production (26.77), electronic commerce (22.50), tourism (15.68), and electronic services (14.30).

5. Discussion and Conclusion

The aim of the present research was to identify entrepreneurship opportunities in the field of electronic business so that these opportunities can be used as strategies for the development of electronic business. According to the graduated population in the society with great knowledge of the Internet, acquiring knowledge and skills in the business world has become more important than capital and wealth. This is considered a competitive advantage for the electronic business compared to traditional business. Consequently, along with the special focus of the youth community and university students to these opportunities, the government and universities are expected to provide practical training programs to promote the principles and skills related to electronic businesses. Hence, it may help create job opportunities by supporting youth investment in this area.

In response to the main research question, five dimensions were identified that include electronic tourism, electronic transportation, electronic content production, electronic services, and electronic commerce. In the field of electronic tourism, the following suggestions are made: advertising tourism sites in social media, creating information databases for tourists, creating

electronic cards for tourism centers and delivering these cards on-line, making videos concerning the tourism attractions of the province. In terms of electronic transportation, it is suggested to create an online marketplace for cargo transfer by trucks. Aramesh et al. (2019) specifically identified business opportunities in electronic tourism in Chabahar city in Iran, proposed making smart systems for touring, residing, trading, advertising, routing, and transporting which supports some of the findings of our study. About 90% of people in the world have cell phones (Gontareva, et al., 2018). Accordingly, smart mobile applications can help for this purpose (See Siuhi & Mwakalonge, 2016). In the field of electronic content, it is suggested to provide skill training through electronic content such as mechanical training, sewing, and language training through electronic content. In the field of electronic services, it is necessary to focus on the needs of the local people. For example, the need for electronic medical services is observed in the province of Sistan and Baluchistan. The quality of care can be improved using electronic medical records (Janett & Yeracaris, 2020), while confidentiality can be ensured (See Wu et al., 2022). In the field of e-commerce, it is recommended to create electronic stores for household appliances in Chabahar region; hold electronic sales for appliances, such as tea and blanket; hold exhibitions on the internet about regional handicrafts, especially the needlework art of Baloch women; create electronic stores for regional agricultural products, especially dates and tropical fruits; create electronic restaurants in Chabahar; provide electronic services in ticket and hotel reservations in Chabahar.

In general, electronic business has a wide range of dimensions. According to the demands of each region, entrepreneurs can investigate online businesses pertaining to the capacity and talent of that region population. Technology effects on marketing decisions in entrepreneurship (Polas & Raju, 2021) and cyper entrepreneurship is one type of entrepreneurship that provides innovative practice for organizations (See Tajvidi & Tajvidi, 2021). Besides, new areas have emerged in the field of online businesses, such as the Internet of Things (e.g., Kumar et al., 2019), virtual reality (e.g., Singh et al., 2020) can be considered in future research through a semi-structured interview. Consequently, it is suggested to conduct case studies in Science and Technology Parks and Centers in other provinces of the country.

On the other hand, the statistical population of this research included electronic businesses located in the science and technology park of Zahedan, Iran. The emergence of the concept and phenomenon of growth centers and science and technology parks in recent years originates from a global desire and enthusiasm as a part of scientific, technological, and industrial policies to

develop local and national economies. According to global experiences, it seems that the creation of research parks in the country, with appropriate planning and investment, can play an effective role in completing the research cycle and commercializing research results. Furthermore, this issue can accelerate the process of technology transfer and expansion of small and medium-sized companies, which ultimately leads to promoting the country's economic growth.

Finally, considering that the present study was an applied study highlighting the Science and Technology Park in Zahedan, the generalizability of the results of this research should be treated with caution due to the limited statistical population and the specific social, cultural, political, and economic conditions of Zahedan. Nevertheless, since there have been limited studies in the field of opportunity identification in e-business, the results of the present research can be used for the development of other studies.

References

- Aramesh, H., Zivdar, M., Riki, M., & Saljooghi, Z. S. (2019). Identifying and prioritizing new business opportunities in the electronic tourism industry of Chabahar City. *International Journal of Human Capital in Urban Management*, 4(1), 51-60.
- A Selection of Labor Force Survey Results. (2022). Statistical Centre of Iran. <https://www.amar.org.ir/english/Latest-Releases-Page/ID/17362/a-selection-of-labor-force-survey-results-winter-the-year-14001-22-december-2021-20-march-2022>
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*. 18(1), 105-123.
- Barringer, B. R., & Ireland, R. D. (2019). *Entrepreneurship: Successfully Launching New Ventures (Six Edition)*. Pearson Education, Inc.
- Carrington, W. J., & Detragiache, E. (1999). How extensive is the brain drain? Finance and Development. *A quarterly magazine of the IMF*, 36, 46-49.
- Čiarnienė, R., & Stankevičiūtė, G. (2015). Theoretical Framework of E-Business Competitiveness. *Procedia - Social and Behavioral Sciences*. 213, 734-739.
- Cohen, D., Hsu, D. K., & Shinnar, R. S. (2021). Identifying innovative opportunities in the entrepreneurship classroom: a new approach and empirical test. *Small Business Economics*, 57(4), 1931-1955.
- Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). *Advanced mixed methods research designs*. Handbook of Mixed Methods in Social and Behavioral Research, 209(240), 209–240.
- Gontareva, I., Chorna, M., Pawliszczy, D., Barna, M., Dorokhov, O., & Osinska, O. (2018). Features of the entrepreneurship development in digital economy. *TEM Journal*, 7(4), 813.
- Grégoire, D. A., Barr, P. S., & Shepherd, D. A. (2010). Cognitive processes of opportunity recognition: The role of structural alignment. *Organization science*, 21(2), 413-431.
- Guest, G., Bunce, A., & Johnson, L. (2006). How Many Interviews Are Enough?: An Experiment with Data Saturation and Variability. *Field Methods*. 18(1), 59-82.
- Gundry, L. K., & Kickul, J. R. (2007). Entrepreneurship strategy: Changing patterns in new venture creation, growth, and reinvention. In *Entrepreneurship Strategy: Changing Patterns in New Venture Creation, Growth, and Reinvention*. Sage.
- Hajizadeh, A., Zali, M., & Beigpour, E. (2014). Examining the relationship between prior

- knowledge and entrepreneurial opportunity recognition with mediating role of entrepreneurial alertness and entrepreneurial learning. *Journal of Entrepreneurship Development*, 7(4), 613–633.
- Individuals using the Internet (% of population)*. (2022). The World Bank. <https://data.worldbank.org/indicator/IT.NET.USER.ZS>
- Janett, R. S., & Yeracaris, P. P. (2020). Electronic Medical Records in the American Health System: challenges and lessons learned. *Ciencia & saude coletiva*, 25, 1293-1304.
- Jelassi, T., & Enders, A. (2005). *Strategies for e-business: creating value through electronic and mobile commerce: concepts and cases*. Pearson Education.
- Kumar, S., Tiwari, P., & Zymbler, M. (2019). Internet of Things is a revolutionary approach for future technology enhancement: a review. *Journal of Big data*, 6(1), 1-21.
- Kwilinski, A., Dalevska, N., Kravchenko, S., Hroznyi, I., & Kovalenko, O. (2019). Formation of the entrepreneurship model of e-business in the context of the introduction of information and communication technologies. *Journal of Entrepreneurship Education*, 22, 1-7.
- Mary George, N., Parida, V., Lahti, T., & Wincent, J. (2016). A systematic literature review of entrepreneurial opportunity recognition: insights on influencing factors. *International Entrepreneurship and Management Journal*. 12, 309-350.
- Nieto, M., & González-Álvarez, N. (2016). Social capital effects on the discovery and exploitation of entrepreneurial opportunities. *International Entrepreneurship and Management Journal*. 12(2), 309-350.
- Nikraftar, T., & Hosseini, E. (2017). The effect of prior knowledge on entrepreneurial opportunity recognition (the Case study of tourism agencies participating in tourism fairs in Shiraz). *Journal of Entrepreneurship Development*, 9(4), 731–748.
- Ongori, H., & Migiro, S. O. (2010). Information and communication technologies adoption in SMEs: literature review. *Journal of Chinese Entrepreneurship*. 2(1), 93-104.
- Pavic, S., Koh, S. C. L., Simpson, M., & Padmore, J. (2007). Could e-business create a competitive advantage in UK SMEs? *Benchmarking: An International Journal*, 14(3), 320-351.
- Polas, M. R. H., & Raju, V. (2021). Technology and entrepreneurial marketing decisions during COVID-19. *Global Journal of Flexible Systems Management*, 22(2), 95-112.
- Ramoglou, S., & Tsang, E. W. (2016). A realist perspective of entrepreneurship: Opportunities as propensities. *Academy of Management Review*, 41(3), 410-434.

- Singh, R. P., Javaid, M., Kataria, R., Tyagi, M., Haleem, A., & Suman, R. (2020). Significant applications of virtual reality for COVID-19 pandemic. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 14(4), 661-664.
- Siuhi, S., & Mwakalonge, J. (2016). Opportunities and challenges of smart mobile applications in transportaion. *Journal of traffic and transportation engineering (english edition)*, 3(6), 582-592.
- Tajvidi, R. and Tajvidi, M. (2021), The growth of cyber entrepreneurship in the food industry: virtual community engagement in the COVID-19 era, *British Food Journal*, 123 (10), 3309-3325.
- Turban, E., & Gehrke, D. (2000). Determinants of e-commerce Website. *Human Systems Management*. 19 (2), 111-120.
- Varzeshkar, M., Mousakhani, M., Davari, A., & Heydarzadeh, K. (2021). Developing a Native Model for Recognizing and Exploiting Entrepreneurial Opportunities in the field of e-commerce. *Journal of Development & Evolution Mnagement*, 1400(44), 21–31.
- Vedula, S., Doblinger, C., Pacheco, D., York, J. G., Bacq, S., Russo, M. V, & Dean, T. J. (2022). Entrepreneurship for the public good: a review, critique, and path forward for social and environmental entrepreneurship research. *Academy of Management Annals*, 16(1), 391–425.
- Wang, Y. L., Ellinger, A. D., & Wu, Y. C. J. (2013). Entrepreneurial opportunity recognition: An empirical study of R&D personnel. *Management Decision*. 51(2), 248-266.
- Wu, Z., Xuan, S., Xie, J., Lin, C., & Lu, C. (2022). How to ensure the confidentiality of electronic medical records on the cloud: A technical perspective. *Computers in Biology and Medicine*, 147, 105726.