Analysis of new businesses in the conditions of the Covid-19 crisis in Iran (case study: knowledge-based companies based in Tehran province)

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Abstract

Small businesses around the world are facing one of the most challenging times in modern history. The spread of Covid-19 or the corona virus requires these businesses to adapt to an uncertain, unpredictable and rapidly changing environment. If economic enterprises and business owners notice these changes, they will be among the winners of this era, and if they do not notice it and do not have the necessary preparation to enter the new conditions with the corona virus, they will definitely be losers. Therefore, in this research, the analysis of new businesses under the conditions of the Covid-19 crisis in Iran (case study: knowledge-based companies based in Tehran province) is discussed. The type of sampling is random and proportional to the volume of each floor. The statistical sample of the research was selected according to Cochran's formula for determining the sample size in a binomial space from among the managers of knowledge-based companies in Tehran province, which were equal to 385 people. The research method is descriptive-survey type. The tool for collecting information is the use of a questionnaire, as well as the use of library information and referring to the documents available in scientific and authoritative articles and understanding and inferring from this information. The validity of the questionnaire has been achieved by formulating the questions based on the theoretical foundations of the research and with the comments and approval of the professors. In order to obtain the reliability of the questionnaire with the help of SPSS software, Cronbach's alpha coefficient was calculated as 87.50%. After the final implementation of the questionnaires among the main participants of the research, the analysis of the main data of the research and preparation of the final report have been done.

Keywords: New businesses, Covid-19, knowledge-based companies, small businesses.

1. Introduction:

The Covid-19 crisis was first of all a threat to public health, but it has gradually become a global economic threat. Although there is no way to accurately determine the economic damage caused by the new coronavirus epidemic, there is a consensus among economists that this epidemic will have a severe negative impact on the global economy. Therefore, we are not only witnessing a low growth rate, but improving economic growth in the future will also take time. Therefore, the impact of Corona on new businesses is clearly visible. New businesses around the world are facing one of the most challenging times in modern history [1]. The spread of Covid-19 or the corona virus has faced these businesses with an uncertain, unpredictable and rapidly evolving environment, and even these businesses are left confused and stunned by the situation, and some resort to different methods to survive. The closing of the land borders by the neighboring countries, the reduction of exports and foreign currency inflows, the stoppage of oil exports, etc. caused the country's cash flow to face problems. On the other hand, the decrease in the export of raw materials, the increase in currency prices at the end of 2018, the decrease in business activity and the decrease in business opportunities in some areas and the increase in opportunities in some areas are among the traumatic business factors in the Corona era [2]. Creating a shock in the supply chain of raw materials due to the dependence on raw materials from different countries, including China, caused many businesses to face problems, and on the other hand, due to the decrease in productivity and sales, as well as the lack of human resources and the existence of fixed costs, many businesses and During the last year, things have suffered a lot. On the other hand, unfortunately during this period and especially during the years 2018 and 2019, a certain orientation was formed towards creating hoarding in Iran, which fueled the damage of businesses [3]. On the other hand, due to health warnings, consumers became distrustful in their purchases and behaved cautiously in purchasing. Also, with the decrease in demand, the recession increased, and with the drop in the income level and purchasing power of the people, different deciles of the society became poorer. For example, small businesses kept themselves alive only by people's purchases, or they predicted ideas such as internet sales, discounts, etc. to increase their sales [4]. Therefore, businesses should have the necessary forecast in four categories; On the one hand, they should strengthen their supply chain, secondly, they should understand their customers through interaction, thirdly, they should formulate

good financial strategies, and fourthly, they should increase the productivity of their employees by creating new conditions. Therefore, since businesses are born of human needs and change according to human needs. Therefore, businesses are forced to take a completely different path compared to the past with changing needs. Along with important and effective developments, people and business owners should understand this need. One should look for new ways to identify the needs of today's society and take creative decisions to meet the needs [5]. If economic enterprises and business owners notice these changes, they will be among the winners of this era, and if they do not notice it and do not have the necessary preparation to enter the new conditions with the corona virus, they will definitely be losers. Therefore, in this research, the analysis of new businesses under the conditions of the Covid-19 crisis in Iran (case study: knowledge-based companies based in Tehran province) is discussed.

2. The theoretical framework of the research:

Micro, small and medium enterprises play an important role in the economic development of countries in terms of creating employment and producing added value. The spread of the Covid-19 virus has resulted in severe consequences such as a drop in demand and, as a result, a decrease in income, an increase in costs, problems in providing liquidity and working capital in these companies. In general, the destructive effects of the virus outbreak on micro, small and medium units are evaluated more severe in comparison with larger units [6]. This is due to the limited resources and obstacles facing current expenses, greater vulnerability, less resistance due to the scale and size of their activities, and the low level of acquisition of new technologies and less digitalization of these companies [7]. The double problem is that despite the removal of some initial restrictions and the reopening of activities, the total demand for the products and services of these businesses has decreased drastically compared to other markets, which even puts them at risk of bankruptcy. As a result, these businesses face challenges to retain existing customers and find new customers. Global studies show that the Corona epidemic has affected many businesses, regardless of their size. In the meantime, it seems that this impact on micro, small and medium enterprises has been more intense due to their greater vulnerability [8]. On the other hand, these businesses are mostly in those economic sectors that have been affected by the spread of the corona virus more than others. These types of businesses are facing problems such as labor

reduction, lack of parts and intermediate goods, limited inventory level, disruption in the supply chain, and a significant decrease in demand for their services and products [9]. This decrease in demand is more evident in certain sectors such as tourism and transportation, and in areas where restrictions due to the outbreak have been imposed, the decrease in demand for companies that provide resources to local markets is greater. The number of suppliers of small and medium-sized businesses is usually limited, which can be an advantage to protect these businesses against shocks. On the other hand, for companies that cooperate with several suppliers from different parts of the world, there is a higher possibility of vulnerability due to the reduction or stoppage of the activities of one of the links of the supplier chain or the disruption of international goods transportation activities [10]. Undoubtedly, predicting conditions for the future of small and medium-sized companies is vague and difficult; Therefore, the support and help of governments is necessary for the continuation of the activities of such units. At the same time, it should be noted that the epidemic and recession itself can stimulate innovation and creativity. In response to this crisis, governments should consider the contribution of entrepreneurship and the capacity of small and medium-sized companies and take necessary measures to increase the resilience of these businesses.

2.1. The consequences of Covid-19 on business

The coronavirus outbreak is first and foremost a humanitarian disaster and has affected hundreds of thousands of people. Also, the consequences of this virus have an increasing impact on the global economy and small and large businesses. This article aims to provide perspective to business leaders and managers of the challenges and consequences of the corona virus on business and companies. A wide range of outcomes may occur, so decision makers should not assume the worst case. Less than ten weeks have passed since China reported the new virus to the World Health Organization [11]. The virus, now known as SARS-CoV-2, which causes the disease Covid-19, spread rapidly in the city of Wuhan and throughout China. With more than 80,000 cases and more than 3,000 deaths, the country has experienced a profound humanitarian challenge. Covid-19 quickly progressed beyond China's borders. Four other major transmission points have now emerged around the world: East Asia (especially South Korea with more than 7,000 cases, but also Singapore and Japan), the Middle East (centered on Iran, with more than 6,500 cases), Europe

(to (specific to the Lombardy region in northern Italy, with more than 7,300 cases, but with widespread transmission across the continent), and the United States of America with more than 200 cases [12]. Each of these transmission areas has been created in an area where millions of people travel every day for social and economic reasons, making it difficult to prevent the spread of this disease. In addition to these large collections, many other countries are also affected. The next steps of the outbreak are completely unclear. From our point of view, what can be understood from the trends of the public, policy makers and the market is that we are facing an epidemic, but maybe it can be looked at more positively [13]. The virus is highly contagious. Observed experiences and emerging scientific evidence show that the Covid-19 virus is easily transmitted from person to person. The US Centers for Disease Control and Prevention estimates that the reproduction number of the virus (the number of additional cases likely to result from infection from the original case) is between 1.6 and 2.4, and Covid-19 is significantly more transmissible than seasonal influenza (which has an estimated reproduction number of 1.2 to 1.4). The virus typically affects older people with underlying conditions [14]. Epidemiologists including Zunyu Wu and Jennifer McGugan analyzed a report from China's Centers for Disease Control and Prevention that looked at more than 72,000 cases and concluded that the death rate for patients aged 80 and older was seven times the average and three times the average. It is up to four times the average of patients. In other reports, the death rate of people under the age of 40 is 0.2% [15].

2.2. Economic effects of Covid-19

According to our analysis, three broad economic scenarios could play out: a rapid recovery, a global slowdown, and a pandemic-driven recession. Here, we describe all three scenarios. We believe that the prevailing pessimistic narrative (which both markets and policymakers seem to support in response to the virus) is likely to capture a more optimistic outcome of the evolution of Covid-19.

Rapid recovery: In this scenario, the number of cases continues to grow due to the high transmissibility of the virus. While this inevitably causes a strong public reaction and reduced demand, other countries are able to achieve the same rapid control seen in China, with public concern peaking relatively quickly (within a week or two). It comes by itself. Given the low death rates among children and working-age adults, the level of concern may begin to subside even as the

outbreak continues. Working-age adults worry about their parents and older friends, neighbors, and co-workers, and take steps to reassure them. Older people, especially people with sensitive conditions, withdraw from many activities. But most people outside high transmission areas go about their daily lives [16].

Global slowdown: This scenario assumes that most countries will not be able to achieve the same rapid control that happened in China. In Europe and the United States, transmission is high but occurring locally, in part because individuals, companies, and governments are taking strong countermeasures (including closing schools and canceling public events). For the United States, this scenario is assumed to be between 10,000 and 500,000 cases in the total population. In this way, it includes a main center with 40-50% of all cases, two or three smaller centers with 10-15% of all cases and a long string of cities with a handful or a few tens of cases. This scenario sees spread in some parts of Africa, India and other densely populated areas, but the virus's transmissibility naturally decreases in the Northern Hemisphere. This scenario sees much more changes in people's daily behaviors. These reactions last six to eight weeks in towns and cities with active transmission and three to four weeks in neighboring cities [17].

Covid-19 Pandemic and Economic Recession: This scenario is similar to a global slowdown, except we assume the virus is not seasonal (influenced by spring in the Northern Hemisphere). Case growth continues throughout Q2 and Q3, potentially overshadowing healthcare systems around the world and improving consumer confidence in Q3 or beyond. This scenario leads to an economic recession, while global growth in 2020 falls between -1.5% and 0.5% [18].

Supply chain challenges: For many companies around the world, the most important issue from the first ten weeks of the Covid-19 outbreak is the impact on supply chains that originate in or pass through China. As a result of factory shutdowns in China in Q1, many supply chain disruptions have been felt, although the full impact is not yet clear. Hubei Province is still in the early stages of recovery. The number of Covid-19 cases has decreased, but the death toll remains high, and many restrictions remain, preventing normal activity from resuming until early Q2. In the rest of China, however, many large companies announced they were operating at more than 90 percent capacity from March 1. While some major challenges, such as the return of migrant workers to the workplace due to the lack of permission to travel, remain to restart the factory.

The cargo carrying capacity to send goods from factories to ports has reached 60-80% of the normal capacity [19].

2.3. Necessary skills to improve business intelligence

In order for a system with business intelligence to work properly, by knowing the situations of which information is given to which people, the relationships between people and information and the process of implementing processes must be carefully examined. Business intelligence in the organization considers all employees as well as the relationships between them so that the company's value chain is fully covered and no process is forgotten. In order to implement any improvement process in the organization, special skills must be arranged for that process, of course, for macro processes such as business intelligence, special attention is needed. Business skills include business routines and communication with organizational strategy along with transformation processes, which is very important in determining organizational policy [20]. Information technology skills that technically help change management and support analysis methodologies should also be available in the organization to a sufficient extent. Another skill, as analytical skills, including summarizing analysis, exploration, and correct description, is as significant as other skills, that these three types of skills in some companies have a center of intersection, which is considered exactly the center of business intelligence improvement, and the wider If it is more, surely there is more business intelligence in the organization and even though it is smaller, there is less intelligence in that business [21]. Of course, in some organizations that operate as an island, the scope of each of these skills, although they are wide, but they do not overlap, and certainly the implementation of such plans (business intelligence) in these organizations does not have a definition, because the main condition of using the new technology of business intelligence is working in It is a competitive environment and companies that act as islands cannot enter this environment. If the organization uses data extraction, transfer and conversion technology in its infrastructure and transactional layers and provides a platform of business intelligence in data mining technology and also uses BI tools based on information technology and customer orientation, intelligence in This business will be efficient [22]. If standards and applications, strategic, operational, and analytical are also used in the platform of BI, intelligence is effective in this

business. When intelligence assumes the role of leverage in business, when the performance is carefully evaluated and culture building among users has begun [23]. Finally, to achieve this goal, the BI methodology and its skills should be established in the body of the organization. When the organization leans towards the goals of globalization by using virtualization and steps from physical buildings to the virtual arena, it can make the process of implementing processes within the organization as transparent as possible and make the role of intelligence a competitive role, so with This strength is to compete with competitors.

3. Research goals:

In order for the results of the research to be valid, a proper method must be used in the research because choosing the wrong method will lead to wrong conclusions. Research method is a systematic process to find an answer to a question or a solution to a problem. In other words, "the research method is a set of valid (reliable) and systematic rules, tools, and ways to investigate facts, discover unknowns, and find solutions to problems." Research methods are actually tools to achieve reality. In the research, the researcher tries to choose the most appropriate method, and that is the method that discovers the laws of reality more accurately than other methods. Therefore, knowing the existing facts and understanding the relationships between them requires choosing the appropriate research method. This choice depends on factors such as the nature of the research topic, research goals and questions, the scope of the research topic, and the implementation possibilities of the research. The purpose of choosing a research method is for the researcher to determine what research method is necessary to investigate a specific issue. The research method depends on the goals and the nature of the research topic and its implementation facilities, so it is possible to decide on the research method when the nature of the research topic, the goals, and the extent of its scope are known. Therefore, the main goal of choosing a research method is for the researcher to determine what method and method to adopt to help him as quickly and cheaply as possible in obtaining answers to the desired research question or questions. The extensive study of the market creates the understanding and knowledge in the policy makers of which sectors have suffered the most damage, how to plan for the treatment of these damaged sectors, and then what approach should be taken for the life of the sectors that have faced less damage. Studying, discovering and

recognizing the damages resulting from the Corona crisis makes it possible to provide more appropriate support methods to compensate the losses of companies and reduce the damage and return to the normal path. One of the positive effects of Corona on non-online (traditional) businesses and their entry into the online market, or e-commerce. Reports show that new technologies have entered a new field in the world. The survey of commercial activities shows that more than one billion purchases have been made in more than 34 countries, which indicates the explosive growth of e-commerce around the world since the start of the Corona virus pandemic. According to the above, in this research, the impact of the Covid-19 crisis on new businesses in knowledge-based companies in Tehran province is discussed.

4. Research Methodology:

Considering that the research is a survey type, a questionnaire is used to collect research data. In addition to using the library method to collect information, there is a need to use field methods etc. to complete the required information. The method of collecting information in this research is the use of a questionnaire, as well as the use of library information and reference to documents in scientific articles and valid and understanding and inference from this information. In order to analyze the data obtained from the implementation of the questionnaires, descriptive and inferential statistical indicators will be used. After performing the test of normality or not, the research variables will be used to prove or reject the research hypotheses by using the mean test. SPSS statistical software will also be used to test hypotheses and analyze hypotheses.

5. Research Hypotheses

• **Hypothesis H1:** The conditions of the Covid-19 crisis have an effect on the operations and value system in knowledge-based companies in Iran.

• **Hypothesis H2:** The conditions of the Covid-19 crisis have an impact on consumer experiences in knowledge-based companies in Iran.

• **Hypothesis H3:** The conditions of the Covid-19 crisis have an impact on human capital and labor in knowledge-based companies in Iran.

• **Hypothesis H4:** The conditions of the Covid-19 crisis have an effect on leadership and change management in knowledge-based companies in Iran.

6. Population and statistical sample:

Statistical population: The first part of the research: the statistical community includes business specialists and university professors related to the subject. The second part of the research: the statistical population includes managers of knowledge-based companies in Tehran province.

The sample size formulas and procedures used for categorical data are very similar, but some variations do exist. Since the data are qualitatively and the number of statistical community is unlimited, so the sample size calculation formula is as follows:

$$n = \frac{Z_{\alpha/2}^{2} p_0 (1-p_0)}{\varepsilon^2} \qquad (1)$$

In this study, researcher has set the alpha level a priori at .05, plans to use a proportional variable, has set the level of acceptable error at 5%, and has estimated the standard deviation of the scale as .5. Cochran's sample size formula for categorical data and an example of its use is presented here along with explanations as to how these decisions were made.

$$n = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2} = 384.16 \qquad (2)$$

Where $Z_{\alpha/2}$ = value for selected alpha level of .025 in each tail = 1.96.

(The alpha level of .05 indicates the level of risk the researcher is willing to take that true margin of error may exceed the acceptable margin of error).

Where (p)(q) = estimate of variance = .25.

(Maximum possible proportion (.5) *1-Maximum possible proportion (.5) produces maximum possible sample size).

Where ε = acceptable margin of error for proportion being estimated = .1

7. Analysis of information

SPSS software was used for statistical analysis and one-sample t-test was used to analyze the statistical hypotheses. We used SPSS 24 to analyze the data. In following the results of test hypotheses are offered:

Testing Hypothesis H1. The conditions of the Covid-19 crisis have an effect on the operations and value system in knowledge-based companies in Iran.

The results of SPSS are shown below:

Table. 1. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
H1	385	6.8443	1.01973	.17362

Table. 2. One-Sample Test

	Test Value = 5					
				Mean	95% Confidence Interval of the Difference	
	T	df	Sig. (2-tailed)	Difference	Lower	Upper
H1	16.844	384	.000	1.4721	1.09443	1.6832

Testing Hypothesis H2. The conditions of the Covid-19 crisis have an impact on consumer experiences in knowledge-based companies in Iran.

The results of SPSS are shown below:

Table. 3. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
H2	385	6.8426	1.0964	.17031

Table. 4. One-Sample Test

	Test Value = 5					
				Mean	95% Confidence Interval of the Difference	
	T	df	Sig. (2-tailed)	Difference	Lower	Upper
H2	16.8443	384	.000	1.6843	1.6385	2.0591

Testing Hypothesis H3. The conditions of the Covid-19 crisis have an impact on human capital and labor in knowledge-based companies in Iran.

The results of SPSS are shown below:

Table. 5. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
H3	385	6.7392	1.0793	.19831

Table. 6. One-Sample Test

	Test Value = 5					
				Mean	95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Difference	Lower	Upper
H3	15.0946	384	.000	1.7931	1.0588	1.7692

Testing Hypothesis H4. The conditions of the Covid-19 crisis have an effect on leadership and change management in knowledge-based companies in Iran.
The results of SPSS are shown below:

Table. 7. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
H4	385	6.7593	1.0658	.19643

Table. 8. One-Sample Test

	Test Value = 5					
				Mean	95% Confidence Interval of the Difference	
	T	df	Sig. (2-tailed)	Difference	Lower	Upper
H4	17.7443	384	.000	1.9653	1.6883	1.9752

Conclusion and Suggestions:

The spread of Covid-19 has faced these businesses with an uncertain, unpredictable and rapidly evolving environment, and even these businesses are left confused and stunned by the situation, and some resort to different methods to survive. The decrease in the sales of businesses can be caused by the decrease in the economic power of the people due to the inflation in the country, and unfortunately this cycle continued until we reached an infinite cycle and the businesses faced many problems. In these days, businesses faced problems due to the lack of supply of their raw materials, as well as lack of necessary liquidity, or problems in the field of marketing, etc., due to the reduction of purchases, which caused losses for them. The closing of the land borders by the neighboring countries, the reduction of exports and foreign currency inflows, the stoppage of oil exports, etc. caused the country's cash flow to face problems. On the other hand, the decrease in the export of raw materials, the increase in currency prices at the end of 2018, the decrease in business activity and the decrease in business opportunities in some areas and the increase in opportunities in some areas are among the traumatic business factors in the

Corona era. Creating a shock in the supply chain of raw materials due to the dependence on raw materials from different countries, including China, caused many businesses to face problems, and on the other hand, due to the decrease in productivity and sales, as well as the lack of human resources and the existence of fixed costs, many businesses and During the last year, things have suffered a lot. Global studies show that the Corona epidemic has affected many businesses, regardless of their size. In the meantime, it seems that this impact on micro, small and medium enterprises has been more intense due to their greater vulnerability. On the other hand, these businesses are mostly in those economic sectors that have been affected by the spread of the corona virus more than others. These types of businesses are facing problems such as labor reduction, lack of parts and intermediate goods, limited inventory level, disruption in the supply chain, and a significant decrease in demand for their services and products. • The first hypothesis states: the conditions of the Covid-19 crisis have an effect on the operations and value system in knowledge-based companies in Iran. The results of this research indicate the confirmation of this hypothesis. The results of this research show that companies should cooperate beyond the limits of individual success in an effort to achieve overall success in which suppliers, customers and partners of the company operate, and from these collaborations for success at the level of the supply chain. Use it to gain more competitiveness. Therefore, it is suggested that companies focus on strengthening the green supply chain through the interaction between the green performance within the company and the company's cooperation with suppliers, customers, and colleagues.

• The second hypothesis states: the conditions of the Covid-19 crisis have an effect on consumer experiences in knowledge-based companies in Iran. The results of this research indicate the confirmation of this hypothesis. Knowledge-based companies need experienced and expert people. Increasing the performance and proper management of human resources will bring these companies closer to achieving their goals. The presence of skilled and responsible people, people with high education and modern knowledge will lead to the progress of companies. On the other hand, marketing and finding customers for products has a significant impact on the success of knowledge-based companies. Many factors are involved in the sale of products, which can be mentioned as superior branding, product price, type of packaging, proper

distribution, creating value for the customer, communication, accountability, responsibility, proper advertising, trust building and quality products.

• The third hypothesis states: the conditions of the Covid-19 crisis have an impact on human capital and labor in knowledge-based companies in Iran. The results of this research indicate the confirmation of this hypothesis. What can be concluded from the results of this research is that successful and progressive companies consider human resources training as a type of investment; Because they believe that efficient manpower is the driving force of good business and is the basis for development. Human resource development is a part of human resource management that specifically deals with the training and development of the organization's employees. Human resource development includes providing opportunities to learn new skills, distributing resources that help them perform tasks, and any type of activity for the growth and development of employees. Therefore, this item should be on the agenda of knowledge-based companies.

• The fourth hypothesis states: the conditions of the Covid-19 crisis have an effect on leadership and change management in knowledge-based companies in Iran. The results of this research indicate the confirmation of this hypothesis. Nowadays, the competition between companies has increased a lot. Companies are in a competitive and complex situation affected by many factors such as globalization, technology development and the increasing speed of new technologies. In the framework of this new landscape, companies must act differently than before in order to survive and progress. In particular, they should look for new sources of competitive advantage and use new forms of competition, which themselves require a clear understanding of the nature and dynamics of competition.

References

1. Anh, D.L.T. and Gan, C. (2020), "The impact of the COVID-19 lockdown on stock market performance: evidence from Vietnam", Journal of Economic Studies, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JES-06-2020-0312.
2. Appelbaum, S.H., Calla, R., Desautels, D. and Hasan, L.N. (2017), "The challenges of organizational agility: part 2", Industrial and Commercial Training, Vol. 49 No. 2, pp. 69-74. https://doi.org/10.1108/ICT-05-2016-0028.
3. Attar, M. and Abdul-Kareem, A. (2020), "The Role of Agile Leadership in Organisational Agility", Akkaya, B. (Ed.) Agile Business Leadership Methods for

Industry 4.0, Emerald Publishing Limited, pp. 171-191. https://doi.org/10.1108/978-1-80043-380-920201011.

4. Carvalho, A.M., Sampaio, P., Rebentisch, E., Carvalho, J.Á. and Saraiva, P. (2020), "The influence of operational excellence on the culture and agility of organizations: evidence from industry", International Journal of Quality & Reliability Management, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJQRM-07-2020-0248.

5. El-Adaileh, N. and Foster, S. (2019), "Successful business intelligence implementation: a systematic literature review", Journal of Work-Applied Management, Vol. 11 No. 2, pp. 121-132. https://doi.org/10.1108/JWAM-09-2019-0027.

6. Gonzales, R. and Wareham, J. (2019), "Analysing the impact of a business intelligence system and new conceptualizations of system use", Journal of Economics, Finance and Administrative Science, Vol. 24 No. 48, pp. 345-368. https://doi.org/10.1108/JEFAS-05-2018-0052.

7. Hellström, M. and Ramberg, U. (2019), "Senior public leaders' perceptions of business intelligence", International Journal of Public Leadership, Vol. 15 No. 2, pp. 113-128. https://doi.org/10.1108/IJPL-11-2018-0055.

8. Jiang, Y. and Wen, J. (2020), "Effects of COVID-19 on hotel marketing and management: a perspective article", International Journal of Contemporary Hospitality Management, Vol. 32 No. 8, pp. 2563-2573. https://doi.org/10.1108/ IJCHM-03-2020-0237.

9. Kabadayi, S., O'Connor, G.E. and Tuzovic, S. (2020), "Viewpoint: The impact of coronavirus on service ecosystems as service mega-disruptions", Journal of Services Marketing, Vol. 34 No. 6, pp. 809-817. https://doi.org/10.1108/JSM-03-2020-0090.

10. Kraus, S., Clauss, T., Breier, M., Gast, J., Zardini, A. and Tiberius, V. (2020), "The economics of COVID-19: initial empirical evidence on how family firms in five European countries cope with the corona crisis", International Journal of Entrepreneurial Behavior & Research, Vol. 26 No. 5, pp. 1067-1092.

11. Kurniawan, R., Manurung, A.H., Hamsal, M. and Kosasih, W. (2020), "Orchestrating internal and external resources to achieve agility and performance: the centrality of market orientation", Benchmarking: An International Journal, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/BIJ-05-2020-0229.

12. Lim, Y. and Teoh, A. (2020), "Realizing the strategic impact of business intelligence utilization", Strategic Direction, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10. 1108/SD-09-2019-0184.

13. Madero Gómez, S., Ortiz Mendoza, O.E., Ramírez, J. and Olivas-Luján, M.R. (2020), "Stress and myths related to the COVID-19 pandemic's effects on remote work", Management Research, Vol. 18 No. 4, pp. 401-420.

14. Margherita, Alessandro & Heikkilä, Marikka. (2021). Business Continuity in the COVID-19 Emergency: A Framework of Actions Undertaken by World-Leading Companies. Business Horizons. 64. 10.1016/j.bushor.2021.02.020.

15. Matiza, T. (2020), "Post-COVID-19 crisis travel behaviour: towards mitigating the effects of perceived risk", Journal of Tourism Futures, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JTF-04-2020-0063.

16. Nyanga, C., Pansiri, J. and Chatibura, D. (2019), "Enhancing competitiveness in the tourism industry through the use of business intelligence: a literature review", Journal of Tourism Futures, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JTF-11-2018-0069.

17. Prah, D. and Sibiri, H. (2020), "The resilience of African migrant entrepreneurs in China under COVID-19", Journal of Entrepreneurship in Emerging Economies, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JEEE -05-2020-0111.

18. Priporas, C. (2019), "Competitive intelligence practice in liquor retailing: evidence from a longitudinal case analysis", International Journal of Retail & Distribution Management, Vol. 47 No. 9, pp. 997-1010. https://doi.org/10.1108/IJRDM-08-2018-0177.

19. Ratia, M., Myllärniemi, J. and Helander, N. (2019), "The potential beyond IC 4.0: the evolution of business intelligence towards advanced business analytics", Measuring Business Excellence, Vol. 23 No. 4, pp. 396-410. https://doi.org/10.1108/MBE-12-2018-0103.

20. Ratten, V. (2020), Coronavirus disease (COVID-19) and sport entrepreneurship, International Journal of Entrepreneurial Behavior & Research, Vol. 26 No. 6, pp. 1379-1388.

21. Shaikh, A.R. and Qazi, A.A. (2020), "Chohan Decoration Services Pakistan – survival amid COVID-19", Emerald Emerging Markets Case Studies, Vol. 10 No. 4. https://doi.org/10.1108/EEMCS-05-2020-0142.

22. Tajvidi, R. and Tajvidi, M. (2020), "The growth of cyber entrepreneurship in the food industry: virtual community engagement in the COVID-19 era", British Food Journal, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/ BFJ-06-2020-0559.

23. Tingey-Holyoak, J.L. and Pisaniello, J.D. (2020), "The need for accounting-integrated data streams for scenario-based planning in primary production: responding to COVID-19 and other crises", Sustainability Accounting, Management and Policy Journal, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/SAMPJ-07-2020-0258.