

Putting into action crisis-driven business solutions during COVID-19 pandemic

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ABSTRACT

This research was conducted within the National Research project “ReCOVery - LV” for exploring the impact of the COVID-19 pandemic on the Latvian companies, specifically analyzing in this paper the range of emotions experienced by the Latvian companies and the new solutions they elaborated and realized to overcome the crisis despite the shock and stress. The qualitative content analysis of the feedback from 334 companies revealed their anxiety combined with the emotions of fear, anger and sadness, including six more emotions which present these three basic emotions’ different levels of intensity. Although, being in this negative emotional state, some of the companies managed to increase their revenues introducing new products and services, creating new sales channels and attracting new clients, digitalize processes and achieve cost savings.

Keywords: crisis-driven business, emotions, new opportunities, COVID-19 pandemic

1. INTRODUCTION

The health necessitated lockdown and social isolation caused by COVID-19 have stopped most human and business activities which put forward unprecedented task to mankind to create new communication, working, economic, political, ecological and other living behaviors. In this revolutionary time to overcome the COVID-19 disaster, different anti-epidemic measures have been undertaken by many governments, businesses, health, educational and religious organizations involving in this battle against the pandemic also different societal groups and individuals. However, the attempts of governments to keep citizens at home and implement lockdown measures to slow down the spread of the virus, have turned out into another global pandemic – the pandemic of loneliness. This resulted in severe psychological stress of individuals around the world due to worries over the health, financial security, temporary unemployment, significant changes in our daily lives which all of us have to adapt to, studying, working and creating relationship with other people facing the lack of physical contact [1; 2; 3; 4].

In this uncertain and stressful reality doubled load is put on company owners and managers, as first of all, they are humans who also suffer physically and emotionally from this dramatic situation, and secondly, they bear full responsibility for their businesses which make the pillars of the economy of any country. Therefore, it is crucial to explore not only the new crisis-driven solutions which were put into action during the COVID-19 pandemic, but also the emotions felt by company heads for understanding of what kind of emotions could make driving forces for the innovative growth of companies in crisis. The key role of emotions in economics needs more attention to be devoted to [5], as traditional economic models built for rational and unemotional agents do not work effectively. Instead, new economic models of quasi-rational emotional humans should be built though it is a more challenging goal [6]. Accordingly, the research questions explored in this paper are:

- 1) What is the emotional state in the companies during the COVID-19 pandemic?
- 2) What business solutions are implemented to overcome the challenges caused by the COVID-19 pandemic?

2. EMOTIONS AND CRISIS-DRIVEN SOLUTIONS IN THE COVID-19 PANDEMIC

The COVID-19 pandemic has given a powerful boost to the digitalization of companies accelerating the innovating processes by replacing or complementing traditional businesses with new solutions. Companies have created many new offerings believing that to remain economically viable, they need to digitize their core business models [7]. It is argued that five years of e-commerce growth has condensed into three months due to the lockdowns and a shift in consumers’ priorities, drastically reshaping both the consumer path to purchase and the actual points of purchase; that created new business patterns that most likely won’t revert back to the pre-COVID-19 normal anymore [8]. Therefore, with a proactive view into the future, the fastest understanding of the post-pandemic generation is becoming one of the key factors of companies’ competitive growth in recruiting, productivity, innovation and relations with customers [9]. It is believed that there will be a post-pandemic generation after the Z-generation (born in 1995-2012). If Z-generation is already

digital native and able to multitask while online, [10], there are not any characteristics known of the post-COVID generation. However, to meet the forthcoming demands with the most active involvement of the new generation-to-come, different digital business transformation models with the involvement of artificial intelligence are under active elaboration to: collect big data of business transactions; deploy big data analytics; ensure a better customer experience; design safe and contactless customer journey while acquiring the product or the service; and provide positive emotions via customers' enjoying the digital experience owing to powerful tools which will also capture and analyze customer behavior without human touch [11]. The understanding of emotions by artificial intelligence has a dual nature, as on the one hand, it excludes direct human-to-human interaction but, on the other hand, it is tended to preserve the focus on most human-specific characteristics – feelings and emotions in digital transformation of business models.

The great role of feelings and emotions (affect) in the entrepreneurial processes has been emphasized by scholars of the field, as feelings and emotions influence many aspects of cognition and behavior which might occur when entrepreneurs operate in unpredictable and uncertain situations performing many tasks and launching new ventures [12]. Being interconnected with each other, cognition and emotions impact the processes through which information is perceived, processed, stored and retrieved when needed for problem solving, innovation and decision making in highly dynamic entrepreneurial environments [13; 14].

It was proved that in stable and predictable situations emotions and feelings do not bring to such actions and decisions which they might cause in unknown or unstable situations [15]. And how can we characterize COVID-19 pandemic reality? With the emotions of worry, fear, stress, boredom, anger/annoyance [16; 17] causing anxiety, stress and depression [4; 18] threatening mental and psychological health of people worldwide [19]. People of different levels of emotional intelligence respond to the pandemic with different intensity of anger, disgust, sadness, fear, anxiety but not less frequently [20].

Despite the psychological support provided to vulnerable groups of the society, also in Latvia the level of depression, anxiety, insomnia and suicides have grown with the second wave of coronavirus [21], as people have become more aware of what COVID-19 is either having lost some of their relatives and friends or getting infected themselves and struggling against it. As the number of cases has grown more than 35 times in Latvia (calculated by the authors based on the Worldometer statistics) for the last four months (from October, 2020 to the end of January, 2020) [22], strict rules of anti-epidemic measures including curfew for weekends have been imposed due to the current state of emergency. All this unstable and uncertain situation worsens the emotional and

psychological state in the society and creates additional challenges to businesspeople who not only worry about their own and their families' health and safety but also need to save their companies and find new working solutions to survive in the crisis. But is it possible to be creative and find new business solutions in such a negative emotional and psychological environment? The answer is 'yes', as also negative emotions and feelings can enhance creativity owing to individuals' efforts to attain creative outcomes [23]. Though, as concluded by Robert Baron, positive emotions and feelings enhance vs. negative emotions and feelings which reduce entrepreneurs':

- creativity needed for new opportunity recognition;
- capacity for acquiring essential financial and human resources;
- capacity for responding effectively to the highly dynamic environments they face;
- tendencies to expand both their skills and social network;
- adoption of relatively efficient strategies for making decisions;
- the capacity to tolerate high levels of stress, and this, in turn, may have beneficial effects on the health and wellbeing of entrepreneurs [24: 333-335].

In order to undertake any specific actions, individuals need to be motivated for that. Motivation has three internal sources - cognition, emotions and needs [25] which, "working together as a team", energize individuals to realize also entrepreneurial processes. Motivation has one more source - external events [25] both positive and negative, which in different ways activate the internal sources of motivation directing individuals toward definite behaviors and actions. The integrative driving force of cognition, emotions, needs and external events can enhance motivation but does not guarantee successful business performance, as there is one more crucial factor in-between – the entrepreneurial skills which play the role of a regulator [26]. Depending on the extent to which entrepreneurial skills are developed, businesspeople exhibit motivation to implement them in practice and succeed or avoid it [27].

Therefore, emotions have great impact on different aspects of the elaboration of business solutions and on the process of putting them into action. Also, the emotions experienced in COVID-19 are giving a boost to unprecedented development of innovation and new businesses similarly to the events in the mankind's history which showed that pandemics have crucial impact on the humanity development in biological, physical and economic dimensions.

Digital transformation is considered to be the most powerful strategic tool for turning the challenges caused by the COVID-19 crisis into new opportunities for businesses and all the aspects of the societal life [28, 11; 29; 30]. To survive and grow in the current conditions, for

companies it is essential to build new capabilities in weeks rather than in months or years [28; 30].

Having conducted empirical investigation, Bhattacharyya and Thakre concluded that company managers have simultaneously adopted dual approach responding to the crisis for surviving and growing both in short- and long-term perspectives correspondingly using reconfiguration of the existing resources and mobilization of the efforts for redesigning business models [31]. One of the paths to develop business models in this uncertain and unstable environment could be the stimulation and mobilization of the workforce to innovate and find new solutions to achieve companies' strategic objectives - revenue and profit growth, and cost reduction [32]. It is believed that to benefit even beyond the crisis period, companies have to invest in building new capabilities including digital infrastructure [30].

In this dynamic and often chaotic environment companies adapt to meet the changes in consumers' expectations, working remotely, adjusting supply networks, managing operations with the resources available, innovating across delivery channels, and redesigning product-portfolio based on the emerging new customer requirements to retain positive performance [31; 30].

3. NECESSITY IS THE MOTHER OF INVENTION: THE LATVIAN CASE

The survey questionnaire was structured of four parts to collect data on: a) the demographic characteristics of the companies which participated in the survey to get insight into the status of the respondents in their companies, the company age, location, sector of industry and number of employees; b) general impact of the COVID-19 pandemic on their businesses in regard with the opportunity of remote work, the number of employees fired, the extent to which COVID-19 has negatively impacted the companies and their turnover; c) specific external factors which have impacted and internal processes which have been affected by the pandemic, including also the opportunities identified and used for overcoming them; d) solutions undertaken by them to overcome the crisis. The questionnaire, which was designed to collect both quantitative and qualitative data, was elaborated in July and piloted in August, 2020. In the end of August, it was sent to Ltd Firmas.lv clients (n=2377) and members of the Latvian Chamber of Commerce and Industry and other associations. The response rate was not very high as only 334 companies shared their experience on the topic; more of it, only about half of them shared their views on open-ended questions. This can be explained with the overall shock experienced by companies in the face of the crisis and common reluctance of respondents to provide textual answers while sharing their experience.

The emotional state of the companies during the COVID-19 pandemic

The qualitative content analysis of the respondents' texts on how pandemic influenced their companies, along with the rational aspects, revealed also definite emotional components which were determined using as pre-constructed codes the emotions systemized by Robert Plutchik in the Wheel of Emotions [33]. It consists of eight (four pairs) of basic emotions: joy opposite to sadness; anger opposite to fear; trust opposite to disgust and surprise opposite to anticipation. Along with each basic emotion, there are two more emotions accordingly of lighter and stronger intensity of it.

Depending on the content of the responses, either one emotion or a combination of emotions was assigned to the text fragments in the process of coding. To illustrate in what way the qualitative content analysis was realised, a few fragments are given below in Table 1.

Table 1
A fragment of the qualitative content analysis

Text fragments	Emotions highlighted
My clients have lost all their businesses, and I have lost my clients!!!	Fear; annoyance; sadness
It has messed up absolutely everything. We have 80% reduction in turnover - all is bad!	Rage, grief, terror
I think the crisis is still ahead - there will be a drop in income, because the unemployment benefits provided in the crisis will soon end, and many other issues are waiting for us.	Fear, sadness, annoyance, remorse
We will be able to speak of the real impact in a year.	Pensiveness
In addition, because of having to buy sanitizers and pay for other precaution means, there is increase in costs.	Annoyance
I hate to comment on this "beastliness" called COVID!	Rage
No negative impact has been observed. On the contrary, some weak opportunities have emerged so unexpectedly.	Surprise, interest
It has not affected anything.	No emotions

The qualitative content analysis resulted in three groups of emotions shown in Table 2. The basic emotions of these groups are anger, fear and sadness. As for the less intensive (annoyance, apprehension and pensiveness) and more intensive (rage, terror and grief) emotions within each of

the three groups, they are shown correspondingly in lighter or darker shades.

Table 2

The three groups of emotions expressed by the company owners, business managers and heads of structural units related to the impact of the COVID-19 pandemic on their companies

Basic emotion	Emotion	Absolute frequency	Frequency (%)	Frequency (%)
Anger	Annoyance	90	31.40	34.10
	Anger	3	1.00	
	Rage	5	1.70	
Fear	Apprehension	57	19.90	30.70
	Fear	18	6.30	
	Terror	13	4.50	
Sadness	Pensiveness	36	12.50	30.30
	Sadness	37	12.90	
	Grief	14	4.90	
No emotions	No emotions	14	4.90	4.90
Total		287	100	100

The total frequencies of all the three basic emotion groups are very close to each other – anger (34.10%), fear (30.7%) and sadness (30.30%) which speaks of these emotions being similarly typical of the surveyed companies. Still, most frequently among all the nine emotions (see Table 2) was mentioned annoyance (n=90; 31.40%) - the lighter intensity of anger. The frequency of apprehension (n=57; 19.90%), the lighter intensity of fear makes almost one fifth of the total number of frequencies. In the third group the basic emotion – sadness (n=37; 12.90%) and its lighter intensity - pensiveness (n=36; 12.50%) were highlighted similarly frequently. The stronger intensities of these negative emotions – rage (n=5; 1.70%), terror (n=13; 4.50%) and grief (n=14; 4.90%) were recognized significantly less frequently in the course of the qualitative content analysis.

Some other emotions felt and shared by the respondents did not even form categories because of their low frequency – surprise (n=1), interest (n=1), remorse (n=1). Emotionally neutral responses - no emotions (n=14; 4.90%) were given only by a small group of respondents. This is an evidence of serious emotional tension among the Latvian company owners (53.62%), business managers (24.64%), heads of structural units (13.77%) and others (5.80%).

The solutions found by the companies to overcome the crisis caused by the COVID-19 pandemic

Despite the atmosphere of the entire shock, distress and anxiety, some of the companies managed to find new

innovative solutions to overcome the crisis and even improve their companies’ work efficiency. The qualitative content analysis of the responses to the question on the opportunities identified and used by the companies with a positive impact on their businesses during COVID-19 revealed three groups of categories related to: a) increase in revenues caused by new product and service introduction, creation of new sales channels and attraction of new clients; b) digitalization of processes owing to new IT solutions, new forms of work organization, introduction of new internal and external communication forms, new forms of document turnover; c) cost savings because of introduction of IT solutions and attracting new specialists at a reasonable price conditioned by increasing their competitive advantages. As a result, increase in work efficiency was observed (see Fig. 1).

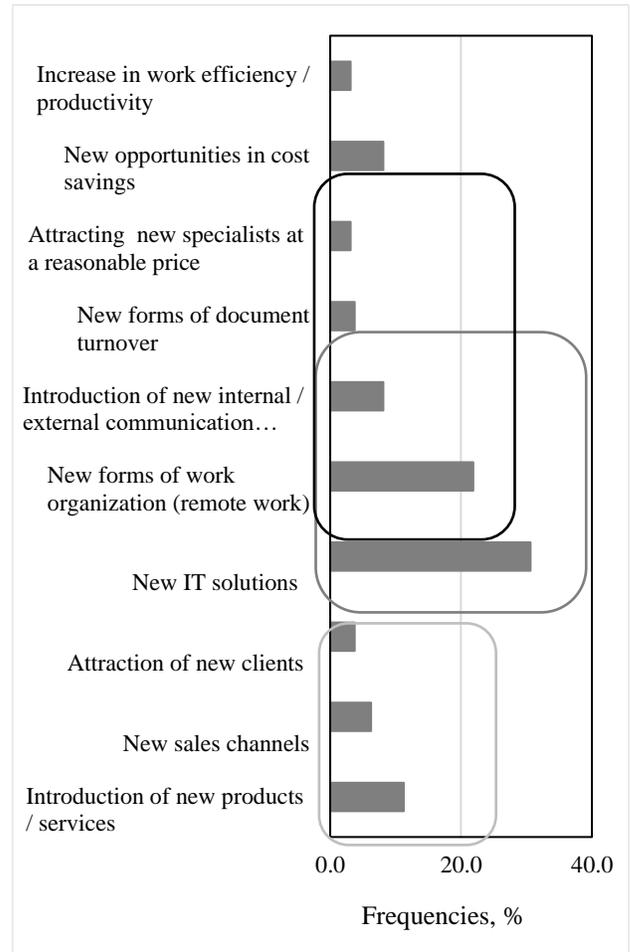


Figure 1. The distribution of frequencies of new opportunities and business solutions identified and put into action by the companies during COVID-19

There are also other types of new opportunities identified and used by the companies while searching innovative solutions through introduction of new technologies, new opportunities for brand development, e-learning of clients, improvement of the infrastructure, the finding of new

collaboration forms in the company, self-production of raw materials and optimization of the production process.

4. CONCLUSIONS

Initially this research project was not designed to explore the emotions experienced by company owners, business managers and heads of structural units of the Latvian companies caused by the COVID-19 pandemic. However, along with respondents' rational answers, also their emotional reaction given to open-ended questions made us pay a special attention to this side of the reality. Therefore, we decided to analyze not only the crisis-driven solutions which were put into action by the companies but also the emotional background against which all these activities were developed and realized.

When people face real threats, uncertainty or the unknown, their normal responses to them are fear, worry and stress [1]. A similar set of negative emotions – anger, fear and sadness, were almost equally experienced by the companies surveyed. In our research these basic emotions were revealed to be combined with the emotions which make accordingly their lighter (annoyance, apprehension and pensiveness) or stronger (rage, terror and grief) intensities. No emotions were demonstrated only by very few respondents - less than 5%; this speaks of the overall negative emotional state of the majority of the businesspeople who took part in this research. However, the research also revealed that one third of the total frequencies made annoyance - the lighter intensity of anger, and one fifth – apprehension – the lighter intensity of fear, while the total frequencies of rage, terror and grief - the stronger intensities of accordingly anger, fear and sadness, made about one tenth of the total frequencies (see Table 2).

Even if we try to see some optimistic signs in this proportion of the lighter and stronger intensities of these negative emotions, obviously, this is not the case considered by Baron when owing to positive emotions, there usually can be observed enhancement in entrepreneurs': creativity needed for new opportunity recognition; capacity for acquiring essential financial and human resources; and efficient decision making in highly dynamic environments they face [24]. On the contrary, the new crisis-driven business solutions were elaborated and put into action owing to the companies' big intellectual and organizational efforts to attain creative outcomes despite the anger, fear and sadness. So, these findings prove the conclusions made by George and Zhou [23].

The nine new business solutions elaborated and put into action have logical interconnection which could be understood via consideration of the three groups of new opportunities: increase in revenues; digitalization of processes owing to new IT solutions; and cost savings (see Figure 1). As a result, increase in work efficiency and

productivity has been achieved. These solutions were mainly realized by experienced small companies with the employees' number not exceeding 50 and with the company age over 18. Regardless of the surveyed companies' age and number of employees in them, speaking of the key success factors, all of them emphasized the optimization, digitalization and investment of new technologies.

Thus, the new business solutions elaborated and put into action by the surveyed Latvian companies go in line with responses towards the COVID-19 pandemic adopted by other companies worldwide [28; 29; 30; 31; 32]. So, one more time necessity was proved to be the mother of invention.

5. ACKNOWLEDGEMENT

This research is conducted within the National Research Program "reCOVvery-LV", VPP-COVID-2020/1-0010, from July to December, 2020.

6. REFERENCES

- [1] World Health Organization, "Mental health & COVID-19", 2020a, <https://www.who.int/teams/mental-health-and-substance-use/covid-19>
- [2] World Health Organization, "Mental health and psychosocial considerations during the COVID-19 outbreak", 18 March, 18 March, 2020b, https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations.pdf?sfvrsn=6d3578af_10
- [3] D. A. Gubler, L. M. Makowski, S. J. Troche & K. Schlegel, "Loneliness and Well-Being During the Covid-19 Pandemic: Associations with Personality and Emotion Regulation", **Journal of Happiness Studies**, Springer, 2020, 20 p.
- [4] A. L. Pedrosa, L. Bitencourt, A. C. F. Fróes, M. L. B. Cazumbá, R. G. B. Campos, S. B. C. S. de Brito & A. C. S. e Silva, "Emotional, Behavioral, and Psychological Impact of the COVID-19 Pandemic", **Frontier in Psychology**, Vol. 11, 2020, pp. 1-18.
- [5] O. Gomes, "Plutchik and Economics: '... Disgust, Fear, and, Oh Yes, Love'", **Economic Issues**, Vol. 22, No. 1, 2017, pp. 37-63.
- [6] R. H. Thaler, "From homo economicus to homo sapiens", **Journal of Economic Perspectives**, 14, 2000, pp. 133-141
- [7] McKinsey & Company, "Customer Experience in the Next Normal After COVID-19", 2020a, <https://www.mckinsey.com/about-us/covid-response-center/leadership-mindsets/webinars/customer-experience-in-the-next-normal-after-covid-19#>
- [8] McKinsey & Company. "US Consumer-Packaged-Goods Advertising in the Next Normal", 2020b, <https://www.mckinsey.com/industries/consumer->

- [packaged-goods/ourinsights/us-consumer-packaged-goods-advertising-in-the-next-normal](#).
- [9] EY, “Beyond COVID-19: Will you define the new normal or watch it unfold?”, 2020. https://www.ey.com/en_gl/covid-19/will-you-define-the-new-normal-or-watch-it-unfold
- [10] A. Munsch, “Millennial and generation Z digital marketing communication and advertising effectiveness: A qualitative exploration”, **Journal of Global Scholars of Marketing Science**, Vol. 31, No. 1, 2021, pp. 10–29.
- [11] S. Li, “How Does COVID-19 Speed the Digital Transformation of Business Processes and Customer Experiences?”, **Review of Business**, Vol. 41, No. 1, 2021, pp. 1–14.
- [12] R. A. Baron, “The role of affect in the entrepreneurial process”, **Academy of Management Review**, Vol. 33, No. 2, 2008, pp. 328–340.
- [13] A. M. Isen, “Missing in action in the AIM: Positive affect’s facilitation of cognitive flexibility, innovation, and problem solving”, **Psychological Inquiry**, Vol. 13, 2002, pp. 57– 65.
- [14] A. M. Isen & A. A. Labroo, “Some ways in which positive affect facilitates decision making and judgment”, in S. Schneider & J. Shanteau (Eds.), **Emerging perspectives on judgment and decision research**, pp. 365–393. New York: Cambridge University Press. 2003.
- [15] J. P. Forgas & J. M. George, “Affective influences on judgments, decision making and behavior in organizations: An information processing perspective”, **Organizational Behavior and Human Decision Processes**, Vol. 86, 2001, pp. 3–34.
- [16] I. Levkovich & S. Shinan-Altman, “Impact of the COVID-19 pandemic on stress and emotional reactions in Israel: a mixed-methods study”, **International Health**, 2020, pp. 1–9.
- [17] S. Sadiković, B. Branovački, M. Oljača, D. Mitrović, D. Pajić & S. Smederevac, “Daily Monitoring of Emotional Responses to the Coronavirus Pandemic in Serbia: A Citizen Science Approach”, **Frontier in Psychology**, Vol. 11, 2020, pp. 1-10.
- [18] C. Bailon, C. Goicoechea, O. Banos, M. Damas, H. Pomares, A. Correa, D. Sanabria & P. Perakakis, “CoVidAffect, real-time monitoring of mood variations following the COVID-19 outbreak in Spain”, **Scientific Data**, 2020, Vol. 7, pp. 1-9.
- [19] World Health Organization, “Mental health and psychological resilience during the COVID-19 pandemic”, 27 March, 2020c, <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/3/mental-health-and-psychological-resilience-during-the-covid-19-pandemic>
- [20] M. Morón & M. Biolik-Morón, “Trait emotional intelligence and emotional experiences during the COVID-19 pandemic outbreak in Poland: A daily diary study”, **Personality and Individual Differences**, Vol. 168, No. 1, 2021, pp. 1-11.
- [21] S. Ambote, “Covid-19 ietekme ir skarba; pieaug depresiju un pašnavību skaits. Intervija ar psihologi Edīti Kalniņu”, **LSM.LV. Latvijas Sabiedriskie Mediji**, 31 October, 2020, <https://www.lsm.lv/raksts/zinas/latvija/covid-19-ietekme-ir-skarba-pieaug-depresiju-un-pasnavibu-skaits-intervija-ar-psihologi-editi-kalniņu.a379991/>
- [22] Worldometer, “Coronavirus: Latvia”, 7 February, 2021. <https://www.worldometers.info/coronavirus/country/latvia/>
- [23] J. M. George & J. Zhou, “Understanding when bad moods foster creativity and good ones don’t: The role of context and clarity of feelings”, **Journal of Applied Psychology**, Vol. 87, 2002, pp. 687–697.
- [24] R. Baron, “The role of affect in the entrepreneurial process”, **Academy of Management Review**, Vol. 33, No. 2, 2008, pp. 328–340.
- [25] J. Reeve, **Understanding motivation and emotion** (3rd ed.). New York: John Wiley & Sons, Inc., 2001.
- [26] K. Oganisjana, & H. Matlay, “Entrepreneurship as a dynamic system: A holistic approach to the development of entrepreneurship education”, **Industry and Higher Education**, Vol. 26, No. 3, 2012, pp. 207-216.
- [27] L. Herron & R. Robinson, “A structural model of the effects of entrepreneurial characteristics of venture performance”, **Journal of Business Venturing**, Vol 8, 1993, pp 281–294.
- [28] J. Bello, S., Collins, R. Dreischmeier, & A. Libarikian, “Innovating from necessity: The business-building imperative in the current crisis”, **McKinsey Digital**, April, 16, 2020.
- [29] L. Nagel, “The influence of the COVID-19 pandemic on the digital transformation of work”, **International Journal of Sociology and Social Policy**, 2020.
- [30] M. Reeves, L. Faeste, C. Chen, P. Carlsson-Szlezak & K. Whitaker, “How Chinese companies have responded to coronavirus”, **Harvard Business Review**, March 2020.
- [31] S.S. Bhattacharyya & S. Thakre, “Coronavirus pandemic and economic lockdown; study of strategic initiatives and tactical responses of firms”, **International Journal of Organizational Analysis**, 2021.
- [32] H. Joly, “Lead your team into a post pandemic world”, **Harvard Business Review**, May 2020.
- [33] R. Plutchik, “The Nature of Emotions: Human emotions have deep evolutionary roots, a fact that may explain their complexity and provide tools for clinical practice”, **American Scientist**, Vol. 89, No. 4, 2001, pp. 344-350.