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Innovation of Startups, the Key to Unlocking Post-Crisis Sustainable Growth in Romanian Entrepreneurial Ecosystem

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Abstract: This paper aims at identifying the entrepreneurial opportunities for establishing innovative startups during and post COVID-19 crisis. To reach this goal, we conducted an exploratory study based on semi-structured interviews with 168 students who intend to involve themselves in entrepreneurship in their future career. The research started from the debates in literature regarding the huge negative impact of the COVID-19 crisis on economic development, which can jeopardize the achievement of United Nations Sustainable Development Goals. The research findings confirm the results of other studies regarding the vulnerability of startups during crises, the reason why they have to refocus on innovative businesses, especially based on information and communication technology (ICT). Such businesses are considered incentives of sustainable development. Other ideas highlighted the importance of social entrepreneurship for the management of startups. It means that startups should develop strong relationships with employees but also with other stakeholders, like companies in the same industry, the public sector, academia, and citizens. In addition, changing the business culture aiming at developing green business could be an inexpensive solution for developing a sustainable entrepreneurial ecosystem. These empirical results have implications for both business and the academic environment, which should cooperate in order to overcome the crisis. Such an approach could be used in the long run in order to manage other crises and to develop sustainable business.

Keywords: sustainable development; entrepreneurship; innovative startups; digitization; qualitative research; COVID-19 crisis; entrepreneurial ecosystem; social entrepreneurship; green business



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1. Introduction

We are currently going through one of the most economically and socially disruptive events since the financial crisis in 2008. The COVID-19 pandemic has affected almost every aspect of life, forcing societies to review their practices and norms, from the way people live and work, to the way companies interact with their customers, how customers choose and purchase products and services, and how they provide their supply chains.

Crises, especially the ones we are facing now, have a significant financial and human cost, by blocking assets and human capital, causing a significant social and economic dislocation. However, these dynamics can create premises for the disruption from which new business models emerge [1,2].

In this train of thought, authors such as [2] have pointed out that this crisis can lead to a more lasting transformation of the way we live, work, and run businesses, a change in which entrepreneurs will play a significant role. The current crisis enables entrepreneurs to build new opportunities, by getting them involved in the very essence and main guidelines of viable capabilities and their management [2].

The vulnerability of small and medium enterprises (SMEs) to internal and external events is largely caused by their size [3]. This means that the smaller the company, the fewer

resources it normally controls. Thus, a critical employee who leaves the job, a decrease in financing options, a reduction in demand due to a competitor's entry into the market or, in this case, a crisis that has hit the global economy can seriously affect the company's activity.

The liability of a small business can be equal to the liability of a new business [3]. According to [4], startups have a higher risk of failure than older companies, because they do not have established business models, have low levels of legitimacy, and depend on the cooperation of strangers. Despite these weaknesses, SMEs have also certain characteristics that could help them in times of crisis. Given their smaller size, they tend to be quite flexible when opportunities or threats emerge in their environment. Moreover, the smaller the organization, the closer decision makers are to their customers and other actors who can provide them with valuable market information, which can be helpful when facing a crisis [5].

The literature review reveals another interesting concept that can be useful for overcoming crises: the development and implementation of new technologies. Digital platforms and associated ecosystems offer a promising new environment for entrepreneurship [6]. The development of digital platforms and associated ecosystems has created a new context with important potential for entrepreneurship [7–9]. These digital ecosystems allow startups to develop services or products that complement those of the platform owner. The gradual infusion of digital content into a wide category of products and services and the constant growth in the number and diversity of such digital platforms have opened up a much broader set of opportunities for entrepreneurs [7,9–12]. Previous research has shown that digital ecosystems have important benefits for new businesses, such as access to established markets, more opportunities for Initial Public Offering (IPO), and increased reputation [13]. Consequently, digital ecosystems provide value creation and value appropriation infrastructure for entrepreneurs and their companies, thereby diminishing the disadvantages of startups [6].

Digital technologies, through digital crowdfunding platforms or financial technology (Fintech) services, can significantly improve access to financial capital through cloud computing, decrease the costs of information and communication technology (ICT), and also reduce the initial costs of labor using artificial intelligence or remote work arrangements. Thus, the development of digitization removes certain barriers to entry and is therefore expected to stimulate entrepreneurship. Based on these perspectives, some authors have stated that digital technologies are external facilitators in starting a business [14], the digitization being an important source of new entrepreneurial opportunities. The latter argument has been investigated in a number of recent empirical studies [7] which indicate that entrepreneurship is considered a major driver of innovation, growth, and economic well-being [15–18].

Increasing attention has been given by scholars to the ways in which digitization may affect an individual's decision to become an entrepreneur. Recent empirical studies indicate that it can facilitate a person's access to information, digital social networks, and online entrepreneurship education programs, improving their ability to identify and evaluate profitable business opportunities [19,20]. One of the major impediments to starting a business is the lack of funding opportunities [21]. Digitization can facilitate the entrepreneur's access to financial resources by offering new ways to acquire entrepreneurial finance, for example, through Fintech, venture capital investments, or online platforms for crowdsourcing, crowdfunding, and crowdinvesting [22,23]. At the same time, digitization has led to the emergence of new innovative business models, such as those based on the sharing economy [24].

On this line, authors such as Giones and Brem [25] and Sussan and Acs [26] have defined digital entrepreneurship as business enterprises that use digital technology as an input factor and create new Internet-based products and services.

Additionally, some authors have shown that although the new wave of digitization is strongly associated with the replacement of workers and the entry into entrepreneurship, the research results suggest that this trend will not necessarily lead to higher unemployment

rates as suggested in the previous literature, since labour markets already adapt to the digital transformation. Workers who are highly educated react to these changes by choosing entrepreneurship themselves. Yet, the workers who are less trained and who run the risk of seeing their jobs wiped off by digitization are very likely to become unemployed and in need of support when deciding to go for the entrepreneurial option. The results also suggest that advances in technology create new opportunities for growth-oriented entrepreneurs who are moving from a paid job to entrepreneurship [27].

We assume that digitization is an ongoing process that will grow faster in the coming decades. According to [28], the current era is the most prolific period in human history in terms of technological innovations. Robots working in industries, self-driving cars, smart watches monitoring patient health, and augmented reality-based games are only a few examples of technological innovations. Therefore, the changes in entrepreneurial dynamics, which are already visible, are expected to intensify in the near future. In this context, for the newly-emerging companies, it is clear that innovation is the only way to enter and succeed on the market.

Last but not least, we also consider in our theoretical framework the significant relevance that the concept of sustainable development holds in contemporary society. This is highlighted in the literature as a complex concept increasingly used to describe the methods and activities by which a business can develop sustainably, can help conserve resources, and provide future generations with similar advantages and benefits to those that current generations enjoy [29].

We approach one of the empirical and methodological gaps in the literature, when referring to the issue of involvement in the development of innovative startups in the context of the COVID-19 pandemic.

The purpose of this paper is to take into account and analyze the students' attitudes and behaviors regarding the involvement in entrepreneurship and the development of innovative startups that can contribute to mitigating the consequences of the COVID-19 pandemic crisis.

The article begins with an introduction to the field. The next section outlines the theoretical framework, Section 3 contains the materials and methods used, and Section 4 presents the results and discussions. The article ends with the conclusions and proposal section.

2. Theoretical Background

2.1. *The Impact of COVID-19 on the Entrepreneurial Ecosystem*

Starting as a local sanitary crisis, COVID-19 has soon become a pandemic crisis with a high negative impact on worldwide economic development. According to the World Economic Forum [30], up to July 2020, more than 70% of the startups all over the world substantially terminated employment contracts, and many companies only have enough operational resources for a few months. According to the same institution, the governments have to support the innovative small business that can find solutions for future economic development.

The issue of the pandemic crisis is largely debated in the literature. It has a negative impact on the world economy without discrimination, because the virus makes no distinction between demographic categories, social status, ethnicity, or wealth. COVID-19 has caused a world economic crisis that raises sustainability-related concerns [31]. In line with these findings, other authors consider that COVID-19 could affect the implementation of United Nations Sustainable Development Goals with negative consequences on the process of eradicating poverty and hunger, but also on education, health, or economic systems [32]. In this respect, the effect of COVID-19 on economic life is highlighted, which deepened the social and economic inequalities between people [33]. Important sectors of the economy have faced difficulties during this crisis, but sectors like hospitality industry or agri-food are considered the most affected, with negative consequences on social life [34]. Certain studies analyzed the situation of the education sector, where technology facilitated the transfer of education into the online environment. Thus, ICT and neuroeducation

are considered crucial for the education future [35]. Technology and innovation are also deemed engines of business transformation like in the case of online delivery of foods or other goods, which increased significantly during the COVID-19 crisis [36].

2.2. *The Innovation during COVID-19 Crisis*

Decision-makers in each company face an important choice in terms of supporting the growth driven by short-term innovation, which can have lasting consequences for their companies' ability to grow in the coming years, because present safety may be a myopic decision at this moment.

Over time, innovation has been the main trigger of an improved standard of living. However, the innovation process is extremely disruptive, as it makes conventional technologies outdated. Digital platforms, cloud computing, Internet of Things (IoT), big data, data science, artificial intelligence (AI) and blockchain are the growing technologies that can lead to a rapid scaling of the business or, on the contrary, can cause the decline of the company if entrepreneurs do not integrate them in time. Although some of these technologies emerged two and a half decades ago, they were neither in the mainstream nor viable for commercial applications. In recent years, the situation has changed radically, and almost every field uses one or more of these technologies. Their massive use in all sectors, especially in areas such as healthcare, automotive, finance, environmental monitoring, agriculture, energy management, security, sports, and games, is changing the way people live, work, and have fun [28,37–40].

Some research suggests that since the onset of the COVID-19 crisis, companies have become more focused on short-term issues, becoming less and less concerned with innovation. Most companies neglect innovation, in order to focus on four aspects: continuing the core business, pursuing known opportunities, conserving cash and minimizing risks, and developing multiple scenarios, given the lack of predictability. The decline in the focus on innovation is evident in almost all sectors; the only exception is the pharmaceutical and medical industry, where an increase of almost 30% has been reported since the beginning of the health crisis [1].

In a recent survey of more than 200 organizations in various industries, 90 percent of the executives said they expected the COVID-19 crisis to fundamentally change the way they would operate in the next five years, with 85% believing that the crisis would have a lasting impact on the needs of their customers. If most directors agree that business innovation will be critical in the next period, only 21% feel ready to comply with the challenge, as they have the expertise, resources, and commitment to pursue the new growth, whereas 33% believe it will be the most challenging moment of their executive career [1].

3. Materials and Method

3.1. *Setting the Context: The Impact of COVID-19 on the Romanian Economy*

As is mentioned in the literature, COVID-19 has triggered an economic crisis, which is hard to quantify in terms of its evolution in the medium and long run. As this process started after the isolation measures imposed in Romania in mid-March 2020, the volume of statistical data is small and poor, with many provisional values. Nevertheless, they are suggestive to illustrate the sudden economic contraction.

The state of emergency was declared in Romania on 16 March 2020, and continued till 14 May 2020. During this period, the national lockdown was instituted, and some economic activities were forbidden, mainly the services provided to the population. Among these ones: restaurant activity, gambling and recreation, hairdressing and beauty, commercial activities in crowded places, sport competitions, museums, cinemas and shows, dental services, etc., can be mentioned. At the same time, many other companies reduced their activities or entered shutdown for various periods of time. The government supported the companies in this period mainly by funding the workforce expenditure, in order to avoid their firing. However, these measures were only conjectural situations, with no effect on stopping the economic decline. Since 15 May 2020, the state of emergency has been

replaced with the state of alert, and most activities have been gradually resumed, but at the moment, some restrictions still exist for certain activities in closed spaces: restaurants, shows, theatres, sport competitions, etc.

In this context, the economic crisis cannot be avoided. Data published by EUROSTAT reveals decreases for the main economic sectors in Romania [41]. Figure 1 shows the short-term business statistics for Industry, Construction, and Trade from the first five months of 2020 in Romania. The indexes are calculated by reporting the figures from current periods to the same month of the previous year [41].

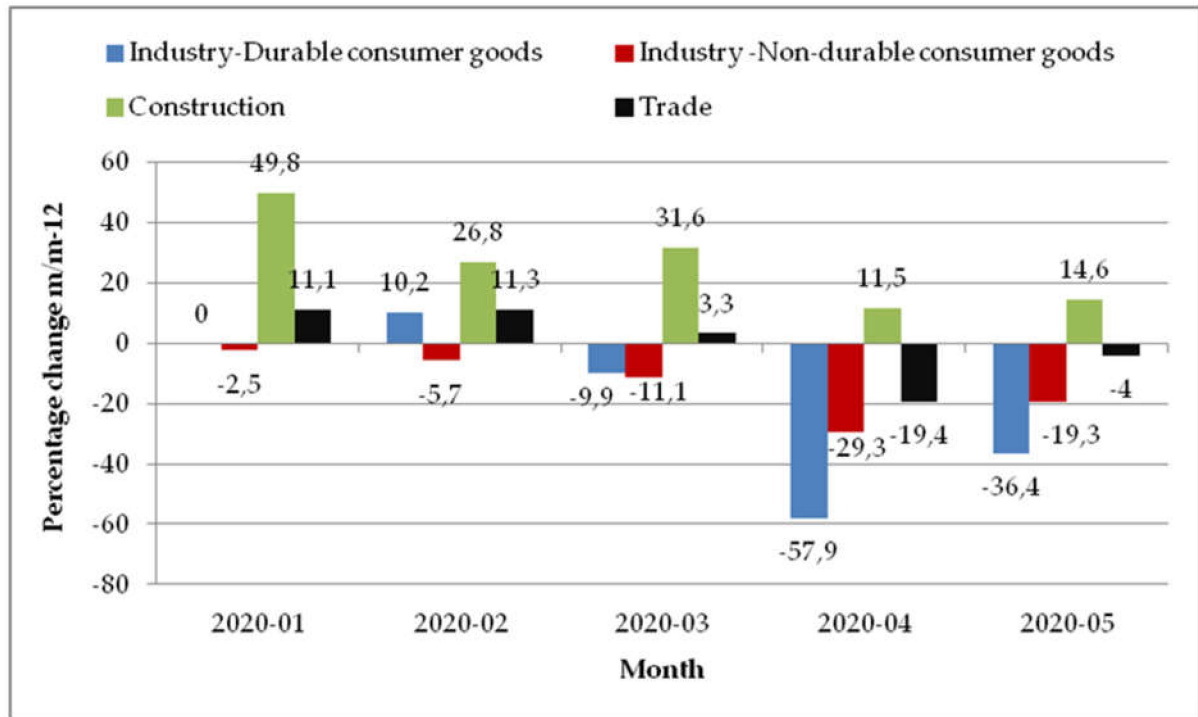


Figure 1. Evolution of the main economic sectors in Romania during the first five months of 2020 (the same month of the previous year = 100). Data source: <https://ec.europa.eu/eurostat/web/short-term-business-statistics/data/main-tables>.

It can be noticed that, since March 2020, when the state of emergency entered into force, all analyzed economic sectors have recorded significant decreases, in comparison with the same month of the previous year, except for the construction sector. Constructions seem to have not been affected by the pandemic crisis so far, as in March they increased by 31.6%, when compared to the same month of 2019. For April and May, 2020, the increases were not so high, but they exceeded 10%. As for the industry, it recorded the highest decrease, especially in the field of durable goods, but also the production of non-durable goods decreased, especially in April. The trade sector also declined in April 2020, after three months of increase, but it seems to have recovered faster than industry, as the decrease in May was only 4% of the previous year's value. In fact, for all sectors, the values recorded in May were better than in April.

The most affected businesses were those in the service sector. For the main services provided to population, the official statistics in Romania [42] reveal that the turnover decreased by more than 50% in April, as compared to the same month of 2019 (see Figure 2). This result is due mainly to the lockdown, when almost all services that involve direct contact between population members were banned. Consequently, the most affected services were gambling and recreation, beauty services and tourism, for which the decline still continued in May.

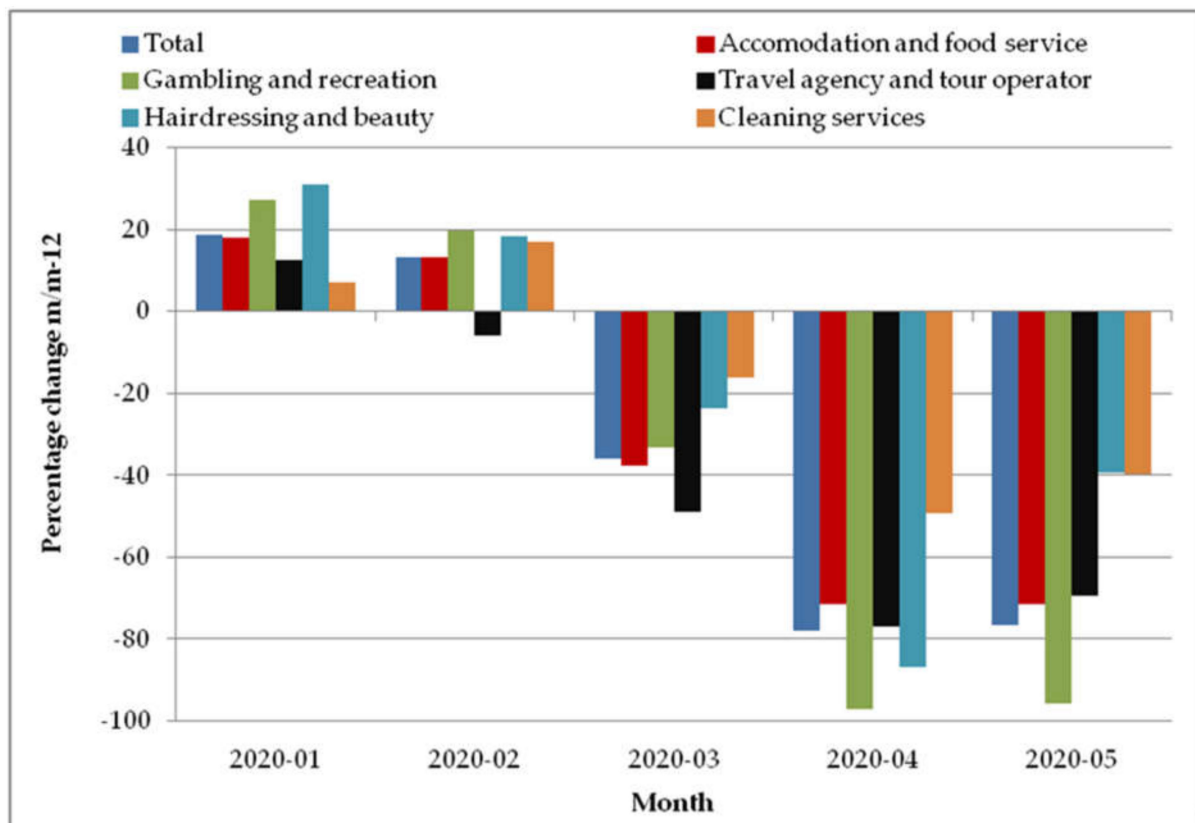


Figure 2. Evolution of the main services provided to population in Romania during the first five months of 2020 (the same month of the previous year = 100). Data source: <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>.

At this very moment, there are no public data available about the number of firms that closed down during this period, but it is assumed that the entrepreneurial ecosystem of Romania was strongly affected by the crisis. The number of employees also decreased by about 2% (on the average 80,000 people/month) both in April and May, in comparison with the previous year's similar periods [42]. However, this indicator is not very relevant for the crisis impact, because the Government supported companies in the short term, with a view to avoiding dismissal of employees. The real situation of unemployment should be analyzed for the next period of time. The significant economic development recorded in the last 20 years, based on exports, foreign investment, relatively cheap labor, and especially consumption, is likely to turn into a disadvantage in the coming years, if the business model will not change.

3.2. Research Methodology

The purpose of the research is to highlight the attitudes and behaviors of the students who consider entrepreneurship as a career option in order to develop innovative startups that can contribute to reducing the consequences of the COVID-19 pandemic crisis.

The objectives meant to achieve the research purpose are:

O1—To find out students' opinions about market behavior changes during the COVID-19 crisis and identifying the facilities that the business environment should benefit from during this period;

O2—To find out the students' opinions about the profile of the successful entrepreneur in the context of COVID-19;

O3—To generate ideas and innovative solutions for startup management, which would contribute to reducing the consequences of the COVID-19 pandemic crisis.

Taking into account that the aspects regarding the motivations and attitudes that influence the target population (the students who consider entrepreneurship as a career option)

to act in various ways as regards the perspective of getting involved in entrepreneurship and, simultaneously, that it was desirable to generate a large number of ideas, the decision was to apply an exploratory research. The option for this type of research was influenced by the advantages of qualitative research methods that allow the in-depth understanding of the researched phenomena; furthermore, it provides the necessary tools for investigating and understanding human experience [43], it facilitates research aimed at understanding the interactions between the subjects more than their opinion and perspective. During the interviews, several projective techniques such as the “third person technique” and the “word association test” were also used. For example, participants were encouraged to think about colleagues with whom they participated in optional entrepreneurship courses and to say what they believed about starting new businesses; during the word association test, the interviewees were asked to associate the first word which came in their mind when thinking of business areas that could be successful in the period marked by the Covid-19 pandemic and were asked to mention the first skills and characteristics they associate with the contemporary successful entrepreneur. These are research methods initially developed by clinical psychologists and psychiatrists in order to gain some understanding of the basic problems of the patient, but which have proven particularly useful in marketing research by the amount, richness, and accuracy of the information obtained [44,45].

To achieve the objectives, the method of semi-structured interviews was used, being conducted online (via E-learning and WhatsApp platforms) on a number of 168 students who consider entrepreneurship as a career option, with a view to developing innovative startups. In order to establish the sample size, the concept according to which, at a certain level of experience, it is possible to approximate the size and to evaluate it during the research, without being necessary to establish the sample size by a formula was adopted [46]. The data collection took place between June and July 2020, during the COVID-19 pandemic, immediately after the application of some relaxation measures that allowed the resumption of the economic activity in many domains that had been blocked and the return to a lifestyle closer to the typical one.

The sample, made up by the “snowball” method, includes students enrolled in a form of higher education in Romania and who have expressed their interest in developing a career in the domain of entrepreneurship. They were selected from the participants in an entrepreneurship course with voluntary participation based on a short selection questionnaire. The main aim was to identify the ones interested in developing entrepreneurial activities in the near future and their socio-demographic characteristics. The selected students were encouraged to recommend other students they know who have the same career goals or they have met by participating in at least one training course in this field. These students were contacted in order to be invited to participate in the interview if their profiles meet the selection criteria. The final sample has a balanced structure, which allows obtaining a large variety of opinions and attitudes from people with different socio-demographic characteristics: 58% of total are females and 42% are males, aged between 20 and 26 years old, that live in various development regions of the country. According to the study field, 53% of the sample members come from engineering faculties and the rest from different social and human sciences. The students in electrical engineering and ICT were the most prevalent group from engineering field (30.6% from the total sample), while for the other fields of study, the students in economics and sociology were the most numerous (23.1% from total). Eight five percent of students were enrolled in bachelor studies, and the rest in masters programs. The choice for this structure was made starting from the profile of the students involved in activities carried out by the Student Entrepreneurial Society founded by the Transilvania University of Brasov, Romania.

The duration of the interviews ranged from 30 to 40 min. The interviews were based on a previously developed interview guide so as to meet the set objectives, but giving each participant a high level of freedom in how to approach the topic and express their opinion. The discussions began by stating the purpose of the research and the presentation of the organizational and confidentiality issues. Then the topics provided by the interview

guide structured in three major directions, in line with the research objectives, were addressed: opinions on market behavior changes during the COVID-19 crisis, opinions about the profile of a successful entrepreneur, and ideas and innovative solutions for startup management. The resulting data were analyzed using content analysis [47]. The analysis started with the structuring, sorting, classification, management, and modelling of raw data so that it was possible to highlight topics that might lead to the understanding of the phenomena exposed by the participants and the formulation of significant conclusions. ATLAS.ti qualitative research software was used for data processing and interpretation. The analysis provided the opportunity to analyze the answers on each topic and to identify the dominant answers. In the end, the research results, grouped on each research objective approached, allowed the generation of important conclusions, leading to the meeting of the research goal.

Although the data are not statistically representative (a feature of the qualitative research), they are relevant for the studied population. Testing the reliability of the research results was done using “Data Triangulation” [48,49]. For each objective, the information obtained from the interviewed young people/students was compared with those obtained from the representatives of the business environment, as well as with the results of other research presented in the literature.

4. Results and Discussion

The research results are structured on each previously mentioned objective. The results obtained provide empirical support for the identification of the characteristics and skills considered essential for business involvement, but also for the identification of the behavioral characteristics and the motivations of students as potential startup developers.

O1—Finding out students’ opinions about market behavior changes during the COVID-19 crisis and identifying the facilities that the business environment should benefit from during this period.

Interviews with young potential entrepreneurs reveal that most of them were interested in the changes that appeared in the buying and consuming behaviors as a result of the Covid-19 pandemic crisis. They collected information from mass media or they studied specialized publication topics from the literature. The participants in this research are convinced that these behavioral changes have affected the market profoundly and irreversibly. In their opinion, the most important changes are related to the way goods are purchased. All the interviewees brought into discussion issues related to online purchases that quickly replaced a large part of the classic trade (during the first topic of the interview, the discussions were guided by the participants in this direction 207 times.) The idea that a large part of the population that had not used e-commerce, were forced to experience this form of commerce, discovered its advantages, and will adopt it as the main method of buying was supported by most of the subjects:

“The COVID-19 pandemic crisis has brought many changes in the daily lives of people everywhere. Many consumption habits have disappeared or had to change radically. From hygiene habits to the consumption of cultural services, everything will change.” “Many consumers live with anxiety when they have to shop, because they feel exposed in public areas with a large flow of people, and will prefer to do the shopping from the safety of their home.”

Similarly, the research participants consider that health and hygiene concerns have become a priority for the population (during the interviews, focusing on the needs in the medical field was brought into discussion 162 times.) The changes in the demand for the tourism products and event organization were also highlighted, as areas that, at least in the short term, were profoundly affected and will require substantial adaptations in the coming years as well. The interviewees consider that the estimates about market developments should distinguish between the acute, initial period of COVID-19 and its next stage, which may take several years, and which should be assessed on the basis of several possible pandemic scenarios. The need for social protection and distance, discussed

by most research participants, has led the dialogue to the potential for increased demand for IT devices and applications that should simplify online communication and facilitate the new lifestyle imposed by COVID-19.

As for the facilities that startups operating in these fields should benefit from, the main ideas issued, structured according to the frequency of occurrence, are granting financing facilities (grants or advantageous loans), tax facilities (tax reductions and tolls in the first years after starting new businesses), and failure support packages (government guarantees). The participants in the research also suggested that the local public administration can support startups by granting free land for the construction of production facilities or the advantageous renting of public domain space for headquarters or branches. A possible solution includes setting up a “hub”, developed by a local entity, where startups can interact, be guided, and receive advice and connections with potential investors and financiers. In the opinions of the young people interviewed, the collaboration between startups and co-working encourage and accelerate innovation, bringing mutual benefits to members. In this respect, one of the interviewees said: *“Creativity and entrepreneurial talent can be stimulated within the group you belong to; the courage of the members increases, as does the strength of the group, and access to infrastructure is easier”*. In addition, students believe that stimulating entrepreneurship necessarily involves business education. In this sense, the research participants argue that the organization of mentoring sessions with members of the business community, the completion of academic programs with internships conducted by tutors, and the study visits to economic agents should be encouraged in the higher education. The collaboration with the business environment is considered essential for the organization of extracurricular learning activities and for the awareness of both students and teaching staff of the needs and expectations of the companies. These ideas are consistent with the results reflected in other studies in the field [50].

O2—To find out the students’ opinions about the profile of the successful entrepreneur in the context of COVID-19.

The synthesis of the results obtained in this objective reflects the current vision of the students regarding the image of the Romanian entrepreneur in the context of Covid-19 and the involvement perspectives in entrepreneurship by establishing startups. By requesting the participants to describe the “successful Romanian entrepreneur”, a complex profile was obtained, which integrates the respondents’ expectations about the ideal entrepreneur in the context of Covid-19. Highlighting the extent to which the respondents imagine themselves as entrepreneurs was made up by overlapping the traits held by the research participants and the portrait of the ideal entrepreneur created by them.

Four main categories of factors that describe the profile of a good entrepreneur were identified: courage, creativity, experience, and perseverance. The discussion was oriented in order to assess the extent to which the respondents consider their personality profile match these traits. Most of the respondents described themselves as creative and brave, but inexperienced and eager to succeed. Similarly, in the opinion of the interviewees, getting equipped with entrepreneurial skills must include independent and reflective thinking, but also empathy towards the employees or the other members of the society.

“For the entrepreneur who will be successful during COVID-19, the manifestation of freedom in thinking and decision-making, the orientation towards innovation and creativity, the exploration of the unknown, and of course the lack of fear are essential,” one of the interviewees stated.

The issues related to risk management in the economic context marked by the pandemic crisis were also heatedly debated topics in the interviews. However, the approach to the topic of risks was closely related to business ethics. This correlation led to particularly interesting results, mainly because the involvement in entrepreneurship in the current context is considered to be strongly marked by the principles of ethical and social responsibility. The participants repeatedly brought into discussion the need for correct behavior towards all business partners, customers, and employees even when, for example,

a simple suspicion of a Covid-19 case would cause great losses. Obtaining a sustainable development should have priority over profit maximization during the Covid-19 period.

“The entrepreneur of the period marked by Covid-19, in addition to the passion and motivation to make a profit, must also have the awareness that during this period we must help each other.” “He must be an organized, responsible person, prepared for any situation and especially motivated to do good things for society”. “People will be more and more skeptical, and the successful entrepreneur must be empathetic in order to have a close relationship with customers, which will bring along success.” These statements represent some of the research participants’ opinions.

Although no consensus has been reached about the skills and competencies required to be a successful entrepreneur in the context generated by COVID-19, the ideas generated converge on the necessity to focus on social entrepreneurship rather than commercial. Most of the interlocutors consider that, although social entrepreneurship is boosted in times of crisis, it must be developed by education and the promotion of the values of sustainable development among the future business graduates. These findings are in line with the results obtained by other researchers in the field [51]. As for the desire of the interviewees to get involved in entrepreneurial activities, the research results reveal that, although a moderate number of the participants in the study match the profile of the ideal entrepreneur, the majority want to develop startups in the coming years and have confidence in their success. The main areas of interest for them are online commerce and ICT.

O3—To generate ideas and innovative solutions for startup management, which would contribute to reducing the consequences of the COVID-19 pandemic crisis

As for the areas considered the most attractive to start a new business in the period affected by COVID-19, the interviewed students stressed the importance of three sectors. The most boosted field by COVID-19 is considered to be the one in which new technologies are developed, considering that startups in the field of IT solution development are the ones with the greatest growth potential. Online commerce came second, in which the participants foresaw an “explosive growth”, followed by the pharmaceutical industry and the production of medical and protective equipment. Overall, the medical field was perceived as “outdated and without sufficient resources, in great need of development”.

The research participants consider that the changes in the economy predicted before the advent of COVID-19 will be boosted by the pandemic crisis. The widespread adoption of digital solutions and artificial intelligence for business development, an inevitable action in the context of the technological evolution, equally accelerated by COVID-19, will have a very big impact on business.

“Online stores of any kind are businesses that will operate in any conditions”. “Investing in online businesses will be the most profitable, because they require minimal financial and human resources.” “Opportunities open up for companies in the field of digitization services because many companies that develop classic business models need guidance for transferring business to the virtual environment.”

If until now the big data analysis and decision-making based on them have been performed by specialized professionals, who were not few, in the future they will be replaced by “algorithms” and artificial intelligence managed by a limited number of highly specialized experts who will contribute to a great extent to the income of the companies for which they work. Because the advanced technologies are resource consuming, the entrepreneurs with few resources need to be more flexible and grow businesses in areas that involve a lot of creativity and where artificial intelligence penetrates harder. They also have to build social networks that could increase their power and technological and innovation capacity.

According to the respondents’ opinions, in the future marked by COVID-19, the digital business models, the digital operational business, and the platform business models will be successful, because all fields will be updated. The replication of some established

traditional business models in the virtual space and their being designed in such a way so as to benefit as much as possible from the advantages conferred by technology represent safe recipes for ensuring a competitive advantage. The companies will be increasingly aware of the importance of collecting and analyzing large volumes of data from those collected by traditional statistics to biometrics used in telemedicine. In this context, opportunities will be developed for startups that could collect, process, and encrypt the data and could develop tools to manage and transform these data into synthetic information, easy to use in the managerial activity. In order to exemplify, the research participants brought into the discussion precision agriculture, which creates a clear competitive advantage in comparison to the conventional agriculture. The startups could take advantage of the demand generated by the needs of the transition from traditional to precision agriculture by offering technological or digital solutions, such as applications that could simplify the management of large volumes of data. Other examples of areas where there are development opportunities for the post-COVID-19 startups frequently mentioned by the participants in the research are augmented reality and the virtual reality, which can create new shopping and consumption experiences. The interlocutors returned systematically and included in their argumentation the idea of innovation and the need to be inventive, to quickly find solutions to the socio-economic environment that is in an accentuated dynamic. At the same time, the interviewees consider that for the development of businesses that create digitization solutions, it is essential that young entrepreneurs should take advantage of the opportunities that the European Union programs such as “Digital Europe” or “Horizon Europe” offer.

5. Conclusions and Proposals

The negative influences of the COVID-19 crisis have left their mark on most European countries, with adverse consequences for the economic evolution. Among these, Romania was one of the most severely affected countries given the sudden transition, in just a few months, from sustained economic growth to economic decline. All sectors of activity were affected, with small punctual exceptions of some areas that benefited from the crisis. Such a context has led to the need for research identifying those innovative businesses that can contribute to the economic recovery during and after the COVID-19 crisis.

The research results confirm that in times of crisis, both the behaviors of consumers and those of sellers change radically as a result of extensive transformations of environmental factors that change the natural course of the business. Thus, the results of previous studies on the influences of crises on the business environment are confirmed, which reveal adverse effects but also new opportunities caused by crises [1,2,4].

As to the first objective of the research, the results highlight the vulnerability of small businesses during the COVID-19 crisis, affecting in particular sectors such as personal care services and the hospitality industry. However, the aspects of flexibility that small companies benefit from are also mentioned, as they can take advantage of the new technologies to develop new businesses. This confirms the results in the literature on the potential offered by entrepreneurship in innovative fields, based mainly on ICT [5–18]. The fields considered by respondents to be the most attractive for businesses during the COVID-19 crisis are IT services and e-commerce. They should be stimulated by financing programs and fiscal facilities, but also by creating conditions for the development of an entrepreneurial ecosystem oriented to supporting startups: creation of startup hubs, creativity stimulation events, entrepreneurship education programs, etc. Most of the opinions expressed by the interviewees emphasize the need to focus on innovation, which is the engine of economic development, and on finding solutions to overcome the crisis. In addition, the intensification of competition forces the industrial networks to make innovation their survival factor, thus creating real premises for the generation of new spaces in which the industrial dynamics are the innovation itself. Thus, innovation can contribute to the sustainable development of the entire economic ecosystem.

The entrepreneurial ecosystem also has a significant contribution to sustainable regional development. In this context, as a result of the second objective of the research, a good entrepreneur is considered to be characterized by a lot of courage and perseverance, but also by a high level of creativity. Equally, entrepreneurs should also be actively involved in building harmonious relationships, both with the employees and with the company's external environment, which could give rise to social entrepreneurship with beneficial effects for sustainable development. In this sense, the unbridled entrepreneurs who pursue short-term opportunities should not be encouraged, because they can cause socio-economic losses rather than sustainable growth. Taking into consideration the effects of the Covid-19 crisis, the role of entrepreneurs in adopting an integrative vision of business, combining economic and social values, is becoming very important. The ability to adopt sustainable practices, innovation, and building social networks are ideas that recurred several times during the discussions.

Starting from the above-mentioned results, as compared to other research in the field presented in the literature, this research contributes additional elements of knowledge, addressing the issue of the involvement in the development of innovative startups in the context of the COVID-19 pandemic. Thus, the proposals taken from the analysis of the research results aim at creating a legislative framework and programs to support innovative startups in order to develop business in priority domains for finding solutions to combat the crisis, but also in domains that have lately benefited from development opportunities. One such field is the development of ICT applications, which is often mentioned in the literature as a generator of sustainable development [5–18]. Government support programs will need to focus on supporting innovative and bold projects that propose solutions to the current paradigm.

In their turn, the entrepreneurs should be actively involved in the development and restructuring of businesses on sustainable bases, including an orientation towards employees and society as a whole. Thus, the foundations for the development of a social entrepreneurship with beneficial effects for the company, society, and the environment are laid. In this sense, a quadruple helix theory approach is needed, which involves a close collaboration between companies, the public sector, academia, and citizens to ensure sustainable development. Such collaborations allow companies to benefit from the results of studies regarding the needs of the population and to develop innovative products meant to meet these needs. The adoption of such products often requires support from public authorities. On the other hand, collaboration with the academic environment can bring extra expertise in different fields resulting from scientific research, but also facilities for developing new businesses and supporting existing ones by setting up business incubators, developing joint projects, organizing entrepreneurial courses, etc.

The intensification of the involvement in such collaborative models is absolutely necessary in crisis situations, especially the one generated by COVID-19, for which there are many enigmas about how to get out of the crisis and the time horizon that it will be on for. Nevertheless, the crisis can raise obstacles in applying social entrepreneurship models, because one of the most important barriers comes from the necessity of assuring the financing sources. The literature highlights that in these models, the most popular financing sources are the government funds, investors, or other stakeholders. However, the COVID-19 crisis is expected to significantly affect the access to these funds. In this respect, each country should find the most appropriate ideology that could be most effective in promoting economic development and that receives less resistance from the institutional and socio-cultural filter process of that country [52].

In order to attain the entrepreneurs' objectives and to contribute to the development of a sustainable entrepreneurial ecosystem, special attention should be paid to fructifying new opportunities provided by the new green initiatives. As is stressed in literature, pollution reduction becomes a crucial objective of the nations [53,54]. Therefore, changing the business culture seems to be one of the most important ways to develop sustainable business [55]. Finding opportunities to change the business culture in order develop

green business and green economy seems to open a large perspective for sustainable business ideas that can be developed with limited financial resources. As the business grows, the entrepreneurs could also access various funds invested by government or other stakeholders. Such sustainable businesses could also be developed by the help of innovation, technology, and ICT services, as was suggested by the interviewees selected in our research.

Given the above, the results of this research have significant implications on the business environment, which can benefit from useful information when making important decisions for long-term sustainable development. It has also a major impact on the academic environment, because it brings to the fore the need to intensify curriculum development efforts by integrating entrepreneurial skill training programs with those of crisis management. Such programs can contribute to better preparation of students regarding the imminence of unavoidable crises (such as pandemic crises). Thus, they are trained in the management of unforeseen events and in finding solutions to make business activities more flexible in the sense of taking advantage of market opportunities. Higher education in entrepreneurship must transcend the boundaries of economic education and extend to other fields of study. For example, the introduction of elements of entrepreneurship in the curriculum of technical specializations may lead to a higher level of training. Thus, a young person could successfully combine, upon graduation from the faculty, the technical skills with the entrepreneurial ones, having more options in the labor market. He can choose between developing his own business (especially in the context of the current crisis), and testing his entrepreneurial skills in an organization (company) as an internal entrepreneur. In addition, such a combination of professional and transversal skills could result in a reconsideration of young people's interest in polytechnics. Starting from the experience of the major crisis of the medical system during the COVID-19 crisis, beyond the engineering fields, entrepreneurial education can be extended in multiple fields: medicine, music, sports, humanities, etc. Thus, young people will be prepared to anticipate crises and establish measures for their effective management so as not to affect the sustainability of businesses at micro- and macro-economic level.

Under these conditions, the importance of entrepreneurial structures at the university level (Student Entrepreneurial Societies) becomes maximal, and educating young people in entrepreneurship could be the key to reducing the effects of the economic crisis generated by COVID-19 and anticipating possible future crises. Entrepreneurial education and practice can represent incentives of developing a mindsponge mechanism meant to facilitate the adoption of cultural changes needed for creating new sustainable business. As it is mentioned in literature, such a mindsponge offers the entrepreneurs the opportunity to assimilate new values from external sources and to eliminate useless ones [56]. In this way, they may obtain a sustainable change in business culture, which is opened to innovation and new values, but also a dynamic mechanism of response to the environment changes.

In conclusion, in order to create innovation and economic growth, the industry has become increasingly dependent on academic research. Higher education institutions, in order to be innovative and entrepreneurial, cannot operate in isolation, but only in interdependence with other actors in the ecosystem (large companies, small and medium size enterprises, clusters, associations, technological and scientific parks, and other research organizations). In this context, it is clear that a holistic approach is needed to exploit the full potential of a region for sustainable development.

Beyond the scientific implications stated above, this research has also certain limitations, caused mainly by the exploratory nature of the research method used. Such results cannot be generalized, but given the unprecedented manifestation of this crisis, we consider that qualitative research on people involved in entrepreneurship can provide results with a higher degree of confidence than in the case of using large samples of people who have nothing to do with entrepreneurship. However, a survey of the entrepreneurs or employees in the fields considered successful during this period can create a much more accurate representation of the reality of the entrepreneurial ecosystem in this period. This represents

the main direction of future research, which should be tested in different contexts and cultures. The results of this research will be deepened through qualitative research on the people involved in the management of business activities, so that viable solutions can be outlined to overcome crisis situations in general, beyond the current pandemic situation.

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References

- Am, J.B.; Furstenthal, L.; Felicitas, J.; Roth, E. Innovation in a Crisis: Why It Is More Critical than Ever. Available online: <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/innovation-in-a-crisis-why-it-is-more-critical-than-ever> (accessed on 20 July 2020).
- Neumeyer, X.; Ashton, W.S.; Dentchev, N. Addressing resource and waste management challenges imposed by COVID-19: An entrepreneurship perspective. *Resour. Conserv. Recycl.* **2020**, *162*, 105058. [CrossRef] [PubMed]
- Freeman, J.; Carroll, G.R.; Hannan, M.T. The Liability of Newness: Age Dependence in Organizational Death Rates. *Am. Sociol. Rev.* **1983**, *48*, 692–710. [CrossRef]
- Stinchcombe, A.L. Social Structure and Organizations. In *Handbook of Organizations*; March, J.G., Ed.; Rand McNally: Chicago, IL, USA, 1965; pp. 142–193.
- Eggers, F.; Hansen, D.J.; Davis, A.E. Examining the relationship between customer and entrepreneurial orientation on nascent firms’ marketing strategy. *Int. Entrep. Manag. J.* **2012**, *8*, 203–222. [CrossRef]
- Nambisan, S.; Baron, R.A. On the costs of digital entrepreneurship: Role conflict, stress, and venture performance in digital platform-based ecosystems. *J. Bus. Res.* **2019**. [CrossRef]
- Nambisan, S. Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship. *Entrep. Theory Pr.* **2017**, *41*, 1029–1055. [CrossRef]
- Nambisan, S.; Wright, M.; Feldman, M.P. The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Res. Policy* **2019**, *48*, 103773. [CrossRef]
- Von Briel, F.; Recker, J.; Davidsson, P. Not all digital venture ideas are created equal: Implications for venture creation processes. *J. Strat. Inf. Syst.* **2018**, *27*, 278–295. [CrossRef]
- Davidson, E.; Vaast, E. Digital Entrepreneurship and Its Sociomaterial Enactment. In Proceedings of the 43rd Hawaii International Conference on System Sciences, Koloa, Kauai, HI, USA, 5–8 January 2010; pp. 1–10. [CrossRef]
- Porter, M.E.; Heppelmann, J.E. How Smart, Connected Products are Transforming Competition. *Harv. Bus. Rev.* **2014**, *92*, 64–88.
- Srinivasan, A.; Venkatraman, N. Entrepreneurship in digital platforms: A network-centric view. *Strat. Entrep. J.* **2018**, *12*, 54–71. [CrossRef]
- Ceccagnoli, M.; Forman, C.; Huang, P.; Wu, D.J. Co-creation of value in a platform ecosystem: The case of enterprise software. *MIS Q.* **2012**, *36*, 263–290. [CrossRef]
- Von Briel, F.; Davidsson, P.; Recker, J. Digital Technologies as External Enablers of New Venture Creation in the IT Hardware Sector. *Entrep. Theory Pract.* **2018**, *42*, 47–69. [CrossRef]
- Acs, Z.; Audretsch, D.B. Entrepreneurship, Innovation and Technological Change. *Found. Trends Entrep.* **2005**, *1*, 149–195. [CrossRef]
- Carree, M.A.; Thurik, A.R. *The Impact of Entrepreneurship on Economic Growth*; Springer: Boston, MA, USA, 2003; pp. 437–471. [CrossRef]
- Schumpeter, J.A. *The Theory of Economic Development*; Cambridge University Press: Cambridge, MA, USA, 1934.
- Van Praag, C.M.; Versloot, P.H. What is the value of entrepreneurship? A review of recent research. *Small Bus. Econ.* **2007**, *29*, 351–382. [CrossRef]

19. Al-Atabi, M.; DeBoer, J. Teaching entrepreneurship using Massive Open Online Course (MOOC). *Technovation* **2014**, *34*, 261–264. [[CrossRef](#)]
20. Smith, C.; Smith, J.B.; Shaw, E. Embracing digital networks: Entrepreneurs' social capital online. *J. Bus. Ventur.* **2017**, *32*, 18–34. [[CrossRef](#)]
21. Evans, D.S.; Jovanovic, B. An Estimated Model of Entrepreneurial Choice under Liquidity Constraints. *J. Polit. Econ.* **1989**, *97*, 808–827. [[CrossRef](#)]
22. Cumming, D.J.; Schwienbacher, A. Fintech Venture Capital. *Corp. Gov.* **2018**, *26*, 374–389. [[CrossRef](#)]
23. Haddad, C.; Hornuf, L. The emergence of the global fintech market: Economic and technological determinants. *Small Bus. Econ.* **2018**, *53*, 81–105. [[CrossRef](#)]
24. Richter, C.; Kraus, S.; Brem, A.; Durst, S.; Giselbrecht, C. Digital entrepreneurship: Innovative business models for the sharing economy. *Creat. Innov. Manag.* **2017**, *26*, 300–310. [[CrossRef](#)]
25. Giones, F.; Brem, A. Digital technology entrepreneurship: A definition and research. *Tech. Innov. Manag. Rev.* **2017**, *7*, 44–51. [[CrossRef](#)]
26. Sussan, F.; Acs, Z.J. The digital entrepreneurial ecosystem. *Small Bus. Econ.* **2017**, *49*, 55–73. [[CrossRef](#)]
27. Fossen, F.; Sorgner, A. Digitalization of work and entry into entrepreneurship. *J. Bus. Res.* **2019**. [[CrossRef](#)]
28. Soni, N.; Sharma, E.K.; Singh, N.; Kapoor, A. Artificial Intelligence in Business: From Research and Innovation to Market Deployment. *Procedia Comput. Sci.* **2020**, *167*, 2200–2210. [[CrossRef](#)]
29. Martin, D.M.; Schouten, J.W. The answer is sustainable marketing, when the question is: What can we do? *Rech. Appl. Mark.* **2014**, *29*, 107–109. [[CrossRef](#)]
30. World Economic Forum, Emerging Pathways towards a Post-COVID-19 Reset and Recovery. Available online: <https://www.weforum.org/reports/emerging-pathways-towards-a-post-covid-19-reset-and-recovery> (accessed on 20 July 2020).
31. Korhonen, J.; Granberg, B. Sweden Backcasting, Now?—Strategic Planning for Covid-19 Mitigation in a Liberal Democracy. *Sustainability* **2020**, *12*, 4138. [[CrossRef](#)]
32. Filho, W.L.; Brandli, L.; Salvia, A.L.; Rayman-Bacchus, L.; Platje, J. COVID-19 and the UN Sustainable Development Goals: Threat to Solidarity or an Opportunity? *Sustainability* **2020**, *12*, 5343. [[CrossRef](#)]
33. Ashford, N.A.; Hall, R.P.; Arango-Quiroga, J.; Metaxas, K.A.; Showalter, A.L. Addressing Inequality: The First Step Beyond COVID-19 and towards Sustainability. *Sustainability* **2020**, *12*, 5404. [[CrossRef](#)]
34. Barcaccia, G.; D'Agostino, V.; Zotti, A.; Cozzi, B. Impact of the SARS-CoV-2 on the Italian Agri-Food Sector: An Analysis of the Quarter of Pandemic Lockdown and Clues for a Socio-Economic and Territorial Restart. *Sustainability* **2020**, *12*, 5651. [[CrossRef](#)]
35. Espino-Diaz, L.; Fernandez-Camirero, G.; Hernandez-Lloret, C.-M.; Gonzalez-Gonzalez, H.; Alvarez-Castillo, J.-L. Analyzing the Impact of COVID-19 on Education Professionals. Toward a Paradigm Shift: ICT and Neuroeducation as a Binomial of Action. *Sustainability* **2020**, *12*, 5646. [[CrossRef](#)]
36. Li, C.; Miroso, M.; Bremer, P.J. Review of Online Food Delivery Platforms and their Impacts on Sustainability. *Sustainability* **2020**, *12*, 5528. [[CrossRef](#)]
37. Schwab, K. *The Fourth Industrial Revolution*; Crown Business: New York, NY, USA, 2017.
38. Jaap, B.; van Doorn, M.; Duivestijn, S.; Excoffier, D.; Maas, R.; van Ommeren, E. The Fourth Industrial Revolution. Things to Tighten the Link Between IT and OT. Available online: <https://www.sogeti.com/globalassets/global/special/sogeti-things3en.pdf> (accessed on 20 July 2020).
39. In Proceedings of the World Economic Forum Annual Meeting, Mastering the Fourth Industrial Revolution, Davos-Klosters, Switzerland, 20–23 January 2016. Available online: http://www3.weforum.org/docs/WEF_AM16_Report.pdf (accessed on 7 October 2018).
40. Park, S.-C. The Fourth Industrial Revolution and implications for innovative cluster policies. *AI Soc.* **2017**, *33*, 433–445. [[CrossRef](#)]
41. Available online: <https://ec.europa.eu/eurostat/web/short-term-business-statistics/data/main-tables> (accessed on 2 August 2020).
42. Available online: <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table> (accessed on 2 August 2020).
43. Carson, D.; Gilmore, A.; Perry, C.; Gronhaug, K. *Qualitative Marketing Research*; Sage Publications Inc.: Thousand Oaks, CA, USA, 2001.
44. Donoghue, S. Projective Techniques in Consumer Research. *J. Fam. Ecol. Consumer Sci.* **2000**, *28*, 47–53. [[CrossRef](#)]
45. Bell, E.; Bryman, A.; Harley, B. *Business Research Methods*, 5th ed.; Oxford University Press: Oxford, UK, 2018.
46. Cho, J.; Trent, A. Validity in qualitative research revisited. *Qual. Res.* **2006**, *6*, 319–340. [[CrossRef](#)]
47. Krippendorff, K. *Content Analysis an Introduction to Its Methodology*, 4th ed.; Sage Publications Inc.: Thousand Oaks, CA, USA, 2018.
48. Fielding, N. Triangulation and Mixed Methods Designs. *J. Mix. Methods Res.* **2012**, *6*, 124–136. [[CrossRef](#)]
49. Decrop, A. Triangulation in qualitative tourism research. *Tour. Manag.* **1999**, *20*, 157–161. [[CrossRef](#)]
50. Bărbulescu, O.; Constantin, C.P. Sustainable Growth Approaches: Quadruple Helix Approach for Turning Braşov into a Startup City. *Sustainability* **2019**, *11*, 6154. [[CrossRef](#)]
51. Nga, J.K.H.; Shamuganathan, G. The Influence of Personality Traits and Demographic Factors on Social Entrepreneurship Start Up Intentions. *J. Bus. Ethics* **2010**, *95*, 259–282. [[CrossRef](#)]
52. Nguyen, M.-H.; Pham, T.-H.; Ho, M.-T.; Nguyen, H.T.T.; Vuong, Q.-H. On the social and conceptual structure of the 50-year research landscape in entrepreneurial finance. *SN Bus. Econ.* **2021**, *1*, 1–29. [[CrossRef](#)]

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53. Forster, P.M.; Forster, H.I.; Evans, M.J.; Gidden, M.J.; Jones, C.D.; Keller, C.A.; Lambolli, R.D.; le Quéré, C.; Rogelj, J.; Rosen, D.; et al. Current and future global climate impacts resulting from COVID-19. *Nat. Clim. Chang.* **2020**, *10*, 913–919. [[CrossRef](#)]
 54. Diffenbaugh, N.; Field, C.B.; Appel, E.A.; Azevedo, I.L.; Baldocchi, D.D.; Burke, M.; Burney, J.; Ciais, P.; Davis, S.J.; Fiore, A.M.; et al. The COVID-19 lockdowns: A window into the Earth System. *Nat. Rev. Earth Environ.* **2020**, *1*, 470–481. [[CrossRef](#)]
 55. Vuong, Q.H. The semiconducting principle of monetary and environmental values exchange. *OSF Prepr.* **2020**. [[CrossRef](#)]
 56. Vuong, Q.H.; Napier, N.K. Acculturation and global mindsponge: An emerging market perspective. *Int. J. Intercult. Relat.* **2015**, *49*, 354–367. [[CrossRef](#)]