

## Industry Redesign Directions in the Context of the COVID-19 Pandemic

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### Abstract

*The article presents the main changes that have occurred in key areas of the economy (hospitality, education, culture) severely affected by the COVID-19 pandemic. In parallel, the answers of the main economic agents, the governments, but also the challenges to which we have to find solutions in the future are highlighted. Representing a review of the specialized literature published in the period 2020-2021, after the onset of the pandemic and the implementation of measures to limit its spread, this article captures the specific challenges that each of these three areas must face and it identifies the possible public policies which can be applied in the immediate and future perspective in order to improve the situation of these economic sectors, in particular, and the economy as a whole, in general. The article highlights the role of the Fourth Industrial Revolution in finding appropriate answers to how economic development will take place in the future so that it may become safer, more sustainable, and more inclusive.*

**Key words:** industry redesign, Imagination Age, education, hospitality, culture

**J.E.L. classification:** A14, I20, L83

### 1. Introduction

On December 8, 2019, the Chinese government announced the presence of a new virus in the Wuhan area, as well as the emergence of a new disease called COVID-19. Since that announcement, the world has recorded an accelerated increase in the number of people infected with this new SARS strain (SARS-COV-2), the epidemic spreading at the global level. It is the first pandemic recorded in 100 years since the infamous Spanish Influenza, which killed between 50 and 100 million people in 1918-1920.

The new COVID-19 has been characterized by a very high transmission rate, including from asymptomatic persons, a particularly serious aspect given that at least 40% of the people remain asymptomatic. Many other factors that have favored the extremely fast transmission were recorded, including airborne transmission, vulnerability of elderly people with various comorbidities (underlying medical conditions), sustained physical contact between infected and uninfected people, etc.

The global response to limiting the spread of the virus was delayed and materialized in travel restrictions, online activities, including online educational activities, and physical distancing. Most countries have closed all or part of their borders, these restrictions affecting the vast majority of the population and the global economy, as a whole.

Given the millions of unemployed people registered in various sectors of the economy, the uncertainty regarding economic recovery, and the ongoing fear of a continuing COVID-19 crisis, the global economy is going through an unprecedented crisis (i.e., a crisis within the real economy in terms of both demand and supply).

## 2. Theoretical background

In an article published in April 2020, Sanjeev Khagram (2020), an expert in global leadership, international political economy, sustainable development, and data revolution, argued in favor of using the pandemic crisis as an engine, a chance, and at the same time, of transforming the world into a safer, more sustainable, and more inclusive one. Invoking the arguments of biologists Stephen Jay Gould and Niles Eldredge, who considered, in 1972, that evolution is not a gradual process, but a process which takes place in leaps, the episodes of maximum tension, the crises, leading to such revolutionary leaps, Khagram believed that the current COVID-19 pandemic would force, through the extraordinary pressure put on individuals, organizations, society in general, the acceleration of the Fourth Industrial Revolution (FIR - 4IR), which will set fire to the boundaries between the physical, the digital and the biological world.

Experts believe that the current state of affairs will lead to structural changes in the relationship between the environment and the way we conduct ourselves at a global level. There is the question of how we will use artificial intelligence (AI), the Internet, social media, virtual and augmented reality in the economic transformation. Will the anthropocentric (the Anthropocene) development, in which we have forced the environment to adapt to the human needs, remain standing, or will we use 4IR to re-engage in a new relationship with the environment?

Will 4IR be a challenge that will lead to the retraining of the labor force, which is now being forcibly thrown out of the labor market, or will we try to force a return to the before the pandemic "normalcy"?

It is clear to us that no matter how the world repositions in the future, we need more cooperation. Absurdly, the states behaved during the pandemic by practicing sanitary isolationism and by interrupting cooperation. The cry for help from the states severely affected by the health crisis, Italy, Spain, etc., brought the governments back to reality and cooperation began to manifest itself. The emergence of the anti-COVID-19 vaccines is a sign that the scientific world has understood the message. However, there are many, many more steps to take. Among the necessary steps to be taken, according to experts, is the awareness that imagination and creativity will be the main resources to be used in the future to obtain economic value; they will be the main tools/means of work. The Imagination Age, as a theoretical period beyond the Information Age, will bring to our attention unprecedented challenges, challenges from which we will have to choose the future solutions.

A key concept is that the rise of an immersive virtual reality – the cyberspace or the metaverse – will increase the value of the “imagination work” done by designers, artists, etc. over rational thinking as a foundation of culture, but mainly in economics. 4IR kicked off the Imagination Age, i.e. a moment when the world will realize that everyone must benefit from investments in global public goods, including technology, creativity, and ethical goods.

Until the total reconfiguration of the global economy, which we do not yet know what it will look like, only a few certain paradigms of the future development being foreshadowed, we are free to use our imagination, creativity, and ability to use technology to rethink the near future starting from the few realities we have noticed since the beginning of the crisis. The changes that have already manifested in several sensitive sectors of the economy: education, culture, the hospitality sector, provide us with a first picture of the near future. The question is how many of these will turn out to be irreversible and how many will be resorbed. When and how much will we be able to return to the "normalcy from before"? If we do return...

## 3. Research methodology & results

This article examines the specialized literature published in 2020-2021 on how the measures taken by the states / governments to limit the effects of the pandemic have produced negative effects on the economic activity, especially in hospitality, education and culture, sectors in which physical presence is absolutely necessary in order to carry out specific activities. The disruptions created, the ways in which the industry has adapted and redefined (redesigned) itself have been investigated and an attempt was made to identify solutions, public policies proposed by states / governments / organizations in the form of state aid and other types of support. What we found was that, unfortunately, in spite of all the efforts made, some negative effects can no longer be salvaged. At

the same time, new challenges have emerged which can be transformed, with the help of science, technology, into opportunities for future economic development in an unprecedented and often unimaginable manner.

### 3.1. Hospitality

The Coronavirus crisis (COVID-19) has hit the tourism economy hard, this sector recording a huge shock. According to OECD estimates, the decline recorded in this activity could reach 60%.

Industry and governments are focusing their efforts on three directions:

- Lifting restrictions, access to liquidity, and application of travel safety protocols;
- Restoring trust and stimulating demand;
- Preparing plans for industry recovery, repositioning various destinations, encouraging innovation and investment, as well as rethinking/redesigning the entire sector.

A 2020 survey conducted in the United States, two months after the pandemic was declared, highlighted the emergence of 8 million unemployed people and estimated a \$240 billion drop in business during 2020 (Gursoy & Chi, 2020). The hospitality industry manifests a very high elasticity in terms of demand. With savings covering only 16 days of operation, extremely little compared to other industries that can operate for several months without major disruptions due to the declining demand, the hospitality industry is perhaps the most affected one worldwide. The problem is that the rebound does not show a satisfactory dynamic either. The same Survey (Gursoy & Chi, 2020) shows that only 50% of restaurant customers want to return to hotels and restaurants in which the activity takes place indoors and only 50% want to travel in the near future. Given the high operating costs, the industry is highly dependent on demand and stimulating demand becomes the most important element from the perspective of returning to the pre-pandemic figures.

Considering that only a third of restaurant customers and only 40% of hotel customers are willing to pay more for additional sanitation measures, while only 65% of restaurant customers and only 70% of hotel customers agree to use technology in order to maintain physical distancing, things get very complicated. Because all this means costs, the figures are not encouraging at all and our estimates show that a consistent number of scientific studies are needed and also a special effort in the research related to marketing and tourism management to find the right solutions so as to bring customers back to hotels and restaurants.

Their retransformation into tourism consumers does not come naturally. Again, we come back to the issue of using creativity and imagination (innovation), based on processing a sufficiently large database, to find suitable redesigning solutions for packages/tourist offers appropriate to the new conditions. Redesigning tourist packages, rethinking destinations and their proper promotion means a combined scientific and managerial effort. We need to put to work science, data, but also imagination, creativity, and innovative capacity in order to design a fast and adequate action. The industry is changing, people have other needs, new health needs are added to the known needs, and people are more or less willing to pay for it.

This conclusion, which we have already outlined by analyzing the studies published during this period regarding the changes in the field of hospitality, is somewhat also valid for the other two sectors which we have further analyzed: education and culture.

### 3.2. Education

The education sector is the most dramatically affected by the pandemic, at all its levels. Recent studies (United Nations, 2020; Di Pietro et al, 2020) have shown that over 30% of Skills gaps lost during this period can remain irreversible. 25% of students do not gain basic knowledge. The risks of women and children abuse, especially girls, have increased, the risks of malnutrition have increased, and there have been consistent limitations regarding parents' ability to work. All of these are long-term effects. The Human Development Index shows a sharp drop during the pandemic. It has collapsed!

What problems do we have? In COVID's time, we must learn to learn. Learn to learn! This is the key issue. How do we solve it? The answer is very different in developed countries compared to the underdeveloped ones. We know what we must achieve: Reimagining the educational system.

However, we do not know how to do it.

As we have stated at the beginning of the article, we will obtain more versions in this area, too. Imagination Age, based on existing data, will give us options. What we will choose is still quite unclear. However, a few public policy ideas emerge from the basic idea, as in the case of tourism, i.e. we must bring the target audience - pupils, students - where necessary - into laboratories, classrooms, amphitheaters, face-to-face with the teachers (virtually or in-person). But how many of these activities will take place physically and how many will remain online, in the near or distant future, must also be analyzed and studied. What do we know?

We know that the spread of the virus must stop, we know that the reopening of the schools must be inclusive, we know that the actors involved - teachers, but also doctors, must get coordinated, we know that funding for education and health must become, because it has not been so, a TOP PRIORITY.

The education system must become resilient to shocks of this type or of another nature. It did not turn out to be so. We had no tools; we had no qualifications. Measuring the negative effects recorded is not yet definitive, but it is clear that we need research in order to define which are the most effective tools and qualifications that can and should be used for the educational process to continue at an appropriate level in extreme situations when classic, face-to-face study options are not possible.

### 3.3. Culture

The OECD Study tells us that in 2020 spending on culture and entertainment has substantially diminished. The drop has been sudden. More than 70,000 cinemas in China, 2,500 in the United States, and 9,000 in Europe closed. The box office collapsed. Stock market prices for film chains fell by more than 50%.

All countries have thought separately, or collectively, about various rescue plans. Rescue plans!

The answers have been extremely varied. Individually, the countries postponed the payment of invoices, payments of taxes, settled solidarity funds to support the rescheduling of loans (France); used aid packages for employees and small businesses, resorted to the creation of an emergency fund for the film industry, the application of emergency aid for film producers, for distributors, the suspension of payments (Germany); aid schemes for the film and audiovisual industry (Spain, Italy), etc.

At the European level, there have also been collective responses. The European Commission adopted a comprehensive Temporary Framework economic response, in which a derogation was made from the State aid scheme until December 2020, plus 100 billion aid for the Member States, usable in this sector as well. The Council of Europe, in a meeting with the ministers of culture of the European countries, generated Creative Facility, which produced changes regarding the Schemes for mobility and transition to the digital age, proposing a budget for achieving this goal for 2021-2027. #CreativeEuropeAtHome has appeared.

The European Parliament has also aligned itself with all this reconstruction effort and created the Cultural and Creative Guarantee Facility, which will translate into increasing the European Budget and building the European Fund for Strategic Investments.

Festivals have moved online, movies have been promoted online in parallel with the cinema networks, we have moved to HomeVideo, but it is still not enough. Entertainment means co-participation, it means spectators. And the same question arises: How do we bring them back to theaters when, in a survey conducted in the USA, just over 50% admit that they would like to re-enter theaters and cinemas?

The answer to this question is again difficult to find. We have managed to collect data, numerous studies have been conducted, but the answers are still missing, or they are unconvincing. Advertising, management, persuasive messages that we are medically safe. A mix that is difficult to obtain, having effects that are difficult to quantify. This study also cannot claim to offer solutions, especially since it is a study that does not represent a quantitative analysis, but it is in the area of descriptive studies based on the investigation of literature and various surveys conducted this year. However, we have chosen three areas which have been extremely affected by the pandemic and we have reviewed the measures which were taken to limit its effects, precisely in order to be able to formulate a few conclusions about what we could do in the future - a future about which we do not know if it will

resemble the present, the recent or the most distant past.

#### 4. Conclusions

If according to Yuval Noah Harari (2014), what transformed us into Sapiens, into this species completely different from what had existed on Earth in the past, was communication, which brought our ability to share knowledge and act together, we must not lose exactly this good thing, if we want to self-perpetuate as a species and to evolve further.

We have been hit in our ability to socialize, being forced to distance ourselves physically, but we must continue to communicate and, especially, to cooperate. Should we want to make a comparison with what happened in the past, we know that the first wave, the Industrial Revolution of the late 18th century, marked by the steam engine's arrival, allowed us to move from manual to mechanized work, the Second Industrial Revolution, the second wave, led, in the middle of the 20th century, to the organization of assembly lines and mass production, the third wave, as defined by Alvin Toffler, marked the transition to the information society. We are in the fourth wave, in which artificial intelligence, strongly manifested in the widespread use of Big Data, of bots (robots), etc. has its say - 4AI, Information Age. But to know where we are heading, we need to put creativity and imagination to work. These are the future means of work that will operate the immense data processing technological capacities (scientifically obtained) to offer us the versions of the future, i.e. the evolution in leaps that we have mentioned. If in the case of the first three waves we knew or sensed what was to come, at the moment things are accelerating so fast that it is difficult to have only one predictable version of the future. It is clear that we will get more versions and we will choose, let us hope, with reason, the best one. Everything changes at lightning speed. No one could have predicted a year ago that schools would be closed, cinemas too, that in Europe, for months, one will have nowhere to drink coffee. The pandemic has changed us completely. We maintain physical distancing from our relatives, from friends, we do not hug our parents and children. However, we must keep creativity, communication, and cooperation. These have taken us where we are (Sapiens, maybe even Deus/God), they will also offer us the solution in the future. Remaining in this paradigm, **creativity, communication, cooperation**, we will find the answers for humanity's further development. Whether we return to the classrooms, cinemas, airplanes, restaurants, entirely or in part, we will surely find solutions to meet our needs and help us progress. But only within this paradigm. Otherwise, the world will enroll in a disciplined way and will march on the path of failure.

The New European Bauhaus (European Commission, 2021), a creative and interdisciplinary initiative, convening a space of encounter to design future ways of living, as an approach located at the intersection between science, art, technology, culture and imagination can be an effective response to the present and, especially, future challenges, laying the foundation for building a more sustainable, inclusive and beautiful world.

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