

# FEELING THE PULSE OF TRADE IN THE AGE OF CORONA: ARTIFICIAL INTELLIGENCE AND E-COMMERCE

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## *Abstract*

*COVID-19 directly has had a negative economic impact on the supply chain, demand, financial markets, investment, production, and international trade, whose consequences could change the geopolitical position of countries in the world. Quarantine policy which has been associated with changing the working pattern and consumption of users, although it has harmed some economic sectors, has been able to save countries from the risk of complete closure with ICT capacities. This article attempts to provide an overview of the effects of the Coronavirus epidemic on the global economy, especially the world's major economies and countries most affected by the crisis, in general, possible development scenarios, and how the epidemic will affect society and examine the global economy. Next, by examining statistics and information published from reputable global sources on the current state of the Coronavirus epidemic, the effects of the virus epidemic on important sectors of the global economy, such as financial markets, labor market, energy market, and travel and tourism industry are discussed and reviewed. Finally, in order to identify the various economic strategies for managing the effects of this crisis, the economic policies of different countries in the face of the coronavirus epidemic were briefly reviewed.*

**Keywords:** Coronavirus; Economy; Business; Information technology; Marketing strategy.

## **1. Introduction**

The year 2020 will be remembered as the year of the COVID-19 pandemic, the first time that nearly any country on the globe was forced to briefly confine individuals, close businesses, and control human activity to reduce physical encounters (Chen et al., 2021; Craven et al., 2020; Zhang, et al., 2020a; Xu et al., 2020). The COVID-19 pandemic, a massive and unexpected phenomenon, proved to be a significant re-shifting factor in social (Gong et al., 2021) and economic life as we know it, as shown by a changing workforce, demand metamorphosis, supply chain shocks, and resulting shifts in business models. Beginning in January 2020, businesses all over the world had several workers placed on lockout, big supply chain challenges on a wide perspective, even, in some cases, infiltrations to act, that had not yet happened before and in the record (Patnaik et al., 2021; Alfaro & Jeong 2020). Customers'

ostensible physical encounters, as in the hospitality, transport, service providers, music, and entertainment sectors. The key to becoming resilient in such a challenging environment is to adapt five qualities - resolve, resilience, return, reimagination, and reform to four strategic areas - recovering revenue, rebuilding operations, rethinking the organization, and accelerating the adoption of digital solutions - while adapting marketing strategies and reorganizing the organization (Accenture, 2020). Only 15% of CEOs worldwide declared feeling after the first months of the pandemic, which is consistent with declining corporate performance in the first quarter of 2020 and a severe negative impact on the global economy (Afshar Jahanshahi et al., 2018). One of the ways to deal with these issues is to be more agile. Models with a consumer theme; However, adopting more competitive and cost-effective production methods, as well as more efficient and cost-effective supply chains, remains the first step in recovering sales before and after the pandemic (Taherinia et al., 2021). The increasing development of information and communication technology has created a wide impact on business processes (Eizi et al., 2013). The world economy took shortness of breath with the coronavirus outbreak. According to the Wall Street Journal on March 1, 2020, the coronavirus is different, and almost no company is safe. Businesses are affected by numerous external invoices. But none had as quickly affected supply and demand in many industries as much as the coronavirus. The supply chain of many major companies in the world has been in trouble and has negatively affected businesses (Bartsch et al., 2020).

Looking at the world's English-language newspapers, it can be said that many businesses around the world have lost their previous market due to the fear of the spread of the coronavirus. It may be said that the tourism industry in the world and educational services that need to be attended, such as free schools, health tourism, HoReCa (Hotel/Restaurant/Cafe) international trade have seen the most damage from Corona. However, some experts around the world believe that online businesses and e-commerce have experienced the least negative impact compared to other industries (Obrenovic et al., 2020; Altman, 2020).

### ***1.2 Coronavirus and the Possibility of a Global Economic Crisis***

Given the widespread impact of corona on the world economy and businesses around the world, there is a possibility of another economic crisis, such as the 2007-2008 financial crisis in the world. This paper, with a general view on definitions and principles of internet marketing and sales and e-commerce, their advantages and disadvantages, seeks to push companies and institutions to use this type of marketing and business. The results of this study indicate that in the competitive era and critical conditions (Cronulla), today this type of marketing and trade as a strategic factor and competitive advantage, has helped most of the companies in sales growth and increasing the share of a domestic and foreign market, and if these companies use this type of technology with the principles outlined in the article, it will be seen a high saving of time and cost as well as improving the status of companies in coronavirus conditions (Boles et al., 2017).

## **2. The Situation of Foreign Technology Businesses During the Coronavirus**

In contrast to the sharp decline in the value of stocks in the petrochemical and industrial sectors, technology companies have experienced a narrower decline in market value at the beginning and with the initial shock of the Corona crisis, and some companies such as Amazon and Netflix have been on the growth path. The corona virus crisis with the closure of factories in China has caused a devastating impact on the production and supply chain of many sectors in different countries around the world. Given China's key role in global supply chains, it can be predicted

that the decline in production in China will soon harm businesses around the world (Brynjolfsson, 2020).

In this regard, the French government has called on companies to reconsider their over-dependence on China regarding raw materials and parts. Supply chain disruptions have also led to problems with smartphone sales. Huawei, as the largest smartphone manufacturer in China and one of the largest in the world, has been directly affected by the problems caused by the spread of the coronavirus (Bailey & Breslin, 2020). The survey of online traffic in different areas also shows that the amount of buying and selling in many industries such as sports equipment, home appliances, luxury goods, and tourism has decreased and as a result, the reduction of online banking and insurance transactions has also caused. In contrast, the volume of an online supermarket and retail purchases has increased along with the amount of supply and demand for media and communication services in many regions of the world (Stiglitz, 2014). Amazon, for example, has announced that it is hiring 100,000 recruits in the U.S. alone. The company's employee wages are also set to increase in Europe and the rest of the world. In this regard, online food sales and daily food delivery programs have been growing in China. According to Carrefour Retail, vegetable delivery has grown by 600% compared to last year. The recovery of profits from the COVID-19 pandemic must be focused on reconstruction activities. It's also a must when contemplating modern supply chains, SKUs that are more reliable and cost-effective, and production methods (Liang & Cheah 2020).

Long-distance overseas manufacturers are supported by supply chain, who are hampered in their home countries by different constraints or are reliant on a difficult international shipping sector (Verma & Gustafsson 2020). The COVID- the series, as well as the timing and size of disturbance propagation (i.e., the ripple effect). As a result, firms are increasingly modifying their supply chains through considerations such as localization, complexity elimination, and dual procurement. Use of artificial intelligence (AI) and big data for more efficient supply chain platforms; inclusion of tax optimization into the existing financial analysis; use of the cost-to-serve predictor as the foundational efficiency metric; modeling scenarios are all necessary new methods for the effective reconstruction of operations before and after the COVID-19 pandemic (Shakirov, 2016; Dore et al., 2020).

#### **4. Rethinking the Organization**

Lessons gained from businesses operating in a COVID-19-affected economy from March to August 2020, show disparities dictated first and foremost by their workers' ability to operate remotely or not. Businesses, where remote work was not available on a broad scale, reported considerably higher job losses and anticipated sales reductions (Bazgosha et al., 2012). During the first three months of the pandemic, half of the American workforce turned to remote working, while 41% of Canadian workers became ideal for remote working. As a result of this evolution, new work and operational techniques have emerged, some of which have proven to be successful and therefore can be maintained in the future.

Managers in remote teams, on the other hand, have discovered a host of difficulties in coordinating workers who work from home, including coordination problems, the fear of 24/7 reporting and burnout, a lack of personal contact, isolation, and poor health behaviors (. Zhang et al., 2020b; Hakkak et al., 2014; Chen et al., 2020; Asadollahi et al., 2011). Job- and relation-oriented leadership action, according to access to the portal is the key-element to favor productive work environment at a distance, so organizational cultures already benefiting from this style of a boss had an advantage during the COVID-19 pandemic. Their research, which was focused on data gathered from employees of financial institutions in Germany in April-

May 2020, showed that in tumultuous times like the current one, both facilitating and managing leadership behavior is critical.

Task-oriented action and giving subordinates control and assistance are examples of unique management approaches. The COVID-19 pandemic showed, more than ever, the importance of preparing businesses to transition from strict preparation to simultaneous improvisation at all levels of the enterprise. As a result, it is not enough to have a good organizational culture to withstand a pandemic; it must also be resilient, which is consistent with previous studies on the importance of having both aligned and adaptive organizational cultures for long-term resilience (Sadeghi et al., 2013; Jahanshahi et al., 2020).

Hiring and promoting resilient and adaptable people who are capable of being calm in difficult and turbulent times; continuous communication by examples of how the organization is adhering to its cultural values by new practices; and leveraging the organizational culture through adopting. The last point is in line with results from a survey of executives from 39 Indian companies, local businesses, and MNC subsidiaries (Fong et al., 2020) which provided evidence on an unprecedented change in corporate cultures towards a shared goal (either the customer or the employee), making it easier for managers to communicate and take swift decisions and individuals and third parties from the corporate community were impacted the most as the situation was at its worst (vendors, partners, etc.).

Such an approach could, in an ideal world, be the direct result of a form of social value formation triggered by the pandemic's context by Ratten, which is evident at the legislative, organizational, and individual levels.

#### **4. Accelerating Digitalization**

The definition of resilience is not new, but its application in the context of the COVID-19 pandemic has some unique characteristics. The rapid acceleration of digitalization is one of them, even for companies that were not tech-savvy before the pandemic. Many companies' key response to the pandemic was to quickly implement digital solutions, which paid off because they were able to quickly transition from physical to remote working while being as effective as possible under the circumstances. As a result, most businesses are accelerating their digital transformation, according to Statista's survey of international digital decision-makers (Gallacher & Hossain, 2020). As a result, considering the challenges posed by the COVID-19 pandemic, companies are interested in improving employee digital experiences, as reported by 52 percent of Chief Information Officers (CIOs) worldwide surveyed by Statista, which is expected to be reflected in an increase in investments in digital products and solutions of about 10.4 percent in 2020.

Digitalization, described as "the development of new business models and processes that take advantage of digital opportunities", is more than just using digital tools. Based on their prior experience and orientation toward innovation and technology, some businesses were only forced to implement digital solutions during the pandemic. Around the same time, other businesses that had already succeeded in their digitalization showed that they were prepared to deal with the COVID-19s new way of doing business (Kantar, 2020). The effect of the COVID-19 pandemic on digitalization adoption is expected to result in a revival of old e-commerce models, as well as a major increase in digital collaboration platforms, remote job arrangements, digitization of customer care, the transition to e-commerce, greater use of self-service, digital networks allowing contactless distribution options, use of online and on-demand platforms, and outsourced IT are some of the digital trends posed by the COVID-19 pandemic that are considered future realities (MKOR, 2020).

## 5. Coronavirus Develops AI-based Services

Studies by the ICT Research Institute also show that the development of services based on new technologies such as AI chat robots, robots, anti-fever glasses, and disinfectant drones, and care and remote medicine are also the consequences of the Coronavirus crisis in technology businesses (Moezzi et al., 2012; Hakkak et al., 2013; Jahanshahi et al., 2019; Khaksar et al., 2010a). Relying on the development of these services and businesses, China's ICT sector, which declined by 10 percent at the beginning of 2020, is projected to grow by 5.5 percent at the end of 2020 (PwC, 2020a). Alibaba Trading, for example, has entered one of the largest e-commerce platforms in China relying on its communication and information infrastructure in the field of health care. The company has launched drug delivery services for people who need medication to treat chronic diseases. Alibaba Trading, for example, has entered one of the largest e-commerce platforms in China relying on its communication and information infrastructure in the field of health care. The company has launched drug delivery services for people who need medication to treat chronic diseases. China's largest search engine, Baidu has also already implemented an online consulting platform for any medical questions and for free (KMPG, 2020). The company has also produced an artificial intelligence model to identify people who do not have protective masks. Three reasons why coronavirus is not disrupting China's economy is as following:

It is estimated that the negative economic impacts of the new coronavirus are limited. The effect on China's economic growth in 2020 is likely to be very low, with only 0.1 percent of its GDP low. China's stock market has fallen in recent days after months of rising, with global markets looking on. There are already concerns about the impact of the disease's pervasiveness on China's economy and the growth of the world economy. Are these concerns true? The coronavirus is expected to infect more people in the second and third weeks of February, causing more deaths, it is estimated that the negative economic impacts of the new coronavirus are limited. The effect on China's economic growth in 2020 is likely to be very low, with only 0.1 percent of its GDP low. China's stock market has fallen in recent days after months of rising, with global markets looking on. There are already concerns about the impact of the disease's pervasiveness on China's economy and the growth of the world economy. Are these concerns true? The coronavirus is expected to infect more people in the second and third weeks of February, causing more deaths, but Chinese authorities and the World Health Organization are expected to bring the virus under control by early April. According to this scenario, it is estimated that the negative economic impacts of the virus are limited. Its effect on China's economic growth in 2020 is likely to be very low, with only 0.1 percent of its GDP low. The impact in the first quarter of 2020 will be huge, perhaps reducing economic growth by one percent on an annual while this decline will be offset by the continuation of the year, and the impact on the world's GDP growth will be even lower. This forecast is reminiscent of the experience of the SARS crisis in 2003. A big decline in China's GDP growth was offset in the second quarter of that year in the following two seasons. While the annual growth rate in 2003 was around some fear that the timing of the new virus will keep many people away from shops, restaurants, and travel spaces at the start of a week-long Chinese New Year celebration and school closures, worsening economic conditions. Figure 1, shows COVID-19 disease phases around the world taken on 2020. Also, Figure 2 indicates the impact of COVID-19 on Hubei, China released on 2020 (PwC, 2020b).

The crisis created by the Coronavirus is a story with an uncertain ending. It's saddening people's lives, and companies are trying to protect their employees, address business challenges and risks, and also, reducing the prevalence of this disease in any way they can is a serious task. You can also get the latest information about the Coronavirus from the Centers for Disease

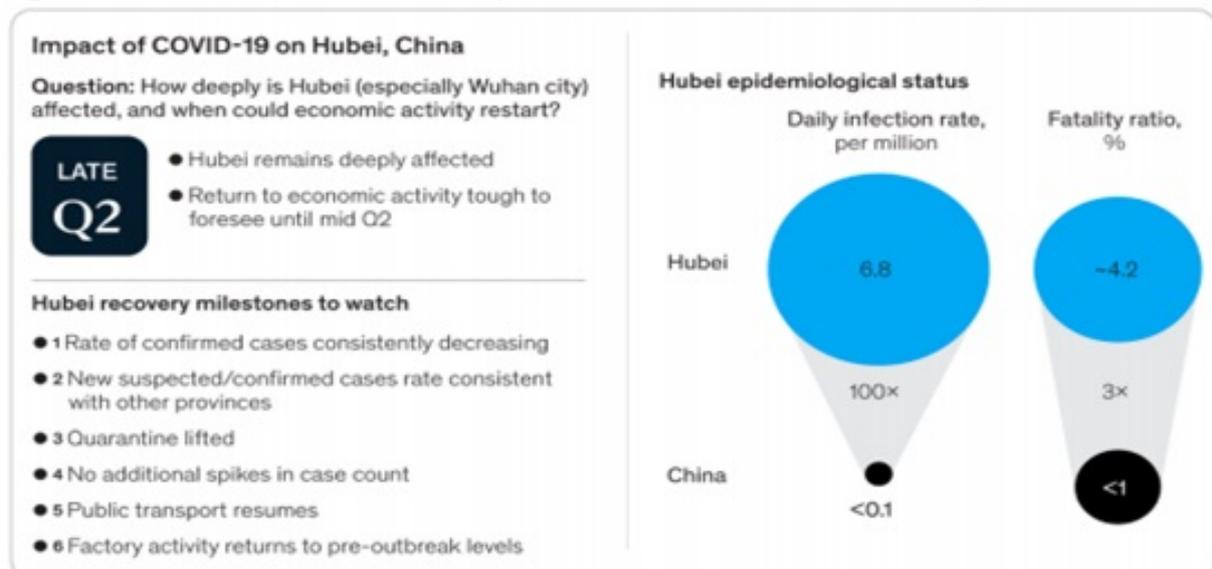
Control and Prevention; such as the European Union, the US Centers for Disease Control and Prevention, the World Health Organization, and the Outbreak Information provided by Johns Hopkins University for updates.

Figure 1 – Critical indicators of the impact of Covid-19 (Feb. 28, 2020). Phases around the world



Source: CNBC; Economist; EgyptAir; International Air Transport Association; Johns Hopkins Center for Systems Science and Engineering; New York Times; OAG.com; Reuters; World Health Organization situation reports

Figure 2 – Critical indicators of the impact of Covid-19 (Feb. 28, 2020). Impact on Hubei



Source: Baidu QianXing; Centers for Disease Control; Columbia University; Economist; EgyptAir; Jakarta Post; Johns Hopkins Center for Systems Science and Engineering; London School of Hygiene & Tropical Medicine; National Bureau of Statistics of China; New York Times; OAG Aviation Worldwide; Organisation for Economic Co-operation Development; Peking University HSBC Business School; Reuters; TomTom Traffic Index; World Health Organization situation reports; Xian Jiaotong University; McKinsey Global Institute

## 6. Three Important Factors Limit the Effect of the Virus

First, unlike the SARS outbreak, China is currently in the age of internet commerce, which means many customers make their purchases online. The decline in in-person purchases to avoid the virus is likely to be offset by an increase in online purchases. Many of the travels that have been canceled today will surely be replaced in the future, as their budgets have been set aside. Many factories had planned their production halt due to the Chinese New Year holidays, so the timing of the outbreak would prevent their unwanted closures. Many government centers and schools are also on vacation, which has nothing to do with the outbreak.

Second, all reports suggest that the new coronavirus is not as deadly as SARS, even if it is transmitted faster. Chinese authorities are equally faster at controlling the virus than at the time of the SARS outbreak. Authorities have increased the chances of faster containment of the disease by taking drastic measures to quarantine real and potential patients. The decline in economic production in these three months will also be offset by increased activity in the continuation of the year.

Third, we do not know if China's trade negotiators knew about the deterioration of the new virus when the first phase of the trade deal with the United States was signed on January 15, but in any case, the timing of the deal was in China's favor. As imports of face masks and medical supplies from the U.S. and other regions increase, China can simultaneously deal with the crisis and keep its promise to import more.

## 7. The Best Sales and Strategy in Times of Crisis and Coronavirus

Let's explore a business together. Suppose you own a supermarket and your customers are minimized due to the spread of the coronavirus. In such a situation, you definitely do not have the necessary infrastructure to sell food online, or you may not even have the necessary knowledge, but you can leave a free courier for your neighborhood customers so that they can register their order without leaving home. Receive at home. Keep in mind that this can initially increase your costs and those of your business, but the payback period is very short and your costs may be reimbursed within a week.

### 7.1 *What Strategies Should We Use in Times of Virus Crisis?*

Just as we have a crisis in life, we are not immune to a crisis in business. As a business owner, if you have the ability to manage the crisis caused by the COVID-19 virus, you can easily make your business a success. The existence of business is basically tied to natural and unnatural crises. It is safe to say that businesses experience a variety of crises throughout their life cycle; Crises such as running out of liquidity, loss of technical team, cancellation of contracts, non-fulfillment of investor promises, and more.

Now, despite the corona crisis in business and the involvement of the general, business managers must pay attention to the fact that they can provide their services to better services for all people in the community (Nawaser, 2015). We all know that commuting these days can increase the number of carriers of the disease in addition to high stress, so the first solution you need to implement in your business is to provide your services online or by phone. In a way that the need for the presence of customers and audiences is kept to a minimum (McGinn, 2020).

### 7.2 *Avoid Making Thoughtless Decisions*

One of the problems that many start-ups often experience is the excitement of making decisions and the haste in making thoughtless decisions. As someone who has a direct impact

on your business, you should be aware that immediate decisions can ruin your business in a short period of time (Gharleghi et al., 2018; Khaksar et al., 2010b; Hakkak et al., 2016). But with the knowledge and understanding of the existing conditions of this disease, it can save you from fast and thoughtless thoughts and consequently immediate wrong decisions, and instead replace it with thinking, understanding, and commitment to solving the problem. Commitment comes first in life, and leaders who make calm decisions in crisis situations usually have strong crisis management and can be better managers for businesses because they are able to think before they get excited. Make a deeper understanding of the crisis ahead and make a wiser and more principled decision (Prasad et al., 2020; Jahanshahi et al., 2011; Hashemzadeh et al., 2011).

Now the move could be to equip your business, or train your troops, or change your product line, or maybe take the opportunity to advertise and work on your business branding. This move can make your business faster. Engrave as a leading and successful business in the minds of the audience. In fact, I mean this faster move, in a way, it can be a better and more principled decision in how to provide services, or it can be related to the right strategy in relation to other customers. This will help you to overcome the corona crisis in business safely.

## 8. Marketing Response

The global impact of the COVID-19 pandemics has been profound. The need for protection, as well as the lockdown time enforced in many counties, compelled them to shop online (Shen et al., 2020). During the lockdown, it was teenagers one of the first to aspire toward online shopping. In the short term, this move will result in increased online competition, more nuanced online marketing strategies, and more differentiation between online sellers. The online experience may become even more important in terms of establishing choice and loyalty. There is no time for extensive consumer surveys and the preparation, treatment, and connection of new offers (both online but also touch-free where offline relationships are operating). It's probably more necessary than ever to build relationships with them when attending to their special needs and demonstrating empathy (Papanikolaou et al., 2020; Khaksar et al., 2011).

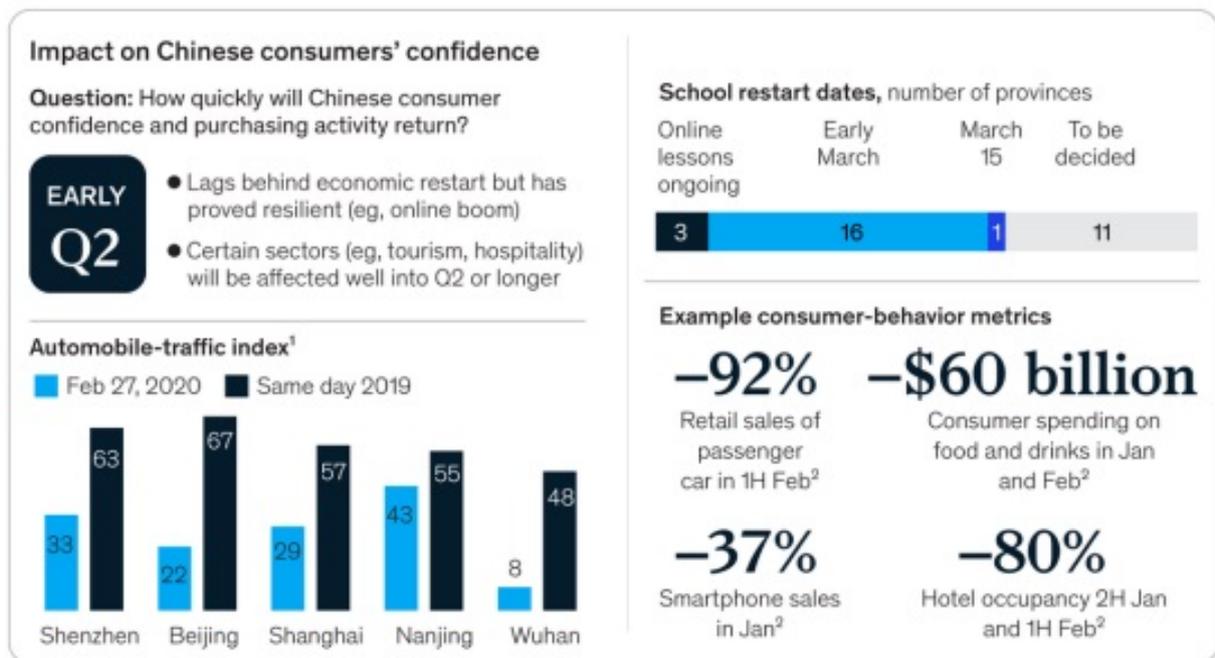
The pandemic has given consumers the ability and time to reflect on the basic sense of consumption and the effect of their consumption not only on themselves but also on others, culture, as well as the environment, not least for the short term. Before the pandemic, customers in the developed world took it for granted that their basic needs, such as food and shelter, could be met quickly thanks to the wide range of goods and services available. During the COVID-19 pandemic, consumers' attitudes shifted toward purchasing more essentials, indicating that they were more cautious. Customers tend to cut needless costs in difficult times like pandemics, which is understandable given declining incomes and increased uncertainties. Marketers should also keep in mind that during the pandemic, all in-home media consumption increased. The activity with the biggest increase during the lockdown at least was culture, news, and hobbies. New brands were trusted by 50% of customers. Online shopping, conscientious consumption, fitness literacy, and local shopping are only a few of the market trends that have intensified. Many of the newly acquired purchase habits are likely to persist after the pandemic: contactless payment, in-app purchasing, home delivery, social media shopping, chatbot, virtual consultation, etc. The pandemic COVID-19 gives companies a tremendous opportunity to change towards more genuine and genuine Corporate Social Responsibility (CSR) and help solve the global challenges of society and the environment.

## 9. Future Discussion

In the first seven months of the 2020 pandemic, it was provided literature evidence regarding the effect of the COVID-19 pandemic on the industry. There are limitations due to the semi-structured approach to reporting, but the factors found to rely on a framework of the most critical elements that determine interpretation responses after the pandemic crisis.

Agile resilience, companies have to work in five main areas today: sales recovery, industry redefinition, organizational rethink, digitalization acceleration, and marketing strategies adaptation. So much emphasis should be placed on evaluating the effect on COVID-19 in future comments about development, performance, teamwork (even from a distance), and cooperation. Current research has suggested also that social contract as a consequence of the collective meaning decided by the pandemic has become an aim for organizations and governments. But it is anticipated that the revision of self-reporting and corporate goals would re-emphasize the norm at medium and long-term in challenging and prolonged times of economic slowdown and intensified competition. Figure 3 represents the COVID-19 impact on Chinese consumer's confidence.

Figure 3 – COVID-19 impact on Chinese consumer's confidence



Source: CNBC; Economist; EgyptAir; International Air Transport Association; Johns Hopkins Center for Systems Science and Engineering; OAG.com; Reuters; World Health Organization situation reports

## 10. Conclusion

Despite the new restrictions imposed in many countries around the world affected by the second wave of coronavirus outbreaks, the rate of decline in the volume of the world economy and next year's economic growth rate is lower than the figures announced in its September report. Its forecasts show that one-third of China's world economic growth will originate next year, but economic growth in the European Union and the United States will be lower than their contribution to the global economy.

The Organization for Economic Co-ordination and Development noted in its report that given the difficulties of vaccinating the entire world population, the ambiguity about how long

the vaccine will take effect, and the possibility of continuing some restrictions on controlling the spread of the virus; “the future of the world economy is still very vague”.

Despite the injection of significant economic incentives and hopes of reviving the world economy next year, one must accept the fact that the Coronavirus crisis has damaged the economic fabric of many countries. Future discussions should focus more on measuring the impact of COVID-19 on innovation, efficiency, teamwork (even if at distance), and on collaboration. Current researches suggest an orientation towards common good as a purpose of brands and organizations as a result of the collective sense determined by the pandemic, but it is to be surveyed on the medium and long term in difficult and prolonged times marked by economic slowdowns and increased competition, refocus on the self and organizational objectives could be expected to re become the norm.

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