THE IMPACT OF COVID-19 ON FRANCE'S ECONOMY WITH AN OVERVIEW ON THE EUROPEAN ECONOMY*

Covid-19'un Fransa Ekonomisine Etkisi ve Avrupa Ekonomisi Üzerine Bir Değerlendirme

Dilara SÜLÜN*

Abstract

Keywords: Covid-19, International Economics, International Trade, Theory of Supply and Demand Shocks, France,

JEL Codes:

European Union.

E20, F02, F13.

Anahtar Kelimeler:

Covid-19, Uluslararası İktisat. Uluslararası Ticaret, Arz ve Talep Şokları Teorisi, Fransa, Avrupa Birliği.

JEL Kodları: E20, F02, F13. The coronavirus infection (COVID-19) occurred towards the end of 2019 and started spreading around the world in a short time with an immense impact on public health. However, it also affected global economy. This paper explores the economic impact of Covid-19 in France which is one of the countries most affected in Europe. We will first analyse the theoretical framework based on 'demand and supply side shock'. We will then expose the economic impacts of Covid-19 on the French market, by evaluating the shocks on the demand and supply sides. The methodology of the study would consist of French governmental, Central Banks' and international economic and financial data, including economic reports statistics, and forecasts of prominent international economic organizations as well as other relevant reports and data from the economic and financial literature. This paper is incorporated by extensive primary and secondary resources. Additionally, this article analyses the effects of Covid-19 on European countries. Within this prospect, European Union support measures and financial assistance is also covered as an extension to our research. Our findings cover economic projections for both France and the European Union and shows that economy cannot reach its prepandemic levels before 2022.

Özet

Koronavirüs enfeksiyonu (COVID-19) 2019'un sonlarına doğru ortaya çıkıp kısa sürede dünya geneline yayılmaya başlamış ve halk sağlığı üzerinde ciddi etkileri olmuştur. Bununla birlikte, Covid-19 küresel ekonomiyi de etkilemiştir. Bu makale, Avrupa'da en çok etkilenen ülkelerden biri olan Fransa'daki Covid-19'un ekonomik etkilerini araştırmaktadır. Öncelikle 'talep ve arza dayalı şokların' teorik çerçevesi ele alınacaktır. Ardından talep ve arza dayalı şoklar değerlendirilerek Covid-19'un Fransa pazarı üzerindeki ekonomik etkileri ortaya çıkarılacaktır. Çalışmanın metodolojisi, önde gelen uluslararası iktisadi kuruluşların ekonomik raporları, istatistikleri ve öngörüleri dahil olmak üzere Fransız hükümeti, Merkez Bankaları ve uluslararası ekonomik ve finansal literatürden elde edilen verilerden oluşmaktadır. Bu makale birincil ve ikincil kaynakları kapsamlı bir şekilde içermektedir. Ayrıca, çalışmamız Covid-19'un Avrupa ülkeleri üzerindeki etkileri de incelemektedir. Bu çerçevede, Avrupa Birliği'nin üye devletlere açıklamış olduğu destek önlemleri ve mali yardım programları da araştırmamızın bir uzantısı olarak ele alınmıştır. Bulgularımız hem Fransa hem de Avrupa Birliği için ekonomik öngörüler içermekte olup, 2022 yılından önce ekonominin pandemi öncesindeki seviyelere ulaşamayacağını göstermektedir.

Makale Geliş Tarihi (Received Date): 14.10.2020 Makale Kabul Tarihi (Accepted Date): 10.12.2020

^{*} This article is an extended article based on the presentation entitled 'The Economic Effects of Covid-19: The Case of France', at the e-ICOAEF VII: International Conference on Applied Economics and Finance & Extended with Social Sciences on August 21st, 2020. The article is prepared in line with research and publication ethics and doesn't necessitate any authorisation from 'Ethic Councils' or any other legal or special approval.

Assist. Prof. Dr., İzmir Demokrasi University, Faculty of Economic and Administrative Sciences, International Relations, dilara.sulun@idu.edu.tr, ORCID: 0000-0001-8874-5194

1. Introduction

Following the coronavirus pandemic, global economy shrank by 3% within three months, billionaires' number increased by 9% thus wealthier people's fortunes reached 74 trillion Dollars within one year (Çongar, 2020). German Organization fighting with hunger Welthungerhilfe announced that coronavirus could deepen hunger problems worldwide. According to the president of Welthungerhilfe, Marlehn Thieme, around 800 million people struggled with hunger in 2019 and the number is expected to reach one billion in 2020. According to the 'United Nations Special Rapporteur' on the Right to Food, Olivier De Schutter, the coronavirus crisis brought more than 250 million people close to starvation and the crisis made impossible to reach the 2030 target for ending global poverty. According to a joint research of the 'United Nations International Children's Emergency Fund' (UNICEF) and Save the Children, Covid-19 epidemic pushed 86 million more children into poverty, rising this rate by 15% (Pandemi Yüzünden Bir Milyar İnsan, 2020).

What is the impact of Covid-19 on the French economy? This paper covers the economic challenges that France is facing since the outbreak of the coronavirus and the lockdown measures taken by the French government by mid-March 2020. Recession in France decreased the production and a global slowdown both in demand and supply occurred worldwide. According to the European Center for Disease Prevention and Control (ECDPC), France recorded 634.763 cases of Covid-19 as of October 8th, 2020 and had 32.365 mortalities due to COVID-19. Concerns and fears increased regarding unemployment and businesses collapses in general. The first section of our article frames the theoretical part of our study explaining 'demand and supply shocks' in national and global economies and includes the literature review. The second section is dedicated to the evaluation of the French economy, the third and fourth sections cover the demand and supply side effects of Covid-19 both in France and the European Union. Our final section explores the policies and financial assistance measures taken by France and the EU.

2. Theoretical Framework and Literature Review

2.1. Supply and Demand Shock Theories

Economic researchers tend to analyze factors that disturb markets by dividing 'demand shock' and 'supply shock'. When the demand for goods and services rises due to an increase in the purchasing power (for example when there is an increase of salaries, decrease of taxes, fall of prices, etc.) this effect is called 'positive demand shock', and when the demand for goods and services decreases under the effect of adverse factors, we can talk about a 'negative demand shock'. For instance, when the supply of goods and services expands due to an improvement of production capacities of enterprises, we can talk about a 'positive supply shock', and inversely we call a 'negative supply shock' when companies reduce their output or when they collapse. We can formulate this definition as follows: a 'positive demand shock' occurs when there is an unexpected and high growth in demand, a 'negative demand shock' is to the contrary, a diminution of demand. Prices of goods and services are affected in the two situations (Barone, 2020). A 'positive supply shock' leads to a growth in the production which diminish prices, where a 'negative supply shock' reduces the production and thus rise prices. Usually unforeseen and unanticipated events cause 'supply shocks', by reducing the production or disturbing supply

chains (Tarver, 2019) just like to current health crisis that the world is facing with Covid-19. In the theory of economic shocks, both 'demand and supply shocks' are shapes of economics shocks, which reflect important changes in macroeconomic indicators that can be seen in inflation, consumption and unemployment. Usually we cannot anticipate shocks because of their unpredictable nature. Overall, we can say that economic shocks are the principle reason of economic recessions (Chappelow, 2019).

What about the Covid-19 crisis and its effects? Let us have a look now to the negative supply shock produced by Covid-19 both in France and Europe. Its effects have been national and international indeed. On the national level, the French lockdown initiated on March 17th, 2020 leading to the closing of many activities judged as non-essential. On the international level, supply chains of many companies have been affected by the slowdown in Chinese economic activities. When we look at the negative demand shock, we can clearly see that Covid-19 crisis caused a negative demand shock on national level by decreasing consumption in products and services and on international level by decreasing consumption of international clients who stopped buying French and European products. Figure 1 demonstrates a 'negative supply shock'; where the 'aggregate supply curve' moves towards left, which will in turn reduce the production and increase prices.

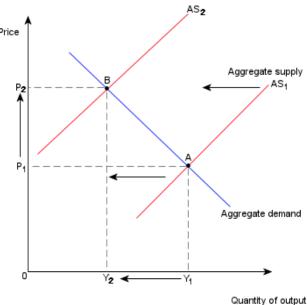


Figure 1. Negative Supply Shock

Source: https://image.slidesharecdn.com/70scrisis-12556432353331-phpapp03/95/70s-crisis-9-728.jpg?cb=1255625626

2.2. The Impact of Covid-19 on Aggregate Demand and Supply

In a supply shock, the global production decreases because of the sudden reduction or stop in factories, which will disturb supply chains and push the global supply curve to the left as we can see from the figure 2. In conclusion, price will increase (Global Macro Monitor, 2020).

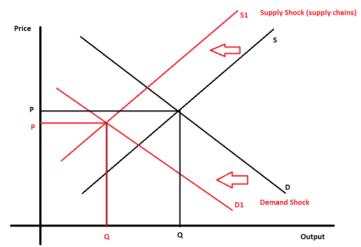


Figure 2. Potential Short-Term Impact of Coronavirus in Global Economy Source: https://custerconsulting.com/the-supply-demand-shock-of-the-coronavirus/

According to the Organisation for Economic Co-operation and Development (OECD) March 2020 Interim Report, world economy would suffer from a negative supply shock due to the Covid-19 epidemic, because production facilities would close and supply chains would be disturbed (Organisation for Economic Co-operation and Development [OECD], 2020a). The questions are how deep and how long would this supply disturbance be and how would the aggregate demand be affected? In fact, many researchers indicated that Covid-19 created both 'demand and supply shocks' (Charles, Dallery and Marie, 2020).

With the case of Covid-19, the problem did not occur with only negative demand shock, many problems occurred indeed on the supply side due to the interruption in the supply chains because of travel and transportation restrictions. However, at the beginning of the economic stagnation, economists tended to explain the situation as a lack in the demand and therefore the question of how to stimulate the demand was on the focus. But policies to stimulate the demand cannot solve negative supply shock problems such as the reduction of the economic activities, fall in the production, rise of unemployment and shortages of products which would rise inflation. 'Containment policies' that reduce production and 'stimulus policies' that preserve consumption would cause supply-based issues: inflation would rise due to lower production and higher consumption. For this reason, reducing production through containment policies and expanding consumption through stimulus instruments may lead to higher inflation (Baldwin, 2020). However, even when a lack of supply causes a recession, demand would also be affected which may intensify the recession. A negative supply shock affecting many sectors may have "Keynesian effects" which means job losses and insufficient global demand can extend the first impact and worsen the recession (Guerrieri, Lorenzoni, Straub and Werning, 2020, p. 1). For instance, if companies reduce their production or collapse, they will also reduce business opportunities where they get their supplies, and if unemployment rises, households will reduce their spending and start saving. In economic shocks, researchers analyse both tendency of economic activities and prices. If prices tend to rise during a recession, it is because companies have profitability problems and thus, they increase their prices to gain profitability. However, if prices are tending to fall during a recession, this is mainly because companies have difficulties in selling, thus they reduce their prices to stimulate demand and flow out their stocks. In other words, an acceleration of the inflation would mean that recession is essentially due to a supply

side problem, where disinflation would mean that recession is essentially due to an insufficient global demand (Anota, 2020).

The relation between production and inflation expose that in the Euro area countries, business cycle is mainly based on the demand (Andrle, Bruha and Solmaz, 2013, p. 3). When a financial crisis leads to an economic recession, it is mainly because it decreases the global demand. Given historical evidence, financial crises are mostly a negative shock to demand (Benguria and Taylor, 2019, pp. 1-3).

According to Balleer, Link, Menkhoff and Zorn (2020, p. 1), both demand and supply are affected during the epidemic, but production is mainly affected by the insufficiency in global demand. Therefore, lockdown measures are not sufficient to bring economic activities back to normal as companies' supplies risk to be constrained by the demand. However, stimulating policies and packages to increase demand are fully justified in pandemic crises even though the economic relaunch would be less effective compared to a normal recession Baqaee and Farhi explain in their research that negative sectoral supply shocks are 'stagflationary', whereas negative sectoral demand shocks are deflationary. Their study analyses the quantitative model of the U.S.A., their finding is that supply and demand shocks each explain around half the reduction in real GDP and that aggregate demand stimulus is very lowly effective, it is less than half as effective as in a usual stagnation where all labour markets are slow (Baqaee and Farhi, 2020, pp. 1-5).

Brinca, Duarte and Faria-e-Castro (2020, p. 11) also assessed supply shocks on sectors and the labour demand within the Covid-19 pandemic. Their findings indicate that the majority of sectors were based on wide negative demand and supply shocks in labour, especially the 'leisure and hospitality' sector, both in March 2020 and April 2020, however the extent of shocks differ between sectors. Negative labour supply shocks contributed to the drop in the working hours which differed from some sector that have been able to apply remote working. Del Rio-Chanona Mealy, Pichler, Lafond and Farmer (2020, p. 1) provided economic forecasts regarding supply and demand shocks in the scope of Covid-19 for the U.S.A. Their findings suggest that the sector of transport may face demand shocks which would limit their production; however there would be supply shocks in other sectors such as mining, manufacturing and services while tourism, restaurants and entertainment sectors would undergo both supply and demand shocks of big scale.

Baldwin and Tomiura (2020, p. 66) assess Covid-19 both as a 'demand and supply shock'. Both situations would affect foreign trade. They try to show trade impacts based on history. The first statement is that previous post-war pandemics did not have such a big impact in economically advanced countries. However, Covid-19 affected many important economies, it is spreading physically and economically too. Fornaro and Wolf (2020, p. 1) provide a model to comprehend the macroeconomic consequences of Covid-19. They suggest that the virus may lead a demand-based decline, and increase the supply-demand vicious circle, and consequently cause recession. However, investment support policies may inverse the supply-demand vicious circle and pull the economy out of recession.

With the outbreak of the pandemic, it is worth underlying that an important short-term 'panic buying' occurred world -wide especially on food supply chains. There has been indeed a profound demand-based shock in food supply chains, such as 'panic buying' and changes in the purchase of food, and supply-based interruptions because of disturbances in labour, in

transportation and supply networks. Many countries had to face demand-based shocks. In the beginning of the Covid-19, nearly all supermarket shelves were out of basic aliments such as canned and frozen food, rice, pasta, flour, and of other goods such as soaps, sanitizers, and toilet paper. Apart food shortages, we can also name other supply-side disturbances such as labour shortages, disturbances in transportation networks, and the closing of the borders to stop the free movement of goods (Hobbs, 2020).

What are the effects of Covid-19 on French and European economies? How severe are the impacts and how long would they last? What are the French and European support plans? We will explore these issues in the third and fourth sections of our article. What did the French government do, to counter the negative effects of the pandemic? France introduced partial unemployment measures to sustain a certain level of the revenues of French people, which maintained 84% of their net salaries and avoided a strong collapse in demand (Deubel, 2020, pp. 1-2). We will explore in more detail all the measures taken by the French government and by the European Union against Covid-19 in the fifth section of our study. Before that, we will have a look now to the French economy.

3. French Economy

According to the World Bank and International Monetary Fund (IMF) data (International Monetary Fund [IMF], 2020), France is the world's sixth biggest economy in 2020 with its Gross Domestic Product (GDP) of 2,771 trillion U.S.A. Dollars, ranking after the U.S.A., China, Japan, Germany, and India. In Europe, France is the second largest economy after Germany. Services and industry form the biggest part of the French economy. Indeed 70% of the French GDP comes from services. Another important contribution to the economy comes from the manufacturing, France is in fact among the global leaders in the 'automotive, aerospace and railway' sectors as well as in 'cosmetics, pharmaceuticals, and luxury goods' (Focus Economics, 2020).

3.1. France's Foreign Trade Partners

According to the French National Institute of Statistics and Economic Researches (INSEE), France's top ten export partners are 'Germany, USA, Italy, Spain, Belgium, United Kingdom (UK), China, Switzerland, Netherlands, and Poland' (National Institute of Statistics and Economic Researches [INSEE], 2020). 59% of French exports in products go to the European Union. The figures in table 1 reflect the trade of goods in billion Euros.

Table 1. France's Main Export and Import Partners in 2019 (billion Euros)

Country	Exports	Imports
Germany	69,8	84,9
United States	42,1	38,1
Italy	37,5	43,3
Spain	37,2	37,0
Belgium	34,2	38,1
United Kingdom	33,6	21,1
China*	20,9	52,5
Switzerland	17,8	14,5
Netherlands	17,5	25,3
Poland	10,2	11,8

Source: (INSEE, 2020). * Excluding Hong-Kong

3.2. France's Main Sectors in Foreign Trade

Based on the 2020 annual report of the Directorate General of French Treasury, France had a positive trade balance in 2019, especially due to exports in aeronautical, chemistry and pharmaceuticals. However, the energy sector recorded a deficit of 45 billion Euros. In 2019, France exported goods amounted 508 billion Euros and its exports in services equaled to 251 billion Euros. Its import of goods were 567 billion Euros in goods and 229 billion Euros in services. French trade deficit in goods reached 59 billion Euros whereas services presented a trade surplus of 21,8 billion Euros. The overall trade deficit remains high however aeronautics and aerospace, chemistry and pharmaceuticals sectors and luxury goods had high export levels. Besides the energy sector, electronics and textile sectors also recorded a trade deficit while the automotive sector is also in deficit since 200. Table 2 shows the figures of the French foreign trade surplus and deficits.

Table 2. Main Sectors in Trade Surplus and Trade Deficits in France in 2019

Sectors	Value (billion Euros)	
Aeronautical and Aerospatiale	31	
Chemistry, Perfumes, Cosmetics	15	
Agrofood	8	
Pharmaceuticals	6	
Textile, Leather	-12	
Automotive	-15	
Electronics	-17	
Energy	-45	

Source: Vie-Publique (2020).

3.3. French Primary Export Items

In table 3, we can see the primary export items of France in 2019 and their percentage in the total French exports. French top ten export sectors represented 62.3% of the total French shipments' values.

Table 3. French Top Ten Export Items in 2019 (billion Dollars)

Export Items	Percentage of Total Exports	
Machinery including computers	12.1	
Aircraft, spacecraft	9.6	
Vehicles	9.5	
Electrical machinery, equipment	7.8	
Pharmaceuticals	6.4	
Plastics, plastic articles	3.8	
Perfumes, cosmetics	3.6	
Beverages, spirits, vinegar	3.5	
Optical, technical, medical apparatus	3.2	
Mineral fuels including oil	2.8	

Source: (Workman, 2020a).

3.4. French Main Import Items

Table 4 shows France's main import groups in 2019 with their percentage in total French imports in billion dollars.

Table 4. French Top Ten Import Items in 2019 (billion Dollars)

Import Items	Percentage of Total Exports
Machinery including computers	13.1
Vehicles	11.5
Mineral fuels including oil:	10.3
Electrical machinery, equipment:	8.9
Pharmaceuticals	3.9
Plastics, plastic articles	3.8
Optical, technical, medical apparatus	3.2
Aircraft, spacecraft	3.2
Organic chemicals	2.4
Clothing, accessories (not knit or crochet)	1.9

Source: (Workman, 2020b).

4. Shocks on the Demand Side

4.1. Lockdown and its Effects on the Household Consumptions

On March 17th, 2020, French President Emmanuel Macron announced total lockdown and social distancing measures which lasted around two months and had a direct impact on the French production and consumption. As people could not go to their work, production decreased a lot. A study that Ipsos undertook for the French supermarket Leclerc showed that only 48% of French people shopped every week that rate was 67% before Covid-19. The frequency of the supermarket shopping changed as 29% of the consumers go now shopping 'every 10 days' approximately, to go as less as possible and stock as much as possible. 95% of the participants to the study confirmed that they would pay more attention to the prices of the products and 92% confirmed that they would look at the origin of the products as 45% of them confirmed that they now buy more French products (Leclerc, 2020).

Domestic consumptions in France dropped about one third in April 2020 compared to February 2020, before the Covid-19 pandemic and 20% compared to March 2020, according to the data published by INSEE, this rate dropped by 34,1% in May 2020 (L'Opinion, 2020). Based on the INSEE data, spending on manufactured goods fell more dramatically, a drop around 42% in April 2020 compared to March 2020. The consumption rate dropped by around 66% compared to April 2019. For the last ten years French household consumptions were about 45 and 48 billion Euros by month, they dropped to 30 billion Euros in April and May 2020, which makes the biggest fall in French history.

During the two months of lockdown, French textile and furniture stores faced harsh problems as consumption decreased. According to the Gérald Gautier, secretary of the federal section of the Worker's Forces, 15 to 20% of jobs in these sectors are under threat (Le Monde, 2020). INSEE figures also reflect and confirm the decline in clothing, textile, house furniture and household appliances (Garnier and Prudhomme, 2020). In many European countries, food and agro-industry had been negatively affected by the Covid-19. For example, French farmers wasted 1,500 tonnes of cheese because they could not sell it in Covid-19 restriction times (Coronavirus Leads to Food Industry Crisis, 2020).

4.2. Restaurants and Hotels

Hotels and restaurants in France represent a turnover of 84 billion Euros and the sector employs around 1 million persons. After the lockdown, the damages reached 6 billion Euros in a few weeks. Considering cafés, hotels, restaurants, and clubs all together, economic losses reached 10 billion Euros (Ouest France, 2020). France is the first touristic destination for Chinese tourists; 2,2 million Chinese visited France in 2018 and Paris hosted 52,4% of these visitors. Jean-Pierre Mas; the President of Entreprises du Voyage, mentioned that Chinese tourists spend over 4 billion Euros during their visit in France, which accounts for 7% of consumption in tourism in France. Hotels' turnover decreased following the coronavirus outbreak and at the same time, Chinese restaurants in France also had less clients because of the virus fear (Malou Academy, 2020a). More than 9 journeys out of 10 include accommodation mainly hotels which represent 75.6%. According to Jean-Virgile France, President of the Group of National Hotel Chains, with the spread of Covid-19, 80% of holiday bookings from Chinese tourists were cancelled in January 2020 and 100% were cancelled in February 2020. Jean-Virgile France announced that the financial impact of the virus on hotels and restaurants could reach more than 1 billion Euros and advised more flexible commercial conditions such as free booking cancellations or postponements.

How was the commercial situation of restaurants in France before the Covid-19 virus? In France there are in total 160 000 bars, restaurants, and hotels' restaurants. French restaurants' turnover in 2019 excluding taxes equalled 90 billion Euro and turnover for home delivery for food equalled to 3.3 billion Euros, it increased about 20% compared to 2018. However, the pandemic caused 1.2 billion Euros losses in their turnover per week and a 16% decrease of the turnover in the first trimester of 2020 with -74% in the second half of March 2020 with the lockdown. Three orders are given every three seconds in home delivery, 42% of French people affirmed that they started using online orders for the first time after the lockdown and 20% of them stated they would use it more after this exceptional period (Malou Academy, 2020b). At the global level, the added value of restaurants and accommodation decreased by 47% in April 2020 and at the same time the closing of the non-essential shops dropped trade added value by 43% in April 2020. The most affected countries by the lockdown measures in April were Spain, Italy, and France with a fall in added values around 30 points (Heyer and Timbeau, 2020).

4.3. Tourism: A Prominent Sector in the French Economy and Worldwide

France is the most visited country in the world, tourism is subsequently a key sector in the French economy; it represents around 8% of its GDP and employs around two million persons. According to the 2018 figures, 89 million of tourists visited France (Ministère de l'Economie, des Finances et de la Relance, 2020). However, with the global pandemic and the consequent travel restrictions, the sector has been hit hard. Finance Minister Bruno Le Maire announced that France has seen around 35% fall in tourists following the coronavirus spread (Abigail, 2020). Tourism monthly revenues in France were only 2329 million Euros in June 2020, while it was 7921 million Euros in July 2019. The lowest revenues were registered in April 2020 with 850 million Euros, during the lockdown (Trading Economics, 2020a). French government put 18 billion Euros to support investments in tourism, including 'tax postponements, temporary unemployment, and loans under state guaranty' (Ministère de l'Europe et des Affaires Etrangères, 2020).

26.587 million persons are employed in tourism sectors in Europe which corresponds to 11.17% of EU total employment. From exports perspective, tourism sector represents around 6% of the total EU's exports, accounting to 512.39 billion US Dollars (USD). Thus, tourism accounts for 9.41% of EU's GDP, which is 1724.69 billion USD. 75% of EU's international tourists come from another EU country (except Switzerland). Therefore, tourism industry in the EU can have its negative effects multiplied during the Covid-19, because of its interdependent structure (Islam and Farha, 2020).

'The United Nations Conference on Trade and Development (UNCTAD) Report on Covid-19 and Tourism' assessed the economic consequences of the virus in 65 countries. As of October 13th, 2020, Covid-19 had been transmitted to 37.875.422 persons and caused 1.081.632 mortalities globally (United Nations Conference on Trade and Development [UNCTAD], 2020). The 'United Nations World Tourism Organization' (UNWTO) announced that for the first time 100% of worldwide destinations put restrictions for travelling in the second quarter of 2020. Tourism represented 29% of the global exports in services in 2019 and provided employment to 300 million persons in the world. For many countries, tourism is a major source of employment, government revenues and foreign exchange earnings. According to the report, tourism may return to its pre-pandemic economic level more slowly compared to other sectors, based on the 'World Travel and Tourism Council's (WTTC) estimations, this may take 19 months (World Travel and Tourism Council [WTTC], 2020). UNWTO reported that "tourism has been the worst affected of all major economic sectors" (United Nations World Tourism Organization [UNWTO], 2020). The 'European Parliament Research Service' estimated that tourism industry within the European Union was losing 1 billion Euro per month because of the Covid-19 crisis. Some countries such as France, Spain and Italy have more difficulties as they were major European touristic destinations. Based on 2020 Statista data, over 1.5 million jobs entered in peril in Germany for sectors related to tourism because of Covid-19. The related figures for Italy, Spain, France, and Portugal were 1 million, 0.8 million, 0.8 million and 0.3 million, respectively (Jones and Comfort, 2020, p. 4).

4.4. Purchasing of Durable Consumption Goods in Euro Area

Domestic spending related to consumer durables amounted to 9% of the households' spending in the Euro zone in 2018. Due to the Covid-19 impact, banks put stricter standards for credits in the beginning of 2020, because of the current pandemic. Due to the rigid lockdown measures, consumer credit dynamics dropped significantly in Euro zone countries (Casalis and Krustev, 2020). Individual spending dropped by 4.7% in the first quarter of 2020 in Euro zone countries. Durable products' spending had the biggest drop while the consumption of non-durable goods was also reduced (European Commission, 2020a, p. 20). Covid-19 caused an economic recession and contracted expenditures on durables in 2020, many shops closed under lockdown and households postponed their consumption of big durable goods. However, if the sanitary crisis comes to an end, durable purchases can increase again, but if the crisis persists, the rebound in durable consumption may be less significant.

4.5. Real Estate Operations in France and in European Countries

In April 2020, INSEE estimated the economic loss in the real estate as -35% compared to a normal time. In Germany, according to the latest 'IFO-Institute' business survey conducted in July 2020, German companies do not expect a return to normal business activities before 2021 summer (Philipps, 2020). The impact of Covid-19 on Czech real estate is expected to decrease the construction activities as well because of the drop in foreign labour. This will delay the construction of new offices and buildings. 2020 first quarter data related to the market of real estate in the Czech Republic reflect a decrease of 75% in investment activities. In Slovenia, private investments would mostly be delayed to 2021 because of the reigning incertitude and disturbances in the supply chain. In Slovenia real estate services are among the most affected sectors (European Commission, 2020b).

An econometric assessment was prepared by NATIXIS to evaluate the Covid-19 effects on real estate in Spain, Germany, Italy, and France, with three forms of real estates: 'offices, retail and residential'. According to the study, European offices are expected to have their capital values diminished significantly until December 2021. In the French capital the value of the office market may drop by 10% and the largest Italian and German cities can have their values reduced by 20%. Because of the lockdown, many shops in Europe had to close due to the huge impact on their retail sales. For this reason, French government promoted retail shop owners to abolish their rents for three months for small companies that had to close. Many capital cities would see their real estate values reduced for offices until December 2021. However, residential values are less affected compared to offices; housing prices are forecasted to decrease about 5% in 2020. In conclusion, the forecasted decline in values is '5% for residences, 10 to 20% for offices and 30% for retail real estate' (Natixis, 2020).

4.6. Companies' Re-Organizations and Dismissals in France After Covid-19

Hutchinson, a subsidiary company of French company 'Total', announced in June 2020 its plan for voluntary departure of 1 thousand workers in France (Wakimi, 2020). The group has 80 factories worldwide with 40.000 workers. The plan of the company would affect globally three thousand workers and six thousand temporary workers. Germany based automobile producer BMW announced in June 2020 it would cancel 6000 jobs across Europe, through early retirements, because of the decline of demand due to Covid-19 (Associated Press, 2020). Ways of reducing positions may include settlements with employees who are already near their retirement age, offering partial retirement to some workers and severance pay for those who would leave the company and are over 50 years old. Weekly working hours dropped from 40 to 38 and additional holidays are offered for those who would accept a decrease in their salaries. Air France announced in July 2020 that it would cut off 7.580 jobs, because of the disturbances on the air traffic due to the pandemic. Company plans to save thus 1.221 billion Euros until 2023 (Dutheil, 2020). Renault, which is in alliance with Nissan and Mitsubishi, announced 15.000 job cuts worldwide until 2023, of which 4.600 in France (Béziat, 2020), as part of 2 billion Euros cost-cutting plan because of the Covid-19 pandemic. Renault representatives stated that six plants may be closed, while Nissan representatives said it would close its factory in Barcelona, with 2.800 job losses at Spain. France announced 8 billion Euros recovery plan for car industry and thus help Renault, which is 15% owned by the French state, in exchange,

President Emmanuel Macron had said "Renault should keep workers and production in the country" (Hotten, 2020).

4.7. Public Debts

In 2018, public debt in France represented around 97% of the country's GDP. The French Ministry of Economy has stated that "the French public debt will normally reach 91.4 percent in 2022, compared to 96.8 percent in 2017". The situation of public debts in France is alarming as it is in constant increase since 2005, as we can see from table 5, France is among the most in debt EU countries (Statista, 2020a). French public debts increased 3,1 points since December 2019 and reached 101.2% of its GDP in March 2020, equalling thus 2 trillion 400 billion Euros, which is the highest level since 2009 (Sade, 2020). Based on INSEE report this high increase is due to the economic stagnation and sanitary crisis measures taken because of the Covid-19. British public debt reached its heaviest level for 50 years, surpassing the amount of its entire economy, equalling 1.95 trillion Pounds (Dharshini, 2020).

Table 5. European Countries Governments Public Debts Ratio to Their GDP

•	Debt / GDP Ratio (%) /	Voor (Doorwhan)	
Countries	2020 First Quarter	Year (December)	
Greece	177	2019	
Italy	135	2019	
Portugal	118	2019	
Belgium	98.6	2019	
France	98.1	2019	
South Cyprus Rum Administration	95.5	2019	
Spain	95.5	2019	
Euro Zone	84.1	2019	
United Kingdom*	80.7	2019	
European Union	79.3	2019	
Croatia	73.2	2019	
Austria	70.4	2019	
Hungary	66.3	2019	
Slovenia	66.1	2019	
Germany	59.8	2019	
Finland	59.4	2019	
Ireland	58.8	2019	
Netherlands	48.6	2019	
Slovakia	48	2019	
Poland	46	2019	
Malta	43.1	2019	
Latvia	36.9	2019	
Lithuania	36.3	2019	
Romania	35.2	2019	
Sweden	35.1	2019	
Denmark	33.2	2019	
Turkey**	33.1	2019	
Czech Republic	30.8	2019	
Luxembourg	22.1	2019	
Bulgaria	20.9	2020	
Estonia	8.4	2019	

Source: (Trading Economics, 2020b).

^{*}UK is not an EU member but is listed in the table to show the extend of its debt as a European country ** Turkey is a candidate country to EU membership; it is in the table to show its low debt/GDP ratio in Europe.

5. Impact on the Supply Side

5.1. The Fall in the Production

On the national and domestic level, both France and the EU faced a decrease in their production due to the international travel restrictions, lockdown, and social distance measures. Industrial production decreased by around 18% in April and around 11% in March 2020 in the EU; however, it increased by 9% in June 2020 and by 11.5 in May. The total reduction since February 2020 amounted to 11% (Eurostat, 2020a).

From January to March 2020, industrial production declined by 6%. In the first quarter of 2020, growth in manufacturing was inferior in the Euro area countries compared to the non-Euro countries. The largest drop in the industrial production happened in Italy with 11% as the country was victim of the Covid-19. Among non-EU economies, industrial production was reduced by 6% in the UK especially because of Brexit (United Nations Industrial Development Organization [UNIDO], 2020).

5.2. Unemployment and Business Collapses

Approximately 500.000 jobs had been terminated in France in the first quarter of 2020. This fall is due to the significant decrease in temporary employment (-40.4%) as an effect of the lockdown (Le Parisien, 2020). Based on INSEE data, employment decreased by 2.5% due to the huge fall in temporary works. To compare the situation with the 2008 economic crisis, in France temporary employment had fallen by around 14% in the fourth trimester of 2008 and 13% in the first trimester of 2009. We can thus observe the huge amount of job losses due to the coronavirus in France after the lockdown. The current losses in France concern all sectors but the strongest losses are in the construction (-60,5 %), industry (-40,7 %) and the tertiary sector (-31 %).

From the second trimester of 2020, a high number of business collapses is expected in France, an increase of 21% until the end of 2020 is expected in France according to the French insurance company Coface, which means more than 60.000 enterprises, representing 200.000 direct jobs. According to Coface report published in June 2020, companies' collapses would increase of 21% of companies between the end of 2019 and the end of 2021. The same forecast is valid for Spain that should expect an increase of 22%, and the UK is expected to see an increase of 37% with 36% in the Netherlands. However, Germany would expect a smaller rate of collapses (12%) in this period (Institut de l'Epargne Immobilière et Foncière, 2020).

Looking at the UK, we see that unemployment rose by 220.000 in the second quarter of 2020, which corresponds to the largest quarterly increase since the 2009 stagnation (UK Reports Highest Number, 2020). Looking at the EU in general, unemployment is forecasted to reach 9% in 2020 due to the Covid-19. Greece is likely to be the most affected by unemployment as it is predicted that it would reach around 20% by the end of 2020 and Spain may follow Greece with 19%. Among European countries Germany is likely to be the less affected country regarding unemployment levels (Statista, 2020b).

French Observatory of Economic Conjunctures (OFCE) assessed the effect of the confinement on employment and on GDP for the month of April in 2020 in major economies. Global economy recorded a -19% recession and a huge rise in unemployment in April 2020.

The most affected countries in Europe were 'Spain, France and Italy', due to the confinement measures, the diminution of the GDP has been 35% in Spain, 30% in France and 29% in Italy (Malliet, Reynès, Landa, Hamdi-Cherif and Saussay, 2020, pp. 1-3).

5.3. Disturbances in the Supply Chains

The closure of the borders in Europe and worldwide hit the global trade hard. This affected the global value chains and supply chains as airports shut down, maritime ports also shut down. There has been 80% of fall in the French air traffic during the lockdown (normally 600 flights a day at the Paris Orly airport) and 41% fall of the maritime traffic into French ports: Le Havre, Fos-Marseille (Huynh and Salez, 2020).

Globalisation of trade and economy means a high dependence on international supply chains, especially in the industrial sector. Most of international trade are transactions of intermediate products arising from intra-industrial exchanges on which French and European industries depend. French industrial production is much inter-connected with the EU economies, products often cross several borders which increase added value in each stage of production. More than 20 billion Euros of France's intermediary-products imports come from China, South Korea, and Italy. Therefore, all lockdowns in South-east Asia and north of Italy would have negative effects on the French industrial production. These shocks are likely to increase intermediate products' prices on a special production chain, which generally have very low substitution possibilities at local and international level, impacts of such shocks can last up until three years (Michalski and Ors, 2020). According to the Banque de France, France is more exposed to the lockdown shocks from the EU countries than shocks coming from China and it would be devastating for France to undergo a supply shock, (a decrease of the production) if countries get out of the crisis which would drop France's competitivity (Lisack et al., 2020).

On the other hand, supply chains disturbances in world economy formed 'spill over effects' in various levels of supplier networks. For instance, car companies stopped their operations due to lack of parts. Many sectors went through supply chain disturbances, including luxury goods, such as the Swiss watches, many parts and components were interrupted. The famous toy manufacturer Hasbro had serious difficulties in preserving its market share given that the company outsources around 70% of its products from China and that many factories in China had to close at the peak times of the Covid-19 pandemic. As a result, we can say that the global disturbances in the supply chains increased business costs of manufacturing companies (Fernandes, 2020, pp. 12-13).

5.4. Impact on French and European Exports and Imports

France published its export and import figures of January-June 2020 which reflected the depth of the Covid-19 economic effects. Indeed, the country's exports of products decreased around 21% in comparison to January-June 2019. This fall is even bigger than the record of first half of 2009 following the 2008 economic recession. French commercial deficit also deepened in the second trimester of 2020, it reached 20,4 billion Euros in the second trimester, which is 6,9 billion Euros more compared to the first trimester, with a monthly record in June (Le Monde, 2020). When we look at France's trade deficit, we can see that there has been a deficit of 9 billion USD in August 2020, which was 8.1 billion US Dollars in July 2020. French

exports amounted to 36.5 billion US Dollars in June 2020, which reflects a drop of 22.5% annually, while its imports equalled to 45.4 billion USD in June 2020, indicating a fall of 14.9% annually (CEIC Data, 2020).

Looking at the European Union foreign trade, extra-EU exports of products represented around 155 billion Euros in June 2020, which showed a fall of 9.6% compared with June 2019. EU imported around 134 billion Euros, with a fall of 12.8% in comparison to June 2019. Trade within the EU dropped to 235.4 billion Euros in June 2020, which is 6.4% less in comparison to June 2019. On country-based analysis we can see that between June 2020 and June 2019, Malta, France, and Romania had the biggest fall in their export of goods, with 25.9%, 25.3 and 23.3% respectively. In total 19 EU member states recorded a decrease in their exports, while 8 countries saw their exports increased with Estonia and Slovenia at the top of the list, with 18% and 11.6% respectively. Regarding the EU's imports, 22 member states had seen their imports reduced in June 2020 in comparison to June 2019. The reduction was above 10% in fourteen member states with Malta (-48.7%) and Portugal (-33.5%). at the top of the list (Eurostat, 2020b, pp. 1-4).

6. The Measures Taken in France and at the European Level

France declared in March 2020 'the state of health emergency', and accordingly, the government took various measures related to labour law and social protection. We can analyse these measures in three categories. The first one covers the provisions in "Income Supports", where the French government developed 'partial unemployment' that limited the rise of unemployment. This category includes temporary wage subsidies, unemployment support and sick pay which allowed people affected by the Covid-19 to receive 'replacement income' from health insurance. In addition, people who cannot work from home can ask for 'sick leave' to look after their children younger than 16 years old. This period lasts 21 days but can be prolonged until the closing of schools. The second category includes 'health and safety measures' where employers must provide supply security. Thirdly, remote working was strongly promoted by the Government, with the opportunity for companies to apply different working time and working hours to their employees (Sachs, 2020, pp. 286-290).

What are the support measures taken at the EU level? Firstly, it is important to mention that the EU does not have a supranational authority on issues related to health. Therefore, the European Commission acted in other ways. Economy and border controls have been the first area of measures, concerning health issues, the European Commission tried to cover the prevention of Covid-19 and developed some recovery measures. Later the 'European Central Bank' launched a 'Pandemic Emergency Purchase Programme' (PEPP) worth 750 billion Euro (Eurofound, 2020).

Within this 750 billion Euro package to support European companies and workers, the EU developed a special sub-program entitled 'Support to Mitigate Unemployment Risks in an Emergency (SURE) which covers 100 billion euro for member states. This program is designed to offer financial assistance through favourable loans. The International Labour Organization (ILO) predicts 12 million job losses in Europe for the year of 2020 (Koutsokosta and Gauret, 2020).

7. Conclusion

This paper exposed the negative economic effects of Covid-19 both in France and the EU. Based on the OECD perspectives, France is the third most affected economy in terms of its GDP in the world (OECD, 2020b). According to Villeroy, President of the Banque de France, each month passed in the lockdown costs approximately 3% of the annual French GDP. According to the OFCE, the impact of two months of lockdown is estimated to 120 billion Euros, which means 5% of the annual GDP in minus (Normand, 2020). This level of economic activity loss was only seen in war times, according to the former French Prime Minister Edouard Philippe, France is in its worst recession since 19451. Tourism is among the most affected sector in France and Europe, the sector is not expected to return to its pre-pandemic levels of economic activities before 2022.

The theoretical part of our paper explained the shock effects on demand and supply in economic crises times. It is difficult indeed in periods of crises to re-create supplier networks in the short-term which causes a significant fall of the economic activity. For this reason, it is important to quickly provide temporary measures to alleviate the shock effects of the Covid-19. Our paper showed that French Government put in place important support measures such as income supports for 'partial unemployment', including 'wage subsidies', 'unemployment support' and 'sick pay' to limit the rise of unemployment. France did not put only economic measures but also provided important social and medical facilitations in the scope of social security, health, and safety measures. Remote working was also encouraged and working time was made more flexible.

At the European level, support measures took some time to be put in place indeed, this has even led to a 'questioning' of the European Union's role and task at the beginning of the Covid-19 crisis. Because the EU couldn't act rapidly at the very spread of Covid-19 that hit first Spain and Italy hard, there have been heavy critics questioning the European spirit asking and expecting for more 'European solidarity' in times of medical and economic crises. However, the European Union managed later to agree on a support package of 750 billion Euros for Covid-19 related issues.

As Covid-19 is an unprecedented health and sanitary crisis in the world; projections and forecasts are hard, uncertainty is leading in many dimensions. The duration of the Covid-19 pandemic and the possibility of new lockdowns are unknown for the time being. The economic relaunch is indeed closely linked with the evolution of the sanitary crisis. However, from the available literature, research, and forecasts, we can say that the French economic growth is projected to decrease. Public debt increased significantly in France and many people lost their jobs because of the Covid-19 pandemic. At the European level, the European Commission announced a profound stagnation in 2020 due to Covid-19 pandemic. The 'Summer 2020 Economic Forecast' of the European Commission projects European economy to diminish by 8.3% in 2020 and increase by 5.8% in 2021.

In conclusion, assistance by national governments or supranational institutions such as the EU is vital both for households, businesses, and industries in times of crises. Economic measures to support the demand via financial and monetary policies are necessary to avoid the negative spiral and get over the vicious circle of the crisis. Covid-19 had huge impacts on many

_

¹ Jean Castex is the new prime minister after the French government changed in July 2020.

parts of the world which reflected the need of a global economic response accompanied by health, social and security policies. Governments should take appropriate measures to limit the negative effects of sanitary and economic crises, like in the current case of Covid-19. However, in the case of the EU Union, a general and coordinated collaboration is needed especially in financial terms for countries who cannot overcome the negative effects of this pandemic on their own. Countries must launch macroeconomic policies in line with the needs of the crisis but are not enough, today the importance of collaboration between countries and international organizations is clearer more than ever. Many countries are now in the fear of 'the second wave' due to a general increase in Covid-19 infections worldwide. France is already developing a national plan consisting of long-term precautions, to avoid a second lockdown which was disastrous for the economy.

References

- Abigail, N. (2020, 23 February). France has seen a 30% to 40% fall in tourists following the Coronavirus outbreak: finance minister. *CNBC*. Retrieved from https://www.cnbc.com/2020/02/23/coronavirus-impact-france-sees-tourism-numbers-fall-by-30percent-to-40percent.html
- Andrle, M., Bruha, J. and Solmaz, S. (2013). *Inflation and output co-movement in the Euro Area: Love at second sight?*. (IMF Working Paper No. 13-192). Retrieved from https://www.imf.org/external/pubs/ft/wp/2013/wp13192.pdf
- Anota, M. (2020). Covid-19: l'Epidémie a-t-elle entraîné un choc d'offre ou de demande ? [Blog article]. Retrieved from https://blogs.alternatives-economiques.fr/anota/2020/06/24/covid-19-l-epidemie-a-t-elle-entraine-un-choc-d-offre-ou-de-demande
- Associated Press. (2020). *BMW to drop 6,000 jobs*. Retrieved from https://www.manufacturing.net/automotive/news/21137833/bmw-to-drop-6000-jobs
- Baldwin, R. (2020). The supply side matters: guns versus butter. Retrieved from https://voxeu.org/article/supply-side-matters-guns-versus-butter-covid-style?utm_source=dlvr.it&utm_medium=twitter
- Baldwin, R. and Tomiura, E. (2020). Thinking ahead about the trade impact of COVID-19, economics in the time of COVID-19. In R. Baldwin and B. W. di Mauro (Eds.), *Center for Economic Policy Research* (pp.59-73). UK, CEPR Press.
- Balleer, A. Link, S., Menkhoff, M. and Zorn, P. (2020). *Demand or supply? Price adjustment during the Covid-19 pandemic*. (CEPR Working Paper No. 8394). Retrieved from https://ideas.repec.org/p/ces/ceswps/_8394.html
- Baqaee, D. and Farhi, E. (2020). Supply and demand in disaggregated Keynesian economies with an application to the Covid-19 crisis. (National Bureau of Economic Research Working Paper No. 27152). Retrieved from https://ideas.repec.org/p/nbr/nberwo/27152.html
- Barone, A. (2020). Demand shock. Retrieved from https://www.investopedia.com/terms/d/demandshock.asp#:~:text=A%20positive%20demand%20s hock%20is,prices%20of%20goods%20and%20services
- Benguria, F. M. and Taylor, A. (2019). *After the panic: Are financial crises demand or supply shocks? evidence from international trade*. (National Bureau of Economic Research Working Paper No. 25790). Retrieved from https://www.nber.org/system/files/working_papers/w25790/w25790.pdf
- Béziat, E. (2020, 29 May). Il S'Agit de la Survie de Renault. *Le Monde*. Retrieved from https://www.lemonde.fr/economie/article/2020/05/29/jean-dominique-senard-il-s-agit-de-la-survie-de-renault_6041152_3234.html
- Brinca, P., Duarte, J. B. and Faria-e-Castro, M. (2020). *Measuring sectoral supply and demand shocks during COVID-19*. (FRB St. Louis Working Paper No. 011). http://dx.doi.org/10.20955/wp.2020.011
- Casalis, A. and Krustev, G. (2020). Consumption of durable goods in the Euro Area. *European Central Bank*, *Economic Bulletin*, (05). Retrieved from https://www.ecb.europa.eu/pub/economic-bulletin/articles/2020/html/ecb.ebart202005_01~7749d3224d.en.html#toc1.
- CEIC Data. (2020). France trade balance. Retrieved from https://www.ceicdata.com/en/indicator/france/trade-balance#:
- Chappelow, J. (2019). Economic shock. Retrieved from https://www.investopedia.com/terms/e/economic-shock.asp
- Charles, S., Dallery, T. and Marie, J. (2020, 30 March). Covid-19: Choc d'offre ou choc de demande? raté! les deux!. *La Tribune*. Retrieved from https://www.latribune.fr/opinions/tribunes/covid-19-choc-d-offre-ou-choc-de-demande-rate-les-deux-843729.html
- Çongar, K. (2020). Dünya ekonomisi yüzde 3 küçüldü, zenginlerin serveti 74 trilyon dolara yükseldi [Global economy shrank by 3%, fortunes of the rich people reached 74 trillion dollars]. *Euronews*.

- Retrieved from https://tr.euronews.com/2020/07/12/dunya-ekonomisi-yuzde-3-kuculduzenginlerin-serveti-74-trilyon-dolara-yukseldi
- Coronavirus Leads to Food Industry Crisis in Europe. (2020). Across Europe, much of the food and agriculture industry has been badly affected by the Covid-19 pandemic. *BBC News*. Retrieved from https://www.bbc.com/news/av/world-europe-52715288
- Del Rio-Chanona, R. M., Mealy, P., Pichler, A., Lafond, F. and Farmer, D. (2020). Supply and demand shocks in the COVID-19 pandemic: An industry and occupation perspective. *Econ.GN.*, 1-38 doi:10.1093/oxrep/graa033
- Deubel, P. (2020). Coronavirus et chocs d'offre et de demande. Retrieved from https://www.melchior.fr/synthese/coronavirus-et-chocs-d-offre-et-de-demande
- Dharshini, D. (2020, 19 June). UK debt now larger than size of whole economy. *BBC News*. Retrieved from https://www.bbc.com/news/business-53104734
- Dutheil, G. (2020, 3 July). Air France annonce 7 580 suppressions de postes. *Le Monde*. Retrieved from https://www.lemonde.fr
- Eurofound. (2020). COVID-19. Retrieved from: https://www.eurofound.europa.eu/topic/covid-19
- European Commission. (2020a). *European economic forecast* (Publication 132). Retrieved from https://ec.europa.eu/info/publications/european-economic-forecast-summer-2020 en
- European Commission. (2020b). *European economic forecast* (Publication 125). Retrieved from https://ec.europa.eu/info/publications/european-economic-forecast-spring-2020_en
- Eurostat. (2020a). *Impact of Covid-19 crisis on industrial production*. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php/Impact_of_Covid-19_crisis_on_industrial_production
- Eurostat. (2020b). *Euro Area international trade in goods surplus*. Retrieved from https://ec.europa.eu/eurostat/documents/2995521/10545447/6-14082020-BP-EN.pdf/b2a37ef5-8ecc-e661-36eb-5ce6541d94fc
- Fernandes, N. (2020). Economic effects of coronavirus outbreak (COVID-19) on the world economy. *European Corporate Governance Institute*, 1-33. http://dx.doi.org/10.2139/ssrn.3557504
- Focus Economics. (2020). France economic outlook. Retrieved from https://www.focus-economics.com/countries/france
- Fornaro, L. and Wolf, M. (2020). *Covid-19 coronavirus and macroeconomic policy* (CEPR Discussion Paper 14529). Retrieved from https://cepr.org/active/publications/discussion_papers/dp.php?dpno=14529
- Garnier, J. and Prudhomme, C. (2020, 21 May). Dans la vente de meubles et de vêtements, le Coronavirus, c'est le coup de grâce. *Le Monde*. Retrieved from https://www.lemonde.fr/economie/article/2020/05/21/commerce-le-covid-19-c-est-le-coup-degrace_6040360_3234.html
- Global Macro Monitor. (2020). *The global supply & demand shock of the Coronavirus*. Retrieved from https://global-macro-monitor.com/2020/01/31/the-global-supply-demand-shock-of-the-coronavirus/
- Guerrieri, V., Lorenzoni, G., Straub, L. and Werning, I. (2020). *Macroeconomic implications of Covid-* 19: can negative supply shocks cause demand shortages?. (National Bureau of Economic Research, Working Paper No. 26918). Retrieved from https://www.nber.org/system/files/working_papers/w26918/w26918.pdf
- Heyer, E. and Timbeau, X. (2020). Évaluation de l'impact economique de la pandémie de Covid-19 et des mesures de confinement sur l'economie mondiale en avril 2020. *OFCE Policy Brief*, 1-24. Retrieved from https://econpapers.repec.org/
- Hobbs, J. E. (2020). Food supply chains during the COVID-19 pandemic. [Special issue]. *Canadian Journal of Agricultural Economic*, 68(2), 171-176. https://doi.org/10.1111/cjag.12237

- Hotten, R. (2020). Renault cuts 15,000 jobs in major restructuring. *BBC News*. Retrieved from https://www.bbc.com/news/business-52845849#:~:text=Renault%20is%20cutting%2015%2C000%20jobs,on%20electric%20cars%20a nd%20vans.
- Huynh, T. L. and Salez, N. (2020). Impact du Covid-19 sur l'économie Française à partir des données alternatives en temps réel [Blog article]. Retrieved from http://variances.eu/?p=4900
- Institut de l'Epargne Immobilière et Foncière. (2020). *l'explosion attendue des faillites en France*. Retrieved form https://www.ieif.fr/revue_de_presse/lexplosion-attendue-des-faillites-en-france
- International Monetary Fund. (2020). GDP, current prices. Retrieved from https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/WEOWORLD
- Islam, M. M. and Farha, F. (2020). Covid-19 and Sustainable Tourism: Macroeconomic effect and policy comparison among Europe, the USA and China. *Asian Business Review*, 10(1), 53-60. Retrieved from https://abc.us.org/ojs/index.php/abr/
- Jones, P. and Comfort, D. (2020). The Covid-19 crisis: tourism and sustainable development. *Athens Journal of Tourism*, 7(2), 75-86. Retrieved from http://eprints.glos.ac.uk/8408/
- Koutsokosta, E. and Gauret, F. (2020). The EU's 100 billion Euro scheme to tackle unemployment caused by COVID-19. *Euronews*. Retrieved from: https://www.euronews.com/2020/04/22/the-eu-s-100-billion-euro-scheme-to-tackle-unemployment-caused-by-covid-19
- L'Opinion. (2020). Coronavirus: la consommation des ménages s'est effondrée en avril. Retrieved from https://www.lopinion.fr/edition/economie/consommation-menages-en-chute-libre-d-tiers-en-avril-217972
- Le Monde. (2020). En pleine crise du Covid-19 le déficit commercial se creuse fortement au deuxième trimestre. Retrieved from https://www.lemonde.fr/economie/article/2020/08/07/en-pleine-crise-du-covid-19-le-deficit-commercial-se-creuse-fortement-au-deuxieme-trimestre_6048375_3234.html
- Le Parisien. (2020). *Covid-19: L'emploi salarié a reculé d'un demi-million au 1er trimestre en France*. Retrieved from https://www.leparisien.fr/archives/covid-19-l-emploi-salarie-a-recule-d-un-demi-million-au-1er-trimestre-en-france-11-06-2020-8333538.php
- Leclerc. (2020). *Consommation: Le COVID-19 change la donne!*. Retrieved from https://nouvellesconso.leclerc/consommation-le-covid-19-change-la-donne/
- Lisack, N., Bergeaud, A., Berthou, A. Collès, B. Gaulier, G. and Ouvrard, J-F. (2020). Covid-19 et chaînes de valeur, *Banque de France*, Retrieved from https://publications.banque-france.fr/covid-19-et-chaines-de-valeur
- Malliet, P., Reynès, F., Landa, G., Hamdi-Cherif, M. and Saussay, A. (2020). Assessing short-term and long-term economic and environmental effects of the COVID-19 crisis in France. *Environmental and Resource Economics*, (76), 867–883. https://doi.org/10.1007/s10640-020-00488-z
- Malou Academy. (2020a). *Le Coronavirus : Quels impacts sur l'hôtellerie et la restauration en France?*. Retrieved from https://malou.io/coronavirus-impacts-lhotellerie-restauration-france/
- Malou Academy. (2020b). L'impact du Covid-19 sur la restauration: Quelles conséquences et répercussions?. Retrieved from https://malou.io/impact-covid-19-restauration-consequences-repercussions/
- Michalski, T. K. and Ors, E. (2020). *La propagation de chocs liés au Coronavirus a travers les réseaux de production*. Retrieved from https://www.forbes.fr/business/la-propagation-de-chocs-lies-au-coronavirus-a-travers-les-reseaux-de-production/
- Ministère de l'Economie, des Finances et de la Relance. (2020). *Statistiques officielles de tourisme*. Retrieved from https://www.economie.gouv.fr/cedef/statistiques-officielles-tourisme
- Ministère de l'Europe et des Affaires Etrangères. (2020). Covid-19: Les mesures economiques et l'action du ministère en soutien aux secteurs de l'export et du tourisme. Retrieved from https://www.diplomatie.gouv.fr/fr/le-ministere-et-son-reseau/actualites-du-

- ministere/informations-coronavirus-covid-19/covid-19-les-mesures-economiques-et-l-action-duministere-en-soutien-aux/
- National Institute of Statistics and Economic Researches. (2020). *Foreign trade*. Retrieved from https://www.insee.fr/fr/statistiques/2381428
- Natixis. (2020). Covid-19: What impact on European real estate valuations?, Retrieved from https://www.natixis.com/natixis/jcms/lpaz5_83078/en/covid-19-what-impact-on-european-real-estate-valuations
- Normand, G. (2020). Covid-19: Des pertes abyssales pour l'economie Française. *La Tribune*. Retrieved from https://www.latribune.fr/economie/france/covid-19-des-pertes-abyssales-pour-l-economie-francaise-845592.html#:~:text=Selon%20une%20note%20de%20l,(PIB)%20annuel%20en%20moins.
- Organisation for Economic Co-operation and Development. (2020a). *Coronavirus: The world economy at risk*. Retrieved from https://www.oecd.org/berlin/publikationen/Interim-Economic-Assessment-2-March-2020.pdf
- Organisation for Economic Co-operation and Development (2020b). L'économie mondiale sur une ligne de crête, Perspectives Economiques. Retrieved from http://www.oecd.org/perspectives-economiques/juin-2020/
- Ouest France. (2020). *Hôtels, restaurants : Un pan de l'economie Française est menacé*. Retrieved from https://www.ouest-france.fr/economie/entreprises/crise-du-coronavirus/entretien-hotel-restaurants-un-pan-de-l-economie-française-est-menace-6817145
- Pandemi yüzünden bir milyar insan açlık tehdidi altında. (2020, 7 July). One billion people under the threat of starvation because of the pandemic. *Deutsche Well Türkçe*. Retrieved from: https://www.dw.com/tr/pandemi-y%C3%BCz%C3%BCnden-bir-milyar-insan-a%C3%A7l%C4%B1k-tehdidi-alt%C4%B1nda/a-54083173
- Philipps, A. (2020). *Covid-19 impacts for EMEA real estate*. Retrieved from https://www.cushmanwakefield.com/en/insights/covid-19/covid19-impacts-for-european-real-estate
- Sachs, T. (2020). Covid-19 and labour law in France. *European Labour Law Journal*, *11*(3), 286–291. https://doi.org/10.1177/2031952520934565
- Sade, G. (2020). Covid-19 krizi kamu borçlarını artırıyor mu?, [Does Covid-19 Increase Public Debts?] *Euronews*. Retrieved from https://tr.euronews.com
- Statista. (2020a). France: public debt 2017-2022. Retrieved from https://www.statista.com/statistics/463298/public-debt-france/
- Statista. (2020b). *Unemployment rate forecasts in Europe 2020-2021*. Retrieved from https://www.statista.com/statistics/1115276/coronavirus-european-unemployment/
- $\label{thm:condition} Tarver, \quad E. \quad (2019). \quad Supply \quad shock. \quad Retrieved \quad from \\ \quad https://www.investopedia.com/terms/s/supplyshock.asp#:~:text=change\%20in\%20price.-$
- The Latest: French Exports Down 21.5% As Pandemic Bites. (2020). French exports down. Retrieved from https://www.wmdt.com/i/the-latest-french-exports-down-21-5-as-pandemic-bites-2/
- Trading Economics. (2020a). *France tourism revenues*, Retrieved from https://tradingeconomics.com/france/tourism-revenues
- Trading Economics. (2020b). *European countries governments public debts ratio to their GDP*. Retrieved from https://tradingeconomics.com/country-list/government-debt-to-gdp
- UK Reports Highest Number of Quarterly Job Losses Since 2009 Recession. (2020, 11 August). *Job losses since* 2009. Retrieved from https://www.euronews.com/2020/08/11/uk-reports-highest-number-of-quarterly-job-losses-since-2009-recession
- United Nations Conference on Trade and Development. (2020). *Covid-19 and tourism assessing the economic consequences*, 6 17. Retrieved from https://unctad.org/webflyer/covid-19-and-tourism-assessing-economic-consequences

- United Nations Industrial Development Organization. (2020). *World manufacturing production*. Retrieved from https://www.unido.org/news/global-manufacturing-production-drops-sharply-due-economic-disruptions-caused-covid-19-unido-report
- United Nations World Tourism Organization. (2020). *COVID-19: Putting people first*. Retrieved from https://www.unwto.org/tourism-covid-19#:~:text=The%20worldwide%20outbreak%20of%20COVID,and%20for%20the%20tourism%20sector.
- Vie-Publique. (2020). *Le commerce extérieur de la France s'améliore en 2019*. Retrieved from https://www.vie-publique.fr/en-bref/273282-le-commerce-exterieur-de-la-france-sameliore-en-2019
- Wakimi, N. (2020). *Hutchinson, filiale de Total, va supprimer un millier d'emplois en France*. Retrieved from https://www.lemonde.fr/economie/article/2020/06/05/hutchinson-filiale-de-total-va-supprimer-un-millier-d-emplois-en-france_6041926_3234.html
- Workman, D. (2020a). France's top 10 exports. Retrieved from http://www.worldstopexports.com/frances-top-10-imports/
- Workman, D. (2020b). France's top 10 imports. Retrieved from http://www.worldstopexports.com/frances-top-10-imports/
- World Travel and Tourism Council. (2020). *Impact assessment of the covid-19 outbreak on international tourism*. Retrieved from https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism