Research Article

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The Impact of Pandemic on GDP Growth Rate, FDI and Export: A Case Study of Turkey

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Abstract

It has been two years since the outbreak of Covid 19, and we still live with the pandemic. No one knows when the pandemic will finish and how long it will take until all is back to normal and the global economy fully recovers from the pandemic. Undoubtedly, the Corona crisis has had devastating effects on the global economy. The global GDP decreased by 3.5%, the global FDIs were below $ 1 trillion for the first time in the last 20 years in 2020, falling 35% compared to 2019, and the global trade dropped 5.3% at the same time. The main objective of this paper is to discover the impact of a pandemic on the Turkish economy, or more precisely, on the Turkish GDP growth rate, FDI inflows, and export. To get the most reliable results, a multiple regression analysis has been conducted, using the contemporary economic software EViews 12. World Pandemic Uncertainty Index (WPUI) that was introduced by the International Monetary Fund (IMF) in 2020 was used as a measure of the uncertainty caused by the pandemic. For the robustness of the analysis, World Uncertainty Index (WUI), which measures the overall uncertainty caused by the economic and political factors, was also included. The data about GDP growth rate and export were provided from the World Bank Database, while the data for the FDI inflows from UNCTAD. Different independent variables were used in the research for each dependent variable (GDP growth rate, FDI inflows, and export). The research has shown that Covid 19 pandemic has a significant negative impact on the Turkish GDP growth rate (if we consider a 5% level of significance) and on the Turkish export (if we consider a 10% marginal level of significance). However, the regression analysis has shown that the pandemic has a positive but insignificant impact on FDI inflows to Turkey. The study will be a great benefit for further analysis of the impact of Covid 19 on economies as it is one of the first empirical studies that analyzes the effect of Covid 19 on a specific economy.

Keywords: *Turkey, Covid 19, Pandemic, GDP growth rate, FDI, Export*

1. Introduction

It has been two years since the outbreak of Covid 19, and we still live with the pandemic. No one knows when the pandemic will finish and how long it will take until all is back to normal and the global economy fully recovers from the pandemic. Undoubtedly, the Corona crisis has a devastating effect on the global economy. The global GDP decreased by 3.5% in 2020, the global FDIs were below $ 1 trillion for the first time in the last 20 years, falling 35% compared to 2019, and the global trade dropped by 5.3%.

However, not all countries were equally affected by Covid 19 crisis. Some countries were affected more and some less. Some countries' response to the crisis was better and recovered quickly, while some economies still suffer. Turkey is one of the countries that managed to recover from the crisis better than most other countries. Although the country recorded only 1.8% GDP growth in 2020, still compared to the other countries who recorded negative GDP growth, and especially compared to the global average, the country's GDP did not suffer much. The primary reason was the GDP growth rate in the third quarter, when the Turkish economy recorded an increase of 16.4%, which offset the significant decline of 10.8% in the 2nd quarter of 2020.

The country's FDI inflows suffered from the Covid 19 crisis, as well. Namely, just as in the rest of the world, lockdowns, business closure, social distancing rules, and uncertainty about the future caused many investors to postpone their investments, waiting for the global economy fully to recover from the pandemic. The result was a sharp decrease in global FDI, the lowest level in the last 20 years, lower even than the global FDIs during the global financial crisis of 2007-2009. Unlike many other countries, although FDI inflows to Turkey dropped 16.5%, to only $7.88 billion, which is the lowest level since 2005, still the reduction is not as significant as in the other countries.

In addition to the FDIs inflows, Turkish export was also affected during 2020. Of course, when the borders are closed and uncertainty is at its' highest level, the export will decrease. As a result, Turkish export decreased by 13% in 2020, compared to 2019.

Considering that there wasn't any other pandemic that adversely affected global economy in a way in which Covid pandemic did, the topic did not attract scholars' interest in the past. In addition to that, only World Uncertainty Index (WUI) which measures the overall uncertainty was available, which does not show the uncertainty caused precisely because of the pandemic. That was an obstacle to analyzing the impact of a pandemic on economy.

To fill the gap in the literature, the main objective of this paper is to discover the influence of pandemic on economies, or more precisely, on the Turkish economy and its GDP growth rate, FDI inflows, and export. In order to get the most reliable results, a regression analysis was conducted using the contemporary economic software EViews 12. As a measure of the uncertainty caused by the pandemic, World Pandemic Uncertainty Index (WPUI) was used, which was introduced by International Monetary Fund (IMF) in 2020 when the corona pandemic started. For the robustness of the analysis, World Uncertainty Index (WUI), which measures the overall uncertainty caused by economic and political factors, was also included in the research. The data about GDP growth rate and export were provided from the World Bank Database, while the data for the FDI inflows from UNCTAD. Different independent variables were used in the analysis for each dependent variable (GDP growth rate, FDI inflows, and export).

2. Literature Review

As mentioned before, there is very limited literature related to the impact of a pandemic on different economic indicators. There are two reasons for that. The first reason is that no other pandemic had such a devastating effect on the global economy as a Covid 19 pandemic, and consequently, the topic did not attract much attention from scholars. The second reason is that before, no strict indicator that measures the level of uncertainty caused solely by the pandemic was available, but only WUI that measures overall uncertainty caused by political instability, trade wars, etc. was available. Only in 2020, with the outbreak of Covid 19 virus the WPUI was introduced.

Not many scholars investigated the impact of Spanish fly on economies. A study conducted by Breinerd and Sieglel (2003) discovered that Spanish flu positively impacted per capita income growth across states in the USA in 1920. Lee and McKibbin (2004), using G-Cubed model, investigated the economic costs of the pandemic and found that the health and global economic costs of SARS were at least $40 billion, primarily due to the changes in the spending and investment losses. A study conducted by the United Nations Development Program (2015) found that Ebola costs for 15 countries included in the study were estimated to be $3.6 billion, mostly because of the decrease in the trade, borders closure, flights cancelation FDI reduction, and tourism fueled by stigma.

Since Covid 19 pandemic began only two years ago, and we still live with it, very few authors have investigated the impact of the Covid 19 pandemic on the economy. One of the studies is the research run by Demiessie (2020), who used the VAR method and discovered that Covid 19 caused a massive increase in import in the first six months of the pandemic in Ethiopia, and at the same time, led to considerable losses in the investment sector in Ethiopia. In another study, Peterson (2020) analyzed the Nigerian economy during the Corona crisis and found that the Covid pandemic resulted in huge losses in hospitality, aviation, events, entertainment industry, and sport. Ozili and Arun (2020), on the other hand, found that Covid 19 outbreak caused the global stock market to erase $6 trillion in only five days, between 24th and 28th February. Pinshi (2020), using the Bayesian VAR framework (BVAR)investigated the impact of COVID-19 uncertainty shock on the economy and the monetary policy response. The authors concluded that the uncertainty effect of COVID-19 hit unprecedented aggregate demand and the economy. Ho et al. (2020) analyzed the impact of Covid 19 on global FDIs using a two-step system Generalized Method of Moments estimation of the linear dynamic panel-data model. They discovered that health pandemics hurt FDI inflows. They found that Covid 19 has a significant negative impact on Asia-Pacific countries and emerging economies FDI inflows.

Economic costs of Covid 19 in Turkey are estimated to be about 17% of GDP in the best scenario if the country succeeds in handling the crisis in the best possible way, according to Cakmakli et al. (2020). Cakmakli et al. argue that Covid 19 pandemic has impacted both the supply and the demand in Turkey. In another study, Cakmakli et al. (2021) argued that a less restrictive approach (partial lockdown) would lead to higher economic costs - about 10% of GDP. On the other hand, full lockdown with the closure of most sectors and leaving open only the essential business work and working remotely for approximately 40 days gives lower economic costs of 4.5% of GDP. At the same time, this approach saves many lives as well.

In the FDI Investment Strategy 2021-2023, it is reported that the impact of Covid 19 is expected to be deeper for the FDI projects in manufacturing sectors dominated by MNCs that carry out their operations relying on the global value chain, such as Automotive, Electrical, Metal and Metal Products, Chemical and Plastic Industries. As for the service industry, the strategy stated that the FDI to the service sector would be severely affected by the recession. The only sectors which will maintain their strong position are digital and commercial service sectors (which have the highest share in total FDI to Turkey). Fang et al. (2020), using WPUI, WIU, and World Trade Uncertainty for the period from 1996 to the first quarter of 2020, found that all uncertainty indicators are negatively related to the economic performances in Turkey.

3. The Qualitative Analysis of the GDP, FDI and Export During Pandemic

3.1 GDP in Turkey during pandemic

As mentioned earlier, Covid 19 pandemic has negatively affected all economic indicators in almost all countries worldwide. Some countries were affected more, some less, but it is sure that every country somehow has been affected by the pandemic. Just as in the other countries, the Turkish economy was affected by Covid 19 pandemic, as well. The pandemic impacted Turkey in both ways, on-demand,

and on supply. The supply was affected mainly because of the lockdown and the sickness of the people who could not report to work. On the other hand, the demand was affected due to the fear factor and all restrictions on the social interactions. Also, the industries that were very closely related to the rest of the world suffered more. Furthermore, the depreciation of the lira affected the costs of borrowing. However, despite the fact that the Turkish' economy was adversely affected, especially during the 2nd quarter of 2020, its economic indicators were not as bad as in the other economies and especially not bad compared to the overall global economic indicators. The previous statement are confirmed in Table 4.

Table 4: GDP growth rate, FDI inflows and export in Turkey in comparison to the rest of the world in 2020

	GDP growth rate	FDI	International trade
Turkey	1.8%	-16.5%	-17.5% (Export); +2.2% (Import)
World	-3.5%	-35%	-5.3% (Global trade)

Source: Authors' calculations

As presented in Table 4, it is evident that the global GDP growth declined in 2020 for 3.5%, while in the Turkish economy there was an increase of 1.8% in GDP. In the same period, global FDI decreased by 35%, while the FDI inflows to Turkey declined only by 16.5%. And finally, the export in Turkey was severely affected by the Covid pandemic, recording a 17.5% decline, while import recorded an increase of 2.2%. The global trade decreased by 5.3% in the same year.

3.2 GDP growth rate in Turkey during pandemic

When we analyze the data for the WPUI, we can see that the pandemic uncertainty index for Turkey was above 0 only in 2020, or simply during the Corona crisis, as can be seen from Figure 1. That means that all the previous pandemics, SARS, MERS, Ebola, Swine, or Avian flu, did not impact the Turkish economy and that when we analyze the impact of a pandemic, we actually analyze the impact of Covid 19 on the economy.

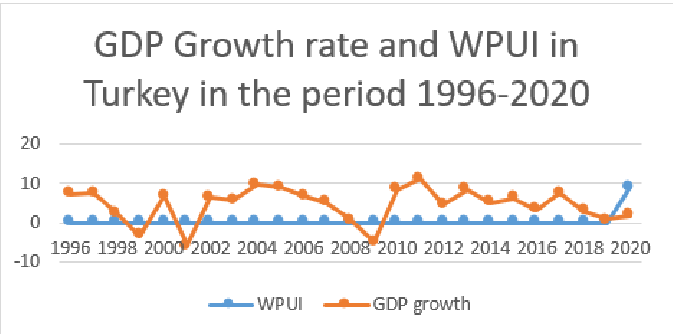

Figure 1: GDP growth rate and WPUI in Turkey in the period 1996 – 2020
Source: Authors' calculations, based on the World Bank database

As presented in Figure 1, the GDP growth rate in Turkey was not stable even before the outbreak of the Corona crisis. Namely, it fluctuated between -5.75% and 11.2% in the period 1996 – 2020. The country had a negative GDP growth rate in 2001 (-5.75%), 2009 (-4.82%), and 1999 (-3.26%). On the other hand, the highest GDP growth rate was in 2011 (11.2%), 2004 (9.8%), and 2005 (8.99%). As for the period right before the Corona outbreak, the GDP growth rate was very volatile, ranging from 0.92% in 2019 to 7.5% in 2017. The reason behind this is that the Turkish economy suffered from high inflation and fiscal and current account deficit. The interest rate was very low (10.75%) compared to the inflation (12%), which led to a negative real interest rate.

It is noticeable that the GDP growth rate in 2019, right before the Corona pandemic started, was 0.9%, which is lower than in 2020 during the Corona crisis. Hence, it is clear that Turkey has managed to weather the storm in 2020 with a GDP growth rate of 1.8%, outperforming all G20 countries except China (Mustafa Warank, 2021). If we analyze the data for 2020 in different quarters, we can see that the most significant drop in Turkey's GDP growth was in the 2nd quarter of 2020 - 10.8%, while in the 3rd quarter was the sharpest increase of 16.4%. In the last quarter of 2020, the GDP growth rate was positive - 1.3%. The fundamental reason behind the rebound in GDP is the government stimulus program that induced credit bum and the relaxation of restrictions on mobility in June and July 2020 which drove a sharp rebound in the whole economy that made Turkey one of the few G20 countries with positive overall growth in 2020 (World Bank, 2021). The sector analysis shows that the value-added in 2020 was 21.4% in finance and insurance, 13.7% in ICT, and 4.8% in agriculture.

As for 2021, the data shows that Turkish GDP gradually recovered and was positive 2.2%, 0.9%, and 2.7% in Q1, Q2, and Q3, respectively. The exceptions are that in the last quarter of 2021, the GDP will grow 2.7%.

3.3 FDI in Turkey during pandemic

In the recent years Turkey is constantly ranked among the top 20 most attractive countries for foreign investors, primarily because of the large market with more than 80 million population, its attractive location and access to two continents – Europe and Asia, as well as the proximity to Africa and access to the powerful market of the European Union. The fact that Turkey was among the top destination for FDI in the last years can be confirmed by the information that up until 2002, the total FDI inflows to Turkey were $15 billion, while in the period 2003-2020, the total FDIs were $225 billion. At the same time, the total number of companies that invested in Turkey before 2002 was 5,600, while in the period 2003 – 2020, 73,765 companies. This data confirms the fact that Turkey's FDIs have increased dramatically in the last 20 years, and the country is now on the global map as one of the most attractive destinations for FDI investments. The FDI trend in Turkey in the period 1996-2020 can be clearly seen in Figure 2.

Figure 2: FDI in Turkey in the period 1996 – 2020, in a million US$
Source: Authors' calculations, based on UNCTAD data

Figure 2 indicates that the highest level of FDI inflows in Turkey was in 2007 and 2015. During the global financial crisis (in the period after 2007 until 2011), the country's FDI inflows were not stable and succeeded in revounding in 2015, when the country had the second-highest level of FDI inflows. In 2016-2017, FDIs in Turkey declined and partially recovered in 2018. However, it needs to be noted that the country suffered from lira depreciation, high inflation, increased costs of borrowing, current account and fiscal deficit as wee as debt problems during this period.

In 2020 Turkey's FDIs declined by nearly 15%, but compared to the global FDI decline of 35%, we can conclude that the FDI inflows to Turkey did not suffer as much as in the rest of the world. Furthermore, if we consider the fact that the decline in FDI inflows in 2019, compared to 2018 was almost 30%, we can say that based on the qualitative analysis, the FDIs to Turkey were not significantly affected during 2020. In addition to that if we analyze the data in details and compare them with the rest of the countries in the world, we will see that actually, Turkey has improved its status as a top FDI destination and now is considered as the 9th most attractive FDI destination in the world, with 160 new FDI projects in 2020. The share of FDI inflows to Turkey in the total FDIs to Europe in 2020 was 3.1%, compared to 3% in 2019, which is an increase that supports the fact that FDIs in China did not suffer much. Of course, one of the reasons for this is that the FDI to developed Europe decreased by more than 80%. Among the emerging European countries, Turkey was the 2nd most attractive destination for FDI in 2020 (3rd in 2019), right after Poland, with a share in total FDI to emerging Europe of 16%. Turkey improved its' share not only in total European FDI but also in the global FDI. Namely, as UNCTAD data suggests (UNCTAD, 2021), the share of FDI inflows to Turkey in global FDI in 2020 was 0.9%, compared to 0.6% in 2019.

The quarterly analysis of the data shows that the lowest level of FDI inflows was in the 2nd quarter of 2020, when the FDI inflows to Turkey dropped to $0.6 billion, while the highest level in the 1st quarter of 2020 (before the first corona cases were reported in the country) - $2.6 billion. The expectations for the FDI to Turkey are very optimistic for 2021, as in the last quarter of 2020 FDIs inflows reached $2.3 billion, which is 30% of the total FDI in 2020. In addition to that, only in December 2020 the country had a $1.4 billion FDI inflow, a 31% increase compared to December 2019. The FDI inflows in 2021 have recovered well and reached the highest level in July 2021.

The sector analysis shows that Covid 19 had the most severe effect on FDI projects in the manufacturing sector dominated by the MNCs that carry out their relations relying on global supply chain. The primary sectors, such as the automotive industry, electrical, metal and metal products, chemical and plastic, should be most affected (FDI investment strategy). On the other hand, companies operating in the service sector, mainly digital and commercial sector services, maintained their strong position.

3.4 Export in Turkey in the period 1996 – 2020

The countries' lockdown, business closure and social distancing rules have affected global trade dramatically. As was mentioned before, global trade decreased by 5.3% in 2020, compared to 2019. The situation was very similar in Turkey, where the export decreased by 17.5%, while at the same time the import increased by 2.2%. On the other hand, if we analyze the export trend in the last 25 years, as presented in Figure 3, the export in Turkey generally had an upward trend, although in some years, like 2009, and 2016 it, has decreased, compared to the previous years. However, the country recorded a chronic trade deficit of 30 billion in 2019. The only period when Turkey had a trade surplus was immediately after the crisis in August 2018, in the 1st quarter of 2019.

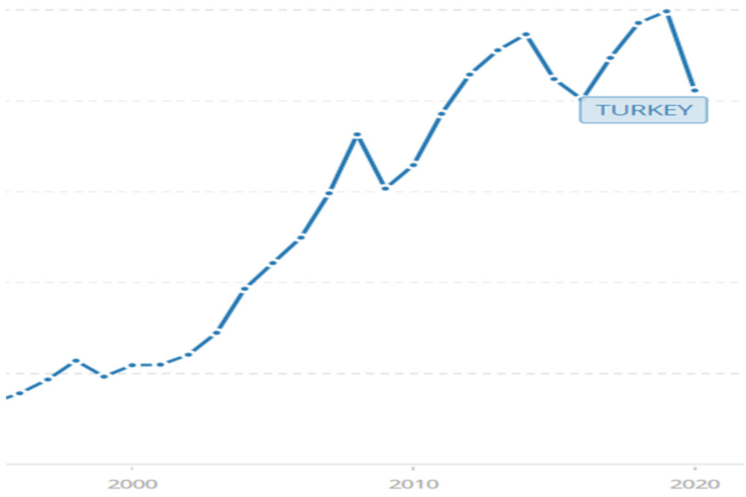

Figure 3: Turkish export and WPUI in the period 1996 – 2020
Source: WB Database

As shown in Figure 3, the export in Turkey in the last three years before the outbreak of Corona has increased and reached the highest level in 2019 – $249.3 billion. Hence, the qualitative analysis shows that the Corona pandemic severely impacted the Turkish export, which dropped 17.5% compared to 2019 and reached the level of 2016.

The monthly export analysis in 2020 shows that Turkish export started to decline at the beginning of April 2020, when actually, in most countries, a lockdown was introduced, and many international trade channels were closed. Consequently, in April 2020, there was the greatest export decline in Turkey, when export dropped by 42%. In the period after, the export continued to decline but with a slower dynamic, 29% in May, 6% in June, 3% in July, and 8% in August. The data for 2020 shows that in the first 9 months of 2020, the export in Turkey was $118 billion, compared to $133 billion in the same period in 2019. It is interesting to note here that the import at the same time increased and reached $156 compared to $154 in 2019.

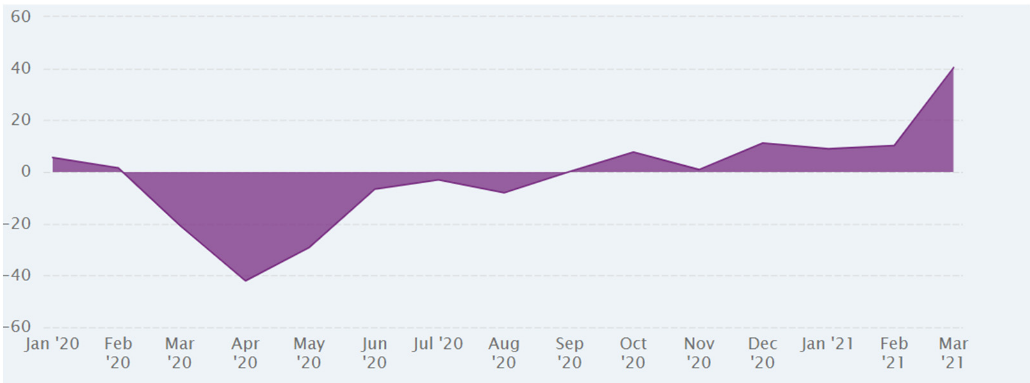

Figure 4: Turkish export in 2020 and 2021(monthly data)
Source: https://www.ceicdata.com/en/indicator/turkey/total-exports-growth

From the Figure 4, it is evident that export started to increase from September 2020 and reached the monthly highest level in December 2020, when it increased by 11.23%. It continued to grow in the period after, reaching the highest increase of 40.3% in March 2021 (compared to March 2020).

The sector analysis shows that the sectors more related to the rest of the world through trade relations or external borrowing were more affected. Also, the export of intermediate goods was less affected than the export of consumption and capital goods, which declined significantly.

4. Methodology

To get the most reliable results about the impact of a pandemic on the GDP growth rate, FDI inflows, and the export, a regression analysis has been performed using EViews 12 software. The data for FDI was provided from UNCTAD, while the data for the WPUI from the International Monetary Fund. All the remaining data is provided from the World Bank Database. We have used different independent variables for each dependent variable. The multiple regression analysis covers the period 1996 – 2020. WPUI is used to measure the uncertainty in the country caused strictly because of the pandemic. The higher the WUI, the higher the level of uncertainty caused by the pandemic. For the robustness of the analysis, WUI was also included, as an indicator that shows the overall uncertainty in the country caused by different factors, such as political instability, trade wars, exchange rate, etc. The higher the index, the higher the level of uncertainty.

The model of the multiple regression analysis that was used is the following:

$$y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \ldots + \beta_p x_{ip} + \epsilon$$

where:
y_i=dependent variable;
x_i=explanatory variables
β_0=y-intercept (constant term)
β_p=slope coefficients for each explanatory variable
ϵ=the model's error term (also known as the residuals)

Three separate regression analyses were conducted for the three different dependent variables. For each dependent variable, different independent variables were used. We considered a 5% level of significance, while 10% as a marginal significance.

5. Analysis and Results

5.1 The impact of a pandemic on GDP growth rate

The multiple regression analysis was conducted to investigate the impact of a pandemic on the GDP growth rate. The following independent variables were used in the analysis:

- FDI
- Infrastructure development (analyzed through the mobile cellular telephone subscriptions; the higher index, the higher the level of development of the infrastructure)
- Export
- Interest rate
- Saving rate
- WPUI
- WUI

As mentioned above, all the data were provided from the World Bank database except for the FDI (provided from UNCTAD) and WPUI and WUI (provided from IMF). The regression analysis covers the period 1996 – 2020. Table 1 presents the results of the regression analysis of the impact of a pandemic on the GDP growth rate in Turkey:

Table 1: Multiple regression analysis of the impact of a pandemic on GDP growth rate in Turkey

Independent variable	Coefficient	T-statistic	Probability
WPUI	-0.723122	-2.382816	0.0291
WUI	-0.017682	-0.0655437	0.9486

Source: Authors' calculations.

As presented results suggest, the pandemic has a significant negative impact on the GDP growth rate in Turkey, considering a 5% level of significance. That means that a 1 unit increase in WPUI leads to a 0.723 decrease in the GDP growth rate. On the other hand, the results suggest that WUI has a negative but insignificant impact on the GDP growth rate in Turkey.

5.2 *The impact of a pandemic on the FDI inflows in Turkey*

The multiple regression analysis was conducted to investigate the impact of a pandemic on FDI inflows to Turkey. The following independent variables were used in the study:

- GDP growth rate
- Infrastructure development (analyzed through the mobile cellular telephone subscriptions; the higher index, the higher the level of development of the infrastructure)
- Inflation
- Unemployment rate
- WPUI
- WUI

As mentioned above, all data were provided from the World Bank database except for the FDI (from UNCTAD) and WPUI and WUI (provided by IMF). The regression analysis covers the period 1996 – 2020. Table 2 presents the results from the regression analysis of the impact of a pandemic on the FDI inflows to Turkey:

Table 2: Multiple regression analysis of the impact of a pandemic on FDI inflows to Turkey

Independent variable	Coefficient	T-statistic	Probability
WPUI	94.54118	0.201653	0.8424
WUI	367.5444	0.809133	0.4290

Source: Authors' calculations.

The results from the multiple regression analysis show that the pandemic had an insignificant positive impact on Turkish FDI inflows. The results also show that overall uncertainty did not significantly impact the FDI flows to Turkey. The results were expected, as the qualitative analysis has shown that in 2020 Turkey has dramatically improved its' status as one of the most attractive destinations for FDIs and has increased its share in the global, European and the FDIs to emerging European countries. Furthermore, the country faced significant uncertainties and challenges in the last years due to the lira depreciation, inflation, current account, and fiscal deficit that did not affect the country's rating as a very attractive destination for foreign investors.

As for the other independent variable, the regression analysis has shown that infrastructure development has a positive impact on the FDI inflows to Turkey. In contrast, unemployment has a significant negative impact on the FDI inflows to Turkey, which means the higher the unemployment, the lower the level of FDI inflows to Turkey. All other independent variables (GDP growth rate, inflation) are proved to have an insignificant negative impact on FDI inflows to Turkey.

5.3 *The impact of a pandemic on export in Turkey*

To investigate the impact of a pandemic on export, a multiple regression analysis has been conducted. The following independent variables were used in the analysis:

- GDP growth rate
- FDI
- Inflation
- Import
- Saving
- WPUI
- WUI

As mentioned above, all data were provided from the World Bank database except for the FDI (provided from UNCTAD) and WPUI and WUI (provided from IMF). The regression analysis covers the period 1996 – 2020. Table 3 presents the results of the regression analysis of the impact of a pandemic on FDI inflows to Turkey:

Table 3: Multiple regression analysis of the impact of a pandemic on FDI inflows to Turkey

Independent variable	Coefficient	T-statistic	Probability
WPUI	-0.429776	-1.937715	0.0695
WUI	0.278905	1.487777	0.1551

Source: Authors' own calculations.

The regression analysis results show that a pandemic has a significant negative impact on export in Turkey if we consider a marginal level of significance of 10%. It means that if the WPUI increases for 1 index point, the export will decrease by 0.429776. The results were expected considering the significant decline in export in Turkey in 2020, especially in the 2^{nd} quarter of 2020, when actually WPUI was also at its' highest level.

As for WUI, the results suggest that the overall uncertainty in Turkey that was higher in the years 2015, 2016, 2019, and 2020 did not significantly impact the Turkish export, even more, in the last years, the country recorded the highest ever level of export. That is why the regression analysis suggested that the impact of uncertainty on Turkish export is insignificant but positive.

As for the other independent variables, the regression analysis shows that all of them have a significant impact on Turkish export, or more precisely, import and savings have a significant positive impact on the Turkish export, while the FDI inflows, the GDP growth rate, and the inflation have a significant negative impact.

6. Discussion

The results of the empirical analysis of the impact of pandemic on GDP growth rate has found significant negative impact of pandemic on GDP growth rate in Turkey. The results are opposite to the expectations from the qualitative analysis and the findings for the Spanish fly and its' impact on USA Economy in 1920 (Breinerd & Sieglel, 2003).

The results also suggested that unlike Ethiopia (Demiessie, 2000) the Corona crisis had a significant negative impact on the Turkish export. The significant negative impact of corona pandemic on Turkish export was confirmed with both – the qualitative and the quantitative analysis.

As for the FDI inflows to Turkey the qualitative analysis has suggested that FDI inflows to Turkey were not adversely affected by the corona pandemic, when the country improved its' status as one of the most attractive investment destinations in Europe. The empirical analysis has confirmed these results as the regression analysis showed a positive impact of pandemic on FDI inflows to

Turkey. However, here needs to be noted that the impact is insignificant. These findings are opposite to the findings from Ho et. al. who analyzed the impact of pandemic on the global FDIs and found a huge significant impact of corona pandemic on global FDis.

7. Conclusions

The Covid pandemic cannot be compared to any pandemic before. We still live with it, and everyone agrees that it has completely changed our life - we live with masks, social distancing rules, and even business closures and lockdowns in some countries. The world will need much more time to recover from the Covid pandemic. It is clear that Covid pandemic has impacted the whole world, and undoubtedly, no country in the world is immune on the corona crisis. However, some countries were affected more, while some countries less.

The main objective of this study was to discover the impact of a pandemic on the Turkish economy, or more precisely, on the Turkish GDP growth rate, FDI inflows, and export. A qualitative, as well as the quantitative analysis was conducted to get the most reliable results. A multiple regression analysis was conducted using the EViews 12 software. WPUI was used as a measure of uncertainty caused by the pandemic in the country, which is an index introduced by IMF right after the outbreak of Corona crisis, when it was clear that this pandemic will be very different and more severe than any other pandemic before, and that the consequences will be devastating for the global economy.

The results from the qualitative analysis showed that, unlike other G20 countries (except China), Turkey had a positive GDP growth rate of 1.8% in 2020. The Turkish GDP growth rate was also higher than the global GDP growth rate, which declined 3.5%. Turkey had the greatest decline during the 2nd quarter when the lockdown was introduced and after the country started to recover. However, the regression analysis has shown that the pandemic has a significant negative impact on the GDP Growth rate in Turkey.

As for the impact of a pandemic on FDI inflows to Turkey, the qualitative analysis has shown that FDI inflows to Turkey declined by 16.5%, compared to the global decline of 35%. Also, the reduction in FDI inflows before the corona pandemic was more significant, and in 2019 FDI inflows to Turkey were 30% lower than in 2018. On the other hand, Turkey improved its' ranking as one of the most attractive destinations for foreign investors in 2020, ranking 9th most attractive destination. The share of Turkish FDIs in global FDIs increased from 0.6% in 2019 to 0.9% in 2020. Turkey's FDI increased its' share in European FDIs, from 3% to 3.1%. At the same time, FDI inflows to Turkey reached 16% of total FDIs to emerging Europe, making it the 2nd most attractive FDI destination in emerging Europe, right after Poland. The regression analysis for the impact of a pandemic on FDI inflows to Turkey has shown that a pandemic had an insignificant but positive impact on FDI inflows to Turkey. The result was expected considering the results of the qualitative analysis.

Finally, the results showed that while import increased in Turkey in 2020, export declined by 17.5%. Expected the most significant decline of 42% was in the 2nd quarter of 2020 when the country introduced the lockdown and while the tremendous increase was in March 2021, 40.3%. The econometric analysis has shown a significant negative impact of a pandemic on Turkish export, considering the marginal level of significance of 10%.

8. Limitation of the Study

At the end, it is necessary to mention some limitations of this study. First, this is just an initial analysis, and more time is needed to investigate the impact of a pandemic on any of the analyzed variables. This is primarily because we still live with the Corona pandemic, new variants are introduced continuously, and even more, restrictions are announced by many countries. Furthermore, although we tried to include as many as possible independent variables for each dependent variable, it is still not possible to include all explanatory variables in the regression.

Finally, as mentioned before, very few studies investigated the impact of a pandemic on economies, which makes the research on this topic more challenging.

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