

# FORECASTING FOREIGN DIRECT INVESTMENT FLOWS IN THE COVID-19 PANDEMIC TIMES AND THE ROLE OF INVESTMENT PROMOTION AGENCIES

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## **Abstract:**

The paper analyses the economic impacts of the pandemic COVID-19 with an emphasis on FDI. The paper evaluates the attitudes of governments towards a crisis and the effects on the stages of economic cycle in the Investment Development Path theory. The important role of investment incentives and the role of investment promotion agencies to support businesses in preventing divestment is highlighted. Based on the analysis of UNCTAD, OECD, CZSO and CNB data, the ambition of the paper is to provide a forecast of FDI inflows in the Czech Republic. Three scenarios are created with a prediction of 15%, 37% and 60% of decline in FDI and compared with the pre-pandemic period. The analysis provides recommendations for both private and public sectors. Business production chains should be simplified and the institutional side should support by appropriate incentive programs. Finally, it is essential to put more emphasis on domestic investors.

## **Key words:**

Investment incentives, investment promotion agencies, Covid-19, global value chain, foreign direct investment

**JEL:** E61, F21, F23, O24.

## **1 Introduction**

The Covid-19 outbreak originated in December 2019 in Wuhan city in China. Since then it continues to spread across the world. By the beginning of August 2020, almost 17.5 million cases have been reported worldwide, with 3.3 million in European region (WHO, 2020). To control spread of Covid-19 and public health risk, government have been preparing contingency plans, and aid packages to sustain their economies. By imposing restrictions, immense pressure have been put on global value chain, international trade, investment and the whole global economy. Economies are globally connected by goods and services, financial capital, international banking, exchange rates, know how, people and their migration, and foreign direct investment (FDI). As Baldwin and Mauro (2020) states, the world is interconnected by all these segments and they are a mechanism for contagion of economic shocks. The size and persistence of the economic impact is unknowable and due to still ongoing spread of the infection, the future predictions are hard to make. FDI has a high potential to play an important role in post-pandemic economic recovery. This is even supported by the evidence from past crises (e.g. Alfaro and Chen, 2012; Desai et al., 2008).

The paper examines the effect of the coronavirus pandemic on the FDI inflow into the Czech Republic. Due to the fact that previous macroeconomic forecasts are already fundamentally different from the reality of 2020, the aim of the paper is to provide possible scenarios for the development of

disrupted FDI flows based on the latest relevant data. The literature review is devoted to the economic impacts of the pandemic on the national economy. Specifically, the effects on FDI flows are examined. In this context, the essential role of investment incentives and investment promotion agencies (IPAs) in current times is discussed in view of investment retaining and avoiding divestment. The methodological part presents prognostic method of forecasting based on scenarios making. The use of the generalized method of moments leads to answer the research question, ie: To what extent will the inflow of FDI into the Czech Republic be negatively affected by the global pandemic? The resulting three scenarios are then interpreted in a macroeconomic context.

## 1.1 Economic Impacts of Pandemic

Experts from international organizations estimate that the economic impact of a pandemic could occur in the same extent as the reduction of GDP caused by the recession in 2008-2009 because the economic impact of a pandemic is very similar to the one caused by of the recession. The pandemic directly affects household income, employment rate, inequality. The effects on public finance are more profound (Maynard & Bloor, 2009). The growth of general government expenditures is not offset by the proportional growth of tax revenues, as GDP is declining as well as consumption and investment. Aggregate demand is driven only by increasing government expenditures, which are directed to health care and in general to IRS, logically to the most desirable areas, but on the other hand to areas that do not accelerate economic performance. There is an outflow of unstable foreign capital; indirect foreign capital in particular (Gabriele, Baratav, & Parikh, 2000; Martins, 2013). The pressure on currency depreciation is exacerbated by outflows. In this context, an analogy can be seen with the situations of the 1970s, when the British government faced a substantial fiscal imbalance that resulted in the International Monetary Fund (IMF) having to support sterling and the UK economy (Maynard & Bloor, 2009).

Smith, Keogh-Brown, Barnett, & Tait (2009) assume that in addition to socio-economic factors, psychological factors must be taken into account to quantify economic impacts. Fear of illness logically reduces an individual's economic performance and is closely related to labour productivity (McDonald, 2015). The duration of the economic crisis is significantly affected by the length of the absence of students in direct teaching and the absence of workers in the workplace. Although the home office can partially eliminate a complete loss of work performance, however, as (Maynard & Bloor, 2009) point out, not every employee who stays at home can work from home. Smith et al. (2009) generalized that 15 weeks of school closure increases the impact of pandemics on GDP by 2.5%.

The macroeconomic impact of pandemics in Western European countries has also been addressed in research Keogh-Brown & Smith (2008). The outbreak of SARS in 2003 and the swine flu in 2009 showed that pandemic has significant macroeconomic impacts. The authors used a multi-sector single country-computable general equilibrium model of the United Kingdom, France, Belgium and The Netherlands. The authors agree in research findings (Smith et al., 2009) that government measures (closure of schools and universities) multiply the impact of a pandemic on GDP.

A problem that has a significant impact on GDP is the reduction in labour supply due to the pandemic (Beutels, Edmunds, & Smith, 2008). There is a significant impact on labour productivity. School closures have a demonstrable impact on reducing the spread of pandemics (Ferguson et al., 2006), but from a purely economic point of view, it is deepening the economic recession. Keogh-Brown & Smith, (2008) have shown that the effects of a pandemic are similar in Western European countries. Economies are globally connected by international trade. The decline in imports in one economy represents a decline in exports in another and vice versa. Significant differences can rather be seen across sectors. The sectoral effect is marked in labour-intensive sectors. Especially in health, insurance and social services. Agriculture is the least affected sector.

Keogh-Brown & Smith (2008) performed economic assessment of the impacts of SARS and their predictions on affected countries. The authors did not take into account the so-called effects of the

countries association, which are relatively close to countries with SARS cases, as well as secondary indirect effects, such as changes in the structure of tourism and increasing demand for countries without SARS cases. Economic effects in the case of COVID-19 will not be possible to examine separately due to the economic connection, the framework of international trade and global production networks, but also in the context of the fact that there are no longer so-called purely safe territories without COVID-19.

## **1.2 Economic Impacts of Limiting Economic Performance and Government Measures to Deal with COVID-19 on FDI**

As stated by Cieřlik & Hien Tran, (2019) emerging economies are often perceived from the perspective of foreign investors as a certain group of countries or as members of certain groupings. For the economies of the Czech Republic and Slovakia, due to their geographical location, common economic development, similar economic level and offer of comparative advantages, this statement is doubly valid. The highest volume of FDI per capita within the V4 group is in the Czech Republic, which is in the ranking of competitiveness (Global Competitiveness Index 2019) published by the World Economic Forum, the best of the four countries (32nd) (Schwab, 2019). Similarly, in the global assessment of the attractiveness of foreign investment (Global Foreign Direct Investment Attractiveness Index 2019), the Czech Republic (26th position) again ranked best (Riadh, 2020). It is possible to expect a short-term decline in investment attractiveness in countries affected by the COVID-19 pandemic for long-term investments, as indicated by a significant decline in short-term capital at the Prague Stock Exchange (PSE, 2020) and a significant depreciation of CZK against EUR (24 March 2020 27.81 CZK / EUR) which fell below the level of CNB interventions in 2013 (27.076) \ CZK / EUR (CNB, 2020). For the Czech Republic and formerly transitive economies, there is a high openness to the inflow of long-term foreign capital. Economic studies show that this openness can be observed from three perspectives: the FDI perspective, the institutional perspective and the managerial perspective (Cieřlik & Hien Tran, 2019).

From an FDI perspective, there is a fundamental relationship between the domestic and foreign economies concerning the activities of a multinational company (MNC); the absence of protectionist measures related to the subject of MNC's business, the existence of preferential agreements, etc. The theoretical anchoring of FDI in this regard represents Dunning's Investment Development Path (IDP) theory, according to which a country that is initially a net recipient of FDI must go through five phases for its business environment to be sufficiently capable of conducting its own FDI abroad (Dunning & Narula, 1993; Dunning, 1986). In the context of the economic crisis caused by the COVID-19 pandemic and the government measures responding to it, the effects and implications of restrictive measures can be seen in all phases.

In first stage, FDI inflow and outflow volumes are low due to the building of a country-level advantage, of which there are relatively few to make them attractive to new foreign investors. Government measures to closed borders indefinitely in connection with restrictions on the movement of labour negatively affect investors' location decisions to enter the host country, while speeding up investment decisions and outflows. The current situation, therefore, prolongs localization decisions on the implementation of new investments, but on the other hand, accelerates the outflow of unstable FDI from host economies. On the other hand, the fifth and final phase represents a situation where FDI, which are localized in a given economy, are at a value similar or equal to the volume of national FDI abroad (Cieřlik & Hien Tran, 2019). Technology transfer is balanced and a significant accumulation of spillovers is realized (Navas, 2019). In general, none of the V4 countries reached this last stage even in terms of selected sectors (Hlaváček & Bal-Domaňska, 2016; Zhang, 2019).

Excepting the FDI perspective, government regulations and the impact of the impending economic recession significantly affect the institutional perspective of long-term foreign capital. Well-established institutions stimulate and motivate FDI activity (Mudambi & Navarra, 2002). However, strict measures to prevent the spread of COVID-19 restrict economic freedom. The legal factor and the regulatory regime

are evaluation criteria in several international indicators and ratings of global agencies, in which a decline can be expected. These ratings are very important especially for new investors considering entering a foreign market. On the other hand, there is a possibility that the deterioration in the perception of doing business, protectionism and macroeconomic volatility in the Czech Republic will not attract new capital and it will not change the investment structure, but rather strengthen the positions of existing MNCs (Cuervo-Cazurra & Genc, 2008) located in the Czech and Slovak markets, as the system of investment incentives does not only apply to new investors, but also to reinvested capital.

From managerial perspective is an impact of economic slowdown paradoxically attractive for new market-seeking MNC that are motivated by high exchange rate (depreciated currency), contrary to performance-seeking MNCs. This type of MNCs and their FDI will be for lower production costs due to low exchange rates (Xing & Wan, 2006).

### **1.3 Retaining Investment and Intensifying Aftercare: Role of Investment Promotion Agencies**

As Harding and Javorcik (2011) argue, IPAs play an important role in the selection of FDI sites. According to previous research, MNCs are attracted by factors related to country characteristics (Bandelj, 2002). Location specific determinants are also in case of Central Europe an important factor. Cass (2007) links the use of IPAs to a transition process of economies.

As foreign investors are facing economic, logistical and operational difficulties due to pandemic, the investment promotion agencies (IPAs) become a significant actor in the investment retention. Potential investors often contact the national IPAs as the first entity for information. Their critical function for serving to governments as intermediaries between public and private sector has been recently brought to light. The agility in support to investors might for example include information on customs issues, quarantine measures, visas' validity and related migration procedures, terms of government business support (Miškinis & Byrka, 2014). Additionally, IPAs also have to face future challenges. The agencies has to start working on strengthening connections not only with existing investors but more importantly with the local ecosystem and local SMEs, rethinking investment promotion strategy and promotion channels, re-prioritize target sectors and naturally, to digitally transform (WAIPA, 2020).

According to UNCTAD (2020) data, a total of 77% of national IPAs globally developed specialized virtual tools with reference to COVID-19 and provide information and services online. On the other hand, the volume of provided support and information has been very varied. Especially European agencies lead the development contrary to developing country IPAs. Social media platforms have become an important tool in sharing the COVID related information across all regions. Generally, the power of technology has become very apparent during the crisis. Germany Trade and Invest agency represents a proactive and innovative approach of IPAs. The German agency has developed a special pandemic website with regular updates including financial support for businesses, supply chains and economic developments. The agency hold a series of webinars, for example on a topic of the latest pandemic-related regulatory changes and the novel fast track programme for medical apps (Germany Trade and Invest, 2020). On the top of that, Austria has also focused on rebranding the country's post-pandemic image including the travel and tourism aspects.

To adverse the impacts of COVID-19 pandemic, economies have adopted policy measures to boost investment, especially in key industries. The governments provide various incentives to enhance production in the health sector and increase R&D efforts in fields such as medicine and pharmacy in order to develop vaccines and treatments. For instance, the Czech Republic, on 23 March 2020, established a CZK 500 million investment subsidy scheme for manufacture of medical devices, pharmaceuticals, and biotechnology (Vláda, 2020). At the regional level, the European Commission, on 6 March 2020, announced that it has prepared up to €140 million in both public and private funding to support urgently needed research. Ten days later, the Commission offered up to EUR 80 million of financial support to an innovative vaccine developer from Germany, to scale up the development and production of a vaccine. Third, on 3 March 2020 the Innovative Medicines Initiative, which is a EU

partnership that funds health research and innovation, launched a fast-track call funded by up to EUR 45 million from the EU's Horizon 2020 research and innovation programme, to be matched by the pharmaceutical industry (European Commission, 2020a). Next, other incentives aimed to encourage manufacturers to expand or shift production lines to medical equipment and personal protective equipment to increase the quantity of the products. Italy, one of the most affected countries, has created a EUR 50 million program to encourage manufacturers to convert to or expand their production of medical devices and supplies.

Due to complications for companies on foreign markets, they are likely to rethink their supply chains and avoid the operations disruptions in host economies that were heavily affected by the coronavirus. This might lead to a trend of shortening of global value chains (OECD, 2020a) Some countries have already started encouraging their investors to divest from the affected host countries. The Japanese government has a USD 2.2 billion support plan to encourage its manufacturers to relocate production out of China, either back to Japan (USD 2 billion allocation) or to other locations in Asia (USD 217 million allocation) (Bloomberg, 2020). Divestment of MNCs may also be an important factor in current economic reallocation process.

With reference to pandemic and consequences for the global economy, the European Commission has issued guidelines to ensure a strong EU-wide approach to FDI screening in order to protect security and public order of the European economy, especially in healthcare-related industries. The EU has one of the most open investment regimes in the world and although the companies from third country investors are still in small numbers on the European market, they have a quite significant economic impact due to their above average size and their focus on high-technology sectors. Implemented already in March 2019, the FDI Screening Regulation is the first EU common framework for screening FDI within the EU zone. The screening mechanism will be applied in its full scope from October 2020 (Esplugues, 2019).

## 2 Methods

The prognostic method is a key methodological procedure used in this paper. A large number of different approaches and methods (formalized, expert, intuitive and others) uses forecasting, one of which is the so-called scenario method. The advantage of this method is the simultaneous use of various prognostic techniques. The scenario method can logically connect and organize information from various already compiled forecasts.

The method of scenarios shows how the future of the subject of research (the state of FDI in the Czech Republic) can develop based on the interrelationship of key events (decline in economic performance; impossibility of employing foreign labour; length of the state of emergency; currency depreciation and others).

Forecasting using model situations (scenarios) is used across economic topics. E.g. in terms of visualizing the development of selected industries; the impact of economic policies on selected sectors; impacts of pandemics on macroeconomic indicators, etc. Baumeister & Kilian (2014) highlight the benefits of forecasting using alternative scenarios in terms of their significance for end users. The forecasting formulated in this way helps users to understand what assumptions enter into the forecast.

The aim of the research is to create a prediction of the future development of FDI inflows into the Czech Republic affected by the pandemic COVID-19. The prognosis is based on the state of the national economy in July 2020 and pandemic development in the region of the Central Europe. The paper also presents tools to increase the attractiveness of the investment market by incentive programs and support of IPAs. The resulting scenarios (optimistic, realistic, pessimistic) provide a comprehensive image based on analysis of institutional forecasts and reports. The paper thus contributes by a deep understanding of the crisis. The following Formula 1 is employ for the calculation:



$$\begin{aligned} t &= 1, \dots, T \\ i &= 1, \dots, N \end{aligned} \quad (1)$$

$$u_{it} = \delta_i + \varepsilon_{it}$$

The variables  $x_{it}$  and  $f_i$  are assumed to be strictly exogenous given the unobservable individual effect  $\delta_i$ . This assumption identifies  $\beta$  but not  $\gamma$  under standard conditions (Arellano & Bover, 1995).

The main data sources are the UNCTAD (2020) forecasts, from which the contribution draws global data on GDP fluctuations, FDI and changes in global values of other macroeconomic indicators. Data at EU level are drawn from the European Commission (2020b), which assesses the impacts of COVID-19 on the individual Member States in terms of the output gap; net exports; real GDP; Investment; Public consumption and others. Data at the national level of the Czech Republic are obtained from the CNB (2020), specifically the state and development of FDI over time, their distribution within the sectoral structure of the Czech Republic. These data are further supplemented by statistics from the government agency CzechInvest (2020). The values of the main macroeconomic indicators are obtained from the CZSO (2020) and supplemented by Deloitte analyzes (2020).

The presented forecast in the form of three different scenarios (optimistic, realistic, pessimistic) is based on the UNCTAD model, which uses panel econometric techniques to predict FDI. These techniques consider the effects of relevant variables across countries simultaneously, ie. it is possible to evaluate the involvement and influence in the global production chains (GPC). The approach used is based on the system of the generalized method of moments (GMM system). The generalized method of moments in connection with financial crises is examined, for example, by Afonso and Jalles (2012) and Dietrich and Wanzenried (2011).

Diametric panel econometric techniques deal with the heterogeneous nature of foreign direct investment in individual countries and the dynamics of foreign direct investment over time. Forecasts of foreign direct investment inflows and the basic trend of foreign direct investment are based on past values of foreign direct investment (autoregressive period). The GMM system used is more suitable for solving endogeneity problems caused by the inclusion of delayed foreign direct investment and other endogenous variables (UNCTAD, 2020).

## 2.1 Approach Limits

When developing scenarios and evaluating them, the influence of a wider range of factors must be taken into account. However, not all factors can be explicitly included in the scenarios (including social, economic, psychological, cultural practices and political factors). At the same time, the exogenous shock of the pandemic increases the usual FDI volatility (up to tens of per cent). A key element of uncertainty is the extent of the economic damage and the effectiveness of the emergency measures that governments around the world are taking to stabilize the economic downturn.

The main limitation of the approach, in this case, is the absence of current data and statistics. The fight against the COVID-19 pandemic is still ongoing and undergoing turbulent changes. The research is based on data available until 2018, resp. until economic activities were not affected by this pandemic at all. The forecast thus covers both the period before the outbreak of the pandemic (2019) and the main pandemic period (2020), based on incomplete data sources and information. In the future, it would, therefore, be appropriate to validate and adjust the resulting scenarios concerning both the newly published facts, but also in the context of the origin and strength of the discussed second wave of coronavirus.

### 3 Paper results

Strong economic interconnectedness of EU member states must be considered when making future predictions about the recovery. Although the research on the economic impact of previous pandemics should be considered, it must be realized that those crises hit a global economy that was much less integrated and interdependent. The predictions depends on the duration of the pandemic which is still currently present, but the future development also depends on whether taken measures of trade policies, consumer behaviour, production chain and globalisation as we know it become permanent or how long they will last. In all scenarios, immediate negative impact in 2020 in considered, with a further deterioration in 2021.

The Czech Republic has long been an example of an economy with minimal macroeconomic imbalances and sufficient financial stability. The CNB strictly adhered to the set inflation target, and inflation fluctuations occurred mainly due to changes in oil prices. The trade balance has been in surplus for a long time (also thanks to the CNB's active interventions). On the other hand, in 2019 the CA balance sheet showed a slight deficit due to high dividends paid abroad. In 2019, the Czech Republic recorded a gradual slowdown in economic performance. One of the reasons was the impact on one of its largest trading partners, Germany, by falling global demand for cars (Deloitte, 2020).

After several previous years of growth, Czech economy was expecting a gradual slowdown already before the pandemic in 2019. The economic indicators got weaken as well as the industrial production dropped in 2019/2020. Although the FDI inflows increased in 2019, for other Visegrad group countries including the Czech Republic, FDI declined.

#### 3.1 Pesimistic Scenario

The pessimistic scenario is based on the assumption that the global economy could slow down by 2.5% in 2020. The pessimistic scenario calculates a one-fifth drop in exports or lower energy consumption (energy is another key sector related to FDI) (OECD, 2020b).

The pessimistic scenario is based on the theoretical anchoring of the investment trap, in which a high degree of uncertainty does not stimulate economic agents to invest neither in investment nor long-term consumer spending. Although monetary policy seeks to stimulate corporate investment and household consumption by lowering interest rates to zero (CNB, 2020), the uncertain economic outlook and over-reliance on global value chains discourage otherwise favourable investment activities.

Based on the above assumptions, the pessimistic scenario calculates a 60% reduction in FDI for 2020. This result is based on the strong involvement of Czech companies in global production networks (GVC) (Hlaváček & Bal-Domańska, 2016). The position of the Czech Republic in the pandemic period proved to be quite difficult. On the one hand, the Czech business environment is dependent on imports of intermediate products from the East, on the other hand on markets in developed countries (where demand is declining). Deliveries of intermediate goods are stagnating and significantly more expensive due to the weakening of the CZK<sup>1</sup>. For this reason, the pessimistic scenario is calculated with the change in the trade balance trend from a surplus from 2019 to a deficit of CZK 134 billion. Due to the need to import components and intermediate products, this deficit has a significant negative effect on the inflow, resp. outflow of FDI. FDI flowing to the Czech Republic is oriented mainly in the areas of automotive and related industries (CzechInvest, 2020), while the direct share of the automotive industry in GDP is 6% (Deloitte, 2020).

The pessimistic scenario, therefore, assumes that there will be a reduction in value-added, turnover, reinvestment and the allocation of new investments in sectors that are still attractive for foreign capital (automotive, manufacturing, air transport, tourism). With such a scenario and the state of the Czech economy described in this way, the state of FDI at the end of 2020 would be at the level of

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<sup>1</sup> 17.2.2020 24.795 CZK/EUR, a month later the CZK weakened by more than two crowns per EUR, resp. 26.96 CZK/EUR (CNB, 2020)

almost CZK 62 billion. The positive sign is mainly influenced by the stable banking and financial sector, which is consistently attractive for Western European FDI (CNB, 2020).

### 3.2 Realistic Scenario

Realistic scenario is based on the newest data from July 2020 (UNCTAD, 2020) suggesting that FDI flows will decrease by up to 40 % globally in 2020, from their 2019 value of \$1.54 trillion. This would lead to the lowest values since 2005. Due to pandemic situation in several large economies and the interconnectedness of the European countries, the fall of FDI is expected to be the most in Europe. For the European region investigated in the paper, the FDI is forecast to decrease by 30 to 45 % compared to 2019 thus we consider 37 % in average.

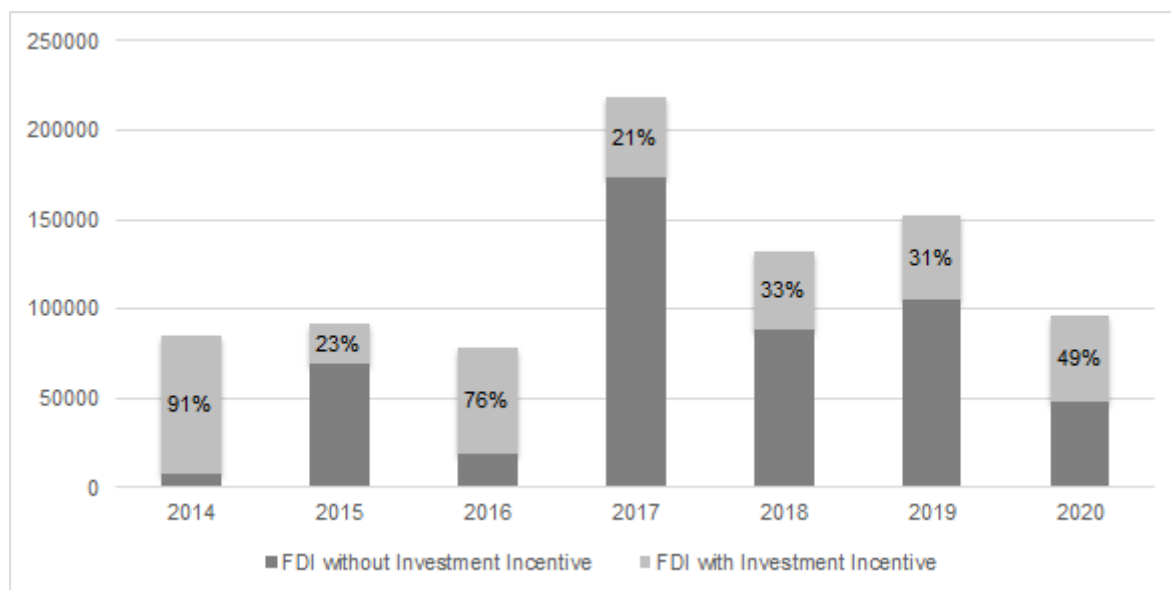
Under this scenario, the public health measures have been initially successful and got the spread of the virus under control for next 2 to 3 months however there are new future outbreaks in particular regions. This scenario reflects the current situation the best. After slowdown of the spread of the virus in most European countries, tourism industry has partially started to recover. Unfortunately, travelling rebooted the spread again and countries such as Croatia or Greece that did not have many confirmed cases are newly considered as risky ones. This scenario counts with public health measures in specific destinations, affecting the economy, imposed till the vaccination development. The service sector is expected to partially resume and restart related business activities. The economic policy interventions are under the realistic scenario only partially effective which decelerates the economic recovery in next terms (OECD, 2020b).

Data of World Bank Group (2020) investigating the previous epidemics indicate that investment dropped by nearly 10 % for five years following the event which reflected high economic uncertainty and substantial risk aversion. In the realistic scenario, the durability of the effects on investors is related to the crucial role of IPAs and national investment policy responses.

Figure 1 demonstrates the importance in attracting foreign investors via investment incentives (IP). The share of FDI with investment incentives is above 30% in average. Demonstrated shares indicate a significance of incentives in post-crisis times when government politics has aimed at attracting of new economic subjects into Czech business environment and supporting reinvestment (in which case, resupported projects are later considered as Czech investment). Specifically, almost ten projects of EUR 100 million were supported in 2014. They were mostly from strategic services, transportation production, mechanical engineering but also food processing. Contrary in 2016, the highest investment incentives were granted to projects of metal industry a again transportation production. Moreover, the biggest FDI project in investigated period (2014 - 2020) received the support in the same year of 2016. This project of Korean investor NEXEN Tire Corporation exceeded EUR 842 million and created nearly 1400 work positions in production but also in related research centre. (CzechInvest, 2020).



**Figure 1: A share of FDI with IP on total FDI (in mil. CZK)**



Note: Year 2020 is based on realistic scenario (37% drop of FDI) and data on FDI with IP for first half of 2020

Source figure: CzechInvest 2020, Deloitte (2020)

### 3.3 Optimistic Scenario

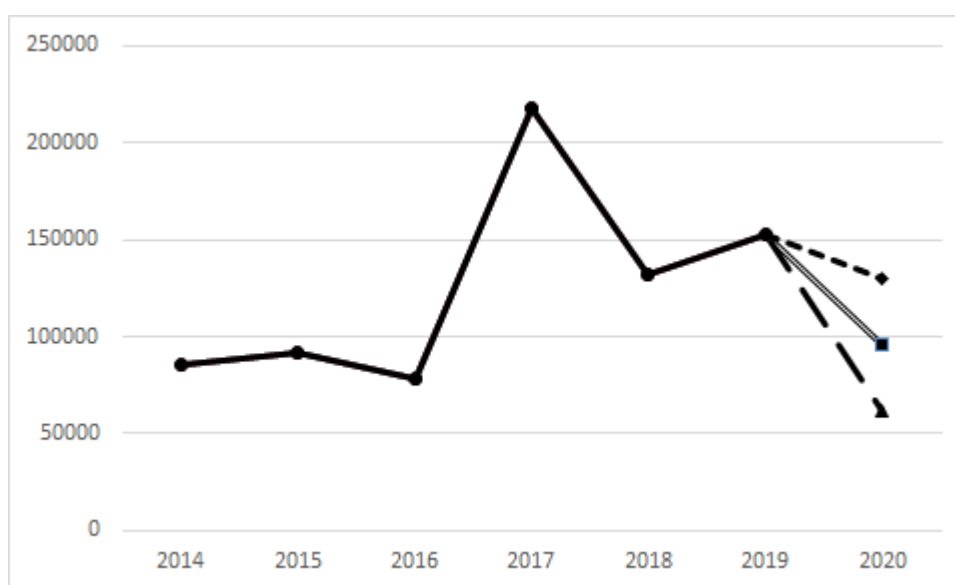
The optimistic scenario is based on assumption that the pandemic peaked in European continent in April and since then, strict lockdowns and measures are gradually lifted in next months. Only measures with relatively limited economic impact will prevail in the second half of this year 2020. The policy interventions that were taken are assume to be very effective. This scenario does not consider possibility of financial crisis, bankruptcies and unemployment in a mass scale, as well as no other serious structural damages to the economy. Economic growth is expected to be back to pre-crisis levels by the end of 2021.

The Czech Republic not only implemented the measures quite early but due to positive development of the pandemic situation in the country, it was able to lift them in May and has started recovering. GDP growth is expected to decline by 6,25%. In coming year 2021, GDP is expected to rebound by 5% which still does not indicate full recovery up to 2019 values. Although the labour market will be affected as well and the unemployment rate is expected to increase from 2% in 2019, 3,7 in June 2020 up to 5% in the second half of 2020, the previous tight situation with almost “zero unemployment” will soften the impacts. Still, it is expected the unemployment rate in the Czech Republic to remain as one of the lowest with the EU. Foreign trade are forecast to be hit significantly due to its structure and the importance of the automotive sector. Both export and import are expected to fall by -13%. Inflation is expected to fall to 2,3% in 2020. This will be accompanied by weaker Czech crown. In the optimistic scenario, the investment are predicted to decrease by 15%, especially due to disruptions in value-chain and secondly by workforce shortages due to lockdown and closed borders. According to the data from Czech Labor Office, the number of workers in the Czech Republic has decreased by 7% from March when was declared the state of emergency to the end of June 2020. Due to travel restrictions, tourism has been a crucially affected sector. This factor related to empty tourist attractions and cities also needs to be considered by the foreign investors. For instance, a Chinese company SunRise having an investment project in Pasohlávky, in South Moravia, has to change its targeted customers and newly is trying to attract the local people or from neighbouring Slovakia and Austria.

A comparison with Slovakia's indicators can be taken into account. Slovakia's GDP growth is similarly to fall by 6,75% however the increase next year 2021 is expected to be higher, by 6,5% particularly. Labour market is going to be affected stronger and the unemployment rate will growth to 8,75% in 2020. (European Commission, 2020b).

The structure of individual components (share capital; reinvested earnings; other capital) of foreign direct investment in the Czech Republic changed compared to 2016 (see Fig. 2), especially in the component of reinvested earnings (a year-on-year increase of CZK 102.5 billion). The largest share of FDI in the total volume of direct investment in the Czech Republic was allocated to the Manufacturing industry (29.2%), followed by the Financial and insurance activities (28.8%) and Real estate activities (9.4%).

**Figure 2: Total FDI in Czech Republic (in mil. CZK) with forecasting for 2020**



Note: Top line - Optimistic scenario (15% drop); Middle line - Realistic scenario (37% drop); Bottom line - Pessimistic scenario (60% drop)

Source: Own proceedings based on data from CNB (2019), Deloitte (2020)

In all three scenarios, a significant decrease is evident compared to 2019. The decrease occurs in all forms of FDI (decrease in the inflow of new share capital, reinvested earnings and other capital).

Graph 2 shows that only the pessimistic scenario is connected with a historically lowest decline in FDI in the Czech Republic (CZK 61.6 billion). If economic development followed a realistic or optimistic scenario, the state of FDI would exceed the situation in 2016 when the low value of FDI inflows was driven by public support for investment incentives (76% of FDI were investment incentive-supported projects).

#### 4 Discussion

The COVID-19 pandemic brings a crucial change circumstance for international production and global business environment. Even though we can expect global recession together with production and supply chain disruptions, in a long term, a supply chain is going to become more resilient and autonomy of regional productive capacity will be pressured to increase. Especially the closures of industrial operations, tourism services, transportation are facing a significant negative effect that must overcome.

Although at the beginning of the outbreak of the COVID-19 the pandemic was compared to the economic recession in 2008-2009, based on the current research, we can conclude that the current economic downturn will exceed it. Unlike the previous recession of 2008-2009, which had both

economic causes as well as consequences, the current economic recession was started by non-economic causes and its consequences are still difficult to assess due to the impending second pandemic wave. As soon as economic subjects have recovered from the first fading wave, we have to ask whether they prepared to face the next one? As McDonald (2015) states, in such a case, uncertainty and often even panic have a significant impact on labour productivity, on a macroeconomic scale on the output of the economy, trade policy and logically investment activities and decisions as well. Confirming Baldwin and Mauro (2020), interconnectedness of Czech economy brings spillover effects in majority of market segments. In pandemic times, MNCs have set a new trend in shared jobs, and home offices have penetrated previously unthinkable sectors and jobs (Ferguson et al., 2006). Several changes on labour market must be expected. However with school re-closing and home teaching it will not be possible to achieve sufficient work performance (Maynard & Bloor, 2009). In such a situation, logically, FDI will not realize reinvestment, as profitable funds will have to be redistributed to cover costs related to both lower demand and sales, but also lower productivity and production. Another effects are expected due to effects of countries associations (Keogh-Brown & Smith, 2008). Although this should not be a direct case of the Czech Republic, related psychological factors (Smith, Keogh-Brown, Barnett, & Tait, 2009) might quantify economic impacts due to the investment related to people-to-people exchange.

The scenarios should be validated and updated in the future, depending on the possible occurrence and strength of the second wave of the pandemic and related measures. In the case of school closures, it will be necessary to revise the calculated impact on GDP, as well as in the case of successful vaccine development and possible vaccination. Current findings support the previous studies (Smith, 2009).

The presented results of the decline in FDI lead to a discussion of recommendations for economic policy concerning the stabilization and support of business activities. It is appropriate to open a discussion on the adjustment and setting of interest-free loans (in the Czech Republic such as COVID I., II., III. program under the auspices of the Guarantee and Development Bank) and shared costs for program employees (so-called kurzarbeit system) towards companies that in the past made significant investments, as well as for the rescue of economic entities at high risk of relocation of business activities or their complete cessation. With an increasing need of aid packages and support from the institutions for the businessmen and investors, the role of IPAs as a mediator between the private sector and government becomes more evident. The investment agencies should maximize their services on online platforms and strengthen their focus on existing foreign investors. Moreover, expanding their scope to domestic investors should be one of the next steps as well.

As the European Bank for Reconstruction and Development will reinvest in the Czech Republic after a thirteen-year hiatus, this action supports the research of Mudambi & Navarra (2002) about stimulating the investment by strong institutions. The EBRD will re-engage in investment projects with focus on the private sector to help mitigate the effects of the pandemic on the economy (EBRD, 2021).

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