CHARLES UNIVERSITY

FACULTY OF SOCIAL SCIENCES

Institute of Economic Studies

Department of Macroeconomics and Econometrics

Master's Thesis

2024 Bc. Vít Žáček

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Modelling of impact of COVID-19 restrictions on the labour market in the Czech Republic

Master's thesis

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Declaration of Authorship

The author hereby declares that he compiled this thesis independently; using only the listed resources and literature, and the thesis has not been used to obtain a different or the same degree.

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In Prague on April 30, 2024 Vít Žáček

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Abstract

In year 2020 the world was hit by an unprecedented event. Although in the past there were epidemics such as SARS or MERS that were connected by restrictions meant to reduce spread of the disease. However, the extensivity and duration of those restrictions was incomparable to those from the recent COVID-19 pandemics.

The recent pandemic has changed a lot of various characteristics of the economies across the world. Switching to home office meant huge change in relation between employer and employee. The fight with the virus was connected in most of the countries with a lot of restrictions imposed on multiple areas of public life. The impact of those restrictions was economic stagnation or even recession. Number of people lost their jobs or were forced to change their branch.

I will investigate the impact of COVID-19 restrictions on structure of unemployment and variables that had influence on that.

JEL Classification: J01, J21, I24

Keywords: COVID, employment, hours worked, LPM, event study

Title: Modelling of impact of COVID-19 restrictions on the labour market in the Czech Republic

Abstrakt

V roce 2020 byl svět zasažen do té doby bezprecedentní událostí. Ačkoliv v minulosti již byly epidemie jako například SARS nebo MERS, které byly spojeny s omezeními směřujícími k omezení rozšiřování zmíněných nemocí. Avšak rozsah a délka trvání těchto omezení byla nesrovnatelná s těmi, které přinesla nedávná pandemie COVIDu-19.

Nedávná pandemie zásadně změnila různé charakteristiky ekonomik napříč světem. Přecházení na práci z domova znamenalo významnou změnu ve vztahu zaměstnanců se zaměstnavateli. Boj proti viru byl spojený ve většině zemí s rozsáhlými restrikcemi v mnoha oblastech veřejného života. Důsledkem toho byla ekonomická stagnace a v některých případech recese. Mnoho lidí se důsledkem toho stalo nezaměstnanými.

Ve své práci se budu věnovat dopadu covidových restrikcí na délku trvání nezaměstnanosti a další aspekty, které ovlivnily strukturu a velikost nezaměstnanosti před, během a po omezeních souvisejících s bojem proti pandemii.

JEL klasifikace: J01, J21, I24

Klíčová slova: COVID, zaměstnanost, odpracované hodiny, LPM, event study

Název: Modelování dopadu restrikcí spojených s nemocí COVID-19 na trh práce v České republice

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Master's Thesis Proposal

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Proposed Topic:

Modelling of impact of Covid-19 restrictions on the labour market in the Czech Republic

Motivation:

The Covid-19 pandemics raised many concerns about health-related topics, for example quality and flexibility of health care system or dealing with spread of the diseases. The response of most of the states were extensive restrictions that caused disruption of various fields of economic life. The ordered closure of shops and hospitality facilities meant the economic disruption leading to loss of jobs or other sources of income for many people. Due to the globalized world, a harsh zero-tolerance covid-19 policy in China lead to massive outages of goods imported from this area. This caused some production to stop until the imports were renewed. This all contributed to the dramatic changes in labour market around the globe. People employed in economic sectors particularly strongly hit by the covid-19 restrictions were often forced to find a new job in another branch.

Focus of this work is to investigate whether and in what intensity these changes happened in the Czech Republic. What was their impact on the labour market in Czechia and whether there is a trend that continues to this day.

A paper by Lee, Schmidt-Klau and Verick (2020) found that the negative impact of covid-19 restrictions was not equal among different demographic groups. Using global data, they found that the most affected was the youngest group of workers followed by the oldest age group. Webster, Khorana and Pastore (2022) emphasize deepening gender inequalities caused by covid-19 restrictions. Inspired by these papers I am going to include aspects like gender or education into my analysis and I will focus on assessing different impacts on different groups of people according to their socio-demographic characteristics. Results from Canadian labour market show that another characteristic determining the differential impact of covid-19 is the original (i.e. pre-covid) employment sector. Findings of Lemieux, Milligan and Schirle (2020) suggest unequal impact on employment in different sectors of economy. Intuitively, more affected are sectors where interpersonal interaction is essential and those which require international travel.

I will investigate whether the above mentioned research findings also apply to the Czech Republic. I will use Czech data and I am going to use them to replicate some of the results from the above-mentioned foreign studies. I will research what impact did pandemic restrictions have on employment of different age groups and I will try to reject or confirm the hypotheses that comes from the foreign papers that the youngest age group belongs to the most heavily affected.

Similarly, I will examine whether there are any gender differences in employment changes during covid-19 period. I am going to do research on existing studies from Europe and
from the world. Since covid-19 hit every country there is relatively plenty of literature on this topic.

Hypotheses:

1. Hypothesis #1: Covid-19 restrictions had a significant impact on employment structure.
2. Hypothesis #2: The impact of covid-19 restrictions has had a disproportionate impact on groups of people based on their socio-demographic characteristics.
3. Hypothesis #3: There are significant differences in labour market changes between individual parts of Czechia, depending on the structure of their economies.

Methodology:

In my thesis the main source of data is the Labour Force Survey collected by the Czech Statistical Office, which has a repeated cross-sectional structure. I am going to use OLS regression and Diff-in-diff estimation to compare sectors strongly affected by covid-19 restrictions and sectors weakly affected. The same approach can be used to identify the period-to-period changes in labour market and filter out the effect of covid-19 restrictions.

I will perform a linear regression where I investigate the specific structure and its changes during covid-19 period. My focus is going to be on gender, education, and age characteristics of employment structure during the specific time period.

To estimate the effect on labour market activity I will use the below stated equation.

$$y_{¿} = \beta_0 + \beta_1 covid_{¿} + X_{¿}\Gamma + u_{¿}$$

where $y_{¿}$ is a variable capturing labour market activity of person i in period t (either an indicator whether person i works or person's i total hours worked), covid is a dummy variable indicating whether observation it comes from a covid affected period, and Xit is a vector of socio-economic characteristics of person i observed in period t. This equation will be estimated on the whole sample of Czech adults and on subsamples defined by age, gender or education levels.

Alternatively, (i.e. instead of working with subsamples) I can add interaction terms to the regression. This would make the equation look like this (the case when we investigate if covid-19 had different impact on men and
women):

$$y_{¿} = \beta_0 + \beta_1 covid_{¿} + \beta_2 covid_{¿} \times femal e_{¿} + \beta_3 femal e_{¿} + X_{¿}\Gamma + u_{¿}$$

With detailed data it is possible to use diff-in-diff estimation. As I mentioned above, the results from foreign studies suggest there is a different impact on specific sectors of economy. For example, tourism was affected quite heavily. Knowledge of structure of economy of particular areas enables to compare them with areas with different type of prevailing sector to estimate the difference in impacts. As a control group for diff-in-diff estimation I will use areas with prevailing industry sector. As a treatment group I will use areas with significant share of tourism and hospitality facilities which were affected the most. The hypothesis I am going to test is whether the covid-19 restrictions had more severe impact on treatment group. In case I will find indeed that there is a disproportionate impact between regions then this will be an evidence that it is caused by a structure of the region's economy.

Expected Contribution:

One result of my thesis is an estimation of how much the labour market structure was affected by covid-19 restrictions. I expect to provide an estimation of changes in structure of employment. This could provide a recommendation for public policy. Identification of the most vulnerable groups in pandemics, whether by age, gender or sector of the economy, could have its contribution in providing better information for planning any potential future lockdowns in case of a new covid-19 wave or in case of a new pandemics.

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1. Introduction

When the world was hit by COVID-19 outbreak in late 2019, it was an unprecedented situation from the point that it was a crisis that affected indiscriminately the whole world. Especially in Southeast Asia region this brought back memories from less than 20 years ago when SARS appeared. During the SARS outbreak, many countries implemented various restrictions and measures to control the spread of the virus. These measures included travel restrictions, border closures, and quarantines for individuals who were suspected of having SARS or who had been in contact with SARS patients. However, the SARS outbreak in 2002-2003 was limited and restrictions has never reached such intensity as in the case of COVID-19.

The COVID-19 pandemic was caused by the SARS-CoV-2 virus and has affected millions of people worldwide since it first emerged in late 2019. The outbreak was first identified in Wuhan, China, and quickly spread to other countries, leading the World Health Organization to declare a global pandemic in March 2020. In response to the COVID-19 outbreak, many countries around the world implemented various public health measures, including lockdowns, social distancing, and wearing masks, to slow the spread of the virus.

Clinical trials of COVID-19 vaccines began in mid-2020. The first vaccines were authorized for emergency use in December 2020, with many countries beginning their vaccination campaigns shortly thereafter.

However, the pandemic has also had significant social and economic impacts, with many countries experiencing significant disruptions to daily life, including the closure of businesses and schools. The pandemic has also highlighted existing health disparities and inequalities, with marginalized communities and those with pre-existing conditions at a higher risk of severe illness and death from COVID-19 (Kantamneni, 2020).

If we focus only on the economic aspects of the COVID-19 outbreak, we are dealing with the disruption of global supply chains, restrictions on travel, stock market fluctuation, oil price instability etc. Almost all sectors of the economy experienced a negative impact of either the

spread of COVID-19 or by restrictions connected with that. According to the World Bank, the decline of global GDP was 3,1% in 2020 (World Bank, 2023).

Another aspect was a significant rise of unemployment in many countries. As a result of the COVID-19-induced job losses, unemployment rates rose sharply in many countries.

Job losses had multiple sources:

- COVID-19 restrictions forced many businesses to close.
- Disruption of supply chains caused many direct job losses in industries that relied on international trade.
- Tourism was especially hard hit, which caused many providers of tourist services to close (hotels, restaurants, airlines, etc.) (Bureau of Transportation Statistics, 2022).
- Mass events were in many countries forbidden during the pandemic. This impacted entertainment, events, and hospitality.

Nevertheless, the impact of COVID-19 on unemployment was not uniformly positive across all countries. According to Su, Dai, Ullah, and Andlib (2022), while several major European economies experienced an increase in unemployment due to COVID-19, Italy exhibited a contrasting outcome. The reason behind this disparity was that the restrictions imposed by COVID-19 resulted in the creation of more online jobs than were lost. On the other hand, in the US, for example, the unemployment rate rose from 3.5% in February 2020 to a peak of 14.7% in April 2020 (Employment Situation News Release, 2020).

The economic impacts of COVID-19 restrictions, like health impacts, had a disproportionate impact on various demographic groups. The main finding of Alon, Doepke, Olmstead-Rumsey and Tertilt (2020) for the USA is that women have disproportionately suffered from the economic impact of COVID-19. The pandemic has widened the gender gap in employment, with women experiencing more severe employment losses compared to men. Women with children have been particularly affected, as they had to take on increased caregiving responsibilities due to school and day-care closures. This may have led to their reduced labour market involvement (Hupkau and Petrongolo, 2020).

Unemployment in Czechia has never reached, even during the past crises (Great recession 2008/09, monetary crisis 1997/98) critical levels (Vejvodová, 2013). The Czech statistical

office collects data, among many other areas, about unemployment. According to its data the unemployment in Czechia has never surpassed 10 % line since the establishment of the independent Czech Republic in 1993. Not only in Europe but also in the rest of the world, it is a significant achievement for an economy that was in nineties still going through economic transformation from central planning to market regime in the nineties.

However, it is unquestionable that the local crisis in 1997, the global crisis in 2008, and COVID-19 in 2020/21 had some impact on the performance of the economy and on the level of unemployment in Czechia. Notably, the GDP experienced a decline of -0.5% and -0.4% in 1997 and 1998 respectively, followed by a significant drop of -4.7% in 2009. However, the most impactful downturn was in 2020, with a decrease of -5.5% (World Bank, 2023). This data highlights that, excluding the years immediately following the change of regime, the COVID-19 shock stands as the most severe in the history of independent Czechia.

The severity of the unemployment issue experienced during the COVID-19 outbreak differs from the earlier crises. Specifically, between 1997 and 1999, unemployment experienced a significant increase of 4.2 percentage points. In comparison, the change from 2008 to 2009 resulted in a rise of 2.3 percentage points. The COVID-19 crisis, spanning over two years, led to a relatively modest increase of only 0.8 percentage points in unemployment (World Bank, 2023).

Unemployment is an essential topic in political debates and discussions on socio-economic conditions among the working population. This leads to my first hypothesis: to investigate **whether there was a significant impact of COVID restrictions on employment levels in Czechia.** I aim to determine which part of the COVID period experienced the most significant decrease in employment. Despite Czechia's reputation for low unemployment, the COVID pandemic had a significant impact on the economy. Czechia's involvement in global supply chains lends credibility to concerns about declining employment.

The labour market is not fully flexible, so employment rates might not fully reflect adverse changes in the labour market. That's why I included the variable "hours worked" in my analysis to **check whether there was a decrease in the number of hours worked.** It is not unusual for struggling companies to put their employees on forced leave while keeping a contract with them, so they are ready to resume production when conditions improve. That

could be the case for Czechia because the excess demand for labour makes it difficult for companies to rehire new workers.

COVID restrictions influenced childcare facilities, among other things, which according to the above-mentioned papers, put a greater burden on women. **To measure the impact on women**, I used two main variables as described in the previous paragraph. Academic research as well as empirical data suggested that the risk of a severe course of COVID increases with age, putting older people at greater risk. This might motivate them to leave or reduce their work activity. On the other hand, junior employees might be the first to be made redundant in case of reducing staff due to economic contraction, or they may work in part-time jobs under various types of contracts. **This suggests that age might be a determinant of different intensity of COVID impact.**

Adapting to the changed working conditions connected anti-spread measures created a task for companies to reduce interpersonal contact between its employees and customers. Some jobs especially in hospitality sector had limited opportunities to adhere these new rules, on the other hand many office jobs developed the home office system which allowed them to reduce contact between people to minimum. Since these jobs are often connected with certain level of required education **it might be one of the potential reasons that drive differences among groups of people with different levels of education.**

Czechia hosts around a million foreigners some of them are living in Czechia permanently some only temporarily and there also a large number of war refugees. It is reasonable to assume that people from different countries have different employment characteristics. **I tested for differences regarding employment and hours worked for foreigners as well as for selected countries** whose citizens make a significant part of working force in Czechia.

Since COVID impact differs by economic sectors it is possible that regions with different composition of economy experienced different development of COVID. In Prague is concentrated large portion of economic performance of Czechia and important share of city's output makes services and hospitality facilities connected to tourism. **I tested for difference between Prague and rest of the country.**

To test the mentioned hypothesis, I used a linear probability model for employment and a weighted OLS estimator for hours worked testing. For both calculations, I also created an

event study for the entire time period of my sample. Additionally, in the appendix, I added estimation with zero hours. This could capture the changes in employment where workers had zero hours worked but were still considered employed.

Results indeed confirmed that the Czech economy and labour market went through a tough period, though it was short as indicated by the latest developments. As expected, the lack of workforce from the pre-COVID period caused employment changes in Czechia to be small. Subsequently, the differences across demographics were only minor in terms of employment. On the other hand, changes in the number of hours worked were more significant, especially during the COVID period (particularly in the second quarter of 2020, at the very beginning of the pandemic). Similarly, the different impacts on various groups in society were more significant as well.

2. History of pandemics

The risk of virulent diseases is actual for the whole history of humanity. Although in recent centuries and particularly in the last century the enormous progress in the field of medicine was achieved, the possibility of epidemics or even pandemics is not only in poor developing countries but as we learned during the COVID-pandemic, the risk of global disease is relevant also in the most developed countries with quality healthcare system.

2.1. Black Death

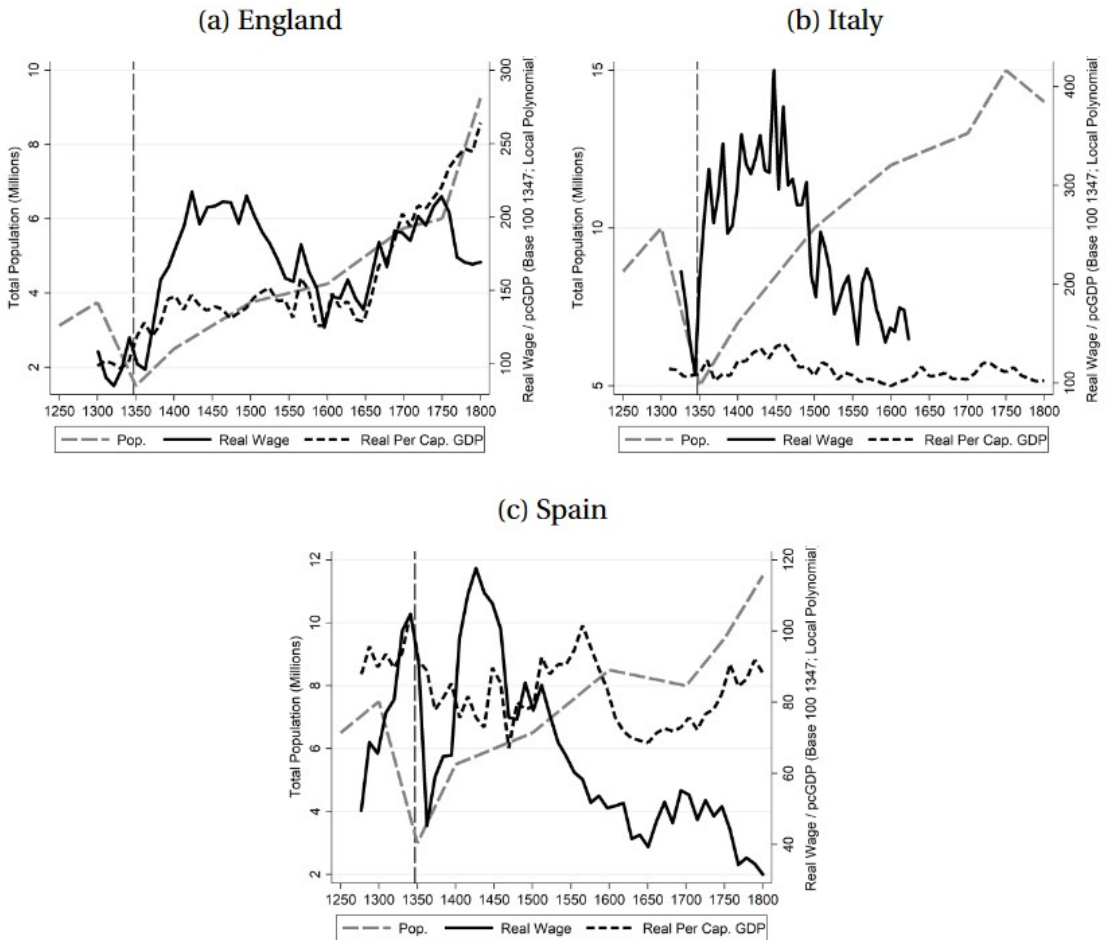
The Black Death, also known as the bubonic plague, was a devastating pandemic that swept through Europe in the mid-14th century. The economic impact of the Black Death was significant, as it caused a severe labour shortage and disrupted trade and commerce.

The impact of the Black Death in terms of economic development was examined in paper Jedwab, Remi, Johnson, and Koyama (2022). The fact that the epidemics that hit Europe gradually between 1347-1352 killed around 40 % of population of that time meant a huge demographic shock to the economy and labour market. Before the epidemics European economies were relatively abundant in labour force and scarce in land and capital. This implies high interest rates, low relative wages, and high rents of land. After loss of 40 %

population this situation changed, and labour became scarce. The impact was intuitive, increase of wages and decrease of interest rate.

Another interesting knowledge is the long-term impact of such a shock. In southern parts of Europe, the later recovery and increase meant eventually decline of wages and increase of interest rate. This was the base for subsequent divergence in economic growth.

Figure 1: The impact of the Black Death on real wages and real per capita GDP



Source: Jedwab, R., Johnson, N. D., & Koyama, M. (2022). The economic impact of the Black Death. *Journal of Economic Literature*, *60*(1), 132-178.

If we compare today's pandemics of COVID-19 and the Black Death, both events had a big impact on economy. However, in case of plague the main shock was the actual loss of a significant part of population, but in case of COVID-19 the biggest disruptions are rather connected with restriction that limits the spread the disease.

2.2. Spanish flu

The Spanish flu was a deadly pandemic that occurred after the World War I in 1918-1919. It infected around 500 million people and caused an estimated 50 million deaths (Saul, 2021). In contrast to other diseases, the Spanish Flu predominantly impacted younger and healthier individuals. The pandemics of Spanish Flu was one of the deadliest pandemics in modern history.

The pandemics had huge impact on global economy, especially on European economies directly involved in the war. In paper from Burdekin (2021) was estimated that death toll of the epidemics caused significant drop in stock rates in US and in some European countries. Although at that time there was not only epidemics but also the world war that had just ended. However, the estimated results are robust to the fact whether the war occurred on the soil of the specific country.

Other study Markel (2007) that examined 43 American cities during an outbreak of Spanish flu concluded that cities that adopted sufficiently extensive restrictions in timely manner were more likely to have lower number of deaths per 100 000 inhabitants. Nonpharmaceutical interventions were implemented to limit the spread of the disease. Those restrictions were for example school closures, public gathering bans, mask mandates or business closures. Isolation and quarantine were also often used to reduce the spread. Interesting fact is that those restrictions are the same as we experienced during the recent COVID-19 pandemics.

As was mentioned above the economic impact of Spanish flu, like the impact of the Black Death, was in fact labour supply shock. Although the mortality in case of Spanish flu was far lower than during plague, it was enough to observe its effect on labour market and on economy in general. In study Karlsson, Nilsson and Pichler (2014) authors combined of precise Swedish data records with the fact that Sweden was not a participant in the world war I. The Spanish flu epidemic caused around 34,000 deaths in Sweden and disrupted the economy, particularly in healthcare and agriculture. The Swedish government implemented policies to mitigate the impact.

The results from Sweden confirmed that capital gains went down at that time with statistical significance. However, another intuitive outcome of the labour supply reduction – increase

of wages, was not confirmed. A possible explanation for that could be, as authors stated, substitution of deceased employees by other people that were not previously working (in the paper only industrial sector was researched, so it is possible that either they were not working or were working in different sector). These people were often women and minors whose labour supply was significantly affected by the epidemics. A larger share of minors was considered as a reason why the average quality of industrial workers decreased. This effect resulted in nulling the expected effect of wage increase.

2.3. SARS/MERS

Severe Acute Respiratory Syndrome (SARS) is a viral respiratory illness caused by the SARS coronavirus (SARS-CoV). The disease was first detected in China in November 2002 (Feng *et al.*, 2009). The outbreak in East Asia in 2003 had a notable economic impact due to the implementation of strict anti-epidemic measures. The tourism, food, and travel industries were particularly affected. China and Singapore experienced a significant decline in tourism as a result of travel restrictions and fear of the disease (Tanaka, 2022).

In comparison to today's pandemics the SARS outbreak was far more limited. However, it was enough to influence stock markets and market expectations. Paper from Chen *et al.* (2009) examines that the SARS outbreak had in fact mixed impact on Taiwanese economy. On the negative side, the SARS outbreak had a significant impact on Taiwan's tourism industry, with a decline in international travel. The outbreak also disrupted trade and commerce, particularly in the retail and service sectors, and resulted in increased healthcare costs for treating infected patients and preventing the spread of the disease. The positive impact was, not mentioning gained experience of dealing with virulent disease, but also increase in stock value of biotech firms and their development.

Another paper Fan (2003) emphasizes that SARS disease was not from medical statistic point of view disastrous illness measured by relatively low mortality[1] and morbidity[2]. The economic impact on economies, predominantly in southeast Asia where the outbreak happened, was mainly driven by reaction of government and public on the risk of further

[1] The mortality rate in relation to a particular disease refers to the rate at which people in a particular demographic group die from that disease.

[2] In epidemiology, morbidity refers to the occurrence of illness or disease in a population, often measured by the number of cases or the prevalence rate of a particular disease or condition.

spread of the virus. The paper states for example lack of relevant information during the rapid outbreak and also media coverage with modern communication technologies like internet already in place. Those are in fact the issues that our world dealt with during the COVID-19 outbreak.

Keogh-Brown and Smith (2008) found that economic impact on labour market in countries was mainly concentrated in branches mostly hit by restrictions and by fear from new disease in society. Those were especially businesses connected with tourist industry like for example hotels or restaurants. However, due to the short duration of the outbreak the shock was very short. In many countries that had some cases of SARS the fall in GDP lasted only for a month. This was too short for any observable and long-lasting changes in labour market. The authors called this as a "bounce-back".

3. Background

COVID-19, also known as the coronavirus disease 2019, is an infectious respiratory illness caused by the SARS-CoV-2 virus. It was first identified in Wuhan, China in December 2019 and has since spread worldwide, leading to a global pandemic.

3.1. Early reaction

The COVID-19 outbreak began in December 2019 in Wuhan, China. The first cases were identified as a cluster of pneumonia cases of unknown cause. Shortly after it became clear the first epicentre of the disease. Initial patients were reported to have had links to the Huanan Seafood Market in Wuhan (Pekar *et al.,* 2022).

On January 9, 2020, Chinese authorities identified the cause of the outbreak as a new variant of coronavirus, which was subsequently named SARS-CoV-2. The virus quickly spread throughout China (World Health Organization, 2020a). By January 30, 2020, the World Health Organization (WHO) declared the outbreak a Public Health Emergency of International Concern (World Health Organization, 2020b). The virus had spread to several other countries, including Thailand, Finland, Japan, and South Korea (World Health Organization, 2020c).

The early spread of COVID-19 in Europe was first reported in late January and early February of 2020 (Spiteri *et al.,* 2020). The first confirmed cases in Europe were identified in France, Germany, and the United Kingdom. Despite some early anti-epidemics measures, COVID-19 continued to spread quickly through the world. In Europe the epicentre became Italy, especially the northern part of the country where quarantine was imposed (Idnes, 2020). Later, on March 9, 2020, the whole country was put under quarantine (IRozhlas, 2020). However, despite the lockdown Italy quickly became one of the worst affected countries in Europe.

In the latter part of 2020, a second wave of COVID-19 infections began to emerge in many countries, including Europe, the Americas, and Asia. This second wave was often more severe than the first, with higher numbers of cases and fatalities reported in many countries. In response, many countries implemented stricter measures, such as curfews and travel restrictions, to control the spread of the virus.

3.2. Later development

In 2021, the pandemics continued to spread thorough the world. Most of the states had implemented a lot of restrictions in order to limit the spread. The new risk appeared, however. For viruses it is easy mutate and develop new features that can potentially develop higher virulency, increased transmissibility and, in some cases, higher resistance to treatments or immunity acquired through previous infections or vaccination.

The end of 2020 brought some hope for returning back to pre-COVID period. Medical trials for vaccination took place in laboratories across Europe, America, and China. Vaccines developed by companies such as Pfizer-BioNTech, Moderna, AstraZeneca, and Johnson & Johnson demonstrated their effectiveness in protecting against COVID-19 (ČT, 2020a). Later they received certification for global distribution. However, the distribution of vaccines highlighted disparities among nations. In the early stages of the vaccination process, a race for access to vaccines ensued among countries, with wealthier regions of the global north gaining more significant advantages in securing vaccine supplies. According to a United Nations report from April 2021, approximately 82% of the produced vaccines at that time were utilized by high-income or upper-middle-income countries, while only 0.2% reached low-income countries (World Health Organization, 2021).

Relatively quickly increasing vaccination coverage meant moderate loosening of measures. For example, some travel restrictions were lifted for people who had completed vaccination or provided negative COVID test results. On the other hand, research indicated that the protection offered by vaccines tended to diminish after 5-6 months following vaccination. However, administering booster shots proved effective in restoring much of the lost efficacy (McKeigue *et al.,* 2022).

Throughout 2021, the global travel industry continued to deal with the impact of COVID-19, particularly in response to the emergence and spread of new variants and new waves of spread connected with that. These variants often prompted countries to impose travel restrictions on individuals traveling to or from specific regions. The implementation of anti-COVID measures heavily affected travel, with significant losses carried over from previous season 2020. However, as the number of new infections decreased during the early summer of 2021 (WHO), coupled with the ongoing vaccination campaigns, limited tourism was possible. Many countries began developing vaccination apps to facilitate the verification of vaccination status, making it easier for travellers to provide proof of immunization (Cechl, 2021).

According to ongoing research by the International Monetary Fund (IMF) on tourism in a post-pandemic world, the first half of 2020 saw a substantial decline in global tourist arrivals, reaching up to 65% decline in tourist arrivals. This decline became particularly pronounced since April, essentially halting tourism activities. To put this into perspective, during the global financial crisis, tourist arrivals dropped by 8 percent, while the SARS epidemic of 2003 saw a 17% decline (IMF, 2020). The speed of recovery varies across countries. For instance, as of 2022, Thailand was still significantly below pre-COVID levels in terms of tourist arrivals (Loe, 2023). In contrast, Croatia experienced a remarkable rebound in 2022, being not far from matching the record results seen in 2019 (Croatiaweek, 2022).

From an economic perspective, European countries have shown a remarkable recovery from the impact of the COVID-19 pandemic by May 2023. Unemployment rates in the European Union have even fallen below pre-pandemic levels, indicating a strong labour market rebound (Eurostat, 2023). Additionally, the GDP growth, which experienced a significant decline in 2020, has not only been restored in 2021 but has continued to grow despite facing subsequent crisis in 2022 (Eurostat).

3.3. COVID-19 in Czechia

Czechia was unable to evade the impact of the initial wave of the COVID-19 pandemic in early 2020. Official statistics report that by May 2023, the total number of COVID casualties had reached 42,791, with approximately 4.6 million individuals having contracted the disease. The most significant period of COVID-19 spread occurred during the winter of 2020-2021, characterized by three notable surges in November, January, and March (Zrůst, 2020).

3.3.1. Outbreak of COVID-19 in Czechia

The early outbreak of COVID-19 in Czechia occurred in March 2020. The first three cases of COVID-19 were reported in the country on March 1, 2020, all of which were people who had travelled to Italy (IRozhlas, 2020). Following the first confirmed cases, the Czech government implemented a series of measures to slow the spread of the virus, including closing schools, banning public events, and restricting travel (Novinky, 2020).

By end of March, the number of confirmed cases had reached over 3000 (Idnes, 2023), and the government imposed a nationwide lockdown on March 16, 2020 (Min. zdravotnictví, 2020a). The lockdown included the closure of non-essential shops and businesses, school closing, as well as restrictions on movement and gatherings.

Despite these measures, the number of cases continued to rise. The situation in Czechia worsened throughout April and May, with the country becoming one of the worst-hit in Europe during the next waves of the pandemics.

3.3.2. Vaccination

In Czechia, the vaccination campaign against COVID-19 began in December 2020, following the approval of vaccines by the European Medicines Agency (EMA) (Akhtar, 2020), (Seznam Zprávy, 2021).

Czechia's vaccination program followed a phased approach, prioritizing individuals based on their risk of exposure and vulnerability to severe illness. Initially, frontline healthcare workers, residents and staff of long-term care facilities, and the elderly were among the first

groups to receive the vaccine. Subsequently, eligibility expanded to include other high-risk individuals, essential workers, and the general population (Otto, 2020).

3.3.3. Restrictions

In response to the first confirmed cases of COVID-19 in Czechia in early March 2020, the government swiftly implemented restrictions to mitigate the spread of the virus. Recognizing schools as particularly vulnerable settings for potential community transmission, stringent measures were put in place from the outset. The Ministry of Health issued emergency regulations on March 11, 2020, resulting in the closure of schools (Min. zdravotnictví, 2020b). Restrictions on public gatherings, restaurants, and shops with non-essential goods closely followed (Vláda ČR, 2020a). The government also closed borders for foreign citizens, and all returning Czech citizens had to follow arrival quarantine. This measure aimed to limit non-essential activities and reduce the risk of COVID-19 transmission. At the same time, towns Uničov, Litovel, and Červenka were closed and isolated due to the incidence of COVID cases in these places. The closure lasted for two weeks. As an anti-spread measure, wearing a mouth cover when outside was ordered. In late March, Czechia saw its first confirmed case.

In late April, the first gradual lifting of restrictions began (Aktuálně.cz, 2022). Traveling abroad was resumed under specific conditions. Czechia imposed travel bans or restrictions on countries or regions with a high number of COVID-19 cases (Lidovky, 2020). These areas were often categorized as "red zones," and travel to and from these destinations was limited and came with additional requirements (ČT, 2020b). Travelers arriving in Czechia from certain countries or regions were required to undergo mandatory quarantine to prevent the transmission of the virus (MVČR).

In May, the state of emergency was ended, and schools were allowed to resume in-person teaching. During the summer of 2020, the majority of the restrictions from the spring were lifted, and public gatherings were again allowed with limitations on the number of people.

In late summer 2020, the number of newly confirmed cases of infections began to rise again (iDnes.cz, 2024), prompting a tightening of measures that started with the mandatory wearing of face masks. In September, the opening hours of restaurants and bars were

limited to 22:00. On October 5th, a new state of emergency was declared, leading to new measures aimed at countering the second wave of COVID-19 (Vláda ČR, 2020b).

The renewed spread of COVID-19 necessitated the closing of schools at all levels once again. Since October, almost all schools, with minor exceptions that varied over time, were closed, and lessons were delivered online. During October 2020, a new set of anti-COVID measures was imposed, including closures of cultural venues, shops, restaurants, and hotels. Face mask rules became even stricter, and in late October, a curfew from 21:00 to 4:59 was put in place. In November, the number of daily new cases decreased, potentially as a result of the restrictions. This led to a limited easing of COVID measures before Christmas 2020. However, by the end of December, the pandemic's development started to worsen again, resulting in the third closure of restaurants, bars, museums, libraries, etc. The turn of 2020 and 2021 marked not only a peak of another wave of COVID-19 but also the introduction of a vaccination campaign.

With further worsening despite all anti-COVID measures in February and March 2021, a new limitation of movement was imposed. Traveling between districts was prohibited, with exceptions for essential travel such as for work, medical reasons, or office-related matters. Eventually, the epidemiological situation began to improve, and in April, the state of emergency was revoked. At the same time, schools were opened for the lowest grades as the situation was improving (Hejzlarová et al., 2021). In May, a series of gradual easing measures for schools were implemented, varying in each region according to its epidemiological situation. From May 17, elementary schools were opened throughout the country. A similar situation applied to high schools. The final return to normal school operations happened with the start of the new school year in 2021, although wearing face masks and regular testing remained obligatory (Bazjuková, 2022). Czechia's duration of school closures during this period was among the highest compared to other European Union countries (UNESCO, 2021).

With the increasing number of vaccinated people and those who have contracted the disease, measures became more selective, allowing activities with a greater risk of disease transmission only for people with COVID certificates of vaccination (MZČR). Later on, no additional general COVID precautions were imposed, which is why I marked this as the end of the COVID period in my thesis.

Although the toughest measures were lifted in mid-2021, the autumn of 2021 and the beginning of 2022 marked the worst period in terms of the number of new infections. Paradoxically, the very beginning of the COVID pandemic in spring 2020 brought (MZČR, 2024), from today's perspective, only very modest numbers of infected individuals but had the harshest impact on the labour market, as I found out in my work.

4. Previous research

The COVID-19 pandemic was an unprecedented and unforeseen shock, with similarities in its impact only to the Spanish flu pandemic of 1919. Prior to this, various localized outbreaks of diseases such as SARS, MERS, and bird flu had occurred. The rapidity of the COVID-19 outbreak was notable, with the initial cases reported in China in January, leading to the city of Wuhan being placed under closure. By February, Europe had its first cases, and by the end of March, the entire continent was in lockdown. This swift progression resulted in limited research being conducted on the topic at the time. Consequently, the pandemic opened up numerous ways for studying the impact of COVID-19 itself, or more precisely, the consequences of the implemented restrictions on society.

4.1. Inequalities

Despite the wide-ranging closures that affected numerous sectors of the economy and left very few individuals untouched by the restrictions, the ultimate impact varied significantly across different groups of employees.

4.1.1. Gender inequalities

There are many studies whose aim was to research potential differences between genders. Although most of them suggest that women were generally more likely to fare worse than men, a closer look at the differences might reveal substantial variations among women and, in some cases, even an opposite response to COVID-19.

According to Lee, Schmidt-Klau, and Verick (2020), the adverse effects of the COVID-19 pandemic have disproportionately impacted women. This discrepancy can be attributed to

the varying distribution of male and female employees across different economic sectors. The researchers estimated that approximately 40% of employed women globally work in sectors that were significantly affected by the pandemic restrictions, compared to around 36% of men.

One measure of potential differences is, for example, whether the individual is at work or how many hours they actually worked. Other measures, more difficult to measure, are time spent on childcare or stress experienced during the pandemic. An example could be the healthcare and social services sectors, which emerged as the busiest and most critical industries in combating the disease. Around 70% of the workforce in these sectors comprises women. These workers have been on the front lines, facing the highest risk of disease transmission.

The primary manifestations of COVID-19 restrictions on the labour market included unemployment, reduced working hours, and the transition to remote work. A study conducted by Reichelt, Makovi, and Sargsyan (2021) examined data from the United States, Germany, and Singapore, revealing that women faced a higher likelihood of being impacted than men across these categories by 3, 5, and 7 percentage points respectively.

Even in the present day, there remains a significant imbalance in caregiving responsibilities, with a greater burden placed on women. Gender stereotypes play a substantial role in shaping the division of household chores within couples. In cases where a woman experiences unemployment, the authors of the mentioned study found that she tends to adopt a more traditional gender-role attitude, leading to an increased availability for housework. Conversely, when a man goes through a period of unemployment, he tends to shift towards a more egalitarian gender-role attitude.

Regarding personal consumption, savings, job loss, and income, Dang and Nguyen (2021) discovered that COVID-19 restrictions had a more severe impact on women. This disparity can be attributed, in part, to differences in the participation rate in the service sector, which was heavily affected by the restrictions. Additionally, Oreffice and Quintana-Domeque (2021) identified that having a child amplifies the reduction of hours worked by women, while conversely, the workload of women in terms of childcare increased compared to that of men.

On the other hand, a study by Goldin (2022) using data from the USA labour market points out that the major division line lies more in education than gender. While women were generally hit harder, the inclusion of women's education revealed that the most affected group were non-college-educated women. Women with a college education did not experience much worse consequences than men; in some measures, they even fared better. Although this study did not suggest that there was no disproportional impact on women, it highlights that other characteristics are important in identifying the most affected demographic group.

Overall, from the mentioned studies it is clear that the likelihood of inverse impacts of lockdown is higher for women then for men on average.

4.1.2. Age inequalities

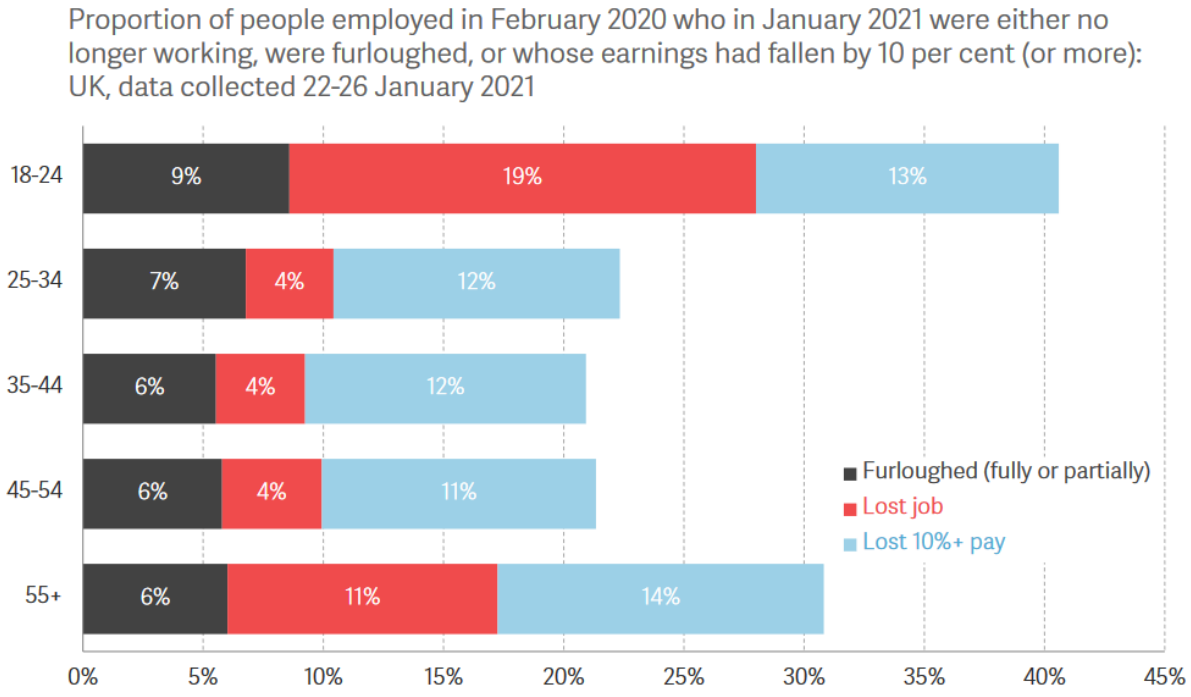
Although the impacts of COVID-19 restrictions on gender differences have been extensively studied, there are other subgroups that have been affected in varying ways, distinct from the majority population. In their research, Crossley, Fisher, Levell and Low (2021) specifically focused on the influence of age in adapting to the new environment brought by sudden and persistent closures.

During the first wave of the pandemic in spring 2020 in the UK, the younger employed individuals (aged 20-29) experienced a significant decline that surpassed the middle-aged group (aged 30-49) by 8 percentage points. Conversely, the oldest working group (aged 50-69) did not undergo a drastic transformation but rather entered into a steady downward trend that persisted without any subsequent recovery. In contrast, the youngest generation witnessed a fluctuation that ultimately brought them back to approximately the same level as in February 2020.

When considering the number of working hours, both the youngest group (aged 20-29) and the oldest group (aged 50-65) experienced a more substantial decline during the period from February to April 2020 compared to the middle-aged group (aged 30-49). However, the recovery appeared more promising for the younger generation, as they gradually approached pre-COVID values by March 2021 (Crossley *et al.,* 2021).

The hypothesis regarding the adverse effects on younger workers is supported by another study conducted by Gustafsson (2020) using data from the UK in May 2020, during the early stages of the pandemic. Gustafsson's research specifically targets an even younger age group, namely individuals aged 18-24. The findings of the study align with the previously mentioned observations, indicating a similar pattern of impact on this age cohort. Among employees aged 18-24 (excluding students), one-third have either lost their jobs or been placed on furlough, whereas this figure stands at one-in-six for adults in their prime working age. Furthermore, these experiences have been more prevalent among employees in non-standard employment arrangements.

Figure 2: Young people have borne the brunt of the COVID-19 labour market hit



Source: Sehmi, R., & Slaughter, H. (2021). Double trouble: Exploring the labour market and mental health impact of COVID-19 on young people. *Resolution Foundation*, *13*.

Sehmi and Slaughter (2021) have uncovered the underlying factors that drive these disparities, primarily attributing them to the specific occupations held by a significant number of young individuals. Many young people are employed in customer-oriented roles found in sectors such as hospitality, retail, and leisure. Unfortunately, these occupations involve direct interaction with customers, which became undesirable and restricted by health authorities in response to the pandemic.

However, the impact of these restrictions was not evenly distributed among young people. Minorities and men experienced a higher degree of adverse consequences. This unequal distribution further exacerbates the existing societal gaps among different demographic groups.

4.1.3. Education inequalities

According to a study conducted by Crossley, Fisher, Levell, and Low (2021), the impact of the COVID-19 shock varied among different educational groups. The findings indicated that individuals with higher education degrees experienced a relatively smaller negative impact compared to those with A-levels or GCSE qualifications. During the early stages of the pandemic in 2020, all three groups experienced a decline in unemployment, positive hours, and hours worked, reflecting the widespread impact on employment and work hours. However, individuals with higher education degrees were found to be more resilient to the shock, facing lower levels of unemployment and experiencing fewer disruptions in their working hours.

Interestingly, the study also revealed that the gap in unemployment rates between degree-level workers and those with A-levels narrowed during the lockdown period.

The results presented in the study by Anderton *et al.* (2021) align with the findings of the previously mentioned study and further support the notion of differential impacts based on education levels during the COVID-19 pandemic. According to this study conducted by the European Central Bank in the euro area, individuals with higher education did not experience any significant impact, while the effects gradually increased for lower skilled workers.

The authors attribute this gap in impact to the possibility of remote working or teleworking, which was more prevalent among jobs that require higher education. As a result, individuals with higher education qualifications were able to adapt and continue their work remotely, thus experiencing minimal disruptions. On the other hand, lower skilled workers, whose job roles may have required physical presence or face-to-face interactions, faced greater challenges, and potentially experienced more significant impacts.

5. Empirical approaches towards measuring the effects of COVID-19

5.1. Diff-in-diff method

Here are two examples of the diff-in-diff method being used in Ghana and Canada. In Ghana, the approach involves comparing regions with stringent anti-COVID measures to those with more relaxed measures, using a geographical comparison. Meanwhile, in Canada, the method aims to compare the percentage change in outcomes during the COVID-19 restrictions to the percentage change during a corresponding period in the pre-COVID year.

5.1.1. Ghana

The main aspect in Ghanian case (Schotte *et al.,* 2023) that the authors took advantage of is the nonequal restrictions that were implemented across the country. Following the outbreak, the primary centres of disease transmission were identified in Accra and Kumasi, both densely populated major cities. Stringent measures were implemented in these urban areas to contain the spread of COVID-19, encompassing travel bans between cities as well as the closure of numerous public institutions such as schools, universities, and private businesses.

To estimate the impact on the labour market, the researchers employed a diff-in-diff estimation method. The treatment group consisted of households located in the affected regions of the capital city Accra, and Kumasi. The control group was comprised of households from districts located outside these high-measure areas. Specifically, the survey data was collected from 19 treated districts and 59 control districts.

However, it is important to note that the assignment of districts to either the treatment or control group was not random. Both the treatment areas (Accra and Kumasi) are large cities with high population densities and a significant number of people traveling outside and inside the cities. This situation is not unique to Ghana and is observed in other countries as well. To address this issue, control districts were also selected based on their high

population density, requiring a minimum of 300 people per square kilometer. This approach enabled the inclusion of 20 control districts in the analysis.

The equation that was used:

$$Y_{idt} = \beta_0 + \beta_1 LOCKDOWN_d + \beta_2 \left(LOCKDOWN_d \times POST_{1t} \right) + \beta_3 \left(LOCKDOWN_d \times POST_{2t} \right) + \beta_4 X_i + \theta_t + \varepsilon_{idt}$$

In the analysis, the variable Y_{idt} represents the employment outcome of worker i in district *d* at time *t*. The binary variable $LOCKDOWN_d$ indicates the treatment status at the district level, with a value of 1 for districts subjected to lockdown policies and 0 for districts not under lockdown. The variables $POST_t$ and $POST_{2t}$ are dummy variables that take a value of 1 for the first and second post-treatment periods, respectively, and 0 for other periods.

The coefficients β_2 and β_3 correspond to the interaction terms between the treatment variable ($LOCKDOWN_d$) and the post-treatment period variables ($POST_t$ and $POST_{2t}$). These interaction terms allow for the estimation of the differences-in-differences (DID) effect of the lockdown policies on the outcome variables. By comparing the changes in the outcome variables for treated districts relative to control districts during the post-treatment periods, these coefficients provide an estimate of the impact of the lockdown policies.

To account for period-specific effects that may differ between treated and control districts, the analysis includes time-fixed effects represented by θ_t. These effects capture time-related variations in the outcome variables.

This study examined two main areas: the impact of restrictions on unemployment and the impact on earnings. In the final estimation, the authors accounted for worker-specific heterogeneity by including individual fixed effects.

Regarding changes in employment, the findings confirm the intuitive notion that individuals in areas under strict lockdown experienced a higher likelihood of job loss compared to workers in control areas. Interestingly, the study found a stronger impact on self-employed workers compared to wage workers, which aligns with previous research on the topic. However, it is important that a few months after the strictest lockdown measures were lifted

(around August/September 2020), the difference between the treatment group and the control group disappeared.

When examining the impacts across different industries, it was observed that sectors that rely heavily on interpersonal interaction (such as retail, hospitality, hair & beauty, and transport) exhibited a more pronounced decline compared to standard production industries. It is not surprising that the health sector experienced a slight increase, given its importance during the pandemic.

The analysis of changes in earnings yielded an interesting result: earnings in the control group (areas without lockdown) decreased more compared to the treatment group. This discrepancy may be explained by the study's design, which only included individuals with non-zero earnings. In the treatment group, there were more individuals with zero earnings, leading them to be excluded from the analysis.

5.1.2. Canada

In study Lemieux, Milligan, Schirle and Skuterud (2020) the early reaction of Canadian labour market was examined. As in previous paragraph Ghana served as an example of how the COVID-19 impact looked like in developing country, Canada is an illustration of high-income country's development in lockdown. The metrics of impact examined in this study were changes in hours worked and changes in employment.

The LFS (Labour Force Survey) is a monthly survey conducted by Statistics Canada, which samples approximately 54,000 households across the country. Their analysis specifically focuses on the months of February, March, and April 2020.

Important thing is that they decided to use employment rather than unemployment. Reason for that is to capture all changes in employment.

Following equation was used by the researchers. It is a diff-in-diff equation where the percentual change in Y over COVID period of early 2020 (February-April) is compared to change during the same period but in non-COVID year 2018. This serves as basis for comparison and includes potential periodical changes.

$$COVID-19\ Impact=(Y_{April\,2020}-Y_{Feb\,2020})/Y_{Feb\,2020}-(Y_{April\,2018}-Y_{Feb\,2018})/Y_{Feb\,2018}$$

During times of crisis, such as the COVID-19 pandemic, it is often the employees who bear the brunt of the impact, and this crisis was no exception. The reduction in hours worked was more substantial than in any previous crisis, including the Great recession of 2008/2009. Specifically, the aggregate hours worked between February and April 2020 witnessed a substantial decrease of 29%. To provide some context, this change was even greater than the 32% decline observed during the same period in 2018.

This decline in hours worked can be attributed to two factors: the reduction in the time spent at work (intensive margin) and the loss of employment (extensive margin). Over this period, the number of individuals employed dropped by 14%, which translates to approximately 2.5 million people. To make a comparison, this represents a 15% change from the same period in 2018.

When analysing the impact of the crisis on different subgroups, it becomes evident that both men and women experienced significant declines in hours worked, with percentages of 31% and 34% respectively. This is consistent with the results of other studies, which indicate that women were disproportionately affected compared to men. Additionally, the youngest working group (aged 20-29) faced the most severe consequences, with a 40% reduction in hours worked and a 25% decrease in employment.

Furthermore, an interesting observation arises when considering the caregiving responsibilities of women with children of different age groups. It appears that women with children under 12 years old experienced a greater burden than those with children aged 13-17 years.

It is worth noting that regional variations exist within Canada, although the reasons behind these differences are likely complex.

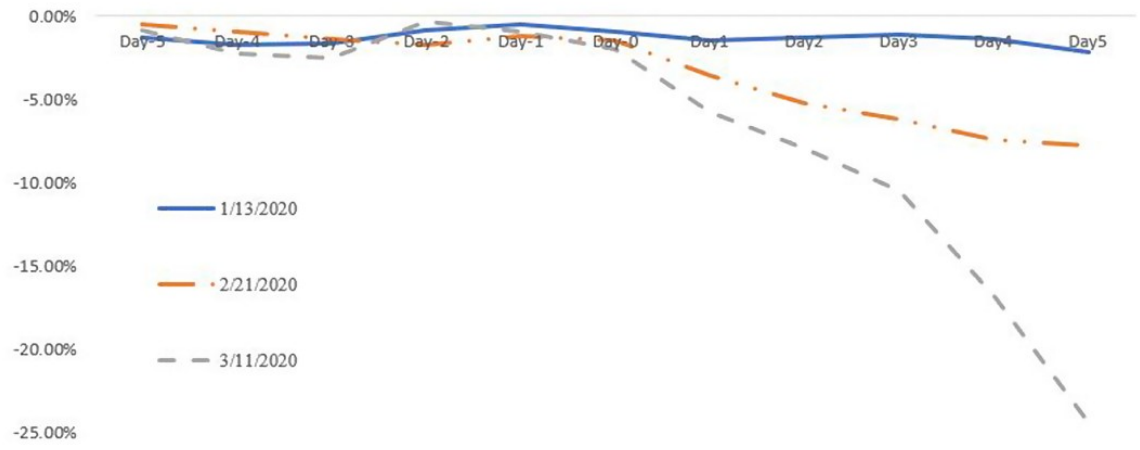
5.2. Event study

Event studies are widely used in finance. They are often connected with researching responses of stocks to events that have the potential to impact their value. In this context, the moment of an event was usually in early 2020 as the disease was quickly spreading

worldwide and governments were imposing restrictions. I illustrate this with two studies. Maneenop and Kotcharin (2020) conducted their research during the start of the COVID-19 pandemic, focusing on the airline industry, which is very vulnerable to this type of event since one of the first restrictions put in place often involves limitations on travel. It is reasonable to assume that market participants will react quickly to this type of event.

The authors defined three major events during the early phase of COVID-19. The first is the announcement of the first case outside China (January 13, 2020). The second was defined as the outbreak in Italy (February 21, 2020), and the last is the announcement by the World Health Organization (WHO) of a global pandemic outbreak and, at the same time, the prohibition of all flights between the USA and Europe (March 11, 2020). The plot below presents a time window of a range of plus or minus 5 days from the specified event.

Figure 3: Average cumulative abnormal returns for the entire sample



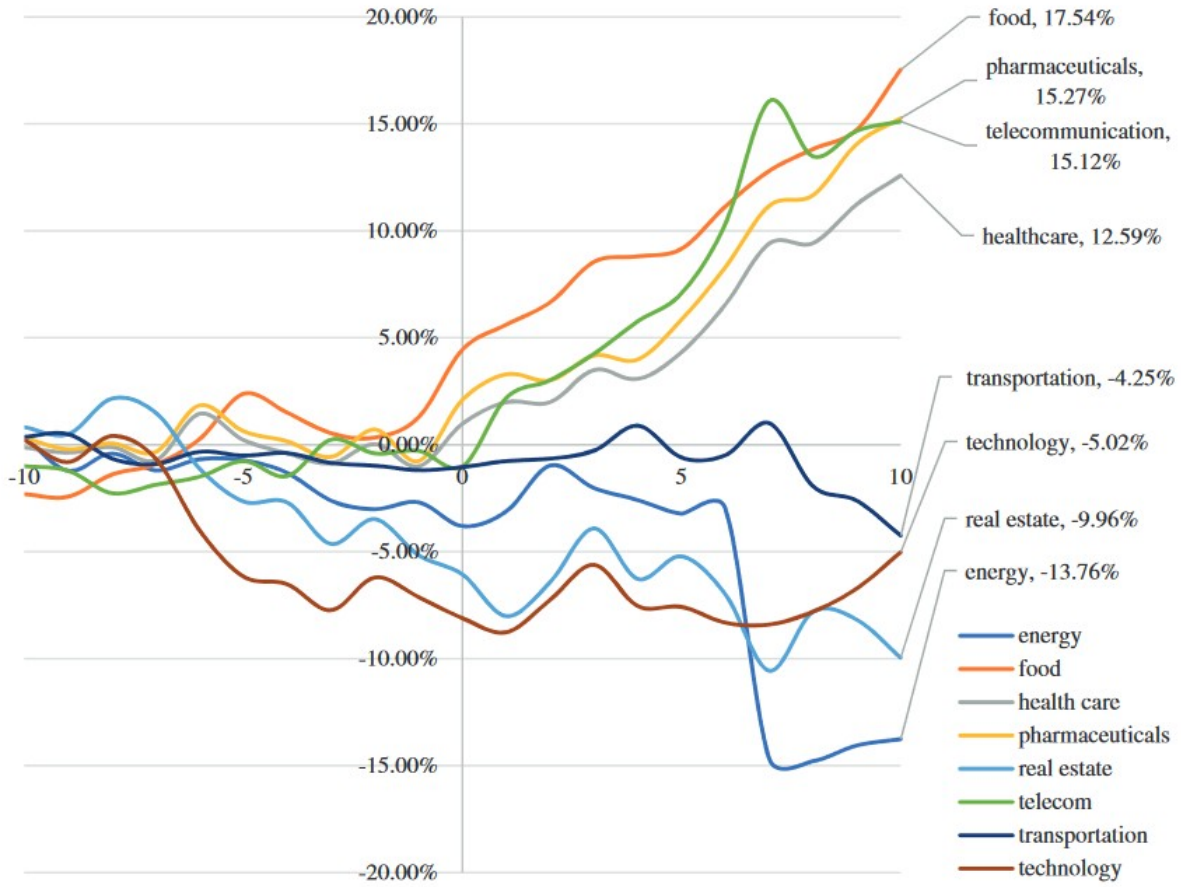
Source: Maneenop, S., & Kotcharin, S. (2020). The impacts of COVID-19 on the global airline industry: An event study approach. Journal of air transport management, 89, 101920.

News of virus expanding outside China did not cause any visible reaction on a stock market. However, the second event caused a modest decline and the last caused the heaviest disruption among airline stocks.

The second paper (Alam, Wei, Wahid, 2021) deals with the response of stocks of companies belonging to different industries in Australia. The event day was February 27, 2020, when the Australian government declared an epidemic. As mentioned in the previous example, stocks of airline companies responded with a rapid downturn, but for different sectors, the response might be the opposite. The authors indeed found that sectors like pharmaceuticals,

healthcare, or food reacted with bigger abnormal cumulative returns due to investor's expectations.

Figure 4: Cumulative abnormal return of industry indices within the test period (−10, 10)



Source: Alam, M. M., Wei, H., & Wahid, A. N. (2021). COVID-19 outbreak and sectoral performance of the Australian stock market: An event study analysis. Australian economic papers, 60(3), 482-495.

6. Methodology

The COVID-19 pandemics hit the world in waves, causing alternating tightening and loosening of restrictions. While some East Asian countries had prior experience with quarantine measures from the SARS and MERS outbreaks in 2003, most of the world was not prepared for this unprecedented event. The early stages of the pandemic posed challenges in obtaining enough medical materials like face masks and disinfectants. However, as production ramped up and proper protection measures were implemented, including

vaccination, life slowly returned to normal, despite persistently high infection rates. This situation led to the hypothesis that different quarters during the COVID-19 pandemic could have varying impacts on the labour market. To address this, I included separate dummies for every quarter.

I calculated these coefficients using both the linear probability model and the event study. For the former, I included terms for the six COVID quarters from 2020q1 up to 2021q2. The coefficients for these dummies can be interpreted as the impact of COVID-19 on employment/hours worked in a particular quarter. In the following equations, I added interaction terms that delineate each subgroup of interest (such as education level, age, nationality, etc.).

The second approach used in the thesis event study involves using dummies for each quarter from 2016 to 2022[3]. The estimated coefficients are then plotted, which is the main outcome of this part. Each coefficient reflects the change from the baseline year of 2015. If there was an effect of COVID restrictions on the measured variables, there should be a deviation from the usual pattern. This approach has been employed in studies such as Alon, Coskun, Doepke, Koll, and Tertilt (2022), which investigated differences between men and women during the COVID recession, and in Albanesi and Kim's (2021) research on the same topic.

The two main variables I researched are employment status and hours worked. Employment status is a binary variable with a value of 1 for employed individuals and 0 for unemployed or inactive individuals. The hours worked variable represents the number of hours worked per week before the interview was conducted. It is not a continuous variable but is limited to integers. I used the OLS estimator to estimate both variables. Since employment status is a binary variable, the LPM approach was used. I chose the linear probability model because of its interpretability and ease of implementation. Similar approaches have been used in other studies, such as Ham and Shore-Sheppard (2005) investigating the impacts of public insurance expansion on private insurance or Stephens and Toohey (2018) researching the impact of health on labour outcomes.

Statistical method I used as the main tool is a linear probability model for employment and OLS regression model for number of hours worked. In addition I used event study to investigate whole period that is available including pre-COVID and post-COVID periods. The

[3] I omitted the first year 2015.

broadest goal, as defined in abstract, is to measure an impact of COVID-19 restrictions on Czech labour market. Specifically, I analyse influence of socio-economic features on magnitude of impact. I took an inspiration from papers that I mentioned in research section. These studies serve as a source of hypotheses, and I will either confirm them or reject them in my estimation.

6.1. Hypothesis

In this section, I formulate all the hypotheses I test in my work. I selected several demographic groups for testing, including sex, education level, age, nationality, and whether individuals work in Prague or elsewhere. Additionally, I conducted tests for the entire population. For each subgroup, I obtained estimates for employment status and the number of hours worked. For both variables, I used a set of quarter dummies. In one case, I used dummies only for the COVID quarters to examine the differences between these quarters and the rest. In the second case, I used dummies for all quarters to investigate any potential changes in the quarters under consideration.

1. *There is a decline in the level of employment (share of employed people).*

Based on the information provided and the similarities observed in other countries, it is reasonable to hypothesize that Czechia might have experienced a hump-shaped pattern in the level of employment. The introduction of restrictions, including measures such as lockdowns and travel restrictions, has had a significant negative impact on businesses, particularly those that rely on interpersonal contact, such as retail and restaurants. These sectors have faced substantial challenges due to reduced customer demand and operational limitations. Given that these aspects hold true for Czechia as well, it is plausible to expect a decline in employment levels during the initial phases of the pandemic. I will verify hypothesis using following model:

$$Employment_{¿} = \beta_0 + \sum_{s=q12016}^{q42022} \beta_s q_s + X_{¿}\Gamma + \varepsilon_{¿} \quad (1)$$

where the dependent variable is employment status ("EMPSTAT"). This variable indicates whether an individual is currently employed at the time of the survey. If the person is employed, the variable takes a value of 1. If not, it takes a value of 0.

The variable "q_s" is a dummy variable representing each quarter in the sample. In the event study, the entire range of quarter dummies was used as shown in the equation above, depicting the change from the base year of 2015, which is omitted. For the LPM estimation, I used dummy variables only for the six COVID quarters from 2020q1 to 2021q2, when the restrictions were most stringent. The coefficients for these variables then reflect the change from non-COVID quarters (either pre-COVID or post-COVID).

$X_{¿}$ represents a vector comprising individual characteristics - age, gender, education and citizenship. The error term is denoted as $\varepsilon_{¿}$.

2. *There is a decrease in the number of hours worked.*

Studies that are focused on estimating the impact of COVID-19 on the labour market often analyse the number of hours worked because there were/are many employees who remained employed but were working significantly less or not at all.

$$\log\left(Hoursworked\right)_{¿} = \beta_0 + \sum_{s=q12016}^{q42022} \beta_s q_s + X_{¿}\Gamma + \varepsilon_{¿} \tag{2}$$

The variable "HOURSWORKED" represents the number of hours the person actually worked last week. To account for individuals who were employed before the pandemic but became unemployed, I set observations of unemployed people to zero instead of NA. Additionally, because I use logarithms, I added a value of 0.1 to each observation.

3. *Women in the labour market were affected more than men.*

According to the existing literature, women have been disproportionately affected by the COVID-19 pandemic compared to men. They have experienced more severe job losses and a greater reduction in working hours. This disparity can be attributed, in part, to the fact that women are overrepresented in sectors such as hospitality, which have been severely impacted by lockdown measures.

The closure of schools and the reduction of other social services during the pandemic have placed additional burdens on women. They often bear a significant part of the caregiving responsibilities within households, which have been further heightened during these challenging times. As a result, women have faced higher demands in terms of balancing work and caregiving responsibilities.

These aspects of the pandemic's impact on women are likely to be applicable to the current situation in Czechia as well.

From this equation, I made an estimate for both the employment status and the log of hours worked. Both variables are written as y in the following equations:

$$y = \beta_0 + \sum_{s=q12016}^{q42022} \beta_s q_s + \sum_{s=q12016}^{q42022} \delta_s q_s \cdot female_{¿} + X_{¿} \Gamma + \varepsilon_{¿} \quad (3)$$

“Female” is a dummy variable that has its value equal to 1 for females and equal to 0 for males. This variable was created by transformation of the original variable “sex” that is a binary variable which is equal to 1 for male and equal to 2 for female. I combined it with the dummy variable q_s that is set as described above. In this regression I focus on coefficient δ_s. It shows the effect of COVID-19 restrictions on employment of women.

4. *There are differences among age groups in terms of severity of impact.*

The research findings summarized in the thesis suggest that various studies examining the differential impact of lockdown measures according to age consistently indicate a more severe effect on both the youngest and oldest generations of workers. These findings align with the notion that younger individuals may face significant challenges in the labour market, particularly in sectors such as hospitality, which have been heavily affected by lockdown restrictions. Similarly, the older generation may encounter difficulties due to potential technological barriers or reduced opportunities for employment.

$$y = \beta_0 + \sum_{s=q42016}^{q42022} \beta_s q_s + \sum_{s=q12016}^{q42022} \delta_{1s} q_s \cdot age_{middle} + \sum_{s=q12016}^{q42022} \delta_{2s} q_s * age_{old} + X_{¿} \Gamma + \varepsilon_{¿} \quad (4)$$

“Age” is dummy variable that is equal to 1 when the person falls into the age bracket. I chose three groups and omitted the youngest group which served as a comparison. Previous

studies suggest that the youngest and oldest age groups are more likely to suffer more than the middle-aged group.

5. *Less educated workers were hit more severely than more educated workers.*

This regression deals with the potential differences between people with various highest attained education. In case there are indeed some differences in Czechia, the coefficients δ_{1_s} and δ_{2_s} will have different magnitude and sign probably. Insignificance would indicate that education is not a determinant of intensity of lockdown impact.

$$y = \beta_0 + \sum_{s=q12016}^{q42022} \beta_s q_s + \sum_{s=q12016}^{q42022} \delta_{1s} q_t * middle_{education} + \sum_{s=q12016}^{q42022} \delta_{2s} q_s * high_{education} + X_{¿} I \quad (5)$$

Above I have the regression equation. Middle education and high education dummy variables are equal to 1 in case the person's highest attained education level is the same as the name of the dummy variable, zero otherwise. These dummies are transformed from the original variable "ISCED". Low education dummy, which is omitted, comprises ISCED 1 and 2. The middle education dummy consists of ISCED 3 levels of education. ISCED 5, 6, 7, and 8 are in the high education dummy. This division roughly equates to groups of people with elementary education, high school level, and university degrees.

6. *Foreigners were affected more than Czech citizens.*

In Czechia, as of 2022, there are over 900,000 employed foreign citizens (ČSÚ, 2023). However, this number experienced a significant increase in the previous year due to the influx of hundreds of thousands of refugees from Ukraine seeking refuge in the European Union, with many choosing Czechia as their destination. In the years 2020 and 2021, during the COVID-19 pandemic, the number of foreign citizens working in Czechia was reported as 742,000 and 804,000, respectively.

Given the availability of data for specific nationalities, it is possible to examine whether there are any prevailing tendencies among foreign workers. By analysing the impact on different nationalities, it may be possible to identify any distinct effects or variations experienced by working foreigners in Czechia.

$$y = \beta_0 + \sum_{s=q12016}^{q42022} \beta_s q_s + \sum_{s=q12016}^{q42022} \delta_s q_s * foreigner + X_{¿} \Gamma + \varepsilon_{¿} \quad (6)$$

$$y = \beta_0 + \sum_{s=q12016}^{q42022} \beta_s q_s + \sum_{s=q12016}^{q42022} \delta_{1s} q_s * Ukraine + \sum_{s=q12016}^{q42022} \delta_{2s} q_s * Slovakia + \sum_{s=q12016}^{q42022} \delta_{3s} \quad (7)$$

To determine the category of foreign citizens, I utilize the variable "STPRISL" which provides national codes for each country. In the second equation, I specifically select several countries that have a substantial number of workers, such as Ukraine and Slovakia. Workers from Vietnam may have a distinct employment scheme compared to other groups of foreigners. Citizens of other countries did not have a sufficient number of observations per quarter; that's why I could not analyse their reaction to COVID restrictions.

7. *The impact of restrictions varies in Prague and the rest of the country.*

As was mentioned above hospitality and tourist industry were hit especially hard. Tourist industry was employing around 8 % of people employed in Prague in 2019 (Seznam Zprávy, 2020). The comparison relies on specific economic status of Prague, being a major urban centre and the primary tourist destination in Czechia.

The COVID restrictions imposed limitations on travel, retail, and restaurants, directly impacting sectors such as hotels immediately after the outbreak of the disease. In contrast, the industrial sector plays a minor role in Prague's economy. While the restrictions did have an impact on the industry, it was not as immediate since the restrictions were not specifically targeted at the industry itself.[4]

To investigate the impact I created dummy variable for Prague. Coefficient for this variable denotes the difference between Prague and the rest of the country. I used the variable "ZAMOKR" which denotes the specific region (NUTS 3) where individuals are employed. [5]

[4] The immediate effect was through imposing quarantine on covid-positive workers.

[5] This is the division that corresponds to the current division into self-governing regions.

$$y = \beta_0 + \sum_{s=q12016}^{q42022} \beta_s q_s + \sum_{s=q12016}^{q42022} \delta_{1s} q_s * prague_{dummy} + X_i \Gamma + \varepsilon_i \quad (8)$$

7. Data

In my thesis I use data collected by the Czech Statistical Office in their Labour Force Sample Survey (LFSS) which is an extensive dataset collected by the statistical office quarterly since 1992. These surveys are taken in every country in the European union with the same methodology and are thus comparable among countries.

The Czech Statistical Office conducts a survey in individual households by their interviewers. To account for the rapidly changing and seasonally influenced labour market, data for each household is tracked over an extended period. The selected households are contacted by the interviewers every three months, with a total of five contacts. The Labour Force Sample Survey selects households randomly for inclusion. In 2020, the CSO interviewers successfully visited almost 23,000 individual apartments and collected responses from over 49,000 individuals.[6]

From a statistical standpoint, the optimal approach would be to filter observations and include each household only once in the sample, thereby creating a repeated cross-section data sample. However, at the time of creating my thesis, these household identifying variables were not available, which is why I included all the observations I had.

7.1. Data description

The dataset sourced from the Czech Statistical Office covers eight years (2015-2022) with quarterly frequency, with each year containing approximately 110,000 observations. The total number of observations exhibits a declining trend, as illustrated in the table below. However, it is important to note that some of the observations were incomplete in variables of specific interest, resulting in a subsequent reduction in the overall number of observations used in calculations. The dataset excludes observations of individuals outside the analysed

[6] Výběrové šetření pracovních sil (VŠPS), [no date]. *ČSÚ*. Online. Available from: https://www.czso.cz/csu/vykazy/vyberove_setreni_pracovnich_sil

age range (20 – 65 years), as people outside this range are typically children or retired and are therefore mostly inactive in the labour market.

Table 1: Number of observations per year

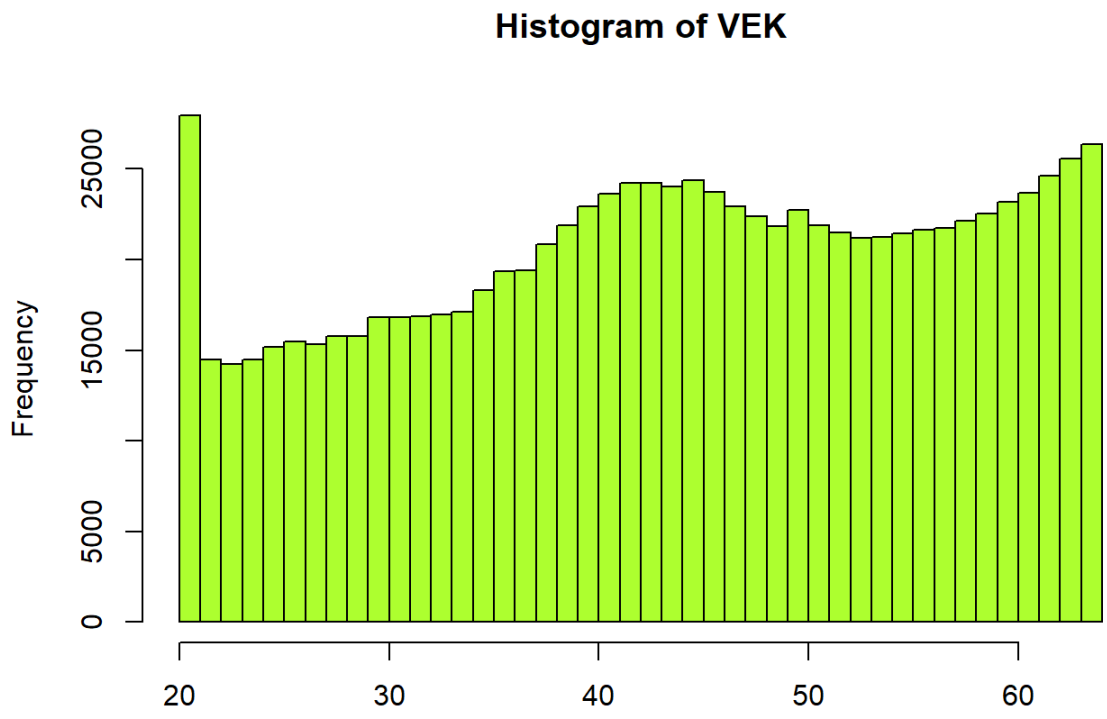
2015	2016	2017	2018	2019	2020	2021	2022
125202	122609	119911	115230	111743	105528	105803	102535

Source: own computation using Czech LFS microdata.

7.1.1. Age

The histogram below illustrates the frequency distribution of ages in my sample. It encompasses the entire sample inside the specified age range. Cases where individuals appear multiple times are allowed due to the inability to restrict inputs to one per person. Comparing this histogram to the ČSÚ age pyramid reveals structural similarities. Notably, the dual peaks in my graph align with those in the Czech age pyramid, signifying the strong post-World War II generation and the demographic surge in the seventies.

Figure 7: Number of observations per age (20-65 years)



Source: own computation using Czech LFS microdata.

In my analysis, I categorized age into distinct age groups. The table below depicts the distribution of observations across these age bins.

Table 2: Number of observations per age group

Young (20-34 years)	Middle (35-50 years)	Old (51-65 years)
233140	334101	341320

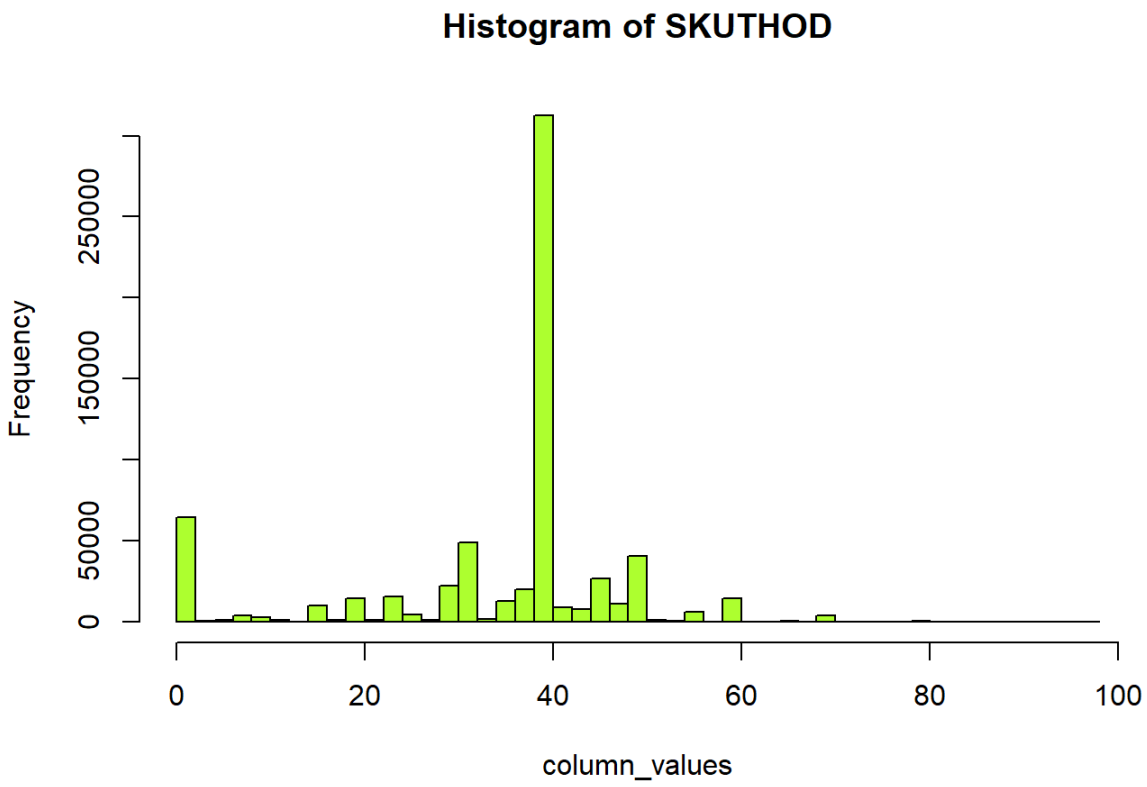
Source: own computation using Czech LFS microdata.

7.1.2. Number of hours worked

This histogram shows the distribution of hours worked in my sample, revealing a clear departure from a normal distribution. There is a pronounced clustering of data points, with a pronounced concentration observed at 40 hours per week. This result is unsurprising, given that it corresponds to the standard full-time working hours. While one might speculate about potential reporting inaccuracies, my analysis, however, was based on the available data in its reported form.

A secondary clustering point becomes evident at the onset of the graph, precisely at zero. These zero values denote individuals who were employed but reported zero worked hours. Those unemployed/inactive have NA.

Figure 8: Number of observations per worked hours



Source: own computation using Czech LFS microdata.

In the presented table, we observe the weighted means of weekly work hours across the observed timeframe. Prior to the pandemic, the average consistently held at a steady 35-36 hours per week. However, since the emergence of COVID-19 in 2020, there has been a noticeable decline, settling at approximately 33 hours per week. This trend has persisted, and as of 2022, work hours have not fully recovered to their pre-pandemic levels.

Table 3: Weighted mean of hours worked per week each year

2015	2016	2017	2018	2019	2020	2021	2022
35.88	36.33	35.73	35.67	35.69	33.59	34.81	34.16

Source: own computation using Czech LFS microdata.

In examining the evolution of working hours, it becomes interesting to investigate the response of the number of individuals employed but recording zero hours worked. This

phenomenon may be attributed to a decision by certain companies, opting to place their employees on mandatory leave rather than laying them off.

The tabulated data reinforces this observation, depicting the count of instances each year where individuals were employed but reported zero hours worked. Preceding the start of COVID restrictions, the figures exhibited stability, consistently hovering around 8000 observations from 2015 to 2019. However, in 2020, a notable surge occurred, with an increase of almost two and a half thousand observations. Yet, it appears to be a short-term spike, as in the subsequent two years, the figures reverted to pre-COVID levels.

Table 4: Number of zero hours worked observations

2015	2016	2017	2018	2019	2020	2021	2022
7958	7415	8093	8010	8001	10415	8130	7899

Source: own computation using Czech LFS microdata.

7.1.3. Dummy variables

Except number of hours worked and age variables I used many dummy variables. One of them is dummy for females. In my dataset I have more women than men. This can be explained by significant share of higher age cohorts in which women predominate (ČSÚ, 2022).

Table 5: Number of males and females

Male	Female
442081	466480

Source: own computation using Czech LFS microdata.

In my analysis of employment changes, I introduced a dummy variable to capture the employment status, making a clear distinction between those who are employed and those with other statuses such as unemployment, inactivity, or NA. The high number in the non-employed category is influenced by the inclusion of all members of selected households, including children in the sample.

Table 6: Number of employed/unemployed/inactive

Unemployed/inactive	Employed
203529	705032

Source: own computation using Czech LFS microdata.

In my estimations, I employed the country of birth as a control variable, using a dummy variable to differentiate between individuals born in Czechia and those born in foreign countries. The table below illustrates that people born in Czechia are constituting a significant majority. The share of individuals born abroad is approximately 3.1 %. Over the observation period, the number of foreign nationals residing in Czechia typically hovers around 5%. While these statistics are not identical, they are likely highly correlated. It is worth noting that the sample comprises randomly chosen households, not individuals, and variations in household size for foreigners—whose families may reside abroad—could be a potential influencing factor. Another important limiting factor is that the survey did not include data from hostels or other temporary accommodation facilities. This may result in an underestimation of the number of foreigners, as these facilities often house foreign workers.

Table 7: Country of birth

Foreign country of birth	Czechia
33757	874804

Source: own computation using Czech LFS microdata.

One part of my analysis involves researching the impact on citizens of different states working in Czechia. I aimed to focus on employees from Ukraine, Slovakia, Vietnam, Romania, and Germany. However, the last two (Romania and Germany) had too few observations per quarter, so the analysis was not possible for those two cases. The complete table with numbers for each quarter for the mentioned countries is in the appendix.

7.1.4. Missing values

In the final phase, I addressed missing values in my estimations. The absence of hours worked data was particularly influenced by the natural economic inactivity usual in the youngest and oldest age groups. It is important to note that only employed individuals

possess non-NA values in the hours worked column. As anticipated, the following histogram of missing values aligns with these expectations.

Table 8: Missing values

Variable	Missing Values
REFTROK	0
POHL	0
VEK	0
ISCED	10
STATUSE	0
SKUTHOD	241477
VEKSK	0
ZEMNAR	0
ZAMISCO	203529
STPRISL	30

Source: own computation using Czech LFS microdata.

As we can see in the table above, some variables do not have a single missing observation. These likely represent data without which households were not included in the sample. On the other hand, there are 241,477 missing observations for the SKUTHOD variable. This is due to unemployed or inactive individuals. In the original sample including people below 20 years and above 65 years, this number would be much higher. The same explanation applies to the ZAMISCO variable, which codes an individual's job.

8. Results

In this section of the thesis, I present results obtained by following the steps outlined in previous sections. I examined changes in employment and number of hours worked using LPM, event study and probit models. As mentioned earlier, the Czech labour market has been contending with a prolonged shortage of workforce. It is reasonable to assume that, confronted with an unprecedented crisis of indeterminate duration, some entities may have leaned toward reducing work hours rather than resorting to job cuts.

8.1. Employment and number of hours worked

In this section, I present all the major results that came from OLS and LPM estimation, as well as event studies.

Most of the data on the number of hours worked seem to have a seasonal pattern. I attempted seasonal adjustment by adding a dummy for each quarter; however, I was unable to eliminate this fluctuation entirely. As a result, I primarily used non-adjusted data because they show better responses to COVID restrictions compared to the adjusted estimations. I have included the seasonally adjusted estimation for hours worked in the appendix.

Observations with missing values (NAs) in the hours worked column were changed to 0 in order to account for the potential overflow of people from employment to unemployment/inactivity, where they would have NAs in the hours worked column and fall out of the estimation. Additionally, since I used logs in this estimation, I added a constant of 0.1 to every observation to avoid issues with zero values.

8.1.1. Impact on employment and hours worked

Employment

Table 9: Employment LPM - COVID dummy

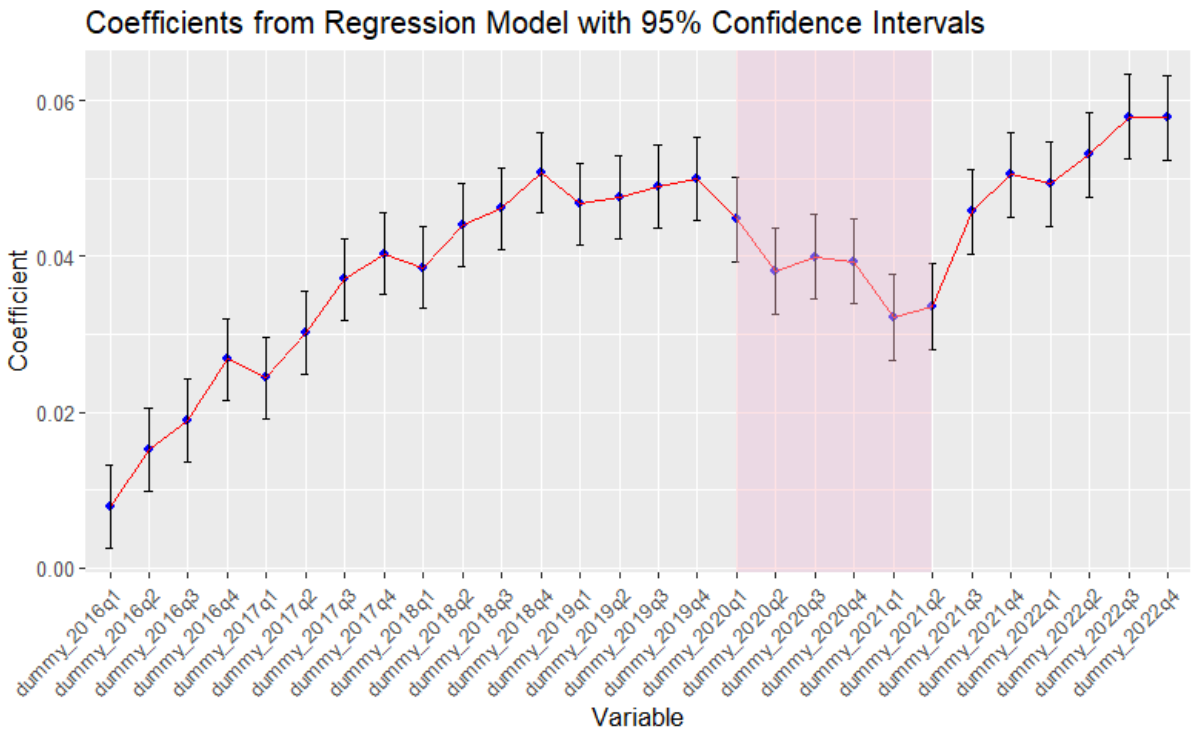
Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.72384647	0.00267205	270.8955	< 2.2e-16 ***
covid_dummy_2020q1	0.01092816	0.00294117	3.7156	0.0002027 ***
covid_dummy_2020q2	0.00431981	0.00297019	1.4544	0.1458392
covid_dummy_2020q3	0.00607702	0.00273722	2.2201	0.0264095 *
covid_dummy_2020q4	0.00552966	0.00274671	2.0132	0.0440943 *
covid_dummy_2021q1	-0.00162426	0.00289266	-0.5615	0.5744502
covid_dummy_2021q2	-0.00035756	0.00281256	-0.1271	0.8988389
female_dummy	-0.16319351	0.00086894	-187.8086	< 2.2e-16 ***
czechia_dummy	-0.00196686	0.00238493	-0.8247	0.4095399
age_middle	0.20479465	0.00118148	173.3381	< 2.2e-16 ***
age_old	0.05663887	0.00139220	40.6830	< 2.2e-16 ***
middle_education	0.06157974	0.00110271	55.8442	< 2.2e-16 ***
high_education	0.11077318	0.00119753	92.5011	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

The first regression considering only 6 COVID quarters did not bring significant evidence of COVID impact. The first COVID dummy for the first quarter of 2020 is statistically significant,

however it suggests that employment was 1 % more likely than non-COVID period. Although the COVID-19 broke out in February 2020 the Czechia itself was directly hit in mid-March 2020 when the first lockdown was introduced, so the effect for the first quarter is probably too weak. The following three coefficients are very small in magnitude (less than 1 %) but still positive. Eventually the last two quarters suggest negative development of employment however these lacks statistical significance.

Figure 10: Employment event study - COVID dummy



Source: own computation using Czech LFS microdata.

Despite Czechia consistently maintaining one of the lowest unemployment rates in the European Union, the COVID shock has had an impact. The employment rate has been growing over time since the start of the sample in 2015, with a stable trend. However, there was a drop in employment as early as 2020q1, which aligns precisely with the period marked as the COVID period. In the second half of 2021, it appears that employment has returned to its pre-COVID trajectory.

Complete table with regression results for this and all following event studies is in Appendix.

Log hours worked

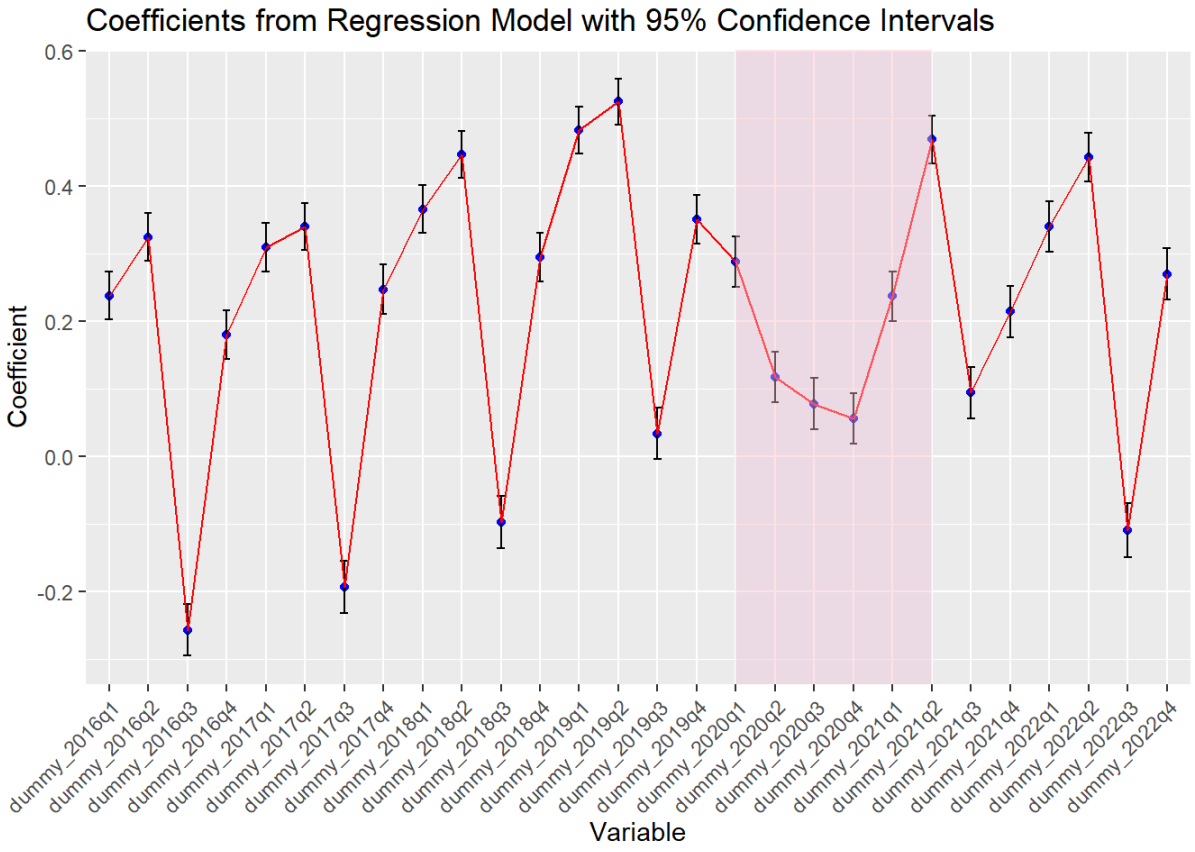
Table 10: Hours worked LPM - COVID dummy

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.6170917	0.0200779	80.5408	< 2.2e-16 ***
covid_dummy_2020q1	0.1019424	0.0231058	4.4120	1.024e-05 ***
covid_dummy_2020q2	-0.0684541	0.0239711	-2.8557	0.004294 **
covid_dummy_2020q3	-0.1081080	0.0243793	-4.4344	9.233e-06 ***
covid_dummy_2020q4	-0.1303393	0.0241138	-5.4052	6.477e-08 ***
covid_dummy_2021q1	0.0509216	0.0217941	2.3365	0.019466 *
covid_dummy_2021q2	0.2829416	0.0187883	15.0595	< 2.2e-16 ***
female_dummy	-1.1565694	0.0059244	-195.2204	< 2.2e-16 ***
czechia_dummy	-0.0350921	0.0174487	-2.0112	0.044309 *
age_middle	1.1790942	0.0084820	139.0117	< 2.2e-16 ***
age_old	0.3421172	0.0093395	36.6313	< 2.2e-16 ***
middle_education	0.4122421	0.0079064	52.1402	< 2.2e-16 ***
high_education	0.6482659	0.0098176	66.0312	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

In terms of log hours worked, the estimates for the second, third, and fourth quarters of 2020 indicate a strong negative effect on hours worked. For example, in 2020 Q3, there is a 10.81% decrease in hours worked, similarly for the adjacent quarters. The positive and statistically significant results for the second quarter of 2021, the last period quarter in my estimation, provide evidence for post-COVID resurrection. Since this quarter contains May and June, it can be attributed to the tourist sector which experienced growth after COVID restrictions were lifted or mitigated.

Figure 11: Hours worked event study – COVID dummy



Source: own computation using Czech LFS microdata.

The event study plot above contains dummies for every quarter from 2016q1 up to 2022q4. A clear seasonal pattern is visible during the first pre-COVID years. The third quarter consistently shows the lowest coefficients each year, likely due to summer vacations. Conversely, the second quarter consistently shows the strongest coefficients.

The COVID period is marked by the pink shaded area between 2020q1 and 2021q2. The results within this area disrupted the seasonal pattern right at the start of the COVID crisis during the first quarter of 2020. In the previous three years, the first quarter was always stronger than the last quarter of the preceding year. However, in 2020, this was no longer the case, marking the start of a decline that lasted for around a year.

The most significant change from the normal situation occurred in 2020q2, which was significantly weaker than the previous quarter. The third quarter did not differ much from 2020q2 but was similar to past third quarters. The last quarter of 2020, on the eve of the

second COVID wave, did not see any increase compared to the third quarter, which was the opposite of the development during the pre-COVID years.

Starting in 2021, it appears that hours worked regained its previous pattern, although it did not reach pre-COVID values by the end of the sample period.

8.1.2. Female

Employment

Table 11: Employment LPM - female

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.72384223	0.00266174	271.9436	< 2e-16 ***
covid_dummy_2020q1	0.00776206	0.00345549	2.2463	0.02469 *
covid_dummy_2020q2	0.00337963	0.00359488	0.9401	0.34715
covid_dummy_2020q3	0.00857598	0.00334876	2.5609	0.01044 *
covid_dummy_2020q4	0.00524673	0.00339518	1.5453	0.12226
covid_dummy_2021q1	-0.00198135	0.00327777	-0.6045	0.54552
covid_dummy_2021q2	0.00209745	0.00322473	0.6504	0.51542
covid_female_2020q1	0.00646335	0.00533520	1.2115	0.22572
covid_female_2020q2	0.00192000	0.00527588	0.3639	0.71592
covid_female_2020q3	-0.00510332	0.00527873	-0.9668	0.33366
covid_female_2020q4	0.00057813	0.00513606	0.1126	0.91038
covid_female_2021q1	0.00072941	0.00486889	0.1498	0.88091
covid_female_2021q2	-0.00501601	0.00503313	-0.9966	0.31896
female_dummy	-0.16318135	0.00095434	-170.9893	< 2e-16 ***
czechia_dummy	-0.00196820	0.00237748	-0.8279	0.40776
age_middle	0.20479455	0.00117906	173.6928	< 2e-16 ***
age_old	0.05663874	0.00138545	40.8811	< 2e-16 ***
middle_education	0.06157775	0.00109922	56.0194	< 2e-16 ***
high_education	0.11077479	0.00119273	92.8753	< 2e-16 ***

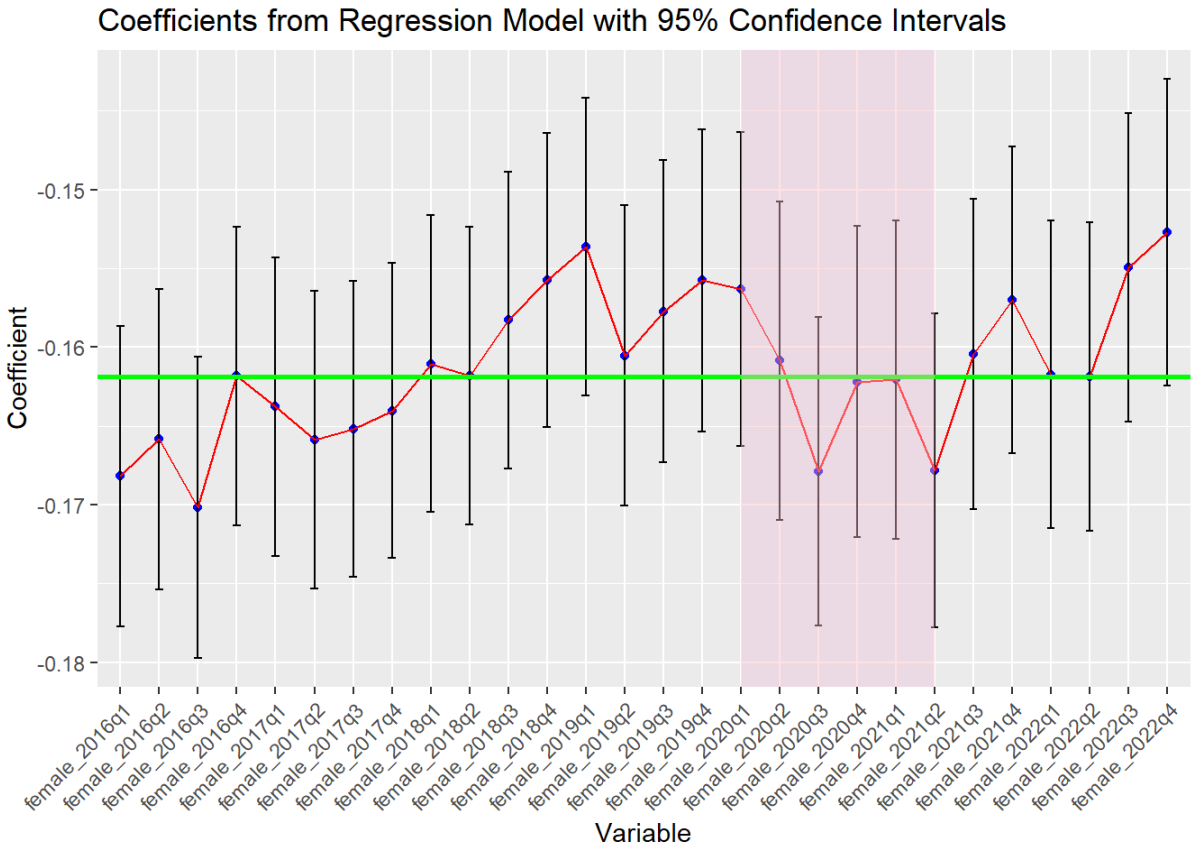
Source: own computation using Czech LFS microdata.

In the first equation, I used only the female dummy as a control variable. In the second regression, I added an interaction term to assess how being a woman during COVID affected the probability of being employed. However, as shown in the table, the new interaction term turned out to be statistically insignificant, with p-values above the confidence level. On the

other hand, the female dummy variable is highly significant and negative. This indicates that women are less likely to be employed regardless of the COVID situation. Even though women often work in sectors that were more severely impacted by COVID-related disruptions compared to sectors where more men work, this did not have a significant impact on their employment. This trend could be attributed to the state of the Czech economy, which currently offers more jobs than there are positions filled.

This finding contrasts with results from other studies, such as those by Bluedorn (2023) and Reichelt, Makovi, and Sargsyan (2021), which reported a negative impact on women, although not universally across all countries they researched. However, later studies (Goldin, 2022) have provided evidence of significant differences among women, with college-educated women faring worse than men only at the very start of the restrictions. Subsequently, they fared even slightly better than men.

Figure 12: Employment event study – female



Source: own computation using Czech LFS microdata.

This event study estimation consists of dummy variables for every quarter in sample and interaction of this dummy variable with female dummy. In plot above is visualized the development of female employment. Coefficient is negative on the whole length of the plot. This is due to the fact I did not include simple female dummy variable for the whole sample. That's why this reflects the fact that women are generally less likely to be employed then men, which is also confirmed by the negative coefficient in my LPM estimation.

Green line indicates the average value of the coefficient in pre-COVID period. Red area marks the COVID quarters.

When focus on the very beginning of the COVID period in early 2020 we can see the sharp drop in women's employment and fall below the pre-COVID average. Below this line it stays until the third quarter of 2021 which also the end of COVID period. This development suggests negative impact on women's employment.

Log hours worked

Table 12: Hours worked LPM - female

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.6137967	0.0200081	80.6572	< 2.2e-16 ***
covid_dummy_2020q1	0.0872632	0.0297122	2.9369	0.0033147 **
covid_dummy_2020q2	-0.0318386	0.0298548	-1.0664	0.2862215
covid_dummy_2020q3	-0.0646747	0.0298427	-2.1672	0.0302207 *
covid_dummy_2020q4	-0.1319739	0.0297667	-4.4336	9.268e-06 ***
covid_dummy_2021q1	0.0879488	0.0246179	3.5726	0.0003535 ***
covid_dummy_2021q2	0.2823990	0.0211617	13.3448	< 2.2e-16 ***
covid_female_2020q1	0.0300394	0.0372435	0.8066	0.4199158
covid_female_2020q2	-0.0746707	0.0370279	-2.0166	0.0437370 *
covid_female_2020q3	-0.0885896	0.0359385	-2.4650	0.0137001 *
covid_female_2020q4	0.0034166	0.0341062	0.1002	0.9202041
covid_female_2021q1	-0.0755649	0.0312721	-2.4164	0.0156764 *
covid_female_2021q2	0.0011857	0.0317937	0.0373	0.9702516
female_dummy	-1.1499852	0.0065416	-175.7962	< 2.2e-16 ***
czechia_dummy	-0.0351032	0.0174106	-2.0162	0.0437795 *
age_middle	1.1791301	0.0084593	139.3879	< 2.2e-16 ***
age_old	0.3421455	0.0093049	36.7704	< 2.2e-16 ***
middle_education	0.4122372	0.0078662	52.4059	< 2.2e-16 ***
high_education	0.6483610	0.0097431	66.5454	< 2.2e-16 ***

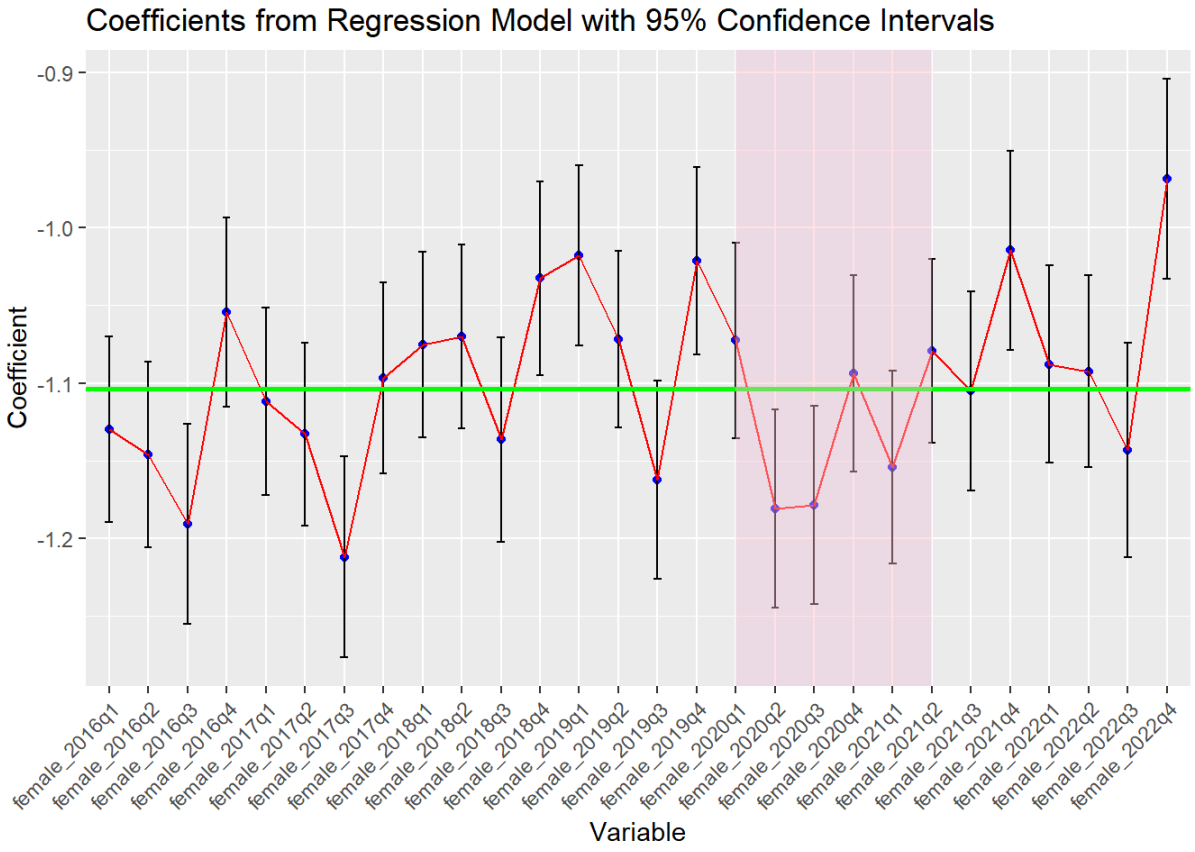
Source: own computation using Czech LFS microdata.

In contrast to the probability of employment, the number of hours worked per week yielded slightly more significant results for interaction variables in the regression. The results obtained from the second and third quarter 2020 present a negative impact on women compared to men. For example, during the third quarter of 2020, women worked approximately 9% fewer hours than men, controlled for the general difference between sexes.

These findings (Zamarro, Perez-Arce and Prados, 2021) align with conclusions drawn from foreign studies that also reported a more significant negative impact of COVID restrictions on worked hours, particularly for women. The underlying reason for this effect lies in gender stereotypes, which often assign childcare responsibilities to women and a general caregiving role within the family.

With closures in the education system and the unavailability of substitute care for small children, women were frequently tasked with addressing these challenges. Since we cannot assume that the situation in this regard differs significantly from that observed abroad, the obtained results align with expectations based on existing literature.

Figure 13: Hours worked event study – female



Source: own computation using Czech LFS microdata.

The event study plot above shows an apparent seasonal pattern that was present in observations before the COVID pandemic. At the very beginning of the COVID period, there is a sharp drop that increased the difference between the sexes in terms of hours worked. The third quarter remained at the same level as the second. With the end of restrictions, the gap in hours worked seems to slowly shrink. Although there are other factors that impact this gap, there is a visible movement exactly at the time period of the global pandemic, supporting the hypothesis that females experienced a bigger impact.

8.1.3. Age

Employment

Table 13: Employment LPM - age

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.72689461	0.00269898	269.3222	< 2.2e-16 ***
covid_dummy_2020q1	-0.00016796	0.00630045	-0.0267	0.978732
covid_dummy_2020q2	-0.01360235	0.00653586	-2.0812	0.037417 *
covid_dummy_2020q3	-0.00892859	0.00588739	-1.5166	0.129378
covid_dummy_2020q4	-0.01122142	0.00617445	-1.8174	0.069157 .
covid_dummy_2021q1	-0.01725302	0.00654300	-2.6369	0.008368 **
covid_dummy_2021q2	-0.01581701	0.00616826	-2.5643	0.010340 *
middle_covid_2020q1	0.00916431	0.00710138	1.2905	0.196879
middle_covid_2020q2	0.01129405	0.00765667	1.4751	0.140197
middle_covid_2020q3	0.00616334	0.00703243	0.8764	0.380803
middle_covid_2020q4	0.00594242	0.00728494	0.8157	0.414665
middle_covid_2021q1	0.00443164	0.00737563	0.6008	0.547941
middle_covid_2021q2	0.00530505	0.00727049	0.7297	0.465593
old_covid_2020q1	0.02386477	0.00803516	2.9700	0.002978 **
old_covid_2020q2	0.04286732	0.00823912	5.2029	1.962e-07 ***
old_covid_2020q3	0.04011043	0.00742945	5.3988	6.709e-08 ***
old_covid_2020q4	0.04581499	0.00755676	6.0628	1.338e-09 ***
old_covid_2021q1	0.04420217	0.00815214	5.4222	5.890e-08 ***
old_covid_2021q2	0.04246113	0.00800629	5.3035	1.136e-07 ***
female_dummy	-0.16317118	0.00086850	-187.8767	< 2.2e-16 ***
age_middle	0.20358027	0.00128786	158.0763	< 2.2e-16 ***
age_old	0.04929217	0.00153725	32.0652	< 2.2e-16 ***
czechia_dummy	-0.00217297	0.00237943	-0.9132	0.361120
middle_education	0.06140741	0.00110159	55.7444	< 2.2e-16 ***
high_education	0.11072323	0.00119545	92.6202	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

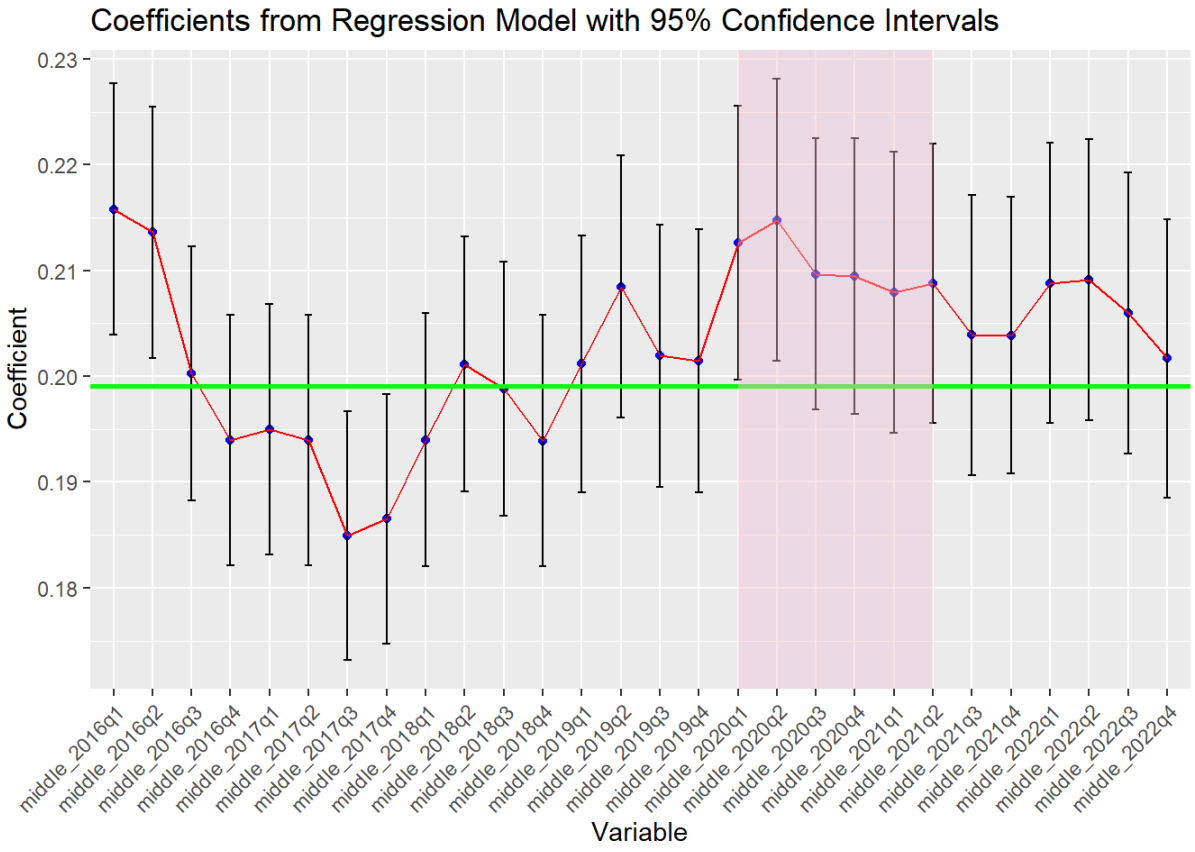
While age control variables were initially incorporated in preceding equations, I have now introduced interaction variables for each distinct age cohort, dividing individuals into three age groups. Due to multicollinearity, it was necessary to exclude the youngest group which serves now as a baseline.

The results reveal a substantial difference in the statistical significance between the middle age group and the old age group. The middle age group does not show any significant estimate, indicating that they were impacted in the same way as the young group. However, the old age group exhibits high significance. The baseline group is the youngest age group (20-34 years).

As seen in the table, the coefficient for the old age group hovers around 0.04. This indicates about a 4% higher probability of employment during COVID, after accounting for non-COVID differences between age groups. When considering the combined effect of the COVID dummy and the COVID-age interaction variable, the total effect is positive for the old age group (50-64).

These findings align with studies that have observed a disproportionate impact on the younger generation. Conversely, the oldest generation in Czechia appears to have been affected not negatively, as found in foreign studies, but even positively. This discrepancy highlights a difference between Czechia and countries mentioned in the referenced paper. One plausible explanation for this difference could be the insufficient saturation of the Czech labour market and a chronic workforce shortage. Companies, fearing challenges in rehiring employees post-COVID, might be hesitant to reduce their workforce and instead opt to cut work hours.

Figure 14: Event study employment – middle age



Source: own computation using Czech LFS microdata.

The "middle_ed" dummy which is plotted in the graph above shows increase during the COVID restrictions period. This dummy compares the middle-aged group with the young group. From this point of view it is not surprising that the result is positive since the previous regression as well as foreign papers suggest worse impact on the young group. When we consider the regular dummy in regression than the total impact of the restrictions was positive for middle group.

The estimation for the old group reveals a stable upward sloping trend, indicating increasing employment among people aged 51-65 years. This trend is so stable that the COVID restrictions did not affect it in any way.

Log hours worked

Table 14: Hours worked LPM - age

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.6306897	0.0201042	81.1120	< 2.2e-16 ***
covid_dummy_2020q1	0.0535406	0.0419036	1.2777	0.2013531
covid_dummy_2020q2	-0.1724130	0.0437910	-3.9372	8.245e-05 ***
covid_dummy_2020q3	-0.0594945	0.0410119	-1.4507	0.1468736
covid_dummy_2020q4	-0.1969355	0.0374765	-5.2549	1.481e-07 ***
covid_dummy_2021q1	-0.0118838	0.0422327	-0.2814	0.7784119
covid_dummy_2021q2	0.1339506	0.0361448	3.7059	0.0002106 ***
middle_covid_2020q1	0.0036920	0.0503502	0.0733	0.9415463
middle_covid_2020q2	0.0078536	0.0522867	0.1502	0.8806053
middle_covid_2020q3	-0.2033897	0.0466432	-4.3605	1.298e-05 ***
middle_covid_2020q4	-0.0195595	0.0477125	-0.4099	0.6818466
middle_covid_2021q1	-0.0122227	0.0471158	-0.2594	0.7953129
middle_covid_2021q2	0.1436592	0.0437180	3.2860	0.0010161 **
old_covid_2020q1	0.1494841	0.0508599	2.9391	0.0032914 **
old_covid_2020q2	0.3212743	0.0520279	6.1750	6.618e-10 ***
old_covid_2020q3	0.1021890	0.0525161	1.9459	0.0516717 .
old_covid_2020q4	0.2362689	0.0473605	4.9887	6.079e-07 ***
old_covid_2021q1	0.2152715	0.0555346	3.8764	0.0001060 ***
old_covid_2021q2	0.2906543	0.0491173	5.9176	3.269e-09 ***
female_dummy	-1.1564673	0.0059203	-195.3378	< 2.2e-16 ***
czechia_dummy	-0.0362863	0.0174041	-2.0849	0.0370761 *
age_middle	1.1823856	0.0093859	125.9745	< 2.2e-16 ***
age_old	0.3002204	0.0103077	29.1258	< 2.2e-16 ***
middle_education	0.4111844	0.0078784	52.1912	< 2.2e-16 ***
high_education	0.6478857	0.0097670	66.3341	< 2.2e-16 ***

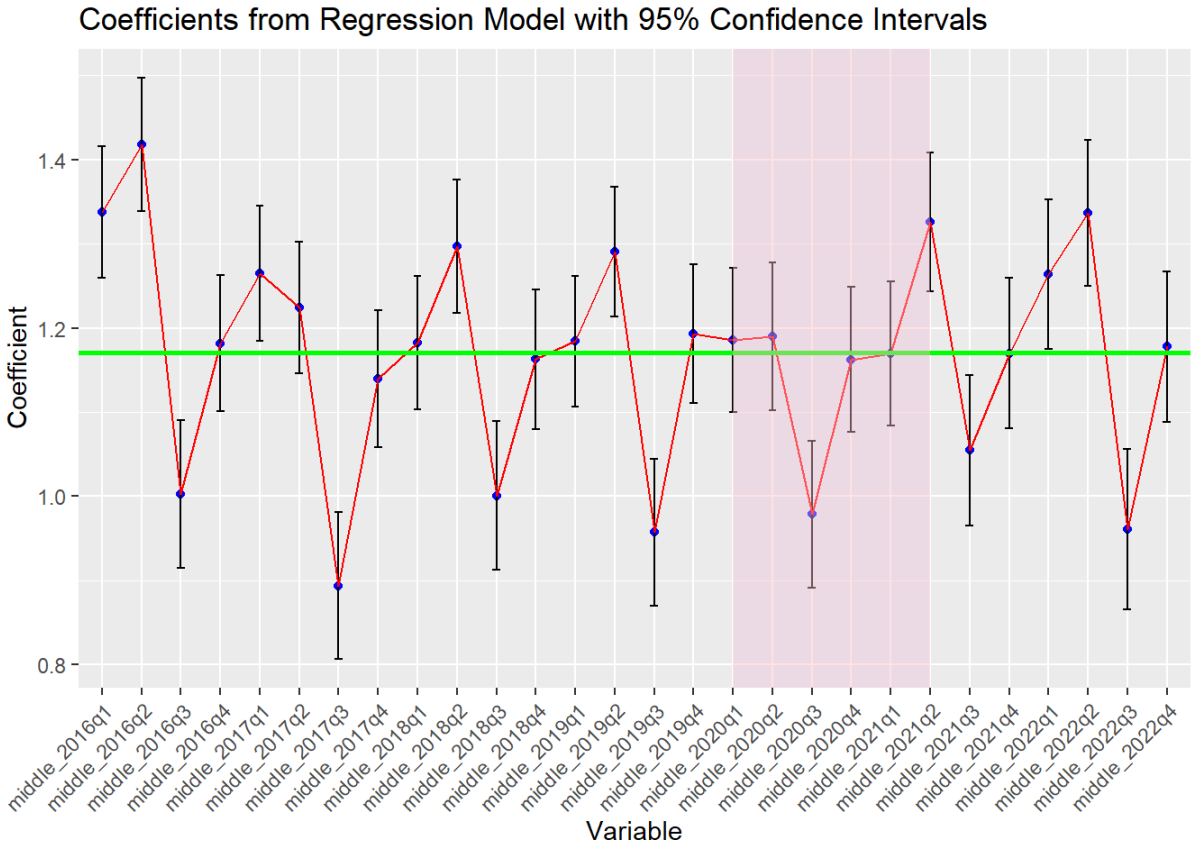
Source: own computation using Czech LFS microdata.

Not all estimates presented above are statistically significant. However, for the middle age group, the third quarter of 2020 shows around a 20% reduction in hours worked compared to the young age group, which serves as the baseline group. Conversely, the last COVID quarter (2021q2) shows a 14% increase in hours worked compared to the young age group.

For the old age group, the differences become significant for the entire COVID period. The coefficients are consistently positive and relatively large. For example, at the turn of 2020 and 2021, there was a 23.6% and 21.5% difference between the 51-65 group and the 20-34

group. Together with the COVID dummy coefficients, the results for the old group are positive. This suggests that the growth of the gap was partly caused by a decrease in hours worked among young people and partly by increase among old group. This highlights the higher vulnerability of the younger employees.

Figure 16: Hours worked event study – middle age

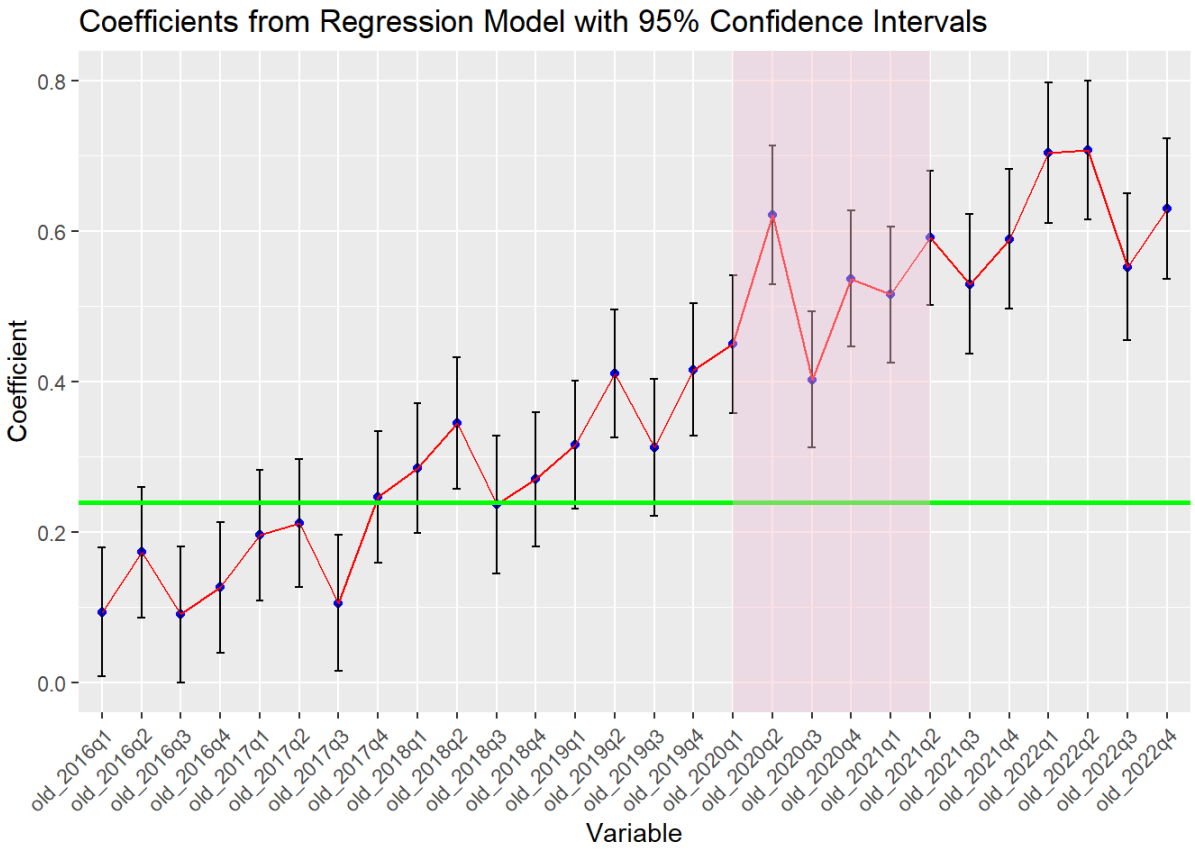


Source: own computation using Czech LFS microdata.

The middle dummy is dummy for middle aged generation. The coefficients in the plot show the difference between middle group and the young group. Obviously, the coefficients are always positive which shows the overall higher employment among middle aged group. This is not surprising since many of members of the youngest group are still studying and data from many countries indicate that young adults are more likely to face unemployment. The area of interest shows that the development follows the normal seasonal pattern from previous year except the second quarter of 2020. The usual spike in this quarter is completely missing. However the situation in the following periods seem to keep the pattern and the drop in the third quarter of 2020 is approximately at the same level as previous year.

From this plot we can assume that in terms of hours worked middle aged individuals were affected most in comparison to the youngest generation at 2020q2.

Figure 17: Hours worked event study - old age



Source: own computation using Czech LFS microdata.

We can observe the same trend in the hours worked graph as well. The COVID period brought a noticeable jump between 2020q1 and 2020q2, indicating that the gap between the young group and the old group grew even larger. This further suggests that the young group was affected more significantly. Overall, COVID did not disrupt the trend significantly, and it continues to this day.

8.1.4. Education

Employment

Table 15: Employment LPM - education

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.72266514	0.00268009	269.6425	< 2.2e-16 ***
covid_dummy_2020q1	0.01721356	0.00504956	3.4089	0.0006522 ***
covid_dummy_2020q2	0.01017571	0.00509902	1.9956	0.0459755 *
covid_dummy_2020q3	0.01392665	0.00500526	2.7824	0.0053959 **
covid_dummy_2020q4	0.01407889	0.00500564	2.8126	0.0049143 **
covid_dummy_2021q1	0.00303083	0.00517920	0.5852	0.5584178
covid_dummy_2021q2	0.00644421	0.00501763	1.2843	0.1990328
middle_ed_covid_2020q1	-0.00467572	0.00636195	-0.7350	0.4623696
middle_ed_covid_2020q2	-0.00159719	0.00634420	-0.2518	0.8012300
middle_ed_covid_2020q3	-0.00303374	0.00655495	-0.4628	0.6434958
middle_ed_covid_2020q4	-0.00774983	0.00662689	-1.1695	0.2422221
middle_ed_covid_2021q1	-0.00584268	0.00674302	-0.8665	0.3862287
middle_ed_covid_2021q2	-0.01215241	0.00664628	-1.8285	0.0674820 .
high_ed_covid_2020q1	-0.01945009	0.00687281	-2.8300	0.0046548 **
high_ed_covid_2020q2	-0.02240065	0.00720783	-3.1078	0.0018848 **
high_ed_covid_2020q3	-0.02840470	0.00717233	-3.9603	7.486e-05 ***
high_ed_covid_2020q4	-0.02359163	0.00752997	-3.1330	0.0017302 **
high_ed_covid_2021q1	-0.01021872	0.00732087	-1.3958	0.1627647
high_ed_covid_2021q2	-0.00928555	0.00711501	-1.3051	0.1918706
female_dummy	-0.16316773	0.00086786	-188.0123	< 2.2e-16 ***
czechia_dummy	-0.00203960	0.00237586	-0.8585	0.3906338
age_middle	0.20484565	0.00117911	173.7295	< 2.2e-16 ***
age_old	0.05668309	0.00138474	40.9340	< 2.2e-16 ***
middle_education	0.06262914	0.00121509	51.5427	< 2.2e-16 ***
high_education	0.11431021	0.00130785	87.4030	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

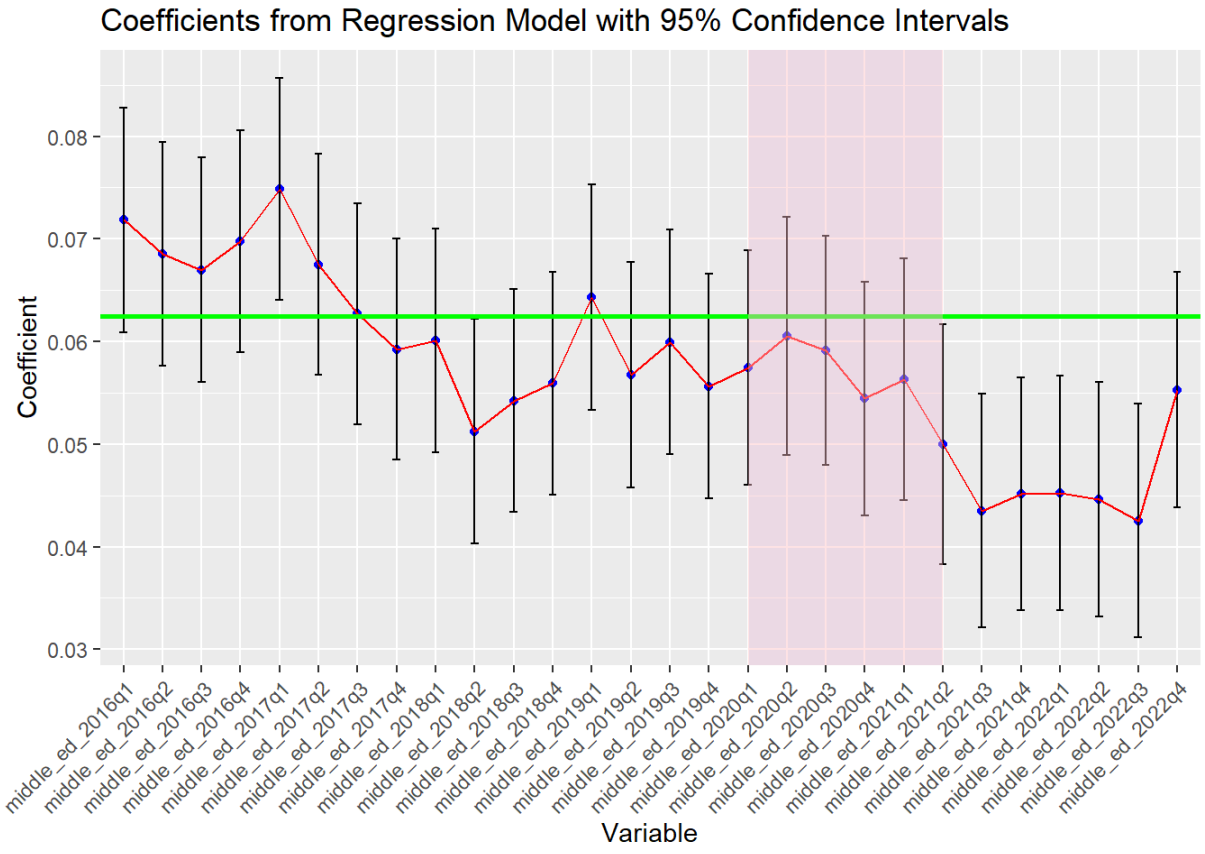
In this analysis, my focus was on interaction terms involving the COVID-19 period and the highest level of education attained, with the interaction term representing individuals with elementary school education omitted.

For individuals with middle education, the coefficients were not statistically relevant except for the last COVID period, 2021q2. Although statistically insignificant, all coefficients for the middle group were negative.

Surprisingly, for individuals with a university degree, the results were significant, and all coefficients were negative. This contrasts with expectations, suggesting that individuals with a university education are more likely to be unemployed than those with elementary education.

This unexpected result may be attributed to the composition of the economy and the structure of vacant positions, which predominantly require only elementary education. The lack of these workers may have contributed to their continued employment (MPSV, 2024).

Figure 18: Employment event study – middle education

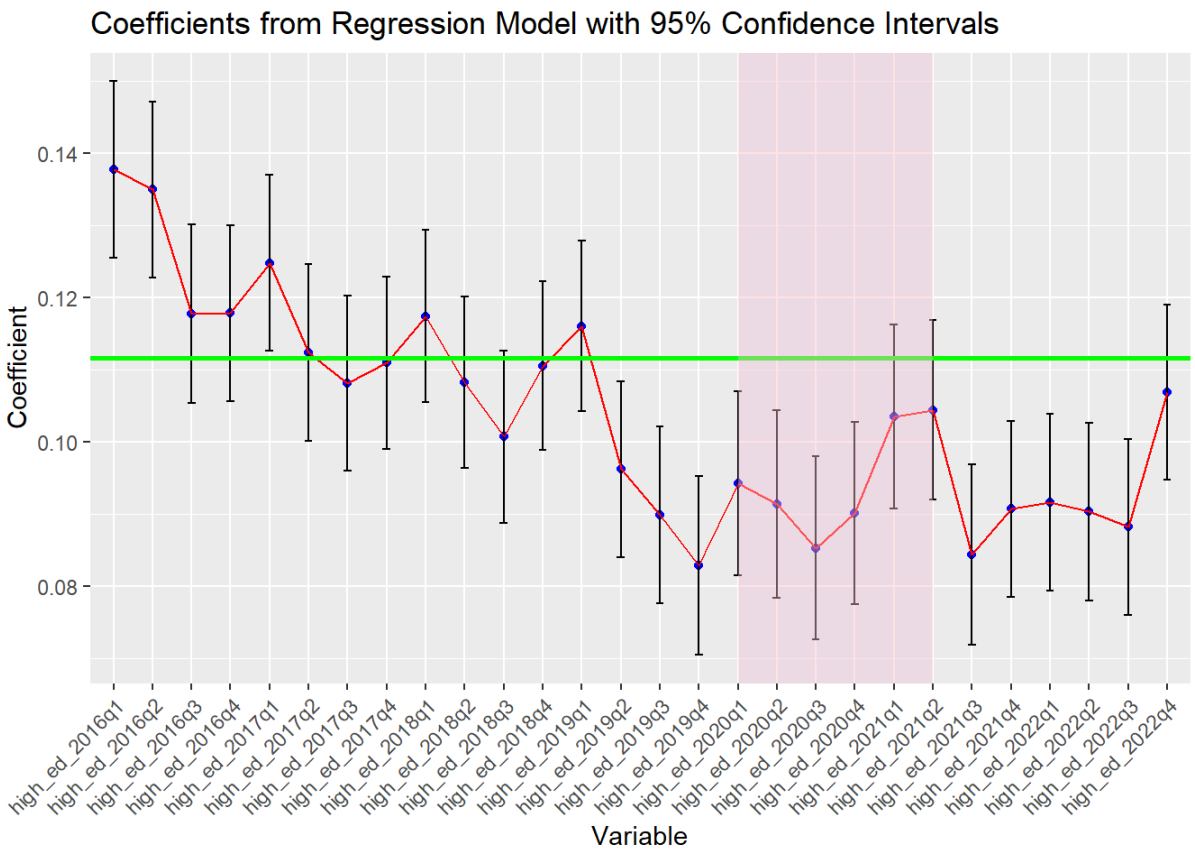


Source: own computation using Czech LFS microdata.

The plot above focuses on individuals with middle education, falling into ISCED category 3, primarily representing high school education with a final (maturita) exam. These individuals are more likely to be employed than those with elementary education. The plot during the

COVID period does not suggest any immediate change in this difference. However, during 2021, there was a drop in the employment of this group. It is worth noting that in absolute terms, the change was rather marginal.

Figure 19: Employment event study – high education



Source: own computation using Czech LFS microdata.

Before COVID, there was a downward sloping trend in employment among highly educated people, which meant that the difference between them and people with elementary education was growing smaller. However, this trend was halted at the beginning of the COVID period and remained relatively stable even after COVID restrictions ended.

Log hours worked

Table 16: Hours worked LPM - education

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.6126907	0.0201495	80.0362	< 2.2e-16 ***
covid_dummy_2020q1	0.1368739	0.0377433	3.6264	0.0002874 ***
covid_dummy_2020q2	-0.1097116	0.0368096	-2.9805	0.0028777 **
covid_dummy_2020q3	0.0338839	0.0365922	0.9260	0.3544529
covid_dummy_2020q4	-0.1176265	0.0371304	-3.1679	0.0015353 **
covid_dummy_2021q1	0.0063666	0.0348573	0.1826	0.8550745
covid_dummy_2021q2	0.3149833	0.0327327	9.6229	< 2.2e-16 ***
middle_ed_covid_2020q1	-0.0467481	0.0456104	-1.0249	0.3053898
middle_ed_covid_2020q2	0.0174051	0.0434505	0.4006	0.6887347
middle_ed_covid_2020q3	-0.1174611	0.0449943	-2.6106	0.0090390 **
middle_ed_covid_2020q4	-0.0328991	0.0451215	-0.7291	0.4659267
middle_ed_covid_2021q1	0.0140155	0.0418530	0.3349	0.7377203
middle_ed_covid_2021q2	-0.0903632	0.0419458	-2.1543	0.0312183 *
high_ed_covid_2020q1	-0.0743953	0.0511683	-1.4539	0.1459650
high_ed_covid_2020q2	0.1475092	0.0483611	3.0502	0.0022873 **
high_ed_covid_2020q3	-0.4118451	0.0510632	-8.0654	7.308e-16 ***
high_ed_covid_2020q4	-0.0012201	0.0535955	-0.0228	0.9818381
high_ed_covid_2021q1	0.1589352	0.0480307	3.3090	0.0009362 ***
high_ed_covid_2021q2	0.0062662	0.0461473	0.1358	0.8919890
female_dummy	-1.1565810	0.0059191	-195.3982	< 2.2e-16 ***
czechia_dummy	-0.0351371	0.0174066	-2.0186	0.0435284 *
age_middle	1.1791508	0.0084611	139.3622	< 2.2e-16 ***
age_old	0.3423542	0.0092976	36.8218	< 2.2e-16 ***
middle_education	0.4204849	0.0088054	47.7529	< 2.2e-16 ***
high_education	0.6536928	0.0109604	59.6412	< 2.2e-16 ***

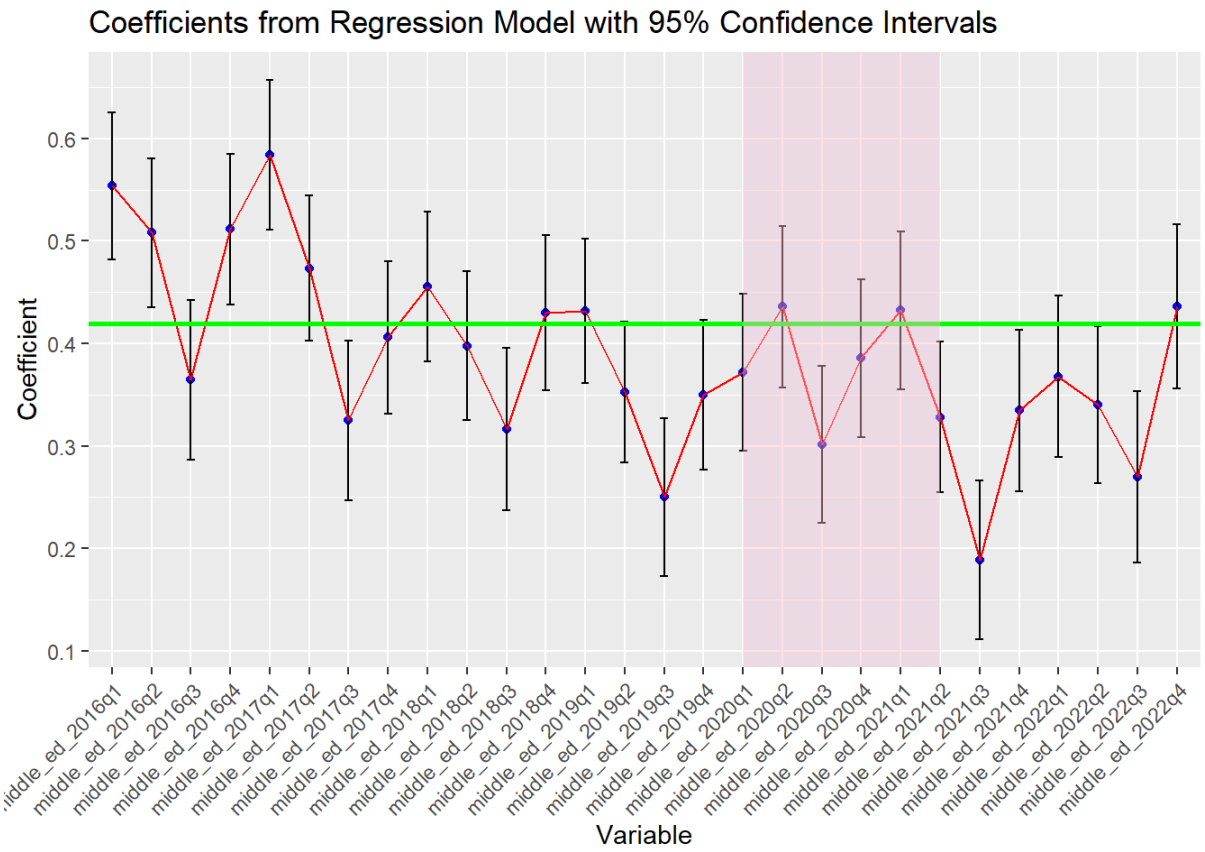
Source: own computation using Czech LFS microdata.

The introduction of the COVID-19 education interaction term reveals a mixed impact on the number of hours worked for both groups in the regression—those with final exam qualifications and individuals with university education. Both groups show a decrease in the third quarter, which might be caused by vacation time in summer and potentially more days off for these two groups than for the low education group. Coefficients in other quarters

often lack significance, but the high education group recorded a 14% higher number of hours worked per week in 2020q2, similar to the first period in 2021.

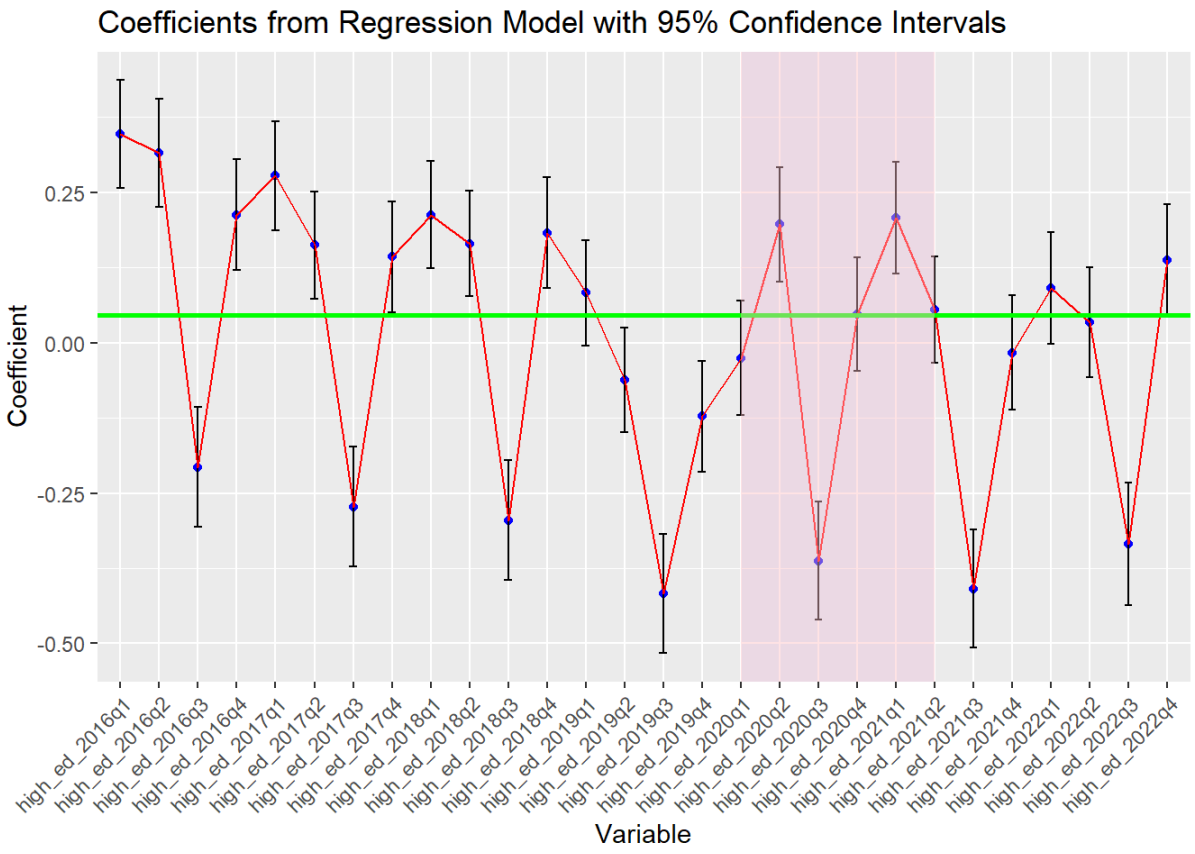
The estimation did not provide evidence for the middle-educated group; however, it suggests that people with university education were affected by COVID restrictions less than people with low education in terms of the number of hours worked. As mentioned earlier, the underlying reasons for this effect likely stem from the nature of occupations that demand a specific level of education. The surge in remote work primarily encompasses office positions requiring higher educational qualifications.

Figure 20: Hours worked event study – middle education



Source: own computation using Czech LFS microdata.

Figure 21: Hours worked event study – high education



Source: own computation using Czech LFS microdata.

The two plots above depict the evolution of the gap in hours worked per week between people with elementary education and those with middle education, as well as individuals with a university degree. There is no visible impact of COVID restrictions on the gap between elementary educated people and those with high school or university degrees. The only observation that can be made from the graph is that the middle education group tends to work the most hours. Additionally, the high education group exhibits the highest seasonality among them, with a significant decrease in hours worked during the third quarters.

8.1.5. Foreigners

Employment

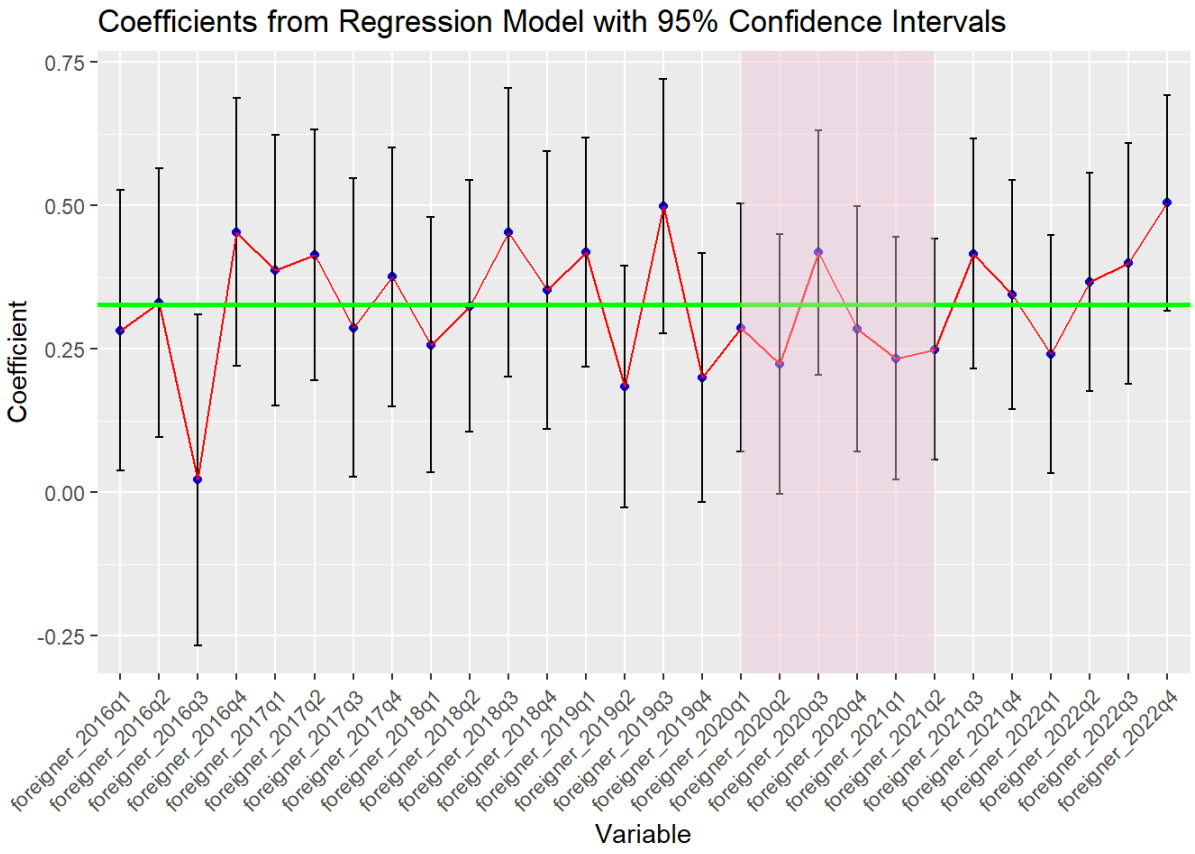
The linear probability model as well as event study did not reveal any substantial effect of COVID restrictions on employment among foreigners. Although foreigners generally have

higher employment rates, according to the LPM, the direct effect of COVID was found to be insignificant.

Log hours worked

Linear probability model did not find any significant difference for foreign citizens.

Figure 22: Hours worked event study - foreigners



Source: own computation using Czech LFS microdata.

According to the plot it seems that COVID restrictions do not have any visible impact on number of hours worked despite the statistically significant results. Interesting feature of the displayed data is reversed seasonality when the strongest quarter is usually the third, which is opposite to the other results.

8.1.6. Ukraine, Slovakia, Vietnam

In this regression analysis, I employed a more detailed approach, introducing interaction variables for selected countries to investigate potential variations in their responses to the COVID-19 shock.

The probability of being employed did not show any relevant changes connected to COVID for people from selected countries. Although each group has significantly higher employment rates than the rest of the sample, there are no COVID-related effects observed.

Table 17: Hours worked LPM - foreigners

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	1.5742373	0.0098653	159.5729	< 2.2e-16 ***
covid_dummy_2020q1	0.1030097	0.0232427	4.4319	9.341e-06 ***
covid_dummy_2020q2	-0.0654163	0.0243549	-2.6860	0.0072322 **
covid_dummy_2020q3	-0.1102968	0.0241317	-4.5706	4.863e-06 ***
covid_dummy_2020q4	-0.1263437	0.0242645	-5.2069	1.920e-07 ***
covid_dummy_2021q1	0.0556290	0.0219058	2.5395	0.0111026 *
covid_dummy_2021q2	0.2846632	0.0187723	15.1640	< 2.2e-16 ***
ukraine_covid_2020q1	0.2937161	0.1743783	1.6844	0.0921122 .
ukraine_covid_2020q2	-0.0735549	0.2566854	-0.2866	0.7744519
ukraine_covid_2020q3	0.5031145	0.1866100	2.6961	0.0070163 **
ukraine_covid_2020q4	-0.2304279	0.2434170	-0.9466	0.3438234
ukraine_covid_2021q1	-0.1665227	0.1917260	-0.8685	0.3850961
ukraine_covid_2021q2	-0.0718033	0.1831377	-0.3921	0.6950047
slovakia_covid_2020q1	-0.2655784	0.1916919	-1.3854	0.1659171
slovakia_covid_2020q2	-0.2336464	0.1899894	-1.2298	0.2187774
slovakia_covid_2020q3	-0.2492151	0.2481245	-1.0044	0.3151882
slovakia_covid_2020q4	-0.1523909	0.1842821	-0.8269	0.4082693
slovakia_covid_2021q1	-0.2018175	0.1895940	-1.0645	0.2871153
slovakia_covid_2021q2	-0.1156071	0.1919334	-0.6023	0.5469551
romania_covid_2020q1	-0.2575146	1.0854749	-0.2372	0.8124731
romania_covid_2020q2	1.5392192	0.3674776	4.1886	2.807e-05 ***
romania_covid_2020q3	0.3079230	1.0849318	0.2838	0.7765501
romania_covid_2020q4	1.5413439	0.4063797	3.7929	0.0001489 ***
romania_covid_2021q1	-0.0957136	0.5317406	-0.1800	0.8571522
romania_covid_2021q2	-0.5408203	0.4051905	-1.3347	0.1819648
vietnam_covid_2020q1	-0.1418298	0.4323004	-0.3281	0.7428500
vietnam_covid_2020q2	-1.1277516	0.5712115	-1.9743	0.0483462 *
vietnam_covid_2020q3	0.0363309	0.3334838	0.1089	0.9132473
vietnam_covid_2020q4	-1.1369745	0.5843710	-1.9456	0.0516985 .
vietnam_covid_2021q1	-1.2742392	0.5320446	-2.3950	0.0166212 *
vietnam_covid_2021q2	-0.4654281	0.3778724	-1.2317	0.2180588
germany_covid2020q1	0.5934437	0.6896545	0.8605	0.3895169
germany_covid2020q2	0.1309800	0.8586936	0.1525	0.8787658
germany_covid2020q3	-0.6145281	1.2131488	-0.5066	0.6124664
germany_covid2020q4	0.3451237	0.9935487	0.3474	0.7283174
germany_covid2021q1	0.3067721	0.8983960	0.3415	0.7327525
germany_covid2021q2	-0.1885970	0.5081956	-0.3711	0.7105548
ukraine	0.3825560	0.0460818	8.3017	< 2.2e-16 ***
slovakia	0.2173539	0.0405564	5.3593	8.357e-08 ***
romania	-0.0647186	0.2033054	-0.3183	0.7502335
vietnam	0.9515922	0.0772990	12.3105	< 2.2e-16 ***
germany	0.7398871	0.1251618	5.9114	3.392e-09 ***
female_dummy	-1.1564883	0.0059202	-195.3473	< 2.2e-16 ***
age_middle	1.1803826	0.0084555	139.5990	< 2.2e-16 ***
age_old	0.3465248	0.0093170	37.1926	< 2.2e-16 ***
middle_education	0.4141903	0.0078602	52.6945	< 2.2e-16 ***
high_education	0.6495897	0.0097265	66.7857	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

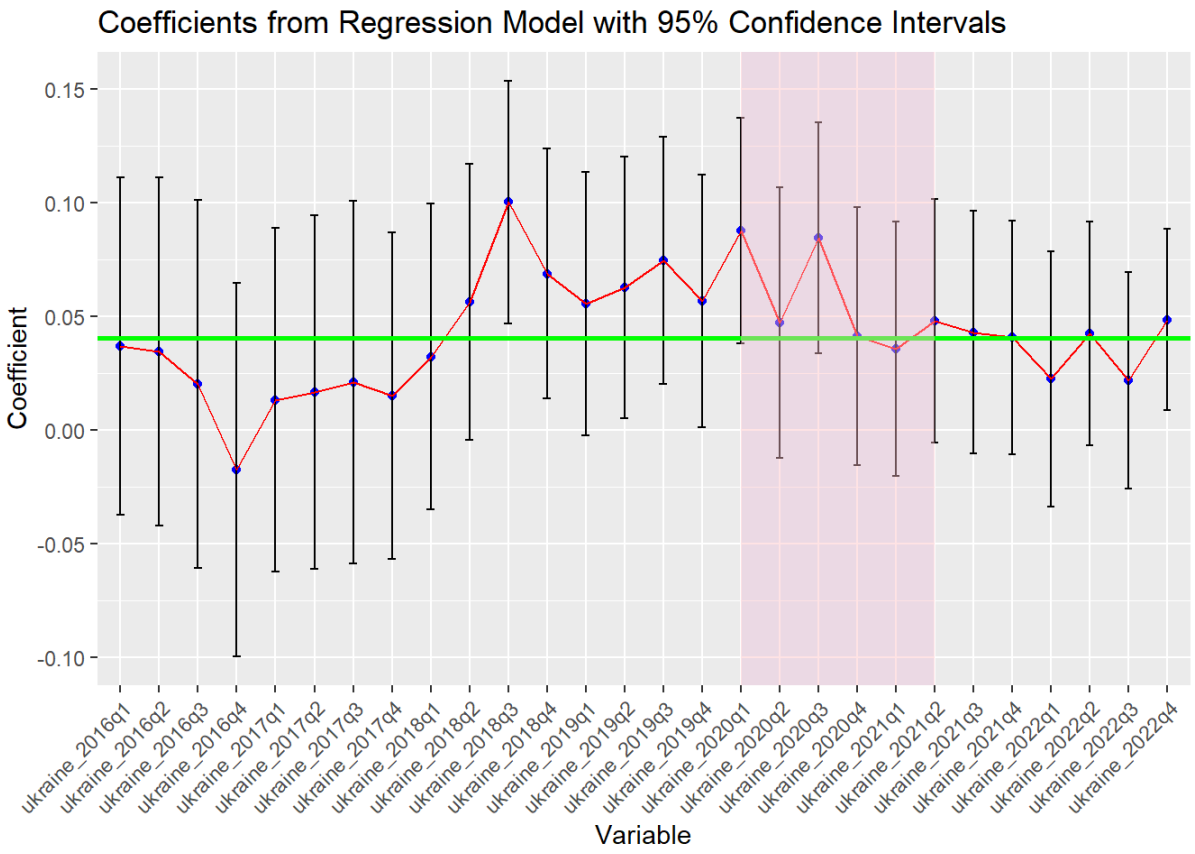
The table above includes estimates for Romania and Germany, but I omitted them from further research due to the low number of observations in each quarter.

Regarding the number of hours worked, the outcomes for specific countries exhibit slight variations. Vietnamese nationals displayed a significant negative coefficient of -1.12 in 2020q2, with a similar magnitude in 2020q4 and 2021q1, indicating a substantial decrease in total working hours during the COVID period.

For Ukrainians, there was only one significant result for 2020q3. However, due to suspected seasonality, this might represent a consequence of different seasonal patterns rather than a direct COVID-related impact.

Other results did not provide relevant information due to their lack of statistical power.

Figure 23: Employment event study – Ukraine



Source: own computation using Czech LFS microdata.

Ukrainian residents tend to have a greater probability of employment than the rest of the population. Although the results for most of the dummy variables are not significant, there

are instances such as 2020q1 and 2020q3, which are significant and positive. This suggests that the impact of COVID restrictions on the probability of being employed does not worsen compared to the rest of the sample. However, there might be issues during the onset of the crisis or afterward, such as some people choosing to return to their country of origin or individuals who lost their jobs being more likely to do so. Since I cannot control for this possibility, the estimation of impacts on other foreign nationals must be taken with reserve.

It is also important to mention that the sampling interviews were not conducted in hostels and other temporary accommodations used, among other people, by foreigners. The results are affected by this.

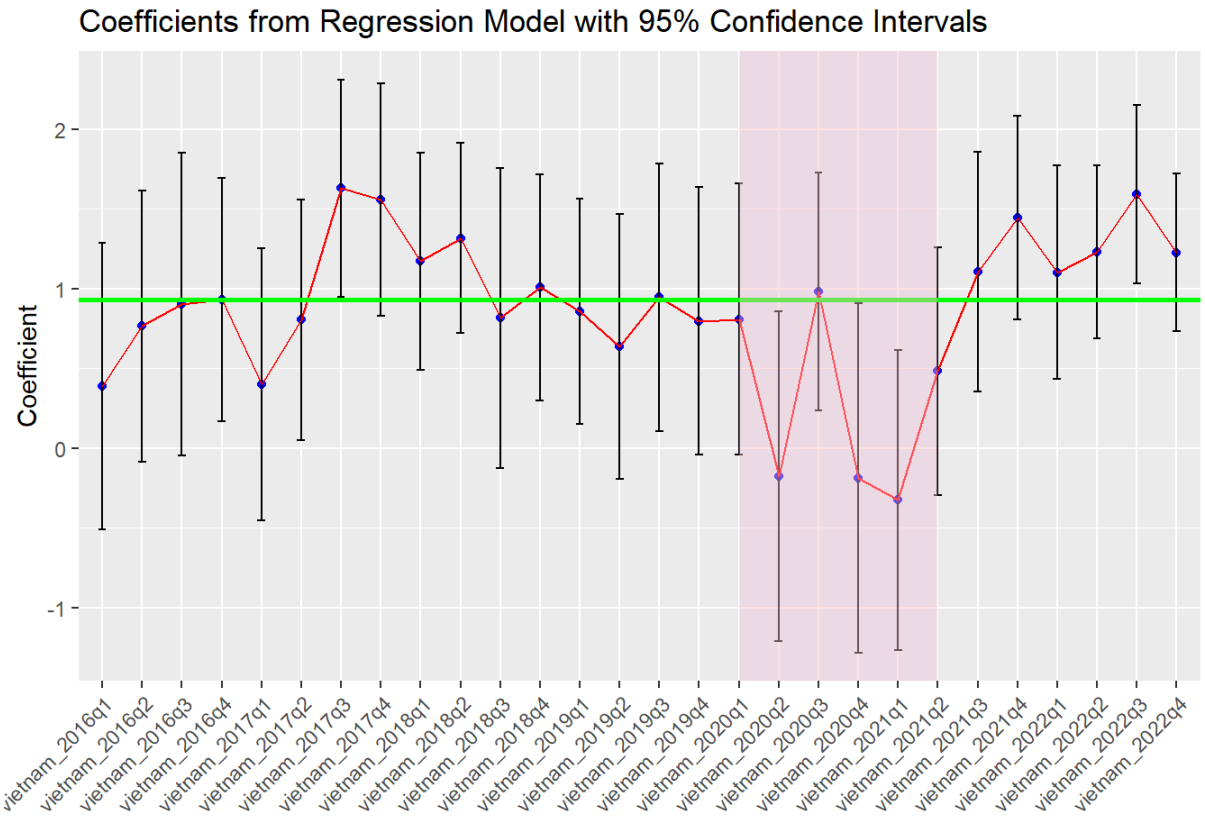
The coefficients for the Slovakian dummy variables showed significant changes only in 2016 and 2017, with unclear origins but certainly not related to COVID. The dummies during the COVID period are not significant.

For people born in Vietnam we have relevant results for the last three quarters of COVID period (2020q4, 2021q1 and 2021q2). All of them stayed slightly positive indicating higher employment then the rest.

Results for Romania and Germany has too few observations to yield relevant results.

Log hours worked

Figure 24: Hours worked event study – Vietnam



Source: own computation using Czech LFS microdata.

Although with limited significance, we can observe that during COVID, Vietnamese nationals in Czechia experienced a decline in the number of hours worked compared to the rest of the population. Before the COVID crisis, Vietnamese nationals generally had a higher number of hours worked, but this difference disappeared during COVID, with the coefficients approaching zero.

The results from the remaining four estimations did not provide relevant information due to their lack of significance.

8.1.7. Prague

Employment – LPM

The coefficients for the COVID impact on Prague lack statistical significance and the coefficients are practically too small to represent any relevant information.

Similarly, for the number of hours worked, COVID interaction dummies are not significant, although the dummy for individuals from Prague shows roughly a 6% higher number of hours worked than for the rest of the country.

8.2. Results by economic sector

The characteristics of disease spread resulted in restrictions aimed at preventing people from meeting at all levels of interpersonal interaction, from intracompany interactions leading to a boom in home offices, to travel restrictions impacting international trade and tourism. This implies differences among different types of jobs, varying across economic sectors. To approximate this, I estimated the above-mentioned equation for three selected categories according to the CZ-ISCO codebook, which divides jobs into types.

I estimated only the hours worked variable because the estimation with the employment dummy as an independent variable did not yield significant results.

8.2.1. Impact on employment and hours worked

Table 18: Hours worked LPM - comparison of economic sectors (2020q2)

Specification	*Coefficient*	*Std. Error*	*t-value*	*Pr(>|t|)*
Service and retail	-0.7066191	0.0691107	-10.2245	< 2.2e-16 ***
Operation of machines and equipment, assemblers	-0.1942471	0.0495830	-3.9176	8.950e-05 ***
Auxiliary and unskilled workers	-0.4827496	0.0913028	-5.2873	1.248e-07 ***

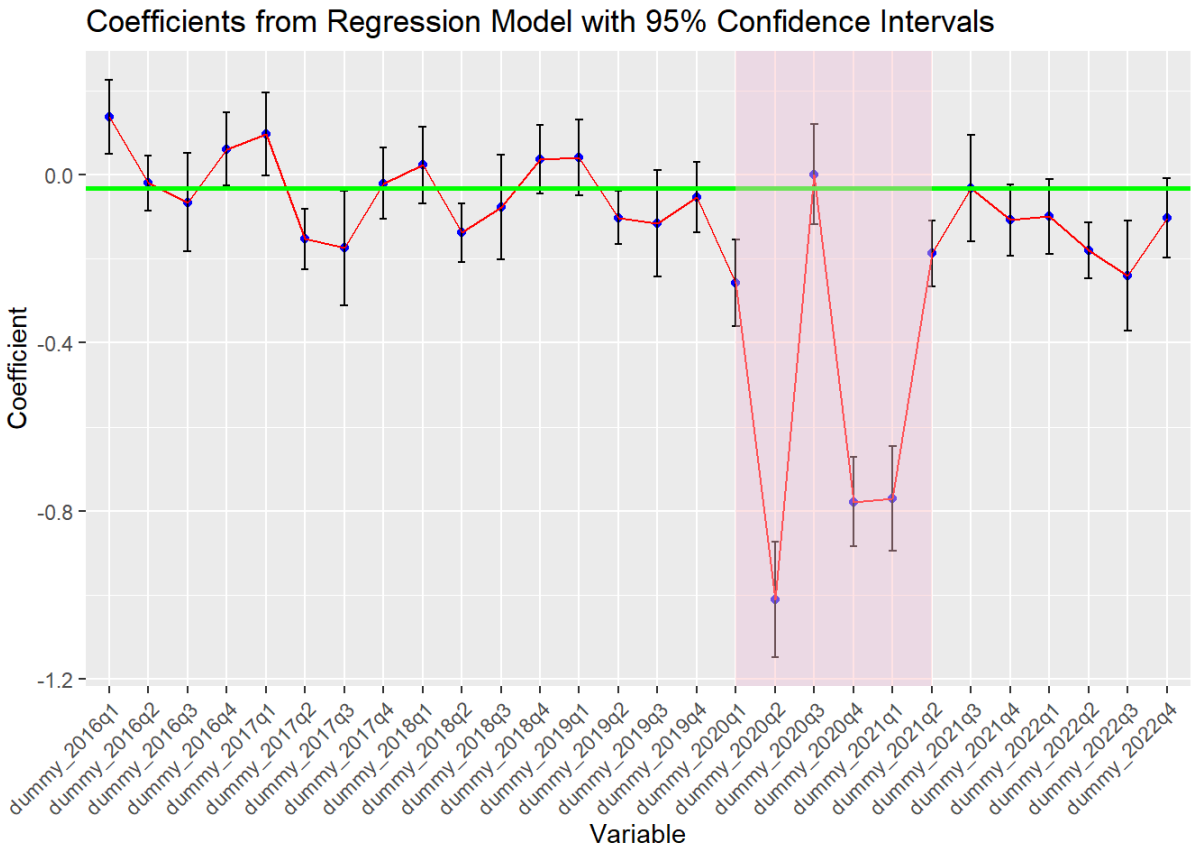
Source: own computation using Czech LFS microdata.

The second quarter of 2020 is highly significant for all three groups. Every group in the estimation experienced a decline in the number of hours worked. However, people employed in services and retail saw the greatest decline. This aligns with expectations since

restaurants and shops were either completely closed or under strict measures. The decline is around 71% in this quarter.

The operation of machines was suspected to have a more modest response to restrictions since there is greater potential to avoid interpersonal contact without disrupting operations too much.

Figure 25: Hours worked event study – services and retail



Source: own computation using Czech LFS microdata.

Figure 26: Hours worked event study – Operation of machines and equipment, assemblers

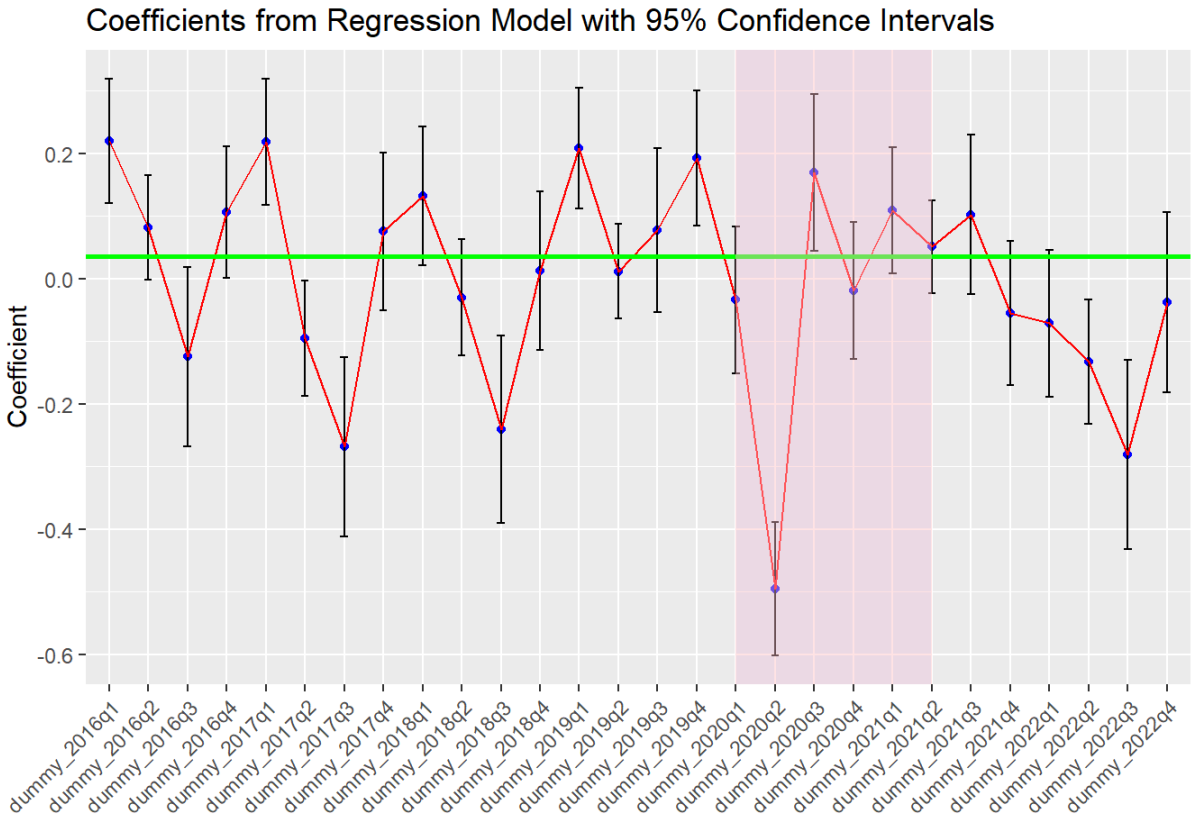
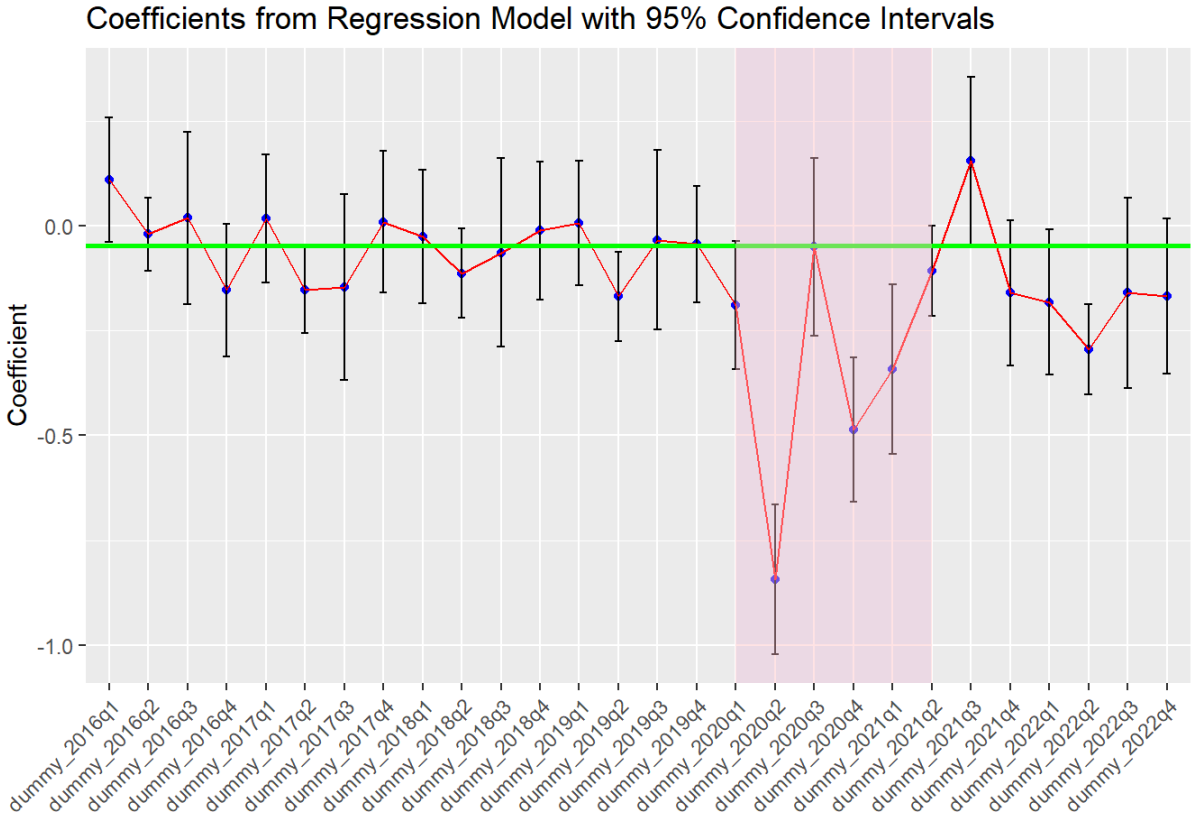


Figure 27: Hours worked event study – Auxiliary and unskilled workers



Source: own computation using Czech LFS microdata.

The most visible impact is in the second quarter of 2020, as discussed above. However, there is also a noticeable difference in the impact during later stages of COVID restrictions. In the plot for the operation of machines, we can see that only 2020q2 saw a substantial decline, whereas the other quarters did not show significant decreases.

The situation for the retail sector closely mirrors the development of the epidemic. During the summer of 2020, most of the restrictions targeting the hospitality sector were lifted, and the tourist industry experienced a slight market recovery. However, as subsequent waves of the epidemic occurred in late 2020 and early 2021, restrictions were reinstated, leading to another downturn in the retail sector.

The auxiliary and unskilled workers group falls somewhere in between, experiencing the strongest decline in 2020q2 but still showing a significant continuation of the decline in 2020q4 and 2021q1.

8.2.2. Female

Table 19: Hours worked LPM - comparison of economic sectors (female, 2020q2)

Variable	*Coefficient*	*Std. Error*	*t-value*	*p-value*
Service and retail	-0.0937364	0.1058638	-0.8854	0.3759197
Operation of machines and equipment, assemblers	-0.2887205	0.1103922	-2.6154	0.0089136**
Auxiliary and unskilled workers	-0.434085	0.126996	-3.4181	0.0006312***

Source: own computation using Czech LFS microdata.

Again, my focus was on 2020q2, which yielded the most significant results. In the service and retail sectors, the differences between males and females were, according to the estimates, insignificant. However, for the operation of machines group, there was a decrease of 28% in hours worked for women compared to men. This gap is even larger for the non-qualified group, where women saw a 43% reduction in hours worked compared to men during the second quarter of 2020.

Figure 28: Hours worked event study – female (services and retail, seasonally adjusted)

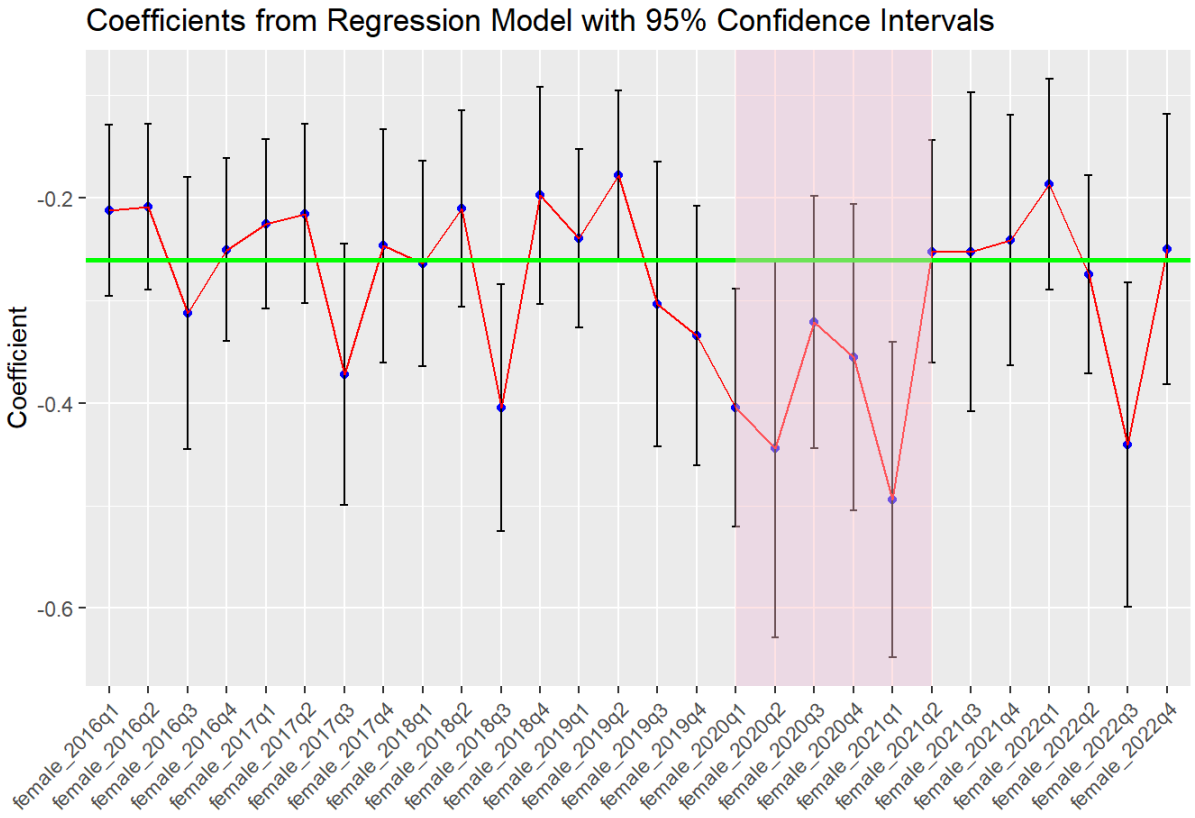
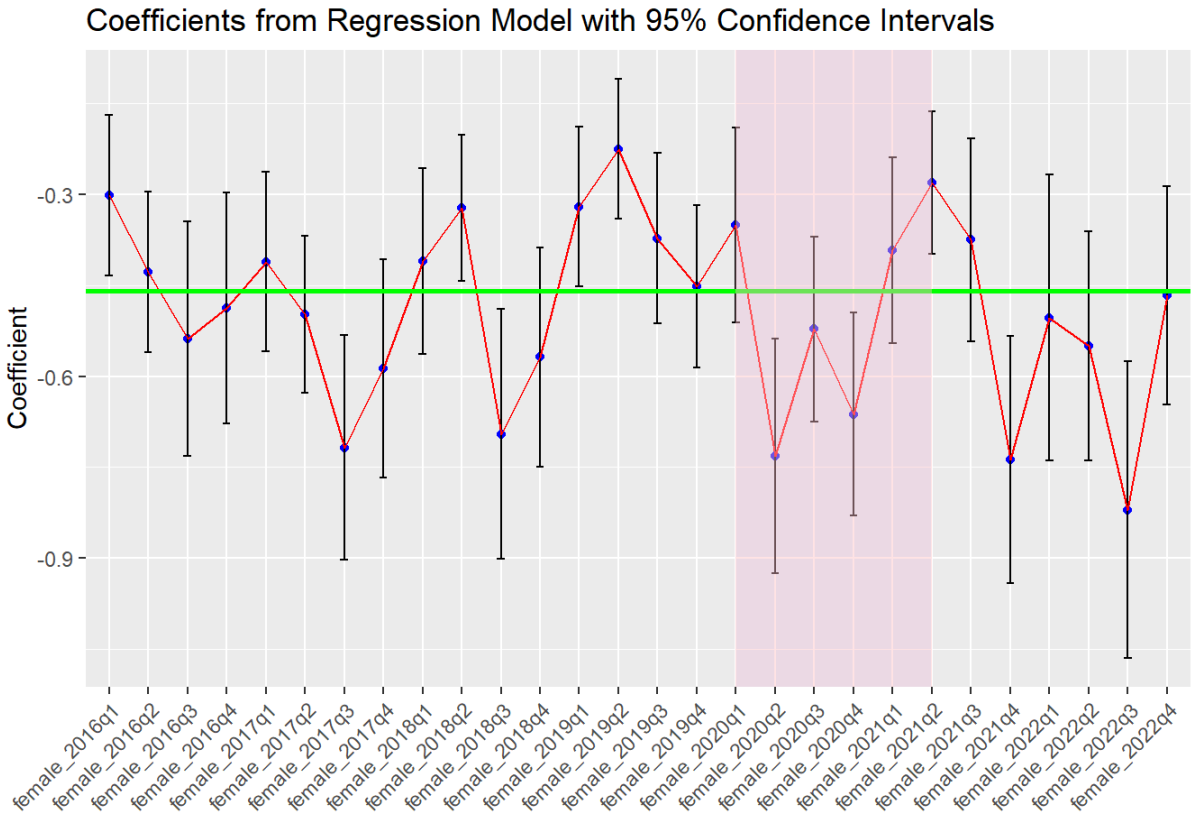
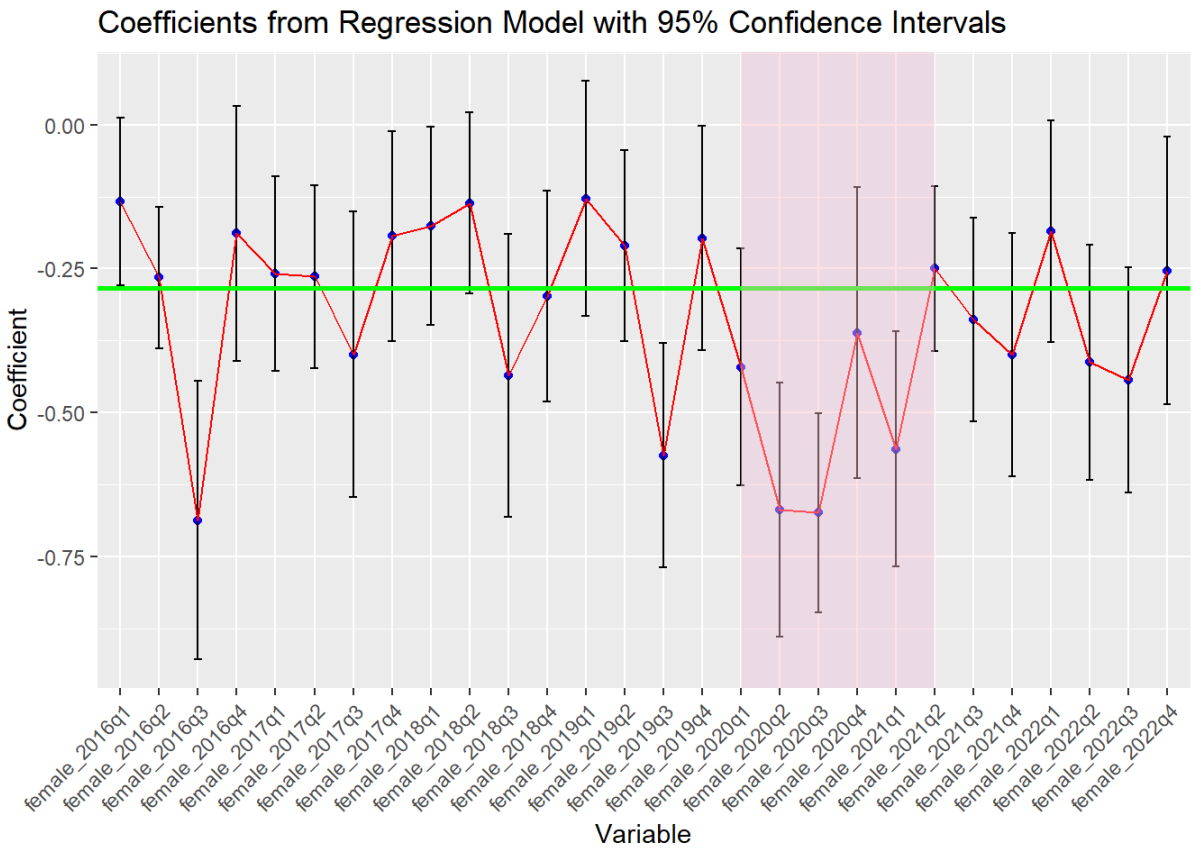


Figure 29: Hours worked event study – female (operation of machines, seasonally adjusted)



Source: own computation using Czech LFS microdata.

Figure 30: Hours worked event study – female (non-qualified, seasonally adjusted)



Source: own computation using Czech LFS microdata.

The event study plots align with the expectation of a COVID-related drop in 2020 and 2021. The first plot shows the path of female employees in the service and retail sector compared to male employees. Although all coefficients during the COVID era are below the pre-COVID average, the decrease began before COVID arrived. Together with weak results from the LPM, this does not point to a different impact in this group.

The remaining two plots align with previous results that suggest an increasing gap between men and women during COVID. Especially among women in non-qualified jobs, the decrease is most apparent.

8.2.3. Age

Table 20: Hours worked LPM - comparison of economic sectors (old age group, 2020q2)

Variable	*Coefficient*	*Std. Error*	*t-value*	*p-value*
Service and retail	0.3282354	0.1231284	2.6658	0.0076817**
Operation of machines and equipment, assemblers	0.197300	0.111281	1.7730	0.0762326.
Auxiliary and unskilled workers	0.569813	0.227457	2.5051	0.0122443*

Source: own computation using Czech LFS microdata.

The results for the middle age group did not yield any relevant results. However, in the second quarter of 2020, the old age group showed that they were better off in terms of hours worked compared to the young age group. This finding contrasts with other countries where the middle age group was often seen as the strongest, followed by the old age group.

The highest magnitude of difference was observed for non-qualified workers, where the old workers worked 56% more hours than the younger workers. The other two groups also showed high positive coefficients, indicating a similar trend across different education and age categories.

9. Conclusion

The years leading up to the 2020 COVID-19 outbreak witnessed a period of robust growth, low unemployment, and modest inflation. This sustained economic stability was disrupted by the unforeseen "black swan" event in the form of the COVID-19 pandemic. Despite prior experiences in European society with disease outbreaks such as the Spanish flu, swine flu, and SARS, the magnitude and rapid spread of this pandemic represented a significant shock on a global scale.

The primary objective of this study was to assess the impact of the COVID-19 pandemic on diverse demographic groups, considering factors such as gender, age, education, country of birth, and citizenship. The methodology involved drawing insights from foreign studies that

had previously yielded outcomes for their respective countries. The overarching aim was to either confirm or refute the hypothesis that the trajectory of developments in Czechia paralleled those observed in other countries.

The findings of this work predominantly indicate consistency with results obtained in other countries across most of the examined parameters. However, distinctions emerged in the Czech context, influenced by a labour market characterized by saturation and a persistent shortage of workforce. Consequently, the effect on unemployment levels in Czechia was relatively modest (MPSV, 2023). Despite the cancellation of numerous positions in sectors severely impacted by the pandemic, there persisted a prolonged surplus of job opportunities over the available workforce.

An essential contributing factor to this modest increase in unemployment was the fact that the Czech economy entered the COVID-19 crisis in an overheated state. Consequently, the reduction in available workplaces did not translate into an equivalent surge in the unemployed population.

The fundamental outcome of this study revealed a statistically significant but modest decrease in working hours within the Czech economy during the COVID-19 crisis. In terms of employment, changes were of a far smaller magnitude and, in some cases, below the detection level.

Academic papers often study gender differences and frequently detect a stronger adverse effect of pandemics on women compared to men. This was true for the number of hours worked, where I identified significant differences in the reported number of hours worked per week. On the other hand, changes in employment did not capture any different trends between men and women, which aligns with the fact of almost full employment in Czechia even amid the COVID period. On the other hand, event studies did not suggest that the increase in the gap is permanent. The impact of COVID restrictions is bounded by the duration of the restrictions and disappears once the COVID measures are over.

Regarding differences among various age cohorts of employed individuals, it seems that the least affected group is the oldest working generation (51-65 years). This contrasts with findings from foreign studies, which often identify the middle group (approximately 30-50

years) as the most resilient. They also consider the old group and young group[7] to be more vulnerable, with the latter being even more so. Czechia is experiencing a similar trend to foreign countries in terms of the most adverse developments for young working adults, but this pattern does not hold for other age groups.

The highest education level largely determines the type of occupation, which can lead to differences across groups of individuals with specific education levels. An unexpected result is that people with a university degree were more likely to be unemployed during COVID-19 than others. However, these results were practically small and come from the fact that the Czech labour market offers many vacant jobs, mostly for non-qualified positions. Results for the number of hours worked, on the other hand, suggest that people with a university education were less likely to experience a decline in hours worked.

The large number of foreigners working in Czechia provides an opportunity to focus on their employment paths during COVID-19. In my work, I conducted estimations for all foreigners as well as for selected nationalities. However, the estimated coefficients did not provide evidence of any potential differences in the researched variables. This estimation was affected by the fact that the Czech statistical office did not collect data from hostels. One issue could be that some foreigners, at the beginning of the crisis, chose to return to their countries. This effect would not be recorded in the data I used. There were also no large differences observed in the number of hours worked among different groups. The only group that experienced a significant drop during COVID-19 were Vietnamese nationals. Since other groups did not see such a development, it can most likely be attributed to the specific employment structure of this group.

Despite Prague's unique position in Czechia, not only in terms of the national economy, I did not uncover any significant differences compared to the rest of the country.

Focusing on specific sectors of the economy brought interesting results. I estimated the different reactions of selected sectors to the COVID shock. The service and retail sector, suspected to have a significant response to the anti-COVID measures, indeed showed a pronounced reaction. A smaller but still substantial reaction was measured for the remaining

[7] The age range considered for the young group in my work is 20-34 years, which is a wider range than in some foreign papers cited in this thesis. The real impact for working people in the narrower range around 18-24 might therefore be even bigger.

two groups: the operation of machines and auxiliary and non-qualified jobs. Although most jobs were affected by the COVID restrictions, it was mainly shops, restaurants, and hotels that faced practically complete lockdowns for some periods of time.

In terms of gender differences, women in non-qualified job positions were affected very strongly but temporarily. On the contrary, among workers in services and retail, the adverse consequences were harsh but mostly equal.

In my work, I provided evidence on how the Czech labour market changed during the COVID era, which groups were most affected by this unprecedented event, and which groups fared well. I also identified areas where the development in Czechia mirrored that of foreign countries and where it evolved differently. While this work alone cannot provide a universal key to dealing with such a crisis in the future, it can shed more light on this topic and contribute to a better understanding of labour dynamics during crisis.

Appendix

Zero hours worked

Considering the observed trends in the weighted mean of zero hours worked, as previously outlined, there was a suspicion regarding the influence of COVID restrictions on the count of employed individuals reporting zero hours worked. To investigate this I used LPM and event study, following the same model configuration as in the employment and hours worked analysis. However, in this case, the dependent variable was a binary indicator labelled "zero_hours," taking a value of one when the number of hours worked was zero and zero otherwise.

Female – LPM

Table 21: Zero hours worked LPM – female

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.07928612	0.00207444	38.2204	< 2.2e-16***
covid_dummy_2020q1	0.00293592	0.00220473	1.3316	0.1830
covid_dummy_2020q2	0.02534300	0.00246462	10.2827	< 2.2e-16***
covid_dummy_2020q3	0.04007080	0.00247824	16.1690	< 2.2e-16***
covid_dummy_2020q4	0.03368546	0.00245133	13.7417	< 2.2e-16***
covid_dummy_2021q1	0.00252884	0.00218311	1.1584	0.2467
covid_dummy_2021q2	-0.04033969	0.00166755	-24.1909	< 2.2e-16***
female_dummy	0.04212207	0.00078369	53.7482	< 2.2e-16***
czechia_dummy	0.00230437	0.00192924	1.1944	0.2323
age_middle	-0.00738284	0.00098474	-7.4972	6.526e-14***
age_old	-0.00423914	0.00103408	-4.0994	4.142e-05***
middle_education	-0.01139908	0.00086742	-13.1413	< 2.2e-16***
high_education	-0.00507302	0.00099672	-5.0897	3.587e-07***

Source: own computation using Czech LFS microdata.

The results obtained from the LPM estimation show mostly positive coefficients, except for 2021q2. Particularly, the last three quarters of 2020 are significant at the 1% level. The positive coefficients align with intuition, as one would expect that the number of people who have employment but are not actively engaged in it may grow when enterprises face challenges and uncertainties during a crisis. This situation could lead to difficulties in hiring

new employees again in the future. Overall, during the last three quarters of 2020, there was a 2%-4% higher likelihood that an employed individual would not work at all in their job.

Table 22: Zero hours worked LPM - female

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.08083460	0.00207980	38.8666	< 2.2e-16***
covid_dummy_2020q1	0.00064529	0.00271660	0.2375	0.8122402
covid_dummy_2020q2	0.01114361	0.00300297	3.7109	0.0002066***
covid_dummy_2020q3	0.02884901	0.00309078	9.3339	< 2.2e-16***
covid_dummy_2020q4	0.02656975	0.00308622	8.6091	< 2.2e-16***
covid_dummy_2021q1	-0.00934436	0.00256882	-3.6376	0.0002752***
covid_dummy_2021q2	-0.03965255	0.00194520	-20.3848	< 2.2e-16***
covid_female_2020q1	0.00516132	0.00452494	1.1406	0.2540211
covid_female_2020q2	0.03212726	0.00506845	6.3387	2.319e-10***
covid_female_2020q3	0.02548476	0.00507628	5.0204	5.159e-07***
covid_female_2020q4	0.01610308	0.00500993	3.2142	0.0013080**
covid_female_2021q1	0.02685627	0.00452058	5.9409	2.836e-09***
covid_female_2021q2	-0.00157448	0.00346143	-0.4549	0.6492064
female_dummy	0.03870144	0.00085544	45.2417	< 2.2e-16***
czechia_dummy	0.00231250	0.00192890	1.1989	0.2305786
age_middle	-0.00743101	0.00098465	-7.5468	4.466e-14***
age_old	-0.00430533	0.00103408	-4.1634	3.135e-05***
middle_education	-0.01138572	0.00086728	-13.1281	< 2.2e-16***
high_education	-0.00507887	0.00099660	-5.0962	3.466e-07***

Source: own computation using Czech LFS microdata.

The coefficients of interest, specifically "covid_female_", indicate that the phenomena described earlier occurred more frequently among women than men. For instance, in 2020q2, at the onset of the pandemic, women had a 3.2% higher chance of having zero working hours in the past week compared to men. This could be attributed to the closure of child-caring facilities, forcing families to find alternative solutions, which may have disproportionately affected females compared to males, as indicated by the results.

Age – LPM

Table 23: Zero hours worked LPM – education

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.07843191	0.00210325	37.2909	< 2.2e-16***
covid_dummy_2020q1	0.00688914	0.00466579	1.4765	0.13980
covid_dummy_2020q2	0.04097592	0.00555500	7.3764	1.628e-13***
covid_dummy_2020q3	0.02349196	0.00506725	4.6360	3.552e-06***
covid_dummy_2020q4	0.04307602	0.00540922	7.9634	1.676e-15***
covid_dummy_2021q1	0.00288235	0.00468371	0.6154	0.53829
covid_dummy_2021q2	-0.02648633	0.00413099	-6.4116	1.441e-10***
middle_covid_2020q1	-0.00311354	0.00574936	-0.5415	0.58813
middle_covid_2020q2	-0.01437474	0.00666182	-2.1578	0.03095*
middle_covid_2020q3	0.02598426	0.00636366	4.0832	4.442e-05***
middle_covid_2020q4	-0.01539583	0.00650538	-2.3666	0.01795*
middle_covid_2021q1	-0.00196695	0.00571496	-0.3442	0.73071
middle_covid_2021q2	-0.02239865	0.00468984	-4.7760	1.789e-06***
old_covid_2020q1	-0.00867004	0.00592590	-1.4631	0.14345
old_covid_2020q2	-0.03055542	0.00681588	-4.4830	7.362e-06***
old_covid_2020q3	0.01639774	0.00653355	2.5098	0.01208*
old_covid_2020q4	-0.00826428	0.00681159	-1.2133	0.22503
old_covid_2021q1	0.00169582	0.00596421	0.2843	0.77616
old_covid_2021q2	-0.01253677	0.00500241	-2.5061	0.01221*
female_dummy	0.04213161	0.00078370	53.7602	< 2.2e-16***
czechia_dummy	0.00230999	0.00192981	1.1970	0.23131
age_middle	-0.00639742	0.00107288	-5.9629	2.480e-09***
age_old	-0.00289480	0.00112788	-2.5666	0.01027*
middle_education	-0.01138078	0.00086749	-13.1192	< 2.2e-16***
high_education	-0.00504855	0.00099666	-5.0655	4.075e-07***

Source: own computation using Czech LFS microdata.

Generally the estimated coefficients suggest that zero hours were more often to see among the youngest cohort. Both age groups in estimation have however positive coefficient in the third quarter of 2020 which may be due to seasonality.

Education – LPM

Table 24: Zero worked hours LPM – education

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.07742439	0.00208780	37.0843	< 2.2e-16***
covid_dummy_2020q1	0.00917112	0.00363696	2.5216	0.0116809*
covid_dummy_2020q2	0.04755831	0.00424189	11.2116	< 2.2e-16***
covid_dummy_2020q3	0.02700147	0.00381510	7.0775	1.469e-12***
covid_dummy_2020q4	0.04904805	0.00420359	11.6681	< 2.2e-16***
covid_dummy_2021q1	0.02381987	0.00388724	6.1277	8.920e-10***
covid_dummy_2021q2	-0.03459475	0.00278428	-12.4250	< 2.2e-16***
middle_ed_covid_2020q1	-0.00374076	0.00507983	-0.7364	0.4614909
middle_ed_covid_2020q2	-0.01373609	0.00589334	-2.3308	0.0197653*
middle_ed_covid_2020q3	0.01260883	0.00548091	2.3005	0.0214201*
middle_ed_covid_2020q4	-0.01160893	0.00576732	-2.0129	0.0441275*
middle_ed_covid_2021q1	-0.01818100	0.00524639	-3.4654	0.0005294***
middle_ed_covid_2021q2	0.00010301	0.00396661	0.0260	0.9792827
high_ed_covid_2020q1	-0.01935016	0.00573599	-3.3735	0.0007423***
high_ed_covid_2020q2	-0.06851167	0.00602178	-11.3773	< 2.2e-16***
high_ed_covid_2020q3	0.03343410	0.00671779	4.9769	6.461e-07***
high_ed_covid_2020q4	-0.04328157	0.00623676	-6.9398	3.931e-12***
high_ed_covid_2021q1	-0.05515447	0.00546113	-10.0995	< 2.2e-16***
high_ed_covid_2021q2	-0.02172203	0.00412952	-5.2602	1.440e-07***
female_dummy	0.04212948	0.00078336	53.7803	< 2.2e-16***
czechia_dummy	0.00221584	0.00192929	1.1485	0.2507500
age_middle	-0.00728540	0.00098458	-7.3995	1.368e-13***
age_old	-0.00420252	0.00103386	-4.0649	4.806e-05***
middle_education	-0.01027423	0.00094165	-10.9108	< 2.2e-16***
high_education	0.00065720	0.00110066	0.5971	0.5504452

Source: own computation using Czech LFS microdata.

The probability of zero hours worked is lower for both the middle age group and the university degree group compared to the group with elementary education, which serves as the comparison group. Furthermore, for the university education group, the coefficients are more negative and more significant. These results suggest that forced leave, which is one potential source of zero worked hours, affected low-qualified jobs more significantly.

The remaining estimates for foreigners, specific nationalities, and employees from Prague did not yield relevant results due to their statistical insignificance.

Seasonally adjusted results

Covid dummy

Table 25: Hours worked LPM – covid dummy (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.7239377	0.0178240	96.7202	< 2.2e-16***
covid_dummy_2020q1	-0.0042819	0.0182565	-0.2345	0.814564
covid_dummy_2020q2	-0.2671712	0.0185177	-14.4279	< 2.2e-16***
covid_dummy_2020q3	0.1873903	0.0185463	10.1039	< 2.2e-16***
covid_dummy_2020q4	-0.1670538	0.0181269	-9.2158	< 2.2e-16***
covid_dummy_2021q1	-0.0553415	0.0180971	-3.0580	0.002228**
covid_dummy_2021q2	0.0841693	0.0172301	4.8850	1.034e-06***
female_dummy	-1.1570025	0.0059438	-194.6586	< 2.2e-16***
czechia_dummy	-0.0371908	0.0155458	-2.3923	0.016742*
age_middle	1.1805711	0.0075739	155.8738	< 2.2e-16***
age_old	0.3430749	0.0080953	42.3793	< 2.2e-16***
middle_education	0.4127078	0.0068360	60.3728	< 2.2e-16***
high_education	0.6505689	0.0076967	84.5259	< 2.2e-16***
q2	0.0924882	0.0092760	9.9707	< 2.2e-16***
q3	-0.4017353	0.0094157	-42.6664	< 2.2e-16***
q4	-0.0695308	0.0091397	-7.6075	2.797e-14***

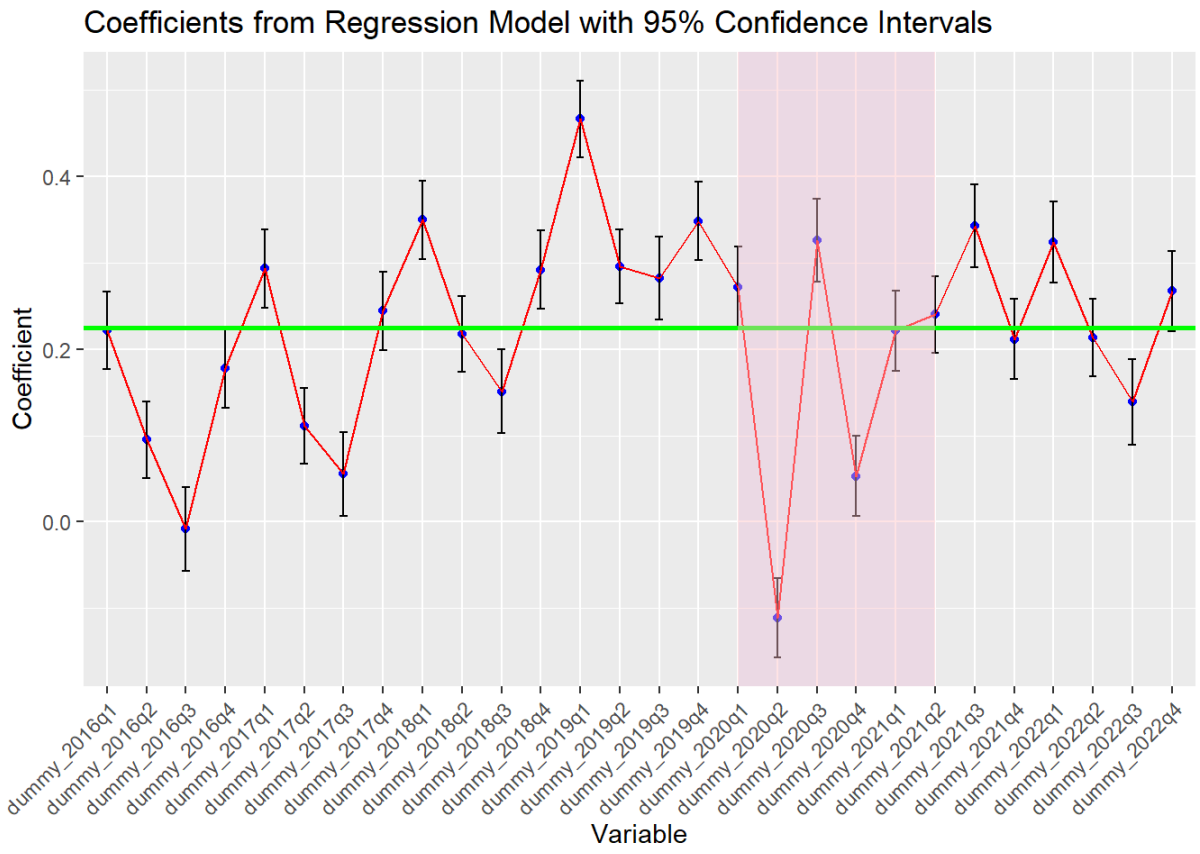
Source: own computation using Czech LFS microdata.

Table 26: Hours worked event study – covid dummy (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.4449914	0.0233901	61.7778	< 2.2e-16***
dummy_2016q1	0.2217601	0.0229912	9.6454	< 2.2e-16***
dummy_2016q2	0.0952465	0.0225643	4.2211	2.431e-05***
dummy_2016q3	-0.0081606	0.0247260	-0.3300	0.74137
dummy_2016q4	0.1773638	0.0230358	7.6995	1.368e-14***
dummy_2017q1	0.2935366	0.0231470	12.6814	< 2.2e-16***
dummy_2017q2	0.1110676	0.0223646	4.9662	6.829e-07***
dummy_2017q3	0.0555118	0.0247440	2.2434	0.02487*
dummy_2017q4	0.2444609	0.0231331	10.5676	< 2.2e-16***
dummy_2018q1	0.3497151	0.0230084	15.1995	< 2.2e-16***
dummy_2018q2	0.2175646	0.0224333	9.6983	< 2.2e-16***
dummy_2018q3	0.1512274	0.0248206	6.0928	1.110e-09***
dummy_2018q4	0.2919898	0.0232862	12.5392	< 2.2e-16***
dummy_2019q1	0.4664851	0.0227152	20.5363	< 2.2e-16***
dummy_2019q2	0.2958175	0.0220151	13.4370	< 2.2e-16***
dummy_2019q3	0.2825003	0.0246017	11.4829	< 2.2e-16***
dummy_2019q4	0.3482209	0.0230342	15.1176	< 2.2e-16***
dummy_2020q1	0.2721411	0.0237338	11.4664	< 2.2e-16***
dummy_2020q2	-0.1113883	0.0234929	-4.7414	2.123e-06***
dummy_2020q3	0.3265037	0.0244901	13.3321	< 2.2e-16***
dummy_2020q4	0.0530247	0.0235121	2.2552	0.02412*
dummy_2021q1	0.2211734	0.0236134	9.3664	< 2.2e-16***
dummy_2021q2	0.2400860	0.0224941	10.6733	< 2.2e-16***
dummy_2021q3	0.3427495	0.0246356	13.9128	< 2.2e-16***
dummy_2021q4	0.2113926	0.0237056	8.9174	< 2.2e-16***
dummy_2022q1	0.3238943	0.0237836	13.6184	< 2.2e-16***
dummy_2022q2	0.2135074	0.0229503	9.3030	< 2.2e-16***
dummy_2022q3	0.1388897	0.0254261	5.4625	4.696e-08***
dummy_2022q4	0.2670798	0.0237254	11.2571	< 2.2e-16***
female_dummy	-1.1557300	0.0059412	-194.5277	< 2.2e-16***
czechia_dummy	-0.0304908	0.0155255	-1.9639	0.04954*
age_middle	1.1760295	0.0075762	155.2267	< 2.2e-16***
age_old	0.3404426	0.0080929	42.0666	< 2.2e-16***
middle_educatio n	0.4107129	0.0068315	60.1205	< 2.2e-16***
high_education	0.6457024	0.0076990	83.8679	< 2.2e-16***
q2	0.2131354	0.0229105	9.3029	< 2.2e-16***
q3	-0.2643932	0.0239657	-11.0322	< 2.2e-16***
q4	-0.0131319	0.0231857	-0.5664	0.57114

Source: own computation using Czech LFS microdata.

Figure 31: Hours worked event study – covid dummy (seasonally adjusted)



Source: own computation using Czech LFS microdata.

The COVID-related drop is clearly apparent in the second quarter of 2020, exceeding all previous coefficients. This sharp drop is then repeated in the last quarter of 2020, after which it returns to its normal range. An interesting result is for 2020q3, which was expected to have the largest seasonal effect. Now, it suggests that the number of working hours grew in this quarter compared to other third quarters. Since many of the restrictions were related to traveling, there might have been fewer vacations among the population, and therefore, the negative effect of COVID might have been neutralized.

Female

Table 27: Hours worked LPM - female (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.7163074	0.0185134	92.7061	< 2.2e-16***
covid_dummy_2020q1	-0.0147455	0.0236918	-0.6224	0.5336849

covid_dummy_2020q2	-0.2361683	0.0241507	-9.7789	< 2.2e-16***
covid_dummy_2020q3	0.2035842	0.0247560	8.2236	< 2.2e-16***
covid_dummy_2020q4	-0.1405581	0.0240175	-5.8523	4.849e-09***
covid_dummy_2021q1	-0.0140908	0.0233293	-0.6040	0.5458480
covid_dummy_2021q2	0.0780220	0.0217877	3.5810	0.0003423***
covid_female_2020q1	0.0215500	0.0366213	0.5885	0.5562279
covid_female_2020q2	-0.0633469	0.0371270	-1.7062	0.0879670*
covid_female_2020q3	-0.0335398	0.0371545	-0.9027	0.3666793
covid_female_2020q4	-0.0534058	0.0363371	-1.4697	0.1416351
covid_female_2021q1	-0.0840712	0.0363001	-2.3160	0.0205581*
covid_female_2021q2	0.0124923	0.0345896	0.3612	0.7179812
female_dummy	-1.1416324	0.0132715	-86.0211	< 2.2e-16***
czechia_dummy	-0.0372470	0.0155452	-2.3960	0.0165735*
age_middle	1.1806137	0.0075736	155.8844	< 2.2e-16***
age_old	0.3431170	0.0080952	42.3855	< 2.2e-16***
middle_education	0.4127175	0.0068360	60.3745	< 2.2e-16***
high_education	0.6506863	0.0076963	84.5458	< 2.2e-16***
q2	0.1023153	0.0120188	8.5129	< 2.2e-16***
q3	-0.3702754	0.0125653	-29.4680	< 2.2e-16***
q4	-0.0934371	0.0119978	-7.7879	6.823e-15***
q2_female	-0.0198111	0.0185753	-1.0665	0.2861832
q3_female	-0.0635498	0.0188531	-3.3708	0.0007496***
q4_female	0.0483153	0.0183031	2.6397	0.0082972**

Source: own computation using Czech LFS microdata.

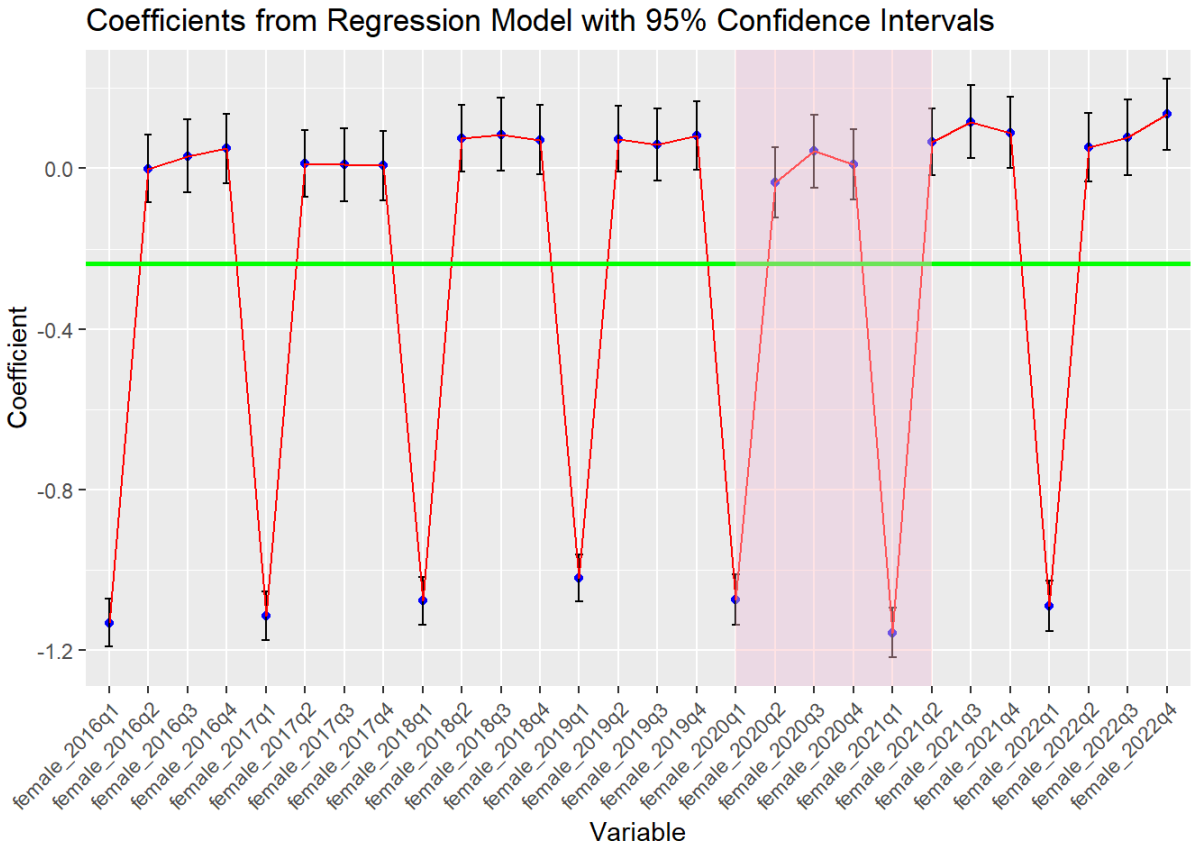
Table 28: Hours worked event study – female (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.66883150	0.02252663	29.6907	< 2.2e-16***
dummy_2016q1	0.82010635	0.02605842	31.4718	< 2.2e-16***
dummy_2016q2	0.09973090	0.02885088	3.4568	0.0005467***
dummy_2016q3	-0.00171899	0.03242869	-0.0530	0.9577253
dummy_2016q4	0.14969480	0.02997853	4.9934	5.934e-07***
dummy_2017q1	0.89209954	0.02620577	34.0421	< 2.2e-16***
dummy_2017q2	0.12725951	0.02840085	4.4808	7.436e-06***
dummy_2017q3	0.08561436	0.03233016	2.6481	0.0080941**
dummy_2017q4	0.25881815	0.02987240	8.6641	< 2.2e-16***
dummy_2018q1	0.93621286	0.02589480	36.1545	< 2.2e-16***
dummy_2018q2	0.20482070	0.02842374	7.2060	5.768e-13***
dummy_2018q3	0.12403678	0.03255807	3.8097	0.0001391***
dummy_2018q4	0.27385485	0.03006360	9.1092	< 2.2e-16***
dummy_2019q1	1.04642715	0.02512898	41.6422	< 2.2e-16***
dummy_2019q2	0.29977074	0.02755687	10.8783	< 2.2e-16***
dummy_2019q3	0.29191006	0.03182129	9.1734	< 2.2e-16***
dummy_2019q4	0.34136684	0.02944108	11.5949	< 2.2e-16***

dummy_2020q1	0.87718686	0.02670762	32.8441	< 2.2e-16***
dummy_2020q2	-0.04663610	0.02968533	-1.5710	0.1161795
dummy_2020q3	0.36052670	0.03166657	11.3851	< 2.2e-16***
dummy_2020q4	0.09083828	0.03025886	3.0020	0.0026819**
dummy_2021q1	0.88000999	0.02639268	33.3430	< 2.2e-16***
dummy_2021q2	0.24308952	0.02818310	8.6254	< 2.2e-16***
dummy_2021q3	0.32559812	0.03172007	10.2647	< 2.2e-16***
dummy_2021q4	0.19082349	0.03058412	6.2393	4.397e-10***
dummy_2022q1	0.95489886	0.02659485	35.9054	< 2.2e-16***
dummy_2022q2	0.23803026	0.02880360	8.2639	< 2.2e-16***
dummy_2022q3	0.13945548	0.03315988	4.2055	2.605e-05***
dummy_2022q4	0.23991972	0.03054968	7.8534	4.053e-15***
female_2016q1	-1.13100982	0.03045819	-37.1332	< 2.2e-16***
female_2016q2	-0.00072677	0.04291453	-0.0169	0.9864883
female_2016q3	0.03076864	0.04637812	0.6634	0.5070553
female_2016q4	0.04937553	0.04378439	1.1277	0.2594482
female_2017q1	-1.11311067	0.03082987	-36.1049	< 2.2e-16***
female_2017q2	0.01254149	0.04254393	0.2948	0.7681549
female_2017q3	0.00922273	0.04642393	0.1987	0.8425262
female_2017q4	0.00697734	0.04387018	0.1590	0.8736332
female_2018q1	-1.07675423	0.03046722	-35.3414	< 2.2e-16***
female_2018q2	0.07543126	0.04266383	1.7680	0.0770549*
female_2018q3	0.08499300	0.04685088	1.8141	0.0696600*
female_2018q4	0.07111395	0.04419836	1.6090	0.1076227
female_2019q1	-1.01945578	0.02946879	-34.5944	< 2.2e-16***
female_2019q2	0.07346634	0.04177564	1.7586	0.0786471*
female_2019q3	0.05905288	0.04620459	1.2781	0.2012237
female_2019q4	0.08246513	0.04349328	1.8960	0.0579547*
female_2020q1	-1.07399754	0.03203305	-33.5278	< 2.2e-16***
female_2020q2	-0.03531963	0.04435515	-0.7963	0.4258628
female_2020q3	0.04282727	0.04611604	0.9287	0.3530526
female_2020q4	0.00988083	0.04450408	0.2220	0.8242978
female_2021q1	-1.15560695	0.03175478	-36.3916	< 2.2e-16***
female_2021q2	0.06618032	0.04266148	1.5513	0.1208326
female_2021q3	0.11633250	0.04620102	2.5180	0.0118037*
female_2021q4	0.08918165	0.04495904	1.9836	0.0472985*
female_2022q1	-1.08926423	0.03233678	-33.6850	< 2.2e-16***
female_2022q2	0.05281031	0.04360442	1.2111	0.2258487
female_2022q3	0.07806477	0.04793628	1.6285	0.1034169
female_2022q4	0.13507414	0.04505602	2.9979	0.0027184**
czechia_dummy	0.01613147	0.01491511	1.0816	0.2794519
age_middle	1.27295897	0.00718030	177.2850	< 2.2e-16***
age_old	0.32238189	0.00768138	41.9693	< 2.2e-16***
middle_education	0.45895450	0.00645533	71.0970	< 2.2e-16***
high_education	0.69814177	0.00730497	95.5708	< 2.2e-16***
q2	0.82256365	0.02590792	31.7495	< 2.2e-16***
q3	0.38326797	0.02793647	13.7193	< 2.2e-16***
q4	0.57573946	0.02658340	21.6579	< 2.2e-16***
q2_female	-1.14681398	0.03019143	-37.9847	< 2.2e-16***
q3_female	-1.22269989	0.03269383	-37.3985	< 2.2e-16***
q4_female	-1.10525015	0.03081977	-35.8617	< 2.2e-16***

Source: own computation using Czech LFS microdata.

Figure 32: Hours worked event study – female (seasonally adjusted)



Source: own computation using Czech LFS microdata.

Age

Table 29: Hours worked LPM - age (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.7138659	0.0210032	81.6004	< 2.2e-16***
covid_dummy_2020q1	-0.0281633	0.0389175	-0.7237	0.4692702
covid_dummy_2020q2	-0.3086651	0.0395381	-7.8068	5.874e-15***
covid_dummy_2020q3	0.1516707	0.0385260	3.9368	8.257e-05***
covid_dummy_2020q4	-0.2205211	0.0386039	-5.7124	1.114e-08***
covid_dummy_2021q1	-0.0936032	0.0390856	-2.3948	0.0166284*
covid_dummy_2021q2	-0.0023742	0.0389065	-0.0610	0.9513398

middle_covid_2020q1	-0.0741349	0.0468858	-1.5812	0.1138370
middle_covid_2020q2	-0.1341574	0.0478595	-2.8032	0.0050607**
middle_covid_2020q3	-0.0182679	0.0476764	-0.3832	0.7015980
middle_covid_2020q4	-0.0247036	0.0468390	-0.5274	0.5979057
middle_covid_2021q1	-0.0901037	0.0469209	-1.9203	0.0548161*
middle_covid_2021q2	0.0016525	0.0452486	0.0365	0.9708667
old_covid_2020q1	0.1658333	0.0500516	3.3132	0.0009222***
old_covid_2020q2	0.2958945	0.0503814	5.8731	4.279e-09***
old_covid_2020q3	0.1422506	0.0494031	2.8794	0.0039846**
old_covid_2020q4	0.2012395	0.0493230	4.0800	4.503e-05***
old_covid_2021q1	0.2316244	0.0497301	4.6576	3.199e-06***
old_covid_2021q2	0.2653279	0.0488921	5.4268	5.739e-08***
female_dummy	-1.1568272	0.0059418	-194.6923	< 2.2e-16***
czechia_dummy	-0.0384862	0.0155460	-2.4756	0.0133001*
age_middle	1.2602825	0.0168421	74.8292	< 2.2e-16***
age_old	0.2841565	0.0181802	15.6300	< 2.2e-16***
middle_education	0.4114738	0.0068347	60.2039	< 2.2e-16***
high_education	0.6503775	0.0076948	84.5212	< 2.2e-16***
q2_middle	0.0641525	0.0236147	2.7166	0.0065950**
q3_middle	-0.2629708	0.0239835	-10.9646	< 2.2e-16***
q4_middle	-0.0727342	0.0233216	-3.1188	0.0018163**
q2_old	0.0417052	0.0256131	1.6283	0.1034658
q3_old	-0.0237036	0.0253505	-0.9350	0.3497699
q4_old	0.0513727	0.0249959	2.0552	0.0398555*
q2	0.0545649	0.0198086	2.7546	0.0058763**
q3	-0.2928743	0.0195763	-14.9607	< 2.2e-16***
q4	-0.0581124	0.0193523	-3.0029	0.0026745**

Source: own computation using Czech LFS microdata.

Table 30: Hours worked event study – age (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.9937973	0.0230212	86.6069	< 2.2e-16***
dummy_2016q1	-0.3003872	0.0371817	-8.0789	6.544e-16***
dummy_2016q2	0.0609842	0.0472500	1.2907	0.1968182
dummy_2016q3	-0.0058164	0.0493504	-0.1179	0.9061788
dummy_2016q4	0.1996901	0.0474293	4.2103	2.551e-05***
dummy_2017q1	-0.2346972	0.0378452	-6.2015	5.595e-10***
dummy_2017q2	0.1362879	0.0466282	2.9229	0.0034683**
dummy_2017q3	0.0952088	0.0489963	1.9432	0.0519942*
dummy_2017q4	0.2442618	0.0476184	5.1296	2.905e-07***
dummy_2018q1	-0.1761597	0.0377917	-4.6613	3.142e-06***
dummy_2018q2	0.1721135	0.0475199	3.6219	0.0002924***
dummy_2018q3	0.1090274	0.0496596	2.1955	0.0281285*
dummy_2018q4	0.2754291	0.0482827	5.7045	1.167e-08***
dummy_2019q1	-0.0699835	0.0375680	-1.8628	0.0624838*
dummy_2019q2	0.2314357	0.0471501	4.9085	9.180e-07***
dummy_2019q3	0.2347313	0.0495238	4.7398	2.140e-06***
dummy_2019q4	0.2739753	0.0482444	5.6789	1.356e-08***
dummy_2020q1	-0.3066533	0.0400514	-7.6565	1.913e-14***

dummy_2020q2	-0.2024465	0.0494608	-4.0931	4.257e-05***
dummy_2020q3	0.2425824	0.0497532	4.8757	1.084e-06***
dummy_2020q4	-0.0470141	0.0491766	-0.9560	0.3390593
dummy_2021q1	-0.3720472	0.0402135	-9.2518	< 2.2e-16***
dummy_2021q2	0.1039808	0.0489564	2.1239	0.0336751*
dummy_2021q3	0.1889053	0.0508771	3.7130	0.0002049***
dummy_2021q4	0.0912100	0.0504782	1.8069	0.0707753*
dummy_2022q1	-0.3688547	0.0420869	-8.7641	< 2.2e-16***
dummy_2022q2	0.0339076	0.0502377	0.6749	0.4997117
dummy_2022q3	0.0125539	0.0523534	0.2398	0.8104914
dummy_2022q4	0.1291288	0.0508664	2.5386	0.0111302*
old_2016q1	0.0927686	0.0436190	2.1268	0.0334377*
old_2016q2	0.0546857	0.0618862	0.8836	0.3768857
old_2016q3	0.0969660	0.0645816	1.5014	0.1332400
old_2016q4	0.0441879	0.0622303	0.7101	0.4776607
old_2017q1	0.1952755	0.0442700	4.4110	1.029e-05***
old_2017q2	0.0934092	0.0612697	1.5246	0.1273698
old_2017q3	0.1118741	0.0646191	1.7313	0.0834011*
old_2017q4	0.1641320	0.0624383	2.6287	0.0085711**
old_2018q1	0.2844089	0.0439785	6.4670	1.000e-10***
old_2018q2	0.2266590	0.0620529	3.6527	0.0002595***
old_2018q3	0.2430708	0.0652114	3.7274	0.0001935***
old_2018q4	0.1879778	0.0631484	2.9768	0.0029132**
old_2019q1	0.3158184	0.0434215	7.2733	3.511e-13***
old_2019q2	0.2923662	0.0612275	4.7751	1.797e-06***
old_2019q3	0.3189406	0.0647252	4.9276	8.326e-07***
old_2019q4	0.3333263	0.0626422	5.3211	1.032e-07***
old_2020q1	0.4491091	0.0466494	9.6273	< 2.2e-16***
old_2020q2	0.5032303	0.0639248	7.8722	3.488e-15***
old_2020q3	0.4090275	0.0646504	6.3268	2.505e-10***
old_2020q4	0.4541835	0.0636591	7.1346	9.713e-13***
old_2021q1	0.5149117	0.0462989	11.1215	< 2.2e-16***
old_2021q2	0.4726082	0.0627578	7.5307	5.053e-14***
old_2021q3	0.5359876	0.0654870	8.1846	2.735e-16***
old_2021q4	0.5069108	0.0645566	7.8522	4.093e-15***
old_2022q1	0.7035632	0.0475783	14.7875	< 2.2e-16***
old_2022q2	0.5893570	0.0638944	9.2239	< 2.2e-16***
old_2022q3	0.5589732	0.0672404	8.3131	< 2.2e-16***
old_2022q4	0.5472970	0.0649015	8.4327	< 2.2e-16***
middle_2016q1	1.3376250	0.0398360	33.5783	< 2.2e-16***
middle_2016q2	0.0444427	0.0564764	0.7869	0.4313258
middle_2016q3	-0.0862317	0.0624029	-1.3819	0.1670168
middle_2016q4	-0.0968486	0.0578503	-1.6741	0.0941067*
middle_2017q1	1.2648094	0.0407984	31.0015	< 2.2e-16***
middle_2017q2	-0.1496539	0.0559882	-2.6730	0.0075188**
middle_2017q3	-0.1947043	0.0621452	-3.1331	0.0017300**
middle_2017q4	-0.1384811	0.0581859	-2.3800	0.0173139*
middle_2018q1	1.1826515	0.0405409	29.1718	< 2.2e-16***
middle_2018q2	-0.0769058	0.0564612	-1.3621	0.1731668
middle_2018q3	-0.0875434	0.0625505	-1.3996	0.1616444
middle_2018q4	-0.1156211	0.0587357	-1.9685	0.0490111*
middle_2019q1	1.1840918	0.0397365	29.7986	< 2.2e-16***

middle_2019q2	-0.0834116	0.0557551	-1.4960	0.1346452
middle_2019q3	-0.1311162	0.0622265	-2.1071	0.0351110*
middle_2019q4	-0.0848912	0.0584917	-1.4513	0.1466861
middle_2020q1	1.1857470	0.0437548	27.0998	< 2.2e-16***
middle_2020q2	-0.1836223	0.0597635	-3.0725	0.0021229**
middle_2020q3	-0.1094378	0.0622132	-1.7591	0.0785648*
middle_2020q4	-0.1157001	0.0598809	-1.9322	0.0533386*
middle_2021q1	1.1698481	0.0437886	26.7158	< 2.2e-16***
middle_2021q2	-0.0478357	0.0576922	-0.8292	0.4070178
middle_2021q3	-0.0336087	0.0630725	-0.5329	0.5941312
middle_2021q4	-0.1082824	0.0609619	-1.7762	0.0756953*
middle_2022q1	1.2639980	0.0454604	27.8044	< 2.2e-16***
middle_2022q2	-0.0367859	0.0592638	-0.6207	0.5347880
middle_2022q3	-0.1269347	0.0652310	-1.9459	0.0516638*
middle_2022q4	-0.1006140	0.0611773	-1.6446	0.1000466
female_dummy	-1.1555675	0.0059400	-194.5395	< 2.2e-16***
czechia_dummy	-0.0367276	0.0155311	-2.3648	0.0180410*
middle_education	0.4058962	0.0068341	59.3932	< 2.2e-16***
high_education	0.6451875	0.0076965	83.8287	< 2.2e-16***
q2_middle	1.3735477	0.0394320	34.8333	< 2.2e-16***
q3_middle	1.0881438	0.0434662	25.0343	< 2.2e-16***
q4_middle	1.2782454	0.0406446	31.4494	< 2.2e-16***
q2_old	0.1176836	0.0433053	2.7175	0.0065772**
q3_old	-0.0071618	0.0453141	-0.1580	0.8744192
q4_old	0.0817763	0.0437690	1.8684	0.0617118*
q2	-0.3301854	0.0369447	-8.9373	< 2.2e-16***
q3	-0.6622839	0.0382599	-17.3101	< 2.2e-16***
q4	-0.5101140	0.0373096	-13.6725	< 2.2e-16***

Source: own computation using Czech LFS microdata.

Figure 33: Hours worked event study – middle age (seasonally adjusted)

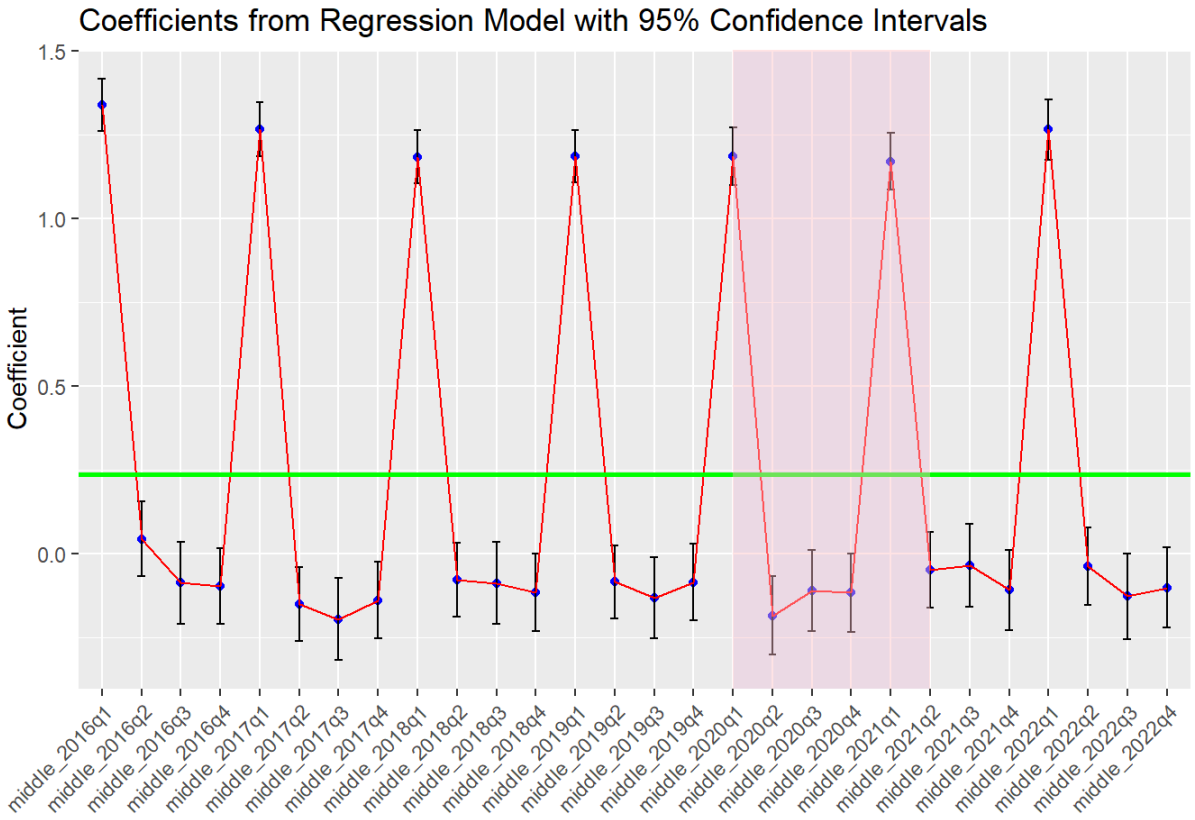
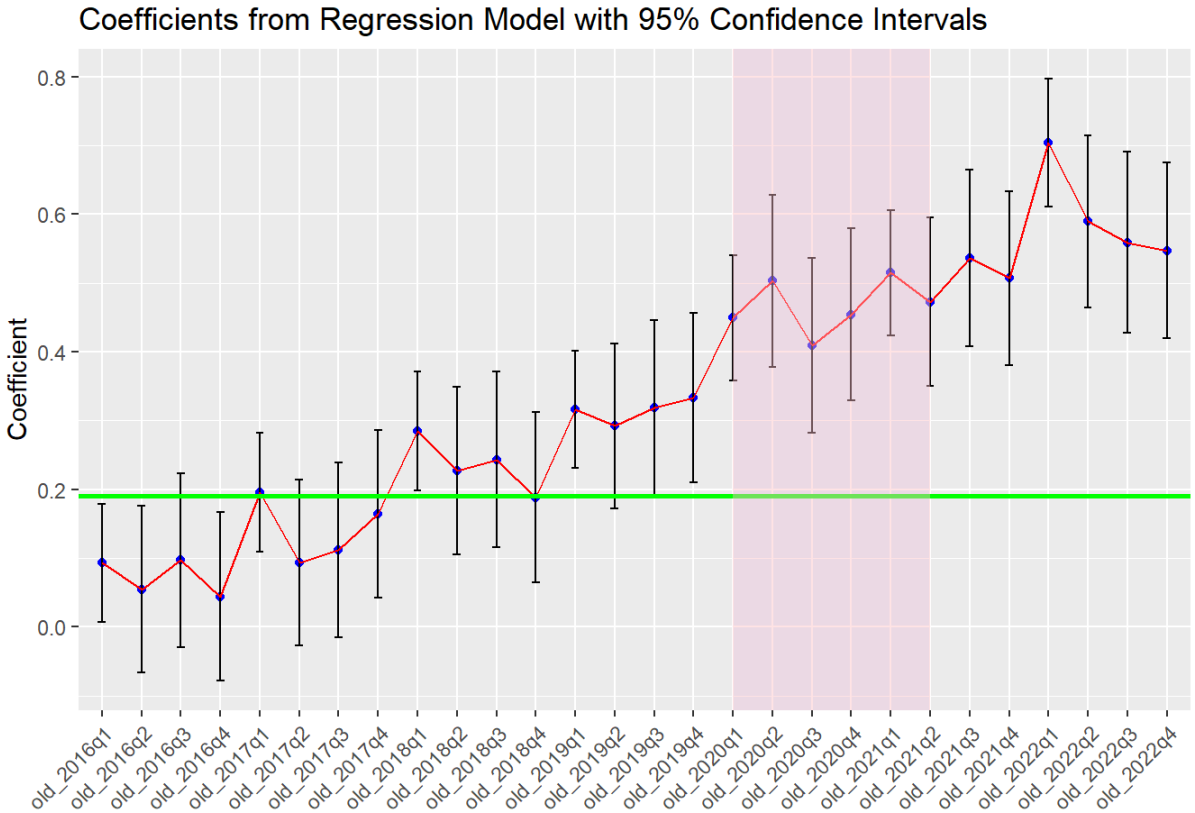


Figure 34: Hours worked event study – middle age (seasonally adjusted)



Source: own computation using Czech LFS microdata.

Education

Table 31: Hours worked LPM - age (seasonally adjusted)

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	1.64299754	0.01939345	84.7192	< 2.2e-16***
covid_dummy_2020q1	0.10775959	0.02944848	3.6593	0.0002530***
covid_dummy_2020q2	-0.27398282	0.02992397	-9.1560	< 2.2e-16***
covid_dummy_2020q3	0.21062111	0.02924375	7.2023	5.927e-13***
covid_dummy_2020q4	-0.12803020	0.02969122	-4.3121	1.618e-05***
covid_dummy_2021q1	-0.02275703	0.02994722	-0.7599	0.4473117
covid_dummy_2021q2	0.15068645	0.02833824	5.3174	1.053e-07***
middle_ed_covid_2020q1	-0.12963299	0.04187534	-3.0957	0.0019636**
middle_ed_covid_2020q2	-0.00070687	0.04283095	-0.0165	0.9868325
middle_ed_covid_2020q3	-0.00800922	0.04182995	-0.1915	0.8481566
middle_ed_covid_2020q4	-0.05743605	0.04182144	-1.3734	0.1696397
middle_ed_covid_2021q1	-0.06886028	0.04216885	-1.6330	0.1024766
middle_ed_covid_2021q2	-0.10845688	0.04028615	-2.6922	0.0070992**
high_ed_covid_2020q1	-0.27244958	0.04748889	-5.7371	9.633e-09***
high_ed_covid_2020q2	0.02824448	0.04739064	0.5960	0.5511802
high_ed_covid_2020q3	-0.08518844	0.04923742	-1.7302	0.0836027*
high_ed_covid_2020q4	-0.07281682	0.04691034	-1.5523	0.1206016
high_ed_covid_2021q1	-0.03914026	0.04613111	-0.8485	0.3961838
high_ed_covid_2021q2	-0.11299384	0.04356628	-2.5936	0.0094976**
female_dummy	-1.15667753	0.00594122	-194.6867	< 2.2e-16***
czechia_dummy	-0.03750246	0.01554025	-2.4132	0.0158113*
age_middle	1.18095445	0.00757172	155.9692	< 2.2e-16***
age_old	0.34347557	0.00809292	42.4415	< 2.2e-16***
middle_education	0.50348313	0.01531969	32.8651	< 2.2e-16***
high_education	0.85178827	0.01703334	50.0071	< 2.2e-16***
q2_middle_ed	-0.06477660	0.02142997	-3.0227	0.0025053**
q3_middle_ed	-0.19234973	0.02153014	-8.9340	< 2.2e-16***
q4_middle_ed	-0.05835498	0.02110867	-2.7645	0.0057011**
q2_high_ed	-0.07880959	0.02382712	-3.3076	0.0009412***
q3_high_ed	-0.52472660	0.02452995	-21.3913	< 2.2e-16***
q4_high_ed	-0.12647893	0.02352005	-5.3775	7.555e-08***
q2	0.13516132	0.01508702	8.9588	< 2.2e-16***
q3	-0.20584782	0.01504817	-13.6793	< 2.2e-16***
q4	-0.01871054	0.01487603	-1.2578	0.2084774

Source: own computation using Czech LFS microdata.

Table 32: Houres worked LPM - education (seasonally adjusted)

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	1.5787131	0.0248605	63.5029	< 2.2e-16***

dummy_2016q1	-0.0330363	0.0318951	-1.0358	0.3003064
dummy_2016q2	0.1125971	0.0361236	3.1170	0.0018271**
dummy_2016q3	0.0519375	0.0380673	1.3644	0.1724550
dummy_2016q4	0.2252526	0.0366749	6.1419	8.159e-10***
dummy_2017q1	0.0393872	0.0326029	1.2081	0.2270137
dummy_2017q2	0.1741847	0.0360307	4.8343	1.336e-06***
dummy_2017q3	0.1479531	0.0383577	3.8572	0.0001147***
dummy_2017q4	0.3465384	0.0370252	9.3595	< 2.2e-16***
dummy_2018q1	0.1578396	0.0324584	4.8628	1.157e-06***
dummy_2018q2	0.3078304	0.0363909	8.4590	< 2.2e-16***
dummy_2018q3	0.2534870	0.0385937	6.5681	5.099e-11***
dummy_2018q4	0.3757150	0.0373065	10.0710	< 2.2e-16***
dummy_2019q1	0.3149551	0.0313875	10.0344	< 2.2e-16***
dummy_2019q2	0.4558842	0.0350571	13.0041	< 2.2e-16***
dummy_2019q3	0.4338915	0.0378587	11.4608	< 2.2e-16***
dummy_2019q4	0.5334423	0.0363993	14.6553	< 2.2e-16***
dummy_2020q1	0.1683321	0.0333134	5.0530	4.351e-07***
dummy_2020q2	-0.0425124	0.0377526	-1.1261	0.2601319
dummy_2020q3	0.4498611	0.0381211	11.8008	< 2.2e-16***
dummy_2020q4	0.1856268	0.0378030	4.9104	9.092e-07***
dummy_2021q1	0.0378631	0.0337552	1.1217	0.2619919
dummy_2021q2	0.3822349	0.0365084	10.4698	< 2.2e-16***
dummy_2021q3	0.5264618	0.0383565	13.7255	< 2.2e-16***
dummy_2021q4	0.3797333	0.0383601	9.8992	< 2.2e-16***
dummy_2022q1	0.1931119	0.0343860	5.6160	1.955e-08***
dummy_2022q2	0.3569616	0.0376873	9.4717	< 2.2e-16***
dummy_2022q3	0.2751537	0.0402172	6.8417	7.832e-12***
dummy_2022q4	0.3572240	0.0389507	9.1712	< 2.2e-16***
middle_ed_2016q1	0.5554528	0.0366934	15.1377	< 2.2e-16***
middle_ed_2016q2	-0.0184479	0.0518001	-0.3561	0.7217388
middle_ed_2016q3	-0.0590711	0.0556831	-1.0608	0.2887613
middle_ed_2016q4	-0.0944754	0.0525528	-1.7977	0.0722212*
middle_ed_2017q1	0.5859374	0.0372691	15.7218	< 2.2e-16***
middle_ed_2017q2	-0.0530173	0.0513179	-1.0331	0.3015501
middle_ed_2017q3	-0.0986930	0.0557485	-1.7703	0.0766735*
middle_ed_2017q4	-0.2003232	0.0529474	-3.7834	0.0001547***
middle_ed_2018q1	0.4568457	0.0371634	12.2929	< 2.2e-16***
middle_ed_2018q2	-0.1289170	0.0518978	-2.4841	0.0129897*
middle_ed_2018q3	-0.1073291	0.0561155	-1.9126	0.0557938*
middle_ed_2018q4	-0.1765043	0.0534819	-3.3003	0.0009660***

middle_ed_2019q1	0.4332747	0.0358692	12.0793	< 2.2e-16***
middle_ed_2019q2	-0.1744293	0.0504428	-3.4580	0.0005443***
middle_ed_2019q3	-0.1735170	0.0553900	-3.1326	0.0017325**
middle_ed_2019q4	-0.2568883	0.0523808	-4.9042	9.380e-07***
middle_ed_2020q1	0.3730872	0.0389832	9.5705	< 2.2e-16***
middle_ed_2020q2	-0.0908232	0.0541149	-1.6783	0.0932809
middle_ed_2020q3	-0.1227116	0.0551783	-2.2239	0.0261548*
middle_ed_2020q4	-0.2209482	0.0538101	-4.1061	4.025e-05***
middle_ed_2021q1	0.4338275	0.0392966	11.0398	< 2.2e-16***
middle_ed_2021q2	-0.1985757	0.0521255	-3.8096	0.0001392***
middle_ed_2021q3	-0.2352952	0.0556147	-4.2308	2.329e-05***
middle_ed_2021q4	-0.2719807	0.0546141	-4.9800	6.358e-07***
middle_ed_2022q1	0.3689045	0.0402193	9.1723	< 2.2e-16***
middle_ed_2022q2	-0.1864903	0.0532807	-3.5001	0.0004650***
middle_ed_2022q3	-0.1540231	0.0578384	-2.6630	0.0077451**
middle_ed_2022q4	-0.1704125	0.0549696	-3.1001	0.0019345**
high_ed_2016q1	0.1998566	0.0568013	3.5185	0.0004340***
high_ed_2016q2	-0.0591455	0.0581575	-1.0170	0.3091589
high_ed_2016q3	-0.1626558	0.0659710	-2.4656	0.0136799*
high_ed_2016q4	-0.0664808	0.0602570	-1.1033	0.2699030
high_ed_2017q1	0.1307152	0.0573987	2.2773	0.0227674*
high_ed_2017q2	-0.2118579	0.0579081	-3.6585	0.0002537***
high_ed_2017q3	-0.2283093	0.0659455	-3.4621	0.0005360***
high_ed_2017q4	-0.1365008	0.0603007	-2.2637	0.0235946*
high_ed_2018q1	0.0661102	0.0565875	1.1683	0.2426925
high_ed_2018q2	-0.2094625	0.0572852	-3.6565	0.0002557***
high_ed_2018q3	-0.2512881	0.0657584	-3.8214	0.0001327***
high_ed_2018q4	-0.0967783	0.0603057	-1.6048	0.1085394
high_ed_2019q1	-0.0637356	0.0560067	-1.1380	0.2551209
high_ed_2019q2	-0.4361118	0.0569482	-7.6581	1.890e-14***
high_ed_2019q3	-0.3731773	0.0655187	-5.6957	1.229e-08***
high_ed_2019q4	-0.4022224	0.0605170	-6.6464	3.005e-11***
high_ed_2020q1	-0.1723144	0.0591743	-2.9120	0.0035915**
high_ed_2020q2	-0.1779618	0.0603381	-2.9494	0.0031839**
high_ed_2020q3	-0.3189064	0.0652859	-4.8848	1.036e-06***
high_ed_2020q4	-0.2318423	0.0614162	-3.7749	0.0001601***

high_ed_2021q1	0.0610209	0.0580886	1.0505	0.2934984
high_ed_2021q2	-0.3192593	0.0573822	-5.5637	2.641e-08***
high_ed_2021q3	-0.3650755	0.0651406	-5.6044	2.090e-08***
high_ed_2021q4	-0.2959849	0.0613919	-4.8212	1.427e-06***
high_ed_2022q1	-0.0560097	0.0582862	-0.9609	0.3365815
high_ed_2022q2	-0.3407977	0.0586984	-5.8059	6.404e-09***
high_ed_2022q3	-0.2906671	0.0668449	-4.3484	1.372e-05***
high_ed_2022q4	-0.1429543	0.0612575	-2.3337	0.0196137*
female_dummy	-1.1534229	0.0059385	-194.2265	< 2.2e-16***
czechia_dummy	-0.0311322	0.0155152	-2.0066	0.0447972*
age_middle	1.1757113	0.0075738	155.2337	< 2.2e-16***
age_old	0.3388283	0.0080898	41.8832	< 2.2e-16***
high_education	0.7509699	0.0391950	19.1599	< 2.2e-16***
q2_middle_ed	0.5280468	0.0363248	14.5368	< 2.2e-16***
q3_middle_ed	0.4251078	0.0390534	10.8853	< 2.2e-16***
q4_middle_ed	0.6078947	0.0368570	16.4933	< 2.2e-16***
q2_high_ed	0.2276033	0.0566469	4.0179	5.872e-05***
q3_high_ed	-0.1908513	0.0607155	-3.1434	0.0016702**
q4_high_ed	0.1327000	0.0580607	2.2855	0.0222815*
q2	-0.0357428	0.0316195	-1.1304	0.2583062
q3	-0.3845163	0.0326626	-11.7724	< 2.2e-16***
q4	-0.2717749	0.0317985	-8.5468	< 2.2e-16***

Source: own computation using Czech LFS microdata.

Figure 35: Hours worked event study – middle education (seasonally adjusted)

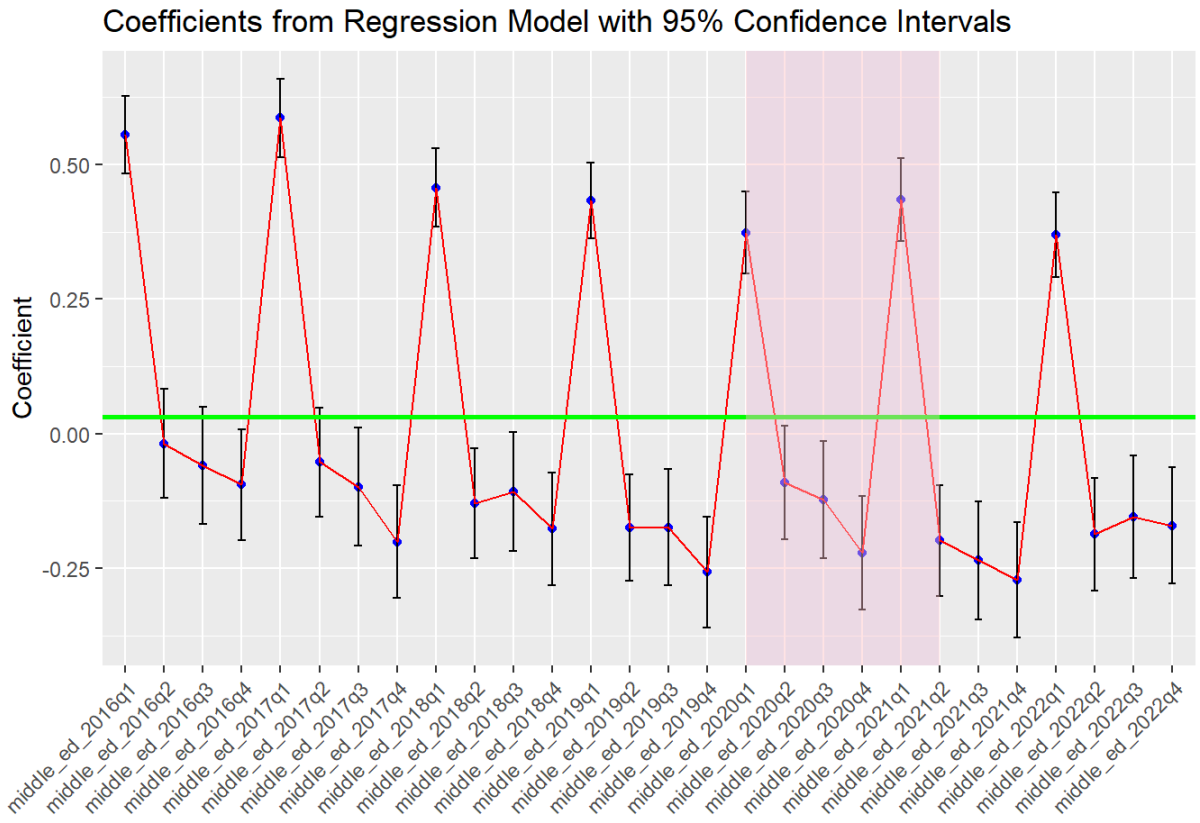
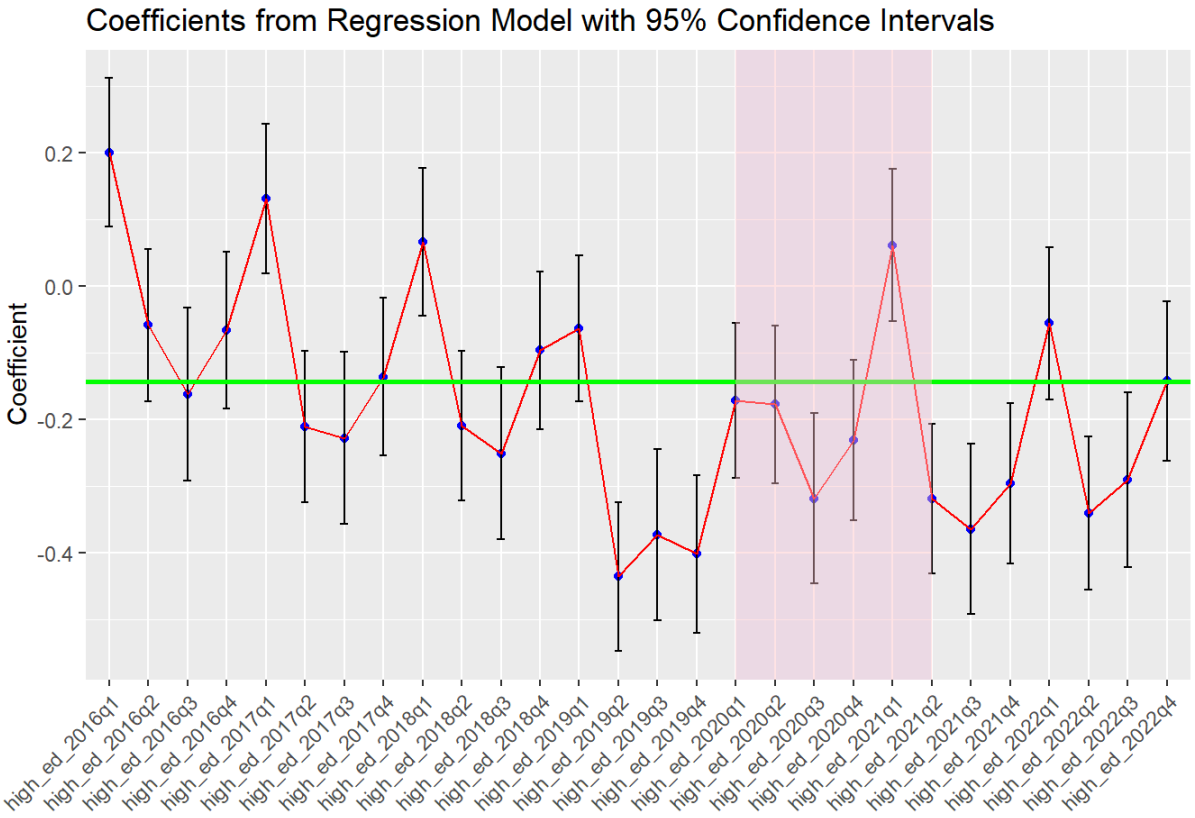


Figure 36: Hours worked event study – university education (seasonally adjusted)



Source: own computation using Czech LFS microdata.

Foreigner

Table 33: Hours worked LPM - foreigner (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.6827624	0.0098886	170.1718	< 2.2e-16***
covid_dummy_2020q1	-0.0039128	0.0184845	-0.2117	0.8323580
covid_dummy_2020q2	-0.2646037	0.0187352	-14.1234	< 2.2e-16***
covid_dummy_2020q3	0.1861497	0.0187899	9.9069	< 2.2e-16***
covid_dummy_2020q4	-0.1646656	0.0183619	-8.9678	< 2.2e-16***
covid_dummy_2021q1	-0.0536792	0.0183289	-2.9287	0.0034043**
covid_dummy_2021q2	0.0856787	0.0174690	4.9046	9.363e-07***
foreigner_covid_2020q1	-0.0318125	0.1177332	-0.2702	0.7869999
foreigner_covid_2020q2	-0.1100951	0.1214527	-0.9065	0.3646792
foreigner_covid_2020q3	0.0150253	0.1159518	0.1296	0.8968971
foreigner_covid_2020q4	-0.1044921	0.1142740	-0.9144	0.3605072
foreigner_covid_2021q1	-0.0853969	0.1152210	-0.7412	0.4585982
foreigner_covid_2021q2	-0.0835215	0.1056298	-0.7907	0.4291191
foreigner	0.1709821	0.0461891	3.7018	0.0002141***

female_dummy	-1.1564224	0.0059444	-194.5382	< 2.2e-16***
age_middle	1.1815292	0.0075746	155.9850	< 2.2e-16***
age_old	0.3466790	0.0081019	42.7899	< 2.2e-16***
middle_education	0.4129171	0.0068346	60.4155	< 2.2e-16***
high_education	0.6483963	0.0076953	84.2590	< 2.2e-16***
q2	0.0920291	0.0093755	9.8159	< 2.2e-16***
q3	-0.4041233	0.0095174	-42.4614	< 2.2e-16***
q4	-0.0716903	0.0092415	-7.7575	8.673e-15***
q2_foreigner	0.0138892	0.0638900	0.2174	0.8279024
q3_foreigner	0.0843474	0.0645159	1.3074	0.1910806
q4_foreigner	0.0705712	0.0619231	1.1397	0.2544282

Source: own computation using Czech LFS microdata.

Table 34: Hours worked event study – foreigners (seasonally adjusted)

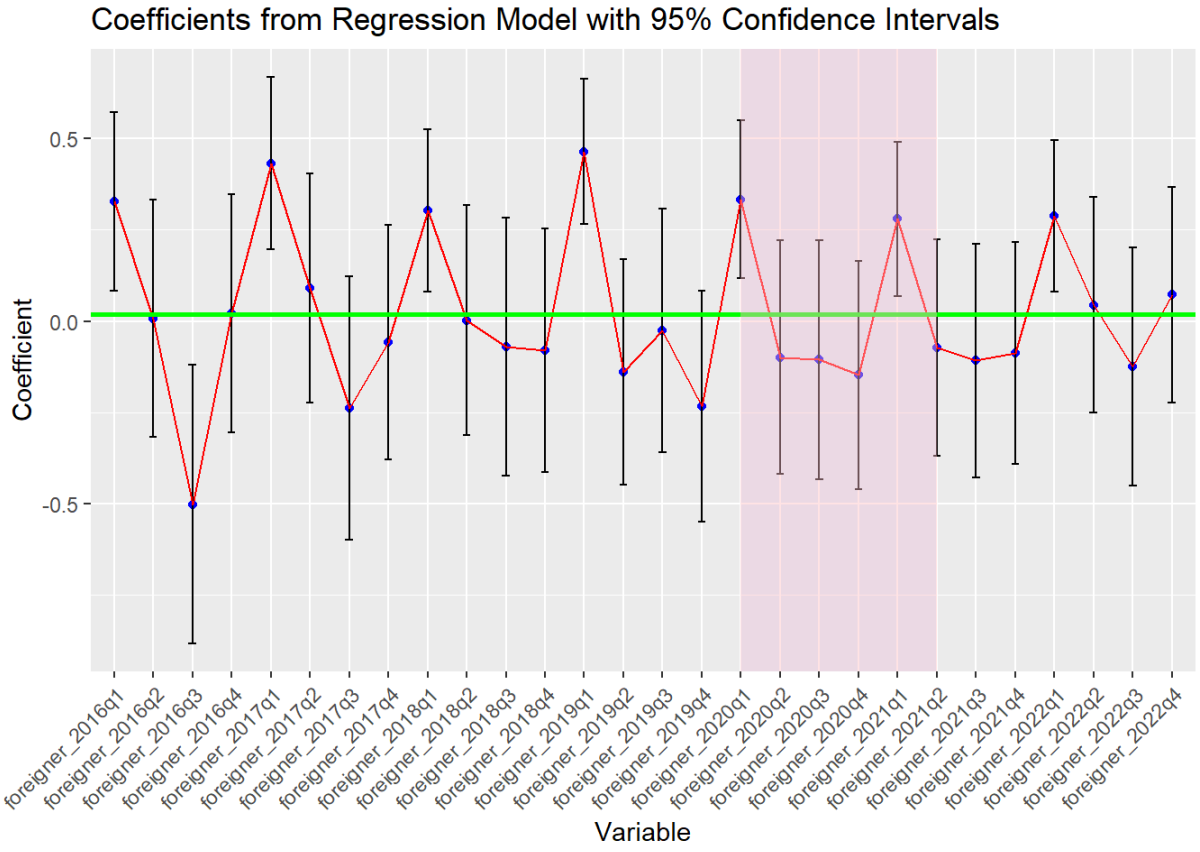
Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.2207263	0.0291204	41.9199	< 2.2e-16 ***
dummy_2016q1	0.2151049	0.0230883	9.3166	< 2.2e-16 ***
dummy_2016q2	0.0949644	0.0227746	4.1697	3.050e-05 ***
dummy_2016q3	0.0013383	0.0249201	0.0537	0.9571705
dummy_2016q4	0.1759931	0.0232568	7.5674	3.812e-14 ***
dummy_2017q1	0.2838202	0.0232556	12.2044	< 2.2e-16 ***
dummy_2017q2	0.1080814	0.0225831	4.7859	1.702e-06 ***
dummy_2017q3	0.0599428	0.0249571	2.4018	0.0163133 *
dummy_2017q4	0.2445180	0.0233660	10.4647	< 2.2e-16 ***
dummy_2018q1	0.3430464	0.0231242	14.8349	< 2.2e-16 ***
dummy_2018q2	0.2167622	0.0226500	9.5701	< 2.2e-16 ***
dummy_2018q3	0.1515629	0.0250481	6.0509	1.441e-09 ***
dummy_2018q4	0.2933020	0.0235012	12.4803	< 2.2e-16 ***
dummy_2019q1	0.4561435	0.0228530	19.9599	< 2.2e-16 ***
dummy_2019q2	0.2989536	0.0222295	13.4485	< 2.2e-16 ***
dummy_2019q3	0.2812117	0.0248666	11.3088	< 2.2e-16 ***
dummy_2019q4	0.3533084	0.0232756	15.1794	< 2.2e-16 ***
dummy_2020q1	0.2646606	0.0238941	11.0764	< 2.2e-16 ***
dummy_2020q2	-0.1097944	0.0237396	-4.6249	3.748e-06 ***
dummy_2020q3	0.3263938	0.0247630	13.1807	< 2.2e-16 ***
dummy_2020q4	0.0549615	0.0237772	2.3115	0.0208046 *
dummy_2021q1	0.2148944	0.0237742	9.0390	< 2.2e-16 ***
dummy_2021q2	0.2408319	0.0227565	10.5830	< 2.2e-16 ***
dummy_2021q3	0.3424441	0.0249440	13.7285	< 2.2e-16 ***
dummy_2021q4	0.2117862	0.0240062	8.8221	< 2.2e-16 ***
dummy_2022q1	0.3180457	0.0239570	13.2757	< 2.2e-16 ***
dummy_2022q2	0.2110965	0.0232411	9.0829	< 2.2e-16 ***
dummy_2022q3	0.1394043	0.0257532	5.4131	6.196e-08 ***
dummy_2022q4	0.2617951	0.0240552	10.8831	< 2.2e-16 ***
foreigner_2016q1	0.3287160	0.1249842	2.6301	0.0085371 **
foreigner_2016q2	0.0070984	0.1659541	0.0428	0.9658823
foreigner_2016q	-0.5025269	0.1946703	-2.5814	0.0098395 **

3				
foreigner_2016q4	0.0205995	0.1668664	0.1234	0.9017515
foreigner_2017q1	0.4329002	0.1204988	3.5926	0.0003275 ***
foreigner_2017q2	0.0905382	0.1603891	0.5645	0.5724203
foreigner_2017q3	-0.2381244	0.1842384	-1.2925	0.1961913
foreigner_2017q4	-0.0581411	0.1640083	-0.3545	0.7229634
foreigner_2018q1	0.3036414	0.1139439	2.6648	0.0077028 **
foreigner_2018q2	0.0019128	0.1608146	0.0119	0.9905099
foreigner_2018q3	-0.0710111	0.1808320	-0.3927	0.6945478
foreigner_2018q4	-0.0805112	0.1702187	-0.4730	0.6362228
foreigner_2019q1	0.4647133	0.1018618	4.5622	5.063e-06 ***
foreigner_2019q2	-0.1391988	0.1577215	-0.8826	0.3774738
foreigner_2019q3	-0.0259438	0.1704898	-0.1522	0.8790512
foreigner_2019q4	-0.2339530	0.1611528	-1.4517	0.1465726
foreigner_2020q1	0.3335656	0.1106269	3.0152	0.0025679 **
foreigner_2020q2	-0.0992804	0.1631249	-0.6086	0.5427792
foreigner_2020q3	-0.1062609	0.1677582	-0.6334	0.5264614
foreigner_2020q4	-0.1481553	0.1597274	-0.9276	0.3536407
foreigner_2021q1	0.2801018	0.1079458	2.5948	0.0094637 **
foreigner_2021q2	-0.0733849	0.1516555	-0.4839	0.6284624
foreigner_2021q3	-0.1080307	0.1635317	-0.6606	0.5088623
foreigner_2021q4	-0.0879989	0.1553255	-0.5665	0.5710234
foreigner_2022q1	0.2873930	0.1059608	2.7123	0.0066828 **
foreigner_2022q2	0.0442571	0.1507283	0.2936	0.7690472
foreigner_2022q3	-0.1248716	0.1665273	-0.7499	0.4533411
foreigner_2022q4	0.0721098	0.1512642	0.4767	0.6335660
female_dummy	-1.1549617	0.0059419	-194.3756	< 2.2e-16 ***

czechia_dummy	0.1996527	0.0234970	8.4969	< 2.2e-16 ***
age_middle	1.1778867	0.0075779	155.4380	< 2.2e-16 ***
age_old	0.3460043	0.0081024	42.7041	< 2.2e-16 ***
middle_educatio n	0.4103895	0.0068307	60.0800	< 2.2e-16 ***
high_education	0.6443665	0.0076983	83.7022	< 2.2e-16 ***
q2	0.2054955	0.0230115	8.9301	< 2.2e-16 ***
q3	-0.2760451	0.0240784	-11.4644	< 2.2e-16 ***
q4	-0.0229962	0.0232948	-0.9872	0.3235531
q2_foreigner	0.3691849	0.1195779	3.0874	0.0020192 **
q3_foreigner	0.5706272	0.1313278	4.3451	1.393e-05 ***
q4_foreigner	0.4794672	0.1211091	3.9590	7.528e-05 ***

Source: own computation using Czech LFS microdata.

Figure 37: Hours worked event study – foreigners (seasonally adjusted)



Source: own computation using Czech LFS microdata.

Ukraine, Slovakia, Vietnam, Romania, Germany

Table 35: Hours worked LPM - Ukraine, Slovakia, Vietnam, Romania, Slovakia (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.6802931	0.0098749	170.1588	< 2.2e-16***

covid_dummy_2020q1	-0.0044065	0.0184256	-0.2391	0.8109901
covid_dummy_2020q2	-0.2647534	0.0186720	-14.1791	< 2.2e-16***
covid_dummy_2020q3	0.1865736	0.0187273	9.9627	< 2.2e-16***
covid_dummy_2020q4	-0.1625879	0.0182929	-8.8880	< 2.2e-16***
covid_dummy_2021q1	-0.0518231	0.0182572	-2.8385	0.0045327**
covid_dummy_2021q2	0.0852806	0.0174058	4.8996	9.607e-07***
ukraine_covid_2020q1	0.4352303	0.2098064	2.0744	0.0380389*
ukraine_covid_2020q2	-0.0090969	0.2380386	-0.0382	0.9695154
ukraine_covid_2020q3	0.2974566	0.1886001	1.5772	0.1147542
ukraine_covid_2020q4	-0.2047045	0.2176964	-0.9403	0.3470531
ukraine_covid_2021q1	-0.0249887	0.2184762	-0.1144	0.9089388
ukraine_covid_2021q2	-0.0072758	0.1925991	-0.0378	0.9698656
slovakia_covid_2020q1	-0.3031800	0.1924375	-1.5755	0.1151479
slovakia_covid_2020q2	-0.2550688	0.2007135	-1.2708	0.2037964
slovakia_covid_2020q3	-0.2185970	0.2000324	-1.0928	0.2744783
slovakia_covid_2020q4	-0.1540550	0.1864190	-0.8264	0.4085824
slovakia_covid_2021q1	-0.2394324	0.1940015	-1.2342	0.2171371
slovakia_covid_2021q2	-0.1370251	0.1767255	-0.7754	0.4381299
romania_covid_2020q1	-0.2878149	0.8471804	-0.3397	0.7340580
romania_covid_2020q2	1.6519958	0.4754509	3.4746	0.0005117***
romania_covid_2020q3	0.4561578	0.9486425	0.4809	0.6306209
romania_covid_2020q4	1.2974539	0.4601700	2.8195	0.0048098**
romania_covid_2021q1	-0.1257417	0.9812801	-0.1281	0.8980379
romania_covid_2021q2	-0.4276015	0.8667490	-0.4933	0.6217728
vietnam_covid_2020q1	0.0688424	0.4625308	0.1488	0.8816811
vietnam_covid_2020q2	-1.0230111	0.5492428	-1.8626	0.0625211.*
vietnam_covid_2020q3	-0.1164108	0.4116685	-0.2828	0.7773471
vietnam_covid_2020q4	-1.2518171	0.5742691	-2.1798	0.0292693*
vietnam_covid_2021q1	-1.0631650	0.5061700	-2.1004	0.0356930*
vietnam_covid_2021q2	-0.3603755	0.4243552	-0.8492	0.3957531
germany_covid_2020q1	0.6586517	0.7181893	0.9171	0.3590903
germany_covid_2020q2	0.4270639	0.8496513	0.5026	0.6152215
germany_covid_2020q3	-0.6409729	1.2433319	-0.5155	0.6061839
germany_covid_2020q4	0.0679990	0.9680586	0.0702	0.9440006
germany_covid_2021q1	0.3719252	0.9224594	0.4032	0.6868095
germany_covid_2021q2	0.1075528	0.5591211	0.1924	0.8474599
ukraine	0.2409464	0.0939837	2.5637	0.0103563*
slovakia	0.2547671	0.0784174	3.2489	0.0011587**
romania	-0.0344858	0.3858589	-0.0894	0.9287846
vietnam	0.7410878	0.1609126	4.6055	4.115e-06***
germany	0.6741722	0.2498223	2.6986	0.0069632**
female_dummy	-1.1569617	0.0059426	-194.6904	< 2.2e-16***
age_middle	1.1819017	0.0075764	155.9987	< 2.2e-16***
age_old	0.3475092	0.0081039	42.8817	< 2.2e-16***
middle_education	0.4146111	0.0068363	60.6487	< 2.2e-16***
high_education	0.6518447	0.0077014	84.6396	< 2.2e-16***

q2	0.0919156	0.0093456	9.8352	< 2.2e-16***
q3	-0.4042980	0.0094878	-42.6125	< 2.2e-16***
q4	-0.0711925	0.0092113	-7.7289	1.086e-14***
q2_slovakia	-0.0162345	0.1072236	-0.1514	0.8796542
q3_slovakia	-0.0682545	0.1097271	-0.6220	0.5339166
q4_slovakia	-0.0359536	0.1058159	-0.3398	0.7340261
q2_romania	-0.1430483	0.5376021	-0.2661	0.7901731
q3_romania	-0.1786266	0.5343601	-0.3343	0.7381673
q4_romania	0.2134048	0.5054681	0.4222	0.6728847
q2_vietnam	0.1060132	0.2230726	0.4752	0.6346154
q3_vietnam	0.3635524	0.2242623	1.6211	0.1049958
q4_vietnam	0.3258909	0.2112572	1.5426	0.1229218
q2_germany	-0.2312349	0.3589831	-0.6441	0.5194856
q3_germany	0.0915168	0.3870484	0.2364	0.8130852
q4_germany	0.3422722	0.3021435	1.1328	0.2572929
q2_ukraine	0.0770622	0.1285336	0.5995	0.5488069
q3_ukraine	0.3472795	0.1253833	2.7697	0.0056102**
q4_ukraine	0.1157837	0.1218906	0.9499	0.3421640

Source: own computation using Czech LFS microdata.

Prague

Table 36: Hours worked LPM - Prague (seasonally adjusted)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	3.1976842	0.0127297	251.1983	< 2.2e-16***
covid_dummy_2020q1	-0.0102925	0.0135287	-0.7608	0.446783
covid_dummy_2020q2	-0.1752380	0.0149682	-11.7074	< 2.2e-16***
covid_dummy_2020q3	-0.2436738	0.0152550	-15.9734	< 2.2e-16***
covid_dummy_2020q4	-0.2676327	0.0148869	-17.9778	< 2.2e-16***
covid_dummy_2021q1	-0.0138593	0.0133936	-1.0348	0.300774
covid_dummy_2021q2	0.2583270	0.0103880	24.8679	< 2.2e-16***
prague_covid_2020q1	-0.2522537	0.0913191	-2.7623	0.005739**
prague_covid_2020q2	-0.1736203	0.0908932	-1.9102	0.056114 .
prague_covid_2020q3	0.3090193	0.1096410	2.8185	0.004826**
prague_covid_2020q4	-0.0557470	0.0895557	-0.6225	0.533624
prague_covid_2021q1	-0.2678377	0.0891684	-3.0037	0.002667**
prague_covid_2021q2	-0.3601176	0.0743668	-4.8425	1.283e-06***
prague	0.2589631	0.0260179	9.9533	< 2.2e-16***
female_dummy	-0.3465300	0.0047417	-73.0821	< 2.2e-16***
czechia_dummy	-0.0333512	0.0118349	-2.8180	0.004832**
age_middle	0.0722443	0.0059745	12.0922	< 2.2e-16***
age_old	0.0418551	0.0062673	6.6784	2.418e-11***
middle_education	0.0650669	0.0052719	12.3421	< 2.2e-16***

high_education	0.0030868	0.0060667	0.5088	0.610884
q2_prague	0.0108572	0.0359792	0.3018	0.762833
q3_prague	-0.6420646	0.0477753	-13.4393	< 2.2e-16***
q4_prague	-0.0973372	0.0356917	-2.7272	0.006388**

Source: own computation using Czech LFS microdata.

Event studies tables

Table 37: Employmnet event study - covid dummy

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.68946997	0.00268385	256.8955	< 2.2e-16***
dummy_2016q1	0.00779557	0.00272107	2.8649	0.004172**
dummy_2016q2	0.01526324	0.00271596	5.6198	1.912e-08***
dummy_2016q3	0.01897415	0.00272644	6.9593	3.422e-12***
dummy_2016q4	0.02679021	0.00269872	9.9270	< 2.2e-16***
dummy_2017q1	0.02440252	0.00270146	9.0331	< 2.2e-16***
dummy_2017q2	0.03025374	0.00269879	11.2101	< 2.2e-16***
dummy_2017q3	0.03703880	0.00268314	13.8042	< 2.2e-16***
dummy_2017q4	0.04038589	0.00267420	15.1020	< 2.2e-16***
dummy_2018q1	0.03854338	0.00268637	14.3477	< 2.2e-16***
dummy_2018q2	0.04404845	0.00269692	16.3329	< 2.2e-16***
dummy_2018q3	0.04618519	0.00268692	17.1889	< 2.2e-16***
dummy_2018q4	0.05076070	0.00266770	19.0279	< 2.2e-16***
dummy_2019q1	0.04672354	0.00269770	17.3197	< 2.2e-16***
dummy_2019q2	0.04754973	0.00271557	17.5100	< 2.2e-16***
dummy_2019q3	0.04900363	0.00272065	18.0117	< 2.2e-16***
dummy_2019q4	0.04997382	0.00272413	18.3449	< 2.2e-16***
dummy_2020q1	0.04476674	0.00280888	15.9375	< 2.2e-16***
dummy_2020q2	0.03815977	0.00284799	13.3988	< 2.2e-16***
dummy_2020q3	0.03992426	0.00276955	14.4155	< 2.2e-16***
dummy_2020q4	0.03938313	0.00278858	14.1230	< 2.2e-16***
dummy_2021q1	0.03223980	0.00284202	11.3440	< 2.2e-16***
dummy_2021q2	0.03351983	0.00281499	11.9076	< 2.2e-16***
dummy_2021q3	0.04579518	0.00278439	16.4471	< 2.2e-16***
dummy_2021q4	0.05049087	0.00275517	18.3258	< 2.2e-16***
dummy_2022q1	0.04932048	0.00276770	17.8200	< 2.2e-16***
dummy_2022q2	0.05305212	0.00277305	19.1314	< 2.2e-16***
dummy_2022q3	0.05792971	0.00276520	20.9495	< 2.2e-16***
dummy_2022q4	0.05779343	0.00275803	20.9546	< 2.2e-16***
female_dummy	-0.16300491	0.00087354	-186.6037	< 2.2e-16***
czechia_dummy	-0.00028184	0.00224832	-0.1254	0.900243
age_middle	0.20390887	0.00111922	182.1882	< 2.2e-16***
age_old	0.05590794	0.00124345	44.9620	< 2.2e-16***
middle_education	0.06092901	0.00100184	60.8170	< 2.2e-16***
high_education	0.10930824	0.00110325	99.0781	< 2.2e-16***

Source: own computation using Czech LFS microdata.

Table 38: Hours worked event study – covid dummy

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	1.4291048	0.0184428	77.4884	< 2.2e-16 ***
dummy_2016q1	0.2378352	0.0179771	13.2299	< 2.2e-16 ***
dummy_2016q2	0.3244580	0.0180674	17.9582	< 2.2e-16 ***
dummy_2016q3	-0.2564754	0.0194710	-13.1722	< 2.2e-16 ***
dummy_2016q4	0.1803105	0.0183093	9.8480	< 2.2e-16 ***
dummy_2017q1	0.3096165	0.0181765	17.0339	< 2.2e-16 ***
dummy_2017q2	0.3402825	0.0178183	19.0974	< 2.2e-16 ***
dummy_2017q3	-0.1928006	0.0194931	-9.8907	< 2.2e-16 ***
dummy_2017q4	0.2474098	0.0184317	13.4230	< 2.2e-16 ***
dummy_2018q1	0.3657965	0.0179994	20.3227	< 2.2e-16 ***
dummy_2018q2	0.4467810	0.0179047	24.9532	< 2.2e-16 ***
dummy_2018q3	-0.0970836	0.0195898	-4.9558	7.204e-07 ***
dummy_2018q4	0.2949393	0.0186237	15.8368	< 2.2e-16 ***
dummy_2019q1	0.4825641	0.0176225	27.3835	< 2.2e-16 ***
dummy_2019q2	0.5250321	0.0173781	30.2123	< 2.2e-16 ***
dummy_2019q3	0.0341871	0.0193121	1.7702	0.076686 .
dummy_2019q4	0.3511692	0.0183076	19.1816	< 2.2e-16 ***
dummy_2020q1	0.2882219	0.0189176	15.2357	< 2.2e-16 ***
dummy_2020q2	0.1178288	0.0192164	6.1317	8.699e-10 ***
dummy_2020q3	0.0781925	0.0191689	4.0791	4.521e-05 ***
dummy_2020q4	0.0559757	0.0189055	2.9608	0.003068 **
dummy_2021q1	0.2372584	0.0187666	12.6426	< 2.2e-16 ***
dummy_2021q2	0.4693084	0.0179824	26.0981	< 2.2e-16 ***
dummy_2021q3	0.0944438	0.0193535	4.8799	1.061e-06 ***
dummy_2021q4	0.2143508	0.0191457	11.1958	< 2.2e-16 ***
dummy_2022q1	0.3399839	0.0189806	17.9122	< 2.2e-16 ***
dummy_2022q2	0.4427313	0.0185499	23.8671	< 2.2e-16 ***
dummy_2022q3	-0.1094140	0.0203504	-5.3765	7.597e-08 ***
dummy_2022q4	0.2700377	0.0191701	14.0864	< 2.2e-16 ***
female_dummy	-1.1557171	0.0059428	-194.4749	< 2.2e-16 ***
czechia_dummy	-0.0305418	0.0155267	-1.9671	0.049177 *
age_middle	1.1759083	0.0075780	155.1741	< 2.2e-16 ***
age_old	0.3403331	0.0080944	42.0457	< 2.2e-16 ***
middle_education	0.4107171	0.0068328	60.1099	< 2.2e-16 ***
high_education	0.6453993	0.0077022	83.7937	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

Table 39: Employment event study - female

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	0.6107813	0.0027167	224.8280	<2e-16***
dummy_2016q1	0.0907368	0.0033039	27.4636	<2e-16***
dummy_2016q2	0.0970498	0.0032908	29.4916	<2e-16***
dummy_2016q3	0.1029129	0.0032790	31.3856	<2e-16***
dummy_2016q4	0.1066153	0.0032261	33.0474	<2e-16***
dummy_2017q1	0.1052005	0.0032323	32.5471	<2e-16***
dummy_2017q2	0.1120840	0.0032158	34.8543	<2e-16***

dummy_2017q3	0.1185523	0.0031516	37.6168	<2e-16***
dummy_2017q4	0.1213200	0.0031282	38.7826	<2e-16***
dummy_2018q1	0.1180230	0.0031491	37.4789	<2e-16***
dummy_2018q2	0.1239022	0.0031410	39.4467	<2e-16***
dummy_2018q3	0.1243066	0.0031465	39.5064	<2e-16***
dummy_2018q4	0.1276158	0.0031159	40.9559	<2e-16***
dummy_2019q1	0.1225534	0.0031986	38.3142	<2e-16***
dummy_2019q2	0.1267587	0.0031857	39.7898	<2e-16***
dummy_2019q3	0.1268364	0.0031843	39.8314	<2e-16***
dummy_2019q4	0.1268559	0.0031789	39.9058	<2e-16***
dummy_2020q1	0.1219501	0.0032951	37.0098	<2e-16***
dummy_2020q2	0.1175574	0.0033486	35.1059	<2e-16***
dummy_2020q3	0.1227781	0.0032382	37.9154	<2e-16***
dummy_2020q4	0.1194637	0.0032760	36.4666	<2e-16***
dummy_2021q1	0.1122584	0.0033540	33.4698	<2e-16***
dummy_2021q2	0.1163701	0.0033065	35.1943	<2e-16***
dummy_2021q3	0.1250272	0.0032837	38.0751	<2e-16***
dummy_2021q4	0.1280566	0.0032123	39.8648	<2e-16***
dummy_2022q1	0.1291963	0.0032057	40.3017	<2e-16***
dummy_2022q2	0.1330038	0.0032048	41.5014	<2e-16***
dummy_2022q3	0.1344820	0.0032198	41.7671	<2e-16***
dummy_2022q4	0.1332633	0.0032143	41.4591	<2e-16***
female_2016q1	-0.1681920	0.0048709	-34.5302	<2e-16***
female_2016q2	-0.1658438	0.0048602	-34.1231	<2e-16***
female_2016q3	-0.1701825	0.0048847	-34.8398	<2e-16***
female_2016q4	-0.1618394	0.0048236	-33.5513	<2e-16***
female_2017q1	-0.1637818	0.0048303	-33.9069	<2e-16***
female_2017q2	-0.1658754	0.0048249	-34.3790	<2e-16***
female_2017q3	-0.1652146	0.0047918	-34.4790	<2e-16***
female_2017q4	-0.1640256	0.0047723	-34.3702	<2e-16***
female_2018q1	-0.1610525	0.0048004	-33.5496	<2e-16***
female_2018q2	-0.1618120	0.0048253	-33.5342	<2e-16***
female_2018q3	-0.1582889	0.0048027	-32.9585	<2e-16***
female_2018q4	-0.1557211	0.0047598	-32.7159	<2e-16***
female_2019q1	-0.1536361	0.0048266	-31.8309	<2e-16***
female_2019q2	-0.1605290	0.0048689	-32.9703	<2e-16***
female_2019q3	-0.1577212	0.0048810	-32.3131	<2e-16***
female_2019q4	-0.1557706	0.0048897	-31.8566	<2e-16***
female_2020q1	-0.1563383	0.0050805	-30.7723	<2e-16***
female_2020q2	-0.1608671	0.0051679	-31.1283	<2e-16***
female_2020q3	-0.1678893	0.0049924	-33.6287	<2e-16***
female_2020q4	-0.1621982	0.0050346	-32.2167	<2e-16***
female_2021q1	-0.1620565	0.0051530	-31.4489	<2e-16***
female_2021q2	-0.1678262	0.0050928	-32.9540	<2e-16***
female_2021q3	-0.1604208	0.0050251	-31.9241	<2e-16***
female_2021q4	-0.1570001	0.0049606	-31.6496	<2e-16***
female_2022q1	-0.1617361	0.0049921	-32.3985	<2e-16***
female_2022q2	-0.1618803	0.0050051	-32.3432	<2e-16***
female_2022q3	-0.1549374	0.0049860	-31.0745	<2e-16***
female_2022q4	-0.1527049	0.0049691	-30.7309	<2e-16***
czechia_dummy	-0.0001759	0.0022591	-0.0779	0.9379
age_middle	0.2037035	0.0011238	181.2681	<2e-16***

age_old	0.0550291	0.0012478	44.1005	<2e-16***
middle_education	0.0583382	0.0010051	58.0423	<2e-16***
high_education	0.1070259	0.0011071	96.6746	<2e-16***

Source: own computation using Czech LFS microdata.

Table 40: Hours worked event study – female

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.6722964	0.0177311	37.9161	<2e-16 ***
dummy_2016q1	0.8239454	0.0220264	37.4072	<2e-16 ***
dummy_2016q2	0.9261516	0.0220032	42.0916	<2e-16 ***
dummy_2016q3	0.3855062	0.0243761	15.8150	<2e-16 ***
dummy_2016q4	0.7293437	0.0226945	32.1375	<2e-16 ***
dummy_2017q1	0.8961517	0.0222007	40.3659	<2e-16 ***
dummy_2017q2	0.9538494	0.0214097	44.5521	<2e-16 ***
dummy_2017q3	0.4729073	0.0242442	19.5060	<2e-16 ***
dummy_2017q4	0.8386251	0.0225533	37.1842	<2e-16 ***
dummy_2018q1	0.9403118	0.0218317	43.0709	<2e-16 ***
dummy_2018q2	1.0314421	0.0214392	48.1101	<2e-16 ***
dummy_2018q3	0.5113643	0.0245473	20.8318	<2e-16 ***
dummy_2018q4	0.8536834	0.0228058	37.4328	<2e-16 ***
dummy_2019q1	1.0504140	0.0209168	50.2188	<2e-16 ***
dummy_2019q2	1.1263112	0.0202770	55.5462	<2e-16 ***
dummy_2019q3	0.6791589	0.0235616	28.8248	<2e-16 ***
dummy_2019q4	0.9210958	0.0219787	41.9086	<2e-16 ***
dummy_2020q1	0.8812927	0.0227886	38.6725	<2e-16 ***
dummy_2020q2	0.7799883	0.0230860	33.7861	<2e-16 ***
dummy_2020q3	0.7479379	0.0233513	32.0298	<2e-16 ***
dummy_2020q4	0.6707937	0.0230618	29.0868	<2e-16 ***
dummy_2021q1	0.8842589	0.0224204	39.4400	<2e-16 ***
dummy_2021q2	1.0699667	0.0211185	50.6649	<2e-16 ***
dummy_2021q3	0.7131880	0.0234227	30.4486	<2e-16 ***
dummy_2021q4	0.7709993	0.0234864	32.8275	<2e-16 ***
dummy_2022q1	0.9593605	0.0226578	42.3412	<2e-16 ***
dummy_2022q2	1.0650197	0.0219400	48.5425	<2e-16 ***
dummy_2022q3	0.5270749	0.0253380	20.8018	<2e-16 ***
dummy_2022q4	0.8200890	0.0234421	34.9836	<2e-16 ***
female_2016q1	-1.1295212	0.0304599	-37.0822	<2e-16 ***
female_2016q2	-1.1460234	0.0305066	-37.5664	<2e-16 ***
female_2016q3	-1.1905057	0.0328991	-36.1866	<2e-16 ***
female_2016q4	-1.0543907	0.0311067	-33.8960	<2e-16 ***
female_2017q1	-1.1116812	0.0308318	-36.0563	<2e-16 ***
female_2017q2	-1.1328138	0.0299840	-37.7807	<2e-16 ***
female_2017q3	-1.2119668	0.0329643	-36.7661	<2e-16 ***
female_2017q4	-1.0967754	0.0312270	-35.1227	<2e-16 ***
female_2018q1	-1.0752691	0.0304682	-35.2915	<2e-16 ***
female_2018q2	-1.0698246	0.0301523	-35.4807	<2e-16 ***
female_2018q3	-1.1361472	0.0335625	-33.8517	<2e-16 ***
female_2018q4	-1.0326019	0.0316870	-32.5876	<2e-16 ***

female_2019q1	-1.0179404	0.0294689	-34.5429	<2e-16 ***
female_2019q2	-1.0718801	0.0288825	-37.1118	<2e-16 ***
female_2019q3	-1.1621974	0.0326541	-35.5912	<2e-16 ***
female_2019q4	-1.0212597	0.0306958	-33.2704	<2e-16 ***
female_2020q1	-1.0725132	0.0320325	-33.4820	<2e-16 ***
female_2020q2	-1.1806044	0.0325023	-36.3237	<2e-16 ***
female_2020q3	-1.1783698	0.0325285	-36.2257	<2e-16 ***
female_2020q4	-1.0938423	0.0321101	-34.0654	<2e-16 ***
female_2021q1	-1.1541239	0.0317565	-36.3429	<2e-16 ***
female_2021q2	-1.0792502	0.0301469	-35.7997	<2e-16 ***
female_2021q3	-1.1049320	0.0326480	-33.8438	<2e-16 ***
female_2021q4	-1.0146579	0.0327385	-30.9928	<2e-16 ***
female_2022q1	-1.0878559	0.0323378	-33.6403	<2e-16 ***
female_2022q2	-1.0925130	0.0314701	-34.7159	<2e-16 ***
female_2022q3	-1.1430672	0.0350624	-32.6010	<2e-16 ***
female_2022q4	-0.9686692	0.0328729	-29.4671	<2e-16 ***
czechia_dummy	0.0171374	0.0149623	1.1454	0.2521
age_middle	1.2722183	0.0072067	176.5322	<2e-16 ***
age_old	0.3188511	0.0077059	41.3774	<2e-16 ***
middle_education	0.4446492	0.0064717	68.7068	<2e-16 ***
high_education	0.6870024	0.0073268	93.7657	<2e-16 ***

Source: own computation using Czech LFS microdata.

Table 41: Employment event study - age

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.7851012	0.0025786	304.4646	< 2.2e-16***
dummy_2016q1	-0.0762715	0.0053617	-14.2253	< 2.2e-16***
dummy_2016q2	-0.0697058	0.0053981	-12.9130	< 2.2e-16***
dummy_2016q3	-0.0602308	0.0054412	-11.0694	< 2.2e-16***
dummy_2016q4	-0.0502853	0.0053447	-9.4085	< 2.2e-16***
dummy_2017q1	-0.0556330	0.0053360	-10.4260	< 2.2e-16***
dummy_2017q2	-0.0503043	0.0053614	-9.3827	< 2.2e-16***
dummy_2017q3	-0.0393197	0.0053314	-7.3751	1.643e-13***
dummy_2017q4	-0.0385430	0.0053606	-7.1901	6.481e-13***
dummy_2018q1	-0.0473129	0.0054400	-8.6973	< 2.2e-16***
dummy_2018q2	-0.0471534	0.0055343	-8.5203	< 2.2e-16***
dummy_2018q3	-0.0440061	0.0055093	-7.9876	1.378e-15***
dummy_2018q4	-0.0357231	0.0054814	-6.5172	7.168e-11***
dummy_2019q1	-0.0446214	0.0055715	-8.0089	1.159e-15***
dummy_2019q2	-0.0515154	0.0057094	-9.0229	< 2.2e-16***
dummy_2019q3	-0.0461124	0.0056842	-8.1124	4.969e-16***
dummy_2019q4	-0.0454820	0.0056973	-7.9830	1.429e-15***
dummy_2020q1	-0.0578969	0.0059611	-9.7125	< 2.2e-16***
dummy_2020q2	-0.0713411	0.0060920	-11.7106	< 2.2e-16***
dummy_2020q3	-0.0666600	0.0058627	-11.3702	< 2.2e-16***
dummy_2020q4	-0.0689520	0.0059611	-11.5670	< 2.2e-16***
dummy_2021q1	-0.0749719	0.0060785	-12.3340	< 2.2e-16***
dummy_2021q2	-0.0735256	0.0060564	-12.1402	< 2.2e-16***

dummy_2021q3	-0.0614723	0.0060989	-10.0793	< 2.2e-16***
dummy_2021q4	-0.0565798	0.0060618	-9.3339	< 2.2e-16***
dummy_2022q1	-0.0645198	0.0061376	-10.5122	< 2.2e-16***
dummy_2022q2	-0.0619955	0.0061467	-10.0860	< 2.2e-16***
dummy_2022q3	-0.0568665	0.0061551	-9.2390	< 2.2e-16***
dummy_2022q4	-0.0521558	0.0061004	-8.5496	< 2.2e-16***
old_2016q1	0.0105553	0.0068539	1.5401	0.1235468
old_2016q2	0.0160129	0.0068540	2.3363	0.0194761*
old_2016q3	0.0137379	0.0068816	1.9963	0.0458996*
old_2016q4	0.0146017	0.0068013	2.1469	0.0318009*
old_2017q1	0.0227961	0.0067959	3.3544	0.0007955***
old_2017q2	0.0256969	0.0068130	3.7717	0.0001621***
old_2017q3	0.0234247	0.0067887	3.4506	0.0005594***
old_2017q4	0.0297175	0.0067783	4.3842	1.164e-05***
old_2018q1	0.0426218	0.0068283	6.2420	4.323e-10***
old_2018q2	0.0508397	0.0069296	7.3366	2.193e-13***
old_2018q3	0.0505063	0.0068999	7.3199	2.484e-13***
old_2018q4	0.0448288	0.0068616	6.5333	6.438e-11***
old_2019q1	0.0512711	0.0069532	7.3738	1.660e-13***
old_2019q2	0.0667625	0.0070343	9.4910	< 2.2e-16***
old_2019q3	0.0623362	0.0070274	8.8704	< 2.2e-16***
old_2019q4	0.0641071	0.0070264	9.1238	< 2.2e-16***
old_2020q1	0.0729622	0.0073574	9.9168	< 2.2e-16***
old_2020q2	0.0919739	0.0074131	12.4069	< 2.2e-16***
old_2020q3	0.0892187	0.0071500	12.4781	< 2.2e-16***
old_2020q4	0.0949293	0.0072409	13.1102	< 2.2e-16***
old_2021q1	0.0933028	0.0073888	12.6276	< 2.2e-16***
old_2021q2	0.0915558	0.0073457	12.4639	< 2.2e-16***
old_2021q3	0.0983699	0.0072813	13.5100	< 2.2e-16***
old_2021q4	0.0976012	0.0072275	13.5041	< 2.2e-16***
old_2022q1	0.1120731	0.0072502	15.4580	< 2.2e-16***
old_2022q2	0.1150856	0.0072748	15.8199	< 2.2e-16***
old_2022q3	0.1181423	0.0072617	16.2692	< 2.2e-16***
old_2022q4	0.1084262	0.0072497	14.9559	< 2.2e-16***
middle_2016q1	0.2158153	0.0060553	35.6406	< 2.2e-16***
middle_2016q2	0.2136082	0.0060798	35.1339	< 2.2e-16***
middle_2016q3	0.2002711	0.0061368	32.6344	< 2.2e-16***
middle_2016q4	0.1939620	0.0060305	32.1632	< 2.2e-16***
middle_2017q1	0.1949644	0.0060421	32.2679	< 2.2e-16***
middle_2017q2	0.1939640	0.0060523	32.0482	< 2.2e-16***
middle_2017q3	0.1849264	0.0059990	30.8260	< 2.2e-16***
middle_2017q4	0.1865242	0.0060152	31.0089	< 2.2e-16***
middle_2018q1	0.1939864	0.0060960	31.8217	< 2.2e-16***
middle_2018q2	0.2011422	0.0061494	32.7090	< 2.2e-16***
middle_2018q3	0.1988204	0.0061244	32.4639	< 2.2e-16***
middle_2018q4	0.1939069	0.0060752	31.9178	< 2.2e-16***
middle_2019q1	0.2011663	0.0061846	32.5268	< 2.2e-16***
middle_2019q2	0.2084824	0.0063189	32.9932	< 2.2e-16***
middle_2019q3	0.2019578	0.0063192	31.9595	< 2.2e-16***
middle_2019q4	0.2014233	0.0063475	31.7329	< 2.2e-16***
middle_2020q1	0.2126522	0.0066074	32.1839	< 2.2e-16***
middle_2020q2	0.2147925	0.0068070	31.5548	< 2.2e-16***

middle_2020q3	0.2096656	0.0065508	32.0061	< 2.2e-16***
middle_2020q4	0.2094532	0.0066462	31.5146	< 2.2e-16***
middle_2021q1	0.2079346	0.0068028	30.5661	< 2.2e-16***
middle_2021q2	0.2087981	0.0067462	30.9506	< 2.2e-16***
middle_2021q3	0.2039117	0.0067522	30.1995	< 2.2e-16***
middle_2021q4	0.2038823	0.0066840	30.5030	< 2.2e-16***
middle_2022q1	0.2088269	0.0067707	30.8426	< 2.2e-16***
middle_2022q2	0.2091569	0.0067821	30.8396	< 2.2e-16***
middle_2022q3	0.2060140	0.0067795	30.3876	< 2.2e-16***
middle_2022q4	0.2016844	0.0067149	30.0352	< 2.2e-16***
female_dummy	-0.1631537	0.0008756	-186.3326	< 2.2e-16***
czechia_dummy	-0.0017898	0.0022523	-0.7947	0.4268150
middle_education	0.0601050	0.0010060	59.7458	< 2.2e-16***
high_education	0.1095833	0.0011049	99.1767	< 2.2e-16***

Source: own computation using Czech LFS microdata.

Table 42: Hours worked event study – age

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.9832318	0.0177375	111.8099	< 2.2e-16 ***
dummy_2016q1	-0.2872704	0.0341731	-8.4063	< 2.2e-16 ***
dummy_2016q2	-0.2560872	0.0350024	-7.3163	2.552e-13 ***
dummy_2016q3	-0.6550179	0.0364577	-17.9665	< 2.2e-16 ***
dummy_2016q4	-0.2973629	0.0348579	-8.5307	< 2.2e-16 ***
dummy_2017q1	-0.2216435	0.0348936	-6.3520	2.127e-10 ***
dummy_2017q2	-0.1808403	0.0341605	-5.2938	1.198e-07 ***
dummy_2017q3	-0.5540228	0.0359764	-15.3996	< 2.2e-16 ***
dummy_2017q4	-0.2528053	0.0351151	-7.1993	6.056e-13 ***
dummy_2018q1	-0.1631040	0.0348349	-4.6822	2.839e-06 ***
dummy_2018q2	-0.1450065	0.0353678	-4.1000	4.133e-05 ***
dummy_2018q3	-0.5402069	0.0368755	-14.6495	< 2.2e-16 ***
dummy_2018q4	-0.2216277	0.0360097	-6.1547	7.527e-10 ***
dummy_2019q1	-0.0569245	0.0345923	-1.6456	0.099850 .
dummy_2019q2	-0.0856759	0.0348647	-2.4574	0.013996 *
dummy_2019q3	-0.4144887	0.0366878	-11.2977	< 2.2e-16 ***
dummy_2019q4	-0.2230836	0.0359543	-6.2046	5.485e-10 ***
dummy_2020q1	-0.2936040	0.0372744	-7.8768	3.362e-15 ***
dummy_2020q2	-0.5195658	0.0379321	-13.6973	< 2.2e-16 ***
dummy_2020q3	-0.4066588	0.0369963	-10.9919	< 2.2e-16 ***
dummy_2020q4	-0.5440727	0.0371960	-14.6272	< 2.2e-16 ***
dummy_2021q1	-0.3590122	0.0374481	-9.5869	< 2.2e-16 ***
dummy_2021q2	-0.2132080	0.0372701	-5.7206	1.062e-08 ***
dummy_2021q3	-0.4603794	0.0384941	-11.9597	< 2.2e-16 ***
dummy_2021q4	-0.4059108	0.0389022	-10.4341	< 2.2e-16 ***
dummy_2022q1	-0.3558489	0.0394526	-9.0197	< 2.2e-16 ***
dummy_2022q2	-0.2832531	0.0389401	-7.2741	3.491e-13 ***
dummy_2022q3	-0.6367222	0.0404294	-15.7490	< 2.2e-16 ***
dummy_2022q4	-0.3680086	0.0394064	-9.3388	< 2.2e-16 ***
old_2016q1	0.0930371	0.0436176	2.1330	0.032924 *

old_2016q2	0.1726267	0.0442355	3.9024	9.523e-05 ***
old_2016q3	0.0900991	0.0460531	1.9564	0.050416 .
old_2016q4	0.1262838	0.0442667	2.8528	0.004334 **
old_2017q1	0.1955844	0.0442684	4.4182	9.956e-06 ***
old_2017q2	0.2113967	0.0433692	4.8743	1.092e-06 ***
old_2017q3	0.1050266	0.0461055	2.2780	0.022729 *
old_2017q4	0.2462274	0.0445560	5.5262	3.272e-08 ***
old_2018q1	0.2846984	0.0439766	6.4739	9.558e-11 ***
old_2018q2	0.3446240	0.0444651	7.7504	9.168e-15 ***
old_2018q3	0.2361866	0.0469287	5.0329	4.833e-07 ***
old_2018q4	0.2700239	0.0455413	5.9292	3.045e-09 ***
old_2019q1	0.3160900	0.0434203	7.2798	3.346e-13 ***
old_2019q2	0.4103028	0.0433007	9.4757	< 2.2e-16 ***
old_2019q3	0.3120362	0.0462416	6.7480	1.500e-11 ***
old_2019q4	0.4153807	0.0448308	9.2655	< 2.2e-16 ***
old_2020q1	0.4493899	0.0466481	9.6336	< 2.2e-16 ***
old_2020q2	0.6211721	0.0470388	13.2055	< 2.2e-16 ***
old_2020q3	0.4021561	0.0461316	8.7176	< 2.2e-16 ***
old_2020q4	0.5362330	0.0462384	11.5971	< 2.2e-16 ***
old_2021q1	0.5151951	0.0462969	11.1281	< 2.2e-16 ***
old_2021q2	0.5905990	0.0454307	13.0000	< 2.2e-16 ***
old_2021q3	0.5291265	0.0472975	11.1872	< 2.2e-16 ***
old_2021q4	0.5889706	0.0474668	12.4081	< 2.2e-16 ***
old_2022q1	0.7038372	0.0475762	14.7939	< 2.2e-16 ***
old_2022q2	0.7072934	0.0469868	15.0530	< 2.2e-16 ***
old_2022q3	0.5520775	0.0496993	11.1084	< 2.2e-16 ***
old_2022q4	0.6293646	0.0479346	13.1297	< 2.2e-16 ***
middle_2016q1	1.3376955	0.0398353	33.5807	< 2.2e-16 ***
middle_2016q2	1.4180694	0.0404303	35.0744	< 2.2e-16 ***
middle_2016q3	1.0020198	0.0447837	22.3746	< 2.2e-16 ***
middle_2016q4	1.1815246	0.0411674	28.7005	< 2.2e-16 ***
middle_2017q1	1.2649177	0.0407975	31.0048	< 2.2e-16 ***
middle_2017q2	1.2239939	0.0397471	30.7946	< 2.2e-16 ***
middle_2017q3	0.8935138	0.0444217	20.1143	< 2.2e-16 ***
middle_2017q4	1.1398408	0.0416381	27.3750	< 2.2e-16 ***
middle_2018q1	1.1827117	0.0405396	29.1742	< 2.2e-16 ***
middle_2018q2	1.2966970	0.0404092	32.0891	< 2.2e-16 ***
middle_2018q3	1.0006754	0.0449886	22.2429	< 2.2e-16 ***
middle_2018q4	1.1627079	0.0424019	27.4211	< 2.2e-16 ***
middle_2019q1	1.1841886	0.0397358	29.8016	< 2.2e-16 ***
middle_2019q2	1.2902041	0.0394142	32.7345	< 2.2e-16 ***
middle_2019q3	0.9570959	0.0445334	21.4917	< 2.2e-16 ***
middle_2019q4	1.1934256	0.0420618	28.3732	< 2.2e-16 ***
middle_2020q1	1.1858123	0.0437538	27.1019	< 2.2e-16 ***
middle_2020q2	1.1899606	0.0449056	26.4992	< 2.2e-16 ***
middle_2020q3	0.9787541	0.0445124	21.9883	< 2.2e-16 ***
middle_2020q4	1.1625632	0.0439706	26.4396	< 2.2e-16 ***
middle_2021q1	1.1698653	0.0437871	26.7171	< 2.2e-16 ***
middle_2021q2	1.3257553	0.0421054	31.4866	< 2.2e-16 ***
middle_2021q3	1.0545710	0.0457045	23.0737	< 2.2e-16 ***
middle_2021q4	1.1699791	0.0454326	25.7520	< 2.2e-16 ***
middle_2022q1	1.2640035	0.0454589	27.8054	< 2.2e-16 ***

middle_2022q2	1.3367562	0.0442371	30.2180	< 2.2e-16 ***
middle_2022q3	0.9612046	0.0486433	19.7603	< 2.2e-16 ***
middle_2022q4	1.1776506	0.0457211	25.7573	< 2.2e-16 ***
female_dummy	-1.1571837	0.0059522	-194.4127	< 2.2e-16 ***
czechia_dummy	-0.0392673	0.0155549	-2.5244	0.011589 *
middle_education	0.4062156	0.0068464	59.3324	< 2.2e-16 ***
high_education	0.6473417	0.0076996	84.0749	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

Table 43: Employment event study – education

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.73632759	0.00263116	279.8494	< 2.2e-16 ***
dummy_2016q1	-0.04791537	0.00406494	-11.7875	< 2.2e-16 ***
dummy_2016q2	-0.03867396	0.00404437	-9.5624	< 2.2e-16 ***
dummy_2016q3	-0.03076388	0.00406822	-7.5620	3.973e-14 ***
dummy_2016q4	-0.02397616	0.00405653	-5.9105	3.412e-09 ***
dummy_2017q1	-0.02986966	0.00411048	-7.2667	3.687e-13 ***
dummy_2017q2	-0.01850202	0.00406835	-4.5478	5.422e-06 ***
dummy_2017q3	-0.00897415	0.00405887	-2.2110	0.0270364 *
dummy_2017q4	-0.00498568	0.00406876	-1.2254	0.2204407
dummy_2018q1	-0.00863811	0.00410883	-2.1023	0.0355251 *
dummy_2018q2	0.00229747	0.00410311	0.5599	0.5755246
dummy_2018q3	0.00505928	0.00407810	1.2406	0.2147550
dummy_2018q4	0.00672296	0.00406283	1.6547	0.0979764 .
dummy_2019q1	-0.00169753	0.00410040	-0.4140	0.6788814
dummy_2019q2	0.00647901	0.00407592	1.5896	0.1119300
dummy_2019q3	0.00825402	0.00411229	2.0072	0.0447328 *
dummy_2019q4	0.01243077	0.00413220	3.0083	0.0026275 **
dummy_2020q1	0.00396260	0.00430185	0.9211	0.3569779
dummy_2020q2	-0.00307725	0.00436147	-0.7056	0.4804660
dummy_2020q3	0.00067470	0.00425378	0.1586	0.8739748
dummy_2020q4	0.00083757	0.00431379	0.1942	0.8460489
dummy_2021q1	-0.01019525	0.00442391	-2.3046	0.0211905 *
dummy_2021q2	-0.00677323	0.00436607	-1.5513	0.1208221
dummy_2021q3	0.01305009	0.00425981	3.0635	0.0021874 **
dummy_2021q4	0.01555617	0.00428838	3.6275	0.0002862 ***
dummy_2022q1	0.01404418	0.00428737	3.2757	0.0010540 **
dummy_2022q2	0.01836553	0.00434013	4.2316	2.321e-05 ***
dummy_2022q3	0.02450467	0.00430176	5.6964	1.224e-08 ***
dummy_2022q4	0.01490457	0.00438300	3.4005	0.0006726 ***
middle_ed_2016q1	0.07183250	0.00557519	12.8843	< 2.2e-16 ***
middle_ed_2016q2	0.06851950	0.00556744	12.3072	< 2.2e-16 ***
middle_ed_2016q3	0.06698305	0.00558349	11.9966	< 2.2e-16 ***
middle_ed_2016q4	0.06976230	0.00551470	12.6502	< 2.2e-16 ***

middle_ed_2017q1	0.07484977	0.00553405	13.5253	< 2.2e-16 ***
middle_ed_2017q2	0.06749991	0.00549705	12.2793	< 2.2e-16 ***
middle_ed_2017q3	0.06271082	0.00549392	11.4146	< 2.2e-16 ***
middle_ed_2017q4	0.05923271	0.00549974	10.7701	< 2.2e-16 ***
middle_ed_2018q1	0.06007785	0.00554973	10.8254	< 2.2e-16 ***
middle_ed_2018q2	0.05124068	0.00558323	9.1776	< 2.2e-16 ***
middle_ed_2018q3	0.05422817	0.00553975	9.7889	< 2.2e-16 ***
middle_ed_2018q4	0.05592949	0.00552523	10.1226	< 2.2e-16 ***
middle_ed_2019q1	0.06430017	0.00559896	11.4843	< 2.2e-16 ***
middle_ed_2019q2	0.05674708	0.00559089	10.1499	< 2.2e-16 ***
middle_ed_2019q3	0.05992871	0.00559040	10.7199	< 2.2e-16 ***
middle_ed_2019q4	0.05565005	0.00557323	9.9852	< 2.2e-16 ***
middle_ed_2020q1	0.05747145	0.00582840	9.8606	< 2.2e-16 ***
middle_ed_2020q2	0.06054663	0.00592859	10.2126	< 2.2e-16 ***
middle_ed_2020q3	0.05913601	0.00570314	10.3690	< 2.2e-16 ***
middle_ed_2020q4	0.05441989	0.00580231	9.3790	< 2.2e-16 ***
middle_ed_2021q1	0.05629889	0.00599594	9.3895	< 2.2e-16 ***
middle_ed_2021q2	0.05000070	0.00595435	8.3973	< 2.2e-16 ***
middle_ed_2021q3	0.04350378	0.00580400	7.4955	6.611e-14 ***
middle_ed_2021q4	0.04516700	0.00579416	7.7953	6.434e-15 ***
middle_ed_2022q1	0.04523794	0.00581936	7.7737	7.631e-15 ***
middle_ed_2022q2	0.04459791	0.00584241	7.6335	2.287e-14 ***
middle_ed_2022q3	0.04254813	0.00582452	7.3050	2.775e-13 ***
middle_ed_2022q4	0.05529595	0.00585618	9.4423	< 2.2e-16 ***
high_ed_2016q1	0.13771189	0.00624050	22.0674	< 2.2e-16 ***
high_ed_2016q2	0.13496498	0.00621437	21.7182	< 2.2e-16 ***
high_ed_2016q3	0.11777916	0.00629845	18.6997	< 2.2e-16 ***
high_ed_2016q4	0.11784974	0.00621745	18.9547	< 2.2e-16 ***

high_ed_2017q1	0.12477604	0.00622117	20.0567	< 2.2e-16 ***
high_ed_2017q2	0.11238760	0.00627474	17.9111	< 2.2e-16 ***
high_ed_2017q3	0.10813056	0.00615681	17.5628	< 2.2e-16 ***
high_ed_2017q4	0.11095584	0.00607464	18.2654	< 2.2e-16 ***
high_ed_2018q1	0.11741565	0.00607949	19.3134	< 2.2e-16 ***
high_ed_2018q2	0.10826722	0.00608112	17.8038	< 2.2e-16 ***
high_ed_2018q3	0.10073186	0.00609563	16.5253	< 2.2e-16 ***
high_ed_2018q4	0.11054796	0.00595207	18.5730	< 2.2e-16 ***
high_ed_2019q1	0.11604527	0.00604287	19.2037	< 2.2e-16 ***
high_ed_2019q2	0.09621554	0.00619980	15.5191	< 2.2e-16 ***
high_ed_2019q3	0.08988146	0.00625548	14.3684	< 2.2e-16 ***
high_ed_2019q4	0.08292466	0.00632501	13.1106	< 2.2e-16 ***
high_ed_2020q1	0.09427253	0.00651012	14.4809	< 2.2e-16 ***
high_ed_2020q2	0.09135679	0.00661884	13.8025	< 2.2e-16 ***
high_ed_2020q3	0.08532087	0.00646767	13.1919	< 2.2e-16 ***
high_ed_2020q4	0.09012860	0.00643070	14.0154	< 2.2e-16 ***
high_ed_2021q1	0.10349592	0.00648677	15.9549	< 2.2e-16 ***
high_ed_2021q2	0.10441569	0.00635333	16.4348	< 2.2e-16 ***
high_ed_2021q3	0.08435339	0.00636349	13.2558	< 2.2e-16 ***
high_ed_2021q4	0.09074419	0.00621274	14.6062	< 2.2e-16 ***
high_ed_2022q1	0.09166863	0.00623970	14.6912	< 2.2e-16 ***
high_ed_2022q2	0.09035014	0.00626430	14.4230	< 2.2e-16 ***
high_ed_2022q3	0.08821375	0.00622367	14.1739	< 2.2e-16 ***
high_ed_2022q4	0.10691831	0.00617567	17.3128	< 2.2e-16 ***
female_dummy	-0.16157899	0.00087423	-184.8245	< 2.2e-16 ***
czechia_dummy	-0.00092853	0.00224817	-0.4130	0.6795960
age_middle	0.20280777	0.00111962	181.1398	< 2.2e-16 ***
age_old	0.05307675	0.00124499	42.6324	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

Table 44: Hours worked event study – education

Estimate	*Std. Error*	*t value*	*Pr(>|t|)*	
(Intercept)	1.5938601	0.0186414	85.5011	< 2.2e-16 ***
dummy_2016q1	-0.0456572	0.0273312	-1.6705	0.0948183 .
dummy_2016q2	0.0642263	0.0274362	2.3409	0.0192358 *
dummy_2016q3	-0.3451765	0.0288081	-11.9819	< 2.2e-16 ***
dummy_2016q4	-0.0591016	0.0279545	-2.1142	0.0344978 *
dummy_2017q1	0.0268226	0.0281544	0.9527	0.3407432
dummy_2017q2	0.1258734	0.0273142	4.6083	4.059e-06 ***
dummy_2017q3	-0.2491134	0.0291913	-8.5338	< 2.2e-16 ***
dummy_2017q4	0.0622279	0.0284146	2.1900	0.0285244 *
dummy_2018q1	0.1452239	0.0279872	5.1889	2.115e-07 ***
dummy_2018q2	0.2595130	0.0277907	9.3381	< 2.2e-16 ***
dummy_2018q3	-0.1435887	0.0295013	-4.8672	1.132e-06 ***
dummy_2018q4	0.0913176	0.0287793	3.1730	0.0015086 **
dummy_2019q1	0.3022922	0.0267379	11.3058	< 2.2e-16 ***
dummy_2019q2	0.4074743	0.0260196	15.6603	< 2.2e-16 ***
dummy_2019q3	0.0366861	0.0285323	1.2858	0.1985222
dummy_2019q4	0.2489634	0.0275928	9.0228	< 2.2e-16 ***

dummy_2020q1	0.1556428	0.0289750	5.3716	7.805e-08 ***
dummy_2020q2	-0.0909453	0.0295558	-3.0771	0.0020905 **
dummy_2020q3	0.0526577	0.0288809	1.8233	0.0682627 .
dummy_2020q4	-0.0988097	0.0294213	-3.3584	0.0007839 ***
dummy_2021q1	0.0252344	0.0294821	0.8559	0.3920417
dummy_2021q2	0.3338759	0.0279449	11.9476	< 2.2e-16 ***
dummy_2021q3	0.1293612	0.0291915	4.4315	9.361e-06 ***
dummy_2021q4	0.0953953	0.0301363	3.1655	0.0015484 **
dummy_2022q1	0.1805909	0.0302029	5.9793	2.243e-09 ***
dummy_2022q2	0.3086379	0.0294713	10.4725	< 2.2e-16 ***
dummy_2022q3	-0.1218987	0.0315982	-3.8578	0.0001144 ***
dummy_2022q4	0.0729288	0.0308858	2.3612	0.0182141 *
middle_ed_2016q1	0.5537663	0.0366918	15.0924	< 2.2e-16 ***
middle_ed_2016q2	0.5079261	0.0369487	13.7468	< 2.2e-16 ***
middle_ed_2016q3	0.3643714	0.0397198	9.1735	< 2.2e-16 ***
middle_ed_2016q4	0.5117628	0.0374825	13.6534	< 2.2e-16 ***
middle_ed_2017q1	0.5842798	0.0372684	15.6776	< 2.2e-16 ***
middle_ed_2017q2	0.4733624	0.0362689	13.0515	< 2.2e-16 ***
middle_ed_2017q3	0.3247651	0.0398133	8.1572	3.433e-16 ***
middle_ed_2017q4	0.4059291	0.0380355	10.6724	< 2.2e-16 ***
middle_ed_2018q1	0.4553304	0.0371638	12.2520	< 2.2e-16 ***
middle_ed_2018q2	0.3975442	0.0370844	10.7200	< 2.2e-16 ***
middle_ed_2018q3	0.3161928	0.0403250	7.8411	4.471e-15 ***
middle_ed_2018q4	0.4298891	0.0387718	11.0877	< 2.2e-16 ***
middle_ed_2019q1	0.4318428	0.0358690	12.0395	< 2.2e-16 ***
middle_ed_2019q2	0.3521818	0.0350159	10.0578	< 2.2e-16 ***
middle_ed_2019q3	0.2502065	0.0393041	6.3659	1.942e-10 ***
middle_ed_2019q4	0.3497200	0.0372357	9.3921	< 2.2e-16 ***
middle_ed_2020q1	0.3718239	0.0389837	9.5379	< 2.2e-16 ***
middle_ed_2020q2	0.4359414	0.0401325	10.8625	< 2.2e-16 ***
middle_ed_2020q3	0.3011790	0.0389999	7.7226	1.141e-14 ***
middle_ed_2020q4	0.3857372	0.0392205	9.8351	< 2.2e-16 ***

middle_ed_2021q1	0.4325540	0.0392982	11.0070	< 2.2e-16 ***
middle_ed_2021q2	0.3282370	0.0373898	8.7788	< 2.2e-16 ***
middle_ed_2021q3	0.1885493	0.0396133	4.7598	1.939e-06 ***
middle_ed_2021q4	0.3345993	0.0403166	8.2993	< 2.2e-16 ***
middle_ed_2022q1	0.3675369	0.0402224	9.1376	< 2.2e-16 ***
middle_ed_2022q2	0.3402928	0.0389884	8.7280	< 2.2e-16 ***
middle_ed_2022q3	0.2697865	0.0426842	6.3205	2.608e-10 ***
middle_ed_2022q4	0.4361771	0.0407970	10.6914	< 2.2e-16 ***
high_ed_2016q1	0.3468045	0.0456630	7.5949	3.084e-14 ***
high_ed_2016q2	0.3154566	0.0458774	6.8761	6.156e-12 ***
high_ed_2016q3	-0.2066120	0.0509709	-4.0535	5.045e-05 ***
high_ed_2016q4	0.2130528	0.0468123	4.5512	5.334e-06 ***
high_ed_2017q1	0.2775775	0.0464038	5.9818	2.208e-09 ***
high_ed_2017q2	0.1626348	0.0455624	3.5695	0.0003577 ***
high_ed_2017q3	-0.2723252	0.0509379	-5.3462	8.983e-08 ***
high_ed_2017q4	0.1429674	0.0468702	3.0503	0.0022863 **
high_ed_2018q1	0.2130499	0.0453965	4.6931	2.692e-06 ***
high_ed_2018q2	0.1650063	0.0447691	3.6857	0.0002281 ***
high_ed_2018q3	-0.2952649	0.0506945	-5.8244	5.734e-09 ***
high_ed_2018q4	0.1829190	0.0468749	3.9023	9.530e-05 ***
high_ed_2019q1	0.0833300	0.0446699	1.8655	0.0621172 .
high_ed_2019q2	-0.0613860	0.0443365	-1.3845	0.1661915
high_ed_2019q3	-0.4168621	0.0503810	-8.2742	< 2.2e-16 ***
high_ed_2019q4	-0.1224080	0.0471461	-2.5964	0.0094221 **
high_ed_2020q1	-0.0252490	0.0485845	-0.5197	0.6032781
high_ed_2020q2	0.1967866	0.0486161	4.0478	5.171e-05 ***
high_ed_2020q3	-0.3626966	0.0500782	-7.2426	4.405e-13 ***
high_ed_2020q4	0.0479020	0.0482963	0.9918	0.3212781
high_ed_2021q1	0.2080514	0.0472580	4.4025	1.070e-05 ***
high_ed_2021q2	0.0553406	0.0448922	1.2327	0.2176714
high_ed_2021q3	-0.4089608	0.0498893	-8.1974	2.460e-16 ***
high_ed_2021q4	-0.0163020	0.0482662	-0.3378	0.7355507
high_ed_2022q1	0.0909935	0.0475009	1.9156	0.0554143 .
high_ed_2022q2	0.0339083	0.0465651	0.7282	0.4664972
high_ed_2022q3	-0.3345096	0.0520946	-6.4212	1.353e-10 ***
high_ed_2022q4	0.1367320	0.0480949	2.8430	0.0044697 **
female_dummy	-1.1487875	0.0059403	-193.3900	< 2.2e-16 ***
czechia_dummy	-0.0304809	0.0155190	-1.9641	0.0495176 *
age_middle	1.1714049	0.0075743	154.6553	< 2.2e-16 ***
age_old	0.3298919	0.0080853	40.8015	< 2.2e-16 ***
high_education	0.6022840	0.0198801	30.2958	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

Table 45: Employment event study - foreigner

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	0.68902562	0.00161333	427.0817	< 2.2e-16***
dummy_2016q1	0.00719293	0.00274087	2.6243	0.008682**
dummy_2016q2	0.01470478	0.00273732	5.3720	7.790e-08***
dummy_2016q3	0.01866016	0.00274598	6.7954	1.081e-11***
dummy_2016q4	0.02619852	0.00272007	9.6316	< 2.2e-16***
dummy_2017q1	0.02359811	0.00272324	8.6654	< 2.2e-16***
dummy_2017q2	0.02930446	0.00272248	10.7639	< 2.2e-16***
dummy_2017q3	0.03630774	0.00270534	13.4208	< 2.2e-16***
dummy_2017q4	0.04020598	0.00269589	14.9138	< 2.2e-16***
dummy_2018q1	0.03828399	0.00270880	14.1332	< 2.2e-16***
dummy_2018q2	0.04361128	0.00271930	16.0377	< 2.2e-16***
dummy_2018q3	0.04535509	0.00271128	16.7283	< 2.2e-16***
dummy_2018q4	0.04998312	0.00269135	18.5717	< 2.2e-16***
dummy_2019q1	0.04598490	0.00272395	16.8817	< 2.2e-16***
dummy_2019q2	0.04688498	0.00274247	17.0959	< 2.2e-16***
dummy_2019q3	0.04804290	0.00274981	17.4713	< 2.2e-16***
dummy_2019q4	0.04926603	0.00275188	17.9027	< 2.2e-16***
dummy_2020q1	0.04403723	0.00283993	15.5064	< 2.2e-16***
dummy_2020q2	0.03775147	0.00287753	13.1194	< 2.2e-16***
dummy_2020q3	0.03914508	0.00279681	13.9963	< 2.2e-16***
dummy_2020q4	0.03842574	0.00281999	13.6262	< 2.2e-16***
dummy_2021q1	0.03175354	0.00287378	11.0494	< 2.2e-16***
dummy_2021q2	0.03274017	0.00284953	11.4897	< 2.2e-16***
dummy_2021q3	0.04549499	0.00281825	16.1430	< 2.2e-16***
dummy_2021q4	0.05007370	0.00278959	17.9502	< 2.2e-16***
dummy_2022q1	0.04895013	0.00280285	17.4644	< 2.2e-16***
dummy_2022q2	0.05213882	0.00281176	18.5431	< 2.2e-16***
dummy_2022q3	0.05751281	0.00280291	20.5190	< 2.2e-16***
dummy_2022q4	0.05656193	0.00280062	20.1962	< 2.2e-16***
foreigner_2016q1	0.03204413	0.01827753	1.7532	0.079568 .
foreigner_2016q2	0.02829804	0.01756526	1.6110	0.107175
foreigner_2016q3	0.01696642	0.01845486	0.9193	0.357914
foreigner_2016q4	0.02774541	0.01730229	1.6036	0.108809
foreigner_2017q1	0.03588068	0.01706282	2.1029	0.035479 *
foreigner_2017q2	0.03897130	0.01635323	2.3831	0.017168 *
foreigner_2017q3	0.03038712	0.01663184	1.8270	0.067693 .
foreigner_2017q4	0.00688719	0.01657972	0.4154	0.677850
foreigner_2018q1	0.01043503	0.01646764	0.6337	0.526297
foreigner_2018q2	0.01769959	0.01661230	1.0655	0.286672

foreigner_2018q3	0.03412733	0.01595577	2.1389	0.032446 *
foreigner_2018q4	0.03363098	0.01599690	2.1023	0.035523 *
foreigner_2019q1	0.03005246	0.01561060	1.9251	0.054213 .
foreigner_2019q2	0.02630530	0.01564894	1.6810	0.092770 .
foreigner_2019q3	0.03600345	0.01508451	2.3868	0.016997 *
foreigner_2019q4	0.02648766	0.01550406	1.7084	0.087556 .
foreigner_2020q1	0.02662448	0.01562535	1.7039	0.088395 .
foreigner_2020q2	0.01465002	0.01635566	0.8957	0.370405
foreigner_2020q3	0.02731454	0.01591280	1.7165	0.086068 .
foreigner_2020q4	0.03341882	0.01531501	2.1821	0.029103 *
foreigner_2021q1	0.01626131	0.01582326	1.0277	0.304099
foreigner_2021q2	0.02406299	0.01490166	1.6148	0.106357
foreigner_2021q3	0.00947299	0.01474778	0.6423	0.520657
foreigner_2021q4	0.01293028	0.01432777	0.9025	0.366811
foreigner_2022q1	0.01222365	0.01429211	0.8553	0.392401
foreigner_2022q2	0.02858753	0.01365090	2.0942	0.036244 *
foreigner_2022q3	0.01272673	0.01379099	0.9228	0.356096
foreigner_2022q4	0.03432957	0.01285251	2.6710	0.007562 **
female_dummy	-0.16293535	0.00087373	-186.4816	< 2.2e-16***
age_middle	0.20402916	0.00111955	182.2415	< 2.2e-16***
age_old	0.05634245	0.00124461	45.2693	< 2.2e-16***
middle_education	0.06096769	0.00100179	60.8589	< 2.2e-16***
high_education	0.10903344	0.00110292	98.8589	< 2.2e-16***

Source: own computation using Czech LFS microdata.

Table 46: Hours worked event study – foreigner

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.2514235	0.0243518	51.3894	< 2.2e-16 ***
dummy_2016q1	0.2319573	0.0181023	12.8137	< 2.2e-16 ***
dummy_2016q2	0.3173464	0.0182100	17.4271	< 2.2e-16 ***

dummy_2016q3	-0.2577626	0.0195863	-13.1603	< 2.2e-16 ***
dummy_2016q4	0.1699515	0.0184590	9.2069	< 2.2e-16 ***
dummy_2017q1	0.3007235	0.0183152	16.4194	< 2.2e-16 ***
dummy_2017q2	0.3304601	0.0179711	18.3885	< 2.2e-16 ***
dummy_2017q3	-0.1992609	0.0196323	-10.1496	< 2.2e-16 ***
dummy_2017q4	0.2383763	0.0185946	12.8197	< 2.2e-16 ***
dummy_2018q1	0.3598974	0.0181479	19.8313	< 2.2e-16 ***
dummy_2018q2	0.4391342	0.0180560	24.3207	< 2.2e-16 ***
dummy_2018q3	-0.1076507	0.0197462	-5.4517	4.990e-08 ***
dummy_2018q4	0.2871312	0.0187642	15.3021	< 2.2e-16 ***
dummy_2019q1	0.4729289	0.0178006	26.5682	< 2.2e-16 ***
dummy_2019q2	0.5212138	0.0175253	29.7406	< 2.2e-16 ***
dummy_2019q3	0.0219337	0.0195166	1.1239	0.2610768
dummy_2019q4	0.3470945	0.0184805	18.7816	< 2.2e-16 ***
dummy_2020q1	0.2814643	0.0191192	14.7215	< 2.2e-16 ***
dummy_2020q2	0.1125783	0.0194077	5.8007	6.606e-09 ***
dummy_2020q3	0.0672197	0.0193837	3.4678	0.0005247 ***
dummy_2020q4	0.0488418	0.0191107	2.5557	0.0105968 *
dummy_2021q1	0.2317161	0.0189699	12.2149	< 2.2e-16 ***
dummy_2021q2	0.4631449	0.0181902	25.4612	< 2.2e-16 ***
dummy_2021q3	0.0831929	0.0196123	4.2419	2.217e-05 ***
dummy_2021q4	0.2055192	0.0193938	10.5972	< 2.2e-16 ***
dummy_2022q1	0.3347521	0.0191989	17.4360	< 2.2e-16 ***
dummy_2022q2	0.4333334	0.0187926	23.0588	< 2.2e-16 ***
dummy_2022q3	-0.1199512	0.0206316	-5.8139	6.104e-09 ***
dummy_2022q4	0.2554599	0.0194512	13.1334	< 2.2e-16 ***
foreigner_2016q1	0.2824281	0.1248050	2.2630	0.0236387 *
foreigner_2016q2	0.3303997	0.1191976	2.7719	0.0055737 **
foreigner_2016q3	0.0213275	0.1471041	0.1450	0.8847250
foreigner_2016q4	0.4537000	0.1189613	3.8138	0.0001368 ***
foreigner_2017q1	0.3864888	0.1203120	3.2124	0.0013164 **
foreigner_2017q2	0.4136619	0.1113157	3.7161	0.0002023 ***
foreigner_2017q3	0.2864953	0.1328803	2.1560	0.0310807 *
foreigner_2017q4	0.3753264	0.1149014	3.2665	0.0010889 **
foreigner_2018q1	0.2569819	0.1137141	2.2599	0.0238281 *
foreigner_2018q2	0.3244141	0.1119718	2.8973	0.0037642 **
foreigner_2018q3	0.4531506	0.1281610	3.5358	0.0004066 ***
foreigner_2018q4	0.3526458	0.1235982	2.8532	0.0043287 **
foreigner_2019q1	0.4184651	0.1016136	4.1182	3.819e-05 ***

foreigner_2019q2	0.1838778	0.1075056	1.7104	0.0871920 .
foreigner_2019q3	0.4986066	0.1131235	4.4076	1.045e-05 ***
foreigner_2019q4	0.1991304	0.1107806	1.7975	0.0722533 .
foreigner_2020q1	0.2869758	0.1104222	2.5989	0.0093526 **
foreigner_2020q2	0.2231721	0.1153221	1.9352	0.0529651 .
foreigner_2020q3	0.4178399	0.1089533	3.8350	0.0001256 ***
foreigner_2020q4	0.2847736	0.1087888	2.6177	0.0088533 **
foreigner_2021q1	0.2334882	0.1077387	2.1672	0.0302220 *
foreigner_2021q2	0.2491992	0.0983632	2.5335	0.0112945 *
foreigner_2021q3	0.4161008	0.1023673	4.0648	4.808e-05 ***
foreigner_2021q4	0.3447116	0.1022075	3.3727	0.0007445 ***
foreigner_2022q1	0.2406817	0.1057420	2.2761	0.0228389 *
foreigner_2022q2	0.3667901	0.0969447	3.7835	0.0001546 ***
foreigner_2022q3	0.3991462	0.1070866	3.7273	0.0001935 ***
foreigner_2022q4	0.5048240	0.0958888	5.2647	1.405e-07 ***
female_dummy	-1.1550486	0.0059435	-194.3393	< 2.2e-16 ***
czechia_dummy	0.1518348	0.0224229	6.7714	1.276e-11 ***
age_middle	1.1774908	0.0075795	155.3529	< 2.2e-16 ***
age_old	0.3448485	0.0081032	42.5570	< 2.2e-16 ***
middle_education	0.4105778	0.0068322	60.0945	< 2.2e-16 ***
high_education	0.6443786	0.0077014	83.6698	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

Table 47: Employment event study – Ukraine

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.68317511	0.00283679	240.8272	<2.2e-16***
dummy_2016q1	0.00758490	0.00272526	2.7832	0.0053829**
dummy_2016q2	0.01508135	0.00271999	5.5446	2.947e-08***
dummy_2016q3	0.01886743	0.00273026	6.9105	4.833e-12***
dummy_2016q4	0.02683854	0.00270205	9.9326	<2.2e-16***
dummy_2017q1	0.02432694	0.00270578	8.9907	<2.2e-16***
dummy_2017q2	0.03017497	0.00270265	11.1650	<2.2e-16***
dummy_2017q3	0.03693708	0.00268641	13.7496	<2.2e-16***

dummy_2017q4	0.04030954	0.00267841	15.0498	<2.2e-16***
dummy_2018q1	0.03839405	0.00269151	14.2649	<2.2e-16***
dummy_2018q2	0.04373088	0.00270320	16.1775	<2.2e-16***
dummy_2018q3	0.04561388	0.00269401	16.9316	<2.2e-16***
dummy_2018q4	0.05036787	0.00267492	18.8297	<2.2e-16***
dummy_2019q1	0.04636778	0.00270482	17.1426	<2.2e-16***
dummy_2019q2	0.04714866	0.00272289	17.3157	<2.2e-16***
dummy_2019q3	0.04846748	0.00272887	17.7610	<2.2e-16***
dummy_2019q4	0.04961363	0.00273216	18.1591	<2.2e-16***
dummy_2020q1	0.04420622	0.00281876	15.6828	<2.2e-16***
dummy_2020q2	0.03785143	0.00285640	13.2514	<2.2e-16***
dummy_2020q3	0.03931596	0.00277923	14.1464	<2.2e-16***
dummy_2020q4	0.03911179	0.00279727	13.9821	<2.2e-16***
dummy_2021q1	0.03199049	0.00285156	11.2186	<2.2e-16***
dummy_2021q2	0.03316314	0.00282495	11.7394	<2.2e-16***
dummy_2021q3	0.04549584	0.00279397	16.2836	<2.2e-16***
dummy_2021q4	0.05022421	0.00276498	18.1644	<2.2e-16***
dummy_2022q1	0.04922264	0.00277610	17.7309	<2.2e-16***
dummy_2022q2	0.05275393	0.00278392	18.9495	<2.2e-16***
dummy_2022q3	0.05780071	0.00277687	20.8150	<2.2e-16***
dummy_2022q4	0.05728461	0.00277410	20.6498	<2.2e-16***
ukraine_2016q1	0.03676480	0.03786211	0.9710	0.3315394
ukraine_2016q2	0.03441062	0.03897865	0.8828	0.3773408
ukraine_2016q3	0.02004159	0.04131200	0.4851	0.6275859
ukraine_2016q4	-0.01759031	0.04190019	-0.4198	0.6746210
ukraine_2017q1	0.01318222	0.03850300	0.3424	0.7320735
ukraine_2017q2	0.01664544	0.03966156	0.4197	0.6747143
ukraine_2017q3	0.02105439	0.04069115	0.5174	0.6048635
ukraine_2017q4	0.01507024	0.03661171	0.4116	0.6806154
ukraine_2018q1	0.03219966	0.03433802	0.9377	0.3483855
ukraine_2018q2	0.05628915	0.03102282	1.8144	0.0696099.
ukraine_2018q3	0.10009541	0.02726438	3.6713	0.0002413***
ukraine_2018q4	0.06867933	0.02808089	2.4458	0.0144546*
ukraine_2019q1	0.05533979	0.02952053	1.8746	0.0608453.
ukraine_2019q2	0.06258741	0.02940555	2.1284	0.0333024*
ukraine_2019q3	0.07460303	0.02768465	2.6947	0.0070444**
ukraine_2019q4	0.05660092	0.02825153	2.0035	0.0451278*
ukraine_2020q1	0.08755768	0.02529264	3.4618	0.0005366***
ukraine_2020q2	0.04727362	0.03034449	1.5579	0.1192578
ukraine_2020q3	0.08425133	0.02591665	3.2509	0.0011506**
ukraine_2020q4	0.04121121	0.02894288	1.4239	0.1544813
ukraine_2021q1	0.03562719	0.02857671	1.2467	0.2125001
ukraine_2021q2	0.04783770	0.02726473	1.7546	0.0793344.
ukraine_2021q3	0.04293091	0.02716577	1.5803	0.1140315
ukraine_2021q4	0.04070631	0.02617437	1.5552	0.1198995
ukraine_2022q1	0.02239437	0.02862290	0.7824	0.4339836
ukraine_2022q2	0.04250119	0.02506892	1.6954	0.0900050.
ukraine_2022q3	0.02184542	0.02424194	0.9011	0.3675132
ukraine_2022q4	0.04840008	0.02029590	2.3847	0.0170922*
female_dummy	-0.16304927	0.00087351	-186.6595	<2.2e-16***
czechia_dummy	0.00617080	0.00243515	2.5341	0.0112754*
age_middle	0.20392057	0.00111924	182.1954	<2.2e-16***

age_old	0.05604833	0.00124356	45.0708	<2.2e-16***
middle_education	0.06099105	0.00100190	60.8755	<2.2e-16***
high_education	0.10945173	0.00110362	99.1749	<2.2e-16***

Source: own computation using Czech LFS microdata.

Table 48: Hours worked event study - Ukraine

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.3726105	0.0194487	70.5759	< 2.2e-16***
dummy_2016q1	0.2362969	0.0180057	13.1234	< 2.2e-16***
dummy_2016q2	0.3230762	0.0180962	17.8532	< 2.2e-16***
dummy_2016q3	-0.2577331	0.0194984	-13.2182	< 2.2e-16***
dummy_2016q4	0.1802238	0.0183322	9.8310	< 2.2e-16***
dummy_2017q1	0.3086101	0.0182049	16.9521	< 2.2e-16***
dummy_2017q2	0.3386967	0.0178477	18.9770	< 2.2e-16***
dummy_2017q3	-0.1953064	0.0195212	-10.0049	< 2.2e-16***
dummy_2017q4	0.2447957	0.0184711	13.2529	< 2.2e-16***
dummy_2018q1	0.3647264	0.0180302	20.2286	< 2.2e-16***
dummy_2018q2	0.4434350	0.0179492	24.7050	< 2.2e-16***
dummy_2018q3	-0.1022564	0.0196337	-5.2082	1.907e-07***
dummy_2018q4	0.2914913	0.0186636	15.6181	< 2.2e-16***
dummy_2019q1	0.4804138	0.0176689	27.1898	< 2.2e-16***
dummy_2019q2	0.5241240	0.0174090	30.1065	< 2.2e-16***
dummy_2019q3	0.0292575	0.0193692	1.5105	0.1309118
dummy_2019q4	0.3500616	0.0183533	19.0734	< 2.2e-16***
dummy_2020q1	0.2837436	0.0189755	14.9532	< 2.2e-16***
dummy_2020q2	0.1157023	0.0192632	6.0064	1.898e-09***
dummy_2020q3	0.0713994	0.0192373	3.7115	0.0002060***
dummy_2020q4	0.0549194	0.0189602	2.8966	0.0037729**
dummy_2021q1	0.2356522	0.0188228	12.5195	< 2.2e-16***
dummy_2021q2	0.4669542	0.0180437	25.8790	< 2.2e-16***
dummy_2021q3	0.0896589	0.0194265	4.6153	3.926e-06***
dummy_2021q4	0.2121218	0.0192110	11.0417	< 2.2e-16***
dummy_2022q1	0.3401928	0.0190245	17.8819	< 2.2e-16***
dummy_2022q2	0.4412974	0.0186133	23.7087	< 2.2e-16***
dummy_2022q3	-0.1142286	0.0204398	-5.5885	2.291e-08***
dummy_2022q4	0.2655382	0.0192746	13.7766	< 2.2e-16***
ukraine_2016q1	0.2538535	0.2442118	1.0395	0.2985814
ukraine_2016q2	0.2439890	0.2515012	0.9701	0.3319817
ukraine_2016q3	0.2469475	0.2999891	0.8232	0.4104013
ukraine_2016q4	-0.0375995	0.2822206	-0.1332	0.8940136
ukraine_2017q1	0.1803795	0.2606732	0.6920	0.4889528
ukraine_2017q2	0.3292177	0.2462621	1.3369	0.1812689
ukraine_2017q3	0.5249441	0.2818644	1.8624	0.0625471.*
ukraine_2017q4	0.4636110	0.2239980	2.0697	0.0384798**
ukraine_2018q1	0.2239934	0.2397545	0.9343	0.3501692
ukraine_2018q2	0.5513041	0.1944940	2.8346	0.0045890**
ukraine_2018q3	0.8617370	0.2238546	3.8495	0.0001183***
ukraine_2018q4	0.5797564	0.2212476	2.6204	0.0087829**

ukraine_2019q1	0.3409279	0.1908259	1.7866	0.0740038.*
ukraine_2019q2	0.1640541	0.2150764	0.7628	0.4455999
ukraine_2019q3	0.6820812	0.2004097	3.4034	0.0006655***
ukraine_2019q4	0.2271183	0.2071042	1.0966	0.2728001
ukraine_2020q1	0.7015040	0.1882648	3.7262	0.0001944***
ukraine_2020q2	0.3340208	0.2218631	1.5055	0.1321890
ukraine_2020q3	0.9098624	0.1700719	5.3499	8.804e-08***
ukraine_2020q4	0.1770948	0.2040018	0.8681	0.3853377
ukraine_2021q1	0.2420703	0.1978308	1.2236	0.2210948
ukraine_2021q2	0.3344861	0.1721606	1.9429	0.0520318.*
ukraine_2021q3	0.6448795	0.1777027	3.6290	0.0002846***
ukraine_2021q4	0.3479022	0.1894867	1.8360	0.0663543.*
ukraine_2022q1	0.0544699	0.2198131	0.2478	0.8042884
ukraine_2022q2	0.2467606	0.1806426	1.3660	0.1719345
ukraine_2022q3	0.5683265	0.1775212	3.2015	0.0013674**
ukraine_2022q4	0.4400963	0.1485952	2.9617	0.0030594**
female_dummy	-1.1561546	0.0059423	-194.5648	< 2.2e-16***
czechia_dummy	0.0273117	0.0167560	1.6300	0.1031091
age_middle	1.1760352	0.0075777	155.1979	< 2.2e-16***
age_old	0.3416041	0.0080950	42.1995	< 2.2e-16***
middle_educatio n	0.4113925	0.0068326	60.2104	< 2.2e-16***
high_education	0.6468013	0.0077036	83.9608	< 2.2e-16***

Source: own computation using Czech LFS microdata.

Table 49: Employment event study – Slovakia

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.68899635	0.00161323	427.0915	< 2.2e-16 ***
dummy_2016q1	0.00728591	0.00272773	2.6711	0.007561 **
dummy_2016q2	0.01475764	0.00272427	5.4171	6.059e-08 ***
dummy_2016q3	0.01840557	0.00273469	6.7304	1.693e-11 ***
dummy_2016q4	0.02598212	0.00270813	9.5941	< 2.2e-16 ***
dummy_2017q1	0.02347922	0.00271107	8.6605	< 2.2e-16 ***
dummy_2017q2	0.02936517	0.00270971	10.8370	< 2.2e-16 ***
dummy_2017q3	0.03646239	0.00269261	13.5417	< 2.2e-16 ***
dummy_2017q4	0.04015664	0.00268256	14.9695	< 2.2e-16 ***
dummy_2018q1	0.03833205	0.00269502	14.2233	< 2.2e-16 ***
dummy_2018q2	0.04383716	0.00270538	16.2037	< 2.2e-16 ***
dummy_2018q3	0.04591306	0.00269544	17.0336	< 2.2e-16 ***
dummy_2018q4	0.05045794	0.00267543	18.8597	< 2.2e-16 ***
dummy_2019q1	0.04640645	0.00270675	17.1447	< 2.2e-16 ***
dummy_2019q2	0.04733907	0.00272419	17.3773	< 2.2e-16 ***
dummy_2019q3	0.04863061	0.00273066	17.8091	< 2.2e-16 ***
dummy_2019q4	0.04951030	0.00273517	18.1013	< 2.2e-16 ***
dummy_2020q1	0.04455164	0.00282049	15.7957	< 2.2e-16 ***
dummy_2020q2	0.03801219	0.00285871	13.2970	< 2.2e-16 ***
dummy_2020q3	0.03966421	0.00277916	14.2720	< 2.2e-16 ***
dummy_2020q4	0.03903229	0.00280041	13.9381	< 2.2e-16 ***
dummy_2021q1	0.03201168	0.00285385	11.2170	< 2.2e-16 ***

dummy_2021q2	0.03300833	0.00282808	11.6716	< 2.2e-16 ***
dummy_2021q3	0.04560772	0.00279639	16.3095	< 2.2e-16 ***
dummy_2021q4	0.05000093	0.00276850	18.0607	< 2.2e-16 ***
dummy_2022q1	0.04882948	0.00278187	17.5528	< 2.2e-16 ***
dummy_2022q2	0.05252552	0.00278709	18.8460	< 2.2e-16 ***
dummy_2022q3	0.05777640	0.00277765	20.8005	< 2.2e-16 ***
dummy_2022q4	0.05747490	0.00276975	20.7509	< 2.2e-16 ***
slovakia_2016q1	0.09018274	0.03084201	2.9240	0.003455 **
slovakia_2016q2	0.07162234	0.02731286	2.6223	0.008734 **
slovakia_2016q3	0.07844452	0.02748287	2.8543	0.004313 **
slovakia_2016q4	0.10205510	0.02459321	4.1497	3.329e-05 ***
slovakia_2017q1	0.10813136	0.02407104	4.4922	7.051e-06 ***
slovakia_2017q2	0.09269221	0.02319266	3.9966	6.426e-05 ***
slovakia_2017q3	0.06260509	0.02539221	2.4655	0.013682 *
slovakia_2017q4	0.02404772	0.02681221	0.8969	0.369776
slovakia_2018q1	0.02352797	0.02647321	0.8887	0.374140
slovakia_2018q2	0.02676174	0.02711864	0.9868	0.323722
slovakia_2018q3	0.03535210	0.02678374	1.3199	0.186866
slovakia_2018q4	0.04315739	0.02767740	1.5593	0.118926
slovakia_2019q1	0.03943794	0.02622102	1.5041	0.132567
slovakia_2019q2	0.02473570	0.02731897	0.9054	0.365232
slovakia_2019q3	0.04027816	0.02537048	1.5876	0.112377
slovakia_2019q4	0.04864719	0.02399132	2.0277	0.042591 *
slovakia_2020q1	0.02108475	0.02522845	0.8358	0.403294
slovakia_2020q2	0.01486046	0.02682648	0.5539	0.579615
slovakia_2020q3	0.02910979	0.02669938	1.0903	0.275590
slovakia_2020q4	0.03753082	0.02445781	1.5345	0.124904
slovakia_2021q1	0.02122025	0.02566672	0.8268	0.408373
slovakia_2021q2	0.04578057	0.02376127	1.9267	0.054019 .
slovakia_2021q3	0.01725262	0.02426268	0.7111	0.477037
slovakia_2021q4	0.04165673	0.02241494	1.8584	0.063107 .
slovakia_2022q1	0.04409087	0.02155162	2.0458	0.040774 *
slovakia_2022q2	0.04982062	0.02142575	2.3253	0.020058 *
slovakia_2022q3	0.01447562	0.02329487	0.6214	0.534331
slovakia_2022q4	0.02868788	0.02353901	1.2187	0.222944
female_dummy	-0.16296363	0.00087346	-186.5735	< 2.2e-16 ***
age_middle	0.20415744	0.00111992	182.2964	< 2.2e-16 ***
age_old	0.05637260	0.00124474	45.2885	< 2.2e-16 ***
middle_educatio n	0.06091360	0.00100177	60.8062	< 2.2e-16 ***
high_education	0.10906161	0.00110347	98.8354	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

Table 50: Employment event study – Vietnam

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	0.68904693	0.00161278	427.2407	< 2.2e-16 ***
dummy_2016q1	0.00778359	0.00272218	2.8593	0.0042456 **
dummy_2016q2	0.01519237	0.00271728	5.5910	2.258e-08 ***
dummy_2016q3	0.01896300	0.00272744	6.9527	3.587e-12 ***

dummy_2016q4	0.02666134	0.00270043	9.8730	< 2.2e-16 ***
dummy_2017q1	0.02430490	0.00270311	8.9915	< 2.2e-16 ***
dummy_2017q2	0.03010570	0.00270031	11.1490	< 2.2e-16 ***
dummy_2017q3	0.03680427	0.00268492	13.7078	< 2.2e-16 ***
dummy_2017q4	0.04014593	0.00267564	15.0043	< 2.2e-16 ***
dummy_2018q1	0.03831383	0.00268803	14.2535	< 2.2e-16 ***
dummy_2018q2	0.04371216	0.00269890	16.1963	< 2.2e-16 ***
dummy_2018q3	0.04598495	0.00268847	17.1045	< 2.2e-16 ***
dummy_2018q4	0.05064047	0.00266937	18.9709	< 2.2e-16 ***
dummy_2019q1	0.04658165	0.00269950	17.2556	< 2.2e-16 ***
dummy_2019q2	0.04743673	0.00271696	17.4595	< 2.2e-16 ***
dummy_2019q3	0.04893485	0.00272232	17.9754	< 2.2e-16 ***
dummy_2019q4	0.04987458	0.00272560	18.2986	< 2.2e-16 ***
dummy_2020q1	0.04470781	0.00281040	15.9080	< 2.2e-16 ***
dummy_2020q2	0.03804366	0.00284998	13.3487	< 2.2e-16 ***
dummy_2020q3	0.03989165	0.00277136	14.3943	< 2.2e-16 ***
dummy_2020q4	0.03922421	0.00279033	14.0572	< 2.2e-16 ***
dummy_2021q1	0.03200828	0.00284430	11.2535	< 2.2e-16 ***
dummy_2021q2	0.03327725	0.00281725	11.8120	< 2.2e-16 ***
dummy_2021q3	0.04551240	0.00278698	16.3304	< 2.2e-16 ***
dummy_2021q4	0.05024131	0.00275718	18.2220	< 2.2e-16 ***
dummy_2022q1	0.04917395	0.00276954	17.7553	< 2.2e-16 ***
dummy_2022q2	0.05281161	0.00277540	19.0284	< 2.2e-16 ***
dummy_2022q3	0.05777899	0.00276756	20.8772	< 2.2e-16 ***
dummy_2022q4	0.05760169	0.00276051	20.8663	< 2.2e-16 ***
vietnam_2016q1	0.00787153	0.07452533	0.1056	0.9158821
vietnam_2016q2	0.04524840	0.06900517	0.6557	0.5120014
vietnam_2016q3	0.00512311	0.07606578	0.0674	0.9463023
vietnam_2016q4	0.07061136	0.06216535	1.1359	0.2560139
vietnam_2017q1	0.04371591	0.06270046	0.6972	0.4856664
vietnam_2017q2	0.06610817	0.06238954	1.0596	0.2893253
vietnam_2017q3	0.16010820	0.05012832	3.1940	0.0014034 **
vietnam_2017q4	0.16285492	0.06015046	2.7075	0.0067802 **
vietnam_2018q1	0.12804604	0.05616679	2.2797	0.0226230 *
vietnam_2018q2	0.16127571	0.04872120	3.3102	0.0009324 ***
vietnam_2018q3	0.10111661	0.05853424	1.7275	0.0840822 .
vietnam_2018q4	0.06760987	0.05728745	1.1802	0.2379264
vietnam_2019q1	0.07001786	0.05801876	1.2068	0.2275040
vietnam_2019q2	0.06906518	0.06784992	1.0179	0.3087205
vietnam_2019q3	0.04067760	0.06271744	0.6486	0.5166067
vietnam_2019q4	0.06999911	0.06672182	1.0491	0.2941237
vietnam_2020q1	0.03278104	0.07033777	0.4661	0.6411786
vietnam_2020q2	0.07053582	0.06126425	1.1513	0.2495938
vietnam_2020q3	0.02874652	0.06113395	0.4702	0.6381967
vietnam_2020q4	0.11005362	0.06338854	1.7362	0.0825332 .
vietnam_2021q1	0.12058661	0.05710418	2.1117	0.0347129 *
vietnam_2021q2	0.10812398	0.05657226	1.9113	0.0559722 .
vietnam_2021q3	0.13250840	0.04801896	2.7595	0.0057891 **
vietnam_2021q4	0.14432703	0.05030184	2.8692	0.0041149 **
vietnam_2022q1	0.08397105	0.05515975	1.5223	0.1279280
vietnam_2022q2	0.12964657	0.04496154	2.8835	0.0039329 **
vietnam_2022q3	0.08196028	0.04631244	1.7697	0.0767733 .

vietnam_2022q4	0.09153713	0.04132823	2.2149	0.0267685 *
female_dummy	-0.16301421	0.00087342	-186.6396	< 2.2e-16 ***
age_middle	0.20396848	0.00111915	182.2527	< 2.2e-16 ***
age_old	0.05599617	0.00124305	45.0475	< 2.2e-16 ***
middle_education	0.06108474	0.00100221	60.9501	< 2.2e-16 ***
high_education	0.10953735	0.00110396	99.2223	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

Table 51: Hours worked event study – Vietnam

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	1.3969982	0.0186793	74.7888	< 2.2e-16 ***
dummy_2016q1	0.2371668	0.0179855	13.1866	< 2.2e-16 ***
dummy_2016q2	0.3230852	0.0180764	17.8733	< 2.2e-16 ***
dummy_2016q3	-0.2579964	0.0194805	-13.2438	< 2.2e-16 ***
dummy_2016q4	0.1784957	0.0183219	9.7422	< 2.2e-16 ***
dummy_2017q1	0.3086446	0.0181861	16.9714	< 2.2e-16 ***
dummy_2017q2	0.3384716	0.0178296	18.9837	< 2.2e-16 ***
dummy_2017q3	-0.1949958	0.0195058	-9.9968	< 2.2e-16 ***
dummy_2017q4	0.2451236	0.0184421	13.2915	< 2.2e-16 ***
dummy_2018q1	0.3637103	0.0180111	20.1937	< 2.2e-16 ***
dummy_2018q2	0.4439837	0.0179174	24.7795	< 2.2e-16 ***
dummy_2018q3	-0.0986909	0.0195983	-5.0357	4.762e-07 ***
dummy_2018q4	0.2929832	0.0186371	15.7204	< 2.2e-16 ***
dummy_2019q1	0.4809938	0.0176345	27.2757	< 2.2e-16 ***
dummy_2019q2	0.5241529	0.0173868	30.1466	< 2.2e-16 ***
dummy_2019q3	0.0329075	0.0193254	1.7028	0.088603 .
dummy_2019q4	0.3504412	0.0183175	19.1315	< 2.2e-16 ***
dummy_2020q1	0.2871562	0.0189291	15.1701	< 2.2e-16 ***
dummy_2020q2	0.1182363	0.0192232	6.1507	7.717e-10 ***
dummy_2020q3	0.0767820	0.0191837	4.0025	6.269e-05 ***
dummy_2020q4	0.0563319	0.0189115	2.9787	0.002895 **
dummy_2021q1	0.2377970	0.0187751	12.6656	< 2.2e-16 ***
dummy_2021q2	0.4684445	0.0179943	26.0330	< 2.2e-16 ***
dummy_2021q3	0.0923587	0.0193701	4.7681	1.860e-06 ***
dummy_2021q4	0.2120917	0.0191606	11.0691	< 2.2e-16 ***
dummy_2022q1	0.3383509	0.0189944	17.8132	< 2.2e-16 ***
dummy_2022q2	0.4406887	0.0185673	23.7346	< 2.2e-16 ***
dummy_2022q3	-0.1119810	0.0203704	-5.4972	3.859e-08 ***
dummy_2022q4	0.2678720	0.0191913	13.9580	< 2.2e-16 ***
vietnam_2016q1	0.3884853	0.4578049	0.8486	0.396114
vietnam_2016q2	0.7642622	0.4337631	1.7619	0.078081 .
vietnam_2016q3	0.9015655	0.4844656	1.8609	0.062752 .
vietnam_2016q4	0.9295295	0.3880130	2.3956	0.016593 *
vietnam_2017q1	0.4010441	0.4347576	0.9225	0.356292
vietnam_2017q2	0.8038675	0.3843109	2.0917	0.036465 *
vietnam_2017q3	1.6290964	0.3479626	4.6818	2.844e-06 ***
vietnam_2017q4	1.5581062	0.3710414	4.1993	2.678e-05 ***
vietnam_2018q1	1.1722809	0.3474499	3.3740	0.000741 ***

vietnam_2018q2	1.3159067	0.3038849	4.3303	1.489e-05 ***
vietnam_2018q3	0.8161185	0.4797494	1.7011	0.088918 .
vietnam_2018q4	1.0068028	0.3629686	2.7738	0.005541 **
vietnam_2019q1	0.8562620	0.3595432	2.3815	0.017241 *
vietnam_2019q2	0.6347675	0.4234335	1.4991	0.133849
vietnam_2019q3	0.9466183	0.4281169	2.2111	0.027028 *
vietnam_2019q4	0.7971404	0.4280801	1.8621	0.062585 .
vietnam_2020q1	0.8072701	0.4336614	1.8615	0.062671 .
vietnam_2020q2	-0.1786387	0.5270960	-0.3389	0.734677
vietnam_2020q3	0.9818721	0.3810656	2.5766	0.009977 **
vietnam_2020q4	-0.1879156	0.5576891	-0.3370	0.736152
vietnam_2021q1	-0.3247079	0.4801091	-0.6763	0.498837
vietnam_2021q2	0.4825674	0.3954160	1.2204	0.222312
vietnam_2021q3	1.1031420	0.3833836	2.8774	0.004010 **
vietnam_2021q4	1.4421328	0.3255319	4.4301	9.421e-06 ***
vietnam_2022q1	1.1026336	0.3409014	3.2345	0.001219 **
vietnam_2022q2	1.2286672	0.2761896	4.4486	8.643e-06 ***
vietnam_2022q3	1.5912355	0.2840617	5.6017	2.123e-08 ***
vietnam_2022q4	1.2254052	0.2520694	4.8614	1.166e-06 ***
female_dummy	-1.1558029	0.0059424	-194.5012	< 2.2e-16 ***
czechia_dummy	0.0013421	0.0158054	0.0849	0.932331
age_middle	1.1763549	0.0075775	155.2437	< 2.2e-16 ***
age_old	0.3408965	0.0080939	42.1176	< 2.2e-16 ***
middle_education	0.4120697	0.0068348	60.2903	< 2.2e-16 ***
high_education	0.6481606	0.0077061	84.1101	< 2.2e-16 ***

Source: own computation using Czech LFS microdata.

Specific economic areas

Table 52: Hours worked LPM – covid dummy (seasonally adjusted, services and retail)

Variable	*Estimate*	*Std. Error*	*t-value*	*Pr(>|t|)*
(Intercept)	3.4112187	0.0290048	117.6089	< 2.2e-16 ***
covid_dummy_2020q1	-0.1378574	0.0358762	-3.8426	0.0001218 ***
covid_dummy_2020q2	-0.7066191	0.0472808	-14.9452	< 2.2e-16 ***
covid_dummy_2020q3	-0.2551916	0.0376113	-6.7850	1.167e-11 ***
covid_dummy_2020q4	-0.6967028	0.0448833	-15.5225	< 2.2e-16 ***
covid_dummy_2021q1	-0.6503138	0.0450664	-14.4301	< 2.2e-16 ***
covid_dummy_2021q2	0.1163122	0.0310210	3.7495	0.0001773 ***
female_dummy	-0.3023911	0.0122457	-24.6936	< 2.2e-16 ***
czechia_dummy	-0.1581241	0.0265227	-5.9618	2.502e-09 ***
age_middle	0.0974587	0.0154404	6.3119	2.766e-10 ***
age_old	0.1077945	0.0158935	6.7823	1.189e-11 ***

middle_education	-0.0024855	0.0123077	-0.2019	0.8399574
high_education	-0.0807331	0.0230470	-3.5030	0.0004603 ***

Source: own computation using Czech LFS microdata.

Table 53: Hours worked LPM – covid dummy (seasonally adjusted, operation of machines)

Variable	*Estimate*	*Std. Error*	*t-value*	*Pr(>|t|)*
(Intercept)	3.1047420	0.0345575	89.8428	< 2.2e-16 ***
covid_dummy_2020q1	0.0096999	0.0377067	0.2572	0.7969883
covid_dummy_2020q2	-0.1942471	0.0400052	-4.8556	1.203e-06 ***
covid_dummy_2020q3	-0.0423981	0.0369560	-1.1473	0.2512786
covid_dummy_2020q4	-0.1206608	0.0364938	-3.3063	0.0009456 ***
covid_dummy_2021q1	0.1528473	0.0318227	4.8031	1.565e-06 ***
covid_dummy_2021q2	0.3521979	0.0258459	13.6268	< 2.2e-16 ***
female_dummy	-0.4957151	0.0160964	-30.7966	< 2.2e-16 ***
czechia_dummy	0.0590972	0.0325997	1.8128	0.0698637 .
age_middle	0.0473265	0.0162422	2.9138	0.0035714 **
age_old	-0.0805139	0.0171890	-4.6840	2.817e-06 ***
middle_education	0.0555284	0.0145676	3.8118	0.0001381 ***
high_education	0.0488274	0.0500121	0.9763	0.3289132

Source: own computation using Czech LFS microdata.

Table 54: Hours worked LPM – covid dummy (seasonally adjusted, non-qualified)

Variable	*Estimate*	*Std. Error*	*t-value*	*Pr(>|t|)*
(Intercept)	3.2737217	0.0407399	80.3566	< 2.2e-16 ***
covid_dummy_2020q1	-0.0079267	0.0550853	-0.1439	0.885581
covid_dummy_2020q2	-0.4827496	0.0700618	-6.8903	5.651e-12 ***
covid_dummy_2020q3	-0.3024054	0.0628954	-4.8081	1.530e-06 ***
covid_dummy_2020q4	-0.4576268	0.0677852	-6.7511	1.488e-11 ***
covid_dummy_2021q1	-0.1611859	0.0684561	-2.3546	0.018548 *
covid_dummy_2021q2	0.2555698	0.0446282	5.7266	1.032e-08 ***
female_dummy	-0.3557655	0.0210010	-16.9404	< 2.2e-16 ***
czechia_dummy	-0.1535923	0.0365318	-4.2043	2.624e-05 ***
age_middle	0.0887142	0.0275208	3.2235	0.001267 **

age_old	-0.0028284	0.0280019	-0.1010	0.919544
middle_education	-0.0189257	0.0256177	-0.7388	0.460049
high_education	-0.0939531	0.0834623	-1.1257	0.260302

Source: own computation using Czech LFS microdata.

Table 55: Hours worked event study – covid dummy (seasonally adjusted, services and retail)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	3.5258078	0.0478263	73.7210	< 2.2e-16 ***
dummy_2016q1	0.1372930	0.0449634	3.0534	0.0022629 **
dummy_2016q2	-0.0204967	0.0332116	-0.6172	0.5371341
dummy_2016q3	-0.0661006	0.0597246	-1.1068	0.2684020
dummy_2016q4	0.0607366	0.0438761	1.3843	0.1662765
dummy_2017q1	0.0966629	0.0506225	1.9095	0.0562022 .
dummy_2017q2	-0.1528971	0.0367424	-4.1613	3.167e-05 ***
dummy_2017q3	-0.1746932	0.0692226	-2.5236	0.0116160 *
dummy_2017q4	-0.0209263	0.0433880	-0.4823	0.6295894
dummy_2018q1	0.0228255	0.0463455	0.4925	0.6223613
dummy_2018q2	-0.1386027	0.0358190	-3.8695	0.0001091 ***
dummy_2018q3	-0.0780256	0.0634845	-1.2291	0.2190558
dummy_2018q4	0.0359427	0.0417556	0.8608	0.3893566
dummy_2019q1	0.0410949	0.0461520	0.8904	0.3732401
dummy_2019q2	-0.1026996	0.0323581	-3.1738	0.0015048 **
dummy_2019q3	-0.1160370	0.0644506	-1.8004	0.0718001 .
dummy_2019q4	-0.0547456	0.0426721	-1.2829	0.1995174
dummy_2020q1	-0.2579230	0.0526616	-4.8977	9.709e-07 ***
dummy_2020q2	-1.0106679	0.0703702	-14.3622	< 2.2e-16 ***
dummy_2020q3	0.0001726	0.0605836	0.0028	0.9977268
dummy_2020q4	-0.7783020	0.0544331	-14.2983	< 2.2e-16 ***
dummy_2021q1	-0.7706060	0.0633604	-12.1623	< 2.2e-16 ***
dummy_2021q2	-0.1880023	0.0397497	-4.7296	2.252e-06 ***
dummy_2021q3	-0.0320010	0.0645196	-0.4960	0.6199038
dummy_2021q4	-0.1081005	0.0432206	-2.5011	0.0123812 *
dummy_2022q1	-0.0995687	0.0455397	-2.1864	0.0287873 *
dummy_2022q2	-0.1806027	0.0342321	-5.2758	1.324e-07 ***
dummy_2022q3	-0.2402567	0.0668320	-3.5949	0.0003246 ***
dummy_2022q4	-0.1041437	0.0480566	-2.1671	0.0302292 *
female_dummy	-0.2992492	0.0116779	-25.6254	< 2.2e-16 ***
czechia_dummy	-0.1622245	0.0276560	-5.8658	4.483e-09 ***
age_middle	0.1024202	0.0159883	6.4059	1.501e-10 ***
age_old	0.1174783	0.0165098	7.1157	1.121e-12 ***
middle_education	0.0014615	0.0125953	0.1160	0.9076233
high_education	-0.0743899	0.0226865	-3.2790	0.0010419 **
q2	0.1839269	0.0424761	4.3301	1.492e-05 ***
q3	-0.3755601	0.0584405	-6.4264	1.312e-10 ***
q4	-0.0386251	0.0470673	-0.8206	0.4118566

Source: own computation using Czech LFS microdata.

Table 56: Hours worked event study – covid dummy (seasonally adjusted, operation of machines)

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3.151240	0.053046	59.4053	< 2.2e-16 ***
dummy_2016q1	0.219279	0.050755	4.3204	1.559e-05 ***
dummy_2016q2	0.080931	0.042694	1.8956	0.0580178 .
dummy_2016q3	-0.124989	0.073114	-1.7095	0.0873588 .
dummy_2016q4	0.106057	0.053468	1.9836	0.0473066 *
dummy_2017q1	0.218190	0.051475	4.2387	2.250e-05 ***
dummy_2017q2	-0.095340	0.046734	-2.0401	0.0413463 *
dummy_2017q3	-0.268635	0.073119	-3.6739	0.0002390 ***
dummy_2017q4	0.075015	0.063921	1.1736	0.2405745
dummy_2018q1	0.132231	0.056611	2.3358	0.0195052 *
dummy_2018q2	-0.030147	0.047409	-0.6359	0.5248457
dummy_2018q3	-0.241042	0.076138	-3.1659	0.0015468 **
dummy_2018q4	0.012825	0.064679	0.1983	0.8428179
dummy_2019q1	0.208470	0.049090	4.2467	2.171e-05 ***
dummy_2019q2	0.011485	0.038521	0.2982	0.7655879
dummy_2019q3	0.076678	0.066845	1.1471	0.2513408
dummy_2019q4	0.192021	0.055131	3.4830	0.0004960 ***
dummy_2020q1	-0.034430	0.059749	-0.5762	0.5644560
dummy_2020q2	-0.495837	0.054360	-9.1214	< 2.2e-16 ***
dummy_2020q3	0.169308	0.064027	2.6443	0.0081872 **
dummy_2020q4	-0.019274	0.055938	-0.3446	0.7304289
dummy_2021q1	0.108740	0.051351	2.1176	0.0342146 *
dummy_2021q2	0.050526	0.037953	1.3313	0.1831007
dummy_2021q3	0.101969	0.064987	1.5691	0.1166375
dummy_2021q4	-0.055207	0.058626	-0.9417	0.3463583
dummy_2022q1	-0.071829	0.059541	-1.2064	0.2276809
dummy_2022q2	-0.132977	0.050906	-2.6122	0.0089979 **
dummy_2022q3	-0.281720	0.077057	-3.6560	0.0002563 ***
dummy_2022q4	-0.037815	0.073223	-0.5164	0.6055494
female_dummy	-0.496107	0.016390	-30.2691	< 2.2e-16 ***
czechia_dummy	0.053711	0.034624	1.5513	0.1208401
age_middle	0.048661	0.016424	2.9629	0.0030485 **
age_old	-0.075623	0.016733	-4.5194	6.210e-06 ***
middle_education	0.057019	0.014298	3.9880	6.668e-05 ***
high_education	0.063684	0.050797	1.2537	0.2099586
q2	0.257542	0.049623	5.1900	2.107e-07 ***
q3	-0.255823	0.064125	-3.9894	6.628e-05 ***
q4	-0.145521	0.055857	-2.6052	0.0091824 **

Source: own computation using Czech LFS microdata.

Table 57: Hours worked event study – covid dummy (seasonally adjusted, non-qualified)

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3.4676546	0.0754617	45.9525	< 2.2e-16 ***
dummy_2016q1	0.1104641	0.0759782	1.4539	0.1459846
dummy_2016q2	-0.0189311	0.0443585	-0.4268	0.6695452
dummy_2016q3	0.0191764	0.1051569	0.1824	0.8553009

dummy_2016q4	-0.1529876	0.0809777	-1.8893	0.0588650 .
dummy_2017q1	0.0184027	0.0783714	0.2348	0.8143539
dummy_2017q2	-0.1520018	0.0533239	-2.8505	0.0043668 **
dummy_2017q3	-0.1463125	0.1130292	-1.2945	0.1955120
dummy_2017q4	0.0104300	0.0867863	0.1202	0.9043406
dummy_2018q1	-0.0251577	0.0817412	-0.3078	0.7582568
dummy_2018q2	-0.1129172	0.0543241	-2.0786	0.0376621 *
dummy_2018q3	-0.0628723	0.1144550	-0.5493	0.5827896
dummy_2018q4	-0.0106281	0.0838688	-0.1267	0.8991601
dummy_2019q1	0.0070895	0.0757749	0.0936	0.9254588
dummy_2019q2	-0.1678799	0.0546929	-3.0695	0.0021457 **
dummy_2019q3	-0.0327691	0.1092772	-0.2999	0.7642772
dummy_2019q4	-0.0431781	0.0711923	-0.6065	0.5441865
dummy_2020q1	-0.1885440	0.0776435	-2.4283	0.0151731 *
dummy_2020q2	-0.8443853	0.0911337	-9.2653	< 2.2e-16 ***
dummy_2020q3	-0.0494154	0.1079650	-0.4577	0.6471716
dummy_2020q4	-0.4854587	0.0881064	-5.5099	3.613e-08 ***
dummy_2021q1	-0.3419363	0.1035758	-3.3013	0.0009632 ***
dummy_2021q2	-0.1062943	0.0550701	-1.9302	0.0535940 .
dummy_2021q3	0.1550065	0.1029342	1.5059	0.1321065
dummy_2021q4	-0.1594391	0.0881420	-1.8089	0.0704760 .
dummy_2022q1	-0.1821255	0.0884172	-2.0598	0.0394203 *
dummy_2022q2	-0.2944072	0.0551852	-5.3349	9.613e-08 ***
dummy_2022q3	-0.1591663	0.1158052	-1.3744	0.1693158
dummy_2022q4	-0.1669852	0.0948933	-1.7597	0.0784641 .
female_dummy	-0.3612781	0.0212442	-17.0059	< 2.2e-16 ***
czechia_dummy	-0.1649165	0.0416879	-3.9560	7.636e-05 ***
age_middle	0.0887988	0.0281091	3.1591	0.0015839 **
age_old	-0.0020533	0.0287229	-0.0715	0.9430102
middle_education	-0.0177715	0.0260740	-0.6816	0.4955088
high_education	-0.0906519	0.0865634	-1.0472	0.2949994
q2	0.1809972	0.0696243	2.5996	0.0093361 **
q3	-0.4337650	0.1058841	-4.0966	4.201e-05 ***
q4	-0.1529707	0.0806131	-1.8976	0.0577573 .

Source: own computation using Czech LFS microdata.

Table 58: Hours worked LPM – female (seasonally adjusted, services and retail)

Variable	*Estimate*	*Std. Error*	*t-value*	*Pr(>|t|)*
(Intercept)	3.3992992	0.0290672	116.9464	< 2.2e-16 ***
covid_dummy_2020q1	-0.0400000	0.0530699	-0.7537	0.4510169
covid_dummy_2020q2	-0.6449573	0.0833816	-7.7350	1.043e-14 ***
covid_dummy_2020q3	-0.2275007	0.0635214	-3.5815	0.0003418 ***
covid_dummy_2020q4	-0.6192246	0.0753419	-8.2189	< 2.2e-16 ***
covid_dummy_2021q	-0.5158385	0.0761252	-6.7762	1.240e-11 ***

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covid_dummy_2021q2	0.0886453	0.0577380	1.5353	0.1247127
covid_female_2020q1	-0.1492131	0.0709108	-2.1042	0.0353600 *
covid_female_2020q2	-0.0937364	0.1011789	-0.9264	0.3542185
covid_female_2020q3	-0.0417701	0.0788063	-0.5300	0.5960886
covid_female_2020q4	-0.1171830	0.0937467	-1.2500	0.2113040
covid_female_2021q1	-0.2026586	0.0943760	-2.1474	0.0317675 *
covid_female_2021q2	0.0420503	0.0680993	0.6175	0.5369156
female_dummy	-0.2844398	0.0126263	-22.5275	< 2.2e-16 ***
czechia_dummy	-0.1583147	0.0265171	-5.9703	2.376e-09 ***
age_middle	0.0978929	0.0154392	6.3406	2.299e-10 ***
age_old	0.1080406	0.0158907	6.7990	1.059e-11 ***
middle_education	-0.0025779	0.0123065	-0.2095	0.8340761
high_education	-0.0804948	0.0230371	-3.4941	0.0004758 ***

Source: own computation using Czech LFS microdata.

Table 59: Hours worked LPM – female (seasonally adjusted, operation of machines)

Variable	*Estimate*	*Std. Error*	*t-value*	*Pr(>|t|)*
(Intercept)	3.1052908	0.0345164	89.9655	< 2.2e-16 ***
covid_dummy_2020q1	-0.0240208	0.0425378	-0.5647	0.5722842
covid_dummy_2020q2	-0.1186862	0.0424354	-2.7969	0.0051612 **
covid_dummy_2020q3	-0.0410614	0.0414388	-0.9909	0.3217407
covid_dummy_2020q4	-0.0865920	0.0401051	-2.1591	0.0308430 *
covid_dummy_2021q1	0.1208115	0.0351843	3.4337	0.0005957 ***
covid_dummy_2021q2	0.2994811	0.0272841	10.9764	< 2.2e-16 ***
covid_female_2020q1	0.1328223	0.0906678	1.4649	0.1429425
covid_female_2020q2	-0.2887205	0.1034890	-2.7899	0.0052741 **
covid_female_2020q3	-0.0050865	0.0893573	-0.0569	0.9546066
covid_female_2020q4	-0.1264862	0.0901499	-1.4031	0.1606007
covid_female_2021q1	0.1185631	0.0779163	1.5217	0.1280947
covid_female_2021q2	0.1969925	0.0669528	2.9423	0.0032591 **
female_dummy	-0.4966337	0.0180703	-27.4835	< 2.2e-16 ***
czechia_dummy	0.0587171	0.0326211	1.8000	0.0718679 .
age_middle	0.0472849	0.0162376	2.9121	0.0035913 **
age_old	-0.0805510	0.0171861	-4.6870	2.777e-06 ***
middle_education	0.0558444	0.0145624	3.8348	0.0001257 ***
high_education	0.0484814	0.0500113	0.9694	0.3323435

Source: own computation using Czech LFS microdata.

Table 60: Hours worked LPM – female (seasonally adjusted, non-qualified)

Variable	Estimate	Std. Error	t-value	Pr(>|t|)
(Intercept)	3.250244	0.041171	78.9450	< 2.2e-16 ***
covid_dummy_2020q1	0.089908	0.074404	1.2084	0.226910
covid_dummy_2020q2	-0.215428	0.097135	-2.2178	0.026574 *
covid_dummy_2020q3	-0.122406	0.094942	-1.2893	0.197309
covid_dummy_2020q4	-0.476851	0.109805	-4.3427	1.411e-05 ***
covid_dummy_2021q1	-0.065492	0.112841	-0.5804	0.561655
covid_dummy_2021q2	0.214253	0.066453	3.2241	0.001265 **
covid_female_2020q1	-0.158829	0.106582	-1.4902	0.136179
covid_female_2020q2	-0.434085	0.136246	-3.1861	0.001443 **
covid_female_2020q3	-0.296268	0.126356	-2.3447	0.019047 *
covid_female_2020q4	0.032385	0.139518	0.2321	0.816443
covid_female_2021q1	-0.160112	0.141794	-1.1292	0.258825
covid_female_2021q2	0.072035	0.089417	0.8056	0.420476
female_dummy	-0.321941	0.022266	-14.4590	< 2.2e-16 ***
czechia_dummy	-0.150893	0.036495	-4.1346	3.563e-05 ***
age_middle	0.088826	0.027517	3.2281	0.001247 **
age_old	-0.002831	0.027982	-0.1012	0.919415
middle_education	-0.017686	0.025592	-0.6911	0.489525
high_education	-0.099644	0.083270	-1.1966	0.231454

Source: own computation using Czech LFS microdata.

Table 61: Hours worked event study – female (seasonally adjusted, services and retail)

Variable	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3.2825876	0.0454457	72.2310	< 2.2e-16 ***
dummy_2016q1	0.2696920	0.0468591	5.7554	8.669e-09 ***
dummy_2016q2	0.1331989	0.0394795	3.3739	0.0007414 ***
dummy_2016q3	0.1716269	0.0753825	2.2767	0.0228033 *
dummy_2016q4	0.2271532	0.0479816	4.7342	2.202e-06 ***
dummy_2017q1	0.2624728	0.0513470	5.1117	3.197e-07 ***
dummy_2017q2	-0.0032005	0.0487844	-0.0656	0.9476930
dummy_2017q3	0.1307035	0.0806236	1.6212	0.1049869
dummy_2017q4	0.1397892	0.0560093	2.4958	0.0125682 *
dummy_2018q1	0.1864398	0.0515831	3.6144	0.0003012 ***
dummy_2018q2	0.0190432	0.0444876	0.4281	0.6686104
dummy_2018q3	0.2213029	0.0704820	3.1399	0.0016908 **
dummy_2018q4	0.1557391	0.0504960	3.0842	0.0020416 **
dummy_2019q1	0.2069710	0.0475879	4.3492	1.367e-05 ***
dummy_2019q2	0.0339180	0.0423778	0.8004	0.4234975
dummy_2019q3	0.1272532	0.0811824	1.5675	0.1170015
dummy_2019q4	0.1760598	0.0551149	3.1944	0.0014016 **
dummy_2020q1	0.0106984	0.0592021	0.1807	0.8565962

dummy_2020q2	-0.6420956	0.0939779	-6.8324	8.395e-12 ***
dummy_2020q3	0.2469810	0.0719168	3.4343	0.0005944 ***
dummy_2020q4	-0.5229909	0.0691266	-7.5657	3.889e-14 ***
dummy_2021q1	-0.4115510	0.0749433	-5.4915	3.995e-08 ***
dummy_2021q2	-0.0121467	0.0498208	-0.2438	0.8073805
dummy_2021q3	0.1620581	0.0859938	1.8845	0.0594959 .
dummy_2021q4	0.0502258	0.0566479	0.8866	0.3752797
dummy_2022q1	0.0329358	0.0547605	0.6015	0.5475406
dummy_2022q2	0.0185178	0.0446580	0.4147	0.6783923
dummy_2022q3	0.1005925	0.0865618	1.1621	0.2452020
dummy_2022q4	0.0715336	0.0581255	1.2307	0.2184477
female_2016q1	-0.2124768	0.0426496	-4.9819	6.306e-07 ***
female_2016q2	-0.2087613	0.0413189	-5.0524	4.369e-07 ***
female_2016q3	-0.3124624	0.0676260	-4.6204	3.834e-06 ***
female_2016q4	-0.2504249	0.0453847	-5.5178	3.440e-08 ***
female_2017q1	-0.2255733	0.0420970	-5.3584	8.413e-08 ***
female_2017q2	-0.2154295	0.0447207	-4.8172	1.458e-06 ***
female_2017q3	-0.3716927	0.0650052	-5.7179	1.081e-08 ***
female_2017q4	-0.2468763	0.0581826	-4.2431	2.206e-05 ***
female_2018q1	-0.2640660	0.0511636	-5.1612	2.458e-07 ***
female_2018q2	-0.2104990	0.0488140	-4.3123	1.617e-05 ***
female_2018q3	-0.4044558	0.0615156	-6.5748	4.893e-11 ***
female_2018q4	-0.1974565	0.0540617	-3.6524	0.0002599 ***
female_2019q1	-0.2394996	0.0444275	-5.3908	7.030e-08 ***
female_2019q2	-0.1776117	0.0418021	-4.2489	2.150e-05 ***
female_2019q3	-0.3033851	0.0709438	-4.2764	1.901e-05 ***
female_2019q4	-0.3342831	0.0646566	-5.1701	2.344e-07 ***
female_2020q1	-0.4048321	0.0590648	-6.8540	7.219e-12 ***
female_2020q2	-0.4442908	0.0938783	-4.7326	2.219e-06 ***
female_2020q3	-0.3211960	0.0626316	-5.1283	2.928e-07 ***
female_2020q4	-0.3551848	0.0762909	-4.6557	3.233e-06 ***
female_2021q1	-0.4942501	0.0785761	-6.2901	3.185e-10 ***
female_2021q2	-0.2521996	0.0552615	-4.5637	5.031e-06 ***
female_2021q3	-0.2527369	0.0794848	-3.1797	0.0014748 **
female_2021q4	-0.2411922	0.0621826	-3.8788	0.0001050 ***
female_2022q1	-0.1868228	0.0525750	-3.5535	0.0003804 ***
female_2022q2	-0.2745516	0.0494719	-5.5496	2.869e-08 ***
female_2022q3	-0.4406097	0.0806237	-5.4650	4.639e-08 ***
female_2022q4	-0.2501387	0.0672454	-3.7198	0.0001995 ***
czechia_dummy	-0.1376481	0.0266374	-5.1675	2.377e-07 ***
age_middle	0.1218142	0.0150469	8.0956	5.757e-16 ***
age_old	0.1275654	0.0157924	8.0777	6.671e-16 ***
middle_education	0.0135984	0.0115241	1.1800	0.2380058
high_education	-0.0561664	0.0213036	-2.6365	0.0083786 **
q2	0.1729156	0.0407584	4.2425	2.213e-05 ***
q3	-0.4138827	0.0566643	-7.3041	2.811e-13 ***
q4	-0.0442305	0.0435967	-1.0145	0.3103282

Source: own computation using Czech LFS microdata.

Table 62: Hours worked event study – female (seasonally adjusted, operation of machines)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	2.999992	0.054496	55.0497	< 2.2e-16 ***
dummy_2016q1	0.331618	0.052433	6.3246	2.550e-10 ***
dummy_2016q2	0.173680	0.041609	4.1741	2.995e-05 ***
dummy_2016q3	0.031466	0.072756	0.4325	0.6653838
dummy_2016q4	0.188903	0.056562	3.3397	0.0008389 ***
dummy_2017q1	0.315313	0.056471	5.5836	2.362e-08 ***
dummy_2017q2	0.027865	0.043383	0.6423	0.5206845
dummy_2017q3	-0.070630	0.069187	-1.0209	0.3073244
dummy_2017q4	0.218802	0.059595	3.6715	0.0002413 ***
dummy_2018q1	0.231612	0.060216	3.8464	0.0001200 ***
dummy_2018q2	0.052808	0.046765	1.1292	0.2588074
dummy_2018q3	-0.035007	0.072694	-0.4816	0.6301131
dummy_2018q4	0.153258	0.058132	2.6364	0.0083804 **
dummy_2019q1	0.291689	0.052699	5.5350	3.121e-08 ***
dummy_2019q2	0.070443	0.040416	1.7430	0.0813443 .
dummy_2019q3	0.176538	0.070109	2.5181	0.0118020 *
dummy_2019q4	0.311301	0.052742	5.9023	3.597e-09 ***
dummy_2020q1	0.108952	0.061816	1.7625	0.0779822 .
dummy_2020q2	-0.316698	0.051936	-6.0978	1.079e-09 ***
dummy_2020q3	0.316869	0.064653	4.9011	9.548e-07 ***
dummy_2020q4	0.117849	0.054401	2.1663	0.0302915 *
dummy_2021q1	0.211130	0.054803	3.8526	0.0001170 ***
dummy_2021q2	0.121438	0.038182	3.1805	0.0014708 **
dummy_2021q3	0.199786	0.066745	2.9933	0.0027609 **
dummy_2021q4	0.113284	0.056160	2.0172	0.0436806 *
dummy_2022q1	0.066938	0.065433	1.0230	0.3063092
dummy_2022q2	-0.015675	0.049546	-0.3164	0.7517154
dummy_2022q3	-0.086691	0.074200	-1.1683	0.2426714
dummy_2022q4	0.068783	0.068246	1.0079	0.3135192
female_2016q1	-0.301710	0.067823	-4.4485	8.658e-06 ***
female_2016q2	-0.428075	0.067455	-6.3461	2.219e-10 ***
female_2016q3	-0.538142	0.098338	-5.4723	4.453e-08 ***
female_2016q4	-0.488218	0.097106	-5.0277	4.973e-07 ***
female_2017q1	-0.411518	0.075426	-5.4559	4.884e-08 ***
female_2017q2	-0.497881	0.066064	-7.5363	4.880e-14 ***
female_2017q3	-0.717856	0.094519	-7.5948	3.112e-14 ***
female_2017q4	-0.587084	0.092013	-6.3804	1.774e-10 ***
female_2018q1	-0.410811	0.078123	-5.2585	1.456e-07 ***
female_2018q2	-0.322584	0.061802	-5.2197	1.797e-07 ***
female_2018q3	-0.695726	0.105133	-6.6176	3.672e-11 ***
female_2018q4	-0.568567	0.092286	-6.1609	7.263e-10 ***
female_2019q1	-0.320399	0.067001	-4.7820	1.738e-06 ***
female_2019q2	-0.225379	0.059052	-3.8166	0.0001354 ***
female_2019q3	-0.372814	0.071561	-5.2097	1.895e-07 ***
female_2019q4	-0.451860	0.067969	-6.6481	2.986e-11 ***
female_2020q1	-0.350692	0.081662	-4.2944	1.753e-05 ***
female_2020q2	-0.731737	0.098731	-7.4114	1.260e-13 ***
female_2020q3	-0.522489	0.077579	-6.7349	1.650e-11 ***
female_2020q4	-0.662571	0.085074	-7.7881	6.872e-15 ***

female_2021q1	-0.392303	0.078459	-5.0001	5.740e-07 ***
female_2021q2	-0.280651	0.060133	-4.6672	3.058e-06 ***
female_2021q3	-0.375175	0.085103	-4.4085	1.042e-05 ***
female_2021q4	-0.737470	0.104289	-7.0714	1.545e-12 ***
female_2022q1	-0.503290	0.120604	-4.1731	3.008e-05 ***
female_2022q2	-0.550530	0.096520	-5.7038	1.175e-08 ***
female_2022q3	-0.820285	0.124959	-6.5644	5.252e-11 ***
female_2022q4	-0.467366	0.091777	-5.0924	3.542e-07 ***
czechia_dummy	0.062168	0.033767	1.8411	0.0656166 .
age_middle	0.039817	0.015507	2.5678	0.0102375 *
age_old	-0.082886	0.015895	-5.2144	1.848e-07 ***
middle_education	0.054638	0.013889	3.9338	8.369e-05 ***
high_education	0.049428	0.051735	0.9554	0.3393810
q2	0.277600	0.051055	5.4373	5.425e-08 ***
q3	-0.244739	0.065291	-3.7484	0.0001781 ***
q4	-0.125870	0.057502	-2.1889	0.0286030 *

Source: own computation using Czech LFS microdata.

Table 63: Hours worked event study – female (seasonally adjusted, non-qualified)

Variable	*Estimate*	*Std. Error*	*t value*	*Pr(>|t|)*
(Intercept)	3.182237	0.073869	43.0797	< 2.2e-16 ***
dummy_2016q1	0.225144	0.079245	2.8411	0.0044979 **
dummy_2016q2	0.156315	0.060033	2.6038	0.0092228 **
dummy_2016q3	0.445698	0.121017	3.6829	0.0002309 ***
dummy_2016q4	-0.045063	0.103278	-0.4363	0.6626054
dummy_2017q1	0.169728	0.090189	1.8819	0.0598540 .
dummy_2017q2	0.011565	0.074360	0.1555	0.8764094
dummy_2017q3	0.090580	0.123747	0.7320	0.4641859
dummy_2017q4	0.132423	0.101273	1.3076	0.1910216
dummy_2018q1	0.066344	0.100083	0.6629	0.5074033
dummy_2018q2	-0.024427	0.075574	-0.3232	0.7465298
dummy_2018q3	0.183420	0.129464	1.4168	0.1565619
dummy_2018q4	0.136639	0.096778	1.4119	0.1579945
dummy_2019q1	0.085956	0.095945	0.8959	0.3703226
dummy_2019q2	-0.038748	0.064180	-0.6037	0.5460191
dummy_2019q3	0.311411	0.118750	2.6224	0.0087347 **
dummy_2019q4	0.071930	0.094270	0.7630	0.4454532
dummy_2020q1	0.091550	0.093740	0.9766	0.3287511
dummy_2020q2	-0.359708	0.100858	-3.5665	0.0003622 ***
dummy_2020q3	0.418939	0.109443	3.8279	0.0001294 ***
dummy_2020q4	-0.233071	0.117291	-1.9871	0.0469164 *
dummy_2021q1	0.091722	0.105644	0.8682	0.3852782
dummy_2021q2	0.067640	0.066961	1.0101	0.3124310
dummy_2021q3	0.380227	0.102905	3.6949	0.0002202 ***
dummy_2021q4	0.106598	0.098522	1.0820	0.2792719
dummy_2022q1	-0.022611	0.105203	-0.2149	0.8298269
dummy_2022q2	-0.027348	0.072574	-0.3768	0.7063065
dummy_2022q3	0.103912	0.120874	0.8597	0.3899784

dummy_2022q4	0.040531	0.117375	0.3453	0.7298586
female_2016q1	-0.134153	0.074193	-1.8082	0.0705864 .
female_2016q2	-0.265665	0.062673	-4.2389	2.251e-05 ***
female_2016q3	-0.687114	0.123456	-5.5656	2.629e-08 ***
female_2016q4	-0.188898	0.112781	-1.6749	0.0939593 .
female_2017q1	-0.259128	0.086432	-2.9981	0.0027188 **
female_2017q2	-0.263948	0.081201	-3.2505	0.0011528 **
female_2017q3	-0.399136	0.126518	-3.1548	0.0016075 **
female_2017q4	-0.193654	0.092841	-2.0859	0.0369966 *
female_2018q1	-0.175714	0.087813	-2.0010	0.0453987 *
female_2018q2	-0.136033	0.079997	-1.7005	0.0890520 .
female_2018q3	-0.435926	0.125434	-3.4753	0.0005108 ***
female_2018q4	-0.298128	0.093560	-3.1865	0.0014413 **
female_2019q1	-0.128234	0.104429	-1.2280	0.2194732
female_2019q2	-0.210018	0.084633	-2.4815	0.0130872 *
female_2019q3	-0.574433	0.099511	-5.7726	7.867e-09 ***
female_2019q4	-0.197349	0.099467	-1.9841	0.0472556 *
female_2020q1	-0.421086	0.105032	-4.0091	6.106e-05 ***
female_2020q2	-0.668398	0.112490	-5.9418	2.843e-09 ***
female_2020q3	-0.674171	0.088158	-7.6473	2.100e-14 ***
female_2020q4	-0.361398	0.128950	-2.8026	0.0050713 **
female_2021q1	-0.563270	0.103993	-5.4164	6.117e-08 ***
female_2021q2	-0.250028	0.072720	-3.4382	0.0005861 ***
female_2021q3	-0.338415	0.090021	-3.7593	0.0001706 ***
female_2021q4	-0.399646	0.107713	-3.7103	0.0002073 ***
female_2022q1	-0.184939	0.098067	-1.8858	0.0593229 .
female_2022q2	-0.412417	0.104181	-3.9587	7.551e-05 ***
female_2022q3	-0.443665	0.099923	-4.4400	9.019e-06 ***
female_2022q4	-0.253429	0.118757	-2.1340	0.0328483 *
czechia_dummy	-0.106161	0.040584	-2.6158	0.0089041 **
age_middle	0.077289	0.025953	2.9781	0.0029024 **
age_old	-0.024695	0.026364	-0.9367	0.3489100
middle_education	-0.027268	0.024700	-1.1039	0.2696262
high_education	-0.157899	0.085833	-1.8396	0.0658346 .
q2	0.188716	0.069294	2.7234	0.0064646 **
q3	-0.428715	0.098278	-4.3623	1.290e-05 ***
q4	-0.144644	0.081143	-1.7826	0.0746638 .

Source: own computation using Czech LFS microdata.

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References

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