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AND MANAGEMENT

ENTN-19

Interest in Entrepreneurship

A study about how Covid-19 affected the Entrepreneurial environment in the European
Union

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Final Seminar: 25th May 2022

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Word count: 10.905

Abstract

This study aims to investigate how the Covid-19 pandemic affected the entrepreneurial environment in the European Union, selecting a representative sample of eight countries (Belgium, France, Germany, Italy, Portugal, Spain, Sweden and The Netherlands). Research published at the beginning of the pandemic projected losses in GDP and an increasing unemployment rate due to a socio-economic shock. This study further explores the context developed due to the spreading of Covid-19 two years after the start of the pandemic. Furthermore, the paper looks into how the shock caused by the virus and its implications has affected the general public interest in entrepreneurship. Lastly, the effect of the Covid-19 pandemic on the actual number of new businesses launched is investigated.

The research approach in this study is a quantitative one using secondary data collected from publically available websites, such as OECD, Eurostat and Google trends. The data were analysed through, regression, trend and correlation analysis.

The conclusions that can be drawn from the analysis of the secondary data is that: unemployment rates in the eight countries did indeed go up during the pandemic and the GDP, as projected, decreased. Regarding the interest in Entrepreneurship, there was no significant correlation between the interest in Entrepreneurship and the Covid-19 virus. In fact, there was only a slight decrease in searches for topics related to Entrepreneurship during the pandemic. Lastly, the study can conclude that the pandemic did indeed have an impact on the number of new business registrations. At the beginning of the pandemic, the number was affected negatively, and then bounced back to the same level or higher than before the pandemic in seven out of the eight countries investigated.

Keywords: Entrepreneurship, Necessity Entrepreneurship, Pull Entrepreneurship, Covid-19

Acknowledgement

We would like to thank you our supervisor Andrea Moro to have supported and helped us during the research done for this paper. Furthermore, we want to thank our classmates that gave us valuable feedback in order to complete our work in the best way possible. An acknowledgement goes also to our examiner Zahida Sarwary that took the time to read and evaluate our paper.

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1. Introduction

Introducing the subject, Covid's impact on the world, how it affected people's behaviour, literature review of recession, unemployment, the market opportunities created by Covid, the attitude towards new business creation, the purpose/novelty of the study

1.1 Background

On the 11th of March 2020, the World Health Organisation (WHO) declared that COVID-19 could be characterised as a pandemic (WHO, 2022). This meant that Covid-19 was spread all over the world and it affected the lives of everyone in one way or another. Most countries quickly adapted restrictions to limit the spread of the virus, some countries adopted a harder approach with lockdowns while other countries had softer approaches with social distancing as the main restriction. However the countries reacted to the outbreak of Covid, people all across the globe spent more time at home than before the pandemic (University of Oxford, 2022). Adding to this, the virus also made a huge blow to the economy, causing a major recession (World Bank, 2020). This recession led to increased unemployment in large parts of the world during 2020 (OECD, 2022a). Furthermore, the GDP of many countries also was forecasted to decrease during 2020 as a consequence of the above mentioned (Maliszewska, Mattoo and Van Der Mensbrugge, 2020).

Covid-19 has dramatically changed lifestyles and it has shaped new habits and the way in which people approach their everyday lives. One example of this is the fact that many people have been introduced to and adapted digital solutions in their daily life in a way that they hadn't before the pandemic (Sin, Berger, Kim, & Yoon, 2021). According to Zahra (2021), Covid has also had a major impact on the global business environment. This change will open up many new opportunities for new venture creation, making use of the changing business landscape with the novel business possibilities given in the post covid world. In addition to Covid reshaping the business environment, it also had a major impact on the labour market, many people lost their jobs during the first period of the pandemic (OECD, 2022b). This study will look into how Covid affected the interest in entrepreneurship and the launching of new ventures in a selection of European countries (Belgium, France, Germany, Italy, Portugal, Spain, Sweden and The Netherlands), to get an overview of how the pandemic has shaped the entrepreneurial landscape and willingness to start businesses.

1.2 Literature review

1.2.1 Recession, Unemployment and Innovation

During recessions business typically becomes worse and many people often lose their jobs. Investigating data from the US about recessions and the launching of new businesses between the years 1996-2009, Fairlie (2013) claims that the unemployment rate in the local labour market is a major determinant of entrepreneurial activity. The author states that higher local unemployment rates lead to a higher probability of people starting businesses of their own. This conclusion is supported by Wosiek, Czudec and Kata (2021) who in a study done in Poland between 2003-2018 shows that there is a correlation between unemployment and newly registered businesses in specific sectors. The authors state that specific sectors (such as the service sector) have a clear correlation between the number of new business registrations and unemployment rates, while other sectors don't have the same relation. However, no sector shows a negative correlation between unemployment and the number of newly launched ventures in this study. Adding to this, in a study conducted on data from West Germany between 1983-1997, Fritsch and Falck (2007) also support these findings by stating that short-term unemployment has a positive impact on the launches of new ventures within the service sector. Fritsch and Falck however, state that long-term unemployment has no impact on the number of new business launches.

So, short term unemployment seems to have a positive impact on the number of new business registrations. One of the reasons for this is explained by the research done by Røed and Skogstrøm (2014), where they find that a person working in a company on the brink of bankruptcy is significantly more likely to launch into an entrepreneurial endeavour than a person working in a stable firm. This is because the opportunity cost for a person who is about to lose or has lost their job is much lower than for a person who is safely employed (Røed & Skogstrøm, 2014).

1.2.2 Attitude towards entrepreneurship

The Global Entrepreneurship Monitor 2021/2022 report (GEM report) proclaims that the attitude towards entrepreneurship affects the level of entrepreneurship in an area. Being able to watch others successfully launch businesses in the local area and being able to follow through with business ideas are some of the things that affect the level of entrepreneurship positively. At the same time, the fear of failure is something that influences entrepreneurship levels in a negative way in the local area (Global Entrepreneurship Monitor, 2022).

According to the same report, in 2021 entrepreneurs in 18 of the 47 countries taking part in the report, believed that it has become more difficult to launch a new venture during the pandemic compared to before. However, the number of this figure decreased in 2021 compared to 2020, when the same number was 33 out of 47. This suggests that there has been a recovery since the first year of the pandemic and that an increase in policy support could have made life easier for entrepreneurs in some areas.

Out of the eight countries being studied in this research six are represented in the GEM report 2021/2022, (France, Germany, Italy Spain, Sweden, and The Netherlands). Of these six countries, in 2021 none of them had more than 50% of respondents stating that it has become harder to launch a business because of the pandemic (Global Entrepreneurship Monitor, 2022). In 2020 more than 50% of the respondents to the GEM report in Italy, Spain and The Netherlands thought it had become more difficult to launch a business. In Sweden and Germany, the figure was lower than 50% and France had no figure shown (Global Entrepreneurship Monitor, 2021).

What these numbers show is that in the countries that are part of this research, the negative impact of Covid during 2020 seems to have decreased till 2021. The perception is still, however, that it has become more difficult to launch a business since the pandemic's start, but to a lesser extent during 2021.

1.2.3 Covid-19 Business landscape impact and Market opportunities

Covid-19 has had a major impact on every level of society and affected everyone's life in one way or another. This has led to changes in multiple areas of society, lifestyles have changed and so has the market, providing new opportunities. According to Matthews (2021), the first months of the Covid-19 pandemic created many unexpected business opportunities for entrepreneurs who were open to it. This is underlined by Neonen and Storbacka (2020) who argue that times of crisis (like the Covid-19 pandemic) make the market agile and open to new favourable market circumstances. The reason for the market becoming “malleable during times of crises” (Neonen and Storbacka, 2020, p1) is that firstly, the market systems are interrupted and forced into motion meaning that it is easier for new market opportunities as the market is already moving. Secondly, crises can change “deeply-rooted mental models” (Neonen and Storbacka, 2020, p2), this also helps to create market opportunities as the mental state of the market can be put into motion during a crisis (Neonen and Storbacka, 2020). This is also underlined by Belitski, Guenther, Kritikos, and Thurik (2022) who state that the pandemic has brought new business opportunities to the market and that the

post-Covid world will offer opportunities for entrepreneurs to create new business models. What these opportunities will look like and in what sector they will take place on a long term basis is still too early to say. However, according to Zahra (2021), one sector that has been opened during the pandemic is business online and digitalization. This is an area that Covid forced many people into and now two years into the pandemic, many people have become accustomed to using digital solutions in their everyday lives. This is one of the trends started by Covid-19 that is projected to continue in the future. The usage of digital solutions is just one area where the pandemic has changed our behaviours. In general, Covid has influenced our lives in many ways and changed some consumer behaviours permanently (Zwanka & Buff, 2021), meaning that the market has changed and now looks different compared to before the pandemic. Summarising this, the pandemic has come to offer entrepreneurs many opportunities in the new post-pandemic world, also agreed upon by 15 out of the 47 economies participating in the Global Entrepreneurial Monitor report 2021/2022 (Global Entrepreneurship Monitor, 2022).

1.2.4 Research Novelty

The purpose of this study is to see how the effects of Covid-19 have affected the entrepreneurial environment of eight countries of the European Union (Belgium, France, Germany, Italy, Portugal, Spain, Sweden, and The Netherlands). We want to investigate how the projected economic recession caused by the virus affected the actual number of ventures that have been launched since the pandemic started and if the general public interest in themes related to Entrepreneurship correlates with Covid and the different spikes in the virus. With this research, we hope to add to the existing literature about how the events of the last two years have affected already existing patterns between recession, innovation, unemployment and the interest in becoming an entrepreneur.

1.3 Purpose of the Study

The research background suggests that the Covid-19 pandemic could have increased the interest in launching new ventures. The pandemic has completely changed the market and the short-term unemployment numbers might have gone up during the pandemic. However, according to the GEM reports 2020/2021 and 2021/2022, the general public perception is that the pandemic has made it more difficult to launch new businesses as a consequence of the pandemic. These factors leave an unclear impression on how the number of new ventures has been affected by Covid. The pandemic has opened up many new business opportunities and,

historically, there has been an increase in new businesses when the short term unemployment rate has gone up. Since it takes time to launch a new business, it could be too early to spot the effects of Covid-19 on the creation of new ventures. For this reason, this study will also investigate how the general public interest in entrepreneurship has been influenced by the pandemic. The purpose of this study is to investigate how these variables actually have looked during the pandemic so far, answering the following questions:

- *How did the number of new ventures launched during the Covid-19 pandemic change?*
- *Did the Covid-19 pandemic change the interest in launching new ventures?*

2. Theoretical Framework

Presenting the theoretical framework that helped structured the analysis. Introducing the general concept of entrepreneurship, the characteristics of necessity entrepreneurship and the socio-economic context caused by Covid-19 in Europe. Explaining the possible connection between Covid-19 and necessity entrepreneurship.

2.1 Entrepreneurship

In the past, authors gave different definitions of entrepreneurship using several interpretations and this led to a lack of common understanding of its field. Davidsson (2005) asserts that since there are so many different suggestions in the literature concerning entrepreneurship, no one can claim to have the correct definition of the concept. Shane and Venkataraman (2000) describe entrepreneurship as the examination of how, by whom, and with which effects, opportunities to create future goods and services are discovered, assessed, and exploited. An entrepreneurial opportunity is not the optimization of an already existing situation but it is the discovery of a new means-ends relationship. Furthermore, there is a necessity for the existence of different beliefs about the available resources, in fact, the entrepreneur is the only one capable of spotting the value-added that others cannot see (Shane & Venkataraman, 2000). For an individual, to be able to recognise an opportunity, there are 3 essential components: (i) active search for potential events in order to observe them, (ii) alertness, the capacity to see market opportunities once they arise and discover a manner of creating a profit, and (iii) prior knowledge, information accrued through beyond experiences (Baron,

2006). The characteristic of entrepreneurship, that is proposed and shared in the majority of past research, is the fact that when trying to exploit a new opportunity there is always a certain level of risk and uncertainty. Knight (1921) describes the environment in which entrepreneurs operate as true uncertainty, underlining the fact that the future is not only unknown but it is also unknowable. Different past researchers assess that there are two different points of view to define entrepreneurship: (i) the exploitation of new opportunities in general, even inside an already existing business, or, in a more narrow perspective, (ii) the creation of a new venture (Davidsson, 2005). In this paper, the main focus is on the second point of view, as the aim is to analyse the interest that Covid-19, as a possible situational factor, brought about the possibilities of creating a new business. It will be investigated if a huge external shock like the one caused by the pandemic has created a stimulating environment where recognise and exploit new opportunities.

2.2 Necessity Entrepreneurship

Past research about entrepreneurship has found a positive link between the individual's cognitive process and venture creation decisions (Mitchell, Smith, Seawright & Morse, 2000). Cognitions are the mental pictures that help to understand and define the behaviours of entrepreneurs (Serviere, 2010). There are two main different types of motivations that stimulate the cognitive process: push and pull. Push and pull motivation is sometimes also presented as extrinsic and intrinsic actuation (Giacomin, Janssen & Guyot, 2011). Extrinsic entrepreneurial motivation is present when an individual decides to build a new venture due to unfavourable personal conditions, such as unemployment or low living status. Instead, an intrinsic entrepreneurial motivation brings an individual to start a business because of positive factors, such as aspiration for independence and personal growth (Giacomin, Janssen & Guyot, 2011). Past literature distinguishes entrepreneurs driven by these two types of motivations in necessity entrepreneurs when pushed by their conditions to start a venture, and opportunity entrepreneurs when pulled by their desires (Giacomin, Janssen & Guyot, 2011; Conti & Roche, 2019). Due to the unfavourable impact of Covid-19 on the social-economic context (Chen, Igan, Pierri, Presbitero, Soledad & Peria, 2020), this research will operate mainly in a necessity entrepreneurial environment. There are many conditions that increase the number of new ventures and, among them, Reynolds (1992) pointed out as more important: (i) historical changes, (ii) the economic conditions of a nation, and (iii) the actions taken from the state. The latter two conditions and their perceptions were somehow affected

during the pandemic by the implications connected to the spread of Covid-19 (Chen, Igan, Pierri, Presbitero, Soledad & Peria, 2020). In fact, the health crisis brought an increase in unemployment (Chen, Igan, Pierri, Presbitero, Soledad and Peria, 2020) and according to Block and Wagner (2010), unemployment seems to be a prevalent aspect among necessity entrepreneurs. However, some literature stated that the link between business creation and socio-economic conditions is sometimes dubious since the degradation of the living conditions can impact entrepreneurship both in a push and in a deterrent way (Conti & Roche, 2019). The latter case corresponds more to opportunity entrepreneurship, while necessity entrepreneurs are individuals who probably would not have jumped into entrepreneurship if they had the possibility of keeping their employment, but they are forced to create a new venture because of a lack of better choices (Conti & Roche, 2019). Furthermore, also Amorós, Ciravegna, Mandakovic and Stenholm (2019) underlined how a “state fragility” blocks opportunity entrepreneurial activities and, instead, promotes necessity entrepreneurial efforts. To conclude, usually the rush brought by the difficult context makes pushed entrepreneurs less successful. They have less ambition compared to the pull entrepreneurs and the businesses of the former are less profitable because they developed more imitative ventures (Giacomin, Janssen & Guyot, 2011).

2.3 Covid-19 context in Europe

In the past two years, Europe has been one of the first continents and one of the most impacted by Covid-19 (Bénassy-Quéré & Weder di Mauro, 2020). After the first period of shock, the different countries have implemented various non-pharmaceutical interventions, including social distancing, school and business closures, and lockdowns. Before the development of vaccines, these restrictions were the main options to decrease the number of infections, helping the overwhelmed health care structures (Fezzi & Fanghella, 2021). But these policies also created important socio-economic problems, which raised a debate on the trade-offs between decreasing the spread of Covid-19 and containing its financial impact (Fezzi & Fanghella, 2021). Perotti (2020) presents that, at least in the short term, restrictions such as lockdowns impacted not only the financial aspects but also affected the overall value chain, reducing production and demand. In fact, the panic among customers and ventures has changed the standard consumption models and created anomalies in the market (Su, Dai, Ullah & Andlib, 2021). Covid-19 has also raised an unprecedented challenge to the European states as the speeding up of the virus caused problems in almost all sectors (Su, Dai, Ullah &

Andlib, 2021). Even if European countries had different Covid magnitudes and they applied different levels of strictness to their policies, the same main characteristics emerged in all of Europe. The Covid downturn has been broad with drops in GDP (Eichenbaum, Rebelo & Trabandt, 2020). Past research shows that the global Gross Domestic Product was forecasted to decrease by 2.1%, whereas for the developing countries the GDP was expected to diminish by 2.5% and for the high-income countries by 1.9% (Maliszewska, Mattoo & Van Der Mensbrugge, 2020). Since these numbers are expectations provided at the beginning of the pandemic, in order to confirm them, this study will analyse the GDP changes at the moment of our data collection and analysis (May 2022). Furthermore, lockdowns and business closures created difficulties for firms in paying their employees, so part of the employed population turned unemployed, and even those who were employed were working for fewer hours. Both cases caused lower purchasing power and an increase in poverty (Su, Dai, Ullah & Andlib, 2021). Based on the literature previously presented, this paper identifies the context of social disruption and lower economic conditions caused by Covid-19 as an environment that can lead to necessity entrepreneurship. Furthermore, as mentioned in the literature review, the Covid-19 pandemic has also presented new market and business opportunities for innovative entrepreneurs. In the qualitative study done by Matthew (2021) seven out of eight entrepreneurs taking part in the paper state that the first months of the pandemic brought entrepreneurial opportunities that wouldn't have arisen without the pandemic. These new opportunities should also thereby have promoted the “pull effect” (Giacomin, Janssen & Guyot, 2011) towards entrepreneurship and self-employment. For those reasons, this paper will research a possible increase in interest in entrepreneurship during the two years of the pandemic.

2.4 Hypothesis

2.4.1 H₁, *The Gross Domestic Product and the unemployment rate have been negatively affected by Covid-19.*

Past research has forecasted drops in the GDP and an increase in the unemployment rate in European countries (Eichenbaum, Rebelo & Trabandt, 2020; Su, Dai, Ullah & Andlib, 2021). Two years after their predictions, we decided to further explore the context under investigation for confirmation.

2.4.2 H₂, *Covid-19 impacted the interest of individuals in Entrepreneurship and Business creation.*

With this hypothesis, this paper aims to investigate how the shock that Covid-19 and all its side effects brought with it, influenced the general public interest in Entrepreneurship and in launching new ventures.

2.4.3 H₃, *Covid-19 did affect the number of launched companies.*

With this hypothesis, this study will investigate how the actual number of launched companies has looked during Covid. Comparing it to what the numbers were before, we hope to gain an understanding of how Covid has influenced the entrepreneurial environment.

3. Methodology

Introducing the methodology we applied in order to answer our research questions. Presenting the research approach, data collection and data analysis for the three different analyses we run: the impact of Covid-19 on GDP and unemployment, the impact of Covid-19 on the launching of new ventures and the impact of Covid-19 on the interest in Entrepreneurship.

3.1 Research approach

The research approach of this study is a deductive one. With the foundation in theories and previous literature on the subject, hypotheses have been formulated and then tested empirically by correlation, regression and trend analysis (Bell, Bryman, & Harley, 2019). The empirical scrutiny of this research is a quantitative secondary analysis done on data gathered from publicly available websites.

3.1.1 Impact of Covid on GDP and unemployment

Research at the beginning of the pandemic forecasted a negative impact of Covid-19 on the European socio-economic context. Authors predicted a decrease in the Gross Domestic Product (GDP) and an increase in the number of people unemployed (Eichenbaum, Rebelo & Trabandt, 2020; Maliszewska, Mattoo & Van Der Mensbrughe, 2020; Su, Dai, Ullah & Andlib, 2021). Therefore, in order to verify those expectations, the aim of our analysis was first to analyse the change in the GDP and in the number of unemployed population after Covid-19 started spreading in the European Union. Compared to previous studies, this study

is able to collect data from the beginning of the pandemic until the time of our research (May 2022), giving us the possibility of measuring the first impact of the virus on unemployment and on GDP. For the purpose of the analysis, eight countries were selected from the European Union (Belgium, France, Germany, Italy, Portugal, Spain, Sweden and The Netherlands) for which all the information needed for all our analyses was provided. In order to complete our investigation, a quantitative approach has been used and official data of the selected countries have been researched regarding (i) the unemployment rate for each country, and (ii) the Gross Domestic Product of each country. To have a clear picture of the context under investigation, the data collected in 2020, when Covid-19 affected Europe, and 2021 have been compared with the ones collected in the two years before the virus started spreading, so 2018 and 2019. Furthermore, in order to extend our examination and investigate if those two variables have an impact on the interest in Entrepreneurship, a possible relation between the number of Google searches related to Entrepreneurship, the average data about the unemployment rate and the average data about GDP has been verified.

3.1.2 Impact of Covid on the interest in Entrepreneurship

The aim of the second analysis is to investigate if the socio-economic context created by the pandemic has affected the interest and willingness of starting a business among the population of the European Union. For the purpose of this analysis, there was no proper official data that measured the level of interest of individuals. Therefore, Google Trend has been used in order to collect data about the searches related to Entrepreneurship made during the two years of the pandemic, 2020 and 2021. To verify the relationship between a possible increased interest in starting a new venture and the impact of Covid-19, data about the searches related to the virus made in the same time period as the ones related to Entrepreneurship have been collected. For this analysis, a possible correlation between the number of Google researches about Entrepreneurship and the ones about Covid and its implications has been investigated. Furthermore, for the same purpose, the trend of the interest in Entrepreneurship in the two years before Covid-19 and during the two years of the pandemic has been analysed.

3.1.3 Impact of Covid on the launching of new ventures

As previously presented in the Theoretical Framework section, combining past literature similarities have been spotted between the context in which necessity entrepreneurs operate and the context created by Covid-19 in the European Union. In this third analysis, the

purpose is to research if the pandemic pushed more people to register and launch new ventures compared to the two years before and so if the level of interest in Entrepreneurship matches the creation of new business during the Covid-19 period. In order to complete this investigation, official data from the 8 selected countries regarding the number of new businesses officially registered have been collected. For the purpose of analysing the impact of the pandemic, we decided to compare, also for this analysis, the data from 2020, when Covid-19 affected Europe, and 2021 with the ones listed in the two years before the virus started spreading, so 2018 and 2019.

3.2 Data Collection

3.2.1 Impact of Covid on GDP and unemployment

In order to run the quantitative analysis, secondary data was collected from different official statistical databases. In this way we have been able to access high-quality databases that are based on large samples and to use an unobtrusive method, avoiding influenced answers (Bell, Bryman, & Harley, 2019).

To gather the data regarding the Gross Domestic Product of the 8 selected countries, we used information found in OECD (Organisation for Economic Co-operation and Development) stats, using the database that represents the Quarterly National Accounts (QNA). The data are collected from all the OECD member countries on the basis of a standardised survey. To filter out the information needed for our research, we used as the subject of the analysis the GDP expenditure and output approaches, taking into consideration current prices and volume estimates. The measure of the data that was collected was per head and in US Dollars and the numbers were seasonally adjusted. A quarterly periodicity as the frequency was used, starting from quarter 1 of 2018 until quarter 4 of 2021 and, as previously mentioned, for the purpose of our analysis, we selected 8 countries of the European Union. In this way, we have been able to create a sample of 128 observations about the GDP (8 observations for each of the 16 quarters).

The data regarding the unemployment rate were collected from the Eurostat database about the unemployment by sex and age. As criteria to select the information we used the age class from 15 to 74 years old, total sex and the percentage of the population in the labour force as units of measure. To be coherent with the GDP data, we took into consideration the data regarding the 8 selected countries and we used a quarterly frequency from the first quarter of 2018 to the fourth quarter of 2021. In this way, we have been able to create also in this case a

sample of 128 observations about the unemployment rate (8 observations for each of the 16 quarters).

3.2.2 Impact of Covid on the interest in Entrepreneurship

Regarding our third point of research, there was no official database providing us with data that measures the interest of individuals in Entrepreneurship. For this reason, in order to run the quantitative analysis, data about the number of Google searches were collected using Google trends, which is a tool that gives us the possibility to know the search frequency on the web search engines of a specific word or sentence.

To gather data that could show an interest in Entrepreneurship we decided to select five possible searches about how to launch a new venture (*Table 1*) and translate them into the different languages related to our selection of countries. The online tools give great literal translation but there was the possibility that individuals from different countries used different ways of phrasing a sentence when searching online. Therefore, we decided to appeal to our personal network and ask native speakers to translate for us the five selected possible searches (*see Appendix 1*). For each of the 8 countries, we downloaded from Google trends the data from January 2018 to December 2021 for each type of search using a weekly frequency. The same data collection approach was applied when gathering data about the Google searches regarding Covid-19 and its implication (*Table 1 and Appendix 1*). Once the data was downloaded, for each country we summed the data of the 5 types of searches regarding Entrepreneurship ending up with one weekly dataset about the topic. The same has been applied to the 5 types of searches regarding Covid-19. In this way, we have been able to create 208 observations for each of the 8 countries.

Table 1: This table shows the Google searches in English about Entrepreneurship and Covid-19.

Entrepreneurship	Covid-19
Startup	COVID
Startup funds	COVID 19
Company registration	COVID deaths
VAT	COVID vaccine
VAT registration	COVID restrictions

3.2.3 Impact of Covid on the launching of new ventures

For this analysis, in order to apply the quantitative approach, we gathered data from a secondary data source in order to gain access to high-quality data with large sample sizes to use an unobtrusive method and avoid influenced answers (Bell, Bryman, & Harley, 2019).

To gather the data regarding the number of new ventures, we used information found in OECD stats, using the database that represents the timely indicators of Entrepreneurship by enterprise characteristics. Data is compiled from official statistical sources of the different countries. To filter out the information needed for our research, we used as an indicator the number of enterprise entries that correspond to enterprise births, thus excluding reorganisations of existing businesses (merger, spin-off, buy-out, change of legal form, etc.). We took into consideration all the businesses' legal forms and we used a quarterly periodicity as frequency, starting from quarter 1 of 2018 until quarter 3 of 2021. Selecting data regarding the 8 selected countries, we have been able to create a sample of 120 observations about the number of new ventures (8 observations for each of the 15 quarters).

3.3 Data Analysis

3.3.1 Impact of Covid on GDP and unemployment

For the purpose of this analysis, the same approach has been applied both to the GDP and the unemployment rate. After collecting the data as described in the previous section, Microsoft Excel has been used to visualize through 2D-line graphs the changes in the two variables over time. We decided to investigate the trend of the variables for each one of the selected countries and the trend of the average between the countries. All the graphs show the trends taking into consideration a quarterly frequency, starting from the first quarter of 2018 to the last quarter of 2021. The aim of this approach was to verify how the two variables changed after the start of the pandemic in the first quarter of 2020.

In order to verify a possible relation between the number of Google searches related to Entrepreneurship, the average data about the unemployment rate and the average data about GDP, the formula for the correlation coefficient of Pearson (*Formula 1*) has been used to spot a possible positive or negative correlation between the variables, since the three of them were interval/ratio and they followed the normal distribution (Bell, Bryman, & Harley, 2019). To run the analysis on Stata, the *correlate* command has been used taking the average unemployment rate as *var1*, the average GDP as *var2* and quarterly Entrepreneurship searches as *var3*. Furthermore, in order to verify if the correlation between the variables was

significant, the coefficient t has been calculated (*Formula 2*). Taking into consideration a significance level of 0.05 and a mono-directional hypothesis, we compare the value of t with the critical value found in the table of the distribution of t .

3.3.2 Impact of Covid on the interest in Entrepreneurship

To recognize how Covid-19 affected the interest in Entrepreneurship of the population in the sample of countries, Stata has been used to analyse the data collected from Google trends.

In order to have a broad view that could be a representation of the European Union context, we decided to sum together the data collected from the 8 selected countries. In this way, we obtained a final sample of 208 weekly observations. For the purpose of verifying a possible correlation between the searches about Entrepreneurship and Covid-19, we selected data related to the period that goes from March 2020 to December 2021, because before this time slot Covid-19 had not fully appeared in the European Union. In this way, for this analysis, we have a sample of 96 observations. Because the two variables were interval/ratio and they followed the normal distribution (Bell, Bryman, & Harley, 2019), the formula for the correlation coefficient of Pearson (*Formula 1*) has been used to check if the relation between the number of searched regarding Covid-19 (*variable X*) and the searches regarding Entrepreneurship (*variable Y*) was positive, negative or if it is the case in which there is no correlation. To further investigate a possible relation between the two variables, a cross-correlation has been executed examining the link among the variables contemporaneously and at various lagged values. In order to declare the dataset as time-series data, the *tsset* command has been used with the temporal variable “week”. To produce the cross-correlation function in Stata, we used the *xcorr* command taking as *x variable* the variable “covid” related to the searches about Covid-19 and as *y variable* the variable “entrepreneurship” related to the searches about Entrepreneurship. The possible correlation has been investigated lagging the *x variable* from 0 to -20 lags. Furthermore, in order to explore the causality of the variables, the lags for which the correlation was higher have been used as independent variables to run a linear regression analysis where the dependent variable was the number of searches about Covid-19. In this way, we have been able to verify the significance of the relationship between the variables.

Regarding the further investigation on how Covid-19 impacted the interest in becoming an entrepreneur, Microsoft Excel has been used to visualise a 2D-line graph about the trend of the Google searches about Entrepreneurship taking into consideration a weekly frequency,

starting from the first quarter of 2018 to the last quarter of 2021, so the full sample size of 208 observations.

$$r = \frac{\sum(X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum(X_i - \bar{X})^2}\sqrt{\sum(Y_i - \bar{Y})^2}} \quad t = (r)\sqrt{\frac{N-2}{1-r^2}}$$

Formula 1: Pearson coefficient formula

Formula 2: T-formula

3.3.3 Impact of Covid on the launching of new ventures

After collecting the data from the OECD database, Microsoft Excel has been used to analyze the changes in the variable over time. Two 2D-line graphs have been created, one showing the trend of new ventures registered for each of the selected countries and the other one showing the trend of the sum of new venture launches between the countries. The graph shows the trends taking into consideration a quarterly frequency, starting from the first quarter of 2018 to the third quarter of 2021. The aim of this analysis was to verify how the number of new ventures changed after the start of the pandemic in the first quarter of 2020.

4. Results

In the result chapter, we present the results graphically and explain key facts.

4.1 Impact of Covid on GDP and unemployment

We started by analysing the changes in the Gross Domestic Product after the arrival of Covid-19 in the 8 selected countries. As shown in *Figure 1*, in all the countries under investigation the GDP had, as expected, a severe drop during the second quarter of 2020, immediately after the beginning of Covid-19 expansion in the European Union (March 2020). It can be seen how for the majority of the nations the GDP returned to its previous level between the third and fourth quarters of 2021.

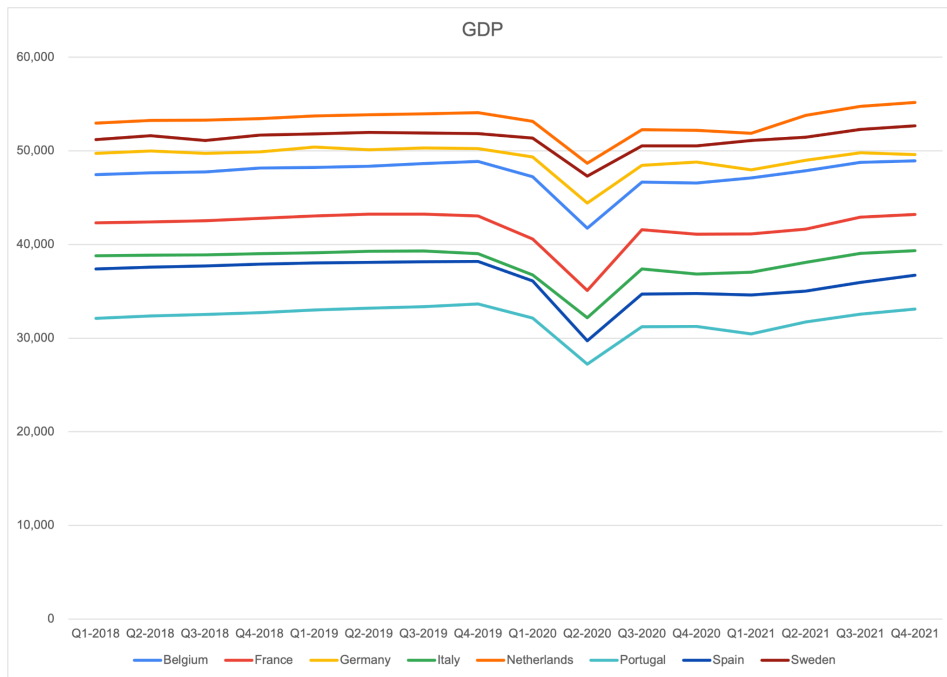


Figure 1: In this graph, the GDP of each country in the study is presented

Furthermore, in order to have an overall representative picture of the situation in the European Union, Figure 2 presents the trend of the average GDP between the selected countries. Also in this case it can be clearly spotted an enormous drop in the second quarter of 2020 and a return to the level precedent to Covid-19 in the last quarter of 2021. These results illustrate as the pandemic impacted negatively the Gross Domestic Product in the countries under investigation but also in the European Union.

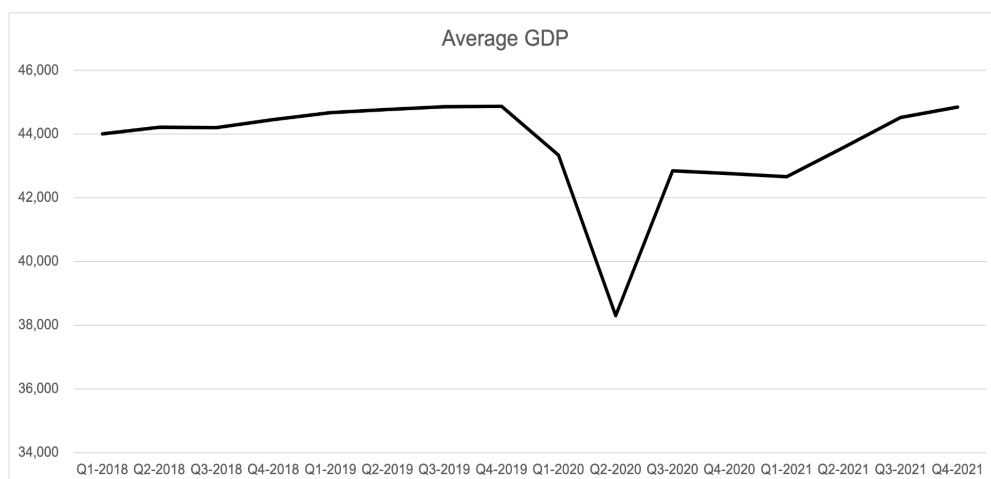


Figure 2: Shows the average GDP in all of the countries

In order to investigate the impact that Covid-19 had on the unemployment rate, a look can be given at *Figure 3* which shows the trend of the quarterly rate of the researched countries. It can be discussed that in the vast majority of the nations the third quarter of 2020 is the period in which the unemployment rate is at the maximum peak compared with the quarters before the spreading of Covid-19. A difference between the countries can be spotted in the second quarter of 2020 when nations such as Italy, France and Portugal dropped their unemployment rates and they had a peak after. Instead, in the other countries, the rate started growing already in quarter 2 of 2020.

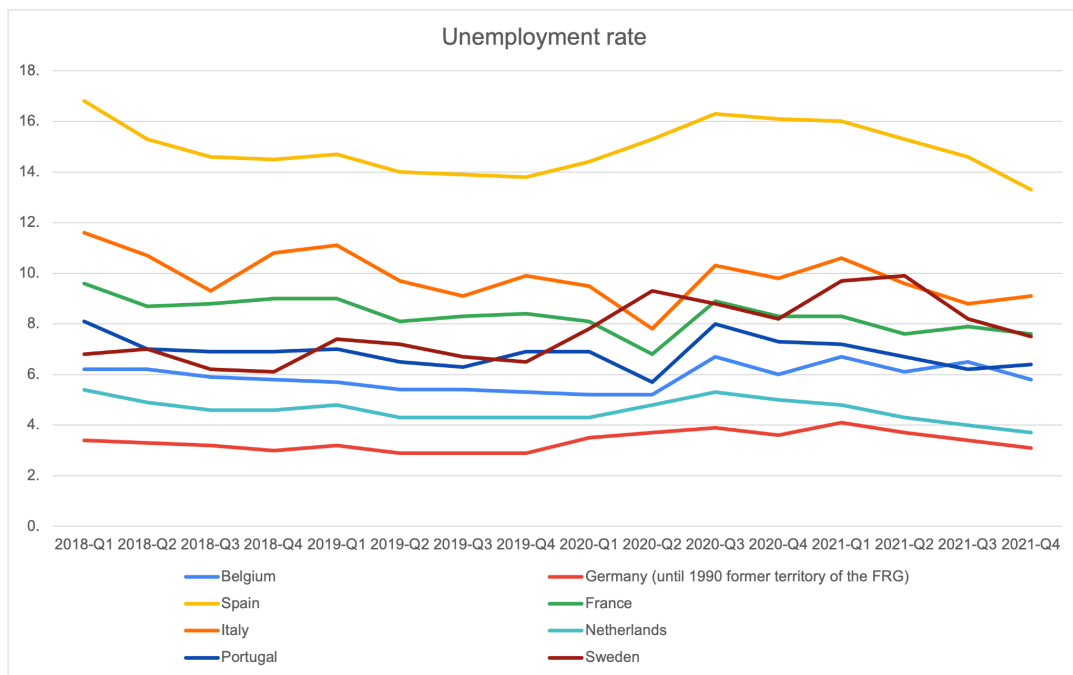


Figure 3: This graph shows the unemployment rate in each country

But, apart from this exception, watching *Figure 4* illustrates the trend of the average unemployment rate between the countries, it can clearly be seen as immediately after the two peaks of Covid-19 also the percentage of people without a job had an increase. We can conclude that the pandemic had, even if not huge, a negative impact on jobs and slightly increased the unemployment rate.

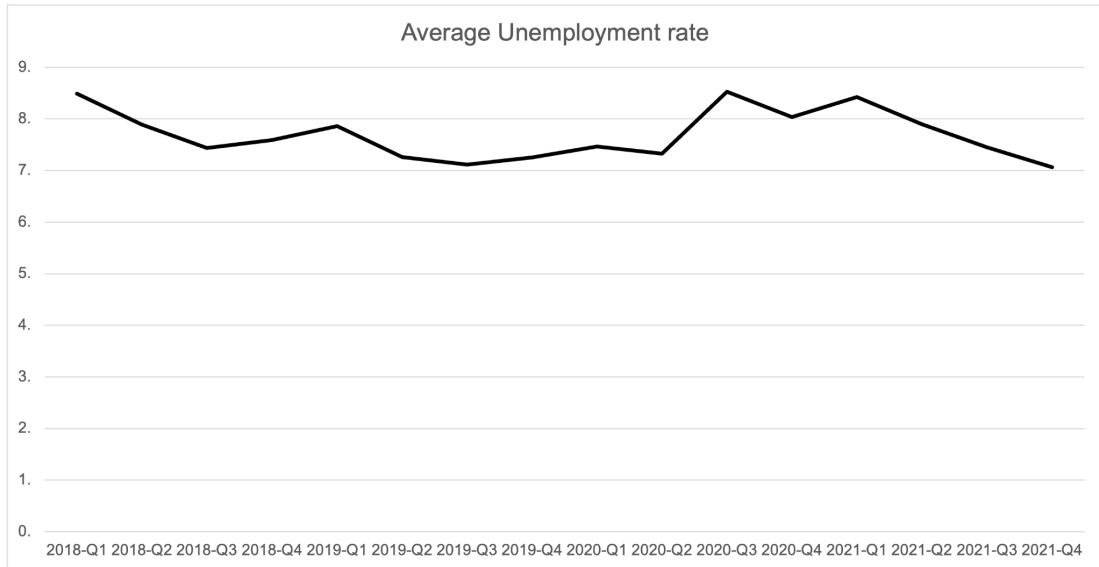


Figure 4: This graph shows the average unemployment in the countries

Table 2 shows the results of the correlation that has been run between the quarterly average unemployment rate, the quarterly average GDP and the quarterly number of Google searches about Entrepreneurship. It has shown that there is no correlation between the GDP variable and the number of searches since the coefficient is near 0 (-0.0931). Instead, the correlation coefficient between the unemployment rate and the number of Google searches is 0.3787, and this means that there is a slightly positive relationship between the two variables, so increasing unemployment also increases the number of people interested in Entrepreneurship. Calculating the coefficient t of Student (1.53099), it can be discussed that taking into consideration a monodirectional test the correlation is also slightly significant for a 0.95 confidence level.

Table2: This table presents the correlation between average unemployment rate, average GDP and searches about Entrepreneurship

```
. correlate avgunemployment avggdp entrepresearches
(obs=16)
```

	avgune~t	avggdp	entre~es
avgunemplo~t	1.0000		
avggdp	-0.1706	1.0000	
entrepre~es	0.3787	-0.0931	1.0000

4.2 Impact of Covid on the interest in Entrepreneurship

Analysing the results (*Table 3*) of the cross-correlation between the Google searches about Entrepreneurship and the ones about Covid-19 and its implications, it can be concluded that there are two lags in which have been spotted a minimal relationship between the two variables. In fact, in lag -5 the correlation coefficient is 0.1742, so the increase in the number of Covid-19 searches brings five weeks after a growth in the number of searches on how to become an entrepreneur. We can see an opposite result in lag -9, where the coefficient is -0.1621, meaning that due to the growth of searches about the virus, the interest in Entrepreneurship nine weeks after decreases.

Table 3: This table shows the cross-correlation between the searches about Entrepreneurship and the lagged searches about Covid-19.

```
. xcorr D.covid D.entrepreneurship, table
```

LAG	CORR	-1	0	1
		[Cross-correlation]		
-20	-0.0386			
-19	-0.0488			
-18	0.0002			
-17	0.0484			
-16	-0.0357			
-15	0.0120			
-14	-0.0641			
-13	0.0481			
-12	-0.0420			
-11	0.0536			
-10	0.0688			
-9	-0.1621			
-8	0.0175			
-7	0.0836			
-6	-0.0271			
-5	0.1742			
-4	-0.0416			
-3	0.0692			
-2	-0.1068			
-1	0.1086			
0	0.1149			

Furthermore, in order to explore the causality of those two lagged variables, we can take into consideration the results of the linear regression analysis run between the google searches about Entrepreneurship and the two lagged variables about searches related to Covid-19 (*lag5* and *lag9*). *Table 4* shows that in the 86 observations analysis the p-value associated with the F value is 0.9855, which, being clearly higher than our alpha level of 0.05, means that the two independent variables do not reliably predict the dependent variable. Furthermore, having, as a result, an R-squared of 0.0003, we can assert that the variance in the number of searches about Entrepreneurship can not be predicted from the two lagged variables. To conclude we can watch the p-value of each of the two independent variables (*lag5* and *lag9*), which are respectively 0.9 and 0.974, both of them definitely higher than the alpha value of 0.05 and this means that for both the variables there is no statistical significance.

Table 4: This table shows the results of the regression analysis between searches about Entrepreneurship and the independent variables lag5 and lag9

. regress entrepreneurship lag5 lag9

Source	SS	df	MS	Number of obs	=	87
				F(2, 84)	=	0.01
Model	997.114329	2	498.557164	Prob > F	=	0.9855
Residual	2866159.12	84	34120.9419	R-squared	=	0.0003
				Adj R-squared	=	-0.0235
Total	2867156.23	86	33339.0259	Root MSE	=	184.72

entreprene~ip	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
lag5	.0080367	.063882	0.13	0.900	-.1189997	.135073
lag9	.0020006	.061289	0.03	0.974	-.1198793	.1238804
_cons	1467.091	79.12049	18.54	0.000	1309.752	1624.431

The results of the regression analysis can be visually confirmed in *Figure 6*, which shows the trend of weekly Google searches about Entrepreneurship from January 2018 to December 2021. The trend line reveals online an imperceptible decrease in Google searches after the spreading of Covid-19. So, it can be concluded that the interest in becoming an entrepreneur has not been impacted by the pandemic.

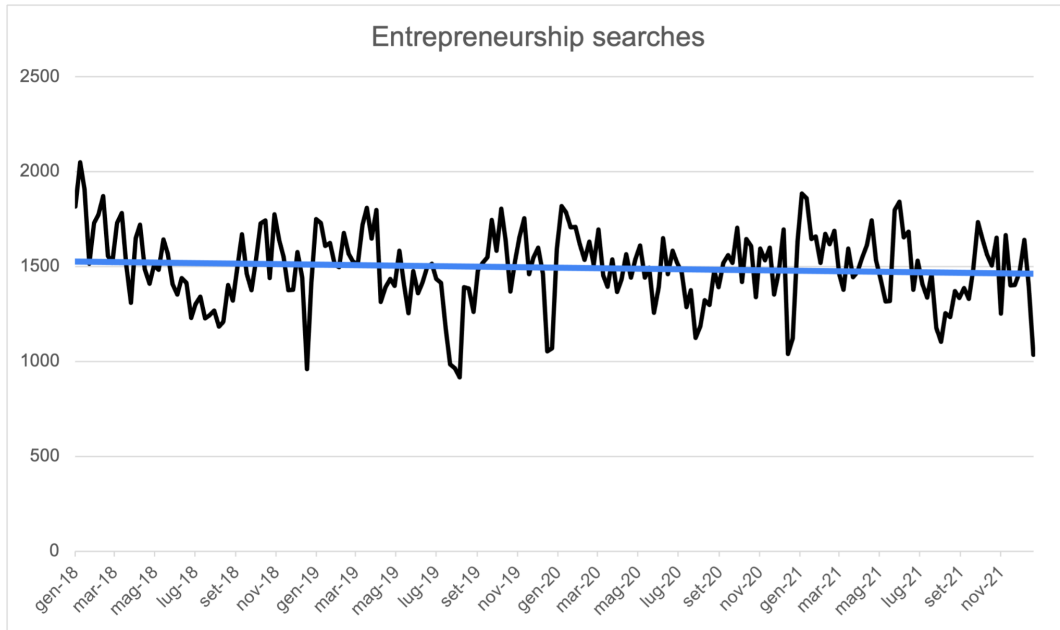


Figure 6: This graph shows the weekly searches for the keyword related to Entrepreneurship. A trendline is also formed in the graph showing an imperceptible declining trend.

4.3 Impact of Covid on the launching of new ventures

This paper aims to investigate how the shock that Covid brought affected the actual number of new ventures being launched. To visualize the data collected from OECD *Figure 7* and *Figure 8* were created. *Figure 7* was created to visualise the total number of new businesses that have been registered in the eight countries between Q1 2018 and Q3 2021. In the figure, it is clear that the number of new businesses registered during a year fluctuated between the quarters. In the years before Covid, it is clear that the peak of new business registrations was in Q1 and that the lowest number was found in Q3. In 2020 the Q1 peak was also present, just at the beginning of Covid. When Covid hit the hardest in Q2 2020 the lowest observation is shown in the graph. However, after the low point of Q2 2020, the number of new business registrations quickly bounced back and in Q4 2020 the number was almost at the same level as it was in Q1 2020. Q1 and Q2 of 2021 are two of the three highest observations in this data set and in Q3 2021 there is a downturn in the numbers, as seen in 2018 and 2019. However, the plummet is not as low as in the years prior to Covid.

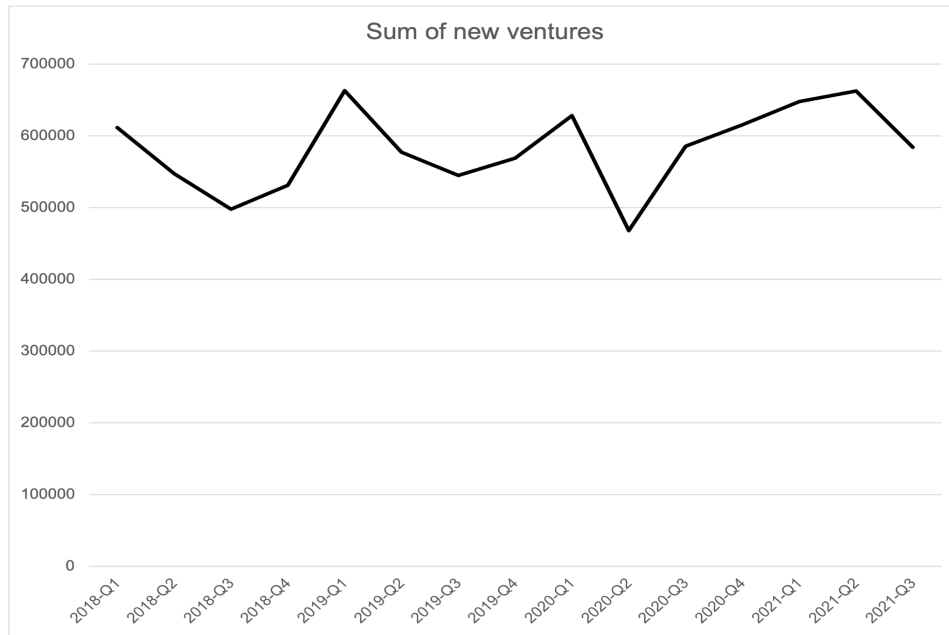


Figure 7: This graph shows the total number of new ventures launched each quarter in all of the countries

Figure 8 shows the number of newly registered businesses in each of the eight countries. The data is shown quarterly from Q1 2018 to Q3 2021. In Figure 8 it is clearly shown that the different numbers of newly registered businesses in each country differ, with France having the highest amounts of new business registrations and Portugal the lowest. There is also a fluctuation between the quarters in every country, where the most common peak in newly registered businesses is found in Q1. From this peak, there are a few exceptions, with Italy's Q1 2021 being the most radical one. What the figure also clearly shows is a drastic downturn in newly registered firms in Q2 of 2020, when Covid hit. The only exception out of the eight countries is the Netherlands. In fact, for the Netherlands, the downturn has reached the bottom in Q3 2020 instead of Q2 as it did for the rest of the countries. After the plummet in 2020, most of the eight countries quickly bounced back to the same amount of new business registrations as before Covid hit. Belgium, Germany, Sweden and Spain in Q3 of 2020 were almost back to the same number of new venture launches as before covid, The Netherlands and Portugal reach this by Q4 2020, France exceeds the pre-pandemic numbers already in Q3 2020 and Italy manages a slight recovery towards the end of 2020. However, by Q3 2021 Italy has not yet reached the same number of business registrations as before Covid. This makes Italy the only country out of the eight which has not had a single quarter since the beginning of Covid (Q1 2020) that has exceeded the pre-pandemic number of newly launched businesses.

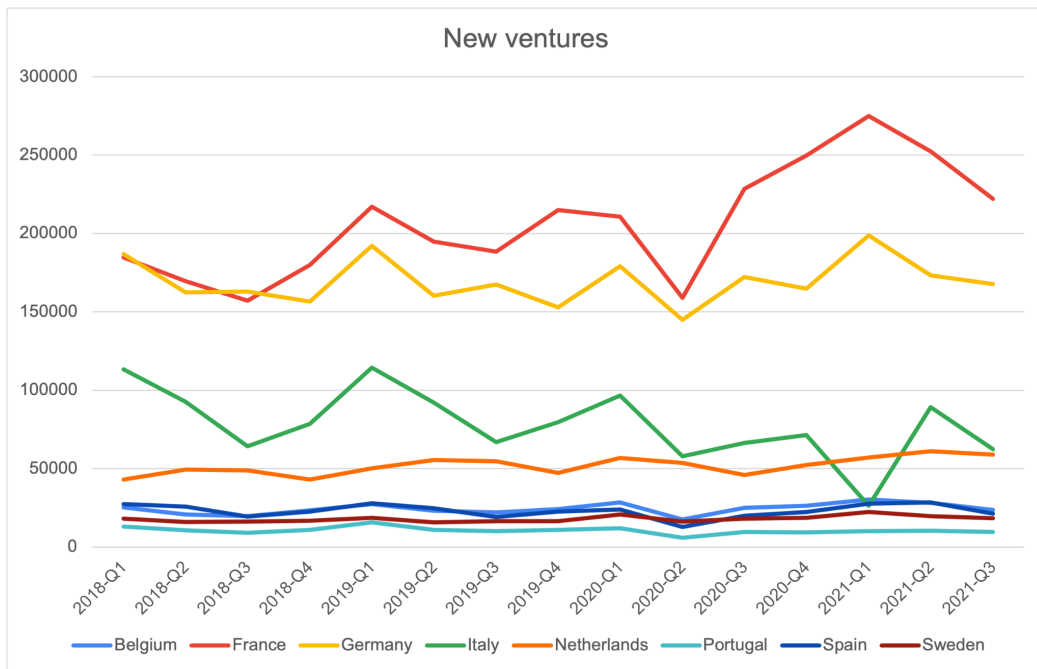


Figure 8: This graph shows the total number of new venture registrations in each country.

5. Discussion

In the Discussion, the outcome of the research is discussed and possible explanations for the results are elaborated on. The limits of the study, as well as future research, are discussed in this chapter

5.1 Impact of Covid on GDP and unemployment

Discussing the results that have been obtained from the exploration of the context under investigation, it can be assessed that our hypothesis about the impact of Covid-19 on GDP and unemployment (H_1) is confirmed. Eichenbaum, Rebelo and Trabandt (2020) underlined the drops in GDP caused by the pandemic and Maliszewska, Mattoo and Van Der Mensbrugge (2020) forecasted a decline of 2.1% in the Gross Domestic Product. The past research analysed the first period of the pandemic and presented predictions about the impact that Covid-19 could have had in the future years on the economy. The findings of our investigation (*Figure 1*) show how the guesses made in the past research somehow turned outright. In fact, in all the 8 selected countries, in the quarter in which Covid-19 started spreading in the European Union, the GDP had a huge drop and a softer decline also during the second peak of the virus. Gross Domestic Product returned to the level of the

pre-pandemic period only in the last quarter of 2021, when also the severity of Covid-19 slowed down in the majority of countries (WHO, 2022).

We can assess that the pandemic had a negative impact on the GDP of the countries under investigation. Furthermore, it is possible that the average GDP between the 8 nations we used for our research could be representative of the European Union context. That's why watching the trend of the average GDP shown in *Figure 2*, it can be concluded that Covid-19 had a negative impact on the Gross Domestic Product inside the European Union, lowering the monetary value of the final products and services produced.

Also, past research about the impact of Covid-19 on the unemployment rate focused on the first period of the pandemic and they forecasted the negative effects to last for the subsequent months. Su, Dai, Ullah and Andlib (2021) stated that governmental restrictions such as lockdowns and business closures created a difficult economic situation for firms, bringing an increase in the number of unemployed individuals. The results of our investigation (*Figure 4*) show that the average unemployment rate between the researched countries grew in the quarter immediately after the first and the second waves of Covid-19, respectively Q2 2020 and Q4 2020 (WHO, 2022). Only around the last quarter of 2021, the number of unemployed people returned to a level similar to the period before the pandemic. For this reason, we can assess that Covid-19 had also a negative impact on the unemployment rate in the European Union, increasing the number of individuals that had no job. Looking at the findings presented in *Figure 3*, we can see how the general trend of increased unemployment is followed by all the 8 countries under investigation. The only main difference that can be spotted is in the second quarter of 2020 when nations such as Italy, France and Portugal dropped their unemployment rates before having a peak in the quarter after. Instead, in the other countries, the rate started growing already in quarter 2 of 2020. We believe that this discrepancy could be due to the fact that governments applied different measures in order to limit the spreading of Covid-19. In fact, Italy, France and Portugal have in common a hard lockdown starting from March 2020 (ECDC, 2022).

Furthermore, the discussion proceeded to the results of the correlation that had been run about the number of Google searches related to Entrepreneurship, the unemployment rate and the Gross Domestic Product. It can be assessed that there is a slight link between the interest in becoming an entrepreneur and the number of people without a job, while there is no correlation between the searches about Entrepreneurship and the GDP. From these findings it can be concluded that there is the possibility that individuals that lost their jobs develop an

interest in becoming an entrepreneur, confirming what was also stated by Block and Wagner (2010) about unemployment and necessity entrepreneurship.

To sum up, the context in which we operated our research is characterised by a decrease in the GDP and an increase in the unemployment rate, confirming our initial hypothesis (H₁). This difficult economic situation combined with the social disruption caused by the imposed restriction have led to a similar context to the one that pushes the necessity of entrepreneurship described in past research (Block & Wagner, 2010; Reynolds, 1992; Conti & Roche, 2019). But, an economic shock like the one caused by the pandemic has also opened new opportunities (Matthew, 2021) and has pulled people to undertake an entrepreneurial journey.

5.2 Impact of Covid on the interest in Entrepreneurship

Considering the results of correlation and regression analysis that have been run using as dependent variable the Google searches about Entrepreneurship and as independent variable the lagged searches related to Covid-19 and its implications (*Table 3 and Table 4*), it can be assessed that the virus had no impact on the interest in becoming an entrepreneur. In fact, both the correlation and regression show that the pandemic did not affect both in a positive and negative way the willingness of individuals to collect information on how to start a new business. These results are also confirmed in *Figure 6*, from which we can clearly see that the searches about Entrepreneurship did not change before and after the spreading of Covid-19 in the selected countries. In fact, the trend line pictured in *Figure X* slightly declined in the pandemic period, but just for a minimal difference. For this reason, we can again state that the virus did not impact the interest of individuals in undertaking an entrepreneurial journey. Our findings collide with what we were expecting based on past literature. In fact, Reynolds (1992) pointed out that the economic condition of a nation is one of the main factors that increase the number of entrepreneurs and Block and Wagner (2010) stated that unemployment can be a relevant aspect of necessity entrepreneurship. Therefore, the difficult socio-economic context brought by Covid-19, forecasted by past research (Chen, Igan, Pierri, Presbitero, Soledad & Peria, 2020; Eichenbaum, Rebelo & Trabandt, 2020; Su, Dai, Ullah & Andlib, 2021) and confirmed by our exploration about Gross Domestic Product and unemployment during the pandemic, led us to believe that the interest in Entrepreneurship would have increased. Furthermore, the new market and business opportunities brought by Covid-19 (Matthew, 2021) should have promoted a “pull effect” toward entrepreneurship. On the other hand, according to the Global Entrepreneurship Monitor report (2022), a significant

part of interviewed entrepreneurs believed that it has become more difficult to start a new business during the pandemic compared to before.

Therefore, it could be assessed that hypothesis H₂ which forecasted a Covid-19 impact on the interest in Entrepreneurship has not been confirmed because the interest has been kept balanced by the two opposite sides caused by the pandemic.

5.3 Impact of Covid on the launching of new ventures

From *Figure 7* and *Figure 8* it is possible to see an interruption in the pattern of business registration when Covid hit. In *Figure 7* Q2 2020 is the lowest number observed within the data set, and it is also the only Q2 that has the lowest value within a year, for all the other observed years (2018, 2019 and 2021) Q3 is the quarter where the number of new registrations is at its lowest. So it is clear that the first wave of Covid (that hit at the end of Q1 and in Q2 2020) had an impact on the business registrations in a negative way. One of the reasons behind this could be that it was the first time that restrictions were put into place to stop the spread of the virus, which meant a huge disruption in the everyday lives of people, and business life was put on halt in many of the selected countries (Think Global Health, 2022). Looking at *Figure 8* the only country that had a “normal” plummet in Q3 in 2020 was the Netherlands. There the new business registration followed the pattern of the pre-pandemic years, this suggests that Covid's impact on the Dutch business registration seems to have been limited. Looking further into *Figure 8* it is clear that the launching of new businesses quickly recovered after the first spring of Covid. Belgium, Germany, The Netherlands, Portugal, Spain and Sweden bounced back to pre-pandemic levels of new business registrations before the end of 2020. The two countries that stand out here are France and Italy. Beginning with Italy, the country had not gone back to pre-pandemic numbers by Q3 2021. Instead, the country had its lowest observation in Q1 2021. This could be because Italy was one of the countries that were hit the hardest by Covid initially, and as a result of this had very hard Covid restrictions (Think Global Health, 2022), which had a major impact on Italian society. The other country that stands out is France, which had a drastic increase in new business registrations after Q2 2020. In Q3 2020 the number of new business registrations in France increased by close to seventy thousand, compared with Q2, and by Q1 2021 the number was about 110000 higher than the bottom observation in Q2 2020. The reason behind this huge increase in numbers could be the good start-up landscape that exists in France. According to Startup Heatmap Europe (2022), Paris ranks as the 4th best city for start-ups in Europe. Another reason behind this could be favourable policies put in place by the local government.

One more possible explanation is that many people in France were “pushed” into necessity entrepreneurship. In *Figure 3* it is clear that the unemployment rate in France went up by around 2% in Q3 2020, which could have led to many people instead deciding to found a new company by themselves, as according to Røed and Skogstrøm (2014) a person on the brink of unemployment is more likely to launch into an entrepreneurial endeavour as the opportunity cost for this person is lower than someone with a stable job.

However, more research needs to be done about both France and Italy to draw any conclusions about the reasons why the figures stand out so much compared to the rest of the countries in the study.

Whatever the reason behind the very different number of new ventures launched in different countries since the beginning of Covid, it is obvious that the pandemic has had an impact on the numbers of ventures launched. The size of the impact differed between the countries in the study, but in common seven out of the eight countries were influenced negatively by Covid in Q2 2020. After the first negative impact, the effects of Covid were different between the countries. Nevertheless, it is obvious that the pandemic has disturbed the pattern that can be found in the number of new business launches before the pandemic. With this hypothesis, H₃ can be accepted.

5.4 Limits of the Study

This study will be limited in some ways. To begin with, this study is conducted in the spring of 2022 and it is not sure that the pandemic is entirely over. There might still come new waves of Covid that affect society in different ways than it has done so far. So with this study, we will be able to answer how it has looked so far in the pandemic and compare it to how it looked before the pandemic. When conducting this study Covid-19 still is a “new” topic which limits the possibility to draw long-term conclusions. The results that we will be able to present from this study will indeed be possible to generalise, but that is in the context of the time period that is investigated due to the reasons mentioned above.

The study is also limited by the different search words used in the analysis. It is possible that the selections of words could have been different and in that case resulted in different results. However, the words used in this study were carefully selected to the best extent possible to represent google searches from someone interested in starting a business, and the words closest related to the topic of Covid. In future research, we encourage the use of more search words to get even more generalizable results.

5.5 Future research

As mentioned in *5.4 Limits of the Study*, this research is about Covid-19 which still is a very current topic. The pandemic is not yet over when this study is written (May 2022), this means that long-term conclusions about the impact of the pandemic can't be drawn. Therefore, there is a need for more research on the topic done in the future, when the pandemic truly is over.

Furthermore, in this study, the interest in Entrepreneurship is measured by a selection of search words. There are more ways to measure the general public interest in entrepreneurship, and we encourage more research on the topic with different approaches to the research to create a clearer picture of how the impact of Covid influenced the interest in Entrepreneurship. Adding to this, the study is limited to the eight countries that have been studied. It is likely that different domestic markets were impacted in different ways as the restrictions implemented were different in most countries. Therefore, there is a need for more research on how the pandemic influenced different domestic markets and different countries' entrepreneurial environments. Another topic discussed in this study is the number of new business registrations and how Covid impacted this, for future research the long term impact of the pandemic could be researched to get a clearer picture of how new venture launching looks in the post-covid world. In this paper, two countries stood out in the number of new ventures launched, Italy and France. For future research, these two countries could be examined in closer detail to get a better picture of why they stood out so much compared to the other six countries in the study.

6. Conclusion

Introducing the conclusion, the hypotheses are either accepted or rejected.

The aim of this research was to explore and analyse the impact that Covid-19 had on the entrepreneurial context in the European Union, investigating how changed the interest in becoming an entrepreneur and the number of new ventures officially registered. For the analysis, eight countries were selected (Belgium, France, Italy, Germany, Portugal, Sweden, Spain, and The Netherlands) that we believed would have been representative of the overall situation in the European Union.

6.1 Impact of Covid on GDP and unemployment

It can be concluded that Covid-19 had a negative impact on the Gross Domestic Product and on the unemployment rate. In fact, at the beginning of the pandemic GDP had huge drops and the number of people without a job increased. This difficult economic situation returned to the pre-covid context only after two years (Q4 2021) that the virus started spreading (Q1 2020) in Europe. H₁ can be accepted and the predictions made by past research in the first months of the pandemic have been confirmed.

6.2 Impact of Covid on the interest in Entrepreneurship

Taking into consideration the findings regarding the effect of Covid-19 on the interest of individuals, it can be concluded that there has not been a change in the approach of people to Entrepreneurship. In fact, the Google searches related to start-ups and how to register a new business had just a minimal decline during the pandemic, suggesting that our second hypothesis (H₂) can not be accepted.

6.3 Impact of Covid on the launching of new ventures

Concluding whether or not Covid has had an impact on the number of newly launched businesses in the researched countries, it can be concluded that it has. With a clear downturn for all countries in Q2 of 2020 (except for the Netherlands), it is clear that Covid had an impact. The negative impact on the numbers was however only short term. All of the countries in the study quickly bounced back and reached numbers that matched or exceeded the pre-pandemic ones, except for Italy. The sum of all new business registrations in all of the countries was higher in Q1 and Q2 2021 than in the years before Covid (except for Q1 2019), meaning that Covid also has had a positive impact on the numbers of newly launched businesses. So, summarising this, we can conclude that Covid at first had a negative impact and then a positive impact on the actual number of businesses registered. Thereby, hypothesis H₃ is accepted

6.4 Accepting or denying the hypotheses

H1, The Gross Domestic Product and the unemployment rate have been negatively affected by Covid-19.	Accepted
H2, Covid-19 impacted the interest of individuals in Entrepreneurship and Business creation.	Denied
H3, Covid did affect the number of launched companies	Accepted

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Appendix

Appendix 1. This table shows the Google search words in all of the languages of the countries under investigation.

ENGLISH WORDS	ITALY	SWEDEN	GERMANY	NETHERLANDS	SPAIN	FRANCE	PORTUGAL	BELGIUM
startup	startup	startup	startup	startup	startup	startup	startup	startup
startup funds	fondi startup	startup finansiering	startup finanzierung	startfondsen	financiamiento empresa	fonds startup	apoios empresa	French/dutch
Company registration	registrare azienda	Företagsregistrering	Firma anmelden	kvk registratie	Constitucion de empresa	constitution société	registo de empresas	French/dutch
VAT	partita IVA	Bolagsnummer	Mwst	BTW	IVA	TVA	IVA	French/dutch
VAT registration	registrare partita IVA	Bolagsregistrering	umsatzsteuer nummer	BTW registratie	Registro de IVA	TVA enregistrement	registo de IVA	French/dutch
COVID	COVID	COVID	COVID	COVID	COVID	COVID	COVID	COVID
COVID 19	COVID 19	COVID 19	COVID 19	COVID 19	COVID 19	COVID 19	COVID 19	COVID 19
COVID deaths	morti Covid	Covid dödstal	COVID Tod	COVID doden	muerdes por	COVID morts	mortes por COVID	French/dutch
COVID vaccine	vaccino Covid	covid vaccination	COVID Impfung	COVID vaccinatie	vacunación	COVID vaccination	vacinação COVID	French/dutch
COVID restrictions	restrizioni Covid	Covid restriktioner	Covid Maßnahmen	COVID maatregelen	restricciones	COVID restrictions	restrições COVID	French/dutch