

Department of Business and Management

Master of Science in Management

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THE IMPACT OF THE COVID 19 PANDEMIC ON ENTERPRISES: MACROECONOMIC EFFECTS AND RESPONSE STRATEGIES. THE CASE OF ITALY, GREECE AND PORTUGAL.

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"It may be, then, that we are in for a long, silent process of physical wasting through food shortages and of gradual and steady lowering of living standards and comforts. The catastrophic disruption of Europe, if we do not put a stop to it, will, in the long run, affect us all; but perhaps not immediately and traumatically. Moreover, this offers us a happy possibility. Perhaps we still have time to reconsider our conduct and to see the world with new eyes. Events will determine the immediate future, and the near future fate of Europe is no longer in the hands of this or that man. The developments of the coming year will not be shaped by the deliberate acts of politicians but by the hidden currents that ceaselessly flow beneath the surface of political history and whose outcome no one can predict. There is only one way we can act on these hidden currents: by setting in motion those forces of education and imagination that change opinion. To affirm the truth, to unveil illusions, to dispel hatred, to enlarge and educate the hearts and minds of men: these are the necessary means".

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PREMISES

The global spread of the health emergency has produced and will continue to produce unprecedented macroeconomic implications. The recession caused by the pandemic is different from all others in that it could not be anticipated but, on the contrary, was sudden, caused by the decisions governments took to curb the spread of contagions.

Moreover, in a short time, the crisis spread to almost the entire world, severely affecting people, social and productive activities, and the stability of the countries involved.

The crisis generated by the pandemic thus shows unique and singular traits, because of the forced closure of activities, the reduction of people's mobility, the implementation of social distancing rules, massive public monetary and fiscal interventions and, not least, the changes induced by the new context in the behaviour of people and businesses, such as the increased use of digital services, e-commerce and the use of remote working.

By its nature, the crisis had an asymmetric intensity, impacting differently on different economies, depending on how many economic activities were more exposed to lockdown and restrictions.

In terms of turnover contraction, the sectors most affected were travel agencies and hotels, but the effects of the crisis were also very severe in air transport and catering. Conversely, a small group of sectors, such as online trade and high-tech industrial districts, benefited from the changes induced by the pandemic due to the profound change in consumer and business habits.

The restriction of activities and the uncertainty generated by the crisis have also impacted business demographics, reducing births in 2020 compared to the previous year and thus heavily impacting employment.

As the ECB pointed out, the contraction in corporate turnover was more abrupt in Italy than in other euro area countries, with the most significant drop being recorded in Italy, followed by Slovakia, Greece and Spain.

In the baseline scenario of the Eurozone annual GDP projections, the decline in real terms recorded in 2020 and 2021 is accompanied by an optimistic recovery projection in 2022.

The fall in foreign demand and the measures to contain the epidemic in Italy and the European countries analysed have led to a contraction, both cyclical and trend, in foreign trade on a scale not seen since the birth of the European single market in 1993.

In order to analyse the impact of this shock on the business system, the results of the ES Follow-up Survey questionnaires on COVID-19 of the World Bank Group, administered during the health emergency to a significant sample of South-Eastern European firms, in particular Italian, Portuguese and Greek firms, were analysed.

Despite the many differentiating factors among the countries surveyed in terms of social distancing measures, effects on supply and demand, mobility, public interventions, and international trade trends, it can be stated that, in the Annus horribilis of COVID-19 and after a decade characterised by a slow and

unfinished recovery, in all cases, the impact of the lockdown caused an asymmetric and sectoral contraction in revenues and a severe worsening of payment times, a liquidity crisis with repercussions on employment and overall production.

The crisis hit smaller companies hardest, so much so that, in Italy, more than 33% of those with fewer than ten employees were considered at risk at the end of 2020. The leading causes of the ensuing recession were lack of liquidity and falling demand.

Companies that were able to export or belonged to multinational groups showed greater resilience, especially in the last months of 2020 than those that could not rely on advanced forms of internationalisation or exports on a global scale, albeit in a situation of a general reduction in revenues.

The following thesis aims to analyse the impact on businesses resulting from the global spread of a pandemic, seeking to understand the economic shocks caused by this spread, the defensive strategies adopted, and the economic sectors' recovery prospects affected by the emergency.

The script was organised by presenting, in the first chapter, the repercussions of the health crisis on businesses, highlighting its effects, the response strategies deployed and the structural fragilities and identifying resilience and vulnerability factors.

The evidence provided by ISTAT's Report on the Competitiveness of Productive Sectors 2021 illustrated how the pandemic health crisis quickly evolved into a global economic crisis. In addition, the effects of the pandemic on businesses were analysed, especially in terms of reduced turnover, falling sales and employment.

Finally, the measures to combat the crisis were presented, both in terms of the response strategies deployed by companies and the support measures taken by national governments to prevent the collapse of the industrial system.

The second chapter focused on the pandemic-economy pair, i.e., the macro-economic analysis of a historically unprecedented recession, contextualising the spread of the virus in a highly globalised and interconnected world.

This scenario allowed for the emergence of direct economic consequences: the lack of employees in jobs due to the disease and the decline in spending. Uncertainty and indirect consequences are caused by the restrictions imposed by governments to contain the spread of the pandemic. It was analysed how much has been lost in production and employment due to the social distancing measures imposed by the lockdowns and as an effect of the closure and drastic reduction of business activities.

In the third chapter, the effect of the crisis on the main industrial sectors in Italy, Greece and Portugal was examined in detail, starting from the results of questionnaires administered by the World Bank Group to a representative sample of both small and medium-sized enterprises and large enterprises, with international and local vocations, operating in both the manufacturing and services sectors.

The analysis was carried out with the help of the World Bank's "COVID 19 Impact ES Follow-up Survey" interviews conducted with a significant sample of companies in the first and second rounds of 2020 with a time horizon of analysis from May to December 2020.

This chapter explores the characteristics of the economies and sectors under study, focusing on the disruption to global supply and value chains caused by factory closures and the consequent reduction in output and employment.

The companies' response to the crisis generated by the pandemic virus was differentiated but strongly influenced by the larger size of the companies, their openness to international markets and the degree of computerisation of the companies examined, a fundamental lever for dealing with the pandemic and speeding up recovery.

In the fourth and final chapter, hypotheses were presented on possible future scenarios and the world ahead. The analysis presented in this chapter highlights the territorial dimension of the crisis in Italy, one of the three countries surveyed, and the impact of the crisis on local production systems.

The focus on Italy makes it possible to assess how the differentiated effects due to the high heterogeneity of the different geographical areas could influence the prospects of recovery or failure.

They were analysed in terms of productivity and employment dynamics and the capacity to react to the international cycle.

The risk profile of the Italian regions depicts a country essentially divided in half, confirming, on the one hand, the usual North-South dualism and highlighting elements of high vulnerability in historically economically vibrant territories, as in the case of some regions in the Centre-North.

Despite the difficulties of making forecasts during a pandemic, thanks to the hypotheses of some illustrious authors, the chapter closes by outlining the prospects for the recovery or collapse of the production system analysed in an evolutionary vision of the crisis.

At the end of the selection process, it will lead to the rescue of the best and most efficient realities.

Shortly, the winners will be those who have learnt the most critical lessons from the pandemic, those ready for the "new normal", and those who have translated these lessons into new policies in good time.

CHAPTER I

The Impact of the Covid-19 Crisis on Enterprises

1.1 Introduction

Whatever they may be, epidemics and pandemics are significant threats to life and health and require significant efforts to contain them and make them less severe. The difficulties in managing them depend on various factors, including their unpredictability and mutability and the need to deal with them by adopting national and international coordination measures, which are more necessary than ever in the current situation of globalisation and the rapid interconnection of people and goods.

The health emergency triggered by the Covid-19 pandemic quickly triggered an unprecedented global crisis that affected all aspects of economic and social life.

The entire global economy was confronted with numerous challenges: eradicating the virus, protecting jobs and incomes and, in parallel, creating a new standard based on the reconstruction of a more equitable, inclusive and resilient social and economic environment.

According to the results of Istat's surveys on the "Situations and prospects of enterprises in the COVID-19 health emergency", at the end of 2020, more than two-thirds of enterprises recorded a significant reduction in turnover compared to 2019, while 62% continued to experience a drop in revenues in the first six months of 2021.

The crisis hit smaller companies in the most challenging way. In Italy, more than 33% of those with fewer than ten employees were considered at risk at the end of 2020. Lack of liquidity and falling demand were the leading causes of the ensuing recession.

Companies that were able to export or belonged to multinational groups showed greater resilience, especially in the final months of the 2020s than those that could not rely on advanced forms of internationalisation or exports on a global scale, albeit in a situation of a general reduction in revenues.

About 30% of enterprises, mainly micro-enterprises in industry and personal services, were "displaced" by the health emergency since, although they were strongly affected by the fall in demand, they had not yet implemented concrete defence strategies at the end of 2020.

In the tertiary sector, about half of the enterprises showed elements of fragility, with very high peaks in some sectors such as tourism, catering, sports and other personal services activities.

In a nutshell, larger and internationally oriented companies showed less risk of closure, less liquidity, demand, and supply problems. Structurally sound companies with above-average staff quality, larger economies and more intensive use of digital technologies were better able to cope with the economic effects of the pandemic.

However, in the current crisis generated by Coronavirus, fragile companies have suffered more than others from a lack of liquidity and a fall in domestic demand in both the industrial and service sectors. They have shown more incredible difficulty in planning their response strategies.

The pandemic also impacted the financing strategies of companies, which used a wide range of instruments to cope with the liquidity crisis.¹

The evolution of the crisis has also accelerated the digital transformation of businesses favouring the spread of investments in cloud, the diffusion of remote work and virtual workstations (doubled between March and November 2020, and has involved the 27% of businesses), as well as software for the shared management of projects, social collaboration platforms and digital services to support the core business.

While from the point of view of sales, the number of businesses that have resorted to e-commerce has doubled.

This chapter is based on the evidence provided concerning our country by the ISTAT Report on the Competitiveness of Productive Sectors 2021. It will illustrate how the pandemic health crisis has evolved into a global economic crisis quickly.

It will analyse the impacts of the Covid-19 crisis on businesses, especially from the point of view of the reduction in turnover and the contraction in sales and employment.

It will then explain the measures taken to counteract the crisis, both in terms of the reaction strategies introduced by companies and the support measures through which national governments intervened to prevent the collapse of the industrial system.

This action will make it possible to analyse how the different segments of the production system react to the shock's consequences and identify the structural factors of resilience or vulnerability of businesses.

The response of Italian companies to the crisis generated by the pandemic virus, as seen in more detail in the following chapters, is also in line with the other European countries analysed in the thesis. In particular, reference is made to companies in Greece and Portugal, whose situations were compared and analysed using data provided by the World Bank.

¹ *Report on the competitiveness of the productive sectors – 2021 Edition, Istat.*

1.2 From the health crisis to the economic crisis

The crisis related to the spread of the pandemic represents an epoch-making event destined to generate substantial economic and social repercussions, which at present are difficult to estimate, given that the data on infections and deaths are still growing in various areas of the World.

On 31 December 2019, the Municipal Health Commission of Wuhan, China, reported to the World Health Organisation a cluster of cases of pneumonia of unknown aetiology in the city of Wuhan, in China's Hubei province. Many of the initial cases reported frequenting Wuhan's wholesale fish market, where several wild animals used for food are also sold.

On 9 January 2020, the China CDC (Centre for Disease Control) announced that it had identified the causative agent, a new coronavirus, first provisionally named 2019-nCoV and then officially named SARSCoV-2 by the International Committee on Taxonomy of Viruses, which was immediately sequenced and made available to the scientific community and subsequently confirmed the possibility of interhuman transmission of the virus.

On 30 January 2020, the World Health Organisation declared the international outbreak of the new coronavirus, identified on 9 January, a public health emergency of international concern. (**Public Health Emergency of International Concern – PHEIC**)².

On 28 February 2020, due to the high contagiousness of the virus and its rapid spread, the WHO raised the threat to the global coronavirus epidemic to 'very high, so much so that on 11 March 2020, WHO Director-General Tedros Adhanom Ghebreyesus called the spread of Covid-19 no longer an epidemic confined to some geographical regions, but a pandemic spread across the planet.

On 19 March 2020, UN Secretary-General António Guterres called the Covid-19 health crisis "a global crisis unlike any other in the 75-year history of the United Nations, which is causing suffering, infecting the global economy and affecting people's lives."

After China, the pandemic first spread to Italy and within a few weeks, between February and March 2020, it affected a growing number of advanced economies until, in April 2020, it was the turn of emerging countries.

Data on the Coronavirus, published by John Hopkins University, show that the number of infected people worldwide exceeds 240 million, while deaths have almost reached 5 million marks.

Italy was among the first western countries to be hit by the virus, particularly Lombardy and the province of Bergamo, due to their European solid industrial vocation and their manufacturing and commercial links with international companies, especially Chinese and German ones.

In addition, Lombardy is a central air transport hub, the centre of the advanced tertiary sector and one of the most densely populated and mobile regions in Europe. In addition, there is also the presence of a significant factor, given the structure of the Italian population, characterised by a prevalence of older adults with higher mortality rates.

The spread of the infection at a global level has brought to the surface the fragility of several national health systems. The health emergency in many countries has been dramatic due to the inability of national health systems to take care of all infected patients in dedicated health facilities.

Since the virus immediately appeared to be very contagious, the governments of the countries affected resorted to the only measure capable of slowing down the contagion rate, social distancing, with the timing and intensity varying from case to case.

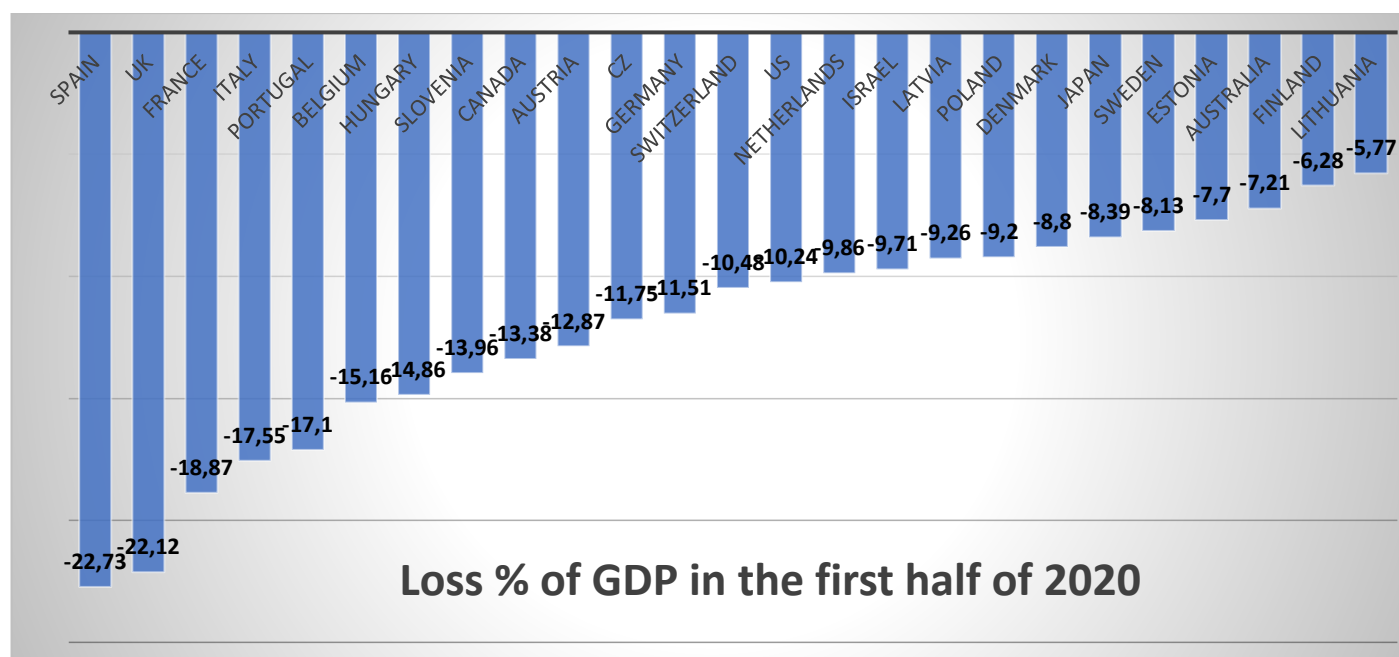
In Europe, the first measures adopted in this sense were

- the suspension of flights to and from China,
- the closure of schools,
- restrictions on the free movement of people even within national borders,
- the suspension of public events, and
- the closure of various non-essential production activities (so-called lockdown).

In particular, the authority imposed these measures during the emergency in Italy from 9 March 2020, when retail businesses, educational activities, catering services were suspended, and gatherings of people in public places or open to the public were prohibited.

The health crisis quickly turned into an economic crisis of historic proportions that affected all countries worldwide.

In the advanced economies, the recession caused by the Covid-19 outbreak was unprecedented, as in addition to the dramatic loss of life, in less than six months, many countries returned to the production (GDP) levels of around 20 years ago as shown in the figure below.



Source: OECD data processing

The epidemic has provoked at least three crises that overlap with each other.

A public health crisis, a global economic crisis, most evident in the United States where 40 million people became unemployed within four weeks, and a political crisis, the forms of which are still poorly defined.

After the first emergency phase, the economic and social repercussions of the pandemic emerged, as the social distancing measures imposed by governments before the advent of vaccines had severe repercussions on the economic and financial activity of the countries that used them.

The reasons that turned the health emergency into an economic crisis are clear since, because of the social distancing measures, there were immediate negative repercussions on both the supply and demand for goods and services, in particular domestic consumption and net exports, and on the investment choices of businesses, which generated effects on the financial and banking system, turning it into a potential detonator of the crisis.

The economic fallout of a health emergency requiring social distancing measures depends on the direct and indirect effects of the lockdown on both supply and demand.

The unforeseen contraction of supply, generating a negative shock, directly affects social distancing measures. It derives from the interruption of production chains considered non-essential, even if, where possible, the stoppage of production activities that required physical presence was counterbalanced by recourse to remote work.

It was not, however, possible to extend the intelligent working organisational solution across the board, since some sectors, in close contact with the public, in the services sector, especially tourism and catering, and in the industrial sector, where the lockdown involved the closure of plants and factories, were excluded.

The consequences of the interruption of production in a given sector or geographical area produced an immediate domino effect, extending to other sectors and other geographical areas, depending on the level of vertical integration of activities, i.e., the interdependencies along the production chain of the goods or services involved, and depending on the geographical connections.

All this ended up amplifying the supply side's initial shock, which added to the demand side caused by the measures restricting individual mobility, which produced a sudden drop in consumption.

In addition, the slowdown and temporary closure of some activities led to a drop in household disposable income, especially since many workers suffered a reduction in pay or lost their jobs in the worst-case scenario.

This situation produced the so-called income effect, which amplified the drop in consumption. The crisis also triggered a wealth effect, as financial assets held by individuals began to lose value due to the negative performance of financial markets.

Finally, in every pandemic, uncertainty increases, especially in cases where it is not easy to estimate its duration and future developments. On a psychological level, uncertainty leads to a paralysis of demand, as individuals tend to limit consumption to the bare minimum, postpone spending and increase precautionary saving.

Indeed, during the Covid-19 pandemic, household savings increased, especially in advanced economies, so much so that in Italy, the savings rate rose to its highest level in twenty years.

Several factors contributed to this, including a strengthening of precautionary attitudes and reduced consumption driven by fear of contagion and government restrictions. The fall in demand resulting from

uncertainty and the collapse in confidence may be transitory and tend to moderate as the pandemic progresses and constraints on individual mobility are removed.

The wealth effect could also be transitory if, for example, financial investments in household portfolios recover the value lost during the crisis as financial markets recover.

On the other hand, the income effect can last more if many firms go bankrupt and, as a result, the unemployment rate rises significantly. Then total disposable income would contract permanently and, in the absence of public support, consumption would fall significantly.

The repercussions of the shock on demand were heterogeneous according to the production sectors affected. In fact, for some of them, such as the pharmaceutical, telecommunications or high-tech sectors, the pandemic had no adverse effects. The primary sector, i.e., agriculture, fishing, livestock breeding and agri-food activities, also experienced limited consequences, while sectors such as tourism, catering and entertainment suffered devastating consequences.

The development of the pandemic and its economic consequences also had significant repercussions on the performance of the financial markets. It leads to a fall in the value of securities which, as mentioned, reduces the financial wealth of families and their propensity to consume.

The negative performance of the markets also reduced the ability of borrowers, i.e. the State and businesses, to raise resources on the market because it reduced the propensity of potential investors to take on risks.

Finally, the crisis also had adverse effects on banks, leading to a reduction in credit that amplified and exacerbated, even more, the contraction of consumption by households and the reduction of investments by businesses. The pandemic caused a strong exogenous shock on public finances due to the heavy measures put in place, on the one hand, to adapt the health system to the emergency and, on the other, to support the incomes of families and businesses and the proper functioning of the markets.

In addition to the imbalance in the public accounts, there was a simultaneous reduction in current and future tax revenues linked to the deferral of tax payments and the contraction of output.

As the Secretary of the United Nations stated, the possibility of a global recession of record dimensions is almost a certainty.

1.3 The impact of the economic crisis on businesses

The economic crisis triggered by the COVID-19 pandemic has had significant and heterogeneous consequences on the activities of both Italian and European companies. Since the early months of 2020, the business system has suffered, in Italy as in most European countries, a shock of proportions never experienced before, with a profound and lasting impact not only on activity levels and operations but also on growth paths.

The administrative closures, the drastic reduction in demand, the interruption or slowing down of supply chains and the lack of liquidity have strongly influenced the operations of production units.

It is no coincidence that, in calling for coordinated policies among the Member States, the UN Secretary-General, in his speech of 19 March 2020 on the global crisis caused by COVID-19, called on world leaders to come together to offer an urgent and coordinated response to a crisis that he described above all as 'a human crisis'.

Available data do not currently allow for an estimate of how long the pandemic will last, and uncertainty remains high about the global economic outlook and the scale of the crisis the world will face.

Most of the countries affected have resorted to the only measure capable of reducing the spread of the infection, namely social distancing. In Europe and Italy, the initial measure of suspending flights to and from China was followed by the closure of schools, the introduction of restrictions on the free movement of people even within national borders, the suspension of public events and demonstrations, and the stoppage of many non-essential production activities through the so-called lockdown.

In the pre-vaccination period, the epidemic was countered by non-pharmacological means such as administrative restrictions and social distancing, while the risk of mortality was dealt with through available drug therapies.

However, it soon became apparent that lockdown is a poorly effective means with enormous economic and social costs and is only sustainable for a limited time, much less than that of viral circulation since it only works while it is in progress, and as soon as it is stopped the epidemic resumes its course.

Secondly, in modern society, presence work can only be suppressed to a limited extent, since some jobs, such as those in the health sector, in procurement and the production of primary goods, but also public order and transport, are not fungible and increase the opportunities for virus circulation.

Lastly, even if the mobility of smart workers is restricted, the reasons for circulating for health reasons or for supplying or caring for family members in need remain, increasing the curve of infection.

Vaccination campaigns began in 2021 and took several months to reach significant percentages of the population. The European Union coordinated, in a joint effort with the Member States and the World Health Organisation, the production of a sufficient quantity of safe and effective vaccines against the virus, with a total commitment to universal access to the vaccine.

The identification of vaccines and their administration to most of the population provides some reassurance, although it does not guarantee that new waves of infection will occur.

Early studies specifically on Covid-19 highlighted the long-term macro-economic repercussions of the pandemic. Fornaro and Wolf³, among others, by analysing the impact of the virus on aggregate demand, they concluded that economic activity could easily slip into severe stagnation depending on the restrictions adopted.

Countries, such as Italy and Spain, which reacted with longer and stricter anti-contagion measures, with the closure of many productive activities, experienced a drop in economic performance in terms of production and, therefore, GDP. In contrast, other countries, such as Sweden, where the epidemic manifested itself with less intensity, recorded a minor fall in GDP and a less severe recession about the lesser intensity of the lockdown.

While the restrictive measures imposed by governments inevitably contributed to the recession, by saving lives, they also alleviated the fear of the epidemic and encouraged expectations of future growth⁴.

Not only did the economic crisis have different impacts in the different countries involved, but it also affected the different economic sectors in a non-homogeneous way, outlining an economic framework characterised by a high heterogeneity of effects both at the sectoral level and for each company.

Therefore, the effects on companies were strongly differentiated according to:

- the different impacts of closures in the various types of production,
- the seasonality of the business,
- the risk of product obsolescence, and
- the degree of dependence on fixed costs.

In some cases, mainly in industry, the drop-in activity due to the freezing and containment measures has been offset by the recovery following the end of the period of restrictions. While in others, especially in some service sectors, the return to pre-crisis levels of activity still seems long and fraught with risks.

Concerning the effects on turnover and business operations, the results of the COVID2 survey, conducted in autumn 2020 by Istat, regarding Italian companies, showed that more than two-thirds of production activities with at least three employees suffered a reduction in turnover compared to the June-October 2019 period, while for almost 60% the decrease was more than 10% and about 62% expected decreasing revenues also in the first six months of 2021.

Such an intense drop-in activity has put many parts of the production system in serious difficulty. In May 2020, during the most acute phase of the crisis, around 38% of companies' chances of survival were severely compromised⁵.

The collapse of domestic and foreign demand, albeit to a lesser extent, together with the liquidity crisis, were the main effects of the economic crisis.

As a result of the recession triggered by the pandemic, Italian companies with an annual turnover of up to EUR 50 million and fewer than 250 employees had a total liquidity requirement of EUR 103.2 billion at the

³ "Covid-19 Coronavirus and Macroeconomic Policy", Luca Fornaro and Martin Wolf, 3rd March 2020.

⁴ "Why does the intensity of the economic crisis differ so much between similar countries?" Giampaolo Galli, Giulio Gottardo, 10 September 2020, *Osseuatoriocpi_Unicatt*

⁵ *Report on the competitiveness of productive sectors - Edition 2021, Istat.*

end of 2020, although public support measures have made a significant contribution to limiting the companies' liquidity needs, proving to be particularly effective tools⁶.

About the effects of the pandemic on global value chains and on the international spread of health containment measures, the international vocation of companies may initially have constituted an element of vulnerability due to widespread lockdown measures, so that exporting companies felt the effects of the crisis to an extent no different from that observed for non-exporting companies.

The exception was companies with a share of exported turnover exceeding 50% or with the ability to export to both European and non-EU markets, especially those belonging to large foreign-controlled multinational groups. These characteristics had a significant dampening effect on the fall in turnover.

In the second half of the 2020s, with the recovery of domestic activity and the subsequent introduction of administrative restrictions on a regional basis, the rapid return of foreign trade levels to pre-pandemic levels increased the gap between the performance of exporting and non-exporting firms, demonstrating how, in times of crisis, the ability to export one's products can become a relevant lever for survival.

Economic literature has, in fact, long shown that the adoption of advanced internationalisation models is associated with higher levels of productivity, and, in general, better economic performance, which translates into greater resilience in times of crisis.

In a nutshell, the most significant difficulties were observed in the sectors most affected by the restrictive anti contagion measures. In particular, the proportion of companies reporting severe closure risks was exceptionally high in the activities of travel agencies, arts and entertainment, non-residential social assistance, air transport, and restaurant services, while, in the industrial sector, the fashion and textile sectors in particular experienced difficulties.

Given the time needed for a total return to normality, these sectors will continue to have a turnover in 2022 that is around 20% lower than before the crisis.

On the other hand, although the motor vehicle trade and construction sectors can benefit from specific support measures introduced by the Italian government, such as the "Ecobonus", it is expected that they will be able to reabsorb the impact of the pandemic in 2022, at least in terms of turnover.

While among the sectors that have suffered less from the effects of the crisis and that will be able to seize the opportunities for recovery and growth are those that have readily intercepted the needs that emerged in the new normalcy generated by the pandemic, such as:

- postal services and courier activities;
- hosting and website services;
- software production and publishing;
- telecommunications-related services.

All of them have double-digit turnover growth rates compared to 2019.

⁶ "The impact of the COVID-19 crisis on firms' liquidity needs", Ministry of Economy and Finance Directorate for Economic and Fiscal Studies and Research, 12 February 2021.

From an operating margin perspective, it is also clear that much of the manufacturing sector will continue to benefit in the medium term from the process optimisation measures put in place to deal with the acute phase of the pandemic.

In a nutshell, for the sectors most and least affected by the pandemic, the forecasts in terms of both the percentage change in turnover and margins compared to 2019, the pre-crisis period, are shown in the table below:

| | Turnover % change | Marginality |
|---|-------------------|-------------|
| Air transport | -20,7 | 4,9 |
| Accommodation services | -20 | 13,2 |
| Travel agencies, tour operators | -18,5 | 2,9 |
| Catering services | -13,5 | 5,6 |
| Creative, arts and entertainment activities | -12,5 | 7 |
| Pharmaceuticals | 14 | 11 |
| Telecommunications | 15,2 | 8,9 |
| Software production | 17,8 | 9 |
| Postal and courier services | 25,5 | 4,3 |
| Hosting and websites | 35,5 | 7,9 |

Source: Sectoral forecasts based on Oxford Economics scenarios

A characteristic aspect of the current crisis has been the suffering of tiny enterprises. The risk of survival of these businesses is widespread, and micro-enterprises are even more vulnerable, the lower their degree of internationalisation.

Consequently, in the presence of increasingly complex forms of internationalisation, the gap observed between small and large enterprises is significantly reduced to the point of almost disappearing in the case of foreign-controlled enterprises.

The size connotation is a recurring element in all macro-sectors, where the share of companies with a strongly declining turnover or at risk of survival tends to decrease as the company size increases.

The most severe and long-term economic impacts will be felt precisely by those smaller companies, those in debt and with poor cash flow, which in this dramatic economic situation are forced to close, which cannot retain and employ staff, which cannot repay debts, and which have no international vocation.

The impact of the pandemic on the economy and the various production sectors, with the consequent structural changes and the European and national recovery measures adopted, were analysed in a recent report published by the European Parliament.

As far as European companies are concerned, Europe has experienced a more decisive crisis and slower recovery than the international scene.

However, the differences between sectors are broad because the pandemic has accelerated digitalisation with different effects and impacts in terms of unemployment and liquidity crises, especially in small and medium-sized enterprises.

Specifically, the digital and pharmaceutical industries have been marginally affected; chemicals and automotive have started a recovery path since the end of the first lockdown, while for textiles and construction, the recovery is likely to take place in 2022-23 with V or U-shaped trends.

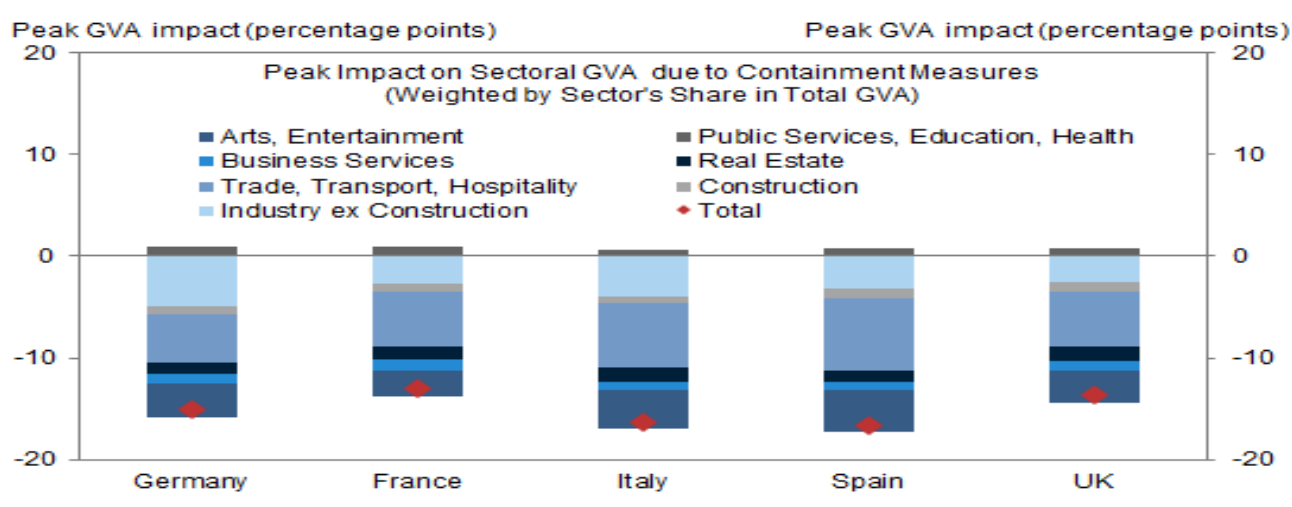
On the other hand, sectors dependent on human contact and interaction, such as the cultural, creative, tourism and aerospace sectors, and the services sector in general, have been severely damaged and will experience much more extended periods of adjustment with U- or L-shaped trends than the manufacturing sector⁷, as the chart below clearly shows.



Source: OECD

Indeed, trade in goods has declined faster and recovered more quickly than during the previous financial crisis, but trade in services remains depressed.

As can be seen in the graph below, the effects of the pandemic are spilling over into different productive sectors with a prevalence in the transport, tourism and trade, industry, and entertainment sectors. They are affecting Spain, Italy and Germany the most.⁸



Source: D. Heymann, S.J. Stehn, S. Ardagna, P. Oppenheimer

⁷ "Covid pandemic impact analysis for European Industries", Andrea Mone, 6 April 2021.

⁸ "Sars-Coronavirus-2 / COVID-19: "An Update on Developments in Europe, Heymann, S.J. Stehn, S. Ardagna, P. Oppenheimer Goldman Sachs, 26th March 2020.

To conclude, in a context characterised by substantial heterogeneity at both the Italian and European level, the conditions of vulnerability that can jeopardise the survival of businesses and the consequent capacity of the production system to withstand a violent exogenous shock can be identified in the economic dimension, in the relational component, i.e. the capacity to operate within a context of structured, productive relations, in the openness to foreign markets and the degree of digitalisation.

1.4 Strategies for companies dealing with the coronavirus crisis and public support measures

In this context, the assessment of the effects generated by the pandemic on businesses and the analysis of the strategies adopted to react to the crisis represents a valuable piece of information for assessing the resilience of the productive apparatus, the degree of disruption generated by the pandemic on growth paths and the impact of public support policies⁹.

The conditions and prospects of Italian resident enterprises during the health and economic crisis generated by Covid-19 were measured by ISTAT both through the short-term indicators currently produced and through survey initiatives to measure the impact of the crisis and the reaction strategies put in place.

In general, the capacity of companies to respond to the pandemic crisis is closely related to the experience gained, i.e. to having previously undertaken strategies to improve quality and positioning on more robust development paths, further increasing their "strategic dynamism", and is directly proportional to the intensity of the harmful effects of the pandemic suffered by each production sector.

As can be seen from the ISTAT data in the **Report on the competitiveness of production sectors 2021**, the Italian production system has reacted very inconsistently. The micro-enterprises, representing about 30% of the units observed, belonging to the industrial and non-commercial services sectors, were utterly overwhelmed by the health emergency without implementing complete defence strategies.

In contrast, a significant proportion of enterprises showed greater resilience and implemented some form of reaction. The largest group (about 25.8% of the cases) adopted strategies oriented towards the expansion of productive activity, such as the introduction of new products, the diversification of sales and supply channels, especially with the use of online services and e-commerce, the intensification of existing relations or the activation of new forms of productive relations with other enterprises.

In a small percentage of companies (20.9% of cases), on the other hand, reorganisation strategies prevailed, concerning the management of processes and workspaces according to the new requirements dictated by the health emergency, the digital transition, and the adoption of new business models. In a smaller fraction of cases, about 16%, the reaction was the contraction of current and prospective production activity.

A critical component of the measures adopted concerns the reorganisation of production resources, processes and workspaces. Concerning personnel management, wage support instruments such as the redundancy fund or the wage supplement fund were the most used by companies during 2020.

Where the characteristics of production activity allowed the use of remote forms of work, companies made extensive use of smart working, with peaks of use in the second half of 2020 of over 40% in the tertiary sector, 20% in industry, 25% in construction and 30% in commerce.

The evolution of the pandemic has led to an acceleration in the digital transformation of businesses, with intervention in crucial business processes such as communication and marketing channels for products and services.

⁹ "Effects of covid-19 and reaction strategies of exporting companies", ICE, July 2021

In addition, the progressive emergence of smart working has encouraged the spread of investments in intangible assets such as cloud servers and virtual workstations, collaborative web solutions for project management and remote process monitoring, as well as rapid growth in the offer of digital services complementary to business activity and, finally, the use of e-commerce.

The data from the Permanent Census on Italian companies, carried out by Istat, at the end of 2019, therefore before the pandemic, allow us to outline the degree of "strategic dynamism" of the companies surveyed, which derives mainly from the greater or lesser propensity to innovate, to invest in technology, digitalisation and continuous training to modernise company organisation and production processes, also paying attention to the aspect of sustainability.

This evidence also confirms the high degree of specificity of exporting companies in terms of their strategic profile and orientation towards dynamism, which is essential for assessing the production system's level of competitiveness and growth potential and their ability to resist crises¹⁰.

In this case, the relationship between exposure to foreign markets and changes in export behaviour is evident, primarily due to the initial restrictive measures that may have led to changes in both EU and non-EU outlet markets. However, the propensity to internationalise and sell one's products on foreign markets to company size is undoubted, as mentioned above, a lever for recovery and a defensive strategy against the crisis.

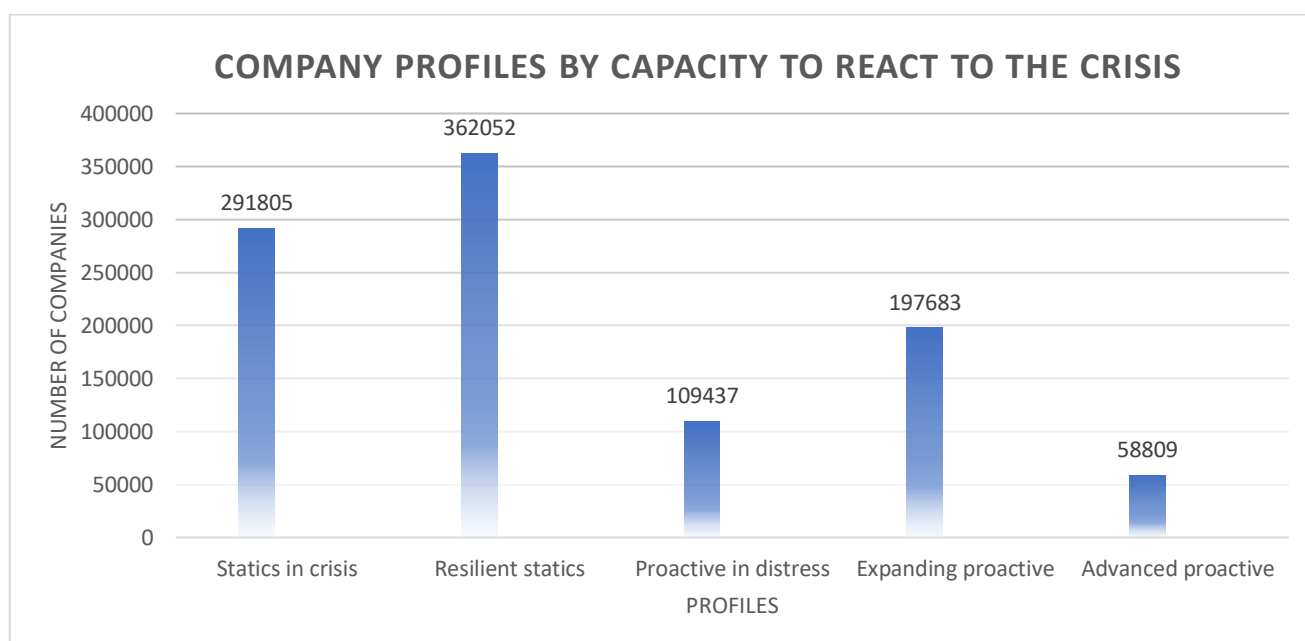
This relevant attitude can allow even small and medium-sized enterprises to record high turnover, added value and productivity increases, compensating for size limits, and constitutes the key to interpreting the responses to the crisis from a medium-long term perspective.

To this end, concerning the ways of reacting to the pandemic, five different company profiles have been outlined from the ISTAT 2021 analyses, which have been drawn up taking into consideration the set of effects and strategies of companies concerning the pandemic, as shown below¹¹:

1. **Static in crisis** – companies that have suffered the impact of the health emergency and have not adopted concrete response strategies;
2. **Resilient statics** – units that have not implemented response strategies because they have not suffered significant negative effects;
3. **Proactive distressed** – units that were hard hit by the crisis but have undertaken structured coping strategies;
4. **Proactive expanding** – mildly affected enterprises that have not altered their previous development path;
5. **Advanced proactive** – companies differentially affected by the consequences of the crisis but which have increased their investments during 2020 compared to 2019.

¹⁰ "Effects of Covid-19 and reaction strategies of exporting companies", ICE Report 2021.

¹¹ Istat 2020 Permanent Census



Source: elaborations on Istat data from the Multipurpose Survey of the Permanent Business Census (2019), Integrated Economic Registers of Enterprises.

The strategies deployed by businesses to react to the pandemic have been accompanied by government policies and measures aimed at guaranteeing operational resilience and survival, dealing with liquidity crises, and providing support for business profiles oriented towards the enhancement of human resources and the digital and technological transition.

As regards Italy in particular, numerous extraordinary measures were adopted to deal with the Coronavirus emergency, aimed at preventing and containing its spread and effects on the economic system.

These were emergency measures aimed at supporting families, workers and businesses adopted between March and December 2020, such as, in chronological order: Decree-Law no. 9 of 2020, whose measures were then merged into the broader legislative intervention contained in Decree-Law no. 18 of 2020, known as 'Cura Italia of 2020, known as 'Cura Italia'; Decree-Law no. 23 of 2020, known as 'Liquidity'; Decree-Law no. 34 of 2020, known as 'Rilancio'; Decree-Law no. 104 of 2020, known as 'August', and Decree-Law no. 137 of 2020, known as 'Ristori'; Decree-Law no. 149 of 2020, known as 'Ristori-bis'; Decree-Law no. 154 of 2020 known as 'Ristori-ter'; and Decree-Law No. 157 of 2020 known as 'Ristori-quater'.

Due to the continuation of the epidemiological emergency and the consequent need and urgency to introduce new and more incisive measures to support the economic and labour sectors affected by the restrictive measures, Decree-Law No. 41 of 2021, known as "Sostegni" and Decree-Law No. 73 of 2021 known as "Sostegni-bis" were adopted during this year.”¹².

Among the aid schemes for enterprises to counteract the effects of the pandemic emergency of relevance are those for liquidity, capitalisation and non-repayable grants to those who have suffered turnover reductions.

¹² <https://temi.camera.it>

The Temporary European Framework undertook the interventions on State Aid "***Temporary Framework for State aid measures to support the economy in the current COVID-19 outbreak***".¹³

SMEs that have self-certified have suffered temporary liquidity shortages due to the COVID emergency were first allowed to take advantage of a statutory moratorium on loans contracted.¹⁴ This aid scheme was approved by the European Commission on 25 March 2020.

The moratorium, initially established until 30 September 2020, was first extended until 31 January 2021, and, for businesses in the tourism sector, for the part concerning the payment of loan instalments, until 31 March 2021 by Decree-Law no. 104/2020.¹⁵ Subsequently, the measure was further extended until 30 June 2021 by the 2021 Budget Law¹⁶ and, lastly, by Decree-Law no. 73/2021, until 31 December 2021, limited to the capital portion only.¹⁷

Decree-Law No. 23/2020¹⁸, converted into Law No. 40/2020, also outlined a scheme of extraordinary and transitory guarantees on bank loans to businesses, centred on the role of SACE S.p.A. and the SME Guarantee Fund.¹⁹

In particular, Article 1 of Decree-Law no. 23/2020, converted into Law no. 40/2020, amended by Decree-Law no. 104/2020, by the 2021 Budget Law and, lastly, by Decree-Law no. 73/2021, authorised SACE S.p.A. to grant guarantees in favour of banks, national and international financial institutions and other entities authorised to grant credit in Italy, for loans in any form granted by them to companies based in Italy and affected by the Covid-19 epidemic²⁰.

About the SME Guarantee Fund, Article 13 of Decree-Law No. 23/2020 introduced, until 31 December 2021, an increase in the Fund's intervention as an exception to the ordinary rules. The measure's operation period was first extended from 31 December 2020 to 30 June 2021 by the 2021 Budget Law and then to 31 December 2021 by Decree-Law No. 73/2020.²¹

Concerning measures to support business liquidity, Article 54 of Decree-Law no. 18/2020 and Article 12 of Decree-Law no. 23/2020 set out the strengthening of the Solidarity Fund for mortgages to purchase the first home²² and extended it, on a transitional basis, to self-employed and freelance workers, including sole traders and small entrepreneurs.

Measures were introduced to strengthen the capital of small and medium-sized enterprises in the form of a tax credit for investments in Italian companies that have suffered a reduction in revenues.

¹³ <https://ec.europa.eu>

¹⁴ Decree-Law No 18/2020, Article 56.

¹⁵ Decree-Law No 104/2020, Articles 65 and 77.

¹⁶ Law No 178/2020, Art.1, paras. 248-254.

¹⁷ Decree-Law no. 73/2021, art. 16.

¹⁸ Articles 1 and 13.

¹⁹ <https://temi.camera.it>

²⁰ The operation of the measure, initially envisaged until 31 December 2020, was first extended until 30 June 2021 by the 2021 Budget Law, Law no. 178/2020, Article 1, paragraph 206, letter a)) and, subsequently, until 31 December 2021 by Decree-Law no. 73/2021 (Article 13, paragraph 1, letter a)).

²¹ Decree-Law. no. 73/2020, article 1, paragraph 2.

²² so-called "Gasparrini Fund", Law no. 244/2007, art. 2, par. 475 et seq.

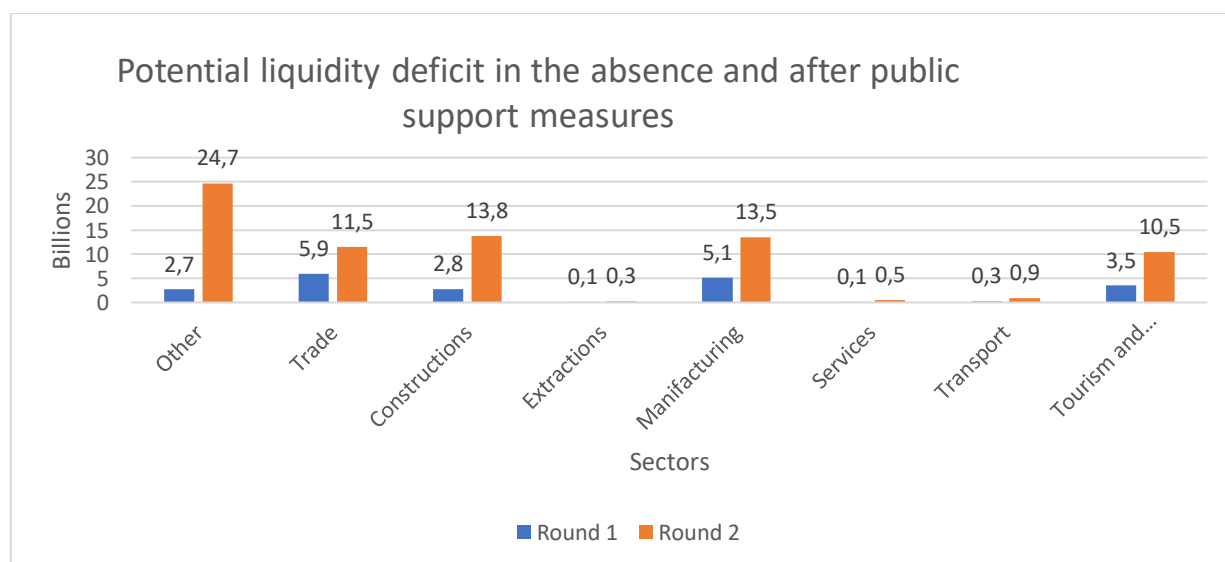
In addition, a fund for the support and revitalisation of Italy's economic-productive system has been established, called Fondo Patrimonio PMI (SME Heritage Fund), for underwriting bonds or debt securities newly issued by medium-sized companies. Decree-Law no. 34/2020 provided the establishment, within Cassa Depositi e Prestiti S.p.A., of a fund to implement interventions and operations to support and relaunch the Italian economic-productive system because of the COVID-19 emergency.

The support as mentioned above measures to cope with the emergency, especially the extension of the integration fund, the deferral of tax liabilities, the moratorium on loans, support for the cost structure and non-refundable transfers, helped to strongly mitigate the effects of the crisis by limiting the liquidity needs of companies to EUR 38.5 billion (with a 62.7% reduction in the potential deficit) and almost cut in half the percentage of companies in liquidity crisis at the end of 2020 (from 42.4% to 22.1%).

The primary support measure was the debt moratorium, which secured about EUR 63bn (72.5% of the total). The measures were particularly relevant for smaller companies, which suffered more from the effects of the health crisis and experienced more severe liquidity crises²³.

An overview of the impact of the measures introduced to address the emergency with the contribution of each sector to the economy is presented in Figure 2. It shows, by macro sector, the potential liquidity needs in the absence of public support measures and the residual needs after the emergency measures.

As is evident from the graph below, in the sectors most affected by the restrictions, the effects of the crisis have been significantly contained by public support measures. For example, looking at the tourism sector, where liquidity needs were reduced from EUR 10.5 billion to EUR 3.5 billion, or the construction sector, which fell from EUR 13.8 billion to EUR 2.8 billion.



Source: elaboration on MEF data, Statistical and information reports, 12 February 2021.

²³ "The impact of the COVID-19 crisis on companies' liquidity needs", Ministry of Economy and Finance, Economic and Fiscal Studies and Research Directorate, 12 February 2021.

In summary, the support measures taken enabled companies to compensate for the liquidity deficit in 2020 significantly. These measures were significant for smaller companies, most severely affected by the pandemic regardless of their sector.

In this respect, the debt moratorium, the relief of certain fixed costs and the non-reimbursable grant have proved to be particularly effective measures, supporting companies that have experienced a liquidity deficit. On the other hand, measures to suspend or exempt taxes were less effective and selective.²⁴

It is essential to recall the indications in the G30 Report on the restructuring of joint-stock companies after Covid-19.

Precisely because while on the one hand it is recognised that the pandemic crisis required an immediate and generalised response to the liquidity problem, on the other hand, the urgency of dealing with the post-crisis is highlighted in order to prevent the liquidity deficit from turning into a more severe solvency problem, to ensure a prospect of stability and growth for companies while containing the cost to public finance.

The income support measures, the freeze on redundancies, and the introduced compensatory measures prevented many workers from being exposed to the risk of poverty following the critical phase of the Covid-19 emergency.

At the EU level, the Temporary Framework State Aid was adopted on 19 March 2020 to allow the Member States to use all the flexibility available under State aid rules to support the economy in the context of the coronavirus outbreak.

The response of the EU institutions to the outbreak has mainly focused on measures to counterbalance the socio-economic effects of the crisis. In this specific case, the European Commission has coordinated a typical response to the pandemic, acting decisively to strengthen public health sectors and mitigate the socio-economic impact in the Union in order to support the Member States and coordinate their national responses. The Union's commitment is to ensure that safe vaccines reach all corners of the world. To this end, the Commission and EU countries have committed almost €3 billion to COVAX, the global initiative to ensure equitable access to COVID-19 vaccines, by supporting large-scale vaccination campaigns in partner countries.²⁵

In addition, to support productive sectors, the European Commission, the European Parliament and EU leaders have agreed on a recovery plan that will help the European Union repair the economic and social damage caused by the coronavirus health emergency, investing in the future of Europe and its Member States to restart after the Covid-19 emergency.²⁶

The European Commission's entire initiative is structured around three pillars: supporting the Member States in investments and reforms, boosting the Union's economy by stimulating private investment, and learning from the crisis.

²⁴ “Reviving and Restructuring the Corporate Sector post-Covid”, Draghi M. and Rajan R., December 2020, G30.

²⁵ <https://ec.europa.eu>

²⁶ <https://www.agenziacoessione.gov.it>

In this direction, the **European Plan for Recovery and Resilience** will make available EUR 723.8 billion in loans and grants to support reforms and investments by the Member States, to mitigate the economic and social impact of the pandemic and make European economies and societies more sustainable, resilient and prepared for the challenges and opportunities of the green and digital transition.

As a result, all Member States have prepared their recovery and resilience plans to receive funding under the European Instrument.

In addition, the **Next Generation EU** has also allocated EUR 50.6 billion to REACT-EU, a new initiative that continues and expands on the crisis response and recovery measures implemented through the Coronavirus Investment Initiative. The resources will be divided between the European Regional Development Fund (ERDF), the European Social Fund (ESF), the European Aid Fund for the Most Deprived Persons (FEAD) and the European Social Fund (EDF).²⁷

All the measures introduced at the national, federal and global level aim to show that a crisis is not just a misfortune that interrupts a train that needs to be put back on track as soon as possible, not just a 'Black Swan' with pandemic, systemic and pervasive implications, but above all a revelation of limits and possibilities.

To learn from what has happened, to turn a dramatic moment into a unique opportunity for regeneration.

²⁷ <https://ec.europa.eu>

1.5 Conclusions

The analyses presented, considering the effects of the crisis on the productive fabric and the risks generated by the pandemic on the development prospects of businesses, make it possible to outline a structural picture of the reaction to pandemic crisis, also regarding the support measures put in place by national governments, with particular reference to Italy.

This information confirms, on the one hand, the vast presence of resilient, dynamic and expansion-oriented company profiles, especially among companies open to the markets, which show financial results and development prospects that are far superior to those of companies oriented only to the domestic market. On the other hand, it shows how companies that in the pre-crisis phase had driven the overall economic performance of the manufacturing sector tend to react with more incredible determination to the pandemic-induced crisis in an attempt not to undermine their competitive positioning not to interrupt the growth path. A picture emerges that confirms the violent and lasting negative impact of the crisis on the entire Italian and European production system and the need to give continuity to public support policies.

Overall, this evidence, as will be confirmed in the following chapters, shows the widening of the gaps between the most competitive and dynamic sectors and those less inclined to change and highlights how, in the recovery phase, a dynamic and innovation-oriented strategic approach can be the most effective response to the crisis.

Companies that are well equipped in terms of work practices, adoption of digital technologies, optimisation of processes and openness to internationalisation, i.e., the most dynamic and resilient companies during the crisis, will have the prospect of accelerating the transition towards more complex and competitive organisational profiles.

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CHAPTER II

The consequences of the Covid-19 crisis on the economy

2.1. Introduction

"This time is the first time" the World has been experiencing not simply an era of change, but an epoch-making change, due to the intensity, extent, and specific nature of the crisis that the economy is going through. It has affected all the World's countries, starting from China and with a very long shock wave, and has generated consequences of enormous magnitude and an economic recession not seen since the Second World War.

The most characteristic effect of this crisis stems from a very particular shock, the result of a lockdown, which affected all sectors of the world economy indiscriminately.

Consequently, there has been widespread uncertainty about the future course of the contagions, the actual mortality rate, the identification of effective countermeasures against the virus, the duration of the social distancing, the medium- to long-term effects on the economy, and the prospects for recovery.

Unlike the 2008 financial crisis, this time, capital injection only into the financial sector cannot be the answer, as this current crisis is not a banking crisis, nor is it an ordinary supply and demand shock.

Instead, the pandemic crisis from Covid-19 was a shock to society. It has been estimated that 60% of the future fall in US GDP is attributable precisely to the "uncertainty" factor. In other words, we look to the future with few anchor points valid for drawing realistic scenarios without knowing how and when we will return to a new "normality."

In a context of this kind, economic analyses seem to favor forward-looking assessments of a future that is difficult to decipher, in which the economic policies to be adopted may have to go in the direction of massive monetary and fiscal interventions aimed at preventing the macroeconomic repercussions of the pandemic from seriously affecting businesses, with dangerous contractions in terms of both employment and productivity.

The worrying fact that concerns Italy and other countries are that this crisis is hitting business demographics hard, which means that we risk losing an entire generation of entrepreneurs, with negative consequences on the country's development capacity.

High levels of start-up rate produce, in fact, positive and lasting effects at an economic level, driving productivity and real growth in the country and affecting the speed of post-crisis recovery, with a fundamental impact on the economy in terms of employment.

In this chapter the aim is to assess the impact of the current crisis on the primary macroeconomic variable. The analysis has been taken from the point of view of entrepreneurship.

The challenge is to establish how much the production and employment sectors have lost due to the social distancing measures imposed by the lockdowns.

Moreover, the effect of closure and drastic reduction of business activities will be assessed too.

2.2. Globalization and virus

Covid-19 was the first pandemic to spread in a fully globalized world. The virus, when it was still silent, traveled by plane and quickly reached all continents.

Even during the Spanish epidemic, a hundred years ago, the rapid spread of the contagion was aided by the mobility of troops, the end of the Great War, and demobilization, but the capacity for movement then is nothing like the ease and intensity of short, medium and long-range movement around the planet today. The rapidity of the pandemic's spread has undermined global mutual dependencies. Indeed, when a large part of the production, particularly that of Asia, came to a halt in the early 2020s, the effects on global value chains distributing production steps in different countries around the world took a severe blow.

The flow of raw and processed materials that feed international trade has suddenly come to a standstill. European ports have lost a large share of their trade and, without supplies, all industrial production has suffered a devastating impact.

The dependence of some countries on foreign manufacturing has been so striking that some national governments have taken steps to bring these industrial processes back within their borders and production back to a local scale to better cope with future crises.

Companies could also diversify their supply chains by rethinking what is best produced at home and outsourced.

However, if such a scenario were to materialize and developing countries would lose orders without any compensation, the result would be disastrous. As Ian Goldin stated ²⁸ there would be more deaths from starvation than from a pandemic.

It is likely to be argued that globalization is not going to end, given that, after the drop in the first half of 2020, international trade has returned to pre-crisis levels.

Companies, in general, could opt for local production if the pandemic threat is perceived as permanent, even if, due to ongoing vaccination campaigns, the current situation is likely to be perceived as temporary.

At the same time, in order to increase their resilience in the face of crises, both companies and governments may be willing to sacrifice maximizing production efficiency in favour of local emergency stocks and shorter production chains, as the European Commission has indicated.

The challenge today is the success of the vaccine campaign, so the faster the population more exposed to the risk of infection or weaker to the effects of the virus is immunized, the faster the national economies will recover.

For the recovery to be sustained and widespread, action is needed on several fronts, from vaccination programs in all countries to concerted public investment strategies, as the OECD Secretary-General said, Mathias Cormann.²⁹

²⁸ “*The Butterfly Defect: How Globalization Creates Systemic Risks, and What to Do about It*”, Goldin, Mariathan, 20 October 2015.

²⁹ <https://www.oecd.org>

Differences in vaccination rates between countries, however, are contributing to the unevenness of the recovery, while new waves of the virus are forcing some countries to curtail activities, maintain distancing measures and restrict mobility, causing bottlenecks along supply chains.

The inequalities in the distribution of vaccines, denounced in January 2021 by the director-general of the WHO as a “*catastrophic moral failure*” that could undo efforts to contain the virus, could induce some countries to prefer unilateral action in the future or bilateral relations with those partners that have shown they act according to the principle of reciprocity. The future of multilateralism would thus be called into question, casting doubt on globalization's resilience.

2.3. Lockdown recession

The blockade imposed by national governments through social distancing measures on more than half the world's population to flatten the infection curve hit the world like a meteorite, pushing the global economy into its worst recession since World War II.

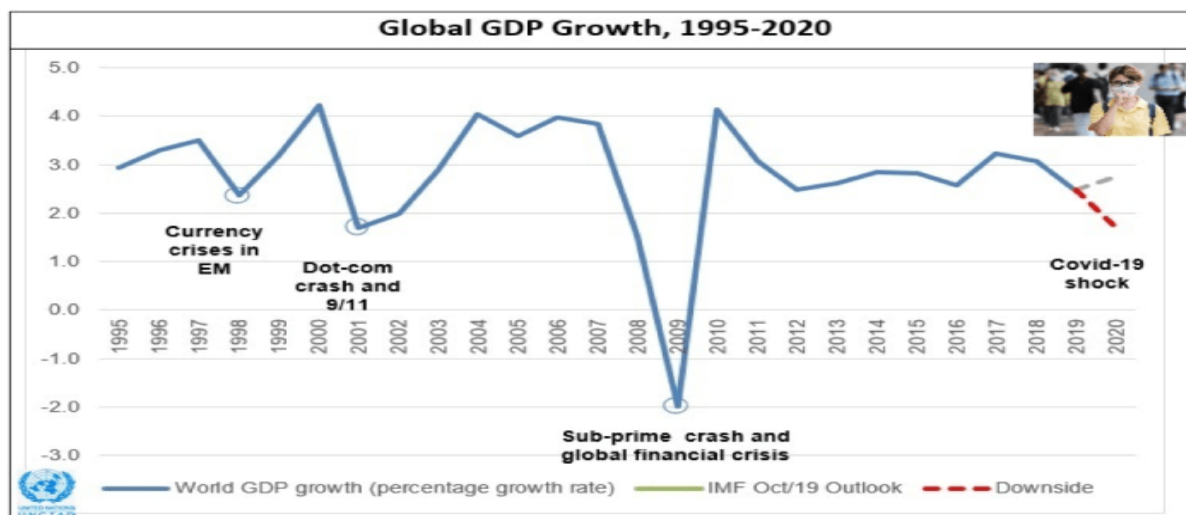
The economic consequences of the epidemic quickly evolved from a localised supply *shock* centred on China to a violent demand *shock* that damaged consumption and investment not only in Asia but also in Europe, the United States and Latin America, paving the way for the global recession that hit most developed and emerging economies in the first two quarters of 2020.

The most severe economic impacts of the crisis concern countries with a high level of private debt, both in households and businesses and in Italy, with a high percentage of the elderly population.

This information is what emerged from a recent analysis by KPMG, still unpublished in Italy. High indebtedness compares to a series of negative impacts, including reduced consumption, falling asset prices, blocked investments and negative expectations in investors' choices which, in turn, are reflected in financial market trends.³⁰

The health crisis caused by COVID-19 has extremely severe economic effects worldwide, but it is particularly relevant in countries with relatively fragile economies, such as Italy³¹.

In 2017-2018, the world economy recorded growth rates above 3% per year, with advanced economies close to +2.5% and emerging countries close to +5%, thanks primarily to the performance of China and India. After the slowdown in growth suffered in 2019, as can be seen from the graph below, during the pandemic, the world economy experienced a crisis as shocking as any in the previous 90 years.



Graph 1: annual percentage change in world gross product. Source Unctad

The International Monetary Fund predicted a 3% fall in world GDP by 2020, around 6% on average in advanced economies and 1% in emerging economies³². The European Commission's forecast for the euro

³⁰ <https://home.kpmg/it>

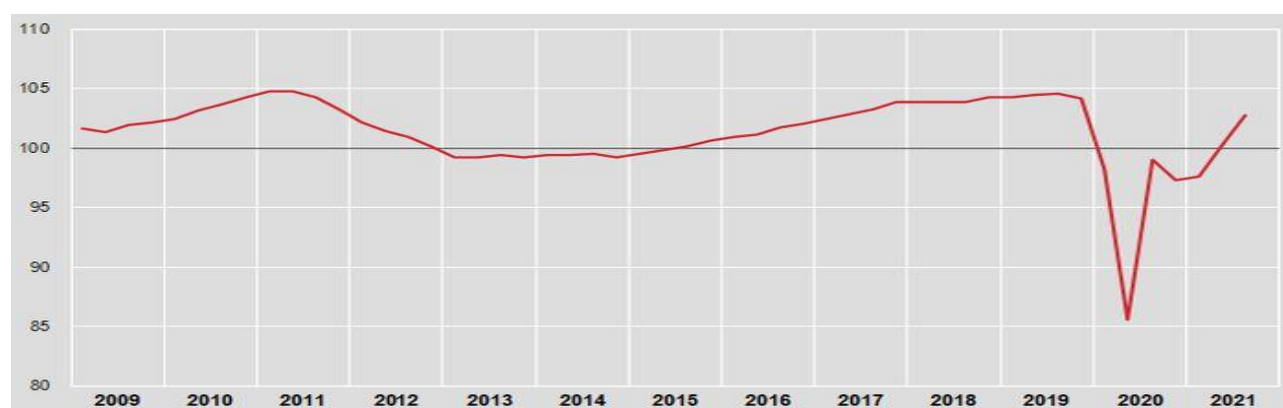
³¹ Annual report ISTAT 2020

³² IMF, *World Economic Outlook*, April 2020.

area, which estimated a 7.7% contraction in GDP in 2020 followed by a partial recovery in 2021, was also in line.³³

Indeed, in 2020, world GDP stood at -3.5%, recording a negative record not seen since the post-war period, with significant declines in all the world's major economies, except for China, which instead recorded an increase of 2.3%.

In Italy, the crisis came when the economy was already showing signs of slowing down, although the overall conditions of the production and financial system were more solid than in the past, and public finances showed a budget deficit under control. The cyclical change in national GDP is well illustrated in the figure below.



Source: Istat, April 2020.

In all advanced economies, therefore, the recession caused by the pandemic was, to all intents and purposes, unprecedented, since, in addition to the dramatic loss of life, in less than six months, many countries returned to the production (GDP) levels of about 20 years ago.

However, the impact on macroeconomic variables has been far from uniform. While the common element among the countries involved was the implementation of anti-contagious measures such as closures, bans and lockdowns between March and April 2020, there were significant differences in the spread of the virus and the countermeasures adopted.

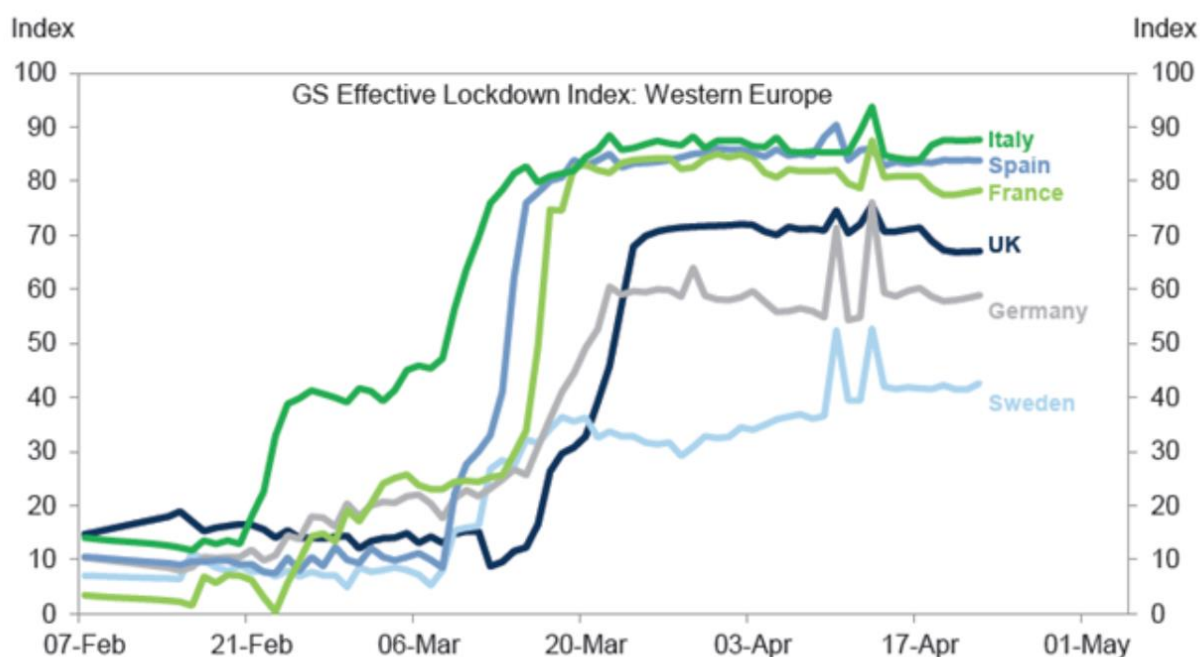
As a result, the intensity of lockdowns was very heterogeneous between countries, as was the impact on different productive sectors and the intensity of the resulting recessionary effects.

Countries like Spain and Italy resorted to prolonged and severe lockdowns, with the closure of many production activities, recorded more severe and pervasive recessionary effects. In contrast, others adopted less drastic measures due to the lesser severity of the epidemic, recorded a minor fall in production.

The correlation between the intensity of the lockdown and the fall in GDP is evident, as is shown in the figure below. The recession has worsened in countries where people have been isolated for longer and with more stringent lockdowns. The graph below, drawn up by Goldman Sachs, shows that the Eli index for Italy

³³ European Commission, *Spring Forecasts 2020*.

has a value close to 90, followed by Spain, France and then, the UK and Germany have a value lower than 70.



Source: Oxford University, Google, Apple, Wind, Goldman Sachs Global Investment Research

In a nutshell, the main factors affecting the reduction in GDP in advanced countries during the first half of 2020 were the severity of the restrictions imposed by the lockdown policies adopted, the effect of people's fear of the number of deaths due to the virus, and the sectoral characteristics of the different economies. In turn, the severity of anti-infection measures was directly proportional to the resilience of national health systems.

In the short run, the pandemic depressed global demand by amplifying the initial supply shock. In the long run, pessimistic expectations of economic actors prevented the system from moving away from an equilibrium of low growth and high unemployment due to the continuation of the supply *shock*.

The role of economic agents' expectations of uncertainty has been examined in the studies of **Baker and Ludvigson** ³⁴, where, in particular, the effects were captured through three forward-looking indicators, namely the implied volatility of stock markets, the frequency with which terms such as 'economy' and 'uncertainty' recur in newspaper articles, and the expectations expressed by market participants in sample surveys, which provide real-time measures of forward-looking uncertainty.

It was estimated that about half of the year-on-year contraction in US real GDP is attributable to the adverse effects generated by uncertainty about developments in the Covid-19 pandemic.

The bankruptcy of companies, the consequent drop in employment and household disposable income, the contraction of private sector savings, the prolonged deterioration in confidence, and the negative expectations of economic operators will have complex and lasting effects, the consequences of which will

³⁴ "Covid-induced economic uncertainty", Baker and Ludvigson, Working Paper.

also depend, to a large extent, on the economic policies implemented by States in order to mitigate their impact.

Moreover, it is well known that the crisis has been economical and human, as it has disrupted the lives of individuals, imposing forced social isolation and causing a reversal of models and paradigms.

The long wave of Covid will also have long-term repercussions on the mental health of individuals. In these terms, the pandemic has provoked a series of other cascading effects that are likely to be much more difficult to mitigate and will entail complex effects, primarily on younger people and those who are psychologically more fragile or more exposed to the economic crisis resulting from the health emergency.

According to the results of a study carried out by the Department of Biomedical Sciences of **Humanitas University**, the Covid-19 pandemic has had a significant impact on the psychological and emotional sphere of individuals since, during lockdown periods, the restrictions imposed on social life and the consequent economic concerns have had a heavy impact on people's psychic sphere.³⁵

The economic recovery has been strongly driven by supportive measures from governments and banking institutions and progress in vaccine uptake. However, although global GDP has risen above its pre-crisis level, the recovery remains uneven across countries, presenting them with different challenges.

Forecasts of recovery must consider the considerable uncertainties in 2021, caused by the impossibility of predicting the evolution of the pandemic, its economic impact, the speed of vaccine administration and the return to normality³⁶.

Although it is possible to foresee a recovery of the world economy for the affected countries that will bring GDP back above the pre-Covid level, the wounds of the crisis are still open. According to OECD (Organisation for Economic Co-operation and Development) calculations, the gap is equivalent to USD 4,500 billion less than potential, i.e., if there had been no Covid-19. It means *"one year of growth in the world economy, under normal conditions"*.³⁷

In addition, the rapid surge in demand following the reopening of economies is driving up prices of essential commodities such as oil and metals, while food prices in emerging markets are also rising. Thus, tensions along supply chains caused by the pandemic have been compounded by cost pressures.

However, the inflation outlook is patchy and variable: while the inflation rate has risen sharply in the US and some emerging economies, it remains relatively low in many other advanced economies, mainly in Europe. These inflationary pressures should eventually dissipate, as once supply disruptions are resolved, price increases in durable goods are more than likely to abate quickly as industry sectors quickly pick up a supply. Consumer price inflation in G20 countries is expected to peak towards the end of 2021 and slow down during 2022.

³⁵ <https://www.hunimed.eu/it>

³⁶ <https://www.labparlamento.it>

³⁷ OCSE: Interim Economic Outlook.

The pandemic has not yet been overcome and living with the virus will continue to generate pronounced economic and social effects, depending on the ability of the affected countries to contain new outbreaks promptly and on the extent and timeliness of budgetary and monetary policy measures taken by the states. In the face of the elements as mentioned above of indeterminacy, the extent of the crisis will inevitably depend on clear and measurable factors, including:

- ❖ the economic-financial conditions and the degree of vulnerability of each country;
- ❖ the extent and timeliness of the measures to combat the crisis;
- ❖ the structural characteristics of the production;
- ❖ the organisational models of the economic and financial system.

2.4 The impact on the labour market

The two dramatic Covid-19 balance sheets concern the labour market and the number of deaths.

According to estimates by the World Labour Organisation (WLO), the number of hours worked on a global scale dropped by 8.8% in 2020 compared to 2019.

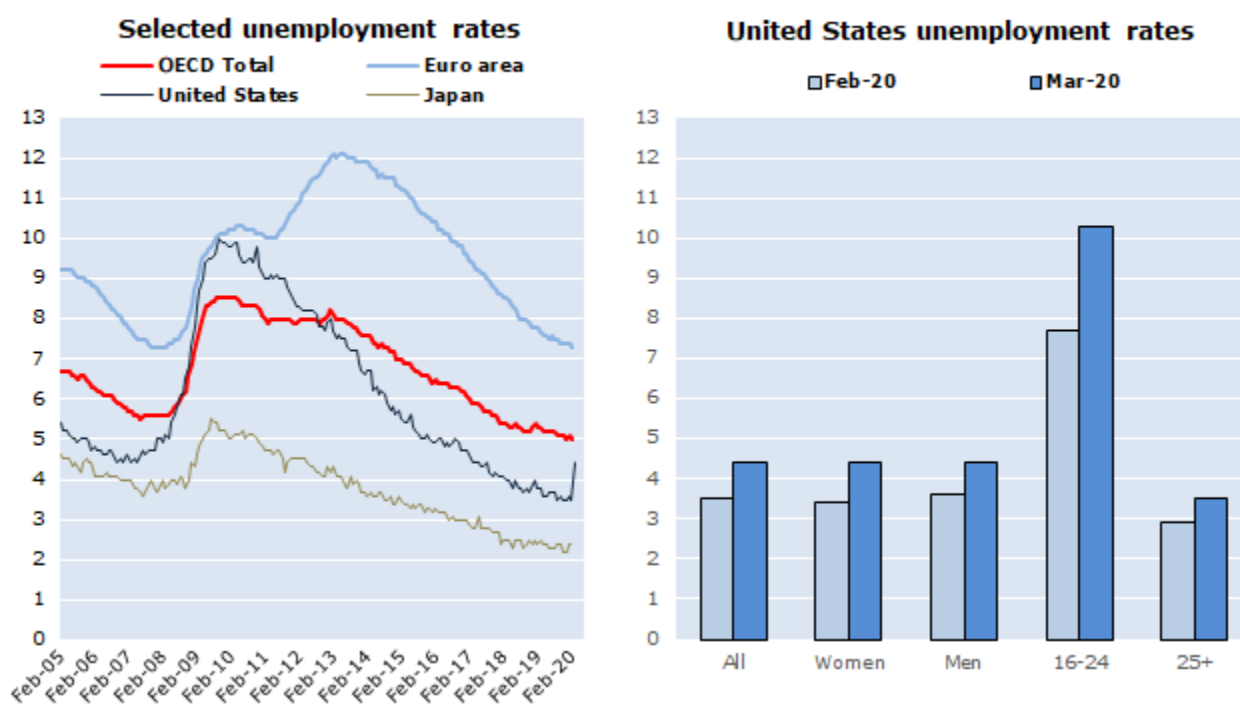
The International Labour Organisation (ILO) estimates that the economic and labour crisis caused by COVID-19 could increase unemployment worldwide by almost 25 million, with global unemployment soaring towards double digits, from 5.3 million to 24.7 million.³⁸

It is the worst figure of the century, with about 33 million people losing their jobs compared to 21 million in 2009.

In absolute terms, Asia was the worst affected continent, partly because of its large population, with a loss of almost 7 billion hours worked per week, or 60% of the global decline.

In second place was Latin America and the Caribbean, with a decrease of more than 1.7 billion hours worked per week, followed in order by Europe (-1.2 billion), Africa (-900 million), North America (-620 million) and Oceania (-20 million).

OECD Unemployment Rates, s.a.



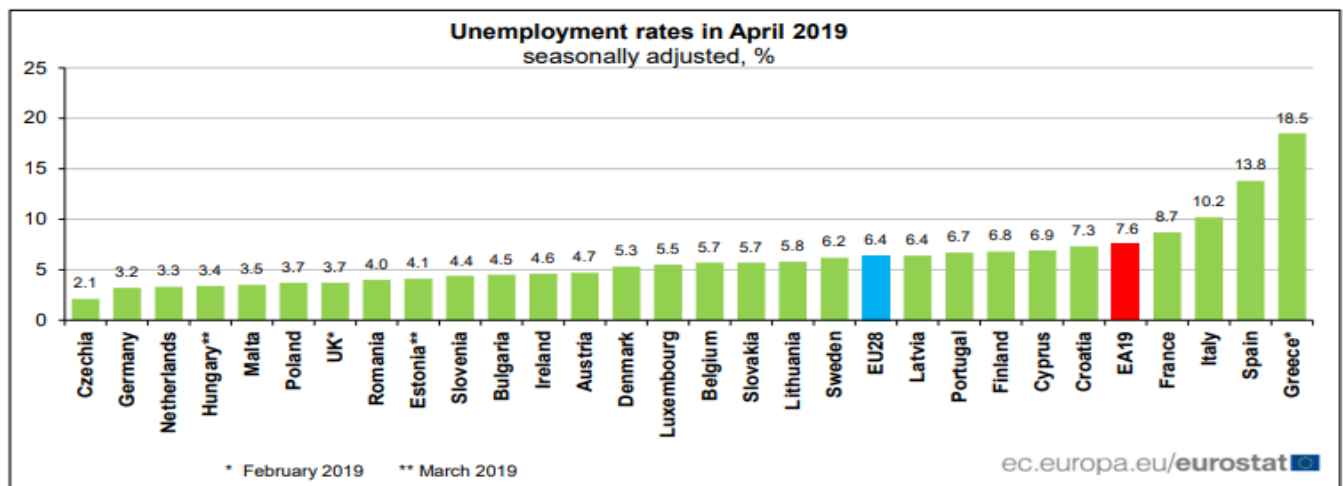
The focus on European countries shows that the loss of working hours was exceptionally high in southern Europe, which recorded -13% compared to 2019, with the worst figure marked by Italy and an increase in unemployment among young people and women, as the following graphs illustrate.

³⁸ <https://www.ilo.org>



Source: Eurostat

As the chart below shows, Italy's unemployment rate, at 10.2 per cent, is the third highest in the European Union. According to data published by Eurostat, only Spain, where it is at 13.8%, and Greece, 18.5%, fare worse. The same situation can be found in the youth unemployment figures, with Italy at 31.4%, Spain at 32.7% and Greece with the lowest rate at 38.8%. The figures, which compare the unemployment rate in April 2019 with April 2018, show that it has fallen in all member states over the past year. Overall, the share of unemployed people in the Eurozone fell from 7.7% in 2018 to 7.6% this year, recording the lowest rate since January 2000. In Luxembourg and Poland it remained stable, only Denmark saw a slight increase, from 5.2% to 5.3%. The countries with the lowest rates are the Czech Republic (2.1%) and Germany, where overall unemployment stands at 3.2%.



Source: Eurostat

In Italy, the pandemic has hit an economy and a labour market already profoundly marked by a long blockade that started with the financial crisis of 2008 and continued with the sovereign debt crisis in 2010-2011.

Both at the global and European level, the distinguishing feature of 2020 has been the sharp rise in the number of inactive people, i.e. those who are neither employed nor seeking employment. During the

pandemic, the number of inactive people increased by a record 81 million, contributing 71% to overall employment losses.

In Europe, inactivity has dealt a much more significant blow to labour market developments than unemployment, with the growth of the inactive almost three times that of the unemployed. A detailed analysis of some European countries reveals that the sub-group formed by Italy, France and Spain alone absorbed more than 50% of the entire increase in inactivity in the old continent.

In addition to employment losses due to increased inactivity and unemployment, the drop-in hours worked in 2020 also stems from the reduction in working hours of those who have retained employment.

Simple calculations of the LMWG data show that this factor has had a meaningful impact on the overall reduction in hours worked in 2020, further confirming the devastating effect of the pandemic and related labour market containment measures.

In monetary terms, by cross-referencing the share of GDP attributable to the labour input with the reduction in hours worked, it is possible to obtain a reasonable estimate of the labour income that has been burnt due to Covid-19. Without considering the income support measures put in place by several states, this amounts to USD 3.7 trillion, or 4.4% of global GDP.

The great unknown, of course, is how profoundly the crisis will have transformed the economy in general and the labour market over the past year since the possibility of a rapid return to pre-crisis levels will depend on this.

For example, it will have to be clarified how the fall in incomes of the groups most affected by the crisis will be reflected in future consumption, output and consequently employment. The habit of buying online could also continue beyond the crisis, with obvious consequences for those production sectors and businesses that will not be able to adapt to digitalisation processes.

Indeed, these possible changes in consumer habits will be reflected in businesses, leading to their disappearance or transformation. For some production sectors, new units may even be created. In turn, the processes of transforming the productive fabric will inevitably be reflected in the labour market, where some professional figures will become obsolete, others will gain in importance, and others will be created.

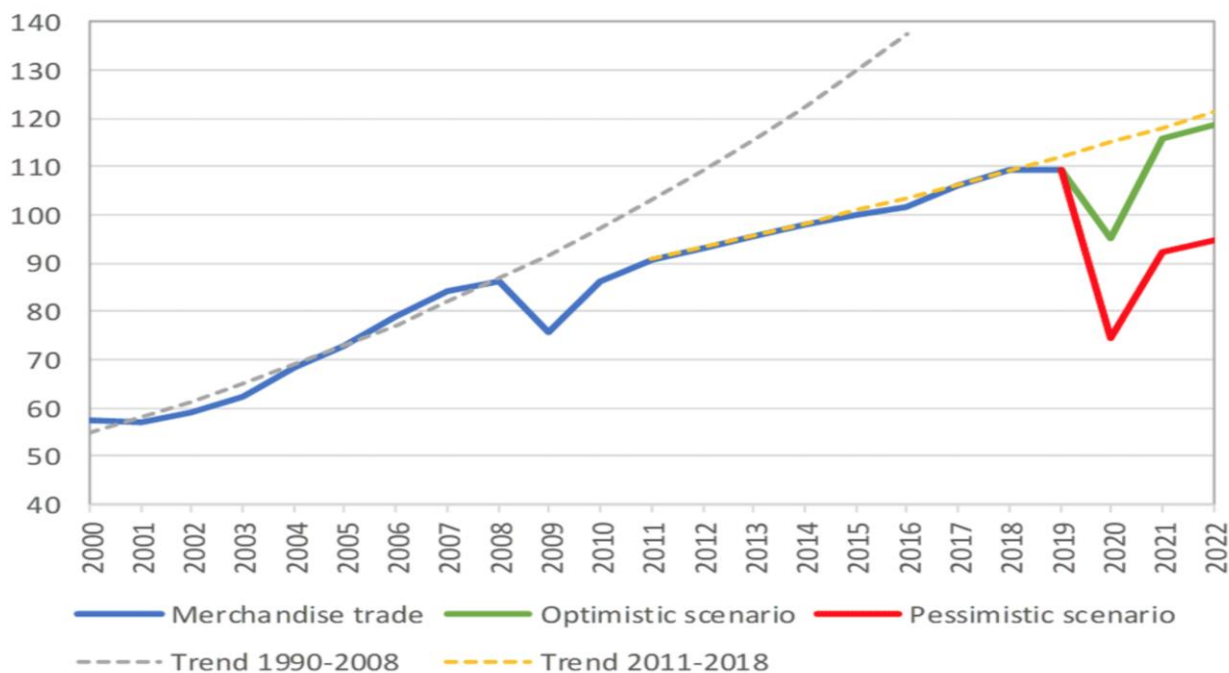
2.5 The impact on international trade

The effects of the Covid-19 pandemic are also hitting international trade hard, contributing to slowing its growth at the global level.

Recent estimates by the World Trade Organisation (WTO)³⁹, despite the current uncertainty, point to two possible scenarios: a relatively favourable scenario that foresees a 13% reduction in the volume of goods traded and a pessimistic outlook that sees this variation at 32%.

The natural consequences beyond this range will depend on the development of the pandemic in the coming months, but a significant contraction in international trade and related financial flows certainly cannot be ruled out.

In such a context, companies in low- and middle-income countries will be the most affected by the contraction of internationalisation due to their intrinsic weaknesses as they are particularly vulnerable to external shocks and characterised by production structures that are less able to react to change.



Global merchandise trade volume, 2005Q1-2021Q4 - Source: WTO/Unctad

Despite the contraction of the international market, the ability to export remains a lever of meaningful impact and ensures greater resilience, especially for those realities that have developed advanced forms of internationalisation, with exports on a global scale.

³⁹ <https://www.wto.org>

2.6 Mitigation effects of public support policies

Leading economists around the world agree on the need for rapid policy action to mitigate the economic damage of the global pandemic.

The capacity of health care systems is limited. It is assessed as the capacity of intensive care units, the number of hospital beds, the number of qualified health care professionals and ventilators. In any country, even in the richest ones.

This phenomenon places an upper limit on the number of patients who can be adequately treated at any given time, as represented by the flat line in Figure 1.

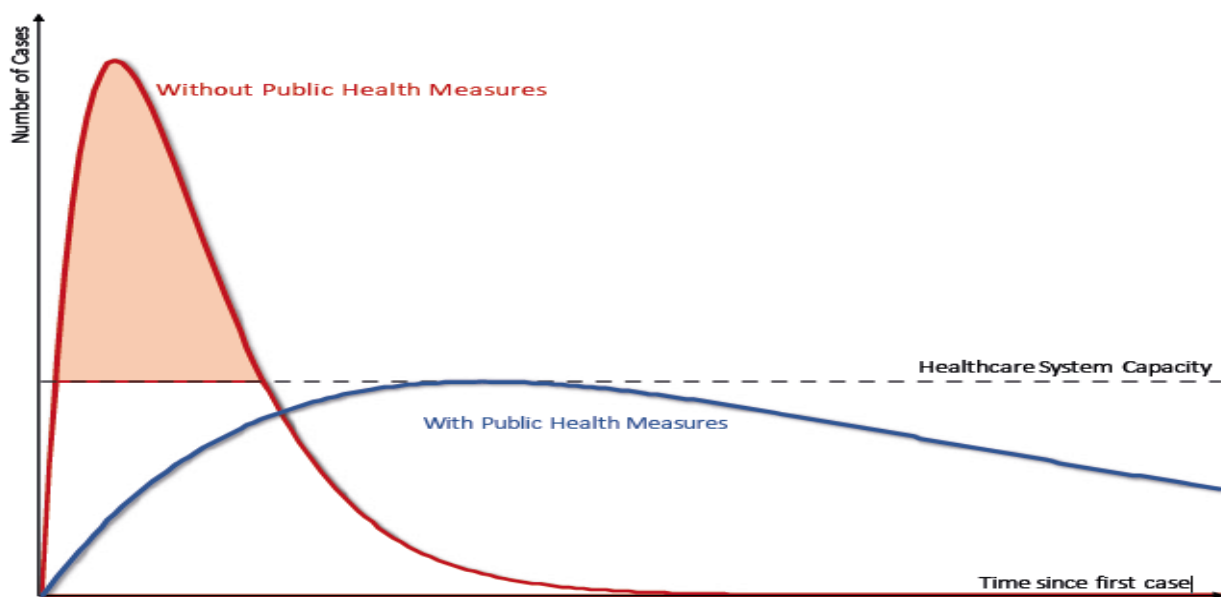


Figure 1 - Flattening of the pandemic curve -

Unchecked, the pandemic would quickly overwhelm any health system, leaving many patients without treatment and driving mortality rates soaring.

Without public intervention, 1% of the world's population would die or about 76 million people. This scenario corresponds to the red curve in Figure 3. The part of the curve (shaded in red) above the health system's capacity faces a significantly higher mortality risk.

With an appropriate public health policy imposing drastic social distancing measures, the curve can be 'flattened', allowing more people to receive adequate health care and reducing the mortality rate. It is the blue curve shown in the figure.

Countries that have taken drastic containment measures, such as Taiwan, Singapore or the Chinese regions outside Hubei, have experienced a reduction in the number of infections, but the price to pay has been an economic decline.

When health authorities intervene with social distancing measures, the infection curve flattens significantly, as shown in Figure 1 in blue. The trade-off, however, is significant in terms of the macroeconomic

implications since, as Richard Baldwin has shown, in the short run, *"the flattening of the infection curve inevitably steepens the macroeconomic recession curve"*.⁴⁰

It has happened in both China and Italy, where the severe lockdown imposed on the population has required a solid social distancing, the closure of schools and universities, most non-essential activities, and the request to most working-age people to stay at home.

Even if the so-called competent workers were enabled to work remotely, they represented only a tiny share of the total workforce, so that the interruption of work and daily routine generated, as an inevitable consequence, the collapse of production and consumption.

In a nutshell, public intervention through a strict health policy brought the economy to a sudden standstill. As several economists have pointed out, most of the lost output will not return, so it is reasonable to assume a return to baseline rather than a subsequent increase in economic activity.

By comparison, the drop in output growth in the US during the Great Recession of 2008 was about 4.5 per cent, while the recession triggered by Covid promises much higher numbers that can dwarf even those of the Great Recession.

The explanation for these high numbers lies in the intrinsic characteristics of a crisis of historic magnitude, spread widely across the globe, whose shock waves on the economy are much more severe.

During the financial crisis caused by toxic mortgages in 2008, even though the US economy was losing jobs at 800,000 workers a month, the unemployment rate did not exceed 10 per cent, as the other productive sectors were not equally affected. On the contrary, the coronavirus led to a situation where, even if for a limited period, a significant percentage of workers, from all production sectors, in all countries of the world stopped working, with a catastrophic impact on the economy.

A sudden stoppage such as the one described above triggered a domino effect of events with substantial economic impacts, fuelled by appropriate individual decisions but proved detrimental when taken collectively, to the extent that they amplified the recession.

If, in fact, from an individual point of view, maintaining social distancing proves to be the right choice to avoid contagion, from a collective point of view, self-isolation produces fewer opportunities for consumption and a reduction in spending. It translates into a fall in aggregate demand, which leads firms to reduce supply, contract earnings, cut costs and lay off workers. As a result, the financial system will reduce lending to ailing firms, business expectations will worsen, and the consequence will be business failures and soaring unemployment.

The road to recession is open, and without adequate public policy intervention to mitigate the consequences, the impact becomes deflagrating. As Baldwin stated in *"Mitigating the COVID Economic Crisis: Act Fast and Do What It Takes"*, *"the economy also faces a curve-flattening problem"*.

The red curve represents the consequences of the recession in Figure 2, which shows the output lost during the recession, the blue shaded area represents the economic downturn if, through policy measures, the loss of output during the lockdown period were to be limited.

⁴⁰ *"Mitigating the COVID Economic Crisis: Act Fast and Do What It Takes"* R. Baldwin.

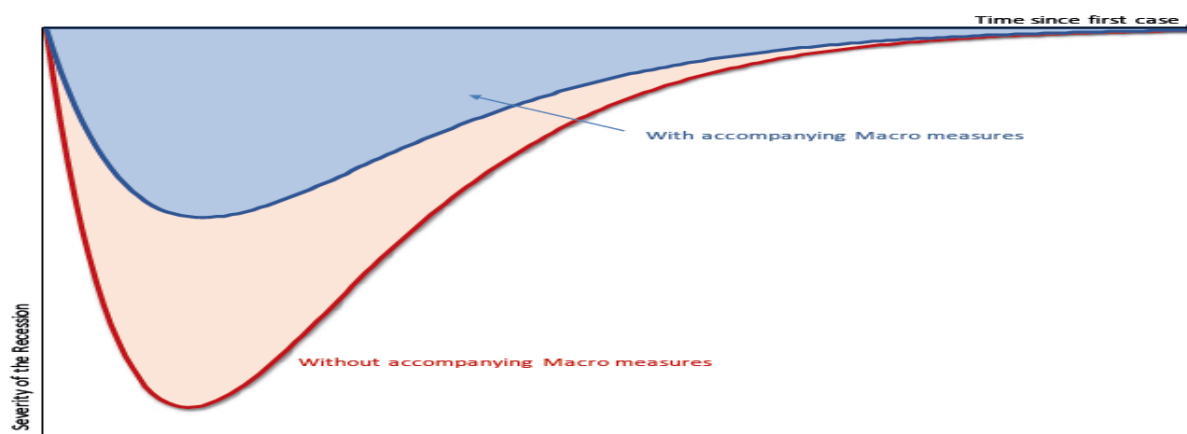


Figure 2 -Flattening of the recession curve-

The economic policy measures capable of flattening the curve, containing losses and significantly reducing recession are mainly monetary and fiscal, the Earnings Supplement Fund, the suspension of payments and the granting of loans to businesses.

The author concludes that *"The right combination starts with health policy in the driver's seat to limit human contagion. Therefore, fiscal and financial policies should be designed to accompany the resulting shock to our economic system and prevent economic contagion"*⁴¹.

In other words, going back to Figure 1, the main objective of economic policies must be to expand the capacity of the health system, to raise the horizontal line representing the capacity of the health system to treat a more significant number of patients and thus to alleviate social distancing measures.

These mitigation measures require a meaningful economic effort because they have a high cost roughly comparable to the lost output, which countries must cope with, including increasing public debt.

⁴¹ "Mitigating the COVID Economic Crisis: Act Fast and Do What It Takes" R. Baldwin.

2.7 Conclusions

In conclusion, the analysis of the impact of the current crisis on the main macroeconomic variables shows that the more severe the social distancing measures imposed by national governments, the greater the negative consequences on their economies, on GDP, on the labour market, on international trade and business activity.

The recessionary effects on economies will have either a V- or U-shaped trend depending on the anti-contagion measures taken by governments and, since social distancing is a necessary measure with a high economic cost, national authorities themselves must intervene with mitigation decisions that, by easing social distancing, flatten the recession curve.

The most severe and long-term economic impacts will be felt by companies that are in debt, have poor cash flows, have little international reach, companies forced to close, cannot hold and hire staff or cannot repay debts, and companies that are inadequately digitised.

Positive signs come from governments' efforts to mitigate the harmful effects of the recession on the economy are increasing in response and counteracting the crisis.

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CHAPTER III

Data description of a sample of southern European countries: overview of Italy, Portugal and Greece enterprises

3.1 Introduction

The global spread of the health emergency has produced and will continue to produce unprecedented macroeconomic implications.

The crisis generated by the pandemic shows unique and peculiar traits linked to the forced closure of activities, the reduction of people's mobility, the implementation of social distancing rules, massive public monetary and fiscal interventions, and, finally, the changes induced by the new context in the behaviour of people and businesses, such as the increased use of digital services and the recourse to smart working.

By its very nature, the crisis had an asymmetric intensity on the different sectors of the economies, impacting more on the activities most exposed to lockdown and restrictions.

According to the studies analyzed, the sectors most affected by turnover contraction were travel agencies (-51.3%) and hotels (-47.1%). However, the impacts of the crisis were also very severe in air transport (-50.8%) and catering (-33.8%).

Conversely, a small group of sectors benefited from the changes induced by the pandemic due to the profound change in consumer and business habits. These include online trade (+23.8%) and technical and industrial districts (+1.3%).

The undermining of a substantial part of SME turnover also affected credit management and corporate liquidity management between the first and second half of 2020.

Non-payments, i.e., the value of unpaid invoices out of those due or past due, increased dramatically, resulting in more than 25% contraction in revenues.

In some sectors, especially in the tourism industry, the situation has been even more alarming; indeed, activity has dropped by 65% worldwide for the flight industry, while there has also been a record drop in foreign trade.

The activity limitation and uncertainty generated by the crisis have also affected business demographics, with fewer births in 2020 than in the previous year. The lack of these new businesses has led to effects on employment creation.

In particular, the contraction of SME business turnover has been more abrupt in Italy than in other Eurozone countries, so much so that the ECB has highlighted the problematic situation in which Italy finds itself after the pandemic and subsequent lockdowns.

As is well known, euro area PMIs reported an adverse change in turnover for the first time since the beginning of 2014, in terms of net percentages equal to -2 percent for the euro area.

Despite some differences between countries, the deterioration was widespread, although the sharpest decline was recorded in Italy, followed by Slovakia, Greece, and Spain.

In the baseline scenario of the Eurozone annual GDP projections, the decline in real terms recorded in 2020 and 2021 is expected to recover by around 3.3% in 2022.

The fall in foreign demand and the measures taken to contain the Covid-19 epidemic in Italy and the European countries analyzed have led to a cyclical and tendential contraction in foreign trade of a magnitude not seen since the birth of the European single market in 1993.

Overall, the contraction caused by Covid was heterogeneous across countries and among the largest economies in the euro area, the decline in economic activity was more pronounced in France, Italy, and Spain than in Germany and the Netherlands, to the extent that, for some product sectors, the damage was the World record.

To analyze the impact of this shock on the SME system at an international level, the results of the ES Follow-up Survey questionnaires on COVID-19 carried out by the World Bank Group and administered during the health emergency to a significant sample of SMEs in south-eastern Europe, in particular Italy, Portugal and Greece, were analyzed.

The SME survey system presents itself in the annus horribilis of COVID-19 without having recovered the marginality levels of the previous crisis of 2007, but with improved financial soundness indices.

In all cases, the impact of the lockdown caused a muscular asymmetric and sectorial contraction in revenues and a severe deterioration of payment times.

The SMEs examined came face to face with the health emergency after a decade characterized by a slow and unfinished recovery, which allowed them to recover only partially the pre-crisis levels of their financial accounts.

Despite the many differentiating factors between the countries involved in the survey in terms of lockdown measures and actual business operations, the demand and supply effects of social distancing, reduced mobility, government intervention, and international trade trends, it was possible to develop forecasting models that allow the impacts of the health emergency on the affected industrial sectors simulated.

Companies have been encouraged to accelerate their digitalization processes and focus more on those areas that have proved to be strategic in managing the emergency.

Other areas in which it is necessary to invest are skills, opening to international markets, and more careful risk management to have more muscular shoulders and remain competitive even in complex situations.

The following paper sets out to analyse the impact of the spread of a pandemic at a global level, trying to understand the economic shocks caused by this spread and the prospects for the recovery of the affected economic sectors following the emergency.

The work was organized by presenting, in the first chapter, the research framework combining the analysis of regulatory, preventive, and social measures related to the pandemic, as well as the impact on macroeconomic variables and SMEs at the international level.

The second chapter focused on economic analysis, contextualizing the spread of the virus in what is a highly globalized and interconnected world, to highlight the economic repercussions, both direct, such as the lack

of employees in jobs due to the disease and the fall in expenditure because of uncertainty, and indirect, caused, for example, by restrictions imposed by governments to contain the spread of the pandemic. The third chapter, going into detail, was dedicated to investigating the impact of the pandemic on the central industrial districts of Italy, Greece, and Portugal. It started from the results of the questionnaires administered by the World Bank Group to a representative sample of SMEs to highlight the effects on the economies of the most affected countries, especially concerning the closures of economic activities that occurred during the reference period and the shocks to supply and demand caused by COVID-19. This chapter explored the characteristics of the countries, economies, and sectors under study, focusing on the disruption of global supply and value chains caused by factory closures and the consequent reduction in production. In the fourth and final chapter, hypotheses were presented on possible future scenarios, on the economic impact at the level of the country examined and at a global level, reflecting on how the containment measures implemented by governments, if on the one hand, they contributed to the total blockage of the economy, on the other, could offer ideas for the recovery of the entrepreneurial fabric. To conclude, a specific section was dedicated to the role of ICT, one of the sectors most affected by the disruption of global value chains but, at the same time, a fundamental lever for tackling the crisis and accelerating recovery.

3.1.1 Preliminar analysis

The following chapter presents the results of a survey on the productive sectors of three countries in South-Eastern Europe, Italy, Greece and Portugal. It has been elaborated starting from the World Bank interviews, highlighting the ability of companies to react to the economic impact of the COVID-19 emergency, concerning company size (small and medium-sized companies vs large and multinational companies), the degree of digitalization (use of e-commerce and smart working) and the international vocation (exporting companies vs companies focused on the local market).

The analysis was carried out with the help of interviews called "COVID 19 Impact ES Follow-up Survey" of the World Bank submitted to a significant sample of companies in the first and second round 2020 with a time horizon of analysis that went from May to December 2020.

The research was based on in-depth interviews conducted by the World Bank using a direct, qualitative approach to explore the immediate reaction of firms to the lockdown about their technological size, the role of international markets and the effect on business models of the reshaping of consumption habits.

At the end of the phase of the restriction imposed by national governments, the scenario in the economies analyzed appears relatively homogeneous, insofar as almost all the SMEs surveyed were affected by the Covid-19 crisis and alternately suffered a slowdown in production activities with a consequent reduction in business volumes. They had to suspend activities entirely, with considerable effects on economic and employment sustainability, even in public support measures introduced by the respective governments.

Most companies face financial difficulty, with liquidity problems arising from partially fixed cost structures and reduced or delayed revenue streams. This effect results in an inability to meet current expenses and the immediate need for economic support to rebalance the working capital cycle.

In particular, the technological dimension, already an instrument of industrial innovation before Covid, appears as a striking lever, especially concerning e-commerce and digital transformation for the new remote collaboration services necessary to cope with the distancing and limitation of circulation, especially in the first period of analysis.

In a medium/long term perspective (second round), the use of technology for the remobilization of work and business activities, in a medium/long term perspective (second round), is confirmed as an indispensable factor of resilience and development.

The rapid spread of smart working has also proved to be an effective tool for maintaining relations with clients and suppliers and creating collaboration and motivation in employees.

The crisis has widened the gap between internationalized companies and those focused on the domestic market as far as exports are concerned. The outlet on foreign markets has always been, in fact, one of the factors of success of companies, but never has its importance increased, also as a factor of compensation for a domestic market depressed by the crisis.

From what has been analyzed, the fundamental skills for dealing with the emergency were, without a doubt, emotional resilience in the face of the crisis, lucidity in interpreting the context and speed of reaction.

The more companies can read the relevant information on the transformation of markets, the more they will be able to develop new business areas and identify new forms of positioning in the relative supply chains.

The value of exports and the drive towards internationalization should not be underestimated so that those companies that have a significant share of foreign markets are resisting the crisis, not least because internationalization has been one of the main drivers of growth for European SMEs in recent years.

In particular, for Italy, this fact is also confirmed by the strong growth of exports of domestic SMEs, which increased, between 2014 and 2018, at an annual growth rate of +2.5%.⁴²

Despite the health emergency's impacts on all economic systems and the resulting slowdown on both the supply and demand sides globally, internationalization remains for Italian, Greek and Portuguese SMEs one of the main drivers of growth and business recovery in the post-Covid era.

Even if the propensity to enter foreign markets increases as company size increases, confirming the size scale as one of the elements of resistance to the crisis.

In extreme synthesis, in the context of general disorientation created by the pandemic, the winner is the one who is lucid and reacts effectively to the transformation underway.

⁴² ICE Report, "Italy in the international economy' 2020-2021"

3.1.2 How Portugal, Italy and Greece faced the pandemic

The coronavirus cases in Portugal, calculated based on the ratio of those infected to the population, were much lower than in other countries, especially Spain and Italy, to name the most affected. The Iberian country, although concerned about the inevitable economic consequences of the crisis, has held up well thanks to the prudence and speed with which the Costa government imposed the lockdown, sheltering it from what could have been a disaster.

The first cases of Covid-19 in Portugal were registered on March 2, 2020; 17 days later, when there were 642 positives and two deaths, a state of emergency was declared. A few days earlier, when there were still 250 positives, schools and universities were closed.

The restrictive measures in the country were not as strict as in Spain and Italy; meeting places and bars were closed, while construction sites and factories remained open.

The population responded well to the invitation to stay at home. A survey released by the Portuguese website **Público**⁴³ on Easter Day showed that 51% of citizens went out no more than once a week. Reducing social contacts to a minimum has undoubtedly paid off, despite a high number of over-65s - lower only than in Italy and Greece - in the population and a health system bent by years of austerity, with few places in intensive care.

However, the Iberian country has managed to limit the damage of Covid-19, much better and much earlier than neighbouring Spain, Italy and other European states.

The factors, as Ispi⁴⁴ explains in a recent report, were various. First and foremost, the timeliness of the containment measures. A fundamental role was played by the collaboration of the opposition with Antonio Costa's socialist majority and the population's respect for the restrictions. Geography also played its part, but the people played the most critical role.

In the emergency, political tensions were reset. The opposition offered the maximum majority cooperation to tackle the crisis. A speech by Rui Rio, leader of the Social Democrats, the main opposition party, wished Prime Minister Costa "courage, nerves of steel and good luck". After all, he concluded, "his luck is our luck".

Since February 2020, Italy has seen a series of measures adopted by the central government to counter the spread of the virus, which have become increasingly stringent and have increasingly involved the Italian territory, to the point of declaring Italy entirely a red zone.

Between January 31 and February 1, 2020, Italy was the first European country to block flights to and from China, in one of the most drastic measures in the EU. Once the first domestic outbreak was discovered, the quarantine of 11 municipalities in northern Italy (in Lombardy and Veneto).

On February 23 2020, the Council of Ministers issued Decree-Law no. 6, which sanctioned the total closure of municipalities with active outbreaks and the suspension of demonstrations and events in the same

⁴³ <https://www.publico.pt>

⁴⁴ <https://www.ispionline.it>

municipalities; in the following days, the President of the Council of Ministers, Giuseppe Conte, issued a series of implementing decrees (DPCMs) with progressively stricter restriction measures that were gradually extended to the entire national territory.

With the DPCM of May 16 2020, Prime Minister Giuseppe Conte announced to the country the start of phase 2, in which many retail businesses, including bars, restaurants and hairdressers, are resumed, and some restrictions, such as social isolation and regional displacement, are lifted.

Following the upturn in the infection curve in the autumn of that year, Decree-Law No 125 of October 7 and the Prime Ministerial Decrees of 13, 18 and 24 October progressively introduced renewed restrictions focusing on regulating commercial and private activities on restricting movement.

With the measures introduced by the Prime Ministerial Decree of November 3 2020, and confirmed by the Prime Ministerial Decrees of December 3, 2020, and January 14 2021, the Italian Regions have been grouped into three different types of epidemiological scenarios, with the adoption of more or less restrictive measures depending on the scenario.

Further decree-laws extend the ban on moving between regions until April 25 2021. Decree-Law no. 2 of January 14 2021, established a 'white zone' for areas at low risk of contagion and extended the state of emergency until April 30.

Decree-Law No 52 of April 22 2021, reinstated the yellow zones and extended the state of emergency until July 31 2021. A timetable of the gradual reopening of the yellow zones was also drawn up, and COVID-19 green certification was established for people who had been vaccinated or cured of COVID-19 or who had a negative antigen swab.

Finally, Decree-Law no. 105 of July 23 2021, extended the state of emergency until December 31, 2021, and extended the contexts in which COVID-19 green certification was made compulsory from August 6; the parameters for differentiating regions into epidemiological scenarios were also changed; this time based on the occupancy rate of intensive care units and medical areas.

The impact of these measures on our country has been disruptive in all respects.

Greece discovered its first case on February 26 in Thessaloniki: a 38-year-old woman from Milan. The state's commitment to keeping the country safe from COVID-19 has so far paid off, as the Guardian⁴⁵ reconstructs in an article devoted to the Greek case. Out of a population of just over 11 million, as of April 16 2020, there were 2,207 confirmed positive cases and 105 deaths, much lower numbers than in other European countries.

If the virus had spread, disaster would have been assured. Greece's public hospitals are still bearing the brunt of ten years of heavy health care cuts. In response to the pandemic, hospital doctors staged silent protests across the country on April 7 2020, urging the government to hire more medical staff and use more resources from the private sector.

⁴⁵ <https://www.theguardian.com>, "How Greece is defeating the coronavirus despite a decade of debts", Helena Smith, 14 April 2020.

The authorities-imposed restrictions on gatherings and transit to prevent travel, and all liturgical celebrations took place in churches behind closed doors.

The measures are taken by the centre-right government of Prime Minister Kyriakos Mitsotakis to combat the pandemic, considering that a quarter of citizens are of retirement age, have been based on social distancing, monitoring of incoming flights, especially from China, and compulsory quarantine.

What is increasingly recognised as textbook crisis management, even by political opponents, has among its merits the choice of prioritising science over politics together with a managerial approach centred on “*state sensitivity, coordination, determination and speed*”, to quote Mitsotakis⁴⁶ words in Parliament.

"Perhaps it has helped that Greece has been experiencing an almost constant state of crisis since 2010, he continues. "A society that has suffered hardship over a prolonged period knows when personal sacrifice is necessary or inevitable. Our schools closed before there was the first victim. Most countries moved a week or two after mourning the loss of dozens of victims", said Prime Minister Mitsotakis.

On March 4, earlier than in most countries in Europe, schools were closed, followed shortly after by bars, cafes, restaurants, discos, gyms, shopping centres, cinemas, retail shops, museums and archaeological sites. Eight days later, on March 12, the first confirmed victim of the new coronavirus was confirmed by the Ministry of Health. The general enforced quarantine, which began on Monday, March 23, has been extended until April 27⁴⁷.

For *Money.it*, the cases of COVID-19 in Greece were probably underestimated as there were no widespread testing or post-mortem coronavirus tests.

Nevertheless, the pandemic catalysed to proceed with a series of reforms just as Greece went into lockdown. Taking advantage of the moment, the government announced some long-overdue measures to protect citizens' health and modernise the state's bureaucratic machinery and support the economy.

3.1.3 Close perspective of the dataset: differentiation and definition of surveyed firms

The dissertation of this chapter is about the economic and behavioral impact that Covid-19 has had throughout two specific periods. The countries studied are Italy, Greece, and Portugal to have better benchmarks and indices whose comparison is plausible. As shown in the following graph, the purpose is dealing with Southern European countries linked by similarities related to GDP per capita and HCI (Human Capital Index). The Human Capital Index is a report produced by the World Bank. The index compares which countries are better at leveraging the economic and professional strength of their citizens.

The World Bank states that “*The HCI provides a new definition of human capital and quantifies the contribution of health and education to the productivity of the next generation of workers*”⁴⁸.

⁴⁶ <https://www.theguardian.com>, “How Greece is defeating the coronavirus despite a decade of debts”, Helena Smith, 14 April 2020

⁴⁷ Hellenic National Public Health Organization (EODY)

⁴⁸ <https://www.worldbank.org>

The index quantifies how much capital each country is wasting due to lack of both education and health. The index was first released in October 2018 and ranked 157 nations. The human capital index fluctuates between 0 and 1, which denotes that the highest potential is achieved.

| Country | GDP annual growth | GDP per capita | HCI |
|----------|-------------------|----------------|-------|
| ITALY | 0,34% | \$ 33.225,6 | 0,728 |
| PORTUGAL | 2,24% | \$ 23.214,0 | 0,769 |
| GREECE | 1,87% | \$ 19.581,0 | 0,69 |

SOURCE: Chart developed by the author



SOURCE: Graph elaborated by the author

The importance of having an analytical and descriptive session in the paper is crucial. Through this arrangement and analysis of data it will be possible to understand the trends that the 3 countries have experienced, examine the results obtained from the graphs and comment on them by assessing the differences and similarities found.

The ordered set of data is the result of previous analytical work, supported by the right tools provided by the World Bank so that this survey can have depth and significance.

In order to be able to compare the percentage incidences, it is imperative that the companies and above all the countries have similarities (not only economic but also geographical, social and cultural) in order to obtain a more truthful, concise and realistic representation.

The object of the study was classified into two periods. However, there is a slight discrepancy. In fact, in Italy the last month of fieldwork for the first period is 06/20; in Greece 07/20; in Portugal 10/20.

As regards the second period, on the other hand, the last month of work is: 12/20 for Italy; 11/20 for Greece; 02/21 for Portugal.

It is therefore also true that the data from Portuguese firms are more recent than those from Italy and Greece. This probably explains the similarities in the dataset for Greece and Italy, which very often have very similar numbers.

However, a consistent representation is secured as the time dilation is only a few months, so the data can be compared with each other and are reliable for comparison.

In this chapter, the focal point of the discussion will be on the data analyzed. Reviewing the given data makes it possible to divide and classify the inputs into six macro-categories: sales, production, labour, finance, policy & expectations.

Concerning the above statements, the economic situation has been represented by using graphs to make the countries' trends clearer.

To ensure that the description and discussion of the thesis are well defined, it is necessary to mention the type of classification conducted in the graphs. The companies have been divided according to some factors: their size (firms between 5 and 99 employees defined as SMI; large firms with more than 100 employees); the type of reference sector, which is the one they belong to (manufacturing or services); and lastly, the degree of exporting (firms that directly exports are 10% or more than sales and non-exporter firms).

3.2 Sales situation: Percentage of firms that have ever temporarily closed during the COVID-19 outbreak

The first question that allowed to make a careful analysis was about the percentage of firms that have ever temporarily closed during the COVID-19 outbreak and through these 3 graphs is willing to be understood how the trend in the 3 countries studied is very homogeneous in Portugal, in fact there is very little difference between the 2 cyclical periods and the nature of the companies (in essence both categories have suffered regardless of their size); the situation is slightly different in Italy, a country where, for example, there was very little difference between the first and second period for SMIs, while the percentage of large firms fell drastically from the first period to the second (there was a decrease of about 30%); finally, as far as Greece is concerned, it is possible to see how the difference between the first and second period is barely perceptible, however, the percentage difference between SMIs and large firms is evident (in fact, we have a delta of almost 30% for both periods, which highlights how small and medium-sized firms have suffered a more tremendous blow).

In the following subsections, the analysis becomes more detailed. In the next pages it will be noticed that both each country and class of firm have different answers to the same question.

This observation is fundamental in order to understand how, despite the many similarities between the three countries (geographical proximity, cultural resemblance, use of the same currency, etc.), each of them has had different paths.

Particular attention should also be paid to the two periods. In fact, it will be noted that in some circumstances, 6 months apart, which is the period between one phase and the other, different results will be obtained. The outcome of this assessment has a rational explanation. At 6/7 months the surveyed firms have not embraced the crisis, instead they have tried to find a solution to get out of it in order to return to sale at standard levels. It will be difficult to achieve almost identical results from one period to the next, even if in some cases very similar figures are met. Much more common was the tendency to fight the economic recession suffered, denoting a dynamic essence of firms which have been able to innovate their sales systems to try to achieve economic stability again.

3.2.1 SMIs vs large firms

It is reasonable to differentiate between sample enterprises to become an accurate analysis. In this first case, the focus will be on the percentage of the temporary closure of activities according to the company's size. They are divided according to their number of employees. SMEs will have between 5 and 99 employees, while large companies will have more than 100 employees.

Starting with Greece (which, as we will see later, is the country closest to Italy in terms of results), two opposite trends are evident. In fact, for the SMIs, the closure result is more marked in both the first and second periods, going from 44.75% in the first period to 45.66% in the second. The situation is different, however, for the large groups. The percentages drop considerably for both periods, from 18.78% to 19.21%.

This truth can only mean one thing: the trend in Greece tended to be different depending on the company's size. SMEs, on average, have suffered more closures, while large companies have managed to cope with this aspect of the crisis.

If we now look at the graph at the end of this subsection, we can see that the trend is different from that of Greece and especially Portugal. Italy is the only country to exceed 50% for both categories in both periods. Both SMEs and large companies in Italy have undergone significant periods of shock, and perhaps it seems (given the consistency of SME results) that it is the large companies that have managed to recover financially in the second period.

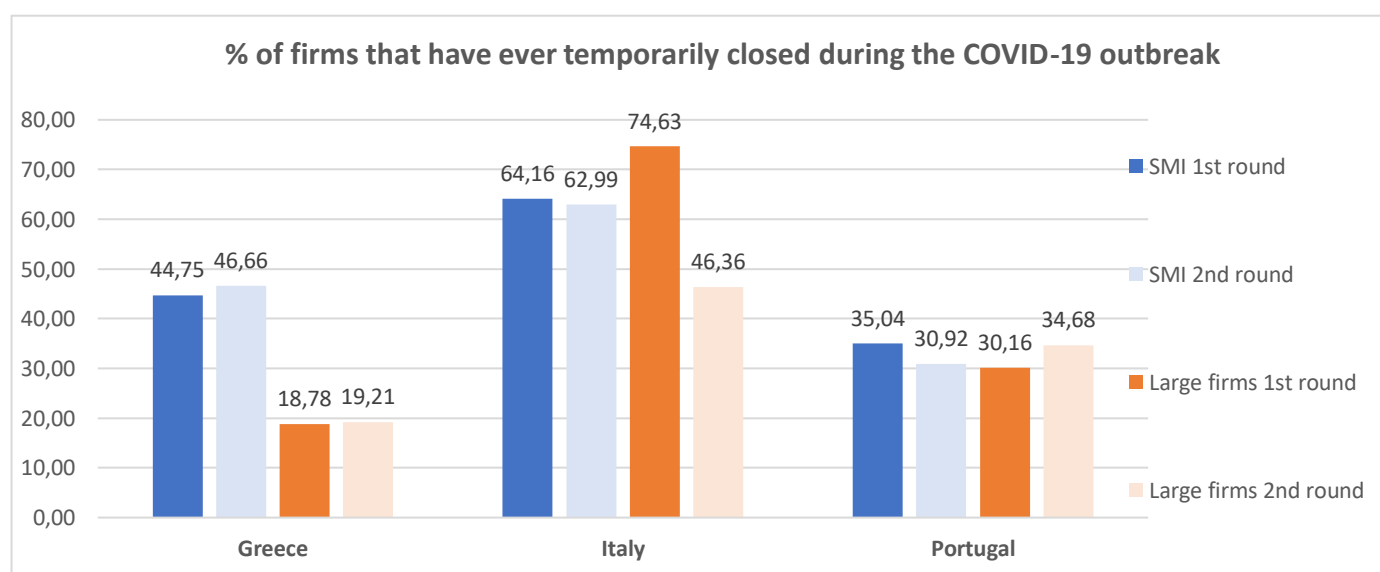
To support this, numerically, the percentage of temporary closures for SMEs was first 64.16% and then 62.99%. These results are very high for the other sampled enterprises.

For large enterprises, the same applies in the first period; in fact, the closure percentage is as high as 74.63% (demonstrating the great difficulty faced at the beginning of the pandemic) but then shows positive signs of recovery, in fact in the second period the percentage fell by almost thirty points to 46.36%.

For Portugal, which has the most homogeneous results over time for both categories, slightly different considerations apply.

It can be seen that the results are almost the same for all the items shown. This fact shows how Portugal initially faced the crisis lighter and with fewer restrictions than Italy, but for EMS also in correspondence with Greece. However, as the results are the same, it denotes a static growth in facing the crisis, as if there were no proper means and aid to do so.

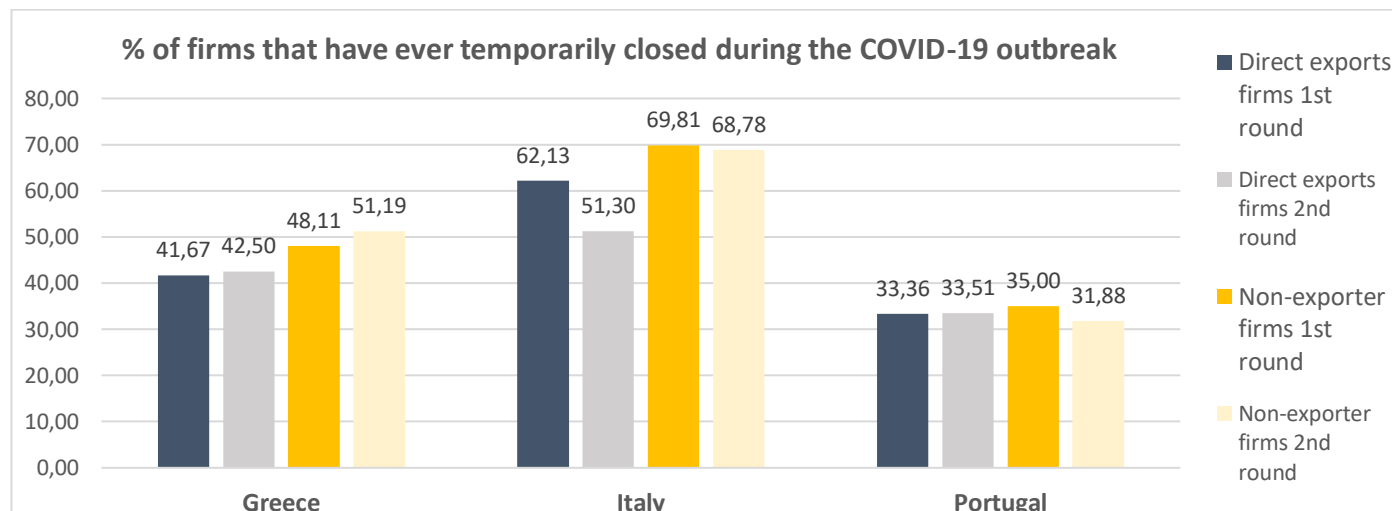
Numerically we are talking about results around 30%. More specifically, for SMEs, the closure rate went from 35.94% in the first period to 30.92% in the second. The opposite was true for large enterprises, i.e. the percentage of temporary closures was lower in the first period (30.16%) and increased in the second period (up to 34.48%).



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

3.2.2 Direct exports are 10% or more of sales vs non-exporters firms

As a final note, here is the second graph representing the same question. This time, however, the firms have been divided by the degree of export. The periods are still 2 for each category studied.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

In this case, Italy would appear to be the nation most affected and with more significant differences, especially to firms that export directly. We are dealing with a difference of approximately ten percentage points between the first and second periods. Non-exporting firms, on the other hand, are much more uniform, with a drop of just one percentage point between the first and second period (more specifically, from 69.81% to 68.78%).

Greece, on the other hand, represents a similar pattern to the ones mentioned above. In this specific case, the percentage of temporarily closed firms during covid 19 rises from 41.67% to 42.50% for directly exporting firms. On the other hand, as far as non-exporting firms are concerned, there is still an increase from 48.11% in the first period to 51.19% in the second.

Even in this case, Greece presents values that are not too remarkable (in comparison with the Italian ones), but that confirm and depict how approximately half of the firms that have experienced the surveys have been affected by an interim period of closure.

Last up is Portugal which, as is usual in this chart, represents the nation that has suffered the least harm even in this category. In this scenario and denoting much lower values than those of the other nations, it is instantaneous to focus on the homogeneity of the values mentioned above. Exporting companies go from 33.36% to 33.51% (a barely perceptible difference), while non-exporting firms register a decrease from 35% to 31.88%.

3.2.3 Manufacturing vs Services firms

The last case study is the sales performance of manufacturing and service firms. In this section, it is possible to highlight how in Greece and Portugal, the firms that have suffered the hardest shock are those operating in the branch of the service rather than those in manufacturing.

A different situation has been faced by Italy, a nation where both the manufacturing and service sectors appear to have undergone a major shutdown. This statement comes from the high percentages reported for both sectors, with a slight deviation between the first and second periods. Despite this, the percentages remain very high, summarizing the problematic situation that Italian firms have had to face during this period of crisis (as can be shown in the following graph).

From the study of these graphs, it is evident that there has been an upward trend between the first and second periods for both sectors in Greece. The percentage of companies that have undergone a period of closure during the pandemic is increasing slightly (by about five percentage points for the manufacturing sector and 2 for the service sector).

More specifically, Greece shifts from a temporary closure of manufacturing companies of 26.72% to 31.05% versus the first 51.52% and then to 53.87% related to service firms.

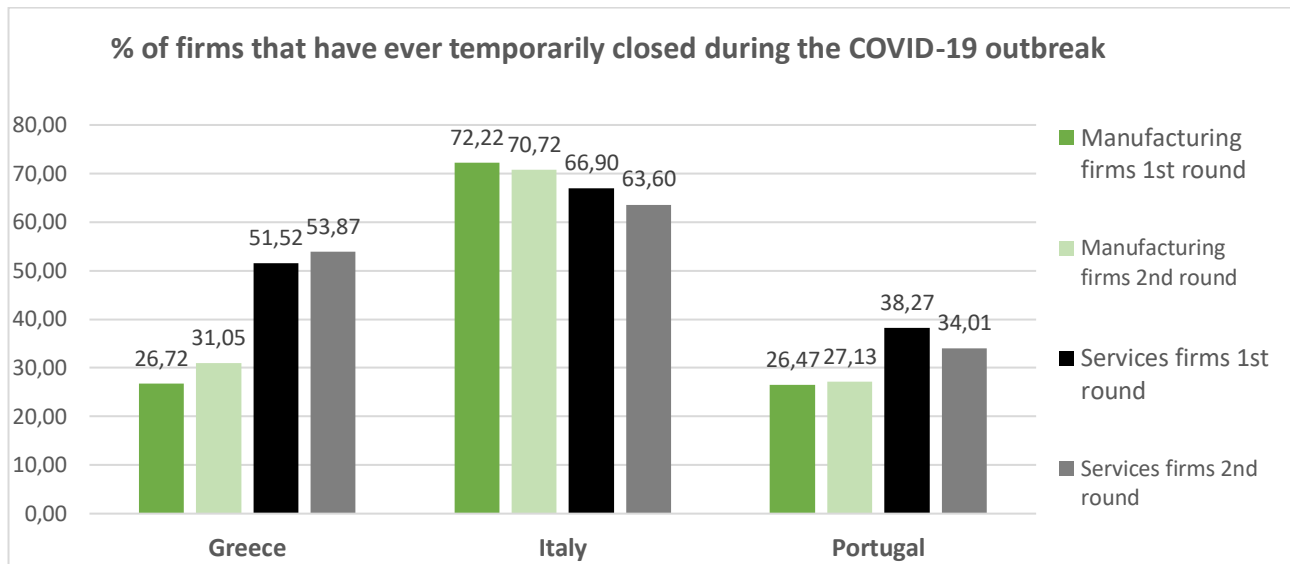
As far as Italy is concerned, there is an opposite trend to that of Greece, looking at the graphs. The fall is constant, even if in minimal terms (between 2 and 3 percentage points respectively for the manufacturing and services sectors in the two periods studied); from this graph, firms have almost experienced the same difficulties due to the pandemic regardless of the sector they belong to.

In Italy, manufacturing firms have gone from 72.22% to 70.22%, while services have shifted from 66.9% to 63.9%. As we can see, the difference is way too consistent in the branch of the services rather than in the manufacturing. In fact, in the services, we are dealing with a six-percentage points reduction.

From this analysis, Italy was the nation most affected by firm closures, followed by Greece and Portugal. Furthermore, among the three countries studied, Italy has suffered the most brutal blow, as it has the highest percentage of companies that have been closed (around 70%).

Completing the chart description is missing Portugal. Through the study of the above graphs, in Portugal, too, service companies have more affected the situation of closures. In this case, it goes from 38.27% to 34.01%. These percentages, however, represent the lowest values for this category among all the three nations studied.

On the other hand, the performance of Portuguese manufacturing firms is more regular and very close to the Greek survey data. In fact, from the first value of 26.47%, it moves to a second of 27.13% (which always answers the same question, i.e., the percentage of companies that underwent a temporary closure during the Covid 19 outbreak).



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

3.3 Macro-scenario of the production analysis

In this section, it is examined how production trends in companies have changed, how Covid-19 has altered some company behaviors, and how new production techniques are incorporated.

First, it will be discussed how the demand for goods and services has decreased compared to one year ago. Making a small digression before starting the statistical survey, the economic impact of the coronavirus crisis varies across industries and companies depending on several factors, including the ability to adapt to problems affecting supply chains, the availability of stocks or the use of just-in-time production processes. The European economy is expected to recover faster than previously forecast, as activity in the first quarter of the year exceeded expectations and the improved health situation led to a faster easing of pandemic control restrictions in the second quarter.

For the first time, the European Commission has mobilised the general safeguard clause of the Stability and Growth Pact as part of its strategy to respond quickly and forcefully to the coronavirus pandemic in a timely and coordinated manner. This allows national governments to better support their economies, as budgetary rules have been considerably relaxed.

Once approved by the Council, the general safeguard clause allows Member States to take measures to respond to the crisis in an appropriate manner, departing from the budgetary obligations that would normally apply under the European fiscal framework.

This measure is an important step in fulfilling the Commission's commitment to use all available economic policy instruments to support Member States in their efforts to protect their citizens and reduce the severe socio-economic effects of the pandemic.

Obviously, this affects not only production but also the other macro-categories.

In the following graph, through an ordered distribution of data, it is possible to focus on how the three countries of reference, and for the six categories selected previously, the results obtained are very homogeneous.

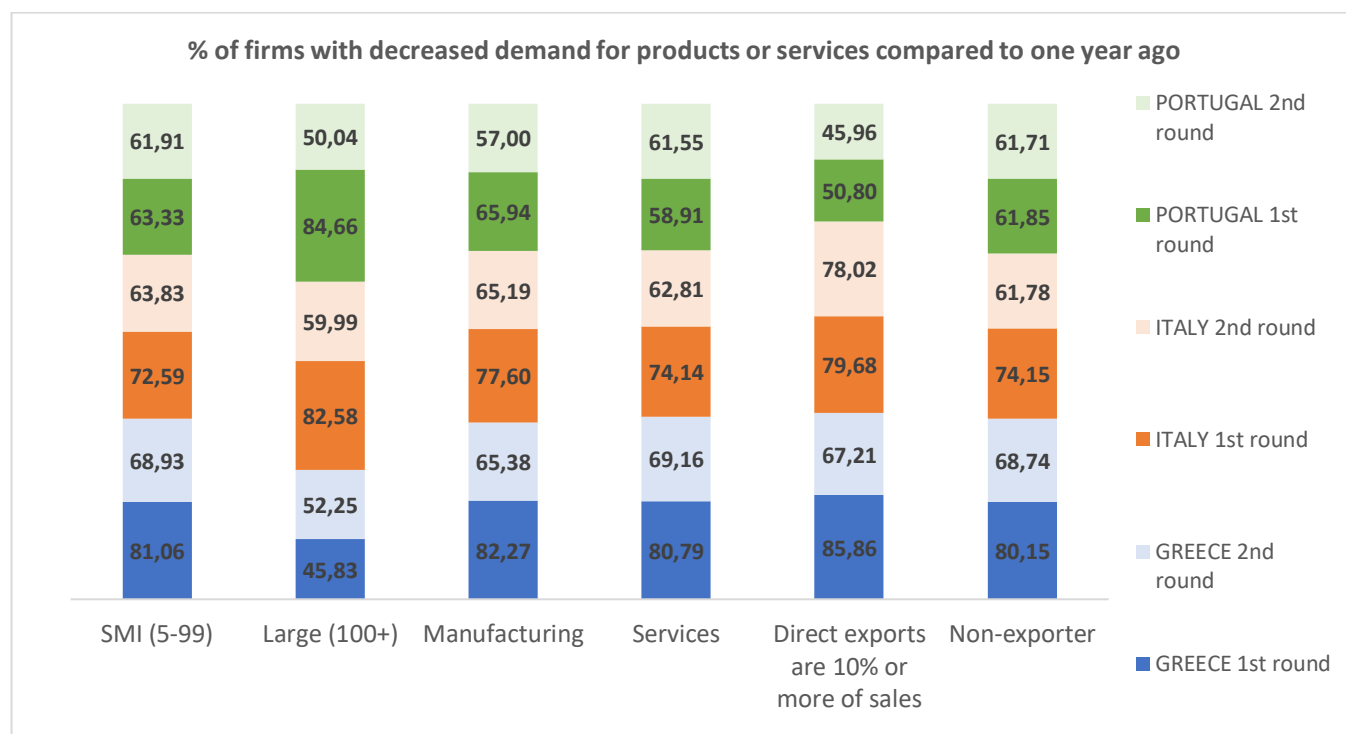
In order to make it easier to understand, the description of the data was always done with the first and second periods of the Covid-19. Even in this section of the analyzed data, coming from the surveys consulted via the World Bank, it highlights how between the first and second period there are entirely different values and trends even if the temporal difference is not so wide.

3.3.1 Percentage of firms with decreased demand for products or services compared to one year ago

The graphical representation below focuses on decreasing demand for products and services.

The graph drawn up by the author brings together all the categories and the three countries under survey.

Both periods are expressed, and the data obtained will be commented on immediately afterwards.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

In Greece (represented by dark blue bricks), the lowest result obtained is 45.83% for large companies in the first period. The other categories seem to have been more affected by this demand shock for percentages of: SMI-81.06%; Manufacturing-82.27%; Services-80.79%; Direct exporters-85.86%; non-direct exporters-80.15%.

In Italy (featured by bright orange bricks), the lowest result is awarded to the large firm category, too, thanks to a percentage of 82.58%. In comparison to the other five categories, there is an increase between 3% and 10%. As a result, the outcomes obtained for SMI, Manufacturing, Services, Direct exporters, and non-direct exporters are respectively: 72.59%; 77.60%; 74.14%; 79.68%; 74.15%. As it is possible to understand, these numbers are close to the Greek ones, but they are slightly lower (except for the percentage of large firms in Italy it has doubled the Greek figure).

The situation in Portugal is on the same wavelength as in Italy. In this case, the highest figure is linked to large firms, too, with a percentage of 84.66% (which represents the highest figure found so far in this category). In contrast, in the remaining categories, Portugal is identified as the nation with the lowest data. According to this representation (featured by bright green bricks), the values found by the World Bank surveys for SMI, Manufacturing, Services, Direct exporters, and non-direct exporters are respectively: 63.33%; 65.94%; 58.91%; 50.80%; 61.85%.

While in the second period, the situation is quite different. The data changes, and there are results that in some ways are in line with those seen in the first period, but which tend to show a decrease in terms of the percentage of firms that have been negatively affected by the demand for goods and services. In fact, the trend seems to have improved slightly compared with the previous period. The corresponding results

obtained diverge from the first period by at least ten percentage points in almost all categories. This fact may be proof that companies have had the first sign of recovery, even though they are still facing a crisis from which they are trying, step by step, to move away (including by new production or behavioral techniques to make workers feel even more comfortable).

Before beginning with the description, it is necessary to identify the different nations. As shown in the graph's legend, they differentiate by the colour used for their graphical representation. Greece's second period appears in light blue, Italy's in light orange, and Portugal's in light green.

As usual, I start by explaining one country at a time. In Greece I get the following numerical results for the categories below: SMI (68.93%); Large firms (52.25%); Manufacturing (65,38%); Services (69.16%); Direct exporters (67.21%); Non-direct exporters (68.74%).

When comparing the results obtained in Greece between the first and second periods, only one category increased from the first to the second period (i.e., large firms). In the remainder, there was a sharp percentage decrease, showing that Greek companies may have found a solution to the initial demand shock in a few months, although the decrease is still perceptible and problematic.

As regards Italy, on the other hand, the trend is much more homogeneous and shows an absolute decrease in all categories between the first and second periods. Indeed, I get the following numerical results for the categories below: SMI (63.83%); Large firms (59.99%); Manufacturing (65.19%); Services (62.81%); Direct exporters (78.02%); Non-direct exporters (61.78%).

However, the only type of company that has shown a minimal decrease between the first and second periods is direct exports. Of course, the percentage has fallen here, but we are still dealing with consistent results that do not bode well for a recovery in this sector.

Meanwhile, as was the case previously in other charts, Portugal is the nation with the lowest values in the second period. For directly exporting companies, percentages below 50% are involved (it is the first time I have gotten a result under 50% in this classification). Again, therefore, it appears that Portugal is the nation with the most vibrant economic health.

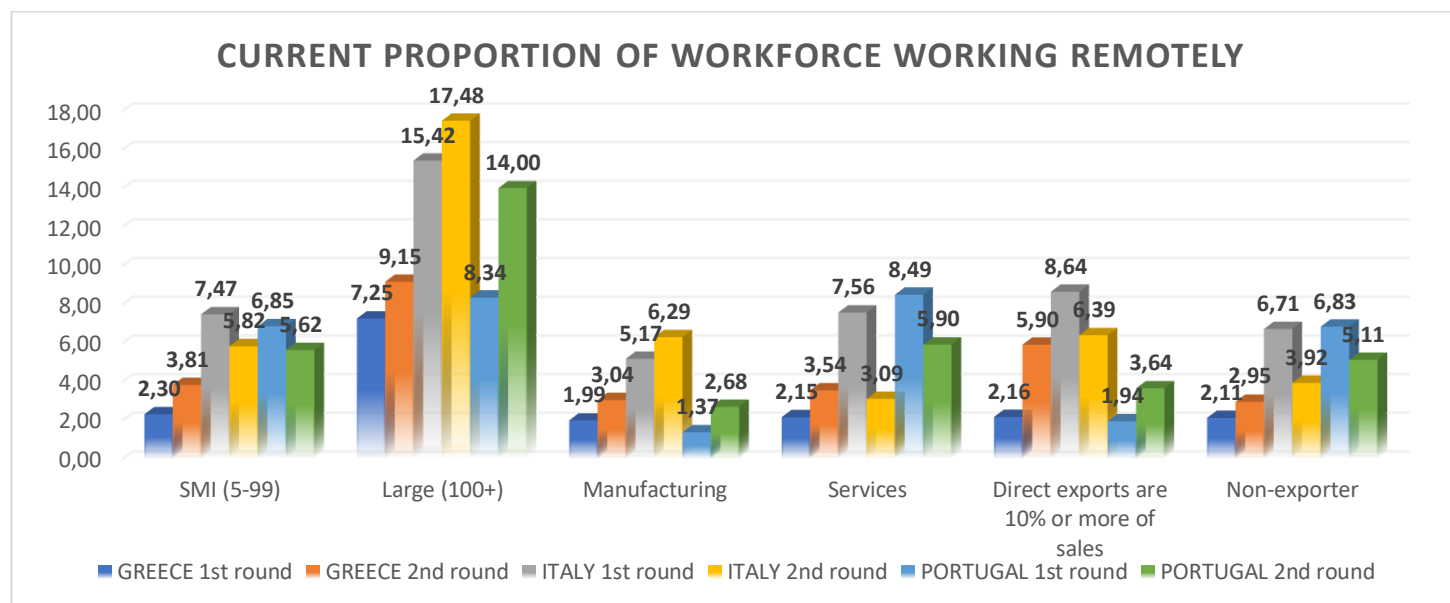
In Portugal I get the following numerical results for the categories below: SMI (61.91%); Large firms (50.04%); Manufacturing (57.00%); Services (61.55%); Direct exporters (45.96%); Non-direct exporters (61.71%).

3.3.2 Current proportion of workforce working remotely

The attention now turns to the analysis of a second graph and ordered data set. It is necessary to open a parenthesis to explain this new circumstance that many companies worldwide have had to face to sustain costs, remaining productive but without incurring in profit losses. Most companies operating in any sector have indeed innovated their production methods by introducing new working methods, such as smart working or remote working. Through this initiative, the worker is autonomous in terms of both working hours and working arrangements. In this way, companies have been able to eliminate certain fixed costs

linked above all to the physical use of company premises and the related expenses (essential utilities, rent, etc.) and to guarantee savings to contain the losses incurred during the first period of economic decline. It then examined how effectively the possibility of working remotely can benefit not only the employer but also the employee himself. If it is true that the former, using this modality, saves on numerous costs, the latter has a human benefit in that he is no longer tied to a physical location but can work in the individual conditions that he prefers without decreasing productivity and efficiency.

Through the study carried out, the proportion of the workforce working remotely was identified.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

3.3.3 Relevant remarks

The study carried out revealed the following results and related considerations:

1. Greece (represented by dark blue and orange bricks) was the nation that relied the least on remote working, although there was a slight increase in the level of the remote working workforce between the first and second periods in any of the categories studied. It is more difficult to differentiate between manufacturing and service companies because the data obtained seems to be almost the same, in fact, the former go from 1.99 to 3.04 and the latter from 2.15 to 3.54; lastly, exporting and non-exporting firms have a very similar numerical level for the first period of study, i.e., 2.16 for the former and 2.11 for the latter; however, in the second period, things change because exporting firms have a proportion of 2.95 while exporting firms have a proportion of 5.90, i.e., almost double.
2. Italy (identified by grey and yellow bricks) express that for the first round in SMI there is the highest figure of all, i.e., 7.47, and then dropped to 5.82 in the second period; The two highest values in the entire graph are also shown in large firms. Moreover, in the first period, there is a proportion of 15.42 that shift to 17.48 in the second one. It is easy to notice that these figures are way too consistent

compared to the other nations, except for the second round in Portugal. The values detected are about twice as high as those of other countries. The only categories in Italy that do not seem to have enjoyed a workforce operating from home are services and non-exporting companies in the second period with proportions of 3.09 and 3.92, respectively. All different proportions detected are significant enough to understand the incidence of remote working on the Italian market and the different segments investigated.

3. Portugal (outlined by light blue and green bricks) proportions data shows how noteworthy remote working is. The emphasis on remote working for SMIs and large companies is tangible in both the first and second periods. In fact, for SMIs, it goes from 6.85 to 5.62 (despite a declining trend); on the other hand, large firms experienced the opposite tendency, thus upward, whereby the proportion swings from a value of 8.34 to 14, which is the highest data in this graph for Portugal. The state of affairs appears to be the opposite in manufacturing and service companies. The data shows that the former (with values of 1.37 and 2.68) benefited much less than the latter (with numbers of 8.49 and 5.90). The data shows that the former (through values of 1.37 and 2.68) have benefited much less than the latter (which report numbers of 8.49 and 5.90). It seems clear that in the covid period just ended, the companies that have tried to innovate and change their production methods are mainly from the service sector. Although manufacturing companies have also gained this experience, they have probably relied on classical production methods.

Finally, for exporting and non-exporting companies, the same issue seems to have arisen.

Although the former may not have taken advantage (due to the rather low values of the proportion of the remote workforce, 1.94 and 3.64 respectively), the latter was much more involved, and this is demonstrated by the numbers on the graph affecting the output of non-exporting companies (referred to the values of 6.83 in the first period and 5.11 in the second).

3.4 Labour investigation

Covid-19 has changed lives and the way of doing business. The impossibility of going out when one wants to, the restriction in terms of physical contact with people, the less and less frequented offices have had an impact on daily life, especially for workers used to leaving home in the morning and returning in the evening. Since the first lockdown until today, it has been necessary to change the approach to work: many companies have chosen, forced by events, to practice innovative initiatives (such as smart-working), to increase or decrease the number of workers, etc.

In the following descriptive session, the labor-related dataset will be analyzed. The attention will be focused on two graphs (which have been broken down by period and category) concerning the percentage of firms that have increased the number of workers since the epidemic spread and the number of full-time permanent female workers.

According to these studies, the description is going to be more precise and aware of the differences figured out in the three surveyed countries. As it will be shown in the graphs, by the way, there will be a sort of homogeneity in the data surveyed which will prove how Italy, Greece, and Portugal have had very similar patterns that differ only on a few occasions (perhaps because of geographical proximity, economic conditioning, or other factors common to the nations).

By the way, dealing with labor could be helpful to dig into the past to see how this crisis can be compared to previous ones.

3.4.1. Historical considerations about labour crisis'

The International Monetary Fund made the comparison, giving figures, but many had already compared the current situation to the crisis following the stock market crash of 1929. The pandemic has been described as the worst crisis since the Great Depression.

The contraction of global GDP in 2020 is estimated at 3%. For Italy, this is one of the worst figures among industrialized countries: minus 9.1%. It is precisely this data that should be looked at first in order to find connections between this crisis and that of the 1930s.

The 1929 crisis was strictly defined as a stock market crisis followed by a decade of depression. This depression to which the current situation should be compared, but the causes are very different. In 1929 the US was producing a total capacity, in remarkable growth and expansion, delivering even more than the market could absorb.

Today the situation is different: as in the 1930s, there is a risk of a contraction in demand because consumption is limited by isolation and the closure of many activities, but there is also a lack of supply because of the drastic reduction in productive activities. It is not just the factories and restaurants that are closed, but also the countryside that is at a standstill because no laborers can be found and the activities that, with the border blockades, have lost their only suppliers.

The fact that we are currently not spending at home leads us to think of deflation, as does the increased precariousness of some activities. However, there is also blocked production, and for some goods, there can be a shortage that can lead to inflation and a rise in prices in a situation of large injections of money by economic institutions.

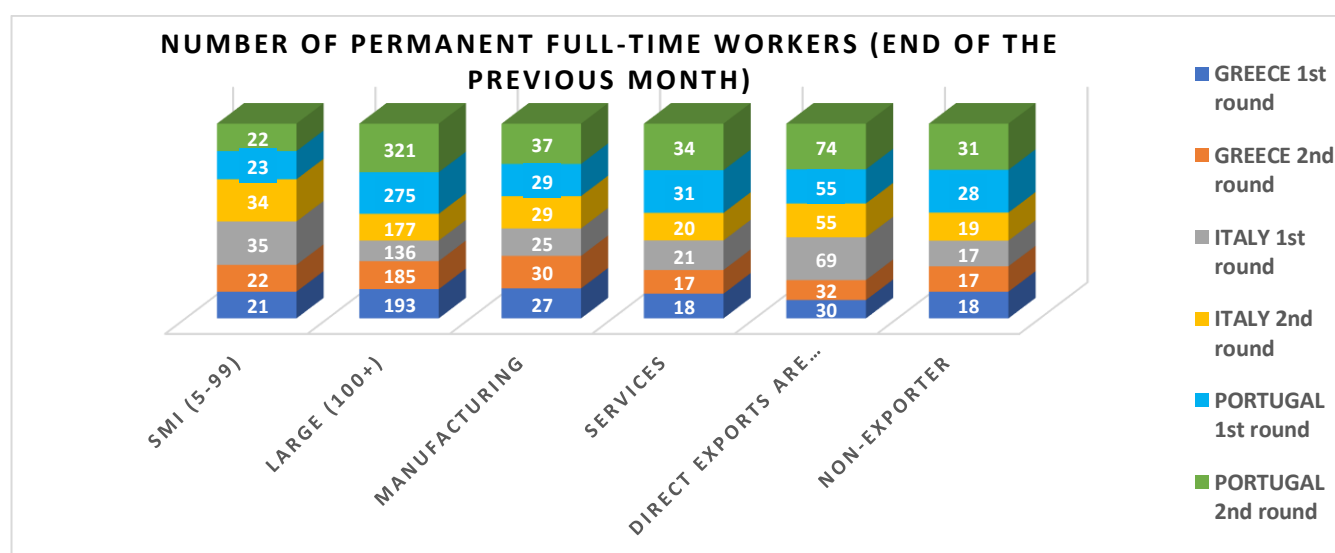
There is also another analogy: the widening of the social gap in a situation of economic crisis. In the 1930s, in the US, which was already the center of the advanced, industrialized world, there was a surge in unemployment like there is now, where the people losing their jobs are precarious workers with already low incomes and unskilled jobs.

3.4.2 Number of permanent full-time workers (end of the previous month)

It is well acknowledged that fantastic opportunities can arise from a crisis and this first graph is pointing out the first period of Covid-19 and the percentage of firms that have ever increased the number of temporary workers, which could lead to a slow recovery.

According to this graph, the first graphic representation introduced in the dissertation is about the number of permanent full-time workers, which will allow to make a comparison by the two periods in the same chart, without shifting.

The meaning of this graphic representation is as follows: the blocks must be taken two by two. In this way, it will be possible to numerically compare the development of each category between the first and second periods.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

Therefore, to make the illustration more understandable, the advice is to follow the legend to identify the different categories to the crucial period.

The analysis begins with Greece. It exhibits an increase of permanent workers between the two periods in the following categories: SMI from 21 to 22; Manufacturing from 27 to 30; Direct exporters from 30 to 32. On the other hand, it decreases in the following categories: large firms from 193 to 185; services from 18 to 17; Non-exporters from 18 to 17.

In this case, my commentary on this topic reveals not much divergence in the number of permanent workers between the two periods. The situation is reasonably constant and follows a homogeneous trend.

Now it is the turn of Italy, which in most categories has a higher number of permanent workers than Greece. More specifically, in three categories, the value increases from one period to another. I am mentioning large firms (from 136 to 177 permanent workers); manufacturing firms (from 25 to 29), and non-exporting firms (from 17 to 19).

In contrast, there is a decrease in the following categories: SMI (from 35 to 34); Services (from 21 to 20), and direct exporters (from 69 to 55).

In Italy, as in Greece, both decreases and increases are defined by a difference of only a few measures, except in some cases where it is substantial and certainly implies a particular significance that could be found in internal business dynamics that could imply a good/bad economic performance (e.g., in large firms and direct exporters).

Finally, Portugal presents a situation of permanent workers quite similar to Italy. Also, there is a substantial increase (which is reflected as the most significant in the picture) that goes from 275 to 321 and is linked to large companies. Therefore, in Portugal, large companies needed to implement their full-time staff between one period and another. This thing could mean a partial recovery to normal business rhythms. Another significant increase in the number of workers has been achieved by direct exporting companies, which have increased from an average of 55 permanent workers to 74. This result may also lead to an implicit need for more labour.

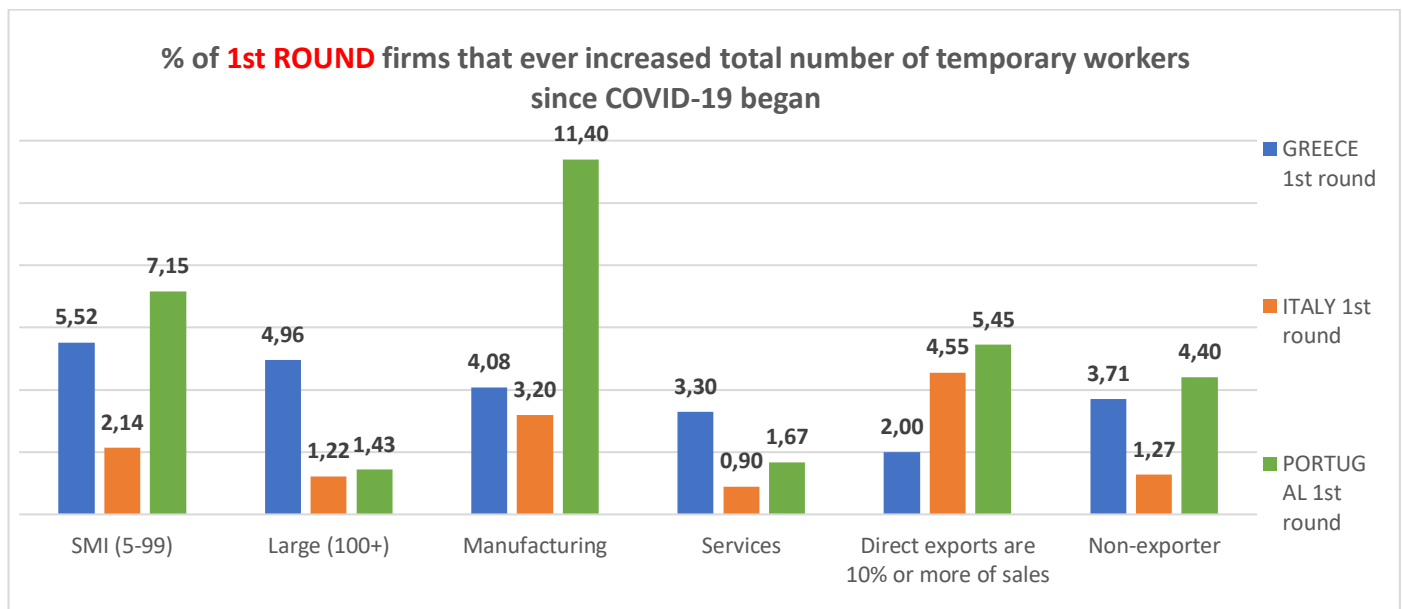
The other categories that experienced an increase in permanent workers are related to manufacturing (from 29 to 37), services (from 31 to 34), and non-exporting (from 28 to 31).

The only category showing a decrease, understandably, is SMIs, from 23 to 22.

This factor is probably to be found in the essence of an SMI, which, identifying itself as a leaner company and business than the large corporations or exporting companies of the world, finds it harder to recover from the blow generated by the epidemic.

3.4.3 Percentage of 1st and 2nd round firms that ever-increased total number of temporary workers since COVID-19 began

The following graph has been divided into two parts to make understanding and more transparent data. This graph will indicate in percentage terms whether the companies under investigation have ever increased the number of temporary workers since the covid- 19 began.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

In this graphical representation after the first Covid period, very few firms had the opportunity to hire new temporary workers (except perhaps those in the manufacturing sector in Portugal, which had a rate of 11.40%).

From the following data, it appears that Italy is the nation that has struggled the most, as in percentage terms, it is always in last place for all categories except for directly exporting firms (4.55%).

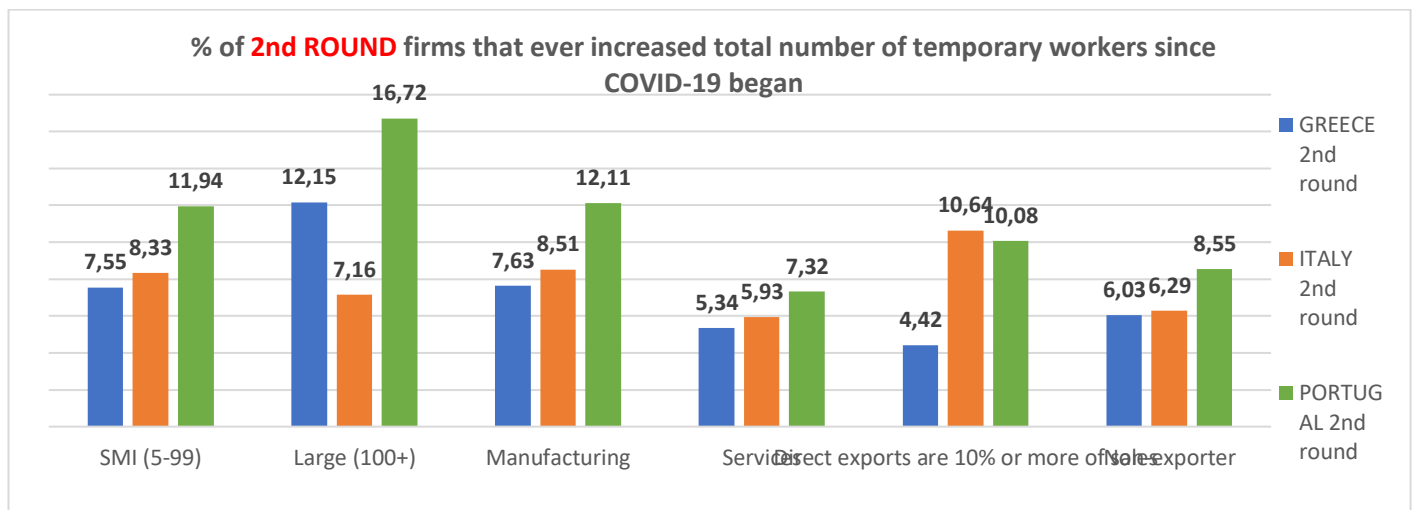
Greece is the most constant in this ranking because it does not seem to have had any category-dependent fluctuations. All the results are in a percentage range that reaches a minimum of 2% of the directly exporting companies and a maximum of 5.52% of the SMIs. Although they should have less economic power, they have had more possibilities to increase the number of temporary workers.

In conclusion, instead, Portugal stands for the country with the highest values (apart from large firms and services firms which mark respectively 1.43% and 1.67%) such as manufacturing firms that have increased the number of temporary workers by 11.40%, which is the highest data of all the chart; moreover, also SMIs with 7.15% and direct exporters report considerable rate of increase.

In the starter graph illustrated on the very next page, I will analyze the second period.

In this case there is a greater uniformity of data in the three countries. It is also true that it obtains the highest values in 5 out of 6 categories, being second only in the directly exporting companies by 6 tenths of a percentage. Commenting on Portugal's performance these values are: SMI (11.94%); Large firms (16.72%); Manufacturing (12.11%); Services (7.32%); Direct exports (10.08%); Non exporters (8.52%).

If, on the other hand, one wishes to compare the results of the first period with those of the previous period, one notes the fact that almost all the initial statistics doubled if not tripled their value, thus demonstrating exponential growth, apart from the category of manufacturing companies which remained almost constant. The most considerable fluctuation was for large companies, from 1.43% to 16.72% in 6 months.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

Moving to the Greece situation, the transition has been more balanced. Concerning the second period, it claims all the above statements made for the first one.

All values reached higher levels about the graph of the first period. It is tangible that the % of SMIs that increased the number of temporary workers is now 7.55% and not 5.52% anymore; instead, the most significant increase was in the large industries where the index goes from 4.96% to 12.15%; much more normal was the growth situation in the other four categories, respectively: Manufacturing from 4.08% to 7.63%; Services from 3.30% to 5.34%; Direct exporters from 2% to 4.42%; finally, the non-exporting companies increased the % of temporary workers from 3.71% to 6.03%.

The Greek situation is not quite the same as that of Portugal, from which divergent results and different trends were raised, suggesting that the two countries responded differently to the acute economic stress caused by the pandemic. In particular, it is highlighted how in the latter case (except for the category as mentioned above of large firms), the result at six months distance between one period and another is undoubtedly higher and increasing but by a very few percentage points, which could justify a non-significant approach of the Greek economy to the present labor issue.

Finally, as regards the case of Italy, the trend is very uniform and homogeneous here too. It seems consolidated that almost all the categories under study increased the percentage of temporary workers compared to the first period, but it was even a standard measure for all the companies surveyed.

Even in this particular case, which may be more similar to the trend of Greece than of Portugal, the result demonstrates a constant growth. No category has peaks that the others cannot reach. If one were to analyze what would make the data obtained by Italy different from those of Greece, I would have to dig deeper and be even more precise and meticulous.

Although the results are very close, except for large firms and direct exporters, which have entirely different values, there are almost the exact percentages in the remaining cases. However, if I go back to the first graph, I can see that the first data for Italy could not even be compared to Greece because they were much

lower. Therefore, to be on the same level now would imply that Italy has grown more between one period and the following one.

In order to understand exactly what percentage of delta I am referring to between one period and another, here follows the list of percentage fluctuations:

SMI from 2.14% to 8.33%; Large firms from 1.22% to 7.16%; Manufacturing from 3.20% to 8.50%; Services from 0.90% to 5.93%; Direct exporters from 4.55% to 10.64%; Non exporters from 1.27% to 6.29%.

3.5 Finance breakdown

The issue of the relevance of effective financial resource management is taking on old roles again. After years in which there was a decreasing and contained cost of money, today it is the scarcity of resources generated by the industrial and distribution system that is of concern. It is the self-financing flows that are fluctuating due to the impact on Covid-19 turnover and above all due to the prolongation of the pandemic and the reduced volumes. Financial resources are needed, which hopefully will remain low cost. Many companies are too small to survive on their own and ensure continuity in the future post-corporate crisis environment. They will soon have to deal with a sudden and severe liquidity crisis. With severely reduced turnovers they will not be able to continue operating without an inflow of cash.

They will also have to quickly reorganise their operations, restructure and strengthen themselves financially and patrimonial to recover or maintain competitiveness in the new context of the post Coronavirus economic crisis.

In order to gain an even better understanding of the macroeconomic situation generated by the advent of Covid-19, the assimilation of data on the financial aspect of the surveyed firms is required.

Financial data makes it possible to understand how the economic trend and performance differ between countries and between different categories. It is well known that some types of businesses have suffered a more severe blow. The factors that are to be found as causes in this inequality, as in the previous sections, are to be found in the nature and core business of the company, its size, and the degree of exporting (all of which are conditioning and determining factors).

In this section, it will be checked the percentage of firms that have suffered a decrease in liquidity or available cash flow since the beginning of the pandemic. This division will be categorized by the difference between the two sample periods. With this system, it will be feasible to compare and contrast the results after six months to establish whether there has been a positive or negative change or whether the situation has remained constant.

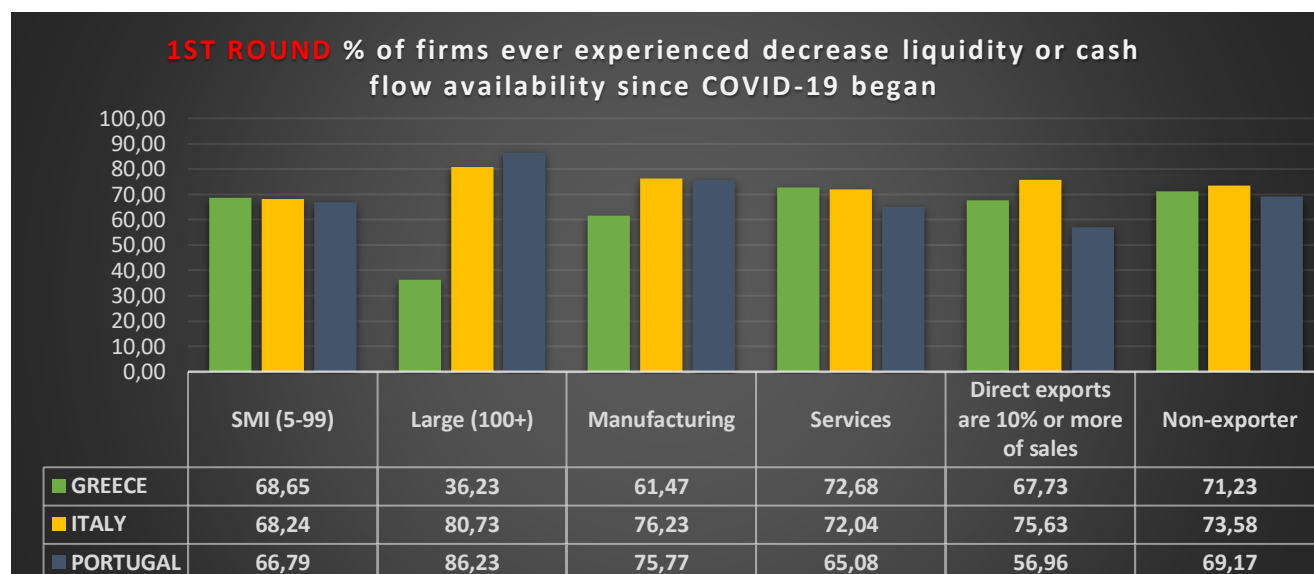
Another graph will be presented later. This fact will describe the percentage of firms that have ever used a loan from commercial banks as their primary funding source since the pandemic broke out. This classification will also be necessary to make a careful analysis of the financial situation in Southern Europe. In this way, it will be possible to determine which types of companies have relied most on this strategy to redress their financial situation.

3.5.1 Percentage of 1st and 2nd round firms ever experienced decrease liquidity or cash flow availability since COVID-19 began

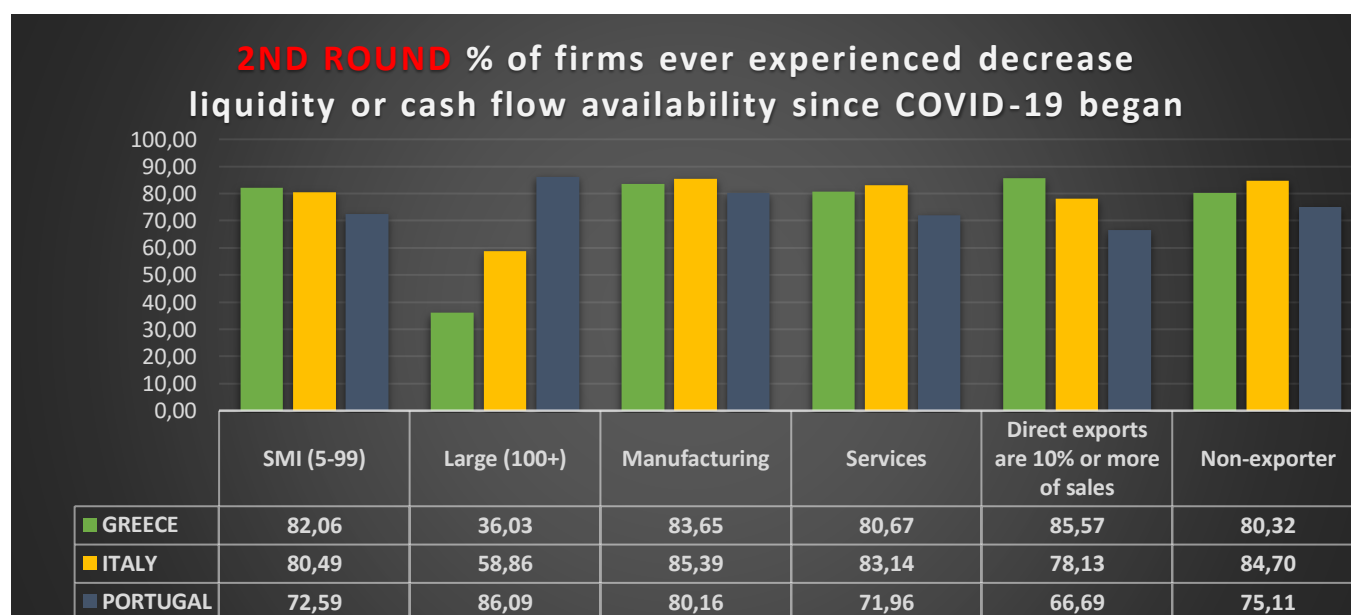
The data in this section relate to the aspect of finances. More specifically, they indicate the percentage of firms that suffered a drop in cash-flows liquidity and availability.

To have the right terms of comparison, for ease of finding the data and due to greater visibility, the second graph is inserted exactly in this compartment.

It has been purposely kept the same colours in the legend so that the shift from one period to the following one is even more visible and perceptible.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

Starting with the data description, as usual, the very first country under examination will be Greece.

In this country, the percentages calculated for both periods are huge, except in the case of large companies, which experienced acceptable levels of decrease in liquidity.

There was a considerable percentage increase in the second period, except for large companies (which, also from a financial point of view, would seem to be the least affected category). It is true that, despite a high percentage for the first period, it continued to rise in the second. It reached very high levels, close to 80/85% in practically all the other items.

Going into a more detailed analysis it is required to focus at the percentage change from one period to the following one.

For the SMIs, this variation implies a shift in the value of the companies that have suffered a decrease in liquidity or available cash flow, which goes from the initial 68.65% to 82.06%.

In the case of large firms, which is the only one to remain practically constant, the percentage goes from 36.23% to 36.03%, even marking a decrease, a symbol of how, perhaps, these companies are in the process of regrowth. This was the difference based on the industrial size. Now it will be shown what has been caused in the companies operating in two different productive sectors: in the manufacturing sector the 61.47% of the first graph increases up to a percentage of 83.65% (an increase of more than 20% between one period and the other aimed at justifying how this business is still in a phase of stalemate); in the services sector, in the same way, an increase is perceived. However, that shifts from 72.68% to 80.67% (which, by the way, is not as significant as that of manufacturing firms).

As a final point of examination, the firms subdivided by the degree of exportation also went through significant fluctuations, more marked in the directly exporting firms than in the non-exporting ones. As a matter of fact, in the first case, the index will move from 67.73% to 85.57% (this imply a very tough period for this category, financially speaking), and in the second one, the indicator relocates from 71.23% to 80.32% (even in this case the result is elevated enough not to convey a situation of economic security).

Having completed the analysis of the situation in Greece, the trend in Italy can be commented on. In Italy, the percentages obtained, from the first period, tend to be higher than in Greece. Already from the first period, the data obtained are pretty significant. The most striking, which differs from Greece, is linked to large companies' first period. In this case, 80.73% of them have experienced decreases in liquidity. If compared to the Greek data (around 36%), it is immediate to develop a critical thought that proves the large Italian companies in the first period have suffered much more than the Greek ones. By the way, Italy has gone through improvements. For the same category, it underwent a sharp decrease that brought the index, in the second period, down to 58.86%. In 6 months of difference, large firms may have found their internal balance that helped the percentage to drop.

It seemed interesting to me to start with this category because it was the only one to perceive a positive trend over time. By positive trend, I refer to a decrease in percentage terms to demonstrate how the higher the index, the greater the damage done to companies.

However, it is different what happened in the remainder of the categories studied. De facto, the index increased, which suggests that perhaps the time for financial recovery has not yet arrived for the above categories. Even though the first set of percentages may be pretty high, and therefore difficult to imagine a further increase, this is what has happened.

More specifically, this is the discrepancy in each category: SMI has gone from 68.24% to 80.49%; Manufacturing from 76.23% to 85.39%; Services switches from 72.04 to 83.14%; Direct exporters experienced a variation from 75.63% to 78.13% (which represents the tiny fluctuation in Italian chart); Non-exporter firms shift from 73.58% to 84.70%.

What about Portugal?

In this circumstance, Portugal deviates from previous trends and appears to be very similar to that of Italy. The percentages obtained in each of the categories are very similar to those of Italy. The same comment as for Italy also applies to Portugal. The peak results with the large firms that establish a very high percentage regarding the decrease of liquidity caused by Covid, corresponding to about 86.23% (the highest among the three countries), while the lowest value is observed in the category of directly exporting firms and it corresponds to 56.96%.

The first percentage, in the second period, does not undergo such a decisive change. This fact could mean a static situation of financial recovery on the part of large Portuguese firms. The value remains firm at 86.09%.

On the other hand, there is an increase of about 10% for directly exporting companies that report a percentage of decrease in liquidity or available cash flow of 66.69%. As there was an increase compared to the first period, the trend is the opposite. Thus, after six months, the direct exporting firms have not only not recovered the gap but have increased the percentage indicating the level of financial stress they are experiencing.

The remaining categories also had percentage increases. The explanation for this is due to an unfavorable condition for the economic recovery of firms. It is precisely this reason that justifies how worse returns are achieved in comparison to the last round.

If, on the other hand, there had been a positive trend, with the aim of financial recovery, it would have been a necessary and sufficient condition that from the first period to the second one there should have been a decrease in the charted value.

By way of clarification, the precise percentage increase refers to the following values: SMIs vary from 66.79 to 72.59%; Manufacturing firms moving from 75.77% to 80.16% while Services one experienced an alteration from 65.08% to 71.96%; in conclusion, non-exporting firms shift from 69.17% to 75.11%. This has been the condition related to the percentage of firms that have ever experienced a decrease in liquidity of cash flow availability since the Covid-19 broke out.

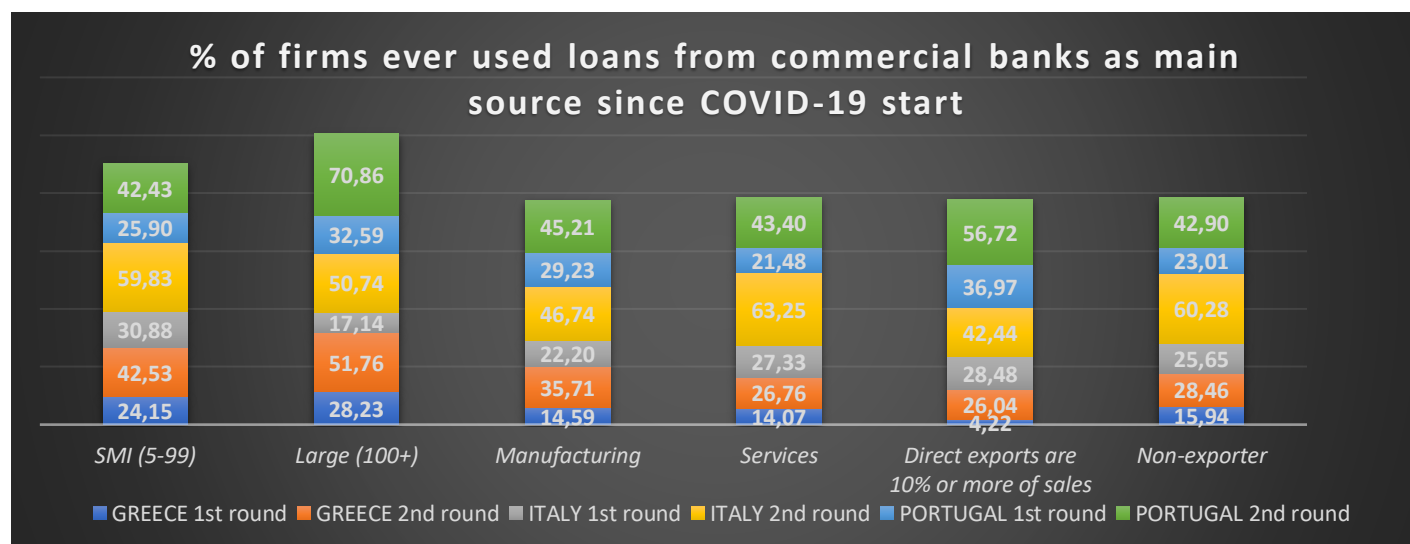
3.5.2 Percentage of firms ever used loans from commercial banks as main source since COVID-19 start

Now another relevant topic will be discussed: dealing with the percentage of firms that have used commercial loans as the primary source of financing.

The chart has been organised in such a way as to arrange each country and its percentages in the same graphic layout. In addition, data for each individual category studied has been included.

The purpose of the following analysis is to focus attention on which countries and which types of businesses have used commercial loans the most as their main source of funding to recover from the economic stress caused by the pandemic.

Thanks to the graph below, it will be easier to expose these arguments.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

To make the graph more comprehensible, it is necessary to consider the blocks two by two. In this way, it will be possible to compare the results of the countries period by period, identifying to what extent there has been a change with the previous period. This time the six different categories of surveyed companies have been inserted on the abscissae. Then, the statistical evolution of the ordered data proceeds vertically, having as a fixed variable the abscissae to have the results united by a group of belonging (SMI, large, etc.). Therefore, the purpose of this representation is not to add up the percentages of each column but to compare them between those of the same nation in different periods and to compare them with those of the other two nations.

3.5.3 Significant observations

Starting from the SMIs, it is evident that all three had a similar path. In the first period, percentages between 25 and 30 percent are maintained (specifically for Greece 24.15 percent; Italy 30.88 percent and Portugal 25.90 percent). However, in the second period, SMIs were more likely to turn to a commercial bank for a loan. In fact, in this section, there is an increase in the three countries with the following results: 42.53% in Greece, 59.83% in Italy, and 42.43% in Portugal relied on a loan.

Although a heavier contribution to commercial lending by large firms, the results in the first period is not too significant; indeed, they are comparable to the ones obtained for SMIs.

In the first period, Greece, Italy, and Portugal respectively reported this value dealing with the percentage of large firms that have used a loan: 28.23%; 17.14% (that in the case of Italy is even lower than for SMIs); 32.59%.

The peculiarity met in this category refers to the second period. In fact, in this case, the percentage is much higher than in the first period and to the SMIs commented on above.

Greece gained 51.76%; Italy 50.74%; and Portugal 70.86% (the highest data in the ranking). Concerning the accomplishment above, it is possible to state that in the second period, large firms have started again to secure new forms of financing from commercial banks to cope with the painful period of crisis from which they have been through.

Even Manufacturing and Services firms have developed their financial capabilities to invest and recover from the first period to the second.

It is common to have not applied for many loans in the first period. At the same time, this inclination was reversed in the second period.

Strictly speaking, and therefore why more loans were taken out in one period than in the other, could be due to the uncertainty surrounding the pandemic's start. From a financial sustainability point of view, it would not be appropriate to take out a loan when the conditions (not only due to failing business processes, but also due to demand shocks) are not in place to repay it. This thing has been disproved in the second period, when thanks to the high percentage of companies applying for commercial loans, it is likely that a slight economic recovery will take place.

Going deeper, here it is what has changed in manufacturing firms' percentages: they went from 14.59% to 35.71% in Greece; they switched from 22.20% to 46.74%, and in Portugal, they shifted from 29.23% to 45.21%.

Indeed, for what concerns the services firms, they have been going through the same swing. In particular: In Greece, the percentage went from 14.07% to 26.76%; in Italy, the variation is higher and more consistent, it has doubled the first value, and it shifted from 27.33% to 63.25%; in Portugal, instead, the first value is 21.48%, and in the second period it increased to 43.40%.

The last two categories to be analyzed are those of directly exporting firms and those of non-exporting ones. Here too, the same consideration applies as before, as it is in line with the previous results. The evolutions are the same, so that the first period is quite transitional, while in the second many more firms refer to the use of commercial loans. The high percentage value demonstrates it in the graph for the second period in both columns.

In the direct exporter firms, there is the presence of the lowest data in the chart. It refers to the first period in Greece and could be quantified with 4.22%. Successively, it moves to 26.04%; In Italy, the situation is different by far. The percentage switched from 28.48% to 42.44%; lastly, the transition is higher in Portugal because the index increased from 36.97% to 56.72%.

Such a similar context is laid out for the non-exporting firms. In Greece, the percentage experienced a shift from 15.94% to 28.46%; in Italy, the index fell the most impressive swing for this category going from

25.65% to 60.28%; in conclusion, Portugal has undergone an increase in its percentage of firms using commercial loans. The outcome fluctuates from 23.01% to 42.00% of the surveyed firms.

In connection with the quantification of these financial data, it was easier to understand the economic situation of the various companies in the different periods and categories. Although it may seem that everything is very much in line, some results are higher in some countries and vice versa. The trend was not always homogeneous, although the many similarities between the three countries meant that the results tended to be in the same range. It will make it much easier to compare the studies empirically in the next paragraphs.

3.6 Policy & Expectations overview

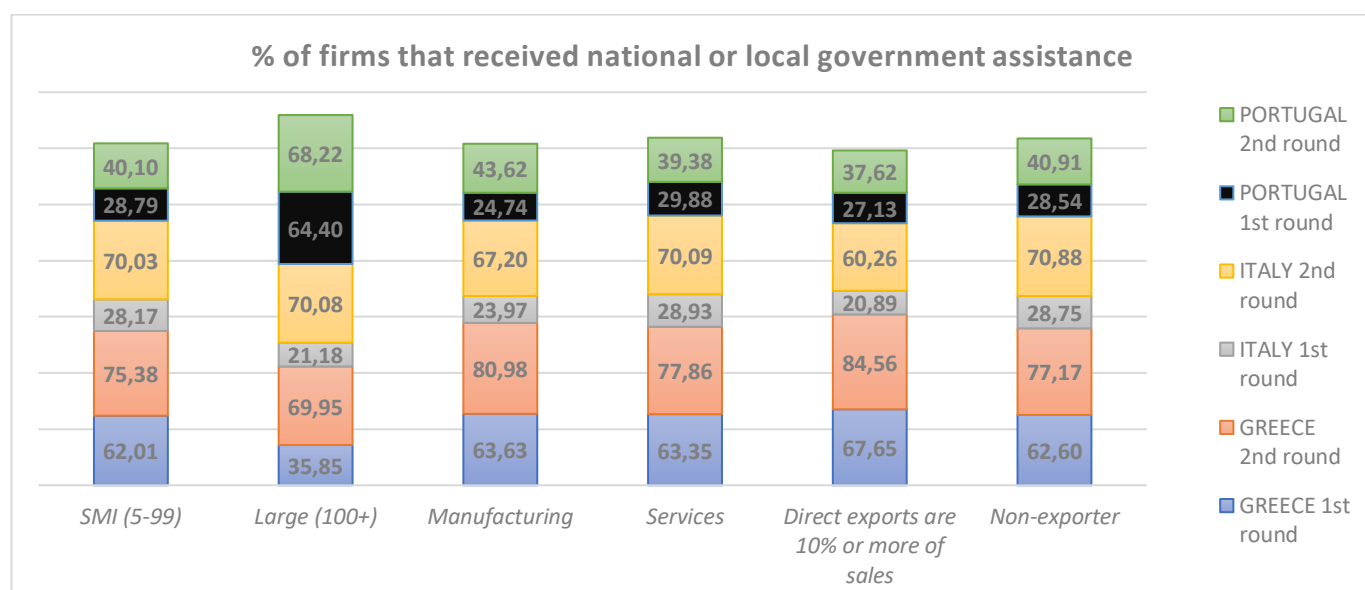
In this section, and the last one providing the data, state and federal policy intervention in favor of economic recovery have been analyzed. It is clearly known that economic, financial, and social stress has had a significant impact on every nation in the World. Strictly speaking, it is plausible that the first form of help should come from national regulations, which should enact reforms and economic adjustments so that recovery is not a real goal.

Because of this truth, the following graph shows the percentage of companies that received national or local government assistance.

3.6.1 Percentage of firms that received national or local government assistance

As was the case with previously analyzed graphs, the aim is not to add up the individual percentages in a column. The categories of companies have been subdivided on the x-axis.

The purpose is to identify the reference percentage for one nation in the first or second period and relate it to the result obtained by another nation or in another period. In this way, it will be easy to understand the degree of state intervention in this matter.



SOURCE: Chart elaborated by the author through "COVID 19 Impact ES Follow-up Survey" provided by the World Bank data

3.6.2 Summary remarks

The discussion starts, as always, with the SMIs. In Greece, they went from 62.02% of national aid received in the first period to 75.38% in the second. In Italy, the change was from 28.17% to 70.03%. Lastly, Portugal experienced a swing from 28.27% to 40.10%.

From this first statistical description, it emerges that Greece was the nation that intervened most in the crisis suffered by its companies by launching economic reforms in the first period. Italy and Portugal, on the other hand, have very low and insignificant percentages.

The facts change in the second period when both Greece and Italy show very high results while Portugal is intermediate.

Large companies, on the other hand, differ from the previous situation. For Greece, there is an increase between the two periods ranging from 35.85% to 69.95%. In Italy, the situation is practically the same as for the SMIs, ranging from 21.18% to 70.08% (almost showing that there is no absolute difference in the size of the company in order to obtain national assistance). In Portugal, the oscillation is minimal, although it remains at very high levels from the first period, ranging from 64.40% to 68.22%.

This analysis suggests that government actions differ according to the size of the companies in question in Greece and Portugal.

It was thus noted that, in the same country, there could be different treatments depending on the company's size.

This is not the case in the division of companies by production sector. An analysis of the graph between manufacturing and service companies (clearly referring to the same country) shows a range of percentages that differs very little.

Starting from manufacturing companies in Greece, the change was from 63.63% to 80.98%; in Italy from 23.97% to 67.20%; in Portugal from 24.74% to 43.62%.

For service companies, the data obtained are very similar:

in Greece, in the first period the percentage is 63.35% and in the second 77.86%; in Italy, it fluctuates from 28.93% to 70.09%; and in Portugal from 29.88% to 39.38%.

Now the last distinction is made between directly exporting and non-exporting companies. For directly exporting companies, the state-assisted 67.65% in Greece in the first period and 84.56% in the second; in Italy 20.89% in the first period and 60.26% in the second; in Portugal, it varied from 27.13% to 37.62%.

On the other hand, as far as non-exporting companies are concerned, in Greece, in the first period, the state intervened in 62.60% of cases and the second in 77.17; in Italy in the first period for 28.75% and the second for 70.88%; finally, in Portugal, the alteration ranged from 28.54% to 40.91%.

If one were to look at the graph, one would see that in Italy and Greece (except for the large companies in this case), one denotes practically the same scenario in all the categories in question. More specifically, Greece has very high values for both periods, while Italy shows low values for the first period and very high values for the second, demonstrating a reversal of the previous trend.

Despite having relatively lower national aid (especially in the second period, which is natural recovery), Portugal is the most balanced nation than the two other nations.

3.7 Conclusions

The peculiarity of this crisis was not only its scale and its very heavy health and economic impact, but also its speed and the complexity of the world is affected.

It is, therefore, not only the Covid-19 pandemic that has challenged the business models of our companies but the changes that have already taken place in the competitive environment. The current paradigm is based on the speed with which everything new spreads across all markets due to the extreme and profound interconnection and complexity of the economic and social environment in which we operate. Moreover, the crisis has further accelerated this process.

Shifting the focus allows understanding how companies that have already innovated their business models are also those that have best coped with the emergency phase and are already recovering, thanks to their flexible, resilient, and digital ability. Qualities enable them to cope with rapid change, complex markets, and unforeseen events.

The biggest challenge is identifying the drivers of competitive advantage in the future, making people understand the need for transformation, and accompanying companies by making them aware of the opportunities and risks.

Digital, internationalisation, green, resilience and business continuity are the main challenges, as this paper shows. This theory is accompanied by strengthening the company's assets, elements capable of bringing sustainable and structured growth. It is only possible through investment in the company's human capital training and a new way of thinking about employee relationships.

In particular, the crises that Italian companies have had to face over the years have undoubtedly contributed to making them more prepared to manage possible emergencies. It emerged that in the financial crisis of 2008, three elements distinguished the success of some Italian companies, namely the ability to innovate, internationalisation and financial solidity.

Innovation is a fundamental driver of productivity and, therefore, of competitiveness. The push towards exports enables diversification and makes it possible to be more resilient to market dynamics and adapt better to change.

Finally, equity strength, the proper debt-equity ratio and on-balance sheet liquidity allow companies to be less impacted in times of poor cash flow.

The survey of Italian Greek and Portuguese companies confirmed the importance of meeting the three conditions mentioned above to face emergencies, proving to be critical elements to be "resilient" and win in this specific period of uncertainty.

For small and medium-sized enterprises, the segment most affected by the emergency and in some respects least prepared to deal with the current crisis, due to their level of digitalisation, small size and reduced accessibility to qualified skills, it is therefore essential to understand the new reality that is looming and prepare to face the future by devising the most suitable path.

History teaches us that there are only two possible outcomes from a crisis: victory or defeat. Those who remain immobile and passive to events have already written their fate. On the other hand, those who try to act and are proactive have a good chance of winning. If during the first phase of the emergency, the only acceptable strategy was to stop and maintain the self-distance with the others in the post-lock-down period, this cannot be the way forward.

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Chapter IV

Territorial effects of the economic crisis and prospects for recovery

4.1. Introduction

The West is preparing to emerge from the health emergency caused by the Covid-19 pandemic on the road to economic recovery.

It is hard to believe that the future holds a return to "business as usual", as our lives have undergone profound changes, including production processes and international relations.

However, this does not mean that this 'new normal' will be radically different from the previous one. Before Covid-19 disrupted our lives and our globalised economic system, specific medium- to long-term trends - such as the digital transition and the ecological transition - had already been visible for some time.

The pandemic has entered these trends with disruptive force, accelerating them on the one hand but also making policy responses inevitable. The pandemic seems to have already produced winners and losers, at least in economic terms. In the period immediately following the first wave, China (and the countries of South-East Asia that it led) managed to reactivate their economies more quickly, thanks to more effective containment of the contagions, which made it possible to limit lockdowns in time.

By contrast, Europe and the US came out the losers: the GDP of the EU and the US contracted by 6.1% and 3.5%, respectively, while market power (in terms of exports) was reduced by about 0.5% for the EU 1% for the US⁴⁹. These figures reveal eloquently how the "shift to Asia" has not only continued but accelerated.

For the foreseeable future, things may be looking up, especially for the European Union, where the vaccination campaign has finally taken off after a difficult start, and the rapidly improving health situation has helped raise growth prospects. In addition, the funds coming from the Next Generation EU could provide a further boost to economic growth, which, thanks to the investments planned in crucial areas such as digital and energy transition, could establish a virtuous circle by raising the prospects for recovery in European countries, and in those analysed and surveyed.

It is a favourable scenario that considers a steady improvement in the health situation and a gradual easing of restrictions on individual travel. In reality, there remains a good deal of uncertainty for the coming months, not only because of the fear of a possible resurgence of infections due to the new variants but also because several regions of the world will not yet have received a sufficient quantity of doses to be able to declare themselves out of danger.

Making forecasts in such a context can be a gamble, given that the pandemic is still in progress.

One element to be considered in the short term is the current upward trend in the prices of raw materials, which, in addition to generating direct consequences for the economic outlook in terms of inflation, which risk putting a brake on the recovery, involves a new geopolitical competition for them due to the mismatch between supply and demand for commodities.

⁴⁹ "After the pandemic towards a new world", Paolo Macrì, 23 July 2021, ISPI.

There are three main dynamics to be observed, as they could influence the direction the economy will take and have a substantial impact on the balance of power between states.

The first dynamic is undoubtedly linked to the fight against climate change. The ecological transition towards new 'clean' and 'green' business models will only be successful if the corporate and financial worlds find the right incentives to invest in new energy sources and aim for more sustainable production. Investing in 'green' sectors and activities will be increasingly convenient to intercept financial resources (such as the European Green Deal and NGEU) and create new opportunities for economic growth and employment.

The second macro-trend is the digital transition. Technologies such as artificial intelligence, machine learning and the Internet of Things are becoming increasingly pervasive. Digitisation could further amplify inequalities, both between and within countries.

The low level of investment in technology is one of the reasons why Europe is not a fertile ground for large tech companies. Europe's gap with the US and China on the start-up front is even more significant. To create a more attractive environment for hi-tech companies, the EU also aims to overcome the internal fragmentation of the digital services market, one of the main obstacles to the growth of large-scale companies.

Finally, the third major trend to watch in the coming decades will be demography. The EU's disadvantaged situation is also to be found in this field. Italy is, unfortunately, the 'black jersey' in the EU and risks finding itself in 2050 with a ratio of people of working age to those over 65 of one to one, with obvious implications in terms of sustainability of welfare systems. It is more than evident that population growth will be concentrated far from the West in the coming decades⁵⁰.

Italy's chances of finally embarking on the road to a solid and sustained recovery over time will essentially depend on the reforms and on the use that will be made of the funds allocated to our country under the Recovery Plan.

Italy will be the primary beneficiary of European funds totalling EUR 191.5 billion, including non-repayable resources and low-interest loans. The key to success will be to translate these resources into effective investments and start a path of reforms.

Shortly, the winners will be those who have learned the essential lessons from the pandemic, who are ready for the new normal and have translated these lessons into new policies in time.

Looking at the three macro-trends indicated (environment, digitalisation, demography), this means having the strength to reconsider economic and environmental policies and those of welfare and social inclusion, education and training, and migration with coherent, long-term strategies⁵¹.

The analysis presented in this chapter highlights the territorial dimension of the crisis in Italy, one of the three countries under investigation, and the impact of the crisis on local production systems.

The particular focus reserved for Italy makes it possible to assess how the differentiated effects due to the high heterogeneity of the different geographical areas may influence the prospects of recovery or failure.

⁵⁰ *Internationalisation survey report, 2021, Assolombarda.*

⁵¹ *"After the pandemic towards a new world", Paolo Macrì, 23 July 2021, ISPI.*

They differ in terms of productivity and employment dynamics and the capacity to react to the international cycle.

The risk profile of the Italian regions depicts a country essentially divided in half, confirming, on the one hand, the usual North-South dualism and highlighting elements of high vulnerability in historically economically vibrant territories, as in the case of some regions in the Centre-North.

Despite the difficulties of making forecasts during a pandemic, with the support of some of the illustrious authors mentioned above, the chapter closes by outlining the prospects for the recovery or the collapse of the production system.

It has been analysed in an evolutionary vision of the crisis, which leads to the rescue of the best and most efficient realities at the end of a process of selection.

4.2 The territorial dimension of the crisis in Italy

The health emergency into which the planet was plunged in 2020 due to the spread of Covid has had unprecedented economic implications.

The consequences affecting Italian SMEs are multiple, peculiar to the pandemic and different from previous crises.

Italian small and medium-sized enterprises (SMEs) have been identified according to the following classification provided by the European Commission⁵² and can be aggregated as follow:

| CATEGORY | EMPLOYEES | | TURNOVER | | ACTIVE |
|-------------------|-----------|-----|------------|-----|------------|
| Large enterprise | ≥ 250 | or | > 50 mln € | and | > 43 mln € |
| Medium enterprise | < 250 | and | ≤ 50 mln € | or | ≤ 43 mln € |
| Small enterprise | < 50 | and | ≤ 10 mln € | or | ≤ 10 mln € |
| Micro enterprise | < 10 | and | ≤ 2 mln € | or | ≤ 2 mln € |

SOURCE: Cerved report SME 2020; Chart elaborated by the author

Italian SMEs faced the pandemic after an incomplete recovery in profitability but with good capital strength. The recovery of Italian SMEs' activity levels continued in 2019: turnover grew in real terms by 2.8% and value-added by 3.4% compared to the previous year.

It was, however, a slower dynamic than that of labour costs, with negative impacts on competitiveness, gross profitability - which remained at levels not far from those of 2018 - and profitability ratios again falling. These data indicate that the Italian SME system has come face to face with the Covid emergency after a decade characterised by a slow and unfinished recovery that only partially recovered the levels of the financial accounts prior to the financial crisis.

For SMEs as a whole, the crisis was highly asymmetrical, concentrating its impact on the sectors most affected by the health emergency, such as the tourism, catering, logistics and transport sectors, and in some industrial sectors such as the fashion system.

The effects were powerful for small businesses and those operating in construction, industry and some service sectors.

About half of the job losses were concentrated in the most affected sectors, such as travel agencies and accommodation facilities.

From a territorial point of view, the impacts are also differentiated, with more significant effects in the South.

The 2021 report of business competitiveness, made up by ISTAT, estimates a loss between 1.4 and 1.9 million workers and a reduction in the capital between €47 and €68 billion.

⁵² *The Cerved SME 2020 Report.*

It is feared that there is no prospect of a revival of the economy once the support measures to cope with the health emergency cease⁵³.

The economic impact of the pandemic on the territories was heterogeneous but pervasive, affecting all the geographical macro-divisions.

The regions with the highest employment intensity in the affected sectors were the Autonomous Province of Bolzano, Valle d'Aosta and the Autonomous Province of Trento, for tourism activities; Tuscany and Marche, for tourism the textile sector, Valle d'Aosta for cultural and sports activities.

The vulnerability of a territory depends both on the degree of diffusion of the sectors most affected by the crisis and the degree of specialisation of the local economy in these activities.

In particular, the textile and clothing industry was hard hit by the collapse of domestic and foreign demand. On the other hand, tourist activities, commerce and catering, and cultural and sporting activities directly impacted administrative lockdowns and social distancing measures.

Among the factors determining regions' greater or lesser exposure, there is also the degree of openness to foreign trade and responsiveness to the international economic cycle.

In this respect, the Italian regions with a productive fabric more oriented towards foreign trade were more exposed to the economic shock in the initial phase of the health emergency due to the decrease in trade.

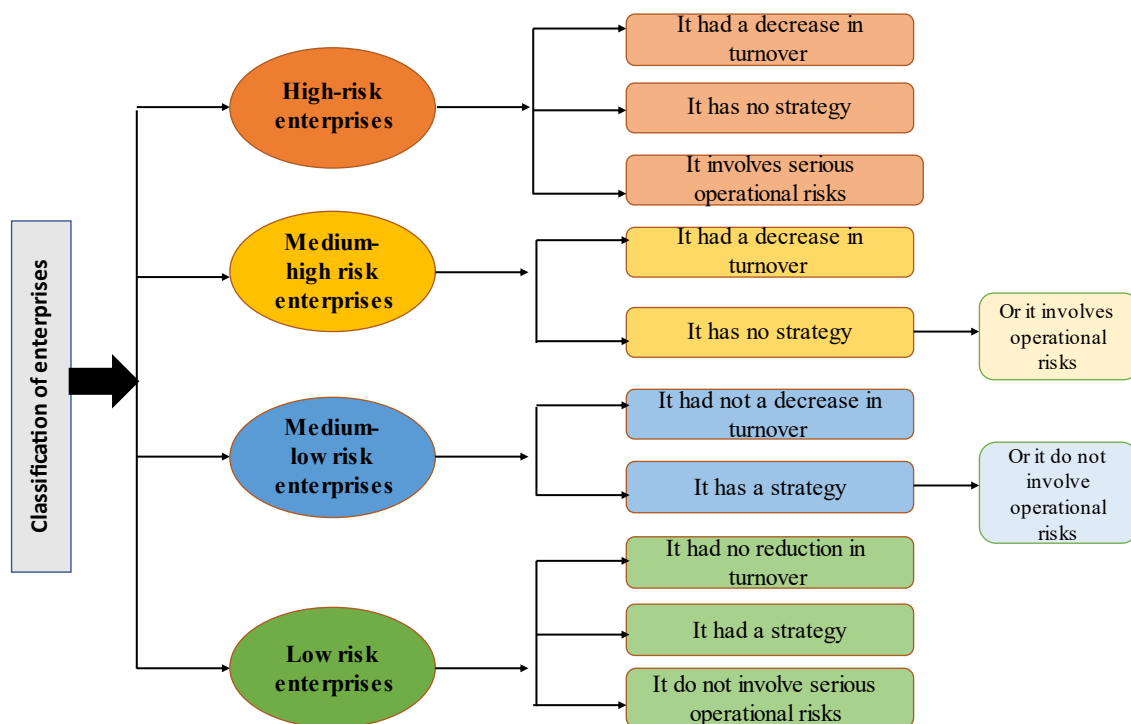
However, in the subsequent period, those regions could be the readiest to emerge from the crisis, thanks to the recovery of international demand.

In addition to presenting asymmetry characteristics between production sectors, the crisis also appears to be strongly discriminating concerning company size. Several times in previous chapters, it has been pointed out that small size was the distinguishing feature of the most affected units, especially in the services sector. On the contrary, a greater capacity to react has characterised the large size with an international vocation and the sectors oriented towards high-tech specialisations.

In the context of the ISTAT survey on *"Situation and perspectives of enterprises in the COVID-19 health emergency"* enterprises have been classified into four risk categories: High, Medium-High, Medium-Low, Low.

According to this taxonomy in Italy, almost half of the companies (about 48.5 per cent) are in the two highest-risk brackets. Their distribution across the regions shows eleven regions with a critical situation, seven of which are in the South, one in the North (the Autonomous Province of Bolzano) and three in Central Italy (Latium, Umbria and Tuscany).

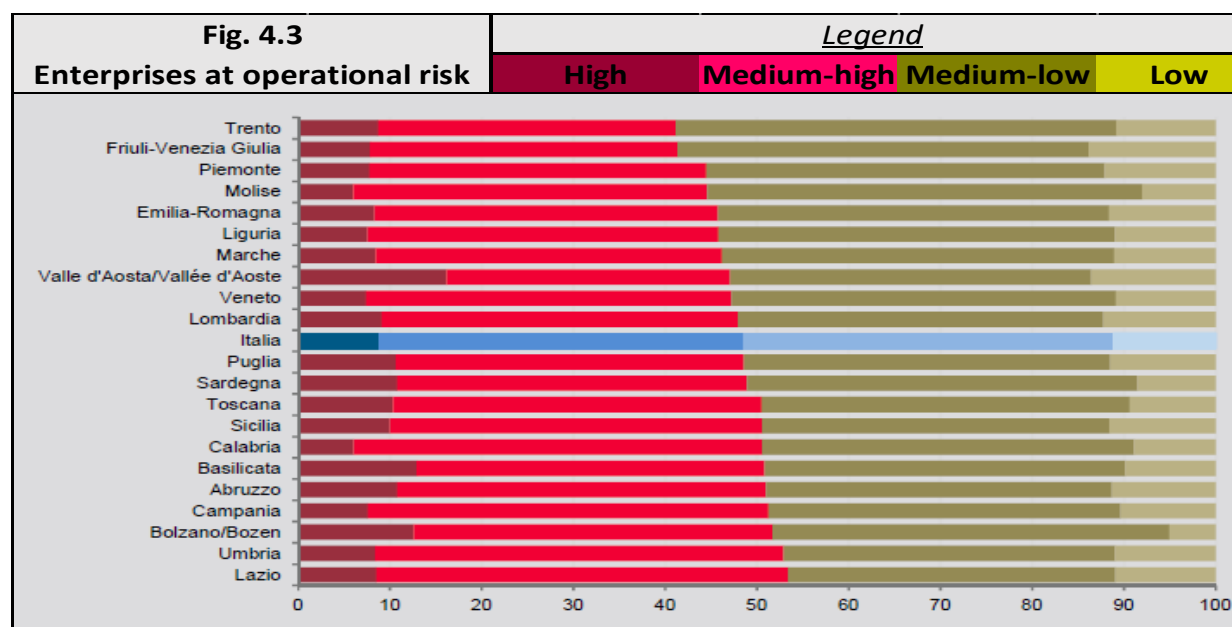
⁵³ *Report on the competitiveness of enterprises, Istat, 2021*



SOUCE: Graph elaborated by the author

On the other hand, the regions with the lowest proportion of companies in the two highest risk categories are the Autonomous Province of Trento (41.2%) and Friuli-Venezia Giulia (41.3%).

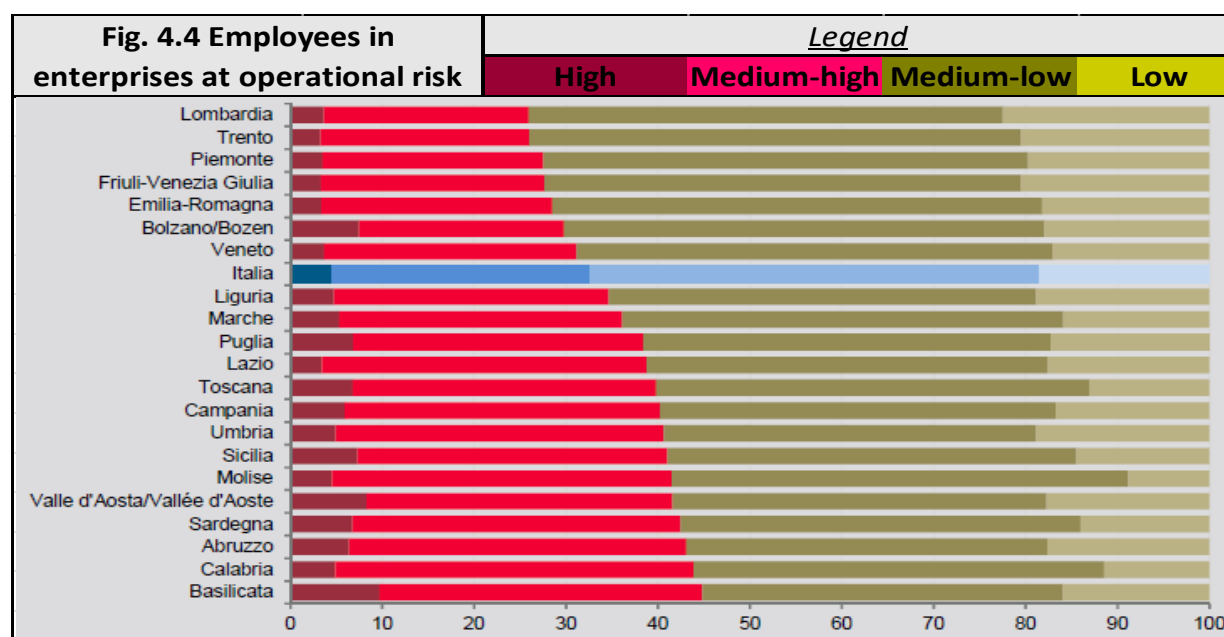
In some territories (Apulia, Tuscany, Aosta Valley, Sicily and Abruzzo), the survey showed an equal distribution of high-risk and low-risk companies, a clear sign of a clear divarication of situations that could condition the measures to stimulate growth and the methods of territorial recovery.



SOURCE: Chart elaborated by the author using ISTAT data

From the point of view of employment, about one-third of the average national employment was classified as High and Medium-High risk, since in 9 regions more than 40 per cent of employment is in High and

Medium-High risk enterprises; seven of these regions are in the South, one in the Centre (Umbria) and one in the North of Italy (Aosta Valley).



SOURCE: Chart elaborated by the author using ISTAT data

The competitiveness report mentioned above then examined companies and employees together for analysis purposes, defining a "combined" risk profile of regional production systems.

Consequently, a region has been classified as "*High combined risk*" if it shows high presence values, both for enterprises and employees, in the two highest-risk bands (High and Medium-High).

It is classified as "*Low combined risk*" (Low and Medium-Low) in the opposite case.

In the two intermediate situations, the percentages of companies or employees fall into the other two quartiles (Medium-High and Medium-Low).

Among the six regions with a High combined operational risk, as shown in the figure below, five belong to Southern Italy (Abruzzo, Basilicata, Calabria, Campania and Sardinia) and one to Central Italy (Umbria). Six regions have a combined medium-high operational risk (Apulia and Sicily in the South and Islands, Tuscany and Latium in the Centre, Aosta Valley and the Autonomous Province of Bolzano in Northern Italy); three have a medium-low operational risk (Veneto, Marche, Molise) and finally six, all belonging to Northern Italy (Piedmont, Liguria, Lombardy, Emilia-Romagna, Friuli-Venezia Giulia, Autonomous Province of Trento), have a low operational risk.

| Italian regions according to the combined operational risk profile of companies and employees. Year 2020 | |
|---|---|
| <u>High combined risk</u> | Campania, Calabria, Sardinia, Abruzzo, Umbria, Basilicata |
| <u>Medium-high combined risk</u> | Sicily, Apulia, Latium, Tuscany, Aosta Valley, Autonomous Province of Bolzano |
| <u>Medium-low combined risk</u> | Molise, Marche, Veneto |
| <u>Low combined risk</u> | Lombardy, Piedmont, Emilia-Romagna, Friuli-Venezia Giulia, Liguria, Autonomous Province of Trento |

Source: Chart elaborated by the author

The proposed reading key, based on risk profiling and the sensitivity of regional production systems, makes it clear that the current pandemic crisis is having a more or less intense economic impact on the territory, depending on the production characteristics of the various regions and on the measures introduced to contain the pandemic.

The measures to close down activities and restrictions on travel have led to very heterogeneous effects in the various territorial areas because they have not been uniform across all the Italian regions.

The risk profiling of the Italian regions thus depicts a country divided in half. It confirms, on the one hand, the usual North-South dualism, while also highlighting elements of high vulnerability in historically economically lively territories, as in the case of some regions in the Centre (Tuscany, Latium and Umbria) and the North (Aosta Valley and the Autonomous Province of Bolzano).

As we have seen, this may reflect the specific features of the current crisis, which has led to an exceptionally concentrated and therefore territorially uneven impact in sectoral terms.

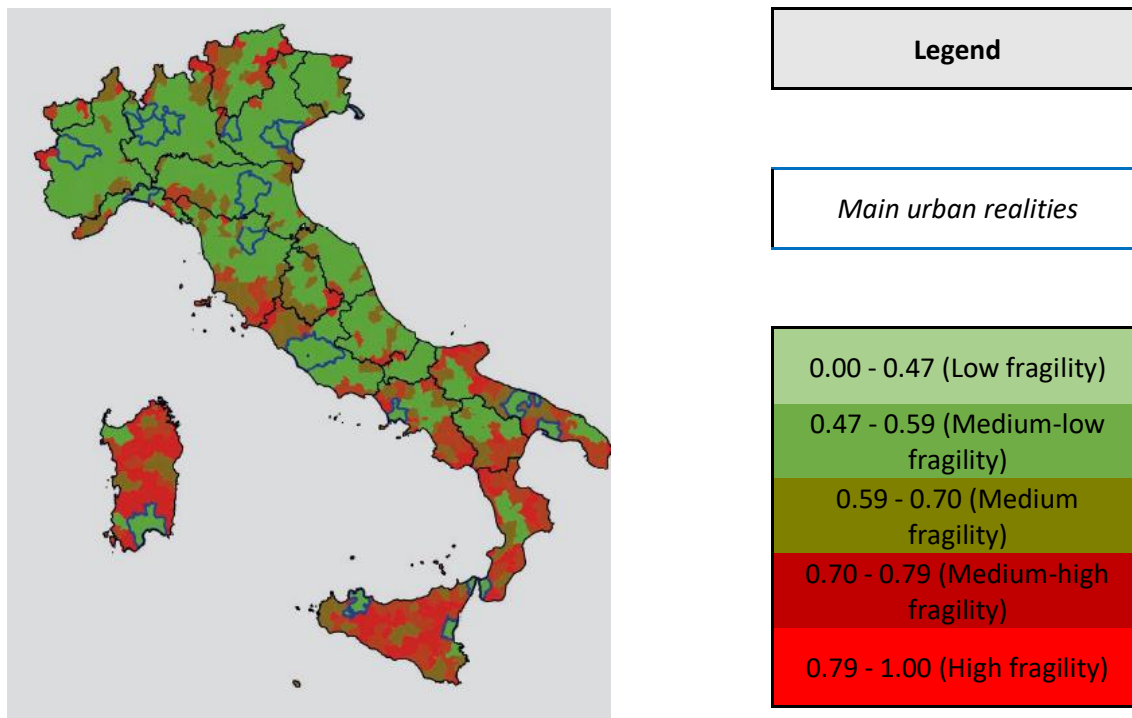
4.3 Focus on local labour systems

Shifting the analysis to a more detailed territorial level, this paragraph will highlight the effects of the COVID-19 pandemic about the 610 Local Employment Systems (LOS) mapped on the Italian territory. In order to determine the territorial location of enterprises, ISTAT has used the following four elementary indicators of fragility,

1. *Percentage share of local units belonging to micro-enterprises (0-9 employees).*
2. *Percentage share of local units, employees and value-added of local units operating in sectors with knowledge intensity and low or medium-low technological content.*
3. *Percentage share of local units, employment and value-added of local units operating in suspended activities (defined by DPCM).*
4. *Percentage change in value-added in 2020 compared to 2019 of the local units present in the Local System.*

The overall situation is represented in the table below, which illustrates, for the year 2020, an indicator of business risk, then re-aggregated into a "territorial risk index" based on the location of the same enterprises in the Local System.

Territorial risk index, year 2020.



Graph elaborated by the author using Istat data

Even at this analysis stage, an apparent dichotomy emerges between North and South, with the former characterised by a less fragile entrepreneurial system and the latter by significantly higher exposure to risk. In fact, of the 245 SMEs classified as high (122 SMEs) or medium-high fragile (123 SMEs), more than three quarters are located in the Centre-South regions.

Most of the slots in the north-west and north-east show limited fragility, thanks to the presence of a more diversified model of specialisation - from mechanics to agri-foodstuffs, from pharmaceuticals to the automotive sector - and with activities with a higher content of technology and innovation, often based in large urban centres.

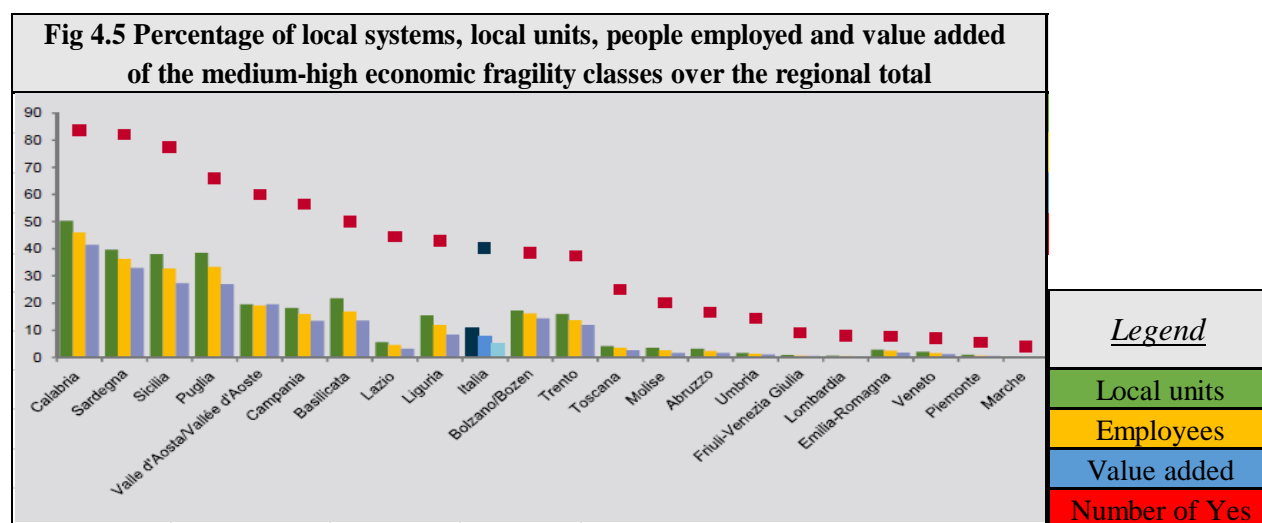
Even for the regions of the Centre, which, based on the analyses in the previous section, had shown a "combined" high and medium-high risk, it is possible to qualify which local economies contribute to this fragility.

These are mainly concentrated in the agricultural and tourist areas of Tuscany and the upper Lazio in some areas of Umbria. District SI seems to show a lower risk, probably also due to their industrial characteristics and a lower incidence of activities suspended because of the administrative measures that imposed the restrictions.

In lower Latium, on the border with Campania, some fragile local systems are identifiable: also, in this case, they are mainly tourism-oriented districts.

A more heterogeneous picture can be observed in southern Italy. Abruzzo and Molise, for example, do not appear too dissimilar from the regions of the Centre, with a limited number of local systems in difficulty. Apulia, Campania and Basilicata show a more significant number of high-risk areas; Calabria, Sicily and Sardinia appear to be the most critical situation, characterised by a significant presence of fragile SL both in the coastal and inland areas.

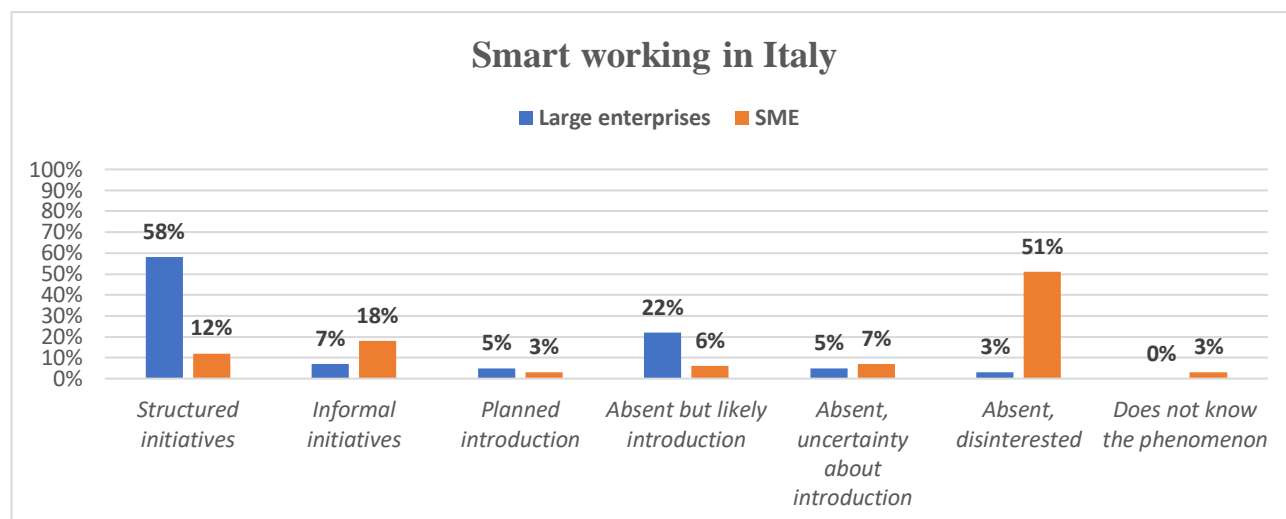
However, within this general framework, it is evident how the central urban realities show a low or medium-low fragility regardless of their macro-division. In addition to the North-South dichotomy mentioned above, there is a dichotomy between large urban centres, historically characterised by greater diversification of economic activities, and other local realities with a higher degree of specialisation.



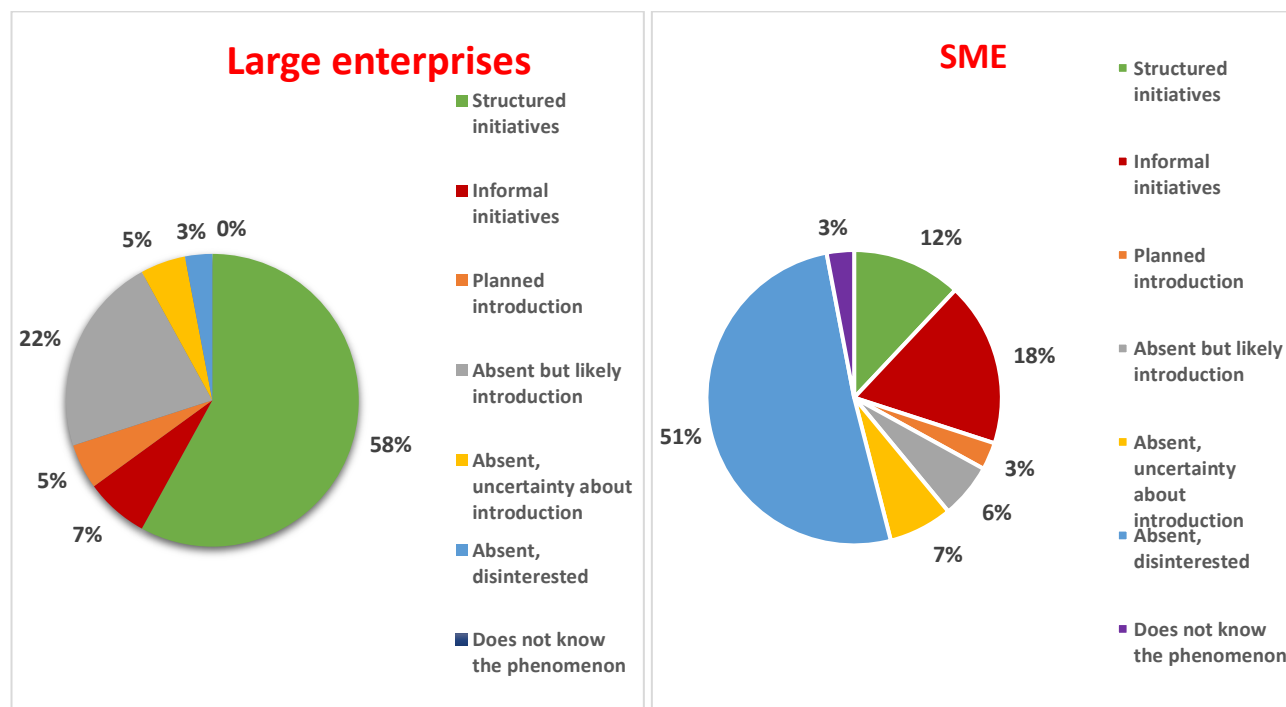
Source: Graph elaborated by the author using Istat data

The evidence presented so far seems to confirm the more meaningful employment and production difficulties in economic activities characterised by a higher risk of pandemic contagion.

The incidence of workers employed in proximity tasks that do not allow for sufficient social distancing and in jobs that are more exposed to disease and infection is higher in most of the regions of southern Italy; on the other hand, the percentage of workers employed in remote or innovative modes is higher in Lombardy, Latium and large metropolitan centres such as Rome, Milan, Bologna and Florence⁵⁴, as shown in the figure below. It shows that smart working is more prevalent in large companies concentrated in large metropolitan cities in central and northern Italy.



Source: Chart elaborated by the author by Istat data



Source: Graphs elaborated by the author using Istat data

This evidence, read from the perspective of identifying weaker territorial realities, redraws the boundaries of the local contexts framed here as more fragile from a structural point of view; the latter, as we have seen, are

⁵⁴Barbieri et al., 2020.

mainly located in the South, in the Islands and, more generally, in the more peripheral areas concerning the large urban centres.

In short, the territorial distribution of the economic impact of the current crisis seems likely to have a widening effect on the gap between the northern and southern regions. The evidence shows that the most at-risk and fragile areas are located in the South of Italy. Even if the territorial analysis is taken to a more detailed level (SI), capable of capturing local situations that are more resilient to the crisis, on the whole, the South presents a framework of weakness that is both structural and linked to the contingency of the pandemic episode.

The first is determined by the high incidence of small enterprises operating in sectors with low technological and knowledge content; the second is that many of these enterprises operate in sectors affected by administrative closures. Moreover, the metropolitan centres, which appear to be less fragile, are located in central and northern Italy.

4.4 Recovery prospects

ISTAT's total estimate of the quarterly financial accounts confirms a sustained economic recovery of the Italian economy in the third quarter at 2.6%, similar to anticipated in the preliminary estimate.

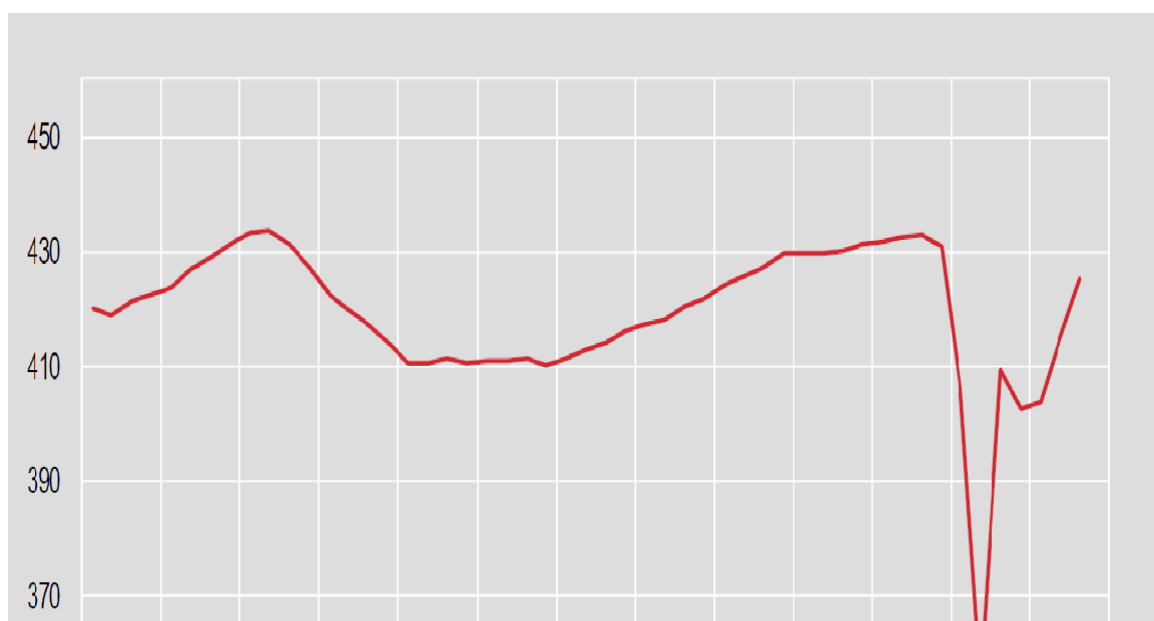
In trend terms, growth compared to the third quarter of 2020 was 3.9% (3.8% in the preliminary estimate).⁵⁵

For the second consecutive quarter, the result benefited from a strong recovery in the market services sector and growth in the industry, while the agricultural sector continued to decline.

On the demand side, GDP growth was mainly driven by private consumption, but significant contributions also came from investments and the foreign component.

Hours worked increased by 1.4% in cyclical terms, jobs by 0.2%, while per capita income rose by 0.5%.

The figure shows the GDP trend from Q1 2019 to Q3 2021 in Italy.



SOURCE: Chart elaborated by using Istat data

In the third quarter, GDP also grew in the other countries, in cyclical terms by 0.5% in the US, 3% in France and 1.8% in Germany.

In trend terms, growth was 4.9% in the US, 2.5% in Germany and 3.3% in France.

Overall, GDP in the euro area countries increased by 2.2% compared to the previous quarter and by 3.7% compared to the third quarter of 2020.

On the demand side, exports of goods and services grew in cyclical terms by 3.4%, gross fixed capital formation by 1.6% and final domestic consumption by 2.2%. Imports increased by 2.1%.

In the third quarter, there were positive cyclical developments in the value-added of industry in the narrow sense by 0.8%, construction by 0.6%, trade, vehicle repair, transport, storage, accommodation and catering by 8.6%, information and communication services by 0.5%, financial and insurance activities by 0.2%, real estate activities by 1.4%, professional activities by 2.9% and public administration, defence, education and

⁵⁵ Q3 2021, *QUARTERLY ECONOMIC ACCOUNTS*, ISTAT, 30 November 2021.

health by 1.2%. The value-added of agriculture decreased by 2.1% and arts, entertainment and other services by 0.4%.

In the third quarter of 2021, hours worked increased by 1.4% compared to the previous quarter. It was due to a growth of 1.8% in industry in the narrow sense: 0.3% in construction and +2% in services, while agriculture, forestry and fishing recorded a decrease of 5.5%.

Labour units increased by 1.5% due to the expansion of industry in the narrow sense, construction and services, with the growth of 1.8%, 0.3% and 2.2% respectively, while agriculture, forestry and fishing recorded a decline of 7%.

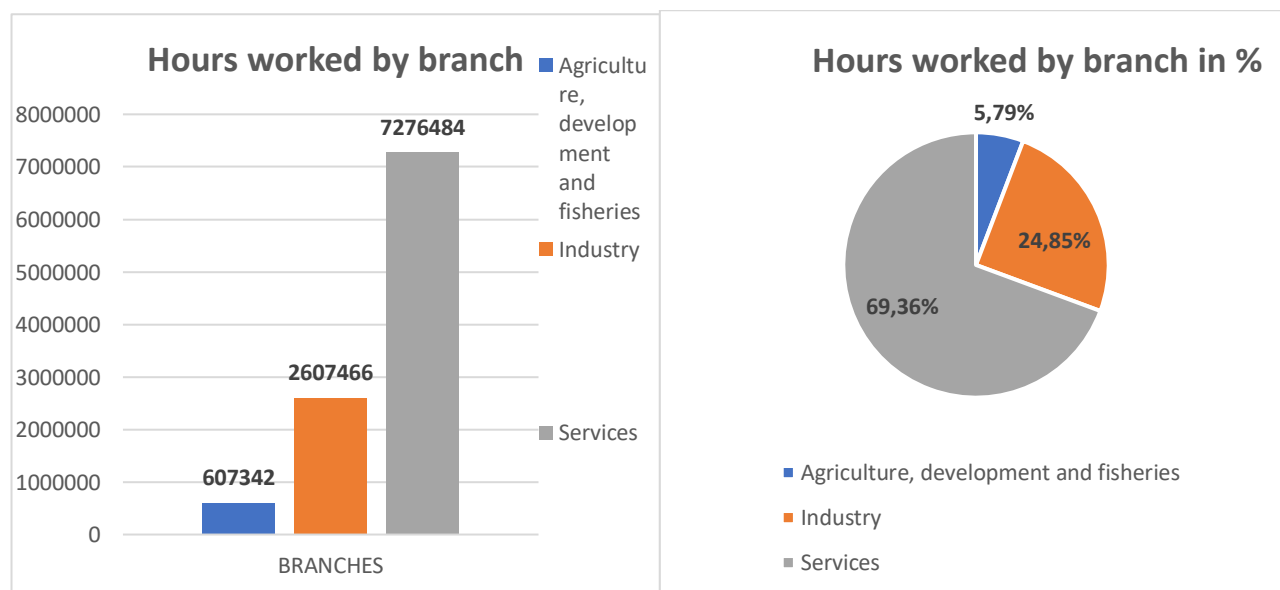
About per capita compensation of employees, the increase for the total economy was 0.5% as a result of growth in all production sectors: in agriculture by 0.1%, in manufacturing by 0.4%, in construction by 1.9% and in services by 0.4%, as shown in the tables below (which, by the way, which will focus on the 3 main production sectors in general)

| BRANCHES | VALUES | % of tot economy/branch | VARIATIONS | |
|---|-----------------|-------------------------|--------------------------------|------------------------------|
| | | | 3 trim. 2021 from 2 trim. 2021 | 3 trim 2021 from 3 trim 2020 |
| 1) Agriculture, development and fisheries | 607342 | 5,79% | -5,5% | -0,5% |
| 2) Industry | 2607466 | 24,85% | 1,3% | 4,8% |
| 3) Services | 7276484 | 69,36% | 2,0% | 4,3% |
| TOAL ECONOMY | 10491294 | 100,00% | 1,40% | 4,1% |

Source: Table elaborated by the author using Istat data

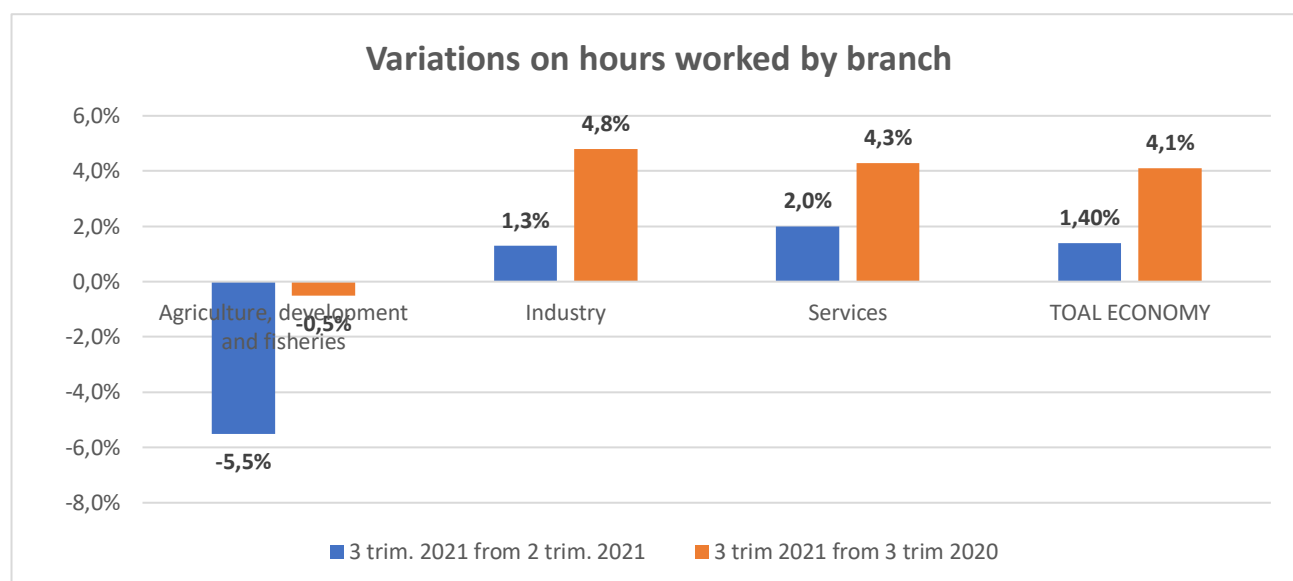
As a result of the author elaboration, 3 charts have been displayed in order to represent: the total amount of worked hours divided by branch (firstly in terms of total amount of worked hours and secondly as a percentage of the total economy) and the variations experienced in different time periods as shown in the graphs below.

By analysing the two representations is evident how the services sector is the one with the most striking and obvious results of change and growth.



SOURCE: Graphs elaborated by the author

Furthermore, the next representation is about the variation experienced by each working sector, in a limited period, as it is shown below.



SOURCE: Graph elaborated by the author

These graphs revealed some characteristics that will also be found in the others. For example, the numerical and percentage values found in the first two graphs ("hours worked by branch") are higher in the services category. The second place belongs to the industry category and the third to the primary sector.

The percentage changes between quarters also reveal a minor detail. Both the secondary and tertiary sectors experienced positive percentage changes; only the primary sector, for both periods, recorded negative percentage changes.

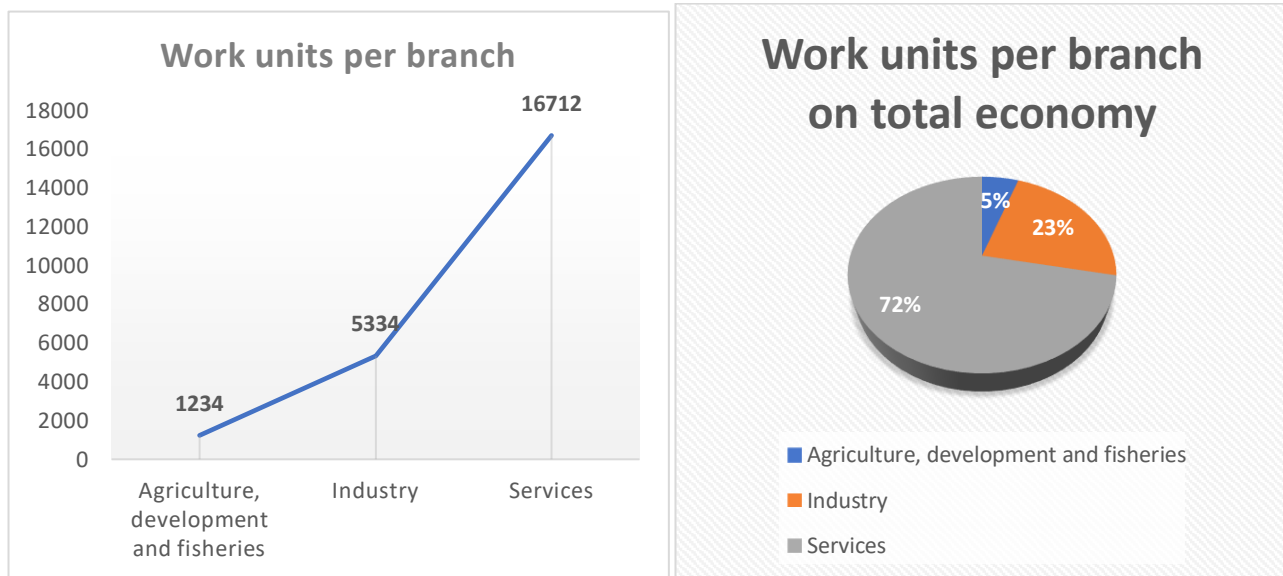
The changes in the total economy were stable, with positive values of 1.4% and 4.1%, respectively.

The following two graphs will concern the changes in labour units by industry and the per capita compensation of employees by industry.

More specifically, the first graph shows the labour units by industry (referring to Q3 2021. Values in thousands) in two ways: the first graph refers to the numerical value of these labour units; the second, instead, estimates a percentage of the total economy.

| BRANCHES | | VALUES | % of tot economy/branch | VARIATIONS | |
|----------|--|--------------|-------------------------|-------------------|------------------|
| | | | | 3 trim. 2021 from | 3 trim 2021 from |
| | | | | 2 trim. 2021 | 3 trim 2020 |
| 1) | Agriculture, development and fisheries | 1234 | 5,30% | 7,0% | -0,8% |
| 2) | Industry | 5334 | 22,91% | 1,3% | 4,4% |
| 3) | Services | 16712 | 71,79% | 2,2% | 3,5% |
| | TOAL ECONOMY | 23280 | | 1,50% | 3,4% |

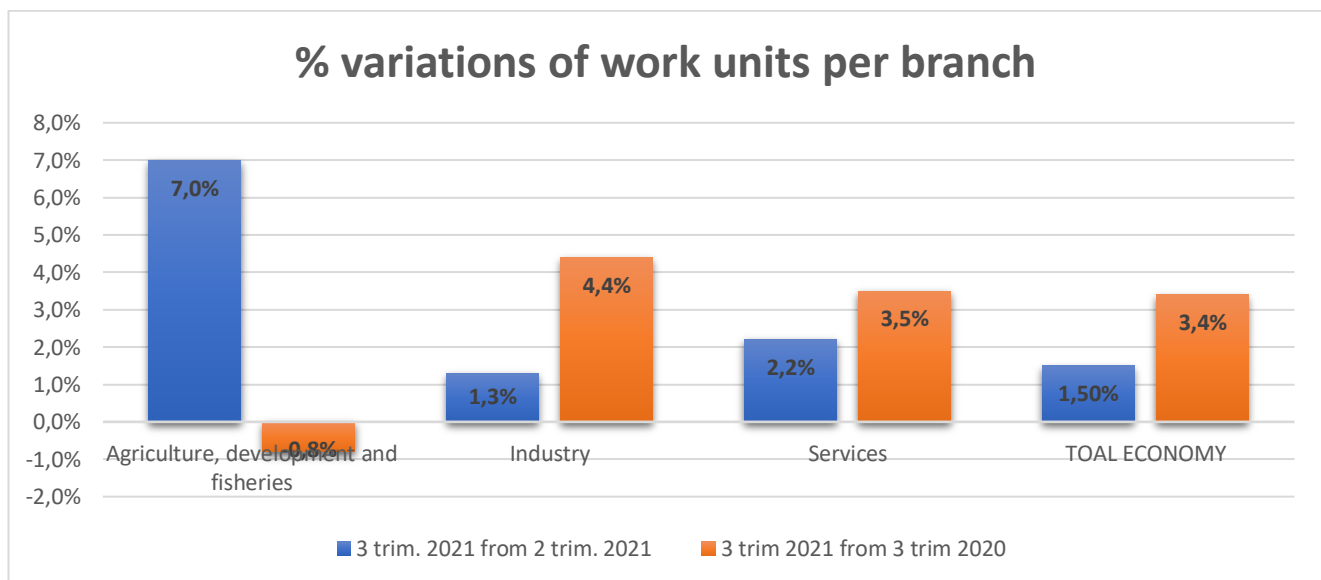
Source: Chart elaborated by the author



SOURCE: Charts elaborated by the author

Again, as in the situation analysed above, the highest value (numerical and percentage) is attributable to the services category. In the second place there is industry, with agriculture at the tail end.

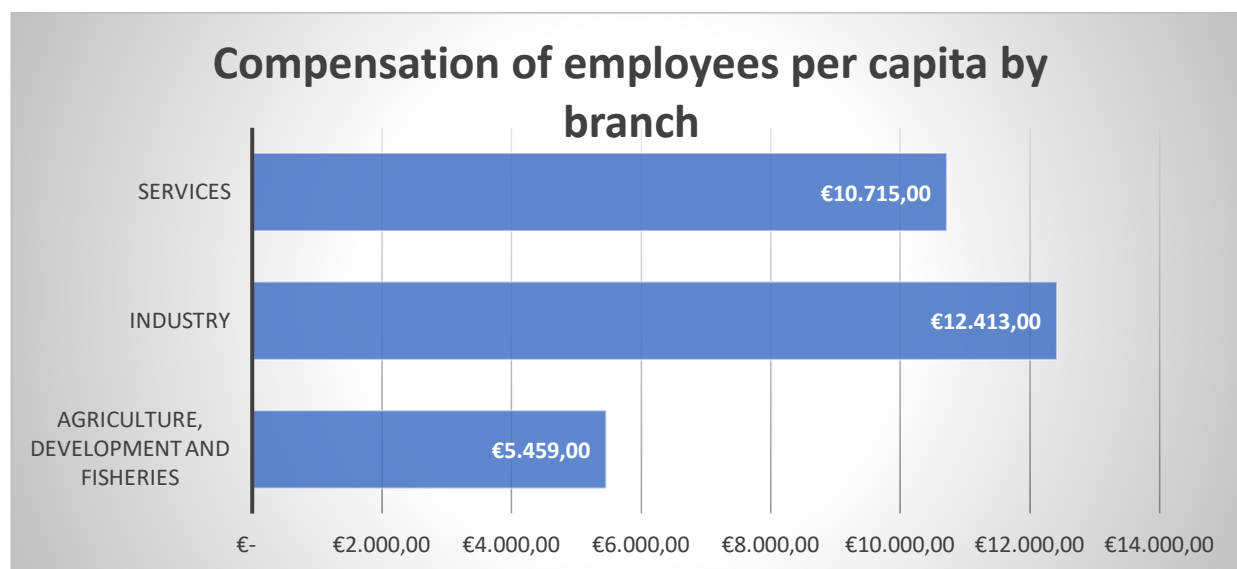
While in the second case the percentage changes between one quarter and the next were analysed in the graph below.



SOURCE: Chart elaborated by the author

Here is a tiny detail, slightly different from the result obtained in the previous graph regarding percentage changes. Only the second quarter of reference, for the primary sector, recorded a negative variation (however, by a not excessively high value, 0.8%) while all the remaining categories took note of positive percentage increases. The same reasoning applies to the entire economy, with 1.5% and 3.4% percentages respectively for the two periods.

At this point, the focus shifts to a further and final table: per capita compensation of employees by industry. Again, this refers to the third quarter of 2021, and the values are expressed in euros per labour unit. As before, the values will be represented through graphs showing their numerical value and their percentage value on the total economy.



SOURCE: Chart elaborated by the author

As it can be seen, there is an apparent disparity between per capita income from the different branches. Although the secondary and tertiary sectors show similar results in numerical terms, the opposite is true of the primary sector. In this case, the result is considerably lower than in the other two sectors.

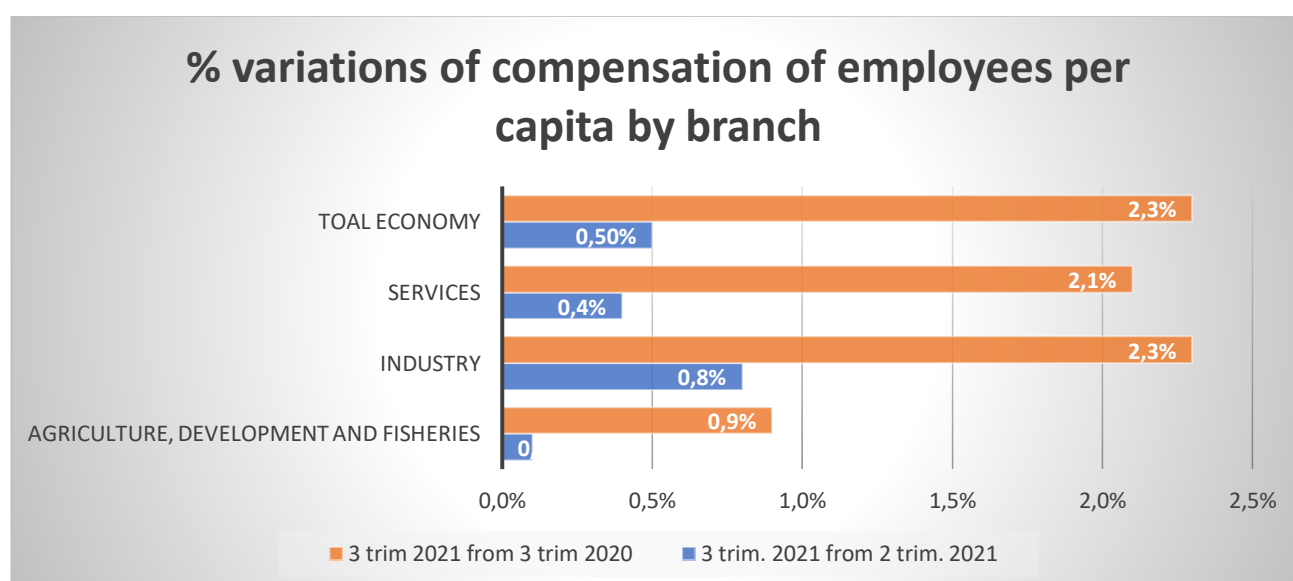
The representation of the data was done by consulting this chart with istat data.

| BRANCHES | | VALUES | VARIATIONS | |
|---------------|--|-------------|--------------------------------|------------------------------|
| | | | 3 trim. 2021 from 2 trim. 2021 | 3 trim 2021 from 3 trim 2020 |
| 1) | Agriculture, development and fisheries | 5.459,00 € | 0,1% | 0,9% |
| 2) | Industry | 12.413,00 € | 0,8% | 2,3% |
| 3) | Services | 10.715,00 € | 0,4% | 2,1% |
| TOTAL ECONOMY | | 11000 | 0,50% | 2,3% |

SOURCE: Chart elaborated by the author

Now it is time to understand what happened in terms of percentage change for each production sector and the entire economy.

It will be possible to do this by consulting the following graph.



SOURCE: Chart elaborated by the author

So, what emerges from this study is a demonstration of how there were no negative percentage changes between different reference quarters in the last case. All production sectors show positive percentage changes, and this, of course, is reflected with the same effect in the total economy.

Clearly, in this table, as in previous ones, the highest values are found in the secondary and tertiary production sectors. It further confirms how these two sectors have reacted better to the crisis, not showing the same degree of difficulty as the primary sector.

4.5 Winners or losers: from crisis to opportunities

The Covid-19 pandemic has been compared to the last century conflicts. Not only because of the number of lives lost, but because it is changing political and economic balances that we took for granted for decades. From the point of view of countries, while China and Asian countries have already wholly entered the post-Covid era, the European Union, which has the best welfare system on the planet, remains in the most awkward position. In fact, according to the latest forecasts of the European Commission, if the rest of the world returns to the production levels of 2019 by 2022, the Union will reach them with at least one year delay.

Therefore, it is essential to understand what has produced a result that could change history, not least because crises such as those we are currently experiencing risk becoming systematic.

This result cannot be explained by demographic factors alone, considering that Japan is the oldest country globally, nor by the assumption that democracy is an inexorably inefficient system since the "winners" also include Australia, New Zealand and South Korea. Moreover, there are substantial differences even within the European Union, such as Germany and Italy.

Three factors appear to be decisive in resisting the crises shaping the new century. Moreover, each corresponds to a lesson that Europe can perhaps learn by looking eastwards.

First of all, the ability to use the data that technologies are making available in unprecedented quantities and at unprecedented costs - think of the varying effectiveness of national infection-tracking systems.

Secondly, the flexibility of production systems and states means reacting immediately to the crisis. Lastly, the strong sense of community that is rewarding Asian countries and that we have lost in the drunkenness of individualism that can get out of hand precisely thanks to those same technologies that, if used well, can win these wars.

From a corporate perspective, too, the pandemic has created more upheaval and turbulence than any other crisis in living memory.

Due to disruptions in supply chains, forced closures, lockdowns and quarantines, the pandemic has been devastating for many companies, while for others, it has created new opportunities, including accelerated digitisation processes and a greater focus on sustainability and environmental stewardship.

Some strong companies have become even more robust, while the weak ones are even more difficult, sometimes kept afloat by the double hand of the state, which prohibits layoffs and pays the redundancy fund. A gap is emerging that goes beyond sectoral or geographical definitions. Indeed, countries such as Italy and Greece, which live mainly from tourism, are suffering enormously from the effects of the pandemic, although they can look to the future with confidence because demand will return.

There are also many small businesses that the crisis has demolished, as they were already in difficulty before the pandemic, but forced closures have eroded their liquidity.

Those companies that had overcome the digital divide before the pandemic was more ready to react during the crisis. Those who invested in digital transformation, merit-based work organisation, and sustainability could grow even when working remotely and despite restrictions.

The pandemic -we read in **El País**- has led to a new organisation of work, the development of digitalisation, a more significant role for the state and has accentuated the crisis of globalisation. It was not Covid that introduced the technological revolution, but it certainly helped accelerate it like no other event in recent times.

Undoubtedly the effect that will be felt most in the economy is the gigantic momentum digitalisation gained during the crisis. *"We have jumped ten years in the adoption of new technologies. Furthermore, that is going to have an impact on the world of work, on the fall in the price of office space in big cities and the rise in demand for semiconductors, along with many other things,"* said **Federico Steinberg**, Senior Research Fellow at the Elcano Royal Institute.

The digital transformation process has gained an unprecedented momentum that will change the world of work and the society we live in at least three dimensions: new forms of work, e-commerce and the robotisation of organisations⁵⁶.

From this crisis, what lesson should we not waste from the pandemic?

Pulitzer Prize winner **Jared Diamond**, professor of physiology and evolutionary biology, offers us a vital reflection: global problems require global solutions. No one in the world will be safe from Covid if there is still a country where it rages, precisely because of the globalised world we have created, based on travel, trade and communication across borders.

In his essay "**Collaps**"⁵⁷, Diamond, through the example of various past civilisations that have disappeared or survived and by analysing the history of present-day societies that have overcome the challenge, also offers a perspective view of crises as selective shocks from which states can emerge victoriously or defeated, nations can deliberately choose to live or die.

The essay bifurcates the history of some peoples of the past who were defeated by environmental problems, such as the Easter Islanders. They became extinct because of the massive deforestation they undertook, or the Maya of Central America, and that of other peoples who succeeded, even in challenging contexts, such as the Icelanders who survived in a hostile environment for more than a millennium. Different peoples, therefore, react differently to the same stimuli.

According to the author, the past is an excellent database from which lessons can be drawn to continue to ensure the prosperity of today's societies. The past collapses have a common denominator in the damage civilisations have caused to the environment and the natural resources on which their livelihoods depended, although this is not the only factor responsible.

⁵⁶ *Rafael Doménech, head of economic analysis at BBVA Research.*

⁵⁷ *"Collapse. How societies choose to die or live", Jared Diamond, Einaudi 2005.*

Today's environmental problems are the same dangers that threatened societies in the past, and the remedies that enabled some civilisations to succeed in the past may, who knows, be effective in preventing and dealing with recent crises.

Not all peoples fail, then, and similarly, not all enterprises are doomed to collapse. The reasons for success, in part, have to do with ecological differences in that some environments pose much more complicated problems than others. Nevertheless, there is more. The longest-lived civilisations, and likewise the most successful companies, are those that know how to adapt to circumstances and changes, first becoming aware of them and then taking the necessary countermeasures.

Therefore, a crisis is always a turning point; things can change for the better or the worse. An optimistic view foresees the possibility that this crisis triggered by Covid will lead to worldwide cooperation. A synergy will serve to tackle even more critical problems such as climate change, which requires global solutions in a short timeframe.

From a business perspective, the challenge is implementing new management paradigms based on respect for the environment, sustainability, the circular economy, and digital transformation as a driver for success. Diamond's work closes with a hope: *"We have the opportunity to learn from the mistakes made by peoples far removed from us in time and space. No other civilisation has ever had this privilege. I have written this book hoping that enough of us will choose to take advantage of it."*

Two other authors, **Daron Acemoglu**, professor of economics at MIT in Boston, and **James A. Robinson**, political scientist and professor at Harvard, in their essay *"Why nations fail"*⁵⁸, also investigated possible reasons for success or failure in the face of crises.

Some theories point to climate and geography. However, the case of Botswana, which is growing at a dizzying pace while neighbouring African countries such as Zimbabwe, Congo and Sierra Leone suffer misery and violence, belies this interpretation.

Other theories call culture into question. Nevertheless, how do we explain the vast differences between North and South Korea? Moreover, what about Nogales, Arizona, which has a per capita income three times higher than Nogales, its Mexican sister city?

The origins of the prosperity or poverty of nations, the two authors conclude, lie, therefore, in the political and economic institutions that nations give themselves, and they demonstrate this with an exciting journey through universal history, from civilisation to civilisation, from revolution to revolution. From the Roman Empire to medieval Venice, from the Inca and the Maya, destroyed by Spanish colonialism, to the devastating impact of the slave trade on tribal Africa, from the Ottoman Empire to Middle Eastern autocracies, the ruling elites always prefer to defend their privileges and extract resources from society rather than embark on a path of prosperity for all.

Nevertheless, some countries can seize the opportunities that history offers, encouraging the emergence of inclusive and pluralist political systems and sustaining economic growth, such as England during the industrial revolution, revolutionary and Napoleonic France and the birth of democracy in the United States.

⁵⁸ *"Why nations fail: the origins of power, prosperity and poverty"*, Daron Acemoglu and James Robinson, 2012.

When we are witnessing the collapse of many countries and the overwhelming rise of others, not least due to this severe planetary crisis, the authors propose a theory that can be easily summarised.

In the long run, representative democracy and the free market are the only two ways a state can guarantee its people prosperity. If 'extractive' political and economic institutions are a recipe for failure, it goes without saying that inclusive economic institutions and pluralistic policies are the paths to success.

Acemoglu and Robinson's book is a political essay whose analysis involves nations to answer a social question: why some countries become rich, and others remain poor.

The conclusion reached by the two authors is that, regardless of geographical or political conditions, some countries know how to seize the opportunities of history better than others.

Although the analysis in this thesis work concerns subjects of different sizes, that are production sectors and companies, it is immediate to extend the conclusions to the realities under investigation, stating that the collapse or recovery from the crisis will depend exclusively on the ability of companies to grasp the challenges that the pandemic has presented and to transform them into opportunities for growth.

4.6 Conclusions

Over the centuries, there have been crises triggered by finance, oil and sovereign debt. Now it is the turn of the first collapse triggered by a virus.

According to the correct interpretations, the Chinese ideogram for the word 'crisis' is composed of two ideograms translated as 'danger' and 'crucial point'.

It indicates how the crisis represents a delicate and fundamental passage in the evolutionary process of the human being, in general, and of the economic realities, in particular, since the emergence of a crisis indicates the appearance of a crucial moment in the evolutionary path of a system, which, starting from a "danger", can recognise the opportunity of change.

In this last chapter, after having analysed the territorial effects of the economic crisis in Italy, one of the three countries under investigation, also concerning the repercussions of the pandemic on the Local Labour Systems (LS) mapped on the Italian territory, the prospects of recovery were analysed based on the quarterly financial accounts estimates provided by ISTAT.

In the final paragraph, we looked beyond Italy and the countries covered by this research, despite the difficulty of making hypotheses with an epidemic still underway, to draw a map of the winners and losers.

Following the theories provided in two colossal works, *"Why Nations Fail: The Origins of Power, Prosperity and Poverty"*, by Daron Acemoglu and James Robinson, and *"Collapse How Societies Choose to Die or Live"* by Jared Diamond, it was concluded that at the country level, in the long run, representative democracy and the free market are the only two ways a state can guarantee its people prosperity.

Similarly, from a business perspective, the challenge is to implement new management paradigms based on respect for the environment, sustainability, the circular economy and digital transformation as levers for success.

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CONCLUSIONS

Many things will remain of the Covid-19 pandemic when it is over: the grief for the dead and the sick, the images of collapsing hospitals and the world's great metropolises ghostly empty, the memory of an experience so unique that it will not easily be forgotten, and the fear that such a health emergency may be repeated or may become a normal warning condition.

After the two terrible years that scarred the world, the Omicron variant opened a new phase that should probably lead to the exit from the acute phase and the gradual randomization of the virus.

However, even though the situation is improving, it is not yet time to lower our guard. The Director-General of the WHO reiterated that this coronavirus 'will continue to evolve and that we are currently unable to predict how.

For this reason, all countries must continue to take all the necessary surveillance and prevention measures and continue the vaccination campaign on a massive scale, with the utmost caution in easing restrictions.

Alight at the end of the tunnel; therefore, while the virus continues to run rampant, with peaks of contagions all over the world, the data are still insufficient to reach a definite conclusion.

In a nutshell, therefore, there are still many clouds hanging over the future, especially in the long-term forecasts, where the danger of new dangerous variants remains high, according to the orientation of most of the international scientific community.

While the end of the acute phase will mark the beginning of new normality, the question remains as to how, in tomorrow's world, the pandemic will have changed politics, the economy, international relations, daily habits and the way of doing business.

From this point of view, the pandemic must be interpreted as an acceleration of history, destined, as in all past crises, to produce changes that, in many cases, are the endpoint of trends and processes that were already underway.

Is not the normality to which we should return once the surge of contagions has been halted the cause of what has happened? What indications can we draw from this crisis for the future?

Unwittingly, the virus has set us on the road to salvation, which in the coming years will see us engaged in various activities such as:

- *the redesigning of urban and domestic spaces;*
- *the definition of social networks that are more based on gratuitousness and altruism;*
- *the search for greater integration between economic systems;*
- *the creation of a new work culture;*
- *in a new way of doing business.*

These are significant, unavoidable challenges that could lead to a 'new Renaissance', both spiritual and material, like the one that followed the terrible waves of pestilence in the mid-fourteenth century that afflicted much of the then known world.

However, there is also a different perspective, another side of the coin. There is, in short, the risk that the 'new world' will take the worst part of the old one or continue it, accentuating its defects and contradictions. The truth is that it is always challenging to decipher history in progress, both in its many causes and consequences, and to make predictions for the future. It is also because, rather than radical changes or epochal leaps, economic, human and social relations dynamics usually undergo slow and gradual transformations.

In this thesis, one of the objectives we have set ourselves is to describe, without giving in to futuristic pseudo-scientific forecasts or personal prophecies, the changes that could reasonably be expected to affect economic systems and businesses due to the pandemic crisis.

The new virus has shown that it is not afraid of borders or barriers. Its apparent democratic nature has further increased economic and social inequalities, affecting states that are already struggling with atavistic problems, particularly in Europe and within the Union; as the analysis of the countries under investigation has shown, it has exacerbated the well-known imbalances between North and South.

Of course, making hypotheses with an epidemic still underway can be complicated, as can drawing a map of the winners and losers. However, it has been helpful to highlight the prospects of recovery or collapse of the production systems analyzed in an evolutionary vision of the crisis, which will lead to the rescue of the best and most efficient companies at the end of a selection process.

The Coronavirus has put a strain on the lives of many people and companies. It was a difficult period, but it showed us that important lessons could be learned from difficulties.

To some extent, all companies have been affected, finding themselves short of cash due to a generalized drop in sales in almost all sectors, which has harmed their production chains, resulting in payment delays. Nevertheless, this situation was also an unmissable opportunity to renew and learn at least two fundamental lessons: the importance of creating an ecosystem with one's production chain and digitalization.

Uncertainty is, for companies, the main enemy, and the recent health emergency has intensified this feeling disproportionately. Overcoming this impact will not be easy, but it will undoubtedly help reflect on management dynamics and appropriate strategic choices that can help fallout.

Dealing with a crisis requires a long preparation acquired through years of appropriate policies and investments.

Think, for example, of smart working. Flexible working has only been adopted by those companies that were ready to do so, as they already had the necessary tools and technologies in place and had identified the new organizational methods to get the organizational redesign off the ground.

In some cases, investments in technology made in recent years have been fundamental for the rapid and extensive transition to this new remote working method, highlighting the importance of planning and implementing company investments in good time.

A similar argument can be made concerning connectivity networks and the need to implement investments in technological infrastructure to avoid being unprepared when the need arises.

It was an unplanned contingency from an IT perspective for most companies, resulting in a race to provide the minimum conditions to communicate, share documents, and ensure business continuity.

From the company's point of view, the challenge today is to implement new management paradigms based on respect for the environment, sustainability, the circular economy and digital transformation as absolute levers for every successful action and for identifying new paths to growth.

Looking at the three macro-trends of the future - the environment, digitalization and demographics - means having the strength to reconsider economic and environmental policies and those of welfare and social inclusion, education and training, and even migration with coherent, long-term strategies.

It is also necessary to have functioning infrastructures and companies that know how to respond promptly to critical situations and develop far-sighted training that sees digital as an essential tool.

Of course, in order for each country to develop the potential to face and overcome this new crisis, the prerequisite is that there are clear economic policies to support demand and less red tape for the implementation of projects that will boost the economy.

Shortly, the winners will be those who have learnt the essential lessons from the pandemic, those ready for the "new normal", and those who have translated these lessons into new policies in good time.

This is the great lesson of the Coronavirus.

ACKNOWLEDGEMENTS

I want to dedicate a few lines to those who contributed to the realisation of my thesis.

I want to thank my parents and sister, who have always been there for me, with their infinite patience, moral support and unconditional love. In the darkest moments, you will always be my brightest light.

I would also like to thank my entire family, who have always been at my side.

I want to thank my supervisor, Professor Luca De Benedictis, who followed me step by step along this path. I acquired a working method that I will undoubtedly replicate in the future.

I want to thank my fiancée Federica for passing on her immense strength and courage. Thank you for all the time you have dedicated to me and for always being there. Only you know the hard work and sacrifices of the last period. You have pushed me on and motivated me not to give up reaching my goal. Thank you for trusting me. Thank you for celebrating my achievements and consoling me in my defeats.

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Thank you to my lifelong friends, "Il Branco". Despite the distance that led me to leave Battipaglia when I was just over eighteen, our relationship has grown stronger year after year. I know it will continue to be like that also in the future. I can tell that we will always be there for each other.

Thank you to my colleagues, the "Beceri", who have been an example to follow in these two years. Thank you for helping me through difficult times and always being there for me.

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SUMMARY

On a global scale, the spread of the health emergency has produced and will continue to produce unprecedented macroeconomic implications.

The recession caused by the pandemic is different from all the others in that it could not be anticipated, but, on the contrary, it was sudden, caused by the decisions that governments have taken to curb the spread of infections.

In a short time, moreover, the crisis has spread almost all over the world, severely hitting people, social and productive activities and the stability of the countries involved.

The crisis generated by the pandemic, therefore, shows unique and singular traits, because of the forced closure of activities, the reduction of the mobility of people, the implementation of social distancing rules, the massive public interventions in the monetary and fiscal fields and, not lastly, the changes induced by the new context in the behaviour of people and businesses, such as the greater use of digital services and the use of remote work.

By its nature, the crisis has had an asymmetrical intensity, impacting different sectors of the economies differently, depending on how many economic activities have been more exposed to lockdown and restrictions.

In terms of the contraction in turnover, the sectors most affected were travel agencies and hotels, but the effects of the crisis were also very severe in air transport and catering.

Conversely, a small group of sectors, such as online commerce and high-tech industrial districts, have benefited from the changes brought about by the pandemic due to the profound change in consumer and business habits.

The limitation of activities and the uncertainty generated by the crisis have also had consequences on company demographics, reducing, in 2020, births compared to the previous year and have had a heavy impact on employment.

As highlighted by the ECB, the contraction in corporate turnover of companies was more abrupt in Italy than in other Eurozone countries. The most significant decline was recorded in Italy, followed by Slovakia, Greece and Spain.

In the base scenario of the projections for the Eurozone's annual GDP, the decline in real terms recorded in 2020 and 2021 is accompanied by an optimistic recovery projection in 2022.

The fall in foreign demand and the measures to contain the epidemic in Italy and the European countries analyzed have led to a contraction, both economic and trend, of trade with foreign countries of an entity, never recorded since the birth of the single market in 1993 European.

The results of the questionnaires of the ES Follow-up Survey on COVID-19 of the World Bank Group were analyzed administered during the health emergency to a significant sample of southern European companies. - Eastern, in particular Italian, Portuguese and Greek. The purpose was to analyze the impact of this shock on the business system.

Despite the many differentiating factors between the countries under investigation in terms of social distancing measures, effects on supply and demand, reduced mobility, public interventions and trends in international trade, it can be said that, in the annus horribilis of Covid -19 and after a decade characterized by a slow and unfinished recovery, in all cases, the impact of the lockdown caused an asymmetrical and sectoral contraction of revenues and a severe worsening of payment times, a liquidity crisis with repercussions on the employment level and the overall production.

The crisis has mainly affected smaller companies, so much so that, in Italy, at the end of 2020, more than 33% of those with fewer than ten employees were considered at risk. Liquidity shortages and falling demand were the leading causes of the ensuing recession.

Companies able to export or belong to multinational groups have shown greater resilience, especially in the last months of 2020, compared to those that have not been able to count on advanced forms of internationalization or exports on a global scale, albeit in a situation of a general reduction in revenues.

The following thesis work aims to analyze the impact on businesses deriving from the spread of a pandemic at a global level, trying to understand the economic shocks caused by this spread and the recovery prospects of the economic sectors affected by the emergency.

The work was organized by presenting, in the first chapter, the repercussions of the health crisis on companies, highlighting its effects, the reaction strategies implemented and structural weaknesses and identifying the factors of resilience and vulnerability.

The evidence provided by the Rapport on the competitiveness of Istat's 2021 productive sectors illustrated how the pandemic health crisis has quickly evolved into a global economic crisis. The effects of the pandemic on businesses were also analyzed, especially from the point of view of the reduction in turnover the contraction in sales and employment.

Finally, the measures to combat the crisis were presented, both in reaction strategies implemented by companies and in terms of the support measures thanks to which national governments intervened to avoid the collapse of the industrial system.

The second chapter focused on the pandemic-economy binomial, on the macro-economic analysis of a recession with no historical precedent, contextualizing the spread of the virus in a highly globalized and interconnected world.

It has allowed to bring out the direct economic consequences, such as the lack of employees in the workplace due to the disease and the drop in expenses due to uncertainty, and indirect, caused by the restrictions imposed by governments to contain the spread of the pandemic, analyzing how much we have lost, in terms of production and employment, due to the social distancing measures imposed by the lockdowns and as an effect of the closure and drastic reduction of business activities.

In the third chapter, going into detail, the effect of the crisis on the main industrial sectors of Italy, Greece and Portugal was examined, starting from the results of the questionnaires administered by the World Bank Group to a representative sample of both small and medium-sized and large companies. With an international and local vocation, Dimensions operates in both the manufacturing and service sectors.

The analysis was carried out with the help of the interviews called "COVID 19 Impact ES Follow-up Survey" of the World Bank subjected to a significant sample of companies in the first and second round 2020 with an analysis time horizon from May to December 2020.

In this chapter, the characteristics of the economies and sectors under study have been explored, focusing on the disruption of supply chains and global value chains caused by the closure of factories and the consequent reduction in production and employment.

The companies' response to the crisis generated by the pandemic virus was differentiated but strongly influenced by the larger company size, the opening to international markets, and the degree of computerization of the realities examined, a fundamental lever for dealing with the pandemic and accelerating the recovery.

The fourth and final chapter presented hypotheses on possible future scenarios and the world that awaits us. The analysis presented in this chapter highlights the territorial dimension of the crisis in Italy, one of the three survey countries, and the impact of the health crisis on local production systems.

The focus reserved for Italy makes it possible to evaluate how the differentiated effects due to the high heterogeneity of the various geographical areas. They were analyzed in terms of productivity and employment dynamics, and the ability to react to the international cycle could influence the prospects of recovery or failure.

The risk profiling of the Italian regions depicts a country substantially divided in half, confirming, on the one hand, the usual North-South dualism, and also highlights elements of high vulnerability in historically lively territories from an economic point of view, as in the case of some regions of the Center-North.

Despite the difficulties of making predictions during a pandemic, with the support of the hypotheses of some illustrious authors, the chapter closes by tracing the prospects of recovery or collapse of the production system analyzed in an evolutionary vision of the crisis, which at the end of a selection process, bring the best and most efficient realities to the rescue.

Shortly, the winners will be those who have learned the most critical lessons from the pandemic, those who have made themselves ready for the "new normal", and those who have translated these lessons into new policies in time.

Epidemics and pandemics represent significant threats to life and health and require great effort to be contained and made less severe. The difficulties in their management depend on a variegated number of factors that depend on the unpredictability and changeability that characterize them and, on the need, to cope with them by adopting national and international coordination measures, which are more than ever necessary in the current situation of globalization and fast interconnection of people and goods.

The health emergency resulting from the Covid-19 pandemic triggered an unprecedented global crisis that affected all aspects of economic and social life.

The entire world economy has been faced with numerous challenges, namely eradicating the virus, protecting jobs and income and, at the same time, creating a new standard based on the reconstruction of a more equitable, inclusive and resilient social and economic context.

According to the results of the Istat surveys on the "Situations and prospects of companies in the COVID-19 health emergency", at the end of 2020, over two-thirds of companies recorded a significant reduction in turnover compared to 2019, while 62% continued to experience a decline in revenues also in the first six months of 2021.

The crisis has mainly affected smaller companies, so much so that, in Italy, at the end of 2020, more than 33% of those with fewer than ten employees were considered at risk. Liquidity shortages and falling demand were the leading causes of the ensuing recession.

Companies able to export or belong to multinational groups have shown greater resilience, especially in the last months of 2020, compared to those that have not been able to count on advanced forms of internationalization or exports on a global scale, albeit in a situation of a general reduction in revenues. About 30% of companies, mainly industrial micro-enterprises and personal services, have been "displaced" by the health emergency since, despite having been strongly affected by the fall in demand, they had not yet implemented at the end of 2020 concrete defence strategies.

In the tertiary sector, about half of the companies showed elements of fragility, with very high peaks in some sectors such as tourism, catering, sport and other personal service activities.

In a nutshell, the larger and internationally oriented companies experienced lower closure risks, fewer liquidity, demand and supply problems. Companies in conditions of structural solidity, characterized by an above-average quality of personnel, more excellent economic dimensions, and more intense use of digital technologies, have been able to better cope with the economic effects of the pandemic.

In the current crisis generated by the Coronavirus, fragile companies, on the other hand, have suffered more than others both from the lack of liquidity and the fall in domestic demand, both in the industrial and tertiary sectors, demonstrating more significant difficulties in planning reaction strategies.

The pandemic also impacted the financing strategies of companies that, to tackle the liquidity crisis, used a wide range of instruments, including bank credit, which played a central role.

The evolution of the crisis has also accelerated the digital transformation of companies, favouring the spread of investments in the cloud, the spread of remote work and virtual workstations (more than doubled between March and November 2020, until to involve 27% of companies), as well as software for the shared management of projects, social collaboration platforms and digital services to support the core business, while from the point of view of sales the number of companies that have use of e-commerce.

In this chapter, based on the evidence provided, as regards our country, by the Report on the competitiveness of the productive sectors 2021 of Istat, we will illustrate how the pandemic health crisis has evolved in a short time into a global economic crisis, analyzing the impacts of the Covid-19 crisis on businesses, especially from the point of view of the reduction in turnover, the contraction in sales and employment. Therefore, the measures to combat the crisis will be explained, both in reaction strategies implemented by companies and in terms of the support measures thanks to which national governments have intervened to avoid the collapse of the industrial system.

This will make it possible to analyze how the different segments of the production system react to the consequences of the shock and identify the structural factors of resilience or the vulnerability of businesses. The response of Italian companies to the crisis generated by the pandemic virus, as will be seen better in the following chapters, is also in line with the other European realities analyzed in the thesis work; in particular, reference is made to companies in Greece and Portugal. Their situations were compared and analyzed using the data provided by the World Bank.

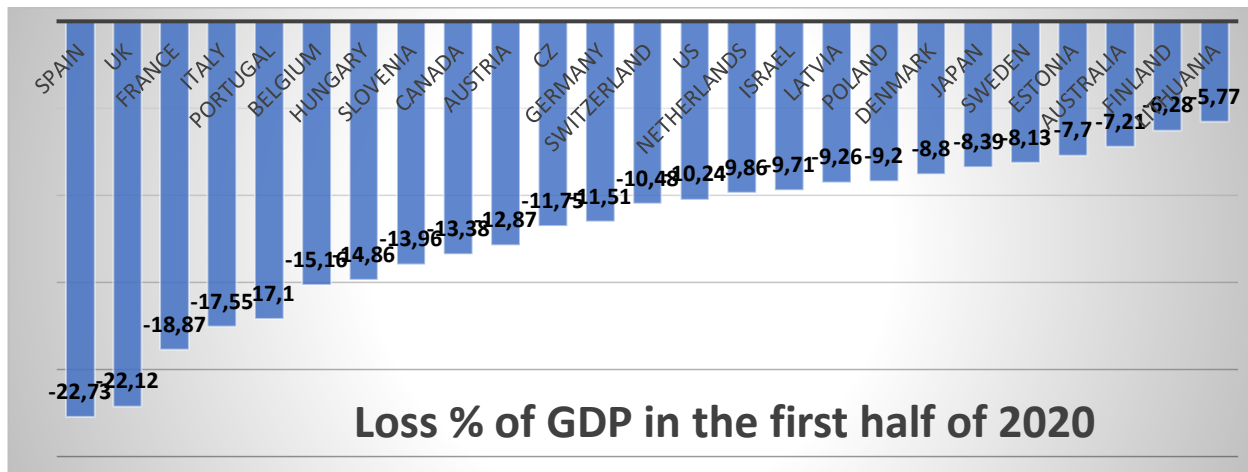
Considering the effects of the crisis on the productive fabric and the risks generated by the pandemic on the development prospects of companies, the analyses presented allow us to outline a structural picture of the reaction behaviour to the pandemic crisis about the support measures implemented. By national governments, with reference to Italy.

This confirms, on the one hand, the significant presence of resilient, dynamic and expansion-oriented business profiles, especially among companies open to the markets, which show financial results and development prospects that are far superior to those of companies oriented only to the internal market. On the other hand, it shows how the companies that in the pre-crisis phase had driven the general economic performance of the manufacturing sector tend to react with more incredible determination to the crisis induced by the pandemic, in an attempt not to jeopardize their competitive positioning and not to interrupt the growth path.

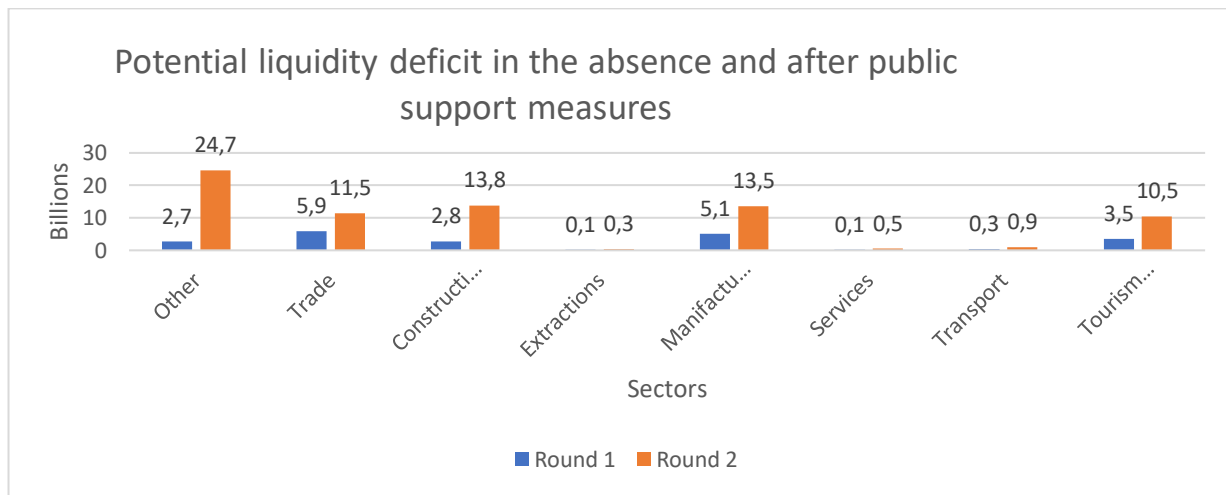
Overall, even in a context that confirms a violent and lasting negative impact of the crisis on the entire Italian and European production system and the need to give continuity to public support policies, this evidence, as will be confirmed in the following chapters, show the widening of the distances between the most competitive and dynamic sectors and those less oriented to change, and highlight, as in the recovery phase, a dynamic and innovation-oriented strategic approach can constitute the most effective response to the crisis.

The companies that will find themselves equipped in terms of how to use work, the adoption of digital technologies, the optimization of processes and the openness to internationalization, those companies, therefore, more dynamic and resilient that have demonstrated ability held during the crisis will have the prospect of accelerating the transition towards more complex and competitive organizational profiles. Strictly speaking, here are some of the most significant and relevant graphs for the following thesis work presented in the first chapter.

In addition to having been an elaboration of the author, these graphs represent the basis on which the following elaborate is built. The analytical-quantitative contribution that the following project wanted to express in all four chapters was of fundamental importance.



The following representation shows the loss of GDP in percentage terms in certain reference countries.



Instead, the following graph represents the Potential liquidity deficit in the absence and after public support measures for different companies belonging to different sectors.

The second chapter opens by saying that as has been argued by several voices, "This time is the first time", that is what we are experiencing is not simply an era of change. However, it is an epochal change, for the intensity, the extent and specificities of the crisis that the economy is going through, which has hit, starting from China and with a very long shock wave, all the countries of the world and has generated enormous consequences and an economic recession never seen from the second post-war period.

The most characterizing effect of this crisis is that it derives from a very particular shock, the result of the lockdown, which has hit all sectors of the world economy without distinction, with a consequent state of widespread uncertainty about the future trend of infections, the rate of effective mortality, on the identification of effective countermeasures against the virus, on the duration of social distancing, on the medium-long term effects on the economy and the prospects for recovery.

Unlike the 2008 financial crisis, this time, capital injection only in the financial sector cannot be the answer, as this current one is not a banking crisis, and it is not even a standard shock in supply and demand.

The Covid-19 pandemic crisis was instead a shock for society. It has been estimated that 60% of the future fall in US GDP is attributable precisely to the "uncertainty" factor. In other words, we look to the future, having few anchor points useful for tracing realistic scenarios without knowing how and when we will return to a new "normal".

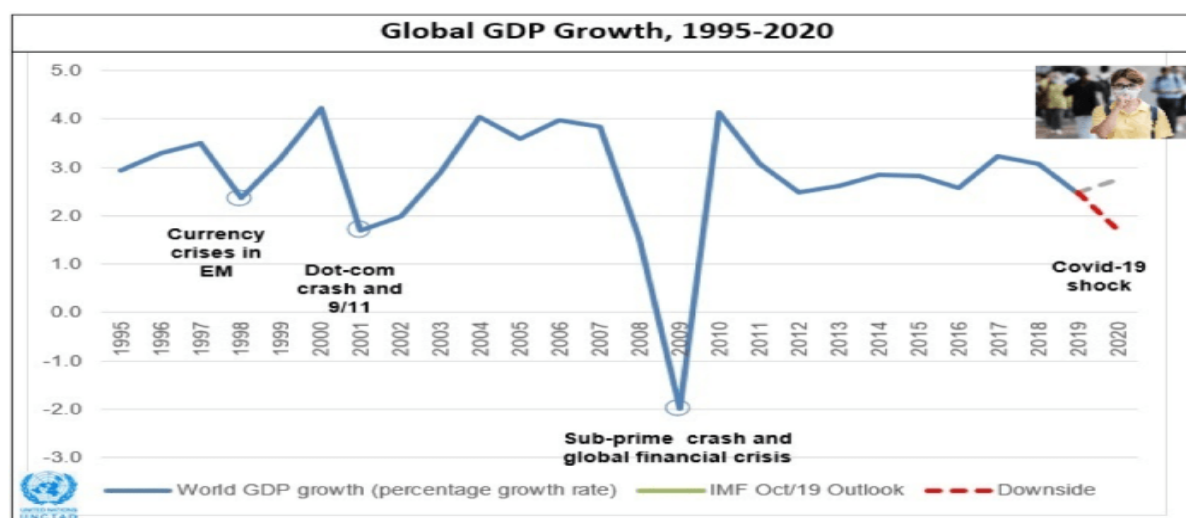
In a context of this kind, economic analyzes seem to favour forward-looking assessments on a future that is difficult to decipher, in which the economic policies to be adopted may have to go in the direction of massive monetary and fiscal interventions, aimed at avoiding the macroeconomic repercussions of the pandemics affect businesses, with dangerous contractions both in terms of employment and productivity. The worrying fact that concerns Italy and other countries is that this crisis is violently affecting the business demography, which means that there is a risk of losing an entire generation of entrepreneurs, with negative consequences on the skills development of the country.

High levels of start-up rates produce positive and lasting effects at an economic level, pushing productivity and real growth in the country and affecting the post-crisis recovery speed, with a fundamental impact on the economy in terms of employment.

This chapter, in particular, was intended to evaluate the impact of the current crisis on the main macroeconomic variables, from the point of view of entrepreneurship, i.e., asking ourselves, how much we have lost, in terms of production and employment, due to the measures social distancing imposed by the lockdowns and as an effect of the closure and drastic reduction of business activities.

Also, in this chapter, the contribution of quantitative analysis was fundamental to give substance to the thesis.

For example, through this graph, it was possible to estimate the annual percentage change in World gross product.

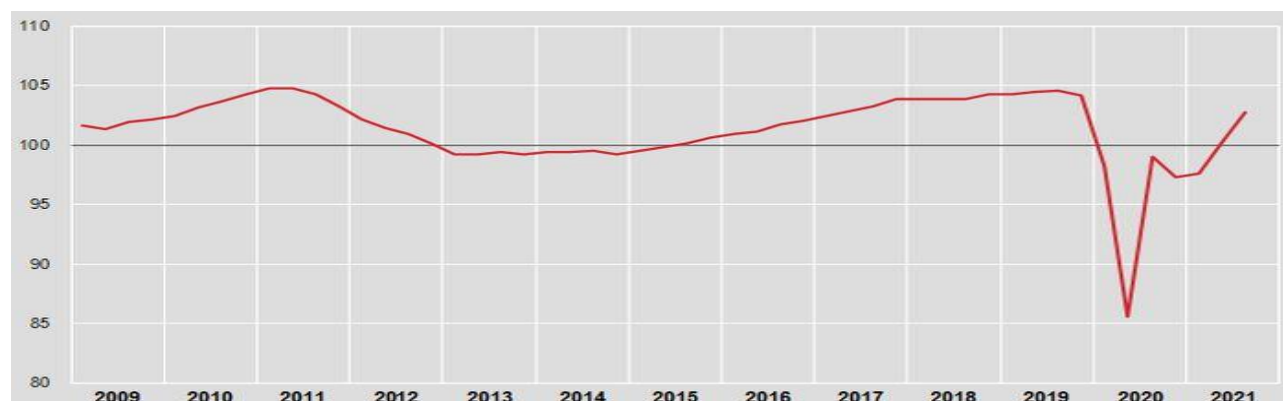


Graph 1: annual percentage change in World gross product. Source Unctad

Still, about a lockdown recession, the situation of the Italian GDP was represented by the following graph, which demonstrates its trend.

The International Monetary Fund predicted a 3% fall in world GDP by 2020, around 6% on average in advanced economies and 1% in emerging economies. The European Commission's forecast for the euro area, which estimated a 7.7% contraction in GDP in 2020 followed by a partial recovery in 2021, was also in line. Indeed, in 2020, world GDP stood at -3.5%, recording a negative record not seen since the post-war period, with significant declines in all the world's major economies, except for China, which instead recorded an increase of 2.3%.

In Italy, the crisis came when the economy was already showing signs of slowing down, although the overall conditions of the production and financial system were more solid than in the past, and public finances showed a budget deficit under control. The cyclical change in national GDP is well illustrated in the figure below.



Source: Istat, April 2020.

The second chapter also analyzed the impact on international trades and the labour market (through graphs that explain their performance in different parts of the world with a particular focus on the Italian situation). In the last paragraph, we find the Mitigation effects of public support policies in which the effects on the economy are compared between health care public measures and without public health measures through some economic theories.

In conclusion, from the analysis of the impact of the current crisis on the main macroeconomic variables, it emerged that the more severe the social distancing measures imposed by national governments, the greater the negative consequences on their respective economies, on GDP, on the work, international trade and business activities.

The recessive effects on economies will have "V" or "U" trends based on the anti-contagion measures adopted by governments and, since social distancing is a necessary measure that entails a high economic cost, the national authorities themselves must intervene with decisions of mitigation which, by easing social distancing, flatten the recession curve.

The most severe and long-term economic impacts will be felt by indebted companies, with poor cash flows, little international vocation, by companies forced to close, which cannot keep and hire staff or cannot repay debts, and by companies poorly digitized.

The positive signs come from governments' efforts to mitigate the adverse effects of the recession on the economy are increasing to respond and counter the crisis.

The third chapter illustrates the results of a survey on the productive sectors of three countries of South-Eastern Europe, Italy, Greece and Portugal, developed starting from the interviews of the World Bank, highlighting the ability of companies to react to the economic impact of the Covid-19 emergency, about the size of the company (small and medium-sized enterprises vs large and multinational companies), the degree of digitization (use of e-commerce and intelligent working) and the international vocation (exporting companies vs companies concentrated on the market local).

The analysis was carried out with the help of the interviews called "COVID 19 Impact ES Follow-up Survey" of the World Bank subjected to a significant sample of companies in the first and second round 2020 with an analysis time horizon from May to December 2020.

The research was based on in-depth interviews conducted by the World Bank with a direct and qualitative approach to explore the immediate reaction of companies to the lockdown concerning their technological dimension, the role of international markets and the effect on business models. The reshaping of consumption habits.

At the end of the phase of the restriction imposed by national governments, the scenario in the economies analyzed appears relatively homogeneous, as almost all the SMEs investigated were affected by the Covid-19 crisis and alternatively suffered a slowdown in production activities with a consequent reduction in volumes of business, or had to entirely suspend activities with considerable effects on economic and employment sustainability, even if in the presence of public support measures introduced by the relevant governments.

Most companies are in financial difficulty, with liquidity problems deriving from partially fixed cost structures and reduced or delayed revenue streams. This results in an inability to meet current expenses and the immediate need for financial support to rebalance the circulation cycle.

In particular, the technological dimension, already an industrial innovation tool before Covid, appears as a striking lever, especially regarding e-commerce and digital transformation for the new remote collaboration services necessary to deal with distancing and limitations circulation, especially in the first analysis period. In a medium/long-term perspective (second round), the use of technology to remotely work and commercial activities is confirmed as an indispensable factor of resilience and development.

The rapid spread of intelligent working has also proved to be an effective tool for maintaining relationships with customers and suppliers and creating collaboration and motivation in employees.

As regards exports, the crisis has amplified the gap between internationalized companies and companies concentrated on the domestic market. The outlet on foreign markets has always been one of the success factors of companies but never before has its relevance increased, also as a compensation factor in the face of a depressed domestic market due to the crisis.

From what has been analyzed, it emerges that the fundamental skills for dealing with the emergency were undoubtedly emotional resilience in the face of the crisis, clarity in reading the context and speed of reaction. The more companies can read the relevant information on the transformation of markets, the more they will be able to develop new business areas and identify new forms of positioning in the relevant supply chains. The value of exports and the drive towards internationalization should not be underestimated so that those companies that have a significant share in foreign markets resist the crisis, also because internationalization, in recent years, has been one of the primary growth directions of European SMEs.

In particular, for Italy, this figure is also confirmed by the strong growth in exports of national SMEs, which increased, between 2014 and 2018, at an annual growth rate of + 2.5%.

Despite the impacts that the health emergency has had on all economic systems and the resulting slowdown on both the supply and demand sides globally, internationalization remains one of the main ones for Italian, Greek and Portuguese SMEs. post-Covid growth and business recovery driver.

Even if the propensity to look out to foreign markets increases as the company grows, confirming the size scale as one of the elements of resistance to the crisis.

In a nutshell, in the context of general disorientation created by the pandemic, the winner is the one who is lucid and reacts effectively to the transformation taking place.

The chapter mentioned above is the most analytical and complex of the four presented in the paper. Different statistical items have been studied, and elaborations of graphs and tables carried out by the author refer to the elaborate consultation. The aim was to represent, through an instant photograph, the situation of similar businesses in similar geographical contexts such as that of southern Europe in order to obtain an analysis that is as truthful and comparable as possible.

The peculiar characteristic of this crisis was its scope, it is very heavy health and economic impact, its speed, and the complexity of the world it hit.

It is, therefore, not only the Covid-19 pandemic that has questioned the business models of our companies but the changes that had already taken place in the competitive context. The current paradigm is based on the speed with which each novelty spreads to all markets due to the extreme and profound interconnection and complexity of the economic and social environment in which we operate. Moreover, the crisis has further accelerated this process.

Shifting the focus allows us to understand how companies that have already innovated their business models are also those that have best faced the emergency phase and are already recovering, thanks to being flexible, resilient and digital. Qualities that allow to face the speed of change and the complexity of the markets and face unexpected events.

The biggest challenge is to identify in advance the drivers of competitive advantage in the future and make people understand the need for transformation and accompany companies by making them aware of the opportunities and the risks.

Digital, push towards internationalization, green, resilience, and business continuity are the main challenges that emerge from this work. This is accompanied by strengthening the company's assets, elements capable of bringing about sustainable and structured growth. Paths were possible only through an investment in the formation of the human capital of one's own company and a new way of conceiving the relationship with one's collaborators.

In particular, the crises that Italian companies have faced over the years have certainly contributed to making them more ready to manage possible emergencies. It emerged as in the financial crisis of 2008; three elements have marked the success of some Italian companies, namely the ability to innovate, internationalization and capital strength.

Innovation is a fundamental driver of productivity and, therefore, of competitiveness; the push towards exports allows for diversification and allows us to be more resilient to market dynamics and better adapt to change.

Finally, capital solidity, the correct ratio between debt and equity and liquidity on the balance sheet allows companies to have minor repercussions in times of poor cash flows.

The survey conducted on Italian, Greek and Portuguese companies confirmed the importance of meeting the three conditions mentioned to deal with emergencies, proving to be critical elements for being "resilient" and winning in this specific period of uncertainty.

For small and medium-sized enterprises, the segment most affected by the emergency and from some points of view less ready to face the current crisis, due to the level of digitization, the small size, the reduced accessibility to qualified skills, it is therefore essential to understand the new reality that is taking shape and prepare to face the future, elaborating the most suitable path.

History teaches us that there can only be two possible results from a crisis: victory or defeat. Those who remain immobile and passive to events have already written their destiny. Those who try to act and are proactive, on the other hand, have a good chance of being the winner. If the only acceptable strategy was to stop and "distance yourself" in post-lock-down during the first phase of the emergency, this could not be the way to go.

The West is preparing to emerge from the health emergency caused by the Covid-19 pandemic and is heading towards economic recovery.

It is difficult to believe that the future holds for us a return to 'business as usual', as our lives have undergone profound changes, involving production processes and international relations.

However, this does not mean that this "new normal" will be radically different from the previous one. Before Covid-19 disrupted our lives and our globalized economic system, some medium to long-term trends - such as the digital and ecological transition - were already visible for some time.

The pandemic has entered these trends with disruptive force, accelerating them on the one hand but also making policy responses unstoppable. The pandemic seems to have already produced winners and losers, at least economically. In the period immediately following the first wave, China (and the countries of Southeast Asia driven by it) managed to reactivate their economies more quickly, above all thanks to a more effective containment of contagions that made it possible to limit lockdowns in time.

Instead, Europe and the United States come out defeated, if we consider that the GDP of the EU and the US contracted respectively by 6.1% and 3.5%, while the market power (in terms of exports) was reduced by about 0.5% for the EU and by 1% for the United States. Data reveal pretty eloquently how the "shift to Asia" has continued and has also accelerated.

For the foreseeable future, things could improve, especially for the European Union, where the vaccination campaign has finally taken off after a difficult start, and the rapid improvement in the health situation has helped raise growth prospects. Furthermore, the funds arriving with the Next Generation EU could further boost economic growth, which, thanks to the investments planned in crucial areas such as digital and the

energy transition, could establish a virtuous circle by raising the recovery prospects of the states. Europeans, particularly those analyzed and the subject of the study survey.

The one described above is a favourable scenario that considers a constant improvement in the health situation and progressive relaxation of restrictions on individual travel. In reality, a good dose of uncertainty remains for the next few months, not only due to the fear of a possible resumption of infections due to new waves of the virus or new variants, but also because different regions of the world will not have yet received a sufficient quantity of doses to be able to declare oneself out of danger.

In a similar context, making predictions can become a gamble, given that the pandemic is still ongoing.

An element to be considered, in the short term, is the current upward trend in the prices of raw materials, which, in addition to generating direct consequences for the economic outlook in terms of inflation, which risk hindering the recovery, involves a new geopolitical competition for their hoarding due to the mismatch between supply and demand for commodities.

There are three main dynamics to observe, as they can influence the direction that the economy will take and will have a substantial impact on the balance of power between states.

The first dynamic is undoubtedly linked to the fight against climate change. The ecological transition to new 'clean' and 'green' business models will only be successful if the world of business and finance find the right incentives to invest in new energy sources and aim for more sustainable production.

Investing in 'green' sectors and activities will be increasingly convenient to intercept financial resources (such as the European Green Deal and NGEU) and create new opportunities for economic growth and employment.

The second 'macro-trend' is linked to the digital transition. Technologies such as Artificial Intelligence, machine learning, Internet of Things are becoming more and more pervasive. If, on the one hand, they are certainly a lever of recovery, on the other hand, digitization could further amplify inequalities between countries and within of the same.

The low level of investment in technology is one reason that prevents Europe from being a fertile ground for large tech companies. The gap between Europe and the US and China is even more significant on the start-up front. To create a more attractive environment for hi-tech companies, the European Union also aims to overcome the internal fragmentation of the digital services market, one of the main obstacles to the growth of large-scale companies.

Finally, the third grand and the trend to keep an eye on in the coming decades will be demographics. The EU's disadvantage is also found in this area. Italy is, unfortunately, the 'black jersey' of the EU and risks finding itself in 2050 with a one-to-one ratio between people of working age and over 65, with obvious implications in terms of the sustainability of welfare systems. It is more than evident that population growth will be concentrated far from the West in the coming decades.

The opportunities for Italy to finally take the path of a solid and sustained recovery over time essentially pass-through reforms and the use that will be made of the funds destined for our country as part of the Recovery Plan.

Italy will be the primary beneficiary of European funds for a total of 191.5 billion euros, including non-repayable resources and low-interest loans. The key to success will be to translate these resources into effective investments and embark on a path of reform.

Shortly, the winners will be those who have learned the essential lessons from the pandemic, those who have made themselves ready for the "new normal", and those who have translated these lessons into new policies in time.

Looking at the three macro-trends indicated (environment, digitization and demography) means having the strength to reconsider economic and environmental policies and those of welfare and social inclusion, education and training, up to those of migration with coherent strategies and long-term.

The analysis presented in this chapter highlights the territorial dimension of the crisis in Italy, one of the three survey countries, and the impact of the health crisis on local production systems.

The focus preserved for Italy makes it possible to evaluate how the differentiated effects due to the high heterogeneity of the various geographical areas, in terms of productivity and employment dynamics and the ability to react to the international cycle, could influence the prospects for recovery or failure.

The risk profiling of the Italian regions depicts a country substantially divided in half, confirms the well-known North-South dualism, and highlights elements of high vulnerability in historically lively territories from an economic point of view, as in the case of some regions of the Center- North.

Despite the difficulties of making predictions during a pandemic, with the support of the hypotheses of some illustrious authors, the chapter closes by tracing the prospects of recovery or collapse of the production system analyzed in an evolutionary vision of the crisis, which at the end of a selection process, bring the best and most efficient realities to the rescue.

Also, this chapter, being very analytical, presents different graphs whose consultation is postponed to the elaborate. The focus is placed on Italy, dividing it based on various factors regarding its response to the crisis. It will be noted that different business areas and worlds have completely different recovery strategies. Despite being in the same country, companies belonging to the same sectors or different sectors have undergone a similar trend during this period. What is concluded, therefore, is that over the centuries, there have been crises triggered by finance, oil and sovereign debt. Now it is the turn of the first collapse caused by a virus.

According to the correct interpretations, the Chinese ideogram to indicate the word "crisis" is composed of two ideograms that can be translated as "danger" and "crucial point".

This indicates how the crisis represents a delicate and fundamental passage in the evolutionary process of the human being in general and of economic realities, specifically, since the emergence of a crisis indicates the appearance of a crucial moment in the evolutionary path of a system that starts from a "danger" can recognize the opportunity for a change.

In this last chapter, after analyzing the territorial effects of the economic crisis in Italy, one of the three countries under investigation, also with the repercussions of the pandemic on the local labour systems (SL)

mapped on the Italian territory, the prospects were analyzed recovery based on the estimates of the quarterly income statements provided by Istat.

In the final paragraph, the look beyond Italy and the countries covered by this research was broadened, despite the difficulty of making hypotheses with an epidemic still in progress, to draw a map of the winners and losers.

Following the theories given in two colossal works, "Why Nations Fail: The Origins of Power, Prosperity and Poverty", by Daron Acemoglu and James Robinson, and "Collapse How Societies Choose to Die or Live" by Jared Diamond, it was concluded that at the country level, in the long run, representative democracy and the free market are the only two paths that a state can take to guarantee prosperity for its people.

Similarly, from a business point of view, the challenge to be seized is to implement new management paradigms based on respect for the environment, sustainability, the circular economy and digital transformation as a lever for every successful action.