An overview of the Covid-19 effects on employment during 2020. Evidence from Cyprus, France, Spain, Greece, Italy, Malta, Croatia and Portugal

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Covid-19 Regional Labour Dashboard
University of Aegean/YOUTH Share - Coronavirus Response & Labour Statistics

Introduction

2020 has been among the most challenging periods for societies and economies across the globe. Whilst the initial outbreak of Covid-19 inflicted a major shock to the world economy, the health crisis and the unprecedented lockdown measures that followed furthered the severe economic turbulence. Labour markets have been highlighted as a crucial field where the impact of the pandemic has unraveled. Latest OECD data highlight a significant increase in unemployment, which, from 5.4% for its 37 countries in 2019, jumped to 7.1% within a year. Despite the implementation of economic recovery plans, the economic and social implications of the Covid-19 pandemic and particularly the effects of lockdowns have been dire.[1] Entire economies have been grinding to a halt by the general confinement of the population and the suspension of business activity. These implications have been unequal among social classes, with the poorest being the hardest hit.[2] Apart from their social footprint, mitigation strategies have varied in their impact across space and age groups. For instance, they have been particularly heavy for young people in peripheral regions.[3] The distinct traits and dynamism of local and regional economies have come to the forefront as central factors in the spatiality the pandemic's footprint. The discourse becomes particularly interesting when its economic effect is studied in the context of the countries of the European Union (EU). With the 2008 global economic crisis still affecting the regional economies and since 2016, Brexit changing the patterns of trade and increasing the level of uncertainty, the outbreak of Covid-19 in 2020 has been transforming again the geographical socio-economic patterns. The consequences of the health and economic crisis has largely varied across and within countries, which, despite being members of a single union, did not implement a common and unified strategy in tackling the pandemic.

Reflecting the above, the report at hand follows the geography of Covid-19 and scrutinizes the impact of the subsequent mitigation policies on employment across countries, regions and the main sectors of economic activity for the Mediterranean EU (MED EU), providing valuable insights for the social, economic and geographical pandemic-induced effects. The countries that are being studied here are Cyprus, France, Spain, Greece, Italy, Malta, Croatia and Portugal.

[1] Nicola, M., Alsafi, Z., …, and Agha, R. (2020) The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery* 78, 185-193.
[2] Bennett M (2021) All things equal? Heterogeneity in policy effectiveness against COVID-19 spread in Chile. *World Development* 137. DOI: 10.1016/j.worlddev.2020.105208
[3] Kanelleas, A., Psarologos, D., Voulgaris, D., Gourzis, K., and Gialis, S. (2020). The harsh uneven regional impact of the Covid-19 pandemic: an account for the Mediterranean EU South based on the 'COVID-19_Regional_Labour' web GIS. *The Greek Review of Social Research* 154, 29-39 (in Greek).

The geographically unequal spread of the pandemic during 2020

As reflected on the variating infection and mortality rates across the EU regions, the spread of Covid-19 has been uneven. The degree of global interconnectedness of a region in terms of trade, position within wider production networks, or tourism, has played an important role for it being affected by Covid-19, both in terms of infections and mortality.[4] During its initial stages, the virus hit northern Italy, the epicenter of the pandemic in South EU. Afterwards, it spread to most EU countries and regions. Metropolitan areas were exposed before rural areas, whilst tourist spots also exhibited a notable vulnerability to each new spike in infections and moralities. More specifically, in Spain, touristy areas Catalonia and Andalucía witnessed a high infection rate first, with Madrid, the capital region of the country, following. Notably, this area, although receiving relatively fewer visitors than other tourism-dependent areas, such as Canarias and Illes Balears regions, has a high level of employment in tourism.[5] In contrast, Greece, which also comprises many important tourist destinations, entered the outbreak of the pandemic before the beginning of its tourist season, which, compared to Spain and Italy, lasts fewer months. Given, additionally, the fact that the country occupies a far less important position in the global value chains, the first waves of the pandemic affected it in milder terms, as the first cases during Spring of 2020 pertained to Greek citizens travelling abroad at the beginning of March rather than to foreigners visiting Greece.[6]

For their part, metropolitan regions, which exhibit a high concentration of production and population, also saw infection rates increasing, as reflected in Map 1. The industrialized and urbanized Italian North became the first epicenter of the pandemic in Europe, followed by the metropolitan regions of Spain, namely Madrid and Barcelona, and Ile-de-France, in France. In Greece, although the absolute numbers of cases remained lower than in other MED EU countries, the two main urban complexes (Athens in Attica and Thessaloniki in Central Macedonia) had most Covid-19 cases.

The picture becomes more complicated when Covid-19 cases are weighed by regional populations (Map 1). As expected, the highly urbanized regions top the rankings in terms of Covid-19 cases per 100k people in 2020. Densely populated areas which constitute business hubs, such as Lombardy in Italy, Madrid and Catalonia in Spain, Ile-de-France and Lyon in France, and Lisbon in Portugal, stand out. At the same time, globally interconnected regions which constitute trade hubs, such as Hauts de France and Marseille in France, as well as Murcia in Spain and Norte (where the port city of Porto is located) in Portugal, also recorded high infection rates due to the high mobility of people. However, even regions with low population density were found exposed to the virus, with this highlighting the complexity of the socio-spatial process of an infectious disease's spread. An illustrative example of this is the border region of the Autonomous Province of Bolzano in Italy, which recorded 5,050 cases per 100k residents, surpassing Lombardy (4,420). Its spatial proximity to Bergamo and Milan could have been crucial for this. In Spain, the small regions of La Rioja and Communidad Foral de Navarra with 5,540 and 6,300 cases per 100k people respectively exceeded the Covid-19 infection rate of the capital region of Madrid (5,530). In Greece, whilst touristy and urbanized Central Macedonia demonstrated the highest number of cases (2,170), it was followed by the rural

[4] Kapitsinis, N. (2020). The underlying factors of the Covid-19 spatially uneven impact. Initial evidence from EU regions. *Regional Science Policy & Practice* 12(6), 1027-1045.

[5] Gómez, M., and Salvatierra, J. (2018). El empleo en el turismo llega al nivel de la construcción en el 'boom'. El Pais. 19 August. Available at: https://elpais.com/economia/2018/08/17/actualidad/1534525294_604254.html

[6] Kanelleas, A., Psarologos, D., Voulgaris, D., Gourzis, K., and Gialis, S. (2020). The harsh uneven regional impact of the Covid-19 pandemic: an account for the Mediterranean EU South based on the 'COVID-19_Regional_Labour' web GIS. *The Greek Review of Social Research* 154, 29-39 (in Greek).

regions Eastern Macedonia and Thrace (1,580) and Western Macedonia (1,490). By way of contrast, Attica, the most urbanized region in the country saw 830 cases per 100k residents.
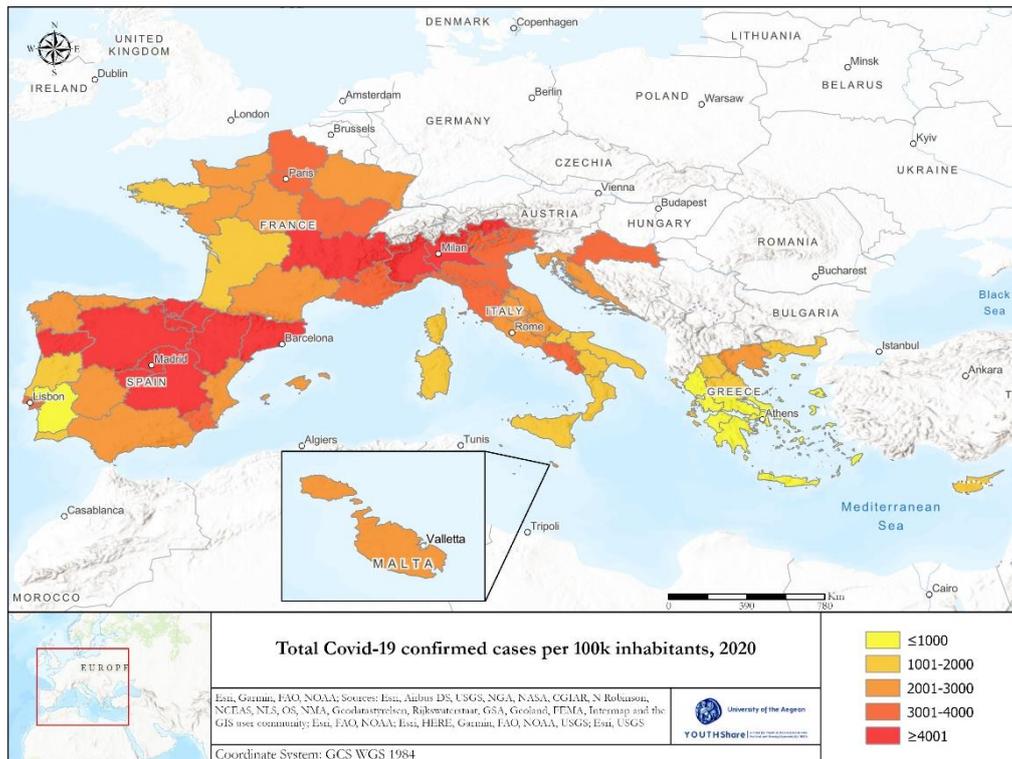
Map 1: Total Covid-19 confirmed cases per 100k inhabitants, late 2020, own elaboration

Employment changes from 2019 to 2020

At the national level, Malta was the only country with a significant positive change in employment for 2019-2020, followed by Cyprus, which showed small upward trends, with the governments in both countries adopting extensive measures to support employment. In contrast, Spain, Italy and Portugal are the countries that saw the greatest impact of the health and economic crisis on their national labor markets. Total employment in these countries demonstrated the strongest downward trends, while forecasts for the recovery of their labor markets remain ominous.[7] Employment in Greece and Croatia contracted by 1%. As data show, countries with the highest Covid-19 infection rate seem to have suffered the greatest employment losses, being the result of stricter and lengthier mitigation strategies to handle the pandemic. In contrast to employment changes, GDP decreased in all studied countries without exceptions, with its contraction ranging from -5% (Portugal) to -10% (Spain and Greece).
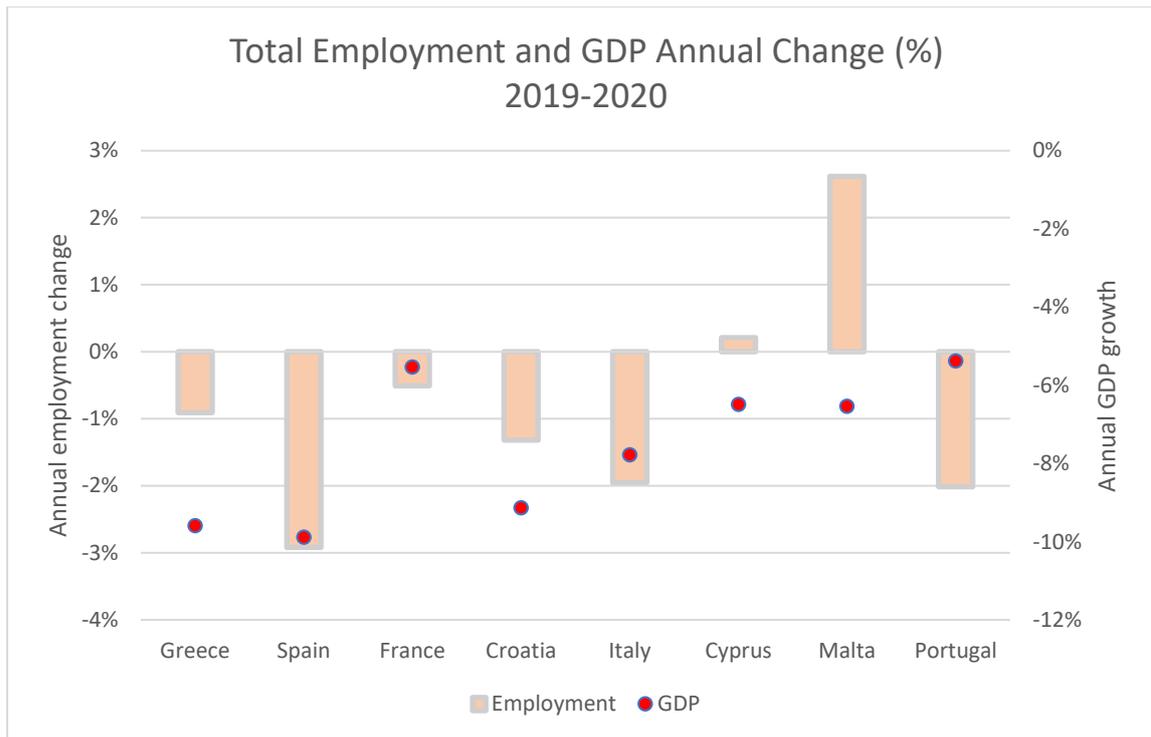
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[7] https://covid-19.iza.org/crisis-monitor/italy/

Figure 1: Annual change (%) of total employment and GDP for the case study countries, 2019-2020, own elaboration

At the subnational level, inter-regional variations of annual employment change are noticeable, both within and across countries (Map 2). Thus, whilst employment in both regions of Croatia significantly decreased, with Kontinentalna Hrvatska, a more urbanized region, recording greater employment losses, the wealthy and metropolitan regions of Greece (Attica) and Portugal (Área Metropolitana de Lisboa) saw a positive annual employment growth. At the same time, most of their insular or coastal touristy regions such as South Aegean, Crete and Algarve saw employment falls. A similar, albeit weaker, trend was recorded in Spain and Italy, with tourism dependent regions such as Illes Balears, Murcia, Andalucía, Sardinia, and Sicily, losing employment. Specifically in Italy, what stands out is the significant divide between the northern, more developed and industrialized regions, which saw a small employment decline that contrasts the large employment contraction in the poorer areas in the south. Finally, in France, the country with the strongest economy in the MED EU, coastal regions, regardless of being in the industrial north or the service-dependent south, maintained or increased their employment levels, apart from a few exceptions such as Brittany, Normandie.
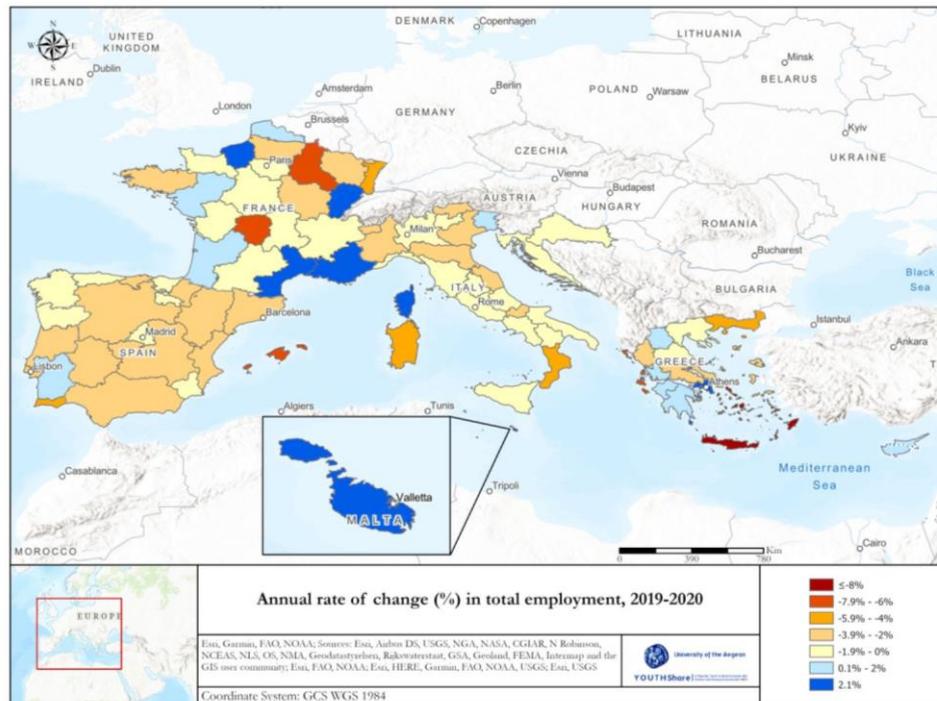
Map 2: Annual rate of change (%) in total employment, 2019-2020, own elaboration

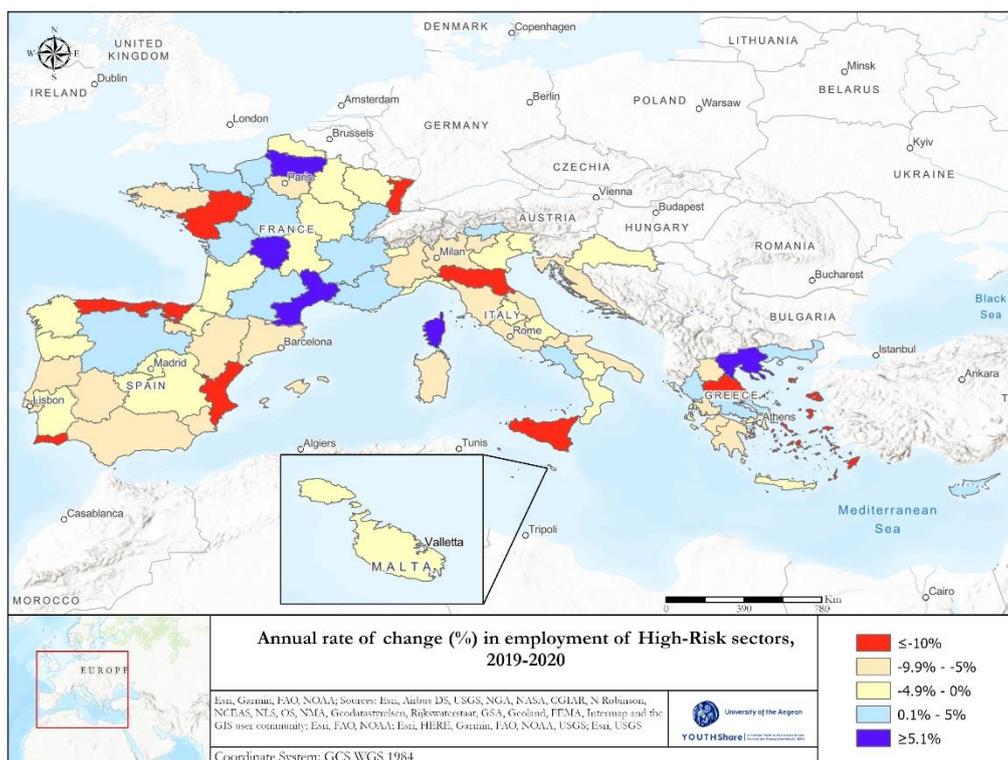## Employment change by sector 2019-2020

With the restrictiveness of mitigation measures differentiating among sectors, the industrial structure of the countries under study was expected to shift notably. Indeed, studying the impact of Covid-19 on sectoral level reveals the uneven terms changes are occurring among sectors and regions. One of the industries that faced the most intense pressures is accommodation and food services, as a result of government strategies to suspend economic activity in this sector due to the high risk of infection. Thus, employment therein declined across all study countries. While however the sector lost employment in most countries, France managed to minimize these losses based on its large internal market that enabled domestic tourist flows, in contrast to the other countries which depend on international tourism much more. Despite limiting their losses, however, French regions exhibited profound variations, demonstrating both the greatest positive and negative employment changes in accommodation and food service activities across the MED EU. France-Comte (-40%) and Brittany (-29%) saw the largest contraction in the year to 2020, whereas Bourgogne (31%), Upper Normandy (30%), and Alsace (25%) recorded the greatest growth. In contrast, all regions in Spain, Malta, Cyprus, and Italy recorded significant employment losses. Tourism-dependent regions in other MED EU countries faced similar pressures. In Greece, few regions, such as Peloponnisos and Western Macedonia, saw annual increases in accommodation and food service employment. However, it was the regions that specialize in tourism that were affected the most due to travels' bans and bookings' cancellations, with South Aegean demonstrating the largest annual employment contraction in the sector (-26%). Ultimately, regardless of regional differentiations, accommodation and food service activities was the sector with the greatest employment losses, mainly because of the pandemic-induced suspension of economic activity and the entry requirements adopted by each country, which resulted in reduced travelling and cancelation of bookings.

Transportation and storage was another industry that was significantly impacted by the mitigation strategies to control the pandemic spread, since commuting significantly declined amidst lockdowns and remote working. However, the transport of medical-related products, such as Covid-19 tests, minimized the loss of jobs in the sector. Moreover, due to the lockdown restrictions, in-person visits to commercial stores were banned, increasing online orders, something that was reflected on a rise in employment in storage. Nevertheless, only Malta and Greece recorded positive employment growth in this sector. By contrast, Italy, Croatia, France, Portugal and Spain witnessed a negative annual change of -5%, while Cyprus saw the greatest decline (-7.5%). From all regions, Ipeiros, in Greece recorded the greatest annual increase (68%), followed by Madeira in Portugal (27%).

Compared to the previous sectors, manufacturing branches, such as food processing and manufacturing of pharmaceutical products were less affected, given that they constitute essential industries. As such, they were not curtailed, despite the fact that industrial hubs emerged as important hotspots of Covid-19 infection on numerous occasions, especially in the early days of the pandemic. However, only Cyprus and Malta saw positive annual changes in employment therein. In contrast, Italy, Croatia and Greece saw limited negative changes (under -2%). Spain, Portugal, and chiefly France recorded the largest employment contraction in manufacturing in the year to 2020.

Last, health and social work activities constituted the most crucial sector during the pandemic, with its needs significantly increasing. Therefore, to allow healthcare systems withstand the increased pressure and demand without being overwhelmed, governments had to provide extra support to the healthcare services by increasing medical staff. However, employment changes still exhibited wide variations between the study regions. Thus, while Central Greece and Illes Balears saw important annual increases (42% and 27% respectively), other regions such as Jadranska Hrvatska, Normandy and Ipeiros witnessed contraction (-18%, -16% and -15% respectively), with this entailing additional pressures on their regional healthcare services.

Below, we have summarized the annual change of employment in high-risk sectors, which comprise wholesale and retail, accommodation, and food service activities, as well as transportation and storage. These sectors were characterized as such as they pertain to high risk of Covid-19 infection and thus a greater propensity for suspension of economic activity. Map 3 illustrates how regions with great dependence on tourism demonstrated important contraction of employment (South Aegean, North Aegean, Jadranska Hrvatska, Sicily, Sardinia, Andalucía, Communidad Valenciana, Algarve).

Map 3: Annual rate of change (%) in employment of High-Risk sectors, 2019-2020, own elaboration

Changes in youth inactivity during the pandemic year

The consequences of the pandemic on youth labor markets have been particularly dire. At the national level, the country with the highest growth of young people that are not in employment, education or training (NEETs) in 2020 compared to 2019 was Spain (19%), followed by France (17%), Malta (16%) and Cyprus (13%). On regional level, both regions of Croatia saw increased numbers of NEETs in the year to 2020. The majority of the French regions saw NEETs' numbers growing too, with only three regions, the capital and two in the industrial north following the opposite trajectory (Ile-de-France, Normandy and Brittany with -1.4%, -4.5% and -10.5% respectively). Spain showed a similar pattern, where the number of NEETs declined in the year to 2020 in just four NUTS 2 regions (Communidad Foral de Navarra, Aragon, Illes Balears and Murcia with -14.1%, -2.8%, -7.6% and -3.5% respectively). On the other hand, and despite the pandemic-driven changes in socio-economic conditions, both Portugal and Greece saw NEET contraction on national level between 2019 and 2020 (-5.5% and -3.1%). At the regional level, in Portugal, the number of NEETs fell in Norte (-28%) and two tourist dependent regions, Região Autónoma dos Açores (-22%) and Algarve (-6%) the most. In Greece, five out of all thirteen regions recorded contraction in the number of NEETs in the year to 2020, with two being tourism dependent (North Aegean with -20% and South Aegean with -19%) and one being a rural/peripheral region (Ipeiros with -28%). Among all 75 study regions (Map 4), the largest increase of NEETs was recorded in three Spanish regions, Pais Vasco (109%), Cantabria (88%), and Catalonia (77%). By way of contrast, Calabria in Italy (-37%), Norte in Portugal (-28%), and Ipeiros in Greece (-28%) demonstrated the steepest decrease. However, it is worth adding that Spanish regions had lower NEET rates in 2019 than

the other countries under study, after limiting their numbers between 2009 and 2018 significantly.[8]
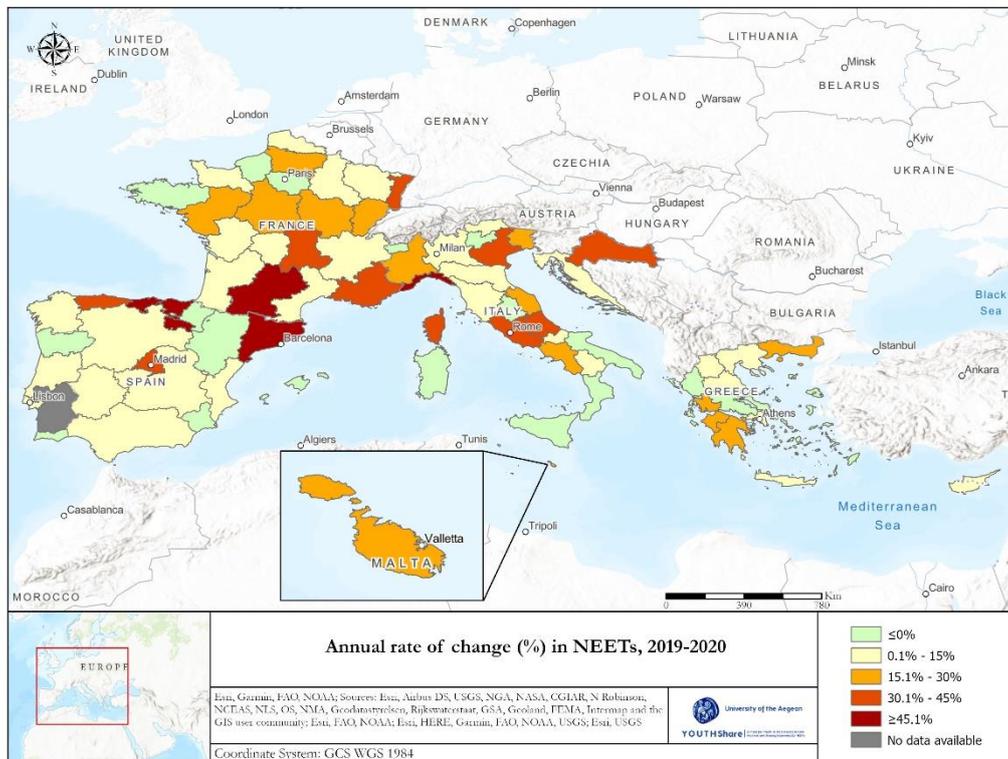
Map 4: Annual rate of change (%) in NEETs, 2019-2020, own elaboration

The role of urbanization, economic growth, and specialization in high-risk sectors

In seeking to explain our findings, below we estimate the statistical correlation of labor market trends with economic growth, urbanization level, and sectoral structure across the 75 NUTS 2 regions under study. The results indicate a negative correlation between the change of NEETs in the year to 2020 and population density (residents per km^2, 2019 values), which is used as an urbanization proxy. Confirming the above analysis, Figure 2 indicates that metropolitan areas tend to have more resilient youth labor markets compared to peripheral and less densely populated regions. The latter appear more likely to record important increases of NEETs between 2019 and 2020.

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[8] YOUTHShare (2020) Transnational Report on the impact of employment policies on young NEETs: tackling youth disengagement through understanding the flexibilization-regional resilience nexus. Available at: http://youthshare.aegean.gr/wp-content/uploads/2020/03/Transnational_Report_NEETs.pdf
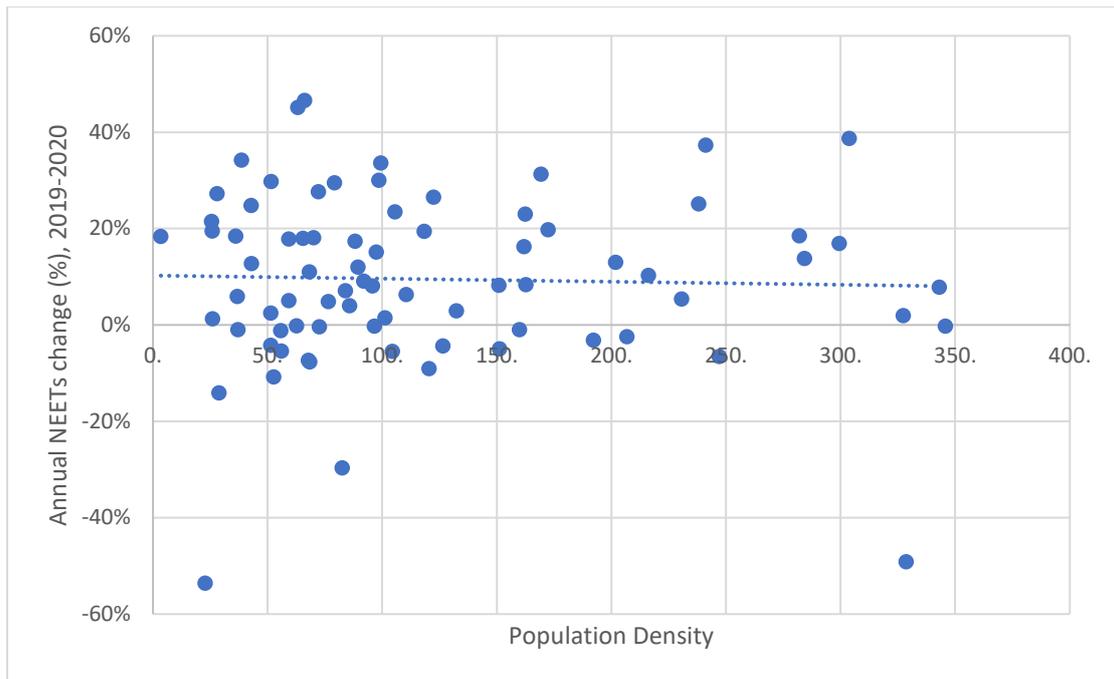
Figure 2: Correlation between annual change (%) of NEETs (2019-2020) and population density (2019), own elaboration

Figure 3 illustrates that the correlation between the employment change in the year to 2020 and GDP per capita (2019 prices) is positive. That is, wealthy regions were expected to record an increase in the employment between 2019 and 2020. In contrast, poor areas appear to have more vulnerable regional labor markets, tending to record higher numbers of job losses.
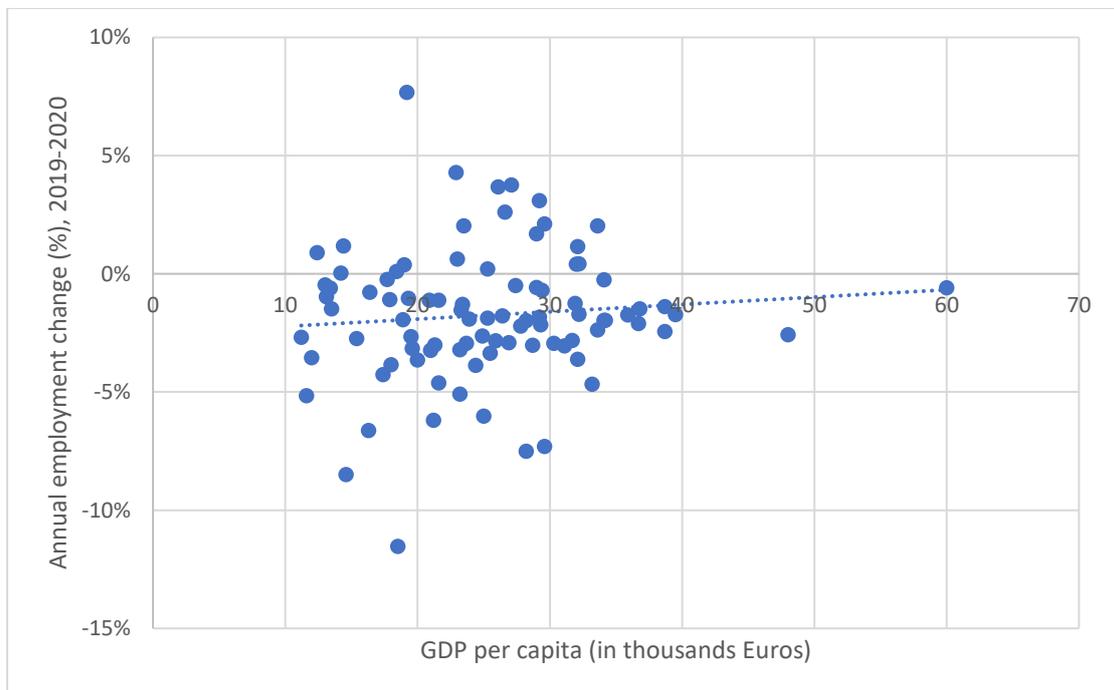

Figure 3: Correlation between annual change (%) of employment (2019-2020) and GDP per capita (2019), own elaboration

The findings also reveal a negative statistical correlation between the 2019-20 employment change and the 2019 share of employment in high-risk sectors within total employment (Figure 4). With high-risk sectors linked to a higher propensity for suspension of economic activity, as mentioned above, it was expected that regions with high concentrations in such jobs to be more likely to exhibit greater losses in total employment.
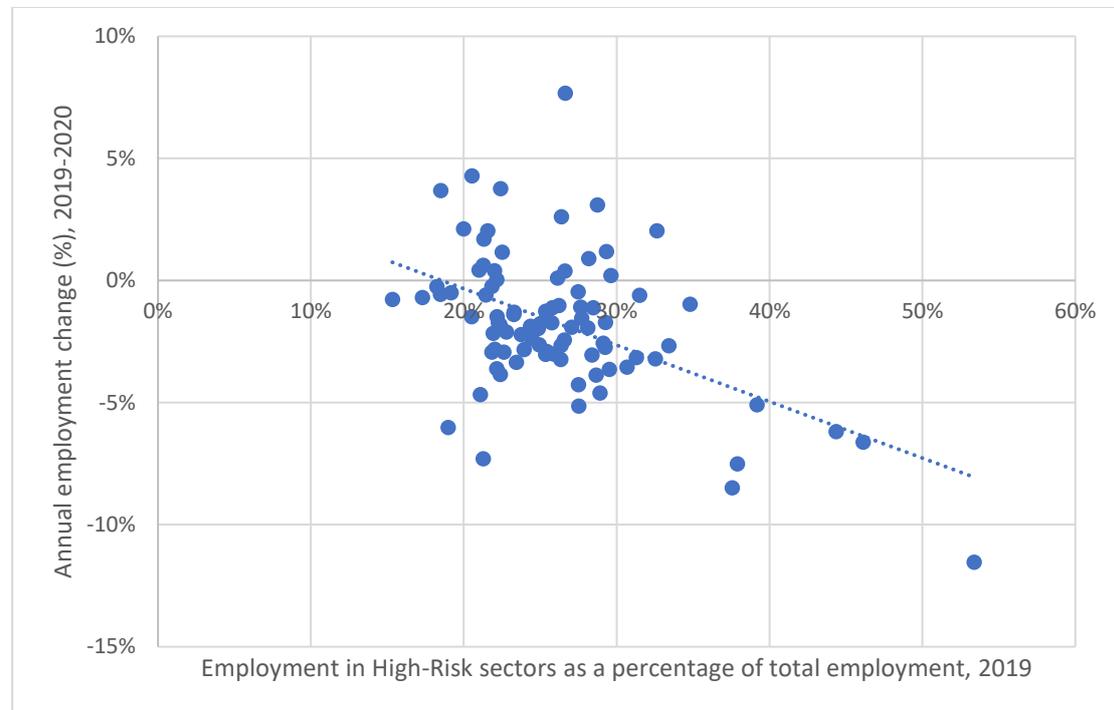

Figure 4: Correlation between annual change (%) of employment (2019-2020) and employment in High-Risk sectors as a percentage of total employment (2019), own elaboration

In seeking to minimize the health crisis fueling an economic recession, and specifically to curtail job losses and support labour markets amidst this pandemic, governments implemented a wide variety of economic recovery plans. The EU member states have agreed on a €750 billion recovery package. These packages however varied by country in terms of magnitude and duration. For instance, the Italian government banned all the dismissals for economic reasons from 16 March to 31 December 2020, i.e. for a total of 290 days during 2020. However, this did not appear to have significantly influenced the national labor market, with Italy recording the second largest annual employment losses among the study countries in the year to 2020 (Figure 1). The same seems to have applied for Portugal, whose government announced a ban on dismissals for firms that are entitled to government financial support. The latter included the funding of part of the wages for firms whose activity was completely suspended or recorded a sharp contraction of activity equal to at least 40% of turnover. Despite this job retention scheme, however, the country demonstrated a 2% decrease of employment in the year to 2020. In contrast, Malta, whose government decided to support the full-time and part-time workers in firms that completely or partly suspended their operation, recorded a 3% annual increase of total employment.

The Oxford COVID-19 Government Response Tacker (OxCGRT) published data for the index of income support across countries globally,[9] recording whether governments covered wages

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[9] Hale, T., Angrist, N., Goldszmidt, R., et al. (2021) A global panel database of pandemic policies. *Nature Human Behaviour* 5:529-538.

or provided direct cash payments/universal basic income to people who cannot work or lose their jobs due to the suspension of economic activity. The OxCGRT published figure for the index for each day in 2020, with values including 0 (no income support), 1 (government is replacing less than 50% of lost salary) and 2 (government is replacing 50% or more of lost salary). The average index, referring to the mean for 2020, revealed that France and Cyprus had the highest average index of income support (1.59) for 2020, followed by Malta (1.57) and Spain (1.56). This could partly explain the increase of total employment in Cyprus and Malta, and the small decrease of employment in France, in the year to 2020 (Figure 1). In the bottom of the ranking, Italy had the lowest average index of income support in 2020 (0.79), below Portugal (0.8), Croatia (1.22) and Greece (1.37), with this partly explaining the large employment contraction of employment in these countries between 2019 and 2020.

Conclusions

This report analyzed the effects of Covid-19 and the subsequent mitigation policies on employment across the main sectors of economic activity at the national and regional level in the MED EU, providing valuable insights for the socio-economic impacts of the pandemic. Findings showed profound variations in the performance of regional labour markets amidst the pandemic, although most recorded losses, nonetheless. The result has been a highly uneven geography of the health crisis's implications, which is expected to exacerbate the uneven development EU demonstrated already before the onset of the pandemic. In most cases, employment protection policies proved to be insufficient, chiefly because they are spatially insensitive. Considering the evidence presented in this report, the differentiation of economic recovery plans and job retention schemes may not have been the only factors of resilience or vulnerability for national and regional labor markets. Other determinants of their performance include rates of economic growth and extent of urbanization, elements closely related to path dependencies of regional evolutionary trajectories. For instance, wealthy areas seem to have more resilient local labor markets and witnessed milder job losses. Moreover, population densities were linked to youth employment, as regions with higher densities had NEETs decreasing, or at least, increasing mildly comparing to other regions. Thus, although being strongly affected by the suspension of economic activity, metropolitan regions exhibited a relative resilience of youth labor markets in the current crisis-ridden environment. This comes in contrast to the 2008 global economic crisis, where this type of areas was impacted direly.[10]

Besides density, regional sectoral composition appeared to be crucial for the performance of local labor markets. Areas strongly dependent on economic sectors whose economic activity pertains to high infection risk and greater possibility for suspension exhibited the greatest employment losses. Moreover, youth labor markets highly specialized in tourism appeared to have been affected the most compared to areas whose economy is driven by manufacturing. This can be explained as touristic firms, which utilize young workers who seasonal labor, were more likely to suspend their activity in 2020 following a general halt in the sector's activity as a result of the health crisis. Overall, the substantial increase of NEETs showed that the already acute problems young people were facing upon entering the labor market before 2020 have exacerbated.

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[10] Gourzis, K., and Gialis, S. (2019). Dismantled Spatial Fixes in the Aftermath of Recession: Capital Switching and Labour Underutilization in the Greek Capital Metropolitan Region. *International Journal of Urban and Regional Research* 43, 741-759.

Last, it must be noted that the regional geography of the pandemic appears to be increasingly significant, with regions, even within the same country, demonstrating different Covid-19 infection and mortality rates, as well as speed of implementing and lifting mitigation measures. This has led to important geographical and sectoral variations of employment contraction. Nevertheless, the actual impact of the health crisis and the economic recession that followed is expected to show its teeth after state-implemented recovery plans and job retentions schemes will be terminated due to limited resources. The *Coronavirus Response & Labor Statistic*s team will closely monitor and analyze these developments.

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