

# Social and economic consequences of the Covid-19 pandemic in Italy

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#### Research Goals



Provide an overall national overview of the pandemic



Analysis of consequences on national, regional and European mobility



Deepening of the situation in the individual regions



Study of the impact on the Italian economy of the restrictive measures



#### **SOURCES**

- ISTAT
- Github
- MEF
- INPS
- ASSAeroporti
- Ministero Salute

- Rpubs
- Google
- Apple
- EpicentrolSS
- EuroStat
- Sole24Ore

Analyzes carried out with R





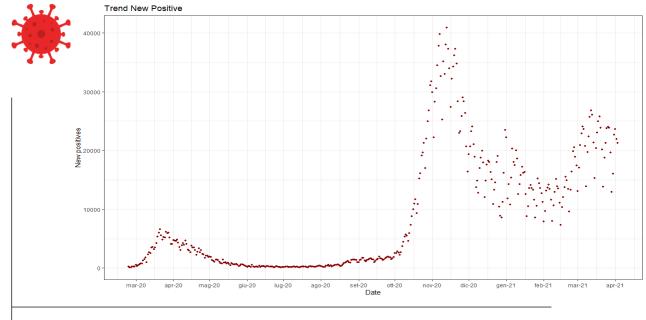


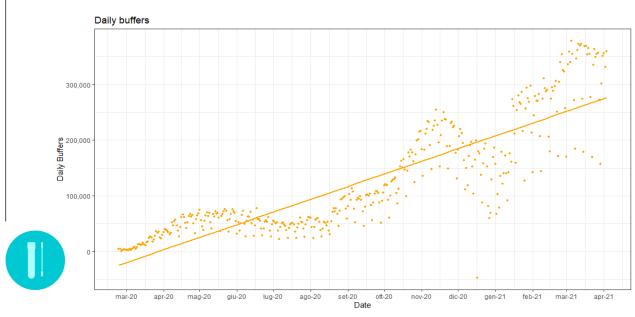
Part 1: Analysis of the pandemic

## Daily positive trends and daily buffers

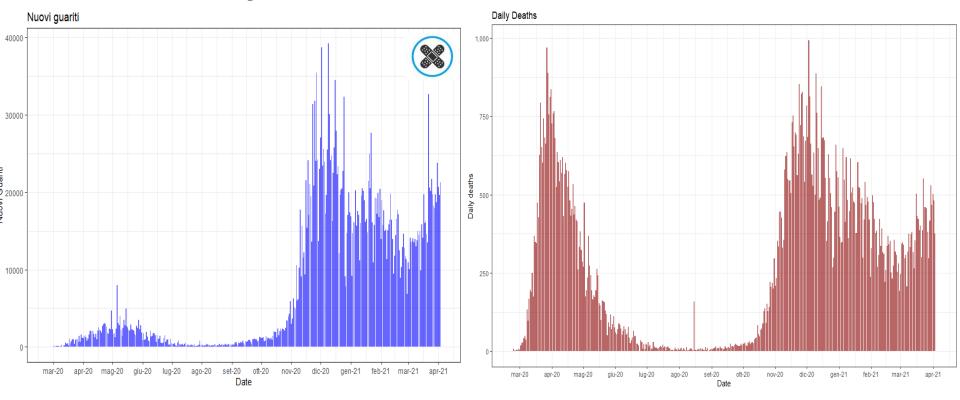


We notice some similarities in the performance of the curves!





#### Daily deaths and new healed





Also in this case we see a <u>similar trend</u>, corresponding to the three waves of the pandemic

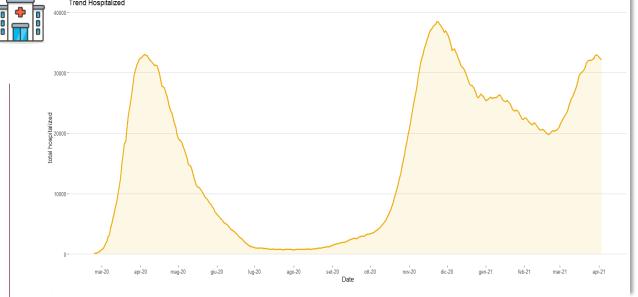


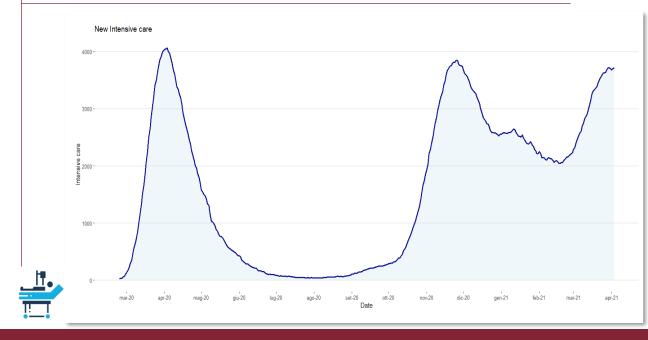
The **healed** increased sharply from the second wave onwards, while the **number of deaths** reached similar peaks in the various waves.

# Hospitalized and Intensive care

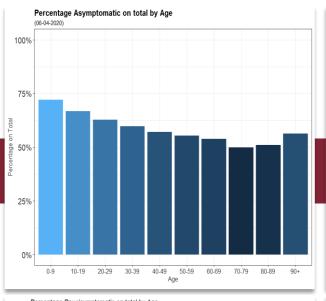


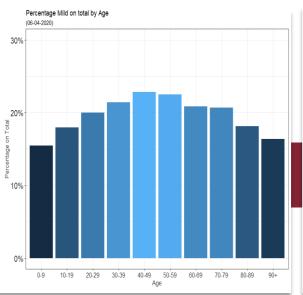
The numbers of ICUs and hospitalized in the first, second and third waves are very <u>similar</u>

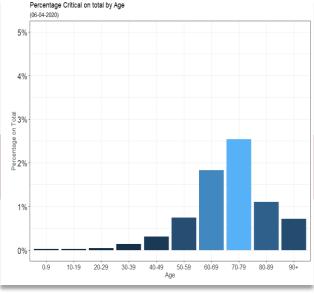


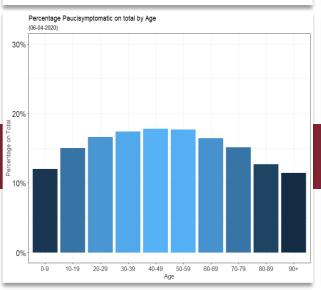


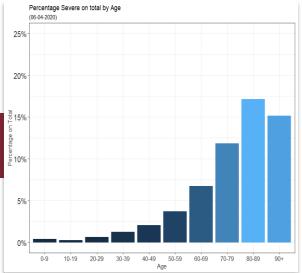
#### Symptoms by group









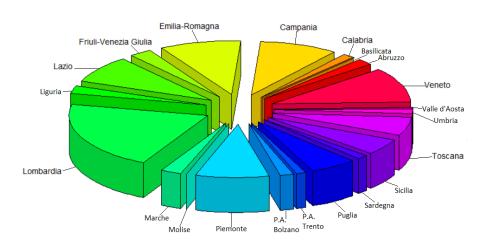




The percentage of asymptomatic out of the total decreases with increasing age.

While critical and severe cases increase with increasing age. The age group most affected by critical cases is 70-79, for severe cases 80-89.

#### Contagion by region



## Total infections distribution by region

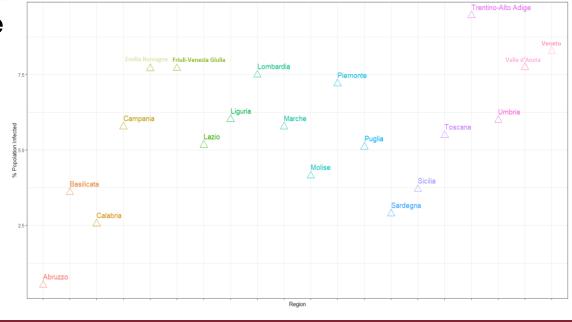


The 4 regions most affected by the infections are: **Lombardy** (750k), **Veneto** (390k), **Emilia Romagna** (344k) **Campania** (330k)

## Total positive percentage of the regional population



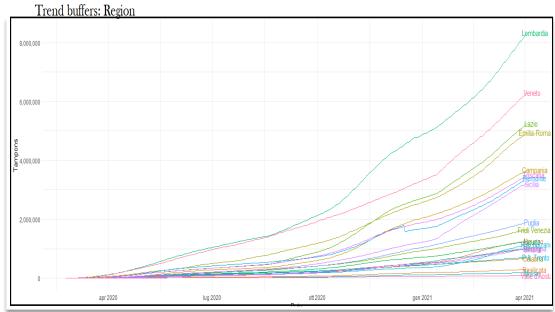
The situation is different for each region. The region with the highest percentage is **Trentito-Alto-Adige** 

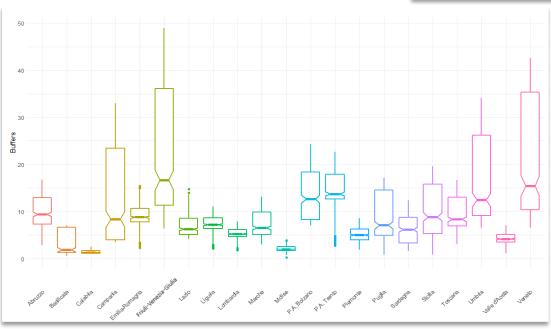


## Contagion trend by region



The regions to have carried out more swabs are the same to have had more cases of infections

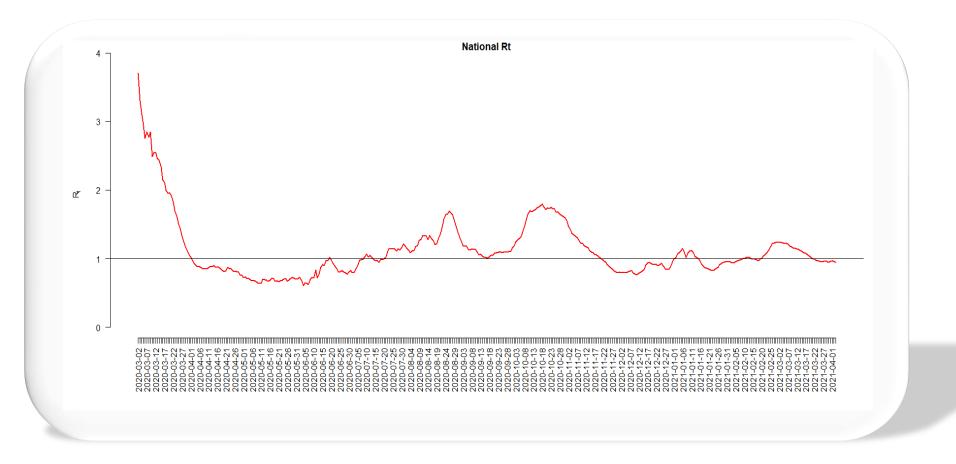




### Buffers trend by region



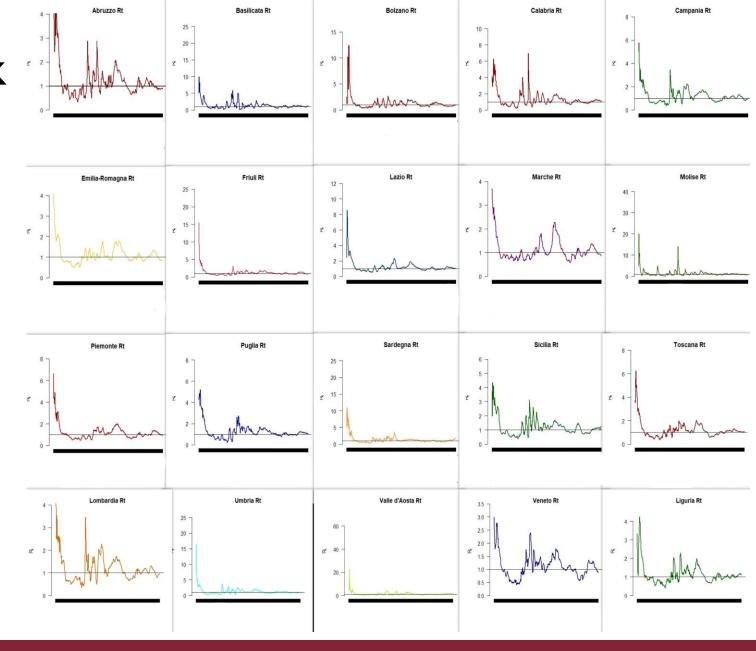
Most regions have an average of 8-9 swabs per positive, but there are some regions that have a higher average, such as **Friuli** with 17 swabs and **Veneto** with 15 swabs.

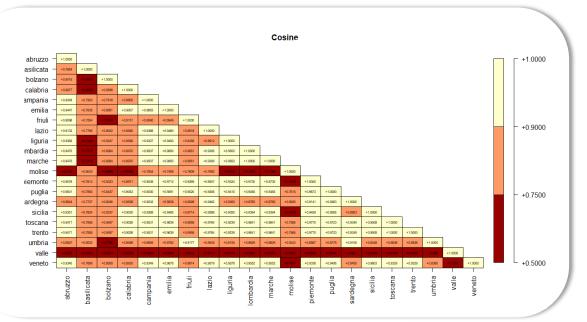


#### National R(t)

#### RT index by region

The trend of the Rt index for each region makes us understand that the situation is very different from region to region

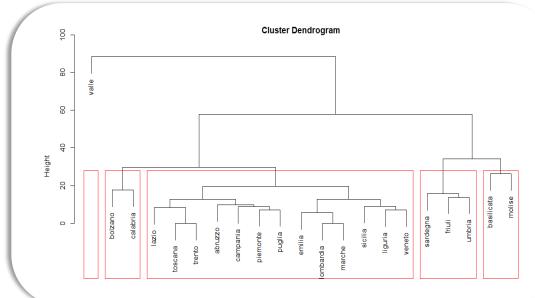


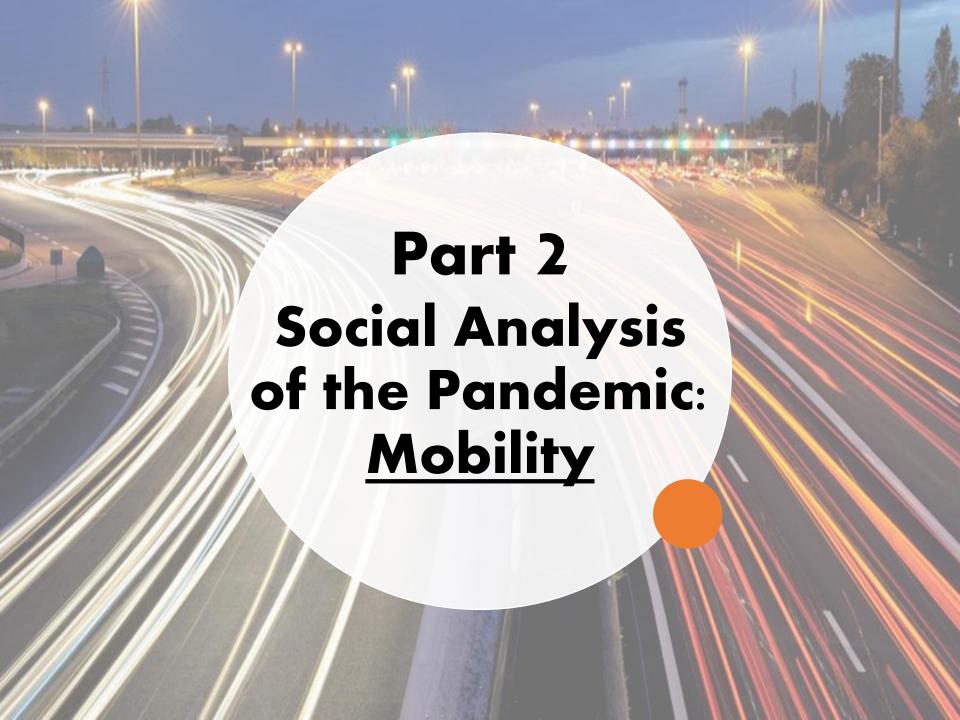


#### Similarity between regions: Rt



Valle d'Aosta exhibits an anomalous and distinct behavior from the others

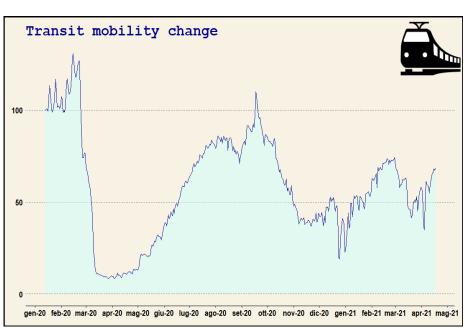




## Change in mobility in Italy



During the lockdown, the movements were almost zero, and then recovered in the summer

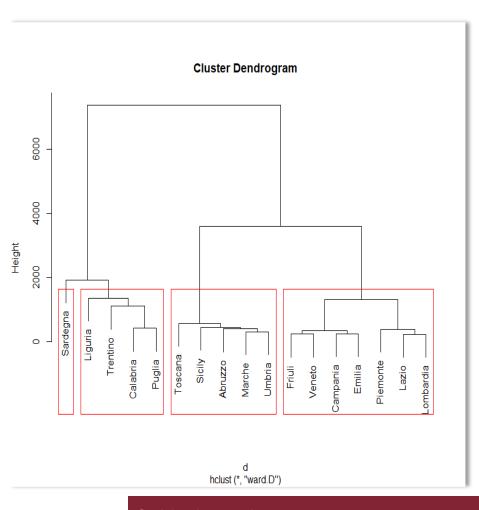


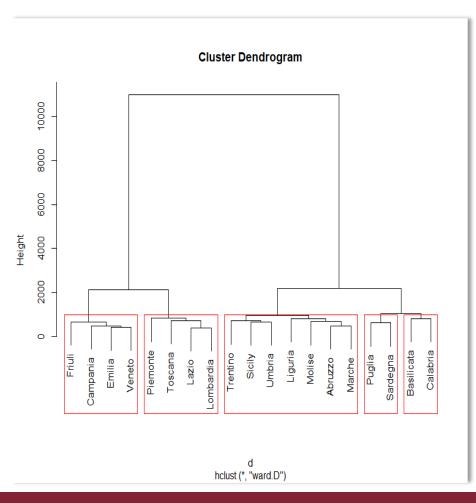




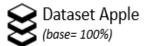
### Similarity between Regions: Driving

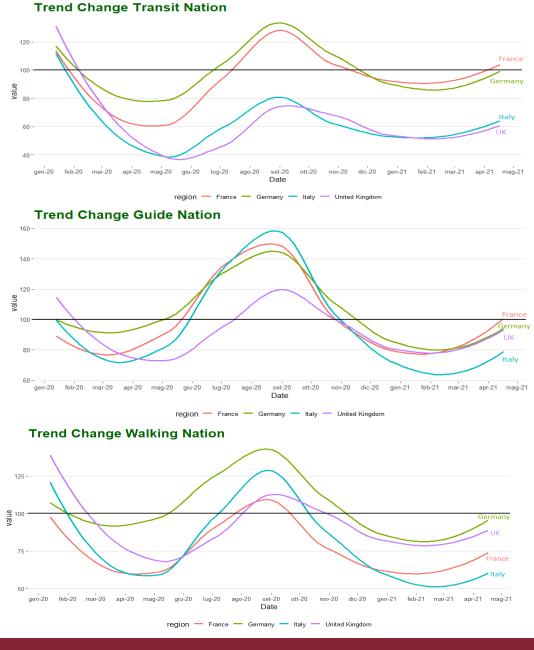
### Similarity between regions: Walking





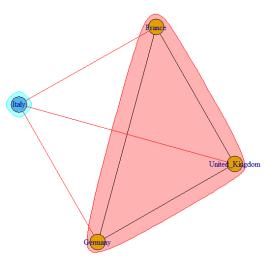
# Mobility change in Europe

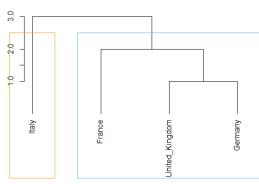




#### Guide

Similarity between european countries: driving

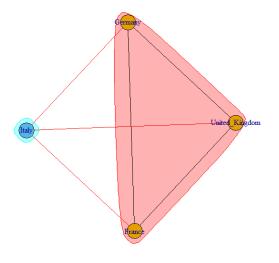


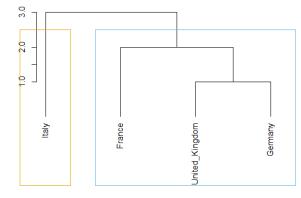


**Italy** seems to have a different behavior than that of other European countries.

#### Walking

Similarity between european countries: Walking

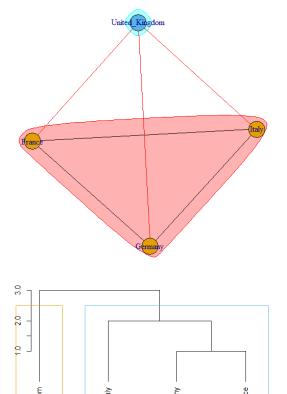




Also in this case, **Italy** differs from other countries in the variation of onwalking mobility.

#### **Transit**

Similarity between european countries: Transit

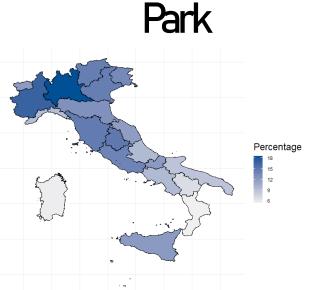


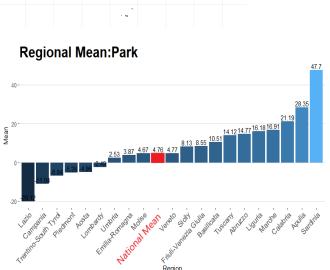
In walking instead, **England** seems to have had a different behavior from other countries.

# Mobility change in percentage: Google dataset

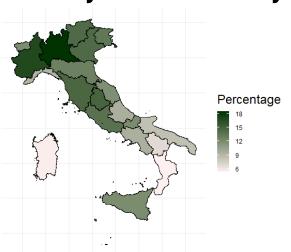
Reference value:median value for the period of 5 weeks from 3-01-2020 to 06-02-2020.



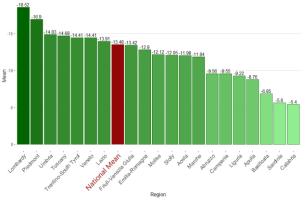




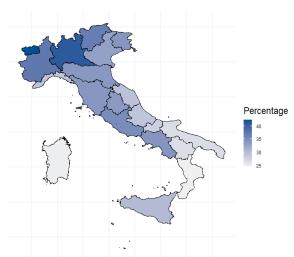
#### Grocery and Pharmacy



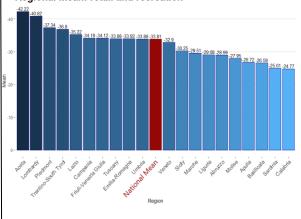
#### Regional Mean: Grocery and Pharmacy

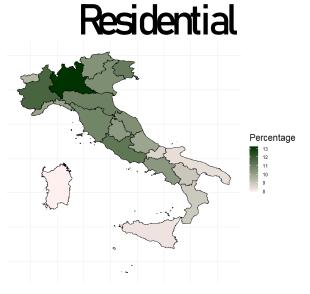


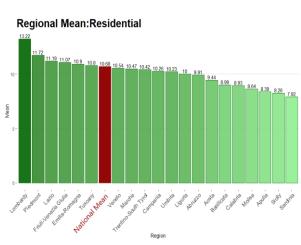
#### Retail and Recreation

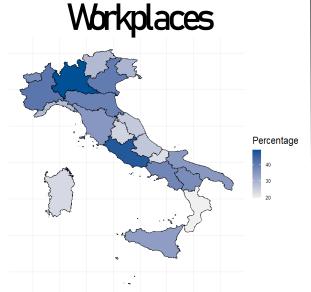


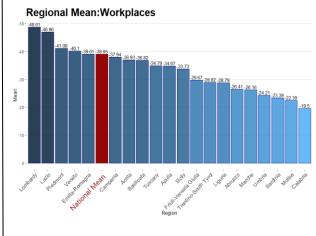
Regional Mean: retail and recreation

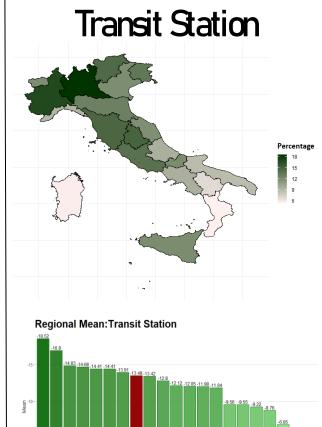


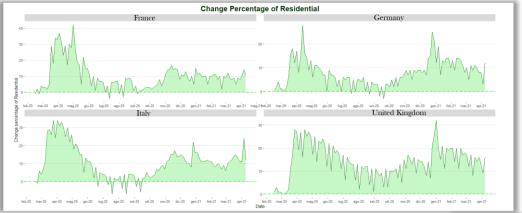










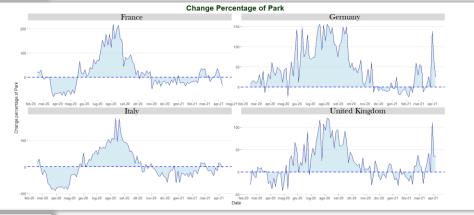


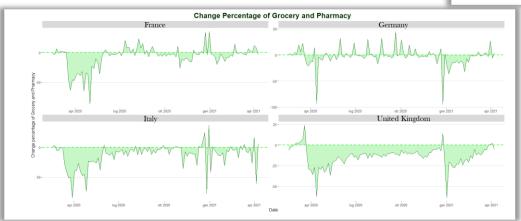
#### **Residential**

Movements to residential areas recorded increases in all the countries considered. First the <u>UK</u> (mean=13,91%), followed by Italy (10,58%), France(10,14%) and Germany (7,76%)

#### <u>Park</u>

The movements in the parks have registered a fair amount in all countries. <u>UK</u> first (average = -13.67%), followed by Italy (-13%), France (-6.74%) and Germany (-2.63%)





#### **Grocery and Pharmacy**

Movements to pharmacies and food shops have sharply reduced, especially during the first wave of the pandemic. <u>UK</u> first, followed by Italy, France and Germany

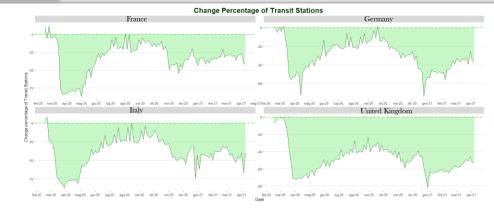


#### **Retail and Recreation**

Travel for Retail and Recreation suffered the largest contraction. In particular in the UK (Mean -43.93%), followed by France (-33.93%), in Italy (-33.7%) and in Germany (-28.17%)

#### **Transit Station**

Travel for Retail and Recreation suffered the largest contraction. In particular in the UK (Mean -43.93%), followed by France (-33.93%), in Italy (-33.7%) and in Germany (-28.17%)

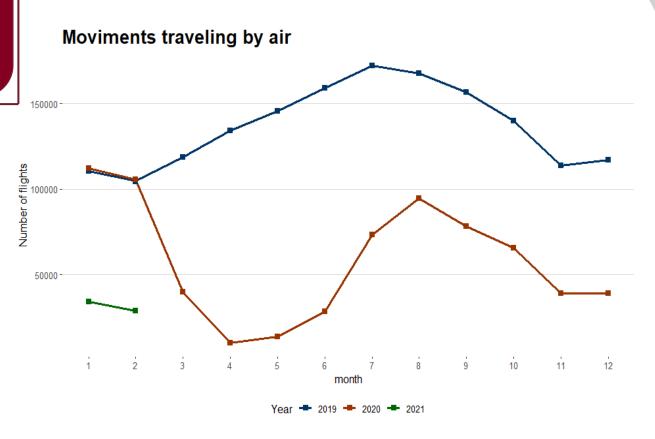




#### Workplaces

Even the actual trips to workplaces have an important reduction. UK first (Mean -47.82%), followed by Italy (-38.98%), France (-32.66%) and Germany (-29.63%)

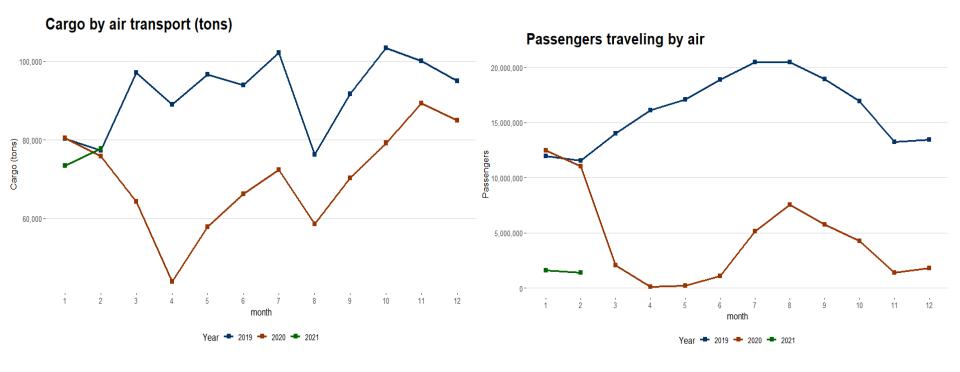
## Number of flights in Italy



#### Air travel in detail



There was a net reduction in both passengers and cargo transport

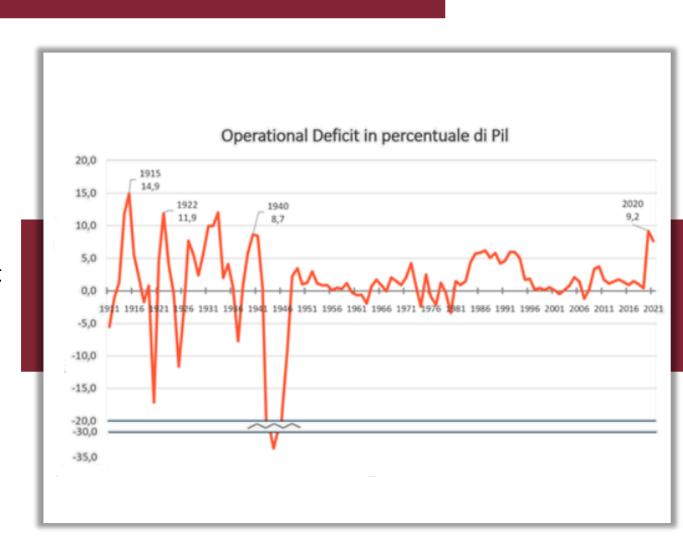




#### **Andamento deficit Operazionale**

The operating deficit stands at values comparable to those of the war period **(9,2%)**. It is even higher than that reached in the '40s.

In 2021, a reduction to **5.5%** is expected.





# Quarterly GDP Italy 2019-2020



Compared to the corresponding quarters of 2019, in 2020 there was a percentage decrease of:

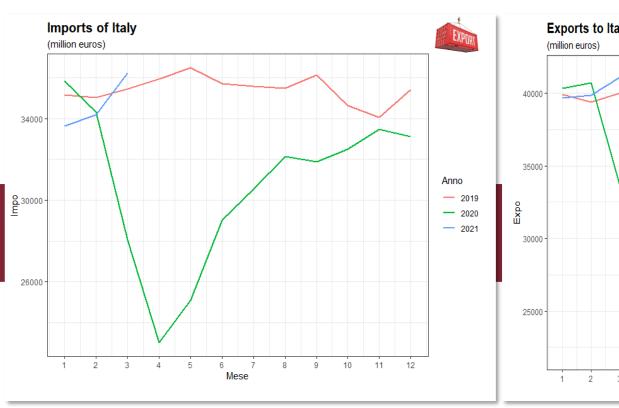
T1 = -5,4%

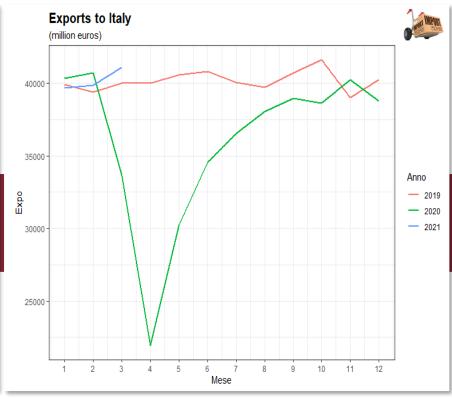
T2= -16,6%

T3 = -4.2%

T4 = -5,1%

#### Monthly changes Imports and exports





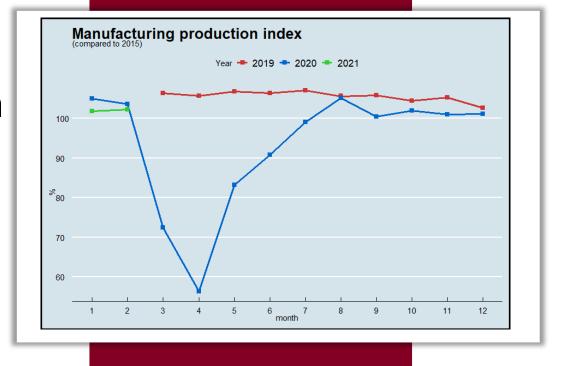


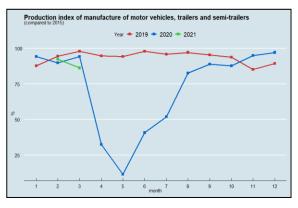
**2020** records a total loss of exports of 49,500 million euros; imports of 56,000 million.

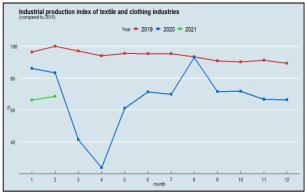
The first data for 2021 show a recovery

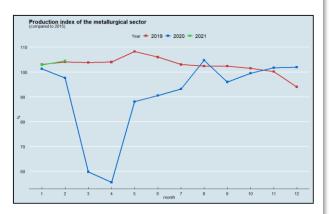
## Industrial production index

The manufacturing sector was hit hard. The most affected markets are the following

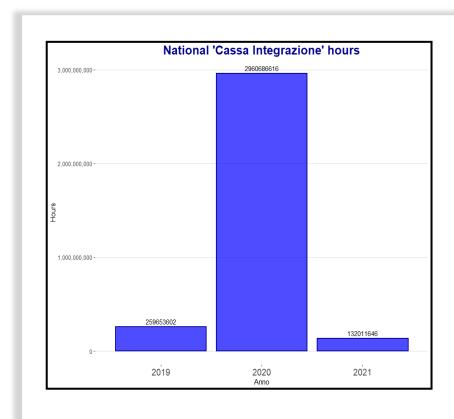


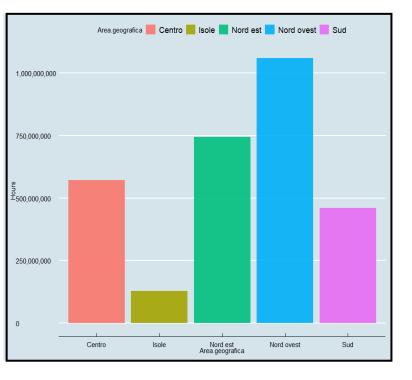






#### «Cassa Integrazione Guadagni»





- In 2020, the hours of layoffs
- were 11 times those of 2019

Most of the hours are concentrated in Northern Italy, especially in the Northwest

#### "Cassa Integrazione" by region

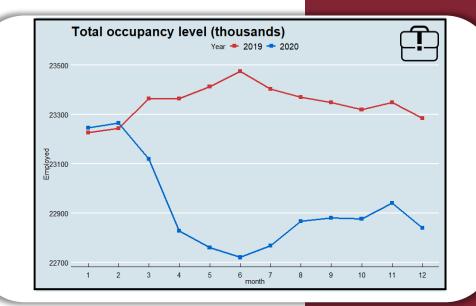


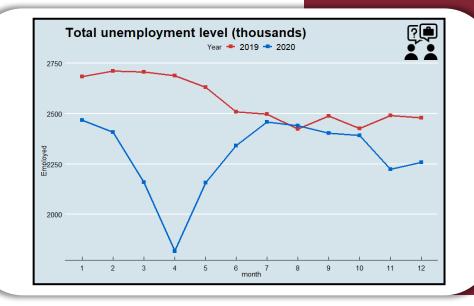


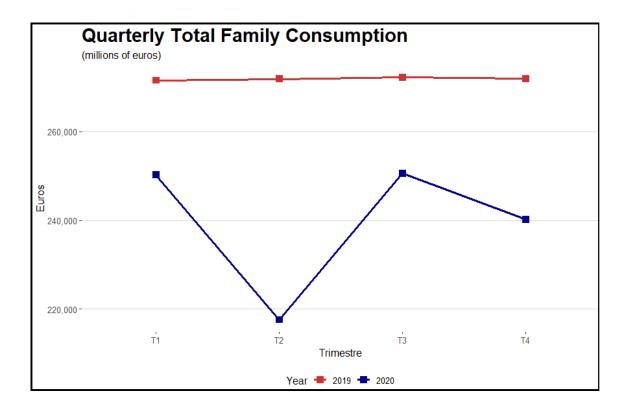
**Lombardy** has significantly more hours of layoffs than other regions

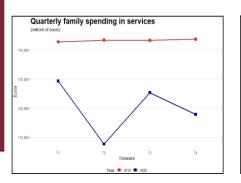
# Level of Employment and Unemployment

There has been a decline in employment since February, with a peak of 810k (thousand) fewer employees in August.
At the same time, unemployment went down

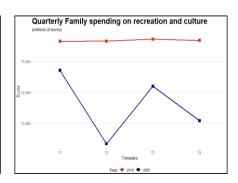








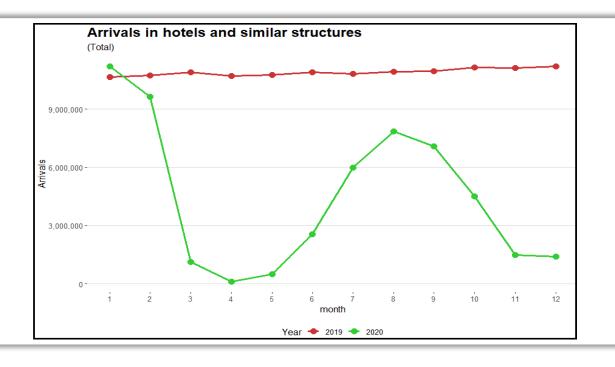




## Total final family consumption

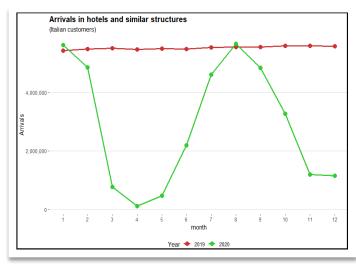
- We record a significant drop in consumption.
- Especially in the expenses for restaurants and hotels, in culture and for services

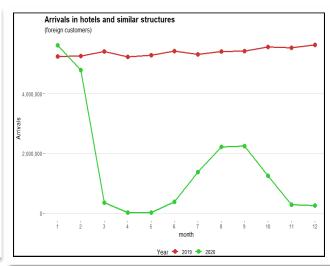
#### Hotel and Tourism industry





We note a sharp decrease in arrivals, partially offset in the summer period (especially by Italian customers).





#### **RESULTS OF THE WORK**



The northern regions were the most affected, Lombardy first.



There was a sharp decline in mobility, especially during the lockdown



Public transport suffered the greatest contraction



The economy recorded a significant contraction in macroeconomic, labor and corporate terms



