

Challenges and opportunities from the pandemic in Europe: The case of Italy

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KEY TAKEAWAYS

- With a significantly older population and a high fraction of younger individuals living with older relatives than most other countries, Italy has proved highly vulnerable to the spread of the virus.
- Italy was surprised by a crisis that may have required less strict but longer and more targeted mitigation policies, which could have reduced its death toll at the same output cost.
- To help Italy and other nations recover from the pandemic, the EU has approved an 800 billion euro recovery plan. In today's dollars, that's eight times the post-WWII Marshall Plan.
- A key dimension of the plan is its conditionality. Funds are to be invested in specific areas such as health and technology and are granted on the premise that Italy implements much needed structural reforms.

The COVID-19 pandemic has presented the world with challenges that are unprecedented in recent times. For the bloc of 27 European countries and roughly 500 million people that constitute the European Union (EU), these challenges have been coupled with those stemming from its peculiar design.

Unlike the U.S., the EU is a political and economic union that binds only 19 of its members by a common currency, the euro, but is not fiscally integrated. As of 2019, the EU budget accounted for less than 1 percent of its gross national income. In the U.S., the corresponding figure was almost 21 percent.

Most decisions about taxes and spending occur at the national level. But fiscal measures by member countries such as targeted transfers to specific constituencies (“bailouts”), which have been employed in the U.S. during the current and past recessions, are heavily restricted — if not specifically prohibited.

Addressing the pandemic, from the control of contagions to the development and the distribution of vaccines, has repeatedly tested the EU's institutional coordination and readiness of response. The crisis has cast a new light on the ability of the EU to confront global challenges and spurred a rethinking of its role vis-à-vis member countries. An outcome of such a process has been the approval of an ambitious recovery plan called “Next Generation EU” (NGEU), worth nearly 800 billion euros, which is meant to support member countries in the aftermath of the crisis and to set the EU toward a stable path of sustained long-term growth. The budget for the plan, part of the 2021-2027 EU budget of 2 trillion euros, represents the largest stimulus package ever financed by the EU.

The first part of this policy brief examines how the pandemic unfolded in Italy, whose experience in many ways has mirrored that in the U.S.. By the end of this past June, Italy had suffered 2,110 deaths per million people relative to the 1,827 recorded in the U.S.. We will consider the specific health and economic emergencies that Italy has faced and contrast the experiences of two major cities in the U.S. and Italy, New York City and Milan, respectively. The second part of the policy brief reviews the fiscal measures adopted by Italy and the EU in response to the pandemic and assesses the opportunities that NGEU offers to Italy as well as the policy challenges ahead.

Background: The EU and Italy at a glance

Created with the Maastricht Treaty of 1993 and guided by the European Council and the European Commission, the EU is a federation of 27 countries with its own parliament that covers much of the European continent, across which goods and people freely flow under a common regulatory framework. With a GDP that is about three quarters of that of the U.S. (73 percent in 2019), these countries account for the largest trade block in the world. The EU is the world's biggest exporter of manufactured goods and services and the largest import market for over 100 countries. In 2019, the EU exported 15 and 25 percent more in dollar value than the U.S. and China, respectively.

With its 60 million people, \$2 trillion GDP as of 2019, and unique historical and geopolitical position at the crossroads of Europe, Africa, and the Middle East, Italy is one of the six founding members of the EU, together with Belgium, France, Germany, Luxembourg, and the Netherlands. And it's one of the EU's largest, most advanced, and open economies. Italy is not only the third most populous EU country (the world's twenty-third) but also the EU's third-largest economy (the world's eighth-largest) and part of the G7 group of the world's most advanced economies. With almost \$650 billion in exports of goods and services in 2019, Italy is the second-largest EU exporter, the tenth-largest in the world. The country

was one of only five countries to total more than \$100 billion in net manufacturing exports in 2019.

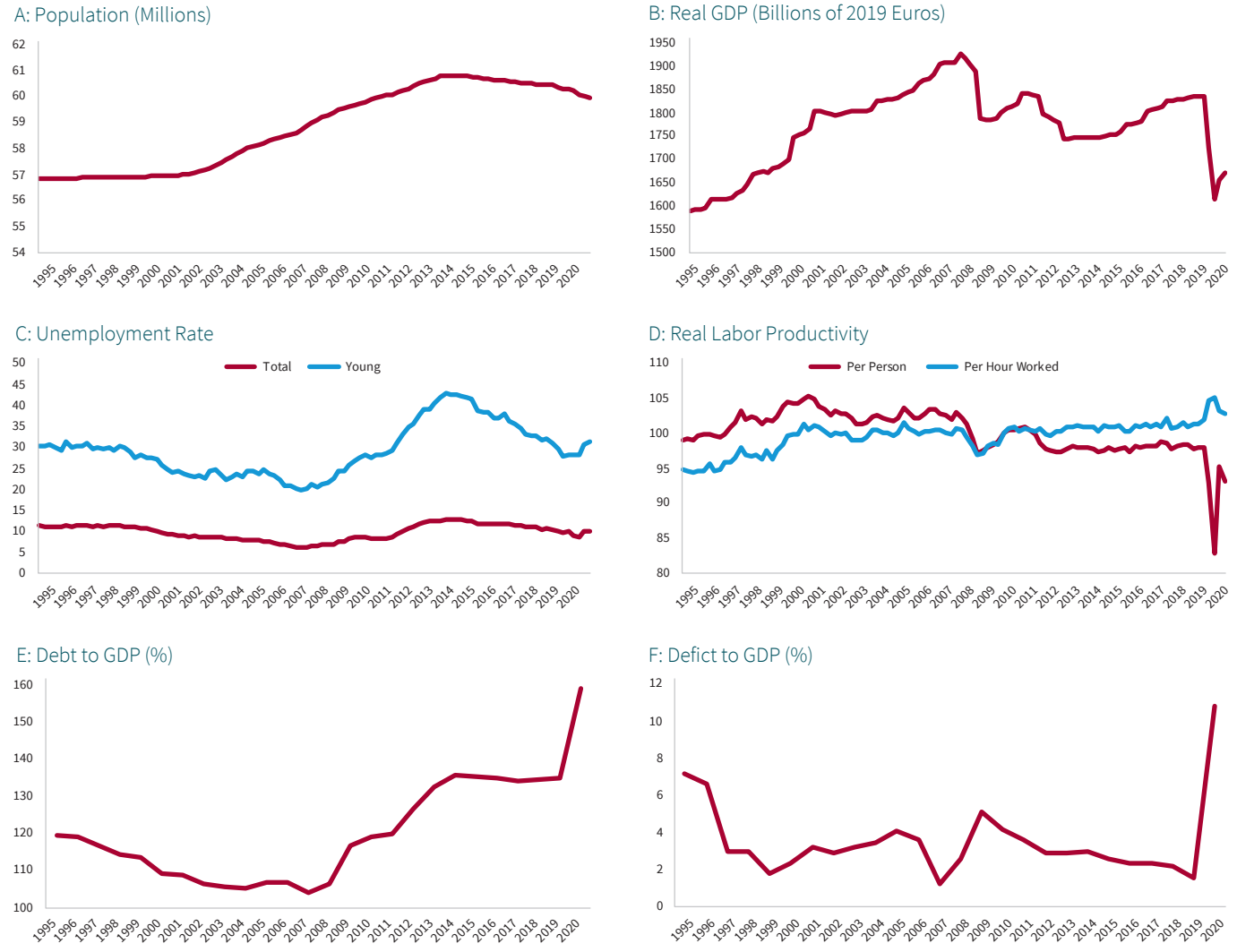
Traditionally, the luxury-goods industry has been a cornerstone of the Italian economy contributing 6.85 percent to its 2019 GDP. In 2019 alone, 22 of the world's 100 top-grossing luxury-goods firms were Italian. The tourism and travel sector accounts for another key share of the economy — 13.1 percent of Italy's 2019 GDP. With more UNESCO heritage sites than any other country in the world, Italy is the world's fifth most-visited country and the most-visited EU country by non-EU visitors.

Italy's productivity and debt

These statistics, however, paint only part of the picture. Although many advanced economies, including the U.S., have experienced a slowdown in productivity growth in recent decades, over the past 25 years Italy has been characterized by virtually no such growth, either measured in terms of real labor productivity per hour worked (blue line in panel D of Figure 1) or per person (red line in panel D of Figure 1). Its unemployment rate has ranged between 5.9 percent and 13.3 percent over this period and, during the past decade, has been hovering around 31 and 13 percent, respectively, among those aged 15 to 24 and 25 to 34, who typically represent the most dynamic segment of a country's workforce. Between 1999 and 2019, Italy's economy, in terms of (real) GDP, grew by only 8.0 percent, compared with 30.7 percent for Germany, 33.1 percent for France, and 43.6 percent for Spain.

Due to slow growth, sustained borrowing, and an annual deficit between 1.3 percent and 7.2 percent of GDP, Italy's government consolidated gross debt has doubled since the mid-1990s. In percentage of GDP, the country has now one of the largest debts among developed economies, the second-highest in the Euro area, at a ratio of 135 percent at the start of the pandemic and of 155.8 percent currently. The debt held by all domestic private entities, including non-financial corporations, households, and nonprofit institutions, was similarly high at 161.6 percent of GDP in 2019. This financial fragility feeds back into the stability of the euro system

Figure 1.1



overall. The concern is that unlike Greece, which has received emergency loan programs worth 326 billion euros between 2010 and 2015 from the International Monetary Fund, the Eurogroup, and the European Central Bank to avert default, Italy would be too large a country to bail out, should the risk of a nationwide default ever materialize.

A known reason for the high ratio of government debt to GDP is the expenditure on retirement benefits, which, at 15.8 percent of GDP, in 2018 was second only to Greece's

in the EU and considerably larger than the EU average (12 percent). Only recently, Italy has implemented reforms to curb these outlays, for instance, by increasing the minimum retirement age — in 2009 the mean retirement age was 59. Like most EU countries, Italy has a national public health care system, but spends relatively less on health care per capita than other EU countries. As a share of GDP, in 2017 Italy's expenditure on health care was only about 9 percent compared with the EU's 10 percent.

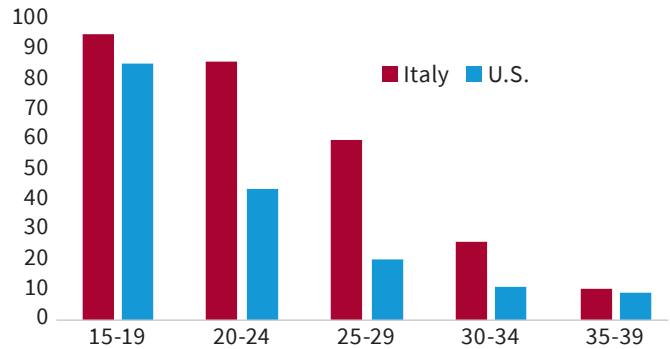
Demographics: Who's who in Italy

The dynamics and structure of Italy's population constitutes a related peculiar feature of the country. Unlike many developed countries that have faced low population growth, Italy's population has actually decreased over the past decade, due to a fertility rate among the lowest in the world — 1.29 total births per woman compared with the EU's average of 1.54. A factor mitigating this trend is immigration. While Italian-born women on average have 1.18 children, the corresponding average for immigrant women is 1.98 — in 2019, 22 percent of newborns were born in a family with at least one immigrant parent. The share of the documented Italian population that is foreign-born in 2019 was 8.45 percent — 9.93 percent counting undocumented immigrants.

At the same time, Italy has been experiencing an increasing rate of international migration among its young. The number of college graduates who have migrated abroad has been steadily increasing. For example, of all Italians leaving for the U.S., the share of those with a college degree was 10 percent in the 1980s and reached 30 percent in the 2010s. This phenomenon is of particular concern for a country that has one of the lowest fractions of college graduates among its working-age population in Europe (17.2 percent), second-to-last before Romania (16 percent) and much behind Luxembourg (41 percent, the highest rate). In 2019, Italy was the OECD country with the fifth-lowest share of individuals aged 25 to 34 with a college degree, 27.7 percent, followed by Mexico, Brazil, Indonesia, and South Africa — the OECD average was 44.9 percent.

Figure 1.2

Share of Young Living with Parents by Age Group



The country's demographics — including the age structure of families — displays other distinctive characteristics that help explain its financial woes and have played a key role in how the pandemic unfolded, as we will argue. While the median age among OECD countries is 40, in Italy it is 47.5, second only to Japan. In 2019, 22.9 percent of the Italian population was over 65 and 7.2 percent was over 80. In terms of the age composition of families, the fraction of adults aged 20 to 24 who live with their parents is twice as large as that in the U.S.. Perhaps more striking is that the fraction of adults aged 25 to 34 who live with their parents is more than *twice* as large as that in the U.S. — of those 25 to 29, it is *three times* as large, partly a reflection of the high unemployment rate for this group. In 2019, the average age of children leaving their parents' home was more than 30 years, which is an important factor depressing aggregate fertility.

Coupled with a fragmented and unstable political landscape, these long-standing issues have left Italy particularly vulnerable to the challenges brought by the pandemic.

The pandemic in Italy

On March 23, 2020, Italy became the first country to record more than 1,000 COVID-19 cases per million people. Faced with the virus' rapid spread, Italy acted swiftly to contain it. Through 2020 and 2021, several

lockdown measures have been implemented — the first lasted 2 months. Despite these stringent policies, Italy so far has suffered more than 4 million cases and about 130 thousand deaths. The lockdown measures have also exacted a heavy economic toll. In 2020, Italy experienced a 9 percent decline in real GDP compared with France’s 8 percent, Germany’s 5.1 percent, and the U.S.’s 3.5 percent.

What happened?

With a significantly older population and a high fraction of younger individuals living with older relatives than most other countries, Italy has proved extremely susceptible to the spread of the virus to one of the most vulnerable segments of the population — older adults. Much research that has focused on understanding the impact of the pandemic has emphasized the role of the network structure of contacts among individuals in the spreading of infections and in generating output. By adapting a version of the model of contagion and economic activity developed in Azzimonti et al. (2020), we now set out to understand how Italy’s demographics and social structure contributed to its death toll, to evaluate how the mitigation policies that were actually implemented helped curb the spread of the virus and impacted the economy, and to analyze whether alternative measures may have helped.

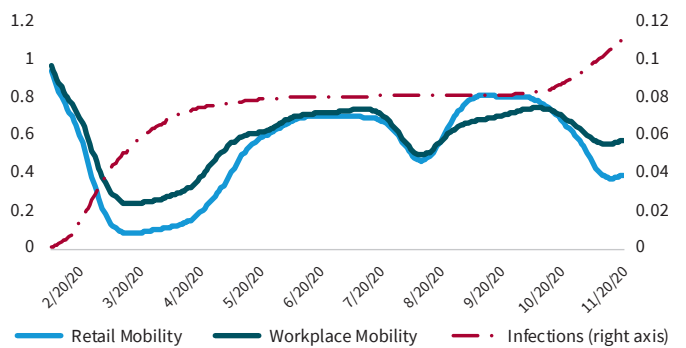
A model of infections and economic activity

The model captures the idea that individuals interact in different “network layers,” which describe the social contacts that take place in homes, neighborhoods, schools, and workplaces and expose them to different groups of people. Each layer is characterized by the set of people that an individual can meet in any period and by the probability of meeting each individual in the potential pool. Some layers, like the household, entail a small number of potential contacts with a high probability of meeting any particular individual. Other layers, like a shopping mall, feature a high number of potential contacts with a low probability of meeting any particular individual.

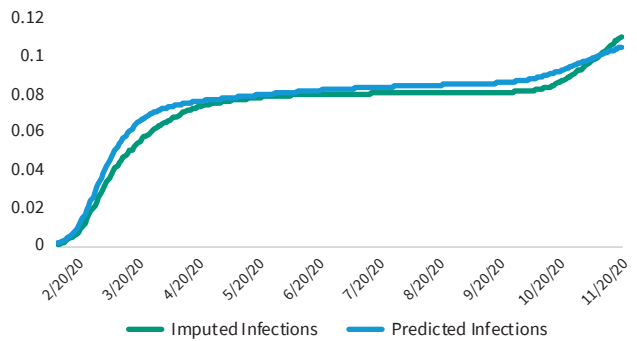
Workplaces are also distinguished as part of a *low-contact* or *high-contact* sector. Workers in the low-contact sector, say, manufacturing, interact with co-workers but have no contact with the general public. Workers in the high-contact sector, say, retail, not only meet their co-workers but also interact at random with other individuals (customers) from the whole population.

Figure 2.1

A: Google Mobility Data vs. Infections



B: Predicted vs. Imputed Cases



We calibrate the model so as to reproduce Italy’s household structure and age distribution as well as key pre-pandemic characteristics of the demographic and social structure of one of its major cities, Milan. In terms of these characteristics, we focus on the frequency and type of social interactions by network layer and the distribution of workers across the high- and low-contact sectors.

The case of Milan is of special interest as Milan is the second-most populous city of Italy, its most prosperous manufacturing and commercial center, and the capital city of the region, Lombardia, which was hardest hit by the pandemic. In Figure 2.1, the top panel shows the impact of the lockdown policies by showing imputed infections and mobility data for Milan and the bottom panel plots the timeline of infections *predicted* by our model against the timeline imputed from data for both the first and second waves of contagions.¹ The top panel of the figure clearly shows the inflections in mobility corresponding to the two main lockdown policies. As apparent from the bottom panel, the model (“Predicted Infections” line) accounts well for the observed dynamics of infections (“Imputed Infections” line).

The impact of Italy’s social structure and alternative mitigation policies

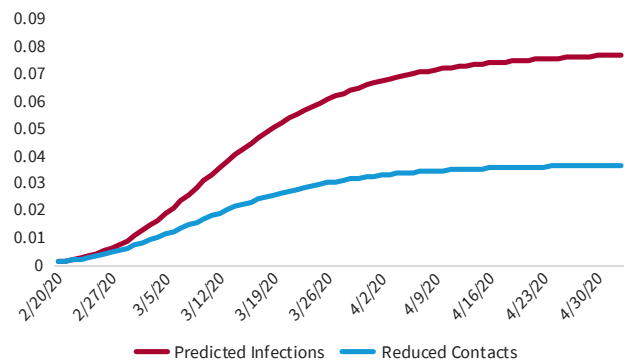
Given the success of the model at reproducing what happened in Milan, we next use it as a laboratory to: i) investigate the role played by the Italian social structure in spreading infections; ii) evaluate the mitigation policies enacted by the Italian government; and iii) compare the mitigation policies adopted in Milan and New York City by examining how different the Italian death and output toll would have been if the mitigation policies of NYC had been adopted in Milan.

Italy is characterized by the largest number of daily contacts among individuals across all countries for which these data are systematically available (Mossong et al. 2008) with an average of 19 contacts per person relative to a cross-country average of 13. Italy is also the only country with a significant fraction of contacts among individuals from different age groups, especially between old individuals, who are more vulnerable to the virus, and young individuals, who are less vulnerable, and, being more often asymptomatic, are more likely to transmit it. Indeed, given the age distribution in Milan and the

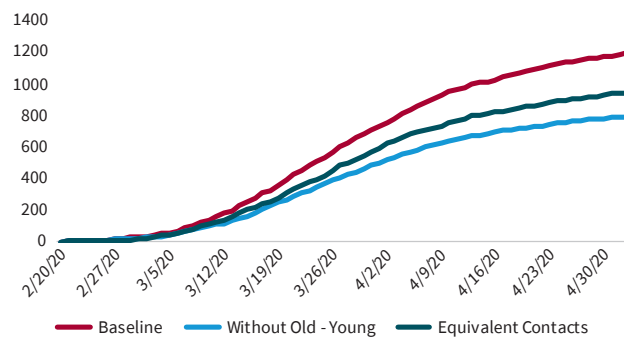
meeting probability across age groups, our model predicts that if the average number of contacts had been 13 rather than 19 before the pandemic, then the total number of infections in Milan would have dropped by as much as 50 percent, as the top panel of Figure 2.2 shows.

Figure 2.2

A: Impact of Reducing the Number of Contacts



B: Impact of Removing Interactions Between Young and Old



Another peculiar feature of the Italian social structure is the degree of mixing between old and young. Compared with other countries, grandparents are more likely to cohabit with their children (and grandchildren) and be involved in their grandchildren’s care. How much did this dimension contribute to the number of deaths that Italy experienced?

¹ We use Google mobility data for Milan to match the reduction in contacts during the first 10 months of the pandemic. We determine the rate of transmission of the virus during the same period by targeting imputed infections, which are calculated from data on observed deaths and infection-fatality ratios estimated by Brazeau et al. (2020).

One way to address this question is to consider what would have happened if there had been no interactions between grandparents and grandchildren. Such a change would have a *volume* and a *composition* effect on contacts: it would not only reduce the total number of contacts but also remove a dimension of interaction between generally asymptomatic carriers and individuals who are more likely to succumb to the virus.

To decompose these two effects, we first simulate a reduction in the total number of contacts among individuals — in the amount accounted for by the interactions between older adults and their grandchildren — but suppose that this reduction in contacts occurs evenly throughout the network (“Equivalent Contacts” experiment). We then consider the case in which this reduction in contacts arises only from older adults no longer interacting with their grandchildren (“Without Old-Young” experiment).

The bottom panel of Figure 2.2 shows that roughly 60 percent of the reduction in deaths for the elderly just arises from the fewer contacts. The remaining 40 percent, everything else equal, owes to the specific decline in social interaction between the elderly and their grandchildren. The intuition for this result is that since children are not quarantined when infected because they are (largely) asymptomatic and so undetected, putting them in contact with older adults leads to additional infections among the elderly.

Milan vs. NYC: A policy comparison

The top panel of Figure 2.3 plots the Google mobility data from the retail and workplace sectors for Milan and NYC, measured in days since the first major announcement of confirmed COVID cases (February 21 for Milan and March 9 for NYC) and normalized to pre-pandemic levels. Note that the data reflect their respective lockdown policies as well as individuals’ responses to them.²

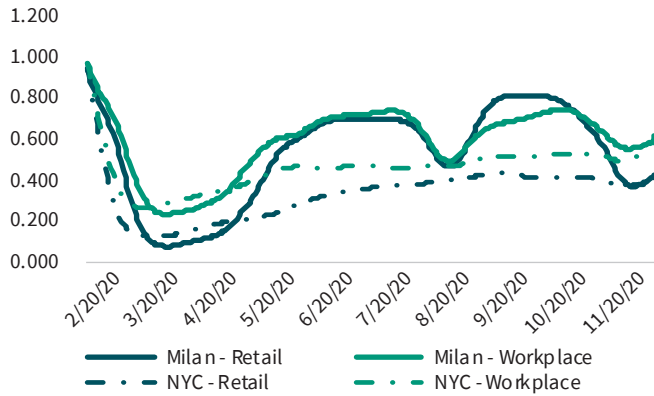
Two differences emerge. First, the mitigation policies implemented in Milan, which initially had a greater impact on mobility than those in NYC — see the solid mobility lines for Milan falling more than the corresponding dashed ones for NYC — over time became much more volatile. That is, NYC maintained relatively stable lockdown policies whereas Italy twice tried to relax them, triggering an increase in infections that led to a subsequent tightening of these measures.

Second, relative to the start of the pandemic in each city, these policies were introduced in Milan later than in NYC — see the solid mobility lines for Milan falling later than the corresponding dashed ones for NYC — as Italy was the first Western country to be hit by the COVID-shock on a large scale, so it took time for local health authorities to detect the infection.

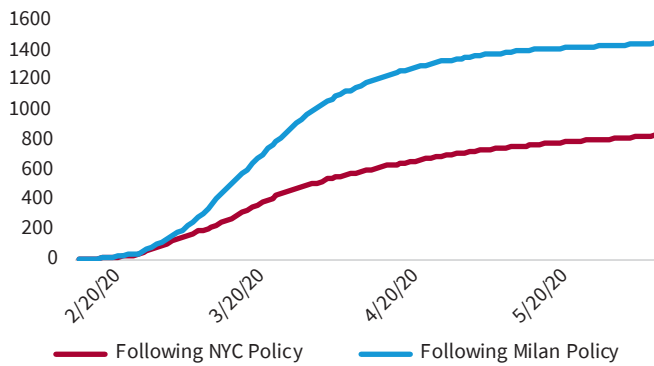
² To be able to infer lockdown policies from mobility data, which capture the effect of both mitigation policies and behavioral responses to them, a maintained assumption is that for a given policy adopted in both cities, individual behavior is comparable across Milan and NYC so that differences in mobility indeed measure differences in policies.

Figure 2.3

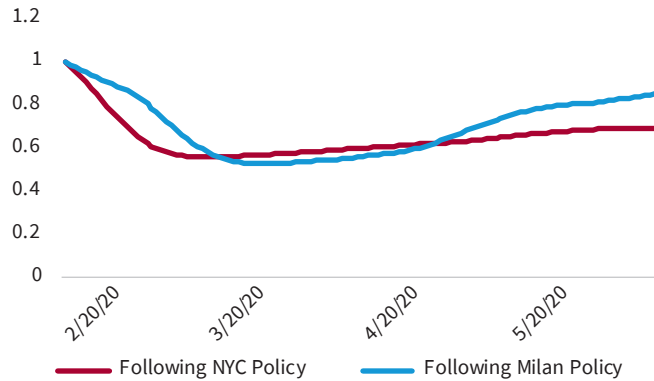
A: Google Mobility Data for Milan and New York City



B: Deaths Under Alternative Policies



C: Output



To understand the differential impact of the distinct mitigation policies of Milan and NYC, suppose that

after the pandemic hit, the same reduction in contacts observed in NYC occurred in Milan. The middle panel of Figure 2.3 compares the number of deaths in Milan under this NYC-type policy with those under the policy actually adopted in Milan. The benefit in terms of saved lives under this hypothetical policy is significant: 600 lives per million would have been saved. This alternative policy would have implied a similar cost in terms of output, as the bottom panel of Figure 2.3 shows.

Hence, Italy was taken by surprise by a crisis that may have required less strict but longer and more targeted mitigation policies — leading to fewer deaths at the same output cost.

The Italian and EU’s fiscal responses to the pandemic

Between March 2020 and March 2021, the Italian government introduced several national relief measures worth 170 billion euros in the form of loans (35 percent of 2020 GDP), primarily to supply liquidity to firms and allow banks to continue to lend to both households and firms, and of grants and tax deferrals (8.5 percent of 2020 GDP). For a comparison, the U.S. has allocated 2.4 percent and Germany 27.8 percent of their respective 2020 GDP to loans; the U.S. has further allocated 25.5 percent and Germany 11 percent of their respective 2020 GDP to grants and tax deferrals.

The EU has complemented the effort of member countries through two main programs: a measure of direct immediate assistance, known as “Support to Mitigate Unemployment Risks in an Emergency” (SURE) that was last distributed on May 25, 2021, and a short-to medium-term measure primarily meant to promote investment, named “Next Generation EU” (NGEU), approved in July 2020 and to be implemented between 2021 and 2027.³

³ In 2020, the EU also started operating the Pandemic Crisis Support (PCS) program through the European Stability Mechanism with the aim of helping member countries contrast the effects of the pandemic, especially those related to the unfolding health care crisis. As of May 2021, though, while 19 countries have accessed the SURE program, no country has accessed the line of credit provided by PCS.

The SURE program

Worth 100 billion euros, SURE has provided assistance to member countries in the form of loans with the stated purpose of stabilizing employment — the program can be thought of as a EU loan-based analogue of the Payroll Protection Program rolled out in the U.S.. SURE loans are guaranteed by the extra resources that the European Commission can call on from member countries to service its debt if a debtor defaults, but also by an additional 25 billion in direct irrevocable callable guarantees from EU countries. SURE bonds are highly rated (AAA) and are extended at very favorable terms for some beneficiary countries. For example, whereas Italy's 7-year bond has always entailed a positive yield, the equivalent-maturity SURE bond has a yield of -0.497 percent, which allows Italy to borrow at a much lower interest rate.

The NGEU program

NGEU is another extraordinary step that the EU has undertaken to support member countries. For a total of approximately 800 billion euros or 5 percent of the EU's GDP, NGEU is the largest financial emergency measure ever enacted by the EU and the largest-ever euro-denominated issuance at a supranational level. By its magnitude and structure, the plan has been designed to have a longer-term impact than just stimulating the recovery of EU countries in the aftermath of the crisis.

NGEU is also the first major fiscal EU package that allocates funds to member states according to their needs in addition to their size.⁴ In particular, countries that suffered a larger decline in GDP during the pandemic are set to receive more funds. Italy, for instance, will receive funds, net of expected repayments, of the order of 2 percent of its 2019 GDP, whereas Germany will contribute to financing it with more than 2 percent of its 2019 GDP.

To finance NGEU, the European Commission will raise funds from capital markets up to its entire amount. Funds will be awarded to EU countries in the form of conditional loans (55 percent), for a maximum of 6.8 percent of a country's GNP, and grants (45 percent), determined according to the criteria mentioned above. Whereas loans are to be repaid by beneficiary member states, the European Council has agreed to ensure that grant repayments will be covered, instead, by gross national income-based contributions and the EU's own resources.

Although forms of "cross-state insurance" are common across U.S. states, this is the first time that such a measure has been adopted by the EU on this scale. In fact, by its scope and intent, the program actually amounts to more than offering EU countries relief from the immediate impact of the pandemic. With funds to be disbursed up to the end of 2026 and a repayment horizon stretching up to 2058, the stated purpose of the program is to promote investments and reforms that can boost the long-term growth of the countries receiving them and hence strengthen their ability to withstand future shocks.

The conditionality of the funds is a key dimension of the policy. In order to request NGEU funds, countries must propose plans for reforms and investments pertaining to six areas, namely: a "green" economy, a country's digital infrastructure, employment and sustainable growth, social and geographic cohesion and inclusion, health care, and education policies. Plans must lay out the timeline of proposed reforms and investments and specify the qualitative and quantitative results to be expected. Not only must plans receive approval by the EU, but countries must also prove satisfactory progress toward agreed-upon intermediate targets to continue receiving funds.

4 Beyond size-related measures such as GDP per capita and population, NGEU assigns resources based on a country's average unemployment between 2015 and 2019 relative to the EU average, decline in real GDP in 2020, and cumulative fall in real GDP between 2020 and 2021.

NGEU for Italy

Italy's proposal for these funds, approved on June 22 of this year for a total of 236 billion euros, consists of several projects meant to address needed improvements in the country's environmental policies, education, digital and physical transportation infrastructure, the criminal justice system, and in the realms of innovation and entrepreneurship.

The lack of innovation, partly due to universities failing to “turn ideas into startups,” is one of the chronic problems listed in Italy's 270-page recovery plan. Other long-standing issues, in addition to the low education of its workforce, include the heavy administrative burden on businesses, clogged courts, and the low participation rate of women in the workforce. Italy is the OECD country with the second-lowest female labor force participation rate in 2019, 41.3 percent, only followed by Turkey at 34.4 percent.

Then, using NGEU resources to digitalize how people use public services could reduce processing time and paperwork. Promoting alternative dispute resolution methods such as arbitration could help settle business disputes more quickly. Adding, as planned, 228,000 day-care and pre-school facilities could attract more women to the labor force. In its annual report from last May, the Bank of Italy estimates that NGEU could increase Italian GDP by 3 to 6 percent over the next decade.

In 2020 dollars, NGEU is a financial initiative nearly 8 times larger than the Marshall Plan — the celebrated post-war plan of European revival — the intent of which is to chart a new course of sustained growth for EU member countries and of lower economic disparities among them. Given NGEU's magnitude and scope, is the EU setting itself on a new path of ever-greater fiscal integration and should it?

Does the EU need greater fiscal integration?

The EU has engaged in unparalleled fiscal interventions in support of member countries during the COVID-19 crisis. These measures have renewed the debate on whether greater fiscal integration to share the risk of adverse macro-shocks across EU countries in the short run and in the long run would allow the EU to better address current and future emergencies. We claim here that this argument is less relevant in the context of the global financial markets that EU countries can access.

An argument against greater integration

It is often maintained that within a monetary union, a unionwide authority coordinating fiscal transfers among member countries is desirable to provide adequate insurance against country-specific macroeconomic shocks, since exchange rates among the countries of such a union are fixed. But since the 1970s, many economists have argued that sophisticated international financial markets are sufficient to provide insurance against country-specific economic fluctuations.⁵

An argument in favor of greater integration

This view, though, is subject to two caveats. First, shocks like the current pandemic that simultaneously affect many countries of a union raise the question of whether a coordinated unionwide response is appropriate when shocks are *common* to member countries rather than *specific* to only some of them.

Second, the notion that greater fiscal integration is unnecessary in the presence of well-developed financial markets presumes that a unionwide authority has no *advantage in implementing domestic fiscal policies* over member countries. However, if a member country, for instance, faces distortions that it is unable or unwilling to fix, then a unionwide authority that imposes the appropriate

5 The idea is simple. Consider two countries that face fluctuations in their crop output due to their weather. Assume one country produces crops only in the fall and the other country only in the spring. Imagine goods can be stored only for six months. Well-developed international insurance markets allow the two countries to guarantee themselves exactly the same level of income (crop output) as if the individuals of each country migrated every six months to the country where crops can be grown. That is, international financial markets can provide all the necessary cross-country insurance without any need for a fiscal authority to implement transfers.

tax or transfer to correct them may be beneficial merely on efficiency grounds, that is, even in the absence of any redistributive goal — and even if exchange rates within the union were completely flexible in that no common currency existed among any members of the union.

Opportunities ahead for Italy

This second caveat is especially relevant for Italy. Italy has lagged behind many advanced economies in measures of R&D and investments in education and research. For instance, in 2019, the country spent only 1.45 percent of its GDP in R&D against an OECD average of 2.47 percent. In the same year, the Italian government’s expenditure on education was 3.9 percent of GDP whereas the EU’s average was 4.7 percent. The NGEU plan is meant to prompt Italy to undertake much-needed investments in research, technology, and digital infrastructure. During the present health emergency, investments in digital technologies and services, including in the public sector, will have long-term beneficial effects on both health, by reducing the volume of social contacts for vulnerable individuals, and on aggregate productivity, by expanding markets and the scale of production, thereby triggering a virtuous circle that could ameliorate the “health vs. wealth” trade-off often debated during the pandemic.

The EU intervention through NGEU, which will help alleviate Italy’s long-standing domestic problems, does not come without challenges though. A key issue is that the effective burden of repayment on individual member countries is unclear and its determination is likely to lead to long negotiations and protracted uncertainty. Other EU policies promoting a common “level-playing-field,” which, unlike NGEU, do not require an explicit financial commitment on the part of any country, could help Italy and other European countries increase productivity simply by increasing competition—an instance of such policies are those that reduce barriers to entry in labor markets as per the Lisbon Recognition Convention of 1997.

For example, it’s no secret that Italy’s labor markets have been over-regulated. Many occupations, as diverse as notaries and taxi drivers, are restricted by law to only a

small number of certified workers — for a comparison, in the U.S., most notary services are performed by other professionals such as lawyers and court clerks. These barriers to entry arguably distort wages and so misallocate talent and resources. Labor market liberalization reforms that have been undertaken in Italy in recent years, such as the Jobs Act of 2014, or reforms that facilitate the inflow of educated workers from other countries, are welcome and should continue to be pursued both in the private and in the public sector.

But these national reforms tend to be contentious, so their adoption is often slow and uneven and their scope limited. Through the NGEU program, the EU has effectively taken the role of “reform enforcer” of last resort in the face of Italy’s repeated inability to address the structural sources of its stagnation, by providing Italy with incentives to tackle many of them. Being one of NGEU’s largest beneficiaries so far, Italy will prove a testing ground for its success.

Italy’s issues are multiple and intertwined but their solution begins with many of NGEU’s proposed reforms, which simply amount to sound domestic policies that a country should ideally be able to implement on its own. The hope is that the comprehensive spectrum of reforms supported will set in motion a virtuous cycle.

Specifically, the recovery plan aims to create conditions that would help scientific discoveries find a commercial path as well as fuel startups and innovative industries while creating career paths that would help retain educated Italians, otherwise inclined to leave the country due to limited prospects. A less-regulated and more dynamic economy would experience a higher growth that would decrease the effective burden of the country’s debt and in this way increase its financial stability: the higher the growth rate of its economy, the higher the debt that Italy can in principle sustain. By linking resources for investments to reforms, NGEU allows Italy to cheaply raise funds while reassuring not just the EU but also financial markets about its commitment to reform.

In general, it is not obvious that the EU needs greater fiscal integration. By sticking to its mission of providing a common and transparent regulatory environment, promoting an ever-larger common market for goods and services, and nudging member countries when unwilling or unable to adopt necessary reforms, the EU can continue playing a key beneficial role. However, today's challenges, from health emergencies to immigration and climate change, have become increasingly global. The stronger EU emerging from the pandemic looks better positioned to face the issues ahead.

For details related to the network model discussed above, please refer to: <https://www.dropbox.com/scl/fi/263lgvz26k1k0vnab8u6a/Technical-Appendix.docx?dl=0&rlkey=u1kqjpwqkv6vzfolcur1i405>.

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Appendix

	U.S.	China	EU
GDP (tril \$)	20.16	12.23	17.04
Public Debt/GDP	106	66.83	89.8
Population (mil)	329	1,398	449
Exports (tril \$)	2.65	2.38	3.02
Exported Goods	1.85	2.14	2.02
Exported Services	0.80	0.24	1.00
Imports (tril \$)	3.58	2.21	2.77
Imported Goods	3.01	1.78	1.84
Imported Services	0.57	0.43	0.93

Country	Population (mil. 2020)	GDP (bil. USD 2020)	GDP per Capita (thousand USD 2020)	Deaths (per mil.)
U.S.	329.2	20,161	61,246	1,827
China	1,398	12,225	8,746	3.2
EU	448.6	15,979	35,622	1,662
Austria	8.9	430	48,212	69.8
Belgium	11.5	525	45,507	2,172
Bulgaria	6.9	62	8,967	2,599
Croatia	4.0	69	16,995	1,999
Cyprus	0.9	29	33,324	421
Czechia	10.7	251	23,442	2,830
Denmark	5.8	382	65,557	438
Estonia	1.3	28	20,714	957
Finland	5.5	272	49,105	175
France	67.5	3,049	45,194	1,646
Germany	83.2	4,046	48,657	1,085
Greece	10.7	254	23,646	1,217
Hungary	9.7	176	18,068	3,105
Ireland	5.0	417	83,637	1,012
Italy	60.1	2,206	36,729	2,110
Latvia	1.9	31	16,486	1,332
Lithuania	2.8	53	18,875	1,610
Luxembourg	0.6	70	110,439	1,307
Malta	0.5	14	27,159	951
Netherlands	17.3	987	56,881	1,052
Poland	38.4	659	17,195	1,982
Portugal	10.3	260	25,316	1,677
Romania	20.1	240	11,957	1,756
Slovakia	5.5	111	20,399	2,291
Slovenia	2.1	55	26,565	2,126
Spain	47.1	1,613	34,234	1,730
Sweden	10.4	596	57,567	1,448



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