DISTANT AND UNEQUAL. LOCKDOWN AND INEQUALITIES IN ITALY[1]

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Abstract

We simulate the short-term effect of two months of lockdown on the Italian income distribution. With a static microsimulation model we show how poverty and inequality were effected by restrictions imposed during Coronavirus outbreak in March and April. We estimate a not negligible increase both in poverty and inequality, effects to a large extent mitigated by stimulus measures implemented by the government. However, we show that adopting alternative social protection approaches would have guaranteed a more universal coverage in particular for households more vulnerable to economic shocks.

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1 Introduction

With the end of April 2020, the critical phase of the health emergency of the Covid-19 epidemic in Italy seems to be behind. But for the economy, the most complicated phase has yet to begin. Certain sectors, whose activity has been suspended for the months of lockdown, supported by emergency public interventions of income support, will have to start up again in an economic situation of great uncertainty. Even areas of the country that have been less severely affected from a health point of view will be no exception. In addition to the direct effects of the period of restrictions, the national economy will face a substantial drop in demand in the months ahead.
The scale and sectoral damage of the crisis following the lockdown period is hard to predict. To get an idea of what lies ahead, it is enough to consider the fall in Italian GDP between 27 March and 14 April estimated by ten Italian and international research institutes. The forecasts, which all assume around two months of severe restrictions, range from a fall of less than 2% (Istat, 2020) to a forecast of -15% (Unicredit, 2020).[2] For this reason alone, in the analysis we present here, we limit ourselves to quantifying the distributional effects of the lockdown period in Italy without considering in any way the effects in the medium and long term. Not because we intend to underestimate the medium-term effects of the health and economic crisis, but simply because at this stage it is premature to imagine that we can evaluate them correctly. Moreover, given that other periods of lockdown are possible in the future, it is key to understand whether the measures of mitigation adopted by the Italian Government have been effective in protecting most vulnerable families.

In Italy, as in the rest of the world, the effects of the restrictions on the different sectors of the economy and the different types of worker vary greatly (Baldwin, 2020; Franzini, 2020; Istat, 2020). The shock differs for persons and households who have different capacities of self-protection. The starting inequalities end up amplifying the costs of the pandemic. In this analysis, we focus precisely on the effects on inequalities of the lockdown measures in force in Italy in March and April.
The analysis considers a scenario similar to that hypothesized by other authors, focusing on a short-term horizon (Figari and Fiorio, 2020). The effects assessed are therefore those of the total closure of certain sectors, identified by ATECO code, while other sectors are considered not affected by the restrictions, such as mass-market distribution or the entire public sector. Furthermore, it is assumed that the Italian economy will resume its normal course after two months of restrictions. Income in the months before and after this period is thus the same as we would have recorded in the absence of an epidemic. This is in line with the objective of assessing the dropin income attributable solely to the lockdown period. As tools protecting against the drop in income, we consider the new measures introduced by the government decrees during the crisis, together with financial support already existing before the emergency.
The crisis mitigation effect achieved through the interventions in force is compared with two alternative hypotheses: the enhancement of the social protection tools proposed by the Forum Disuguaglianze e Diversità (Inequality and Diversity Forum) and a solidarity income that implements a redistribution mechanism of zero-cost for the revenue agency.

2 The impact of lockdown: scenarios compared

This analysis simulates four different scenarios. The simulations are performed using

[2] Table 1 in Appendix contains the complete list of forecasts.

the IRPET *MicroReg* tax microsimulation model, built on the basis of the 2017 EU-SILC survey on income and living conditions by ISTAT (Maitino et al., 2017). For more robust estimates of the impact of the lockdown, we performed a calibration procedure that restricts the original EU-SILC sample weight to the distribution of workers by sector of economic activity and type (employee and self-employed) identified by the ISTAT Labour Force Survey[3].

The first scenario simulates the effects that the lockdown would have had on workers' incomes in the absence of government measures, both already existing and those included in the "Cura Italia" Decree. To this end, we identified the sectors of activity subject to closure, with necessary approximations. The ATECO classification used in the ministerial decrees to establish which sectors are essential is, in fact, more detailed than the Labour Force classification to which the EU-SILC sample classification was recalibrated. For this reason, we had to resort to a probabilistic method of random selection, within each of the 12 sectors, of workers subject to lockdown[4]. The income of the lockdown workers identified in this way was assumed to be zero for the two months of March and April. For the remaining months of the year, we assumed an immediate return to work on the same salary as before the epidemic, for both employees and self-employed workers.

In the second scenario, we take account of the fact that the effects of the impact of blocking activities are offset by the measures implemented by Giuseppe Conte's government to deal with the negative effects of the restrictions and the health crisis on individual incomes. The measures considered in this analysis (see Appendix) are the extension of the *Cassa Integrazione* (CIG; wage guarantee fund) and an allowance for self-employed workers, as established by the "Cura Italia" Decree"[5].

The third scenario considers the proposals put forward by the Inequality and Diversity Forum, which recommend a review of the allowance for self-employed workers and an extension of the *Reditto di Cittadinanza* (Citizens Income, see Appendix), as well as maintaining the other tools already established by government decrees.

The final scenario, which is inspired by a proposal put forward in the daily papers in the first phase of the crisis, assesses the hypothetical effects of the lockdown in the event of the issue of a "solidarity income" (Cinelli and Costagliola, 2020). This consists of universal credit given to all Italian families of 900 euro per head of household, with an additional 600 euro for each adult and 300 euro for each child. The measure is of no cost to public finances, as it is fed by "freezing" the incomes - for two months - of all workers and pensioners. Table 1 illustrates the costs of the various counter-measures that were simulated in this analysis.

Table 1

THE COSTS OF MEASURES TO MITIGATE THE EFFECTS OF THE LOCKDOWN

MEASURE	**billion EUR**
Cura Italia Decree	
Ordinary and extraordinary CIG net of existing CIG	5.1
Allowance for self-employed (total cost for workers in lockdown)	2.39
Additional cost to the State	7.49
Proposals by the Inequality and Diversity Forum	
Ordinary and extraordinary CIG net of existing CIG	5.1
New allowance for self-employed	5.53
Extended Citizens Income	5.04

[3] The calibration also restricts the sample weight to the distribution of families by number of components and is integrative, because it considers jointly family and individual variables.

[4] The probability that an individual works in essential productive activities was estimated using the national accounting data, comparing those in work (employees and self-employed) for the ATECO codes indicated in the ministerial decree with the total persons in work for each of the 12 sectors of activity considered.

[5] Income of last resort was excluded from simulation because there is still no information on how it will be implemented.

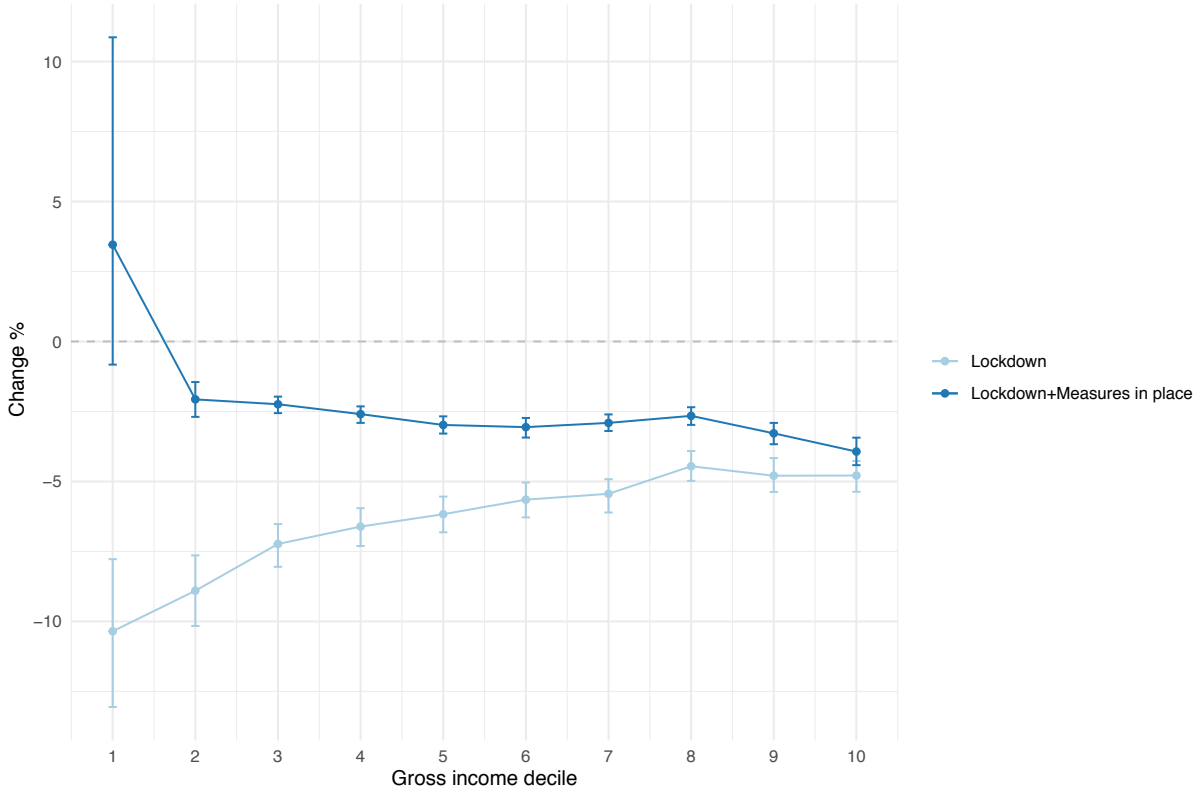
Additional cost to the State	15.67
Solidarity Income	
Solidarity income (a)	92
Lower incomes and pensions (b)	133
Lower tax revenue (c)	41
Additional cost to the State (b-c-a)	0

Note: The details of the measures are provided in the Appendix.

3 The distributional effects on worker incomes

In the absence of corrective actions, lockdown causes a strong regression in worker incomes. Figure 1 shows the relative change (as a percentage) in the income of Italian workers caused by the lockdown. The workers are divided into gross income deciles. The monotonically increasing curve shows that it is the least wealthy workers who pay the most. The containment measures, envisaged in Scenario 2, relating to the "Cura Italia" measures, have a clearly corrective effect, especially in the first deciles. Despite the halt in production, the measures envisaged by the Government would guarantee an increase in income (albeit with a high degree of uncertainty) to the first decile, while the effect of the restrictions on the rest of the workers appears almost proportional (the loss fluctuates around 2.5%).

Figure 1
THE CHANGE IN INCOME CAUSED BY THE LOCKDOWN AND THE MITIGATION OBTAINED BY MEASURES IN PLACE



Note: the average change is calculated for each decile of individual gross income of working population, 99% confidence intervals are obtained through 1,000 random re-samplings
Source: EU-SILC, 2017 and Labour Force Survey 2018.

Perhaps unexpectedly, the lockdown effect is progressive, reducing the pay gap as

regards gender differences and wage differences by geographical area. The gross income of male workers without the lockdown would have been 137% that of female workers; with restrictions, this ratio drops to 135%. A similar reduction can be observed for territorial pay gaps, with income in the north falling from 135% to 132% of average gross income in the south.
Both effects are due to the fact that there are a greater proportion of women and workers from the south are employed in sectors for which there have been no restrictions. Table 2 shows the distribution of people in work, women in work and people in work in the south and, in the last column, the percentage of workers affected by the restrictions by sector. It is noted that the sectors not affected by the block in production mostly employ women, especially in health and education. Workers in the south are also employed in greater proportion in sectors such as agriculture and public administration, not affected by the lockdown.

Table 2
EMPLOYMENT IN THE SECTORS SUBJECT TO LOCKDOWN

Sector	Distribution of people in work	Distribution of women in work	Distribution of people in work in the south	Share of workers under lockdown
Agriculture, forestry and fishing	3.76%	2.23%	6.16%	0.00%
Industry (excluding construction)	20.04%	12.87%	15.10%	57.90%
Construction	6.06%	0.93%	6.80%	58.62%
Trade	14.16%	14.08%	16.15%	47.96%
Hotels and restaurants	6.29%	7.09%	5.46%	86.81%
Transport and storage	4.87%	2.55%	4.58%	0.00%
Information and communication	2.60%	1.97%	1.54%	0.00%
Finance and insurance	2.76%	2.93%	2.00%	0.00%
Real estate, business services	11.37%	14.11%	10.59%	35.61%
Public Administration and defence	5.35%	4.04%	7.34%	0.00%
Education, health and other social services	14.99%	24.84%	17.00%	0.00%
Other collective and personal services	7.76%	12.35%	7.29%	26.61%

NOTE: Percentage of persons in work in Italy, women in work, persons in work in the south and percentage of workers subject to lockdown by sector.
Source : Source: EU-SILC, 2017 and Labour Force Survey 2018.

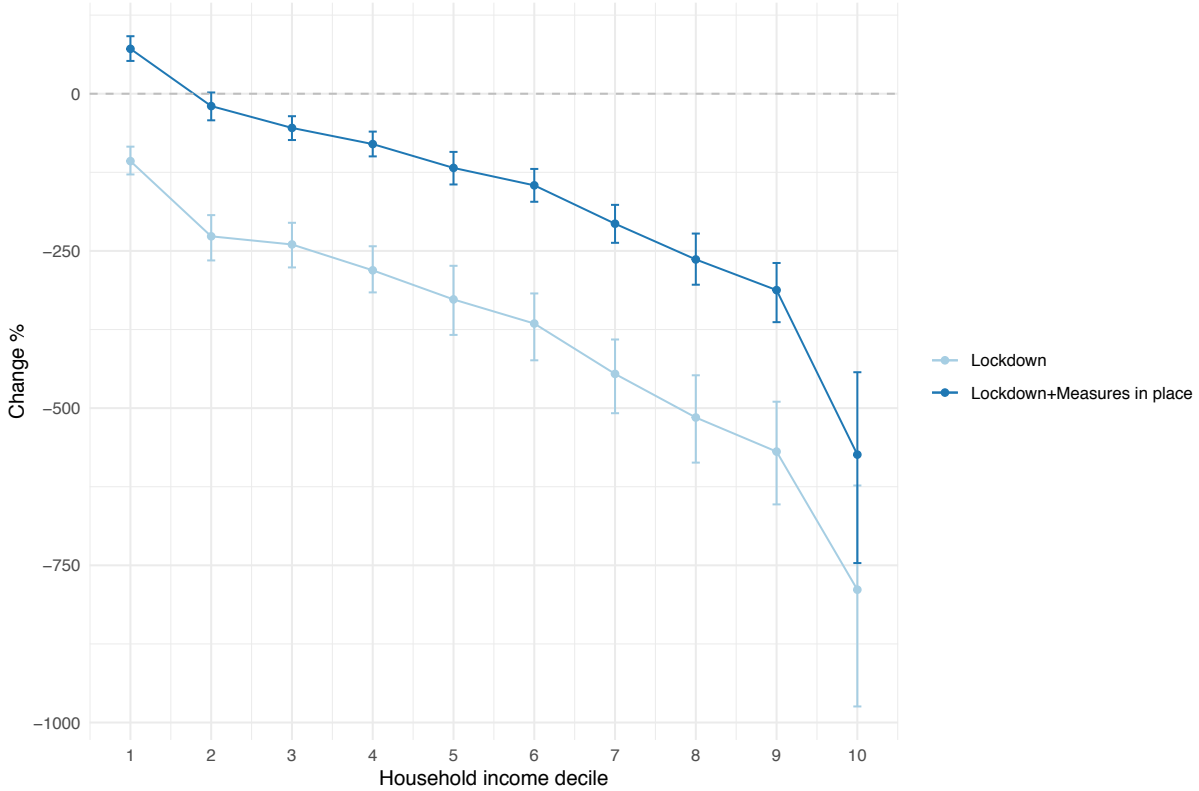
As regards the gender gap, some authors have suggested that this crisis could be an important step in the process of female emancipation (Titan et al., 2020). Without seeking to embrace this point of view, we do note that a somewhat specular but opposite effect occurred in the last decade during the salary freeze in Public Administration: in this case, the over-representation of women in the sector led to a widening of the gender pay gap (Piazzalunga and Di Tommaso, 2020).
In terms of territorial pay gaps, it is worth pointing out that this analysis only looks at the short-term effects of the lockdown. In no way is it intended to suggest that the southern Italy will suffer less damage from the economic crisis; it is enough to recall that a recent report by Association for the Development of Industry in Southern Italy

suggested that the risk of bankruptcy among businesses in the south, as a consequence of the health crisis, could be up to four times greater than the risk for companies based in northern Italy (Svimez, 2020).

4 The impact on Italian households

The effect of the lockdown on the distribution of household disposable income is less pronounced than for the gross income of individual workers. This is due to both progressive taxation and the composition of the family unit. But, as shown in Figure 2, the distributional effect remains clearly regressive. The poorest families lose almost 5% of their financial resources while the wealthiest families lose around 2%. The changes are reported here in absolute terms to show how the correction achieved by the interventions in force has the effect of reducing the loss of income in a substantially equal measure for all households, regardless of their level of income. However, it is true that in relative terms, the cost is higher for less well-off families. Indeed, the poorest families are the ones that suffer the most substantial effects when they are hit by unexpected economic shocks (Franzini, Granaglia and Raitano, 2020). Indeed, 56% of households in the poorest decile declare that they are "unable to cope, using own resources, with unexpected expenses totalling around €800", against 17% of those in the wealthiest decile. About 18% of these families, who do not have enough savings to cope with an unexpected expense, suffer a loss of disposable income greater than €800 due to the lockdown.

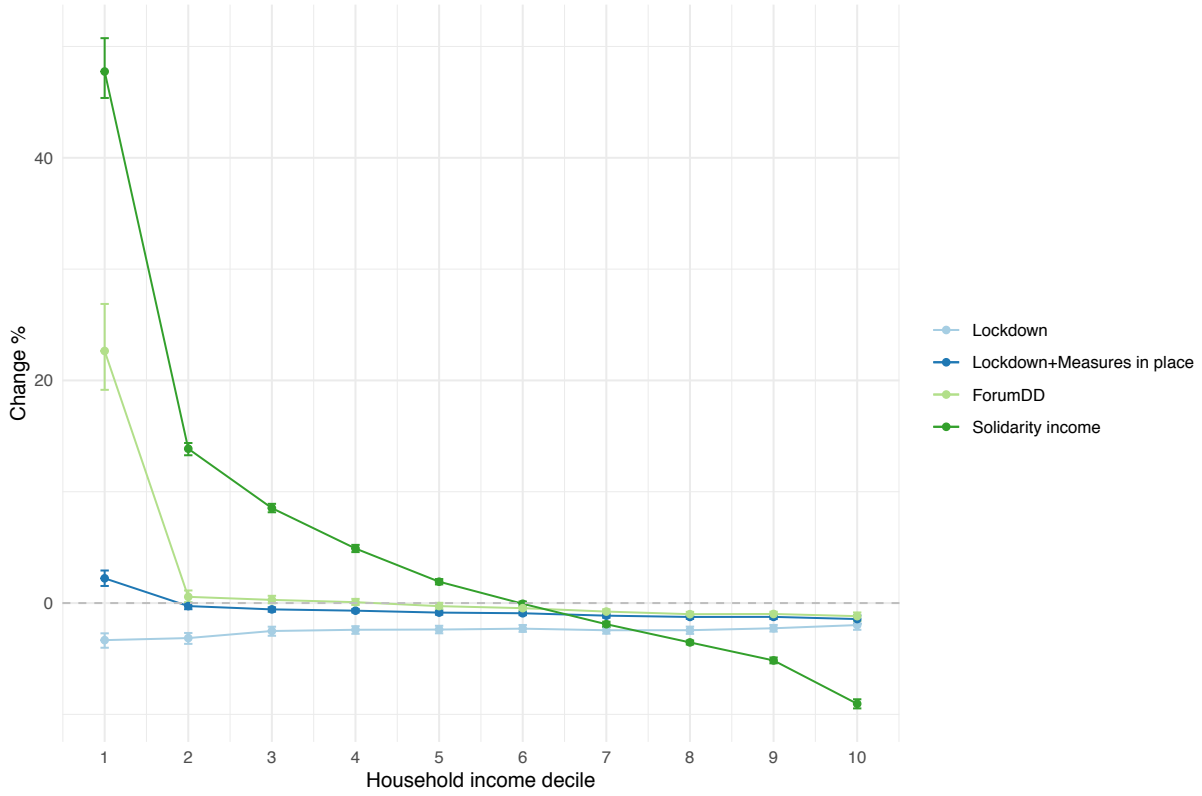
Figure 2
DISTRIBUTIONAL EFFECT OF THE LOCKDOWN AND THE MEASURES IN FORCE



NOTE: the average change is calculated for each decile of equivalent disposable household income (OECD scale), the 99% confidence intervals are obtained through 1,000 random re-samplings.
Source: EU-SILC, 2017 and Labour Force Survey 2018.

Figure 3 shows the same changes in income in relative terms: note how the legislation in force intervenes to partially offset the fall in income and does so progressively. At this point, we also consider the containment effects that would derive from both the proposal by the Inequality and Diversity Forum (Forum DD), and the introduction, at no cost to the national budget, of a solidarity income financed by freezing incomes and pensions for two months (Solidarity income).
The two proposals considered introduce a further corrective measure in favour of households on lower incomes. The proposal of the Inequality and Diversity Forum mainly concentrates resources in favour of the less well-off (first and second deciles). In this case, the poorest see an increase in disposable income, while for the wealthiest, the effect is essentially the same as that achieved with the decrees approved in March and April. The solidarity income proposal also shifts resources towards poorer households, and to a greater extent, in this case taking them from the wealthier households, who end up suffering losses far greater than would occur in the absence of intervention.

Figure 3
THE EFFECT OF SOCIAL PROTECTION POLICIES



NOTE: the average change is calculated for each decile of equivalent disposable household income (OECD scale), the 99% confidence intervals are obtained through 1,000 random re-samplings.
Source: EU-SILC, 2017 and Labour Force Survey 2018.

In terms of overall inequality, the lockdown has the effect of worsening the situation, but this is remedied by the measures in force with the "Cura Italia" Decree. However, Table 3 shows the more marked progressive redistribution for the two alternative scenarios, with the Gini coefficient falling significantly in both substantial and statistical terms in both cases. It falls by 5 points for the solidarity income.

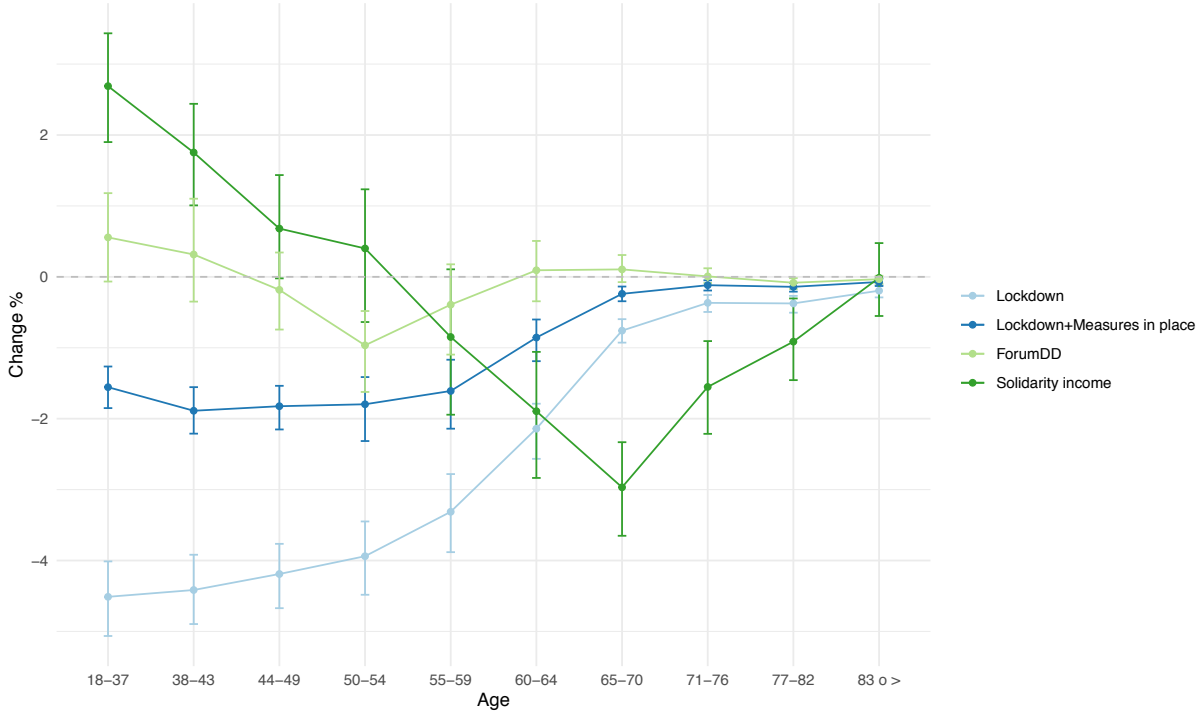
Table 3
THE EFFECT OF LOCKDOWN ON INEQUALITY

Scenario	Gini	C.I.99%	
Disposable income pre Covid19	0.3396	0.3328	0.3465
Lockdown	0.3419	0.3334	0.3517
Existing measures	0.3373	0,331	0.3463
Forum DD	0.3309	0.3241	0.3371
Solidarity Income	0.3036	0.2978	0.3096

NOTE: the Gini coefficient is calculated on the equivalent disposable household income (OECD scale), 99% confidence intervals are obtained through random re-sampling.
Source: EU-SILC, 2017 and Labour Force Survey 2018.

Another gap that is certainly widened by the crisis is the difference among generations. In this case too, there is great variation in the ability of households to cope with a negative shock: about 50% of households in which the head of the household is younger than 38 or older than 82 say they have difficulty covering an unexpected expense of €800. This percentage is much lower for other age cohorts: fewer than 30% of families with heads of household between 65 and 70 years of age have the same problem. Figure 4 shows the effect of the lockdown and the three policies considered on household income based on the age of the head of household. The wide variation in impact of the restrictive measures is shocking, although expected. The effect of the halt in production on younger households is vastly greater than for families with older heads of households. This effect is only partially mitigated by the approved measures. The proposal put forward by the Inequality and Diversity Forum appears to protect substantially the income of younger households. But the solidarity income is certainly the measure that best manages to protect effectively younger households, who more frequently have greater difficulty coping with even temporary reductions in income, taking resources from households where the head is between the ages of 60 and the 82.

Figure 4
INTERGENERATIONAL EFFECTS

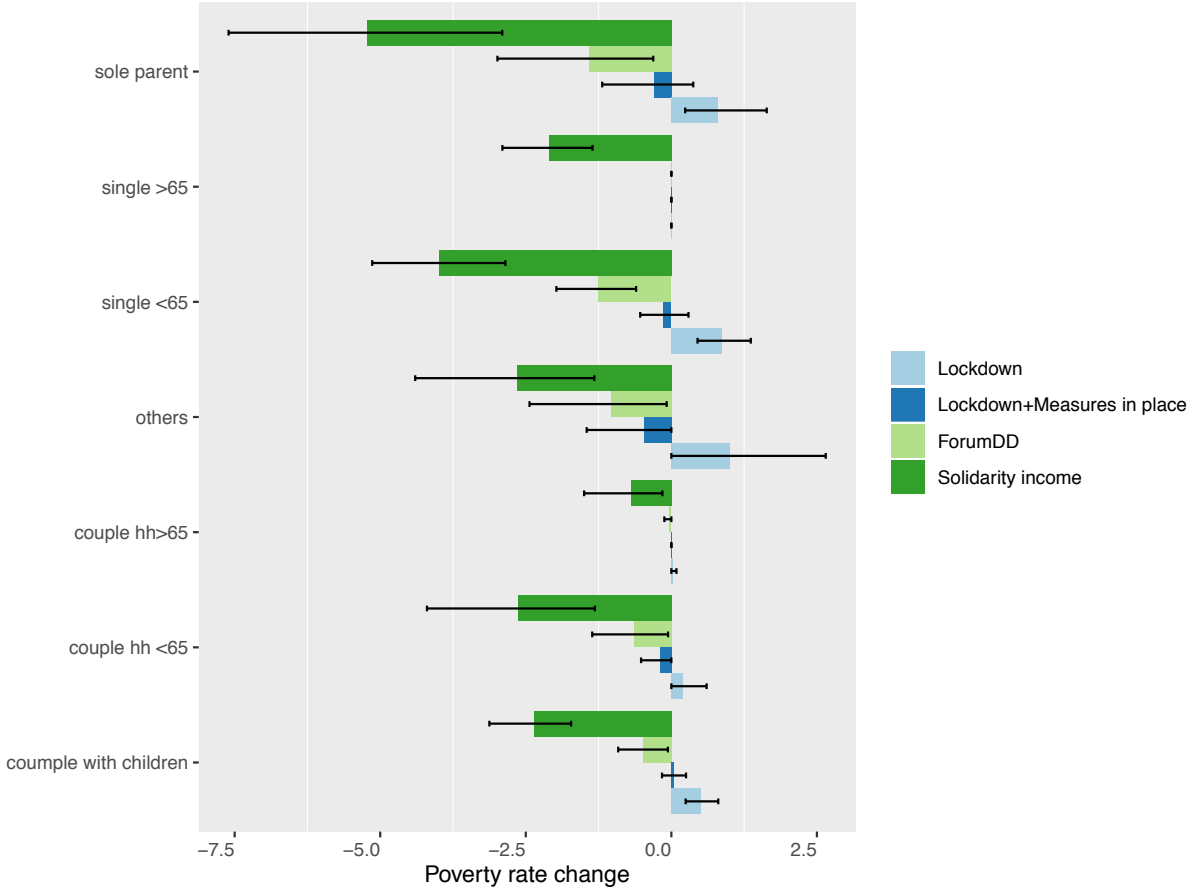


NOTE: the average drop is calculated for each cohort in terms of equivalent disposable

household income (OECD scale), the 99% confidence intervals are obtained through 1,000 random re-samplings.
Source: EU-SILC, 2017 and Labour Force Survey 2018.

Finally, the fall in household disposable income also has implications for the poverty rate. We limit ourselves here to the variation in rate of absolute poverty and its heterogeneity among types of household. In particular, we break it down into: couples with head of household under the age of 65, couples with head of household over the age of 65, couples with children, single-parent families, single persons under the age of 65, single persons over the age of 65. As can be seen in Figure 5, the effect of the lockdown is clearly negative and significant for couples with children, single-parent families and for single persons under the age of 65. In any case, for all types of household, the measures introduced by the government have the effect of neutralizing this negative shock, which would otherwise lead to an increase in poverty rates. It is interesting to note that the two alternative proposals, both that put forward by the Inequality and Diversity Forum and the Solidarity Income appear to more than counterbalance the effect of the lockdown. These schemes would lift out of poverty some households who would have been poor in any case, even without the restrictions on work activities, but who are probably also the households least capable of sustaining the economic shock. It is enough to recall, going back to the capacity to cope with an unexpected expense, that over 63% of poor Italians say they couldn't cope with an unexpected expense of €800.

Figure 5
THE EFFECTS ON THE ABSOLUTE POVERTY OF HOUSEHOLDS



NOTE: the change in poverty rate is expressed in % values in relation to the scenario without the shock of Covid-19. The 99% confidence intervals are obtained through random re-sampling.
Source: EU-SILC, 2017 and Labour Force Survey 2018.

Conclusions

The economic and social effects of the Coronavirus epidemic will be dramatic but are still completely uncertain. For this reason, we presented a partial simulation that takes into consideration only the aspects that are certain to date: the restrictive measures and the stimulus measures approved under Giuseppe Conte between late February and early April 2020.
The analysis shows that those most affected by the shock are individuals who were already the most vulnerable. The fall in income is greater for low-income workers and less well-off households. The consequence is that inequality increases and so does the poverty rate. The interventions of the government are to a large extent able to neutralize these short-term negative effects on the population. This corrective capacity of the approved measures restores the poverty rates and income of the poorest households to the levels that would have existed in the absence of the Covid-19 emergency.
Although our analysis does not take into account the medium or long-term effects on our economy, it does still identify some peculiar aspects of this crisis. The shock is hitting many households hard but it does not affect them all equally. The most substantial differences are among generations, with younger families affected twice as badly as older families. This aspect is particularly alarming if we consider that the younger workers are also those who will find it harder to cope with the subsequent phase, in which may businesses risk closing down or laying off staff.
Our analysis compares the effectiveness of the mitigation measures introduced with that of two other possible approaches, proposed in the public debate in Italy, to dealing with a crisis situation such as that triggered by Coronavirus. The approach proposed by the Inequality and Diversity Forum to extend and expand ordinary social protection measures, and the Solidarity Income, partly inspired by proposals by Gianmario Cinelli and Antonio Costagliola, which implements a more radical mechanism of temporary redistribution. Both measures offer more universal protection for Italian households, especially those including young people and less well-protected workers.
The Solidarity Income proposal, albeit complicated to implement in practice, also has the advantage, in addition to its effectiveness in redistribution, of being self-financed through subtraction from the wealthiest earners. It could therefore be carefully evaluated in the unfortunate event that the need for a national or local lockdown should arise again. It is in fact an option that would allow resources to be allocated towards the re-launch of investments, freeing up resources otherwise employed in the distribution process.

Appendix: The simulated institutions

Cassa Integrazione (wage guarantee fund)

"Cura Italia" allocates resources in addition to those already available for existing ordinary support schemes, ordinary wage guarantee fund and income support funds (FIS), and introduces an extraordinary wage guarantee fund for employers not covered by the ordinary benefits. Overall, the measures implemented are worth around €5.1 billion. Specifically, the decree allocates €1.3 billion for employers with the requirements for the ordinary wage guarantee fund or subscribers to the FIS, who can request it under the reason "COVID-19 emergency", without paying the additional contribution, and pay it even to workers who don't meet the contribution period requirements. For employers already using the extraordinary wage guarantee fund or who are paying the solidarity allowance for FIS subscribers, "Cura Italia" allocates €338 million and €80 million respectively to replace the schemes in progress with ordinary support schemes. For all employers excluded from ordinary income support schemes, €3.3 billion are allocated to the extraordinary wage guarantee fund. Government source estimates of the aforementioned costs are based on assumptions, made by type of support scheme, on the take-up of the tools by the employers and assume they will be used for one month. In our analysis, the wage guarantee fund is instead simulated assuming use for two months, March and April, by employees working in companies subject to lockdown only. The measure would involve 5.8 million beneficiaries, for a total cost (i.e. including also the resources related to the ordinary support schemes in force) of €11.5 billion.

Allowance for self-employed workers

This is an entirely new measure in Italy. This is a contribution for the month of March of €600 for self-employed workers, including artisans and traders, freelancers, collaborators and other minor categories. There are no requirements for accessing the allowance, not even in relation to actual reduction in work activity caused by the Covid19 emergency. The resources allocated total €2.4 billion for approximately 4 million beneficiaries. Similarly to the simulation for employees, our analysis assumes the allowance will be requested only by self-employed workers under lockdown, for both March and April. The simulated measure has a cost similar to that estimated by the government in the technical report to the decree (€2.4 billion), but would involve around half of the beneficiaries (1.9 million) estimated by the government and for two months instead of one.

New allowance for self-employed workers

This is a more generous allowance than that provided for by "Cura Italia". In our simulation, the amount is 80% of income from work for the previous year, reported on a monthly basis. However, the value varies within a maximum and a minimum corresponding to the 25th and 75th percentiles of the relative – monthly – distribution of income from self-employment. The new allowance for self-employed workers – in our estimates – would require an additional €3.1 billion compared to that established by the "Cura Italia" Decree.

Extension of the Citizens Income

This measure is simulated by removing both the requirement of ten years' continuous residence for foreign citizens and the access requirements in terms of real estate and property assets. For the rest, the extended Citizens Income has the same characteristics as that currently in force: it is an income support payment of up to

€6,000 for property-owning households, with an additional €3,360 in rental support for households in rented accommodation.
The extended Citizens Income is a tool of last resort, to be implemented after the wage guarantee fund and the allowance to the self-employed, would cost about €5 billion and would concern 1 million families (which would add to the €8 billion and 1.8 million families already beneficiaries of the existing Citizens Income).

Additional tables

Table 1: Estimates of GDP drop for 2020 in Italy

Institutions	date	GDP drop (%)
Confindustria	March 31st	6
CNC	March 27th	9.26
IFO	April 3d	8.65
Irpet	April 1st	12.3
Prometeia	March 27th	6.5
Unicredit	April 6th	15
Istat	April 7th	1.9
OECD	April 1st	4
IMF	April 14th	9.1
SVIMEZ	April 9th	8.4

Note: GDP change is forecasted under a similar assumption of approximately two-month lockdown.

References

- Baldwin R. (2020). The COVID-19 upheaval scenario: Inequality and pandemic make an explosive mix. VOX - CERP policy portal. Url: voxeu.org
- Cinelli F. e Costagliola A. (2020). Una proposta per non scegliere fra salute e sopravvivenza economica. Corriere della Sera March 11, 2020. Url: corriere.it
- Confindustria (2020). The Italian Economic Outlook 2020-2021. How to help the resilience of the economy and to boost it after the crisis? Centro Studi Confindustria, March 2020. Url: confindustria.it
- CNC (2020). Coronavirus: commercialisti nel periodo del lockdown crollo del PIL fino al 70%. Consiglio Nazionale dei Dottori Commercialisti e degli Esperti Contabili. 27 March 2020. Url: commercialisti.it
- IFO: Dorn F., Fuest C., Göttert M., Krolage C., Lautenbacher S., Lehmann R., Link S., Möhrle S., Peichl A., Reif M., Sauer S., Stöckli M., Wohlrabe K., Wollmershäuser T. (2020). The Economic Costs of the Coronavirus Shutdown for Selected European Countries: A Scenario Calculation. IFO Econ Pol Policy Brief. 25/2020. April 2020. Url: econpol.eu
- Figari F. and Fiorio C. V. 2020. EM6/20Welfare resilience in the immediate aftermath of the COVID-19 outbreak in Italy. EUROMOD Working Paper Series.
- Forum Diseguaglianze e diversità (2020). Curare l'Itala di oggi, guardare all'Italia di domani. Proposta per rendere universale la protezione sociale contro la crisi. March 30, 2020. Url: asvis.it
- Franzini M., Granaglia E., Raitano M. (2020). Il COVID-19 e i sistemi di protezione sociale: riflessioni sul presente e sul futuro. Menabò di Etica e Economia n. 122/2020. Url: eticaeconomia.it
- Franzini M. (2020). Disuguaglianza, crescita e mobilità sociale: un nodo da sciogliere. Menabò di Etica e Economia n. 124/2020. Url: eticaeconomica.it
- IMF (2020). World Economic Outlook. Chapter 1. April, 2020. imf.org
- IRPET (2020). E se durasse due mesi? Scenari economici per la crisi da Covid-19. Note sugli effetti economici del Covid-19. Nota 2/2020. Istituto Regionale per la Programmazione Economica della Toscana. Url: irpet.it
- ISTAT (2020). Nota Mensile sull'Andamento dell'Economia Italiana. March 2020. Servizio per l'analisi dei dati e la ricerca economica, sociale e ambientale. Url: istat.it
- Maitino, M. L., Ravagli L., Sciclone N. (2017). Microreg: A Traditional Tax-Benefit Microsimulation Model Extended To Indirect Taxes And In Kind Transfers. International Journal of Microsimulation. 10.1 (2017): 5-38.
- Piazzalunga D., Di Tommaso, M. L. (2019). The Increase of the Gender Wage Gap in Italy during the 2008-2012 Economic Crisis, Journal of Economic Inequality 17(2): 171-193.
- Prometeia (2020). Covid-19, le previsioni di Prometeia. Prometeia 27 March 2020. Url: prometeia.it
- OECD (2020). Evaluating the initial impact of COVID-19 containment measures on economic activity. Secretary-General of the OECD. March 2020. Url: oecd.org
- Titan M. A., Doepke M., Olmstead-Rumsey J., Tertilt M. (2020). The Impact of COVID-19 on Gender Equality. NBER Working Paper No. 26947. Issued in April 2020.
- Svimez (2020). L'impatto economico e sociale del Covid-19: Mezzogiorno e Centro-Nord. Associazione per lo SVIluppo dell'industria nel Mezzogiorno. Url: svimez.inog

- Unicredit (2020). The mother of all recessions has arrived. The UniCredit Economics Chartbook, Quarterly. 2Q 2020. Unicredit April 2020. Url: unicredit.eu