Castriota, Stefano; Delmastro, Marco; Tonin, Mirco

Working Paper

National or Local? The Demand for News in Italy during Covid-19

CESifo Working Paper, No. 8699

Provided in Cooperation with:
Ifo Institute – Leibniz Institute for Economic Research at the University of Munich

Suggested Citation: Castriota, Stefano; Delmastro, Marco; Tonin, Mirco (2020) : National or Local? The Demand for News in Italy during Covid-19, CESifo Working Paper, No. 8699, Center for Economic Studies and Ifo Institute (CESifo), Munich

This Version is available at:
https://hdl.handle.net/10419/229517

CESifo WORKING PAPERS

8699
2020

November 2020

National or Local? The Demand for News in Italy during Covid-19

Stefano Castriota, Marco Delmastro, Mirco Tonin

CESifo

Impressum:

CESifo Working Papers
ISSN 2364-1428 (electronic version)
Publisher and distributor: Munich Society for the Promotion of Economic Research - CESifo GmbH
The international platform of Ludwigs-Maximilians University's Center for Economic Studies and the ifo Institute
Poschingerstr. 5, 81679 Munich, Germany
Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email office@cesifo.de
Editor: Clemens Fuest
https://www.cesifo.org/en/wp
An electronic version of the paper may be downloaded
· from the SSRN website: www.SSRN.com
· from the RePEc website: www.RePEc.org
· from the CESifo website: https://www.cesifo.org/en/wp

CESifo *Working Paper No. 8699*

National or Local? The Demand for News in Italy during Covid-19

Abstract

Looking at TV news viewership in Italy during the COVID-19 pandemic using actual consumption data, we investigate whether demand for national and local news depends on national or local epidemiological developments, as measured by the number of new positives or the number of currently positives in any given day. Exploiting the fact that the seriousness of the pandemic displays a great deal of variation among the different regions, we find that at the regional level demand for both national news and, more surprisingly, local news responds to the national epidemiological developments rather than to the local ones. This has implications for the incentives faced by local politicians to take preventive action.

JEL-Codes: D120, L820.

Keywords: news, local news, TV, Covid-19.

Stefano Castriota
Department of Political Sciences
University of Pisa
Via Serafini 3
Italy – 56126 Pisa
stefano.castriota@unipi.it
https://orcid.org/0000-0001-9252-778X

Marco Delmastro
Autorità per le Garanzie nelle Comunicazioni
Via Isonzo 21/b
Italy – 00198 Rome
m.delmastro@agcom.it
https://orcid.org/0000-0002-8527-3117

Mirco Tonin
Faculty of Economics and Management
Free University of Bozen-Bolzano
Piazza Università, 1
Italy – 39100 Bolzano
mirco.tonin@unibz.it
https://orcid.org/0000-0003-4831-9347

November 2020
We would like to thank Federico Boffa, Giacomo De Luca, Amedeo Piolatto, Tommaso Reggiani, Paolo Roberti, Francesco Sobbrio, Steve Stillman, Mauro Sylos Labini for useful suggestions. Declarations of interest: none

1. Introduction

The coronavirus crisis has been defined also as a communication crisis (Gollust, Nagler and Fowler, 2020) and the role of information is considered central to support pandemic response (Van Bavel et al., 2020). In the new and fast-changing environment of the pandemic, communication plays a crucial role, as the population is asked to fundamentally alter its day-to-day behavior to comply with social distancing and other measures like hand washing or mask wearing. There are already several studies, reviewed later on, showing how news media affected people's behavior during the pandemic, with some finding evidence of an effect on the spread of the virus and on mortality.

Information supply about the pandemic ranges from media reporting accurate and evidence-based information – the type of media we study in this paper – to outlets spreading conspiracy theories or sensational fake news (World Health Organization, 2020)[1]. Studying people's demand for professional information during the pandemic is then essential to understand what type of information spreads, with important implications for public health and policy.

We study demand for national and local TV news by Italian citizens during the pandemic. We show how the share of TV viewers watching news increases with the worsening of the epidemiological conditions – measured by the number of new positives and the number of currently positives in any given day. Demand for both national and, more surprisingly, local TV news is responsive to national conditions, but not to local ones.

We use high-quality data on television usage akin to PeopleMeters[2]. Italy is the first country with a free press that was severely affected by the virus. In addition, as in other markets like the US (Pew Research Center, 2018), TV is still the dominant mass medium and prime time TV news are by large the main source of information for Italian citizens (Agcom, 2018a). We study how consumption of local and national news changed with the development of the pandemic and, in particular, we analyze whether attention for local and national news depends on local or national epidemiological developments. This in a context like Italy where, in the first wave, COVID-19 affected the country in a very uneven way. For instance,

[1] WHO has recently underlined that "The 2019-nCoV outbreak and response has been accompanied by a massive 'infodemic' - an over-abundance of information – some accurate and some not – that makes it hard for people to find trustworthy sources and reliable guidance when they need it".
[2] https://www.ipsos.com/en/ipsos-encyclopedia-peoplemeter-aka-audimeter

Lombardia, where half of the overall deaths in the period under consideration occurred, was severely affected, with 7.5% of the population having contracted the virus as of July 2020, while Sicily was barely touched, with only 0.3% of the population infected (ISTAT, 2020). In general, the pandemic hit hard the North while the Center and the South were affected only marginally.

National and local facts and policies interact differently with local and national TV news (Martin and McCrain, 2019). It is reasonable to assume that demand for national news should depend on topical national (and international) events, while relevant local events should drive demand for local news. For example, a national election should trigger more viewers of national news, while a regional or mayoral election should affect more strongly viewership for local news. Turcotte et al. (2017), for instance, show that local television news coverage of the Deepwater Horizon oil spill depends on geographical proximity, while Branton and Dunaway (2009) show how news organizations closer to the U.S.-Mexico border generate a higher volume of articles about immigration. In the specific case of public health issues, it has been noticed how, "[b]ecause many public health issues (e.g., an infectious disease outbreak, a water supply toxin, or access to grocery stores) are local in reach, local news has an opportunity to speak to community health concerns more directly than can national outlets" (Gollust et al., 2019).

A reasonable hypothesis would then be that viewership of national news will depend on epidemiological developments at the national level, while viewership of local news will be more strongly related to local conditions. Local news, for instance, is particularly relevant to evaluate the risks associated with going to the grocery store. National news is instead more relevant to understand international and nation-wide developments, for instance related to government policy to contain the virus, e.g. when lockdown is going to be lifted, when non-essential economic activities can resume and so on. Indeed, according to a PEW Survey conducted in April 2020[3], American adults followed national news to get information on topics like the economic (46%) and health (40%) impact of COVID-19, or to seek advice from national

[3] https://www.journalism.org/2020/04/29/2-covid-19-both-a-national-and-local-news-story/ [accessed on November 3, 2020].

health organizations (40%). They instead followed local news to be informed about local government actions (42%), goods in local stores (38%), status of nearby schools (30%).

What we find is that both national and local TV news viewership is not responsive to local conditions, but to conditions outside of the region[4]. In the conclusions, we discuss possible reasons for this and its implications, for instance for incentives faced by local politicians to take preventive action. Besley and Dray (2020) study the role of free media in explaining the government response to the pandemic. They show how countries with free media are more responsive to epidemiological developments: they are more likely to impose a lockdown as the death toll from COVID-19 increases and see greater reductions in mobility during a lockdown in response to rises in deaths. They explain these results with the fact that citizens of free-media countries are better informed, and this affects compliance and the decision to lock down. We show how demand for both local and national information is responsive to the seriousness of the pandemic at the national level, and at the end of the paper discuss the implications for the political economy of the response.

This paper contributes to the literature on information and COVID-19. Several studies on the US have investigated the effect of FOX news on behavior. Ash et al. (2020) exploit random variation in Fox News viewership to show how higher viewership means that people are less likely to stay at home and to consume goods like cleaning products, hand sanitizers, and masks. Simonov at al. (2020) also show the negative effect of Fox News on social distancing, while Bursztyn et al. (2020) study how exposure to Fox News shows with a different coverage of the coronavirus affect behavior and downstream health outcomes. In the context of Brazil, Ajzenman, Cavalcanti and Da Mata (2020) use news coverage and social media data to show the negative effect on social distancing of speeches by Bolsonaro. Watanabe and Yabu (2020) show that three quarters of the decrease in outings in Tokyo are the result of "information updating on the part of citizens through government announcements and the daily release of the number of infections" and only one quarter is due to legally binding measures. Kim, Shepherd and Clinton (2020) exploit variation for rural counties in the US on how local news is focused on urban communities and the fact that the impact of COVID-19 can be quite

[4] In a similar vein, Delmastro and Zamariola (2020) find that feelings of anxiety and depression between Italian population were spread in the whole country and were not correlated with local epidemiological developments.

different between rural and urban communities. They show that rural residents are more likely to practice social distancing if their media market is more impacted by the pandemic due to the urban communities, thus underlining the importance of local information.

These studies show the impact of news on behavior during the pandemic, and thus underline the importance of studying demand for news, but they do not study how this changed during COVID-19. Also, compared to the studies that focus on biased information, we look at the effect on demand for news of official statistics about the pandemic.

More generally, our study also contributes to the literature on consumers' demand for media, reviewed in Berry and Waldfogel (2016). What happens in our context is the combination of a change in the outside option and a shift in tastes. The change in the outside option is due to the restrictions on activities outside home imposed by the lockdown and should affect demand for media in general, so that more people watch TV during the lockdown as they cannot go to the gym or to the pub. This clearly affects the absolute number, but less so the share of TV viewers watching news. The shift in tastes happens if, for instance, during the pandemic people derive higher utility from news programs compared to entertainment programs, for instance because they want to be informed about the latest epidemiological and policy developments. The shift could also have been in the opposite direction if, for instance, due to the anxiety induced by the grim reporting of death and contagion statistics during the pandemic, people chose to isolate themselves and, therefore, reduce their exposure to news. Indeed, the PEW Research Center Survey mentioned above found that 7 out of 10 U.S. adults feel they need to take breaks from COVID-19 news.[5] Within news programs, as already discussed, there can be a differential change in demand for local compared to national news. We document the changes in demand for both types of news and investigate their relationship with epidemiological developments at the national and local level, thus contributing to our understanding of consumer demand during a pandemic.

The rest of the paper is organized as follows. The next section briefly describes the main stylized facts about news consumption in Italy and the main developments of the pandemic.

[5] https://www.journalism.org/2020/04/29/3-majority-of-americans-feel-they-need-breaks-from-covid-19-news-many-say-it-takes-an-emotional-toll/ [accessed on November 3, 2020].

The following section presents the data sources. In section 4, we provide descriptive statistics and the main results. The last section concludes, discussing some implications of our findings.

2. News consumption and COVID-19 in Italy

The Italian news landscape is historically dominated by the presence of major TV channels. As pointed out by Italian communication authority "[t]elevision is confirmed as the medium with the greatest informative value, both for access frequency and for perceived importance and reliability" (Agcom, 2018a). More than 90% of all Italian population get access to news by TV (Internet 70%, Radio 66% and Newspapers 60%), and nearly half consider it as the main source of news (Internet 26%, Newspaper 17% and Radio 8%). The COVID-19 pandemic has reinforced the role of TV (and online outlets) as the main source of national and local news, while newspapers and radio lost significant audience (Agcom, 2020b), something that has been observed also in the US.[6]

More specifically, prime time (at 8 PM) national TV news is widely regarded by Italians as the most important daily time to get access to news and information. In particular, TG1 of RAI - the Italian public broadcaster - and TG5 of Mediaset - the main commercial broadcaster in Italy - are by large the two most viewed TV news, reaching an average daily audience of 4 millions people each (in 2019, 4.7 millions for TG1 and 3.9 millions for TG5; Agcom 2020a). TGLa7 (TG7 from now on) of Cairo Communication (an Italian independent news group) complements the national news offer at prime time with TV news that reach a much smaller audience of more educated people (Agcom, 2019).[7]

With regards to local news, TGR, the regional TV news of RAI, is by large the main source of news for local facts in Italy (Agcom, 2018b) and, because of this, we will use "regional news" as synonym of local news. Coordinated by a central structure and with a common format, in every region a dedicated newsroom produces and broadcasts three TV daily news programs (at 2 PM, 7:30 PM, and 00:10 AM), of which the prime time one – 7:30 PM – reaches more

[6] https://www.journalism.org/2020/10/29/coronavirus-driven-downturn-hits-newspapers-hard-as-tv-news-thrives/ and https://www.wsj.com/articles/local-tv-sees-spike-in-viewers-drop-in-ads-in-coronavirus-crisis-11585915203 [accessed on November 3, 2020].

[7] There are other four national TV news programs (i.e. TG2 and TG3 of RAI, and TG4 and Studio Aperto of Mediaset), which however are not broadcasted at prime time and reach a lower viewership.

than 2 million Italians (2.3 in 2019) and is the third TV news in terms of viewership after TG1 and TG5.

By focusing on prime-time TV news it is possible to observe the evolution of (local and national) news viewership at a regular, fixed time, i.e. holding the news supply constant in terms of available programs. Comparing TV news viewership before and during the first COVID-19 pandemic wave and looking at the relationship between news viewership and epidemiological developments, it is possible to better understand the effect of COVID-19 on news attention.

Regarding COVID-19 in Italy, the Government declared a six-month state of emergency on January 31, 2020, namely the same day the first two cases, a couple of Chinese tourists, where confirmed in Rome (see Appendix for a detailed chronology and a timeline of COVID-19 events and public policies in Italy). When splitting the sample between a pre- and post-COVID periods, we take this date as the threshold. The contagion spread more heavily and rapidly in the northern regions, with the first cases of community transmission reported in Lombardia and Veneto in February and the imposition of a localized lockdown in the outbreak areas. Between March 8 and 9, the whole country went into lockdown. National lockdown measures were extended twice and, finally, ended on May 3, 2020, when a so-called "phase 2" started nationwide, with a gradual re-opening.

An important aspect to underline about the epidemiological developments in Italy is that, as we will detail in the next section, different areas have been affected in very different ways, with a clear North-South gradient. Lombardia alone, with one sixth of the Italian population, has had almost 50% of deaths and 40% of infected. Sicily, with a population that is half that of Lombardia, accounted for 0.9% of deaths and 1.3% of infected (ISTAT, 2020).

3. Data Sources and Descriptive Statistics

Television viewership data come from Auditel which is the organization providing quantitative data on TV audience attention in Italy (similar to Barb in the UK and Nielsen in the US). It should be noted that "[o]ne defining characteristic of the audience measurement industry is that, although a number of different firms provide statistical representations of media audiences, only one firm tends to dominate the distribution of comprehensive audience

data for each media technology" (Napoli, 2003). In this regard, Auditel is the only producer of audience data for the Italian TV market. It is a Joint Industry Committee (JIC), a reciprocal-control organization that brings together all TV market players, namely (national and local) broadcasters, advertisers, media agencies and media buyers. Since 1984, Auditel performs the task of measuring and releasing the data depicting the entire digital, satellite, live and on-demand Italian TV offer on all platforms and devices, 24 hours a day, minute by minute. Nowadays, data are provided by a panel of 16,100 households (sampled to represent the entire Italian population) distributed on all the 20 Italian regions. The panel households are equipped with a meter which measures the TV viewing of the household members, and any possible guests, minute by minute and every day. The meter monitors TV consumption on traditional TV, Smart TV, PC, Game console, and other devices.

We have constructed a panel with daily data for each of the 20 Italian regions, going from January 1, 2019 until July 27, 2020. Data are not available at a lower level of disaggregation, e.g. at the provincial or individual level. In our main analysis, we use as dependent variable the percent share of the prime-time national (8:00-8:30 PM) and local (7:30-8:00 PM) TV news, that is the share of TV viewers that are watching the news in the corresponding time slots in each region. We also have data on the absolute number of viewers, but this may be strongly affected by the fact that during lockdown people end up watching more TV due to a lack of alternatives (e.g. closure of bars, limitation of interpersonal contacts). Looking at the share better isolates the increased interest in the news rather than in TV in general.

Looking at Table 1, we can see that national news (i.e. the cumulative share of the three national prime time news: TG1, TG5 and TG7) have in general a high share, 47.7% on average, and that this share increased significantly from 46.9% in the pre- COVID period (before January 31, 2020, when the first two cases were reported in Italy) to 49.5% in the post- COVID period. For regional news the jump was stronger, going from 12.3% to 15.3%. In absolute numbers, national news is watched over the whole period by around 10.5 million people per day, while regional news by 2.6 million, out of a total population of around 60 million. The changes between the pre- and post- COVID periods correspond to an additional 2 million viewers for national news and almost 1 million more viewers for regional news.

For COVID-19 statistics, we use the official data released every day at 6 PM by the National Department of Civil Protection (Dipartimento della Protezione Civile). An important feature

of the data we use is that they correspond to those that have been disseminated by the news outlets in the corresponding days, thus influencing the perceptions of Italian citizens about the epidemiological developments. At times these data have been subsequently revised, but we use them as they were reported.

As the main explanatory variables, we use the number of new positives and the number of currently positives in any given day. Both measures capture the current intensity of the infection, albeit with a different time horizon, as the variable currently positives is the sum of new positives in the past, minus those who recovered or died. In Table 1, we can see that the number of new positives is on average 1.38 thousand per day over the COVID-19 period and the number of currently positives nationwide is on average 41.3 thousand. We also report the number of deaths, that we use in robustness checks as an alternative measure of the seriousness of the pandemic. Numbers are much smaller and noisy, in particular for smaller and less affected regions. Nationwide, there are on average 197 COVID-related deaths per day in the 178 days of the COVID period we consider.

Figure 1 shows in panel A the daily number of new COVID-19 cases in thousand units (right axis) and the 7-day moving average of the share of the national news (TGN) and, in panel B, local news (TGR) at prime-time in Italy (left axis), while panel C and D report similar plots with the total number of currently positives. It is evident how the time period we consider includes both the growing phase of the infection, with a peak in March for new positives and in April for currently positive, as well as the descending phase. The four plots show an upward trend of the share of national and local news when the sanitary conditions worsened, and a downward trend when, thanks to the lockdown, the situation improved. It can be noticed how the increase in the share of regional news closely tracks the increase in positives, while national news appears to be trending upward already before the start of the pandemic in Italy. This would be consistent with a heightened attention to the international aspects of the pandemic (i.e. the developments in the Chinese region of Wuhan), attention that would be naturally satisfied by national news that also cover international events, but not by regional news. Moreover, it appears that the decline in share tracks the number of currently positives more closely than the number of new positives.

As mentioned, we have a panel with the 20 Italian regions. The epidemiological developments have been very different, with a North-South gradient. As mentioned, Lombardia has been

by far the hardest hit region, but also other Northern regions like Piemonte, Veneto and Emilia-Romagna have suffered heavily. In our data, these regions, with over 4 million inhabitants each, have an average of over 100 new positives per day, while in Southern regions like Campania, Puglia and Sicilia, with over 4 million inhabitants each, the number is below 30 (see Table 2). There is some heterogeneity also regarding the share of national news. Excluding Valle d'Aosta and Trentino-Alto Adige, where there are consistent linguistic minorities and the share of national news is just above 30%, in the rest of the country the average daily share in the pre-COVID period ranges between 43% and 57%. For regional news (provided also in the languages of the linguistic minorities) the range is wider, going from 6% in Campania to 26% in Friuli-Venezia Giulia.

In what follows we analyze the relationship between news viewership and epidemiological conditions in a regression framework.

4. Results

Our general specification is the following:

$$y_{it} = \alpha_i + \sum_{j=1}^{6} \gamma_j D\_day_{j,t} + \delta_1 D\_holiday_t + \beta_1 C_{it} + \beta_2 \bar{C}_{it} + \varepsilon_{it},$$

where y_{it} is the TV share (either for national or regional news) observed in region i in day t. We also include a region fixed effect, α_i, to capture all regional characteristics (e.g. age structure, presence of linguistic minorities) that can be considered invariant in the time period we consider. The regression also includes six dummies for the day of the week, $D\_day_{j,t}$, and a national holiday dummy, $D\_holiday_t$, to capture time variation due, for instance, to availability of alternative TV programs that may be aired on specific days of the week or to different family schedules during holidays. The coefficients of interests are β_1 and β_2, capturing the relationship between TV share in the region and the COVID-19 developments (e.g. number of new positives) in day t in region i, C_{it}, and in other Italian regions, $\bar{C}_{it}$, respectively. In all regressions we use standard errors clustered at the regional level, robust to cross-sectional heteroskedasticity and within-panel serial correlation.

In Table 3, we present the effects for national news (first three columns) and regional news (last three columns). First, we assess the effect of new positives and total currently positives separately, then in columns (3) and (6) together in the same regression. In all instances, it appears that what drives up the engagement of TV viewers with news is not the local development of the pandemic, but rather the development in the rest of the country. This is true for both national and local news. Indeed, the impact of local positives has often a negative sign and is never significant, while the impact of positives in other regions is consistently positive and significant at 1% level. Looking at the specifications in columns (3) and (6), a thousand new positives in other regions imply an increase in the share of national news of 0.9 percentage points and an increase in the share of local news of 1 percentage point. Remember from Table 1 that nationwide the average number of new positives during the pandemic is 1.38 thousand, with a standard deviation of 1.72. A thousand more total currently positives in other regions implies an increase in the share of national news of 0.03 percentage points and of local news of 0.05 percentage points. Nationwide, the average number of total currently positive was 41 thousand, with a standard deviation of 38. So, the coefficient for new positives is 30 times (for national news) or 20 times (for local news) higher than the coefficient for total currently positives, but the average number of total currently positive nationwide is 30 times higher than the average number of new positives. So, the impact of the two variables capturing the epidemiological developments is, broadly speaking, of the same order of magnitude. Also, these magnitudes are in line with the descriptive statistics in Table 1 that showed between the pre- and post- COVID periods an increase of 2.6 percentage points in the share of national news and of 3 percentage points in the share of regional news. Something to keep in mind when assessing these figures is that local news has a much lower base compared to national news, averaging before COVID a 14% share vs 47% for national news.

This result is robust to a series of different specifications reported in Table 4. First, in columns 1 and 2, we exclude Lombardia, the most affected region accounting for half of overall deaths and 40% of positives. We also exclude cases happening in Lombardia in the variables “new positives in other regions” and “total currently positives in other regions” for the remaining 19 regions. Qualitatively the results remain the same, with larger coefficients for the variables capturing epidemiological developments in other regions. Results (not reported) are qualitatively similar, if we exclude Lombardia but keep cases happening in

Lombardia in the variables "new positives in other regions" and "total currently positives in other regions" for the remaining 19 regions. Thus, what we find is not due to the impact in the most affected region.

Next, in columns 3 and 4, we estimate a model in first differences, in which we regress the first difference in the share of national or regional news on a regional fixed effect (thus allowing for a region-specific trend), the day and holiday dummies and the first difference in new positives and currently positives. Notice that the change in currently positives is the sum of the inflow due to new positives and the outflows due to deaths and recoveries. Again, there is no significant impact of the local epidemiological developments, while what happens in the other regions affects how interest by TV viewers for the news develops. In this case, the coefficient for the change in the number of currently positive in other regions for national news is negative, but not significant at the 5% level. In columns 5 and 6, we smooth out both the share of TV viewers watching the news and the numbers of people affected by COVID by taking a 7-days moving average. Again, results are robust to this specification.

In the next robustness check, reported in columns 7 and 8, we delve deeper into the geographical dimension, by distinguishing between neighboring and non-neighboring regions. The idea is that people may be particularly sensitive to what is going on in the regions close by, as the virus could easily spread from there, while they may pay less attention to what is going on further away. We define two regions as neighboring if they have a common border. Some regions like Emilia-Romagna or Lazio have common borders with six other regions, while Sardinia with none. Sicily is also an island, but being only 3 km away from Calabria, we consider the two regions as neighboring. What emerges is that the share of TV viewers watching the news responds in a significant way to the epidemiological developments in non-neighboring regions rather than to the local ones, in which local means within the region or in the neighboring regions. This confirms the lack of importance of proximity for the impact of the pandemic on the interest for national and local news. Finally, in columns 9 and 10, we use as measure of the epidemiological situation the number of deaths due to COVID-19, as officially reported on a daily basis during the period under consideration. Once again, for both types of news, interest is not triggered by local events, but rather by what is happening nationally, a result that thus appears to be robust to a series of different

specifications. In the next section, we discuss possible reasons behind this result and its implications.

5. Conclusions

While it seems natural that attention towards national news is triggered by national events, our finding that this is the case also for local news is more surprising. One could argue that epidemics spread and, therefore, people could rightly consider epidemiological developments outside of their own region as highly relevant for what will eventually happen. As a response, they may follow local news more intensively to monitor whether this is indeed going on. This can explain why local news share responds to what happens nationally, but it still remains surprising that it does not respond to what happens locally.

This finding has implications, for instance, for the incentive faced by local politicians. If in absence of local spread of the virus people were not paying attention to local news, then they would not be informed of – and therefore also less likely to reward – effort exerted by local policy makers to prevent the pandemic. Moreover, the fact that people increase attention to local news in response to national developments may indicate that people are likely to take the national epidemiological developments as counterfactual. This would help avoid the possible accusation of overreaction in case of strong local policy measures successfully avoiding the pandemic. These two mechanisms suggest that local politicians would be rewarded for their effort, even if the local epidemiological situation was not threatening.

Drago, Nannicini and Sobbrio (2014) have indeed studied the impact of local news on local politics in the Italian context, showing how entry and exit of local newspapers affect the reelection probability of the incumbent mayor and the efficiency of the municipal government. We can notice how in mid-September regional election took place in some regions and the incumbent governor of Campania was reelected with 69.5% of votes (compared to 41.2% in 2015).[8] Campania was one of the regions where in the period under consideration the spread of the virus was very limited. This notwithstanding, the governor

[8] The governor of Veneto was reelected with an unprecedented 76.8% of votes (compared to 50.1% five years earlier). Veneto was, together with Lombardia, one of the places were the infection appeared first in Italy, but the subsequent developments were much better than in neighboring Lombardia and this was widely attributed to swifter and better policies by the local government. The governor of Lombardia was not up for re-election.

was very vocal and active in the media, sometimes posing as a "sheriff".[9] In Campania, the share of viewers of national and regional news increased considerably, making voters more aware of local policy interventions and, possibly, making it salient what the counterfactual was. This is an anecdote but can illustrate the possible implications of our findings about incentives faced by politicians seeking reelection.

[9] https://www.dailymail.co.uk/news/article-8143383/Italian-politicians-threaten-flamethrowers-enforce-coronavirus-lockdown.html [accessed on November 3, 2020].

Bibliography

Agcom, 2018a, "Report on the consumption of information".

Agcom, 2018b, "Local news fact-finding investigation" (in Italian).

Agcom 2019, "Communication markets monitoring system", n.1/2019.

Agcom, 2020a, "Annual report" (see, Chapter 3: Economic and competitive evolution of regulated markets; in Italian).

Agcom, 2020b, "The impact of coronavirus in regulated areas".

Ajzenmany, N., Cavalcanti, T. and Da Mata, D. (2020), "More than Words: Leaders' Speech and Risky Behavior During a Pandemic", Working Paper.

Ash, E., Galletta, S., Hangartner, D., Margalit, Y. and Pinna, M. (2020), "The Effect of Fox News on Health Behavior during COVID-19", Working Paper.

Berry, S. T. and Waldfogel, J. (2015), "Empirical modeling for economics of the media: Consumer and advertiser demand, firm supply and firm entry models for media markets". In: Anderson, S. P. Waldfogel, J. and Stromberg, D. (Eds.), Handbook of Media Economics (Vol. 1, pp. 91-120). North-Holland.

Besley, T. and Dray, S. (2020), "The Political Economy of the Great Lockdown: Does Free Media Make a Difference?", Working Paper.

Branton, R. P., and Dunaway, J. (2009), "Spatial proximity to the US—Mexico border and newspaper coverage of immigration issues", *Political Research Quarterly*, Vol. 62, No. 2, pp. 289-302.

Bursztyn, L., Rao, A., Roth, C., and Yanagizawa-Drott, D. (2020). Misinformation during a pandemic. University of Chicago, Becker Friedman Institute for Economics Working Paper, (2020-44).

Delmastro, M. and Zamariola, G. (2020), "The Psychological Effect of COVID-19 and Lockdown on the Population: Evidence from Italy", https://www.researchsquare.com/article/rs-82494/v1.

Dipartimento della Protezione Civile, COVID-19 Italia–Monitoraggio situazione. https://github.com/pcm-dpc/COVID-19.

Drago, F., Nannicini, T. and Sobbrio, F. (2014), "Meet the Press: How Voters and Politicians Respond to Newspaper Entry and Exit", *American Economic Journal: Applied Economics*, Vol. 6 No. 3, pp. 159-188.

Gollust, S.E., and Fowler, E.F., Niederdeppe, J. (2019), " Television News Coverage of Public Health Issues and Implications for Public Health Policy and Practice", *Annual Review of Public Health*, Vol. 40, pp.167-185.

Gollust, S.E., Nagler, R.H. and Fowler, E.F. (2020), "The Emergence of COVID-19 in the U.S.: A Public Health and Political Communication Crisis", *Journal of Health Politics, Policy and Law*, 8641506, doi: https://doi.org/10.1215/03616878-8641506.

ISTAT (2020), "Primi Risultati dell'Indagine di Sieroprevalenza sul SARS-COV2", full text.

Kim, E., Shepherd, M. E., and Clinton, J. D. (2020), "The effect of big-city news on rural America during the COVID-19 pandemic", *Proceedings of the National Academy of Sciences*, Vol. 117, No. 36, pp. 22009-22014.

Martin, G.J. and McCrain, J. (2019), "Local News and National Politics", *American Political Science Review*, Vol. 113, No. 2, pp. 372-384.

Napoli, P. (2003). *Audience Economics*. Columbia University Press: New York.

Pew Research Center (2018) "Americans Still Prefer Watching to Reading the News – And Mostly Still Through Television" https://www.journalism.org/2018/12/03/americans-still-prefer-watching-to-reading-the-news-and-mostly-still-through-television/

Simonov, A., Sacher, S.K., Dubé, J.H. and Biswas, S. (2020), "The Persuasive Effect of Fox News: Non-Compliance with Social Distancing During the Covid-19 Pandemic", NBER Working Paper No. 27237.

Turcotte, J., Kirzinger, A., Dunaway, J., and Goidel, K. (2017), "The many layers of local: proximity and market influence on news coverage of the Deepwater Horizon oil spill", *Social Science Quarterly*, Vol. 98, No.3, pp. 993-1009.

Van Bavel, J.J. et al. (2020), "Using Social and Behavioural Science to Support COVID-19 Pandemic Response", *Nature Human Behaviour*, Vol. 4, pp. 460-471.

Watanabe, T. and Yabu, T. (2020), "Japan's Voluntary Lockdown", Working Papers on Central Bank Communication 027, University of Tokyo, Graduate School of Economics.

World Health Organization. Coronavirus Disease (COVID-2019) Situation Reports. Available online: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf?sfvrsn=195f4010_6.

Table 1: Summary Statistics, national data

Daily data on prime-time TV news and COVID-19 cases, *before* COVID-19 vs. *from* COVID-19

Variable	Overall sample		Pre-COVID	Post-COVID	Difference	t-test
	Obs	Mean (SD)	Mean (SD)	Mean (SD)	Diff. (SD)	t (prob.)
Share of National News *	572	47.73	46.92	49.53	2.60	12.09
		(2.67)	(2.01)	(3.05)	(0.21)	(0.0000)
Share of Regional News **	573	13.21	12.26	15.31	3.04	24.61
		(1.96)	(0.82)	(2.13)	(0.12)	(0.0000)
Viewers of National News (1,000)	572	10,492	9,856	11,898	2,041	10.98
		(2,263)	(1,602)	(2,817)	(185.8)	(0.0000)
Viewers of Regional News (1,000)	573	2,619	2,315	3,293	977	16.72
		(789)	(399.5)	(998.5)	(58.45)	(0.0000)
New positives (1,000)	573			1.38		
				(1.72)		
Total currently positive (1,000)	573			41.28		
				(37.63)		
New deaths	572			197.23		
				(247.8)		

Notes: For National News, there is one observation less since the audience for May 27, 2019 is missing for one channel (TG7). The table reports the number of observations, the mean and standard deviation (in brackets) for the overall sample; the mean and standard deviation (in brackets) for the sample before and from January 31, 2020; the difference in means and standard deviation (in brackets) between the two subsamples pre-post COVID; the t-test for difference in means and the probability that Pr(|T| > |t|) under the null assumption that the difference in means is different from zero.

* National News is the sum of the three main National News of 8:00-8:30 PM (TG1+TG5+TG7)

** Regional News is the share of the Regional News of 7:30-8:00 PM (TG3 Regional)

Table 2: Summary Statistics, regional data

Daily data on prime-time TV news and COVID-19 cases, averages *before* COVID-19 vs. *from* COVID-19

	Share of National News *		Share of Regional News **		New positives	Total currently positive (1,000)	New deaths	Population (millions)
Region	**Pre-covid**	**Post-covid**	**Pre-covid**	**Post-covid**	**Post-covid**	**Post-covid**	**Post-covid**	**1 Jan 2020**
Valle d'Aosta	31.0	38.6	25.2	37.9	7	0.1	0.8	0.1
Piemonte	44.3	47.4	14.6	19.6	178	5.2	23.2	4.3
Liguria	45.9	49.4	16.6	23.1	57	1.2	8.8	1.5
Lombardia	45.0	45.6	12.2	15.5	539	16.3	94.4	10.1
Trentino-Alto Adige	33.3	33.6	19.7	21.9	41	0.9	3.9	1.1
Veneto	47.0	49.2	15.1	16.8	111	3.2	11.6	4.9
Friuli-Venezia Giulia	44.9	46.7	25.6	31.8	19	0.4	1.9	1.2
Emilia-Romagna	43.1	42.8	11.5	13.7	166	4.4	24.1	4.5
Toscana	52.1	54.5	15.1	19.1	59	1.9	6.4	3.7
Marche	49.8	52.2	17.3	19.5	38	1.4	5.5	1.5
Umbria	54.0	57.7	13.9	18.5	8	0.2	0.4	0.9
Lazio	49.1	54.3	12.5	15.4	48	1.9	4.8	5.9
Abruzzo	44.1	47.4	9.5	12.1	19	0.7	2.6	1.3
Molise	56.6	52.7	18.5	25.9	3	0.1	0.1	0.3
Campania	47.6	51.8	5.8	9.7	28	1.0	2.4	5.8
Basilicata	51.7	54.8	14.0	16.9	3	0.1	0.2	0.6
Puglia	49.0	52.7	6.7	8.7	26	1.0	3.1	4.0
Calabria	52.3	56.4	10.0	13.3	7	0.3	0.5	1.9
Sicilia	49.1	51.4	7.1	7.7	20	0.8	1.6	5.0
Sardegna	48.5	48.4	13.3	15.6	8	0.3	0.8	1.6
Average	46.9	49.4	14.2	18.1	69	2.1	9.9	3.0

Notes: The table reports the mean for the sample before and after January 31, 2020. The average gives equal weight to all regions.

* National News is the sum of the three main National News of 8:00-8:30 PM (TG1+TG5+TG7)
** Regional News is the share of the Regional News of 7:30-8:00 PM (TG3 Regional)

Table 3: Determinants of the share of TV News at prime-time

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	National News			Regional News		
New positives in the region (1,000)	-0.421		0.847	-0.924		-1.006
	(0.908)		(0.670)	(1.506)		(0.768)
New positives in other regions (1,000)	1.308**		0.856**	1.850**		0.979**
	(0.177)		(0.102)	(0.265)		(0.190)
Total currently positive in the region (1,000)		-0.0579	-0.0832		-0.0297	-0.00123
		(0.0425)	(0.0432)		(0.0715)	(0.0632)
Total currently positive in other regions (1,000)		0.0514**	0.0258*		0.0779**	0.0488**
		(0.00954)	(0.00974)		(0.0119)	(0.0103)
Baseline (average share pre-COVID)		46.9			14.2	
Observations	11,440	11,440	11,400	11,460	11,460	11,460
R2 within	0.10	0.09	0.11	0.19	0.20	0.23
R2 between	0.03	0.02	0.02	0.01	0.02	0.02
R2 overall	0.04	0.04	0.05	0.08	0.08	0.09

Notes: For National News, there are twenty observations less since the audience for May 27, 2019 is missing for one channel (TG7). Results come from panel regressions with region fixed effects which also include DVs for day of week and national holiday. Robust standard errors clustered at the regional level in parentheses.

** p<0.01, * p<0.05

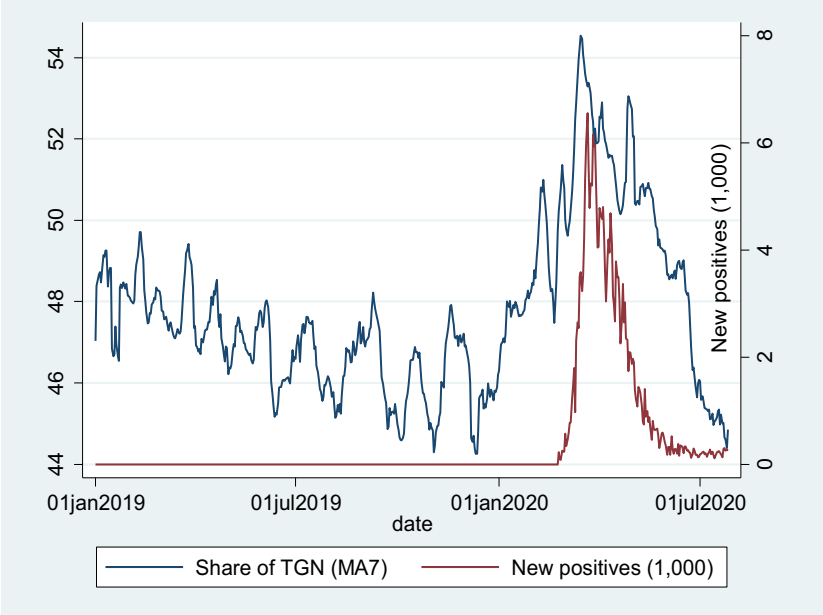
Table 4: Robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Excluding Lombardia		**First Differences**		**Moving Average 7**		**Geographical Distance**		**Deaths**	
Share of ⇒	**National news**	**Regional news**	**National news**	**Regional news**	**National news**	**Regional news**	**National news**	**Regional news**	**National news**	**Regional news**
New positives in the region	0.360	-1.969	0.459	-0.238	0.911	-1.235	1.628	0.553		
	(1.173)	(2.182)	(0.445)	(0.567)	(0.754)	(0.940)	(1.014)	(0.892)		
New positives in other (neighboring, for col. 7-8) regions	1.155**	1.501**	0.943**	0.324**	0.882**	1.042**	0.561	0.291		
	(0.174)	(0.331)	(0.178)	(0.106)	(0.106)	(0.200)	(0.364)	(0.309)		
New positives in non-neighboring regions							0.892**	1.083**		
							(0.126)	(0.227)		
Total currently positives in the region	-0.0913	-0.133	0.0901	-0.172	-0.0844	0.00553	-0.0305	-0.00916		
	(0.176)	(0.251)	(0.138)	(0.110)	(0.0437)	(0.0611)	(0.0601)	(0.0948)		
Total currently positives in other (neighboring, for col. 7-8) regions	0.0462*	0.0809**	-0.0396	0.0602**	0.0248*	0.0470**	0.00431	0.0549		
	(0.0197)	(0.0212)	(0.0195)	(0.0242)	(0.00972)	(0.0102)	(0.0211)	(0.0330)		
Total currently positives in non-neighboring regions							0.0287*	0.0474**		
							(0.0111)	(0.0114)		
New deaths in the region									0.0346	0.927
									(3.31)	(4.85)
New deaths in other regions									0.00861**	0.0127**
									(0.00115)	(0.00171)
N	10,868	10,887	11,400	11,440	11,460	11,460	11,440	11,460	11,440	11,460
R2 within	0.10	0.21	0.03	0.01	0.22	0.39	0.09	0.19	0.09	0.19
Dependent variable:	Share		First Difference Share		Share MA7		Share		Share	
Explanatory variables in:	Levels (1,000)		First difference (1,000)		MA7 (1,000)		Levels (1,000)		Levels	

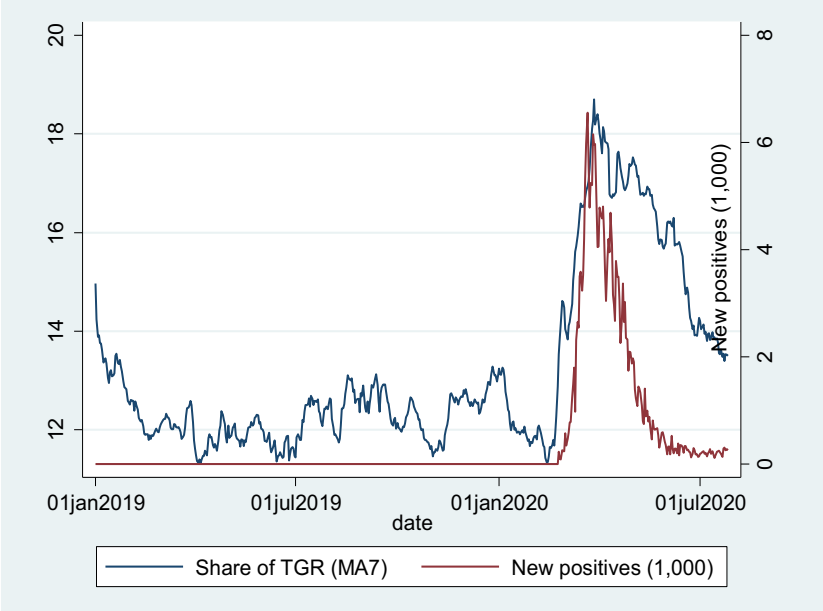
Notes: For National News, the share for May 27, 2019 is missing for one channel (TG7). This reduces the number of observations by 19 (col. 1), by 40 (col. 3), by 20 (col. 7 and 9). Results come from panel regressions with region fixed effects which also include DVs for day of week and national holiday. Robust standard errors clustered at the regional level in parentheses. ** p<0.01, * p<0.05

Figure 1: Share of National and Regional News and COVID-19 Developments

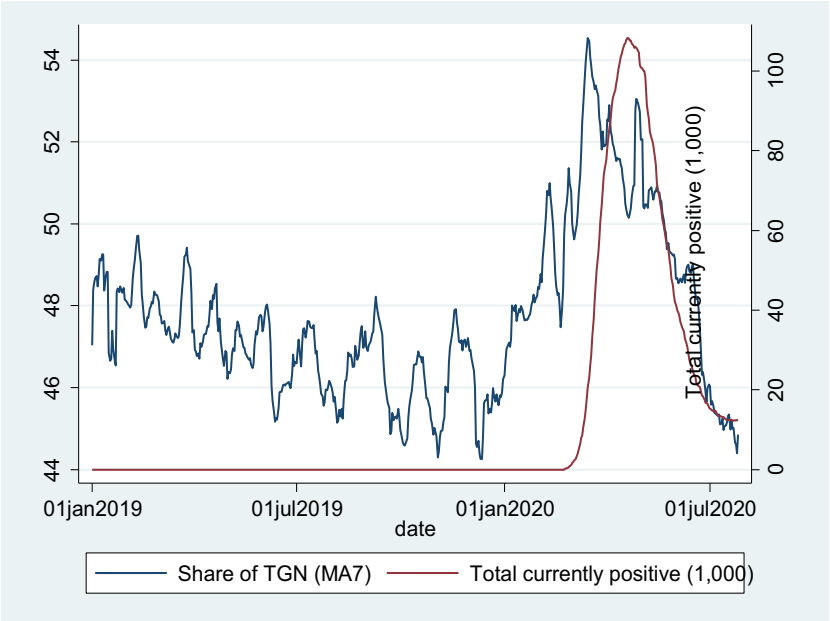
Panel A: New COVID-19 positives (1,000) and 7-day moving average of the share of National News



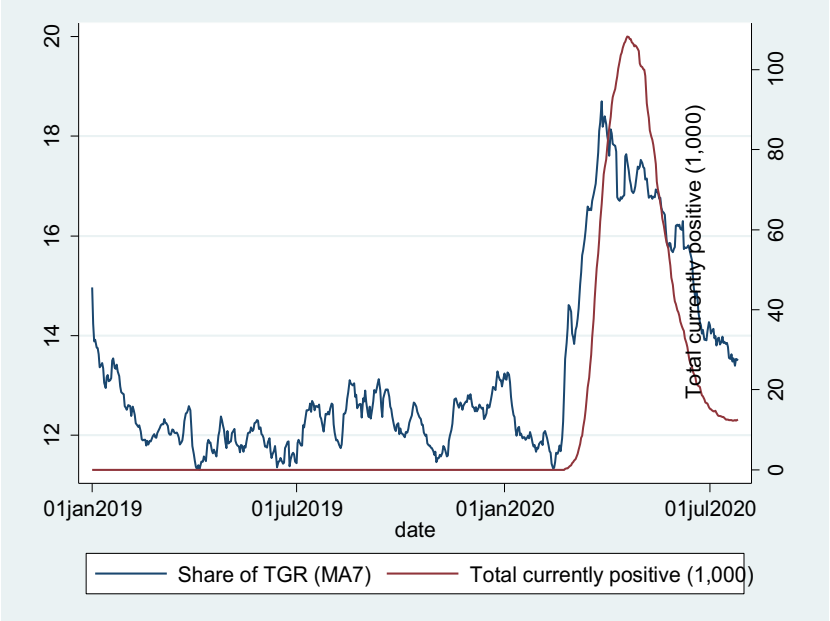
Panel B: New COVID-19 positives (1,000) and 7-day moving average of the share of Regional News



Panel C: Currently COVID-19 positives (1,000) and 7-day moving average of the share of National News



Panel D: Currently COVID-19 positives (1,000) and 7-day moving average of the share of Regional News



Appendix - Detailed chronology of COVID-19 events and policy responses in Italy

The Government of Italy declared a six-month long state of emergency to respond to the COVID-19 outbreak on January 31, 2020, after blocking air traffic from China the day before. Cases of contagion in the northern regions of the country rose more rapidly than in the rest of the country, which led to a series of national and local government measures being implemented concurrently. In the most affected region, Lombardia, the government suspended most public activities, including economic and educational ones, in ten villages in Lombardia, with similar measures being adopted in one village in Veneto region the following day. On February 23, further tightening of restrictions in these villages were applied, including a prohibition to access or leave the area or hold any type of meeting for the following fourteen days.

On the same day, several regions in the North of Italy suspended upcoming public events, and closed schools and museums, until Sunday, March 1 for Lombardia, Veneto, Friuli-Venezia Giulia, and Emilia Romagna, and February 29 for Piemonte, with the provision that the deadline might change as the "epidemiological scenarios" developed.

On February 24, other northern regions adopted similar isolation measures, such as Liguria and the Province of Trento, followed by the central region of Marche (announcing a preliminary deadline for March 4). On March 1, the Government issued a decree suspending public events and closing schools until March 8 in Lombardia, Veneto and Emilia Romagna and in some provinces of Marche and Liguria. On March 4, the closure of schools was extended to the whole country until March 15.

On March 8, the government implemented a total lockdown and banned individual movements with an exception for work or health reasons or for necessity (e.g. purchasing of food and medicines) in the whole of Lombardia and in selected provinces in Emilia Romagna, Veneto, Marche and Piemonte, for a total of 14 provinces in the North of the country. The following day the government extended these measures to the whole country. These restrictions were announced to remain in place until April 3. On March 11th, the government also ordered the closure of most retail shops until March 25, with the exception of grocery shops and pharmacies. This included restaurants, bars, and most personal services (e.g. hairdressers).

On March 22, the government announced that the originally scheduled end date for the closure of commercial activities (March 11) was extended to April 3, and further suspended commercial and industrial activities, and prohibited individual movements outside the town of domicile, with an exception of work or health reasons or for absolute necessity.

On April 1, the government extended a total lockdown to the whole country until 13 April, and on April 10 it was prolonged until May 3.

On April 26, the government announced a starter plan for the so-called "phase 2", that would start from 4 May. Due to the "Phase 2", movements across regions would still be forbidden, while the ones between municipalities would be allowed only for work and health reasons, as well as for visits to relatives. Re-opening of manufacturing industries and construction sites are allowed too.

On May 13, the government announced schools would remain closed until September.

On May 16, the Prime Minister announced the Government plan for the easing of restrictions. Due to the plan, most businesses could reopen, and free movement was granted to all citizens within their Region; inter-regional travel was not permitted, unless it is for absolute necessity.
Swimming pools, gyms and then theatres and cinemas could also reopen.

On June 3, the government allowed unrestricted travel to and from EU countries and between Italy's regions. The inter-regional and foreign travel ban remained in place until after Italy's June 2 Republic Day holiday, avoiding any mass travel over that long-holiday weekend.

Table A1. Timeline of COVID-19 epidemic and policy responses in Italy

Date	*Event*
30-Jan-20	Italy closes flights from China
31-Jan-20	First two cases of COVID-19 diagnosed in Rome
31-Jan-20	Government declares state of emergency
21-Feb-20	First cases of community transmission reported in Lombardia and Veneto; first COVID-19 death (in Vo', Veneto)
21-Feb-20	Most public activities suspended in outbreak areas in Lombardia and (the following day) in Veneto
23-Feb-20	Complete lockdown of outbreak areas in Lombardia and Veneto
24-Feb-20	Schools closed in Lombardia, Veneto, Friuli-Venezia Giulia, Emilia Romagna and (on the following days) Liguria and Marche
4-Mar-20	Schools closure extended to the whole country, announced until March 15
8-Mar-20	Lockdown ("stay at home" measures) declared for Lombardia and 14 Provinces in Veneto, Emilia Romagna, Piemonte and Marche
9-Mar-20	Lockdown ("stay at home" measures) extended to the whole country until April 3rd ; schools closure extended to the whole country, announced until April 3rd
11-Mar-20	Government ordered closure of most retail stores (exceptions included groceries and pharmacies), restaurants and bars, as well as most personal services until March 25th
19-Mar-20	Italy surpasses China as the country with the most reported COVID-19 deaths
22-Mar-20	Government suspended all non-essential economic activities until April 3rd. It also prohibited individual movements outside people's town of domicile (with the exception of work- and health-related reasons or in case of absolute urgency). All these measures are put in place until April 3
1-Apr-20	Lockdown extended to the whole country until April 13
10-Apr-20	Lockdown extended to the whole country until May 3
26-Apr-20	Government announced a starter plan for the so-called "phase 2", that would start from May 4

4- May-20	“Phase 2” started: movements across regions would still be forbidden, while the ones between municipalities would be allowed only for work and health reasons, as well as for visits to relatives. Re-opening of manufacturing industries and construction sites
13-May-20	Government announced schools would remain closed until September
16-May-20	The Prime Minister announced the Government plan for the easing of restrictions. Due to the plan, most businesses could reopen, and free movement was granted to all citizens within their Region; movement across Regions was still banned for non-essential motives.
3-Jun-20	Government allows travels to and from Italy and between the country's regions