WORKING PAPER SERIES

WORKING PAPER
N. 162
MAY 2021

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BAFFI CAREFIN
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# The Effectiveness of Leaders' Public Communication during COVID-19*

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May 11, 2021

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# The Effectiveness of Leaders' Public Communication during COVID-19


## Abstract

During health emergencies and economic crises, country leaders make extensive use of direct communication to inform citizens and encourage compliance. We use real-time survey data to assess the effectiveness of an unexpected broadcast speech on economic aid measures delivered by the Prime Minister in Italy – a country shocked early and hard by the COVID-19 pandemic. We adopt a quasi-natural experimental design by comparing the responses of individuals who answered the survey before and after the live speech. The leader's communication was effective in improving respondents' opin-ions on the handling of the economic crisis and in reducing feelings of anger, whereas ithad no impact on government trust or satisfaction. The effect was particularly strong among men, but not among the likely beneficiaries of the economic aids. These findingssuggest that mortality cues and war narrative were more effective than the provision of detailed information about the economic aids recipients.



Keywords: Public communication, COVID-19, crisis management, citizens perceptions, exogenous shock

## Introduction

COVID-19 created an unprecedented level of health and economic risk, unknown since World War II. This unexpected pandemic constituted an enormous challenge to the world leaders, who had to take actions to restrict the spread of the Coronavirus, while at the same time trying to minimize the economic impact of the lockdown measures and to keep public order. In fact, the early restraining measures adopted in many countries to contain the diffusion of COVID-19 imposed large economic costs and induced psychological strain on the population (Baldwin and Weder di Mauro, 2020; Brooks et al., 2020). Anger, fear, depression and a sense of isolation have been common feelings during the lockdown period (Kimhi et al., 2020; Tull et al., 2020). Indeed, the expected economic effects of the pandemic and the associated restrictive measures are so large that this period has already been named "the Great Lockdown", in line with the "Great Depression" of the 1930s. OECD (2020) estimates a reduction of 4.5 percent in the world GDP for 2020, with many European countries facing a drop of more than 10 percent.

All over the world, country leaders have extensively used direct public communication to address the nation in the most dramatic hours of the pandemic, albeit with different leadership styles and blame management strategies (Masters and 'T Hart, 2012; Hatcher, 2020; Boin et al., 2010; Davis and Gardner, 2012). In France, President Emmanuel Macron delivered a mobilizing speech to the nation on March 16th, invoking a war against COVID-19. In her March 22nd speech, Germany's Chancellor Angela Merkel adopted a calm and disciplined approach based on scientific evidence. Former US President Donald Trump, instead, strongly downplayed the issue and blamed the World Health Organization for incompetence. In most countries, medical authorities have issued daily reports on the evolution of the pandemic. These public communications aimed at encouraging the population to comply with the health rules and to obey the restrictive orders. In fact, in the case of highly transmissible infectious diseases, individual behavior and adherence to the rule directly determine the

collective outcome and thus the spread of the contagion (Sobol et al., 2020; Blair et al., 2017; Briscese et al., 2020). During the Covid-19 pandemic, trust in governmental institutions has been crucial to foster compliance with personal protective actions and support for key public policies (Robinson et al., 2020). Public announcements to the citizens about the availability of instruments of economic relief were also made to reduce the sense of fear, anger, and frustration, to reduce the chances of street protests or turmoils, and of course to score political points.

This communication effort typically follows large shocks, such as pandemics, terrorist attacks and large natural disasters—e.g. earthquakes or extensive floods. Country leaders need to address the nation to inform about the situation and to present the policy measures taken in response to the crisis. A peculiarity of COVID-19 is the long time horizon of the pandemic. Unlike sudden, but short-term and geographically limited natural disasters, such as earthquakes, the COVID-19 pandemic raises enormous health and economic concerns due to its time and geographical extension. This may resemble war-time situations. Indeed, several world leaders have made use of war-related terminology in their public speeches concerning the policy measures to fight the Coronavirus pandemic (Benziman, 2020).

In this article, we assess the effectiveness of early public communication about policy measures in reducing concern, fear and anger among the population and in increasing political satisfaction with the government. We study the case of Italy, which was shocked hard and early by the COVID-19 pandemic, second only to China in its initial magnitude. Italy entered into a nation-wide lockdown on March 9th. Containment measures were further tightened on March 22nd, when all unessential productive activities were stopped, de facto bringing to a halt a large portion of the Italian economy. The Italian Prime Minister, Giuseppe Conte, made several public appearances on TV and social media to explain the evolution of the pandemic in Italy. On March 16th, he announced an urgent decree on economic matters. On March 28th, he detailed the economic policies about to be implemented in a joint TV appearance with the Finance Minister and the President of the Association of the Italian

Municipalities.

To evaluate the effectiveness of this public communication on the economic measure, we run a real-time survey on March 27-30 on a representative sample of 1000 Italian citizens.The survey collected individuals' opinions on the effectiveness of the government actions to face the health and the economic crisis, their self-assessed level of fear and anger and their degree of trust and satisfaction with the government. To identify the causal effect of thePrime Minister's speech on individuals' perceptions, we exploit the fact that his unexpected announcement of economic policy came on March 28th, while our survey was still underway. We can thus use a quasi-experimental design and compare the answers of individuals whotook the survey after the speech with those of individuals who responded before.

Our findings suggest that the Italian Prime Minister's TV appearance was effective in improving individuals' opinions on how the government was handling the economic crisis and in reducing anger towards the government, but had no impact on the overall trust or satisfaction for the government. This positive effect was not stronger among the likely beneficiaries of economic aids. The improvement in individuals' opinions was overwhelmingly concentrated among men. This finding is consistent with the Italian Prime Minister using war narrative and mortality salience rhetoric in his speech.

## Public communication during health and economic crises

Public communication during crises has rapidly increased after 9/11, due to the occurrence of conflicts, terrorist attacks, large-scale natural disasters, and the global financial crisis. These large shocks sparked research on the daunting challenges of crisis management and the different communication styles of global leaders. In crises featuring initial surprise, high levels of threat, emotional concern in the population, and media looking for breaking news, risk communication becomes crucial (Rosenthal and Kouzmin, 1997; Glik, 2007; 't Hart, 2013; Boin et al., 2010; Boin and Hart, 2003). In the content of their speeches, public leaders are expected to engage in a crisis *sense-making* effort, to objectively detail the severity, address

possible causes, and propose policy responses (Masters and 'T Hart, 2012; Boin et al., 2009; Combe and Carrington, 2015).

The effectiveness of a speech depends on several characteristics, including being timely, detailing the policy response clearly and convincingly, and explaining the chain of causality and responsibilities (Lundgren and McMakin, 2018; Reynolds and Quinn, 2008; Masters and 'T Hart, 2012). The main goals of the communication effort are to reduce possible negative feelings regarding how leaders are handling the crisis (van der Meer and Verhoeven, 2014; Jin, 2014), to increase the citizens' morale, to promote compliance with the rules and policy measures (Connolly et al., 2020; Glik, 2007) and to gain- or regain- political support, in a *crisis exploitation* perspective (Boin et al., 2009).

To implement a successful strategy, public leaders have several tools to use during their speeches. Largely exploited are communication instruments facilitating 'blame avoidance' and 'blame-shifting' strategies (Boin et al., 2010; Bligh and Hess, 2007). In fact, public leaders may try to avoid responsibility for a crisis by arguing that this was due to exogenousfactors, outside the control of the government (Masters and 'T Hart, 2012; Traber et al., 2020). These have been termed *"institutionally and politically 'blameless' crises, where the dominant interpretation of what happened centers around exogenous, uncontrollable, unfore- seeable forces"* ('t Hart, 2013). Yet, public authorities remain accountable for promoting viable solutions, even when the shock has a clearly exogenous origin. Thus, they mighttry to find 'lightning roads' and 'scapegoats' to be held publicly responsible for crisis re- sponse. Scientific and medical advisors, or other technical specialists, often serve this role (Baekkeskov and Rubin, 2017; 't Hart, 2013; Boin and Hart, 2003).

Insert Figure 1 around here

We apply the normative framework deriving from the existing literature (summarized in Figure 1) to the setting of a public health and economic crisis. Political communication

and the use of specific rhetoric tools have already been proven important during financial crises and economic recessions (Bligh and Hess, 2007). We test the effectiveness of leaders' communication strategies and rhetoric during the economic crisis caused by the first wave of COVID-19 in Italy. Our first hypothesis is the following:

*H1* : Public Communication by the country leader reduces public concerns on how the government managed the economic crisis that followed the pandemic shock. It also reduces feelings of fear and anger and increases government trust and satisfaction.

Several empirical studies have assessed the effectiveness of the leaders' speeches on mass media resonance, public consensus and exit polls or public compliance with rules and policy directives. Bligh et al. (2004) examine the impact of the 9/11 crisis on the media's por- trayal of President Bush's rhetoric and on his public approval. They find an increase in charismatic content in the media that positively influenced public opinions on the Presi- dent's leadership and crisis management. Connolly et al. (2020), instead, use a randomized survey experiment to test citizens' compliance with the government's directives concerning hurricane evacuation. They find that the provision of additional policy information has no significant impact on the intention to comply, whereas unclear and uncertain informationdecreases the likelihood to comply.

In this article, we test the direct effect of public communication on the citizens' satis- faction with the economic policy measures adopted by the government and on their level of trust and satisfaction with the government. Citizens perceptions after a pandemic, which constitutes an exogenous shock requiring effective crisis management by the government, are under-investigated in the literature. We measure these individual perceptions using a novel real-time survey.

Unlike most of the existing contributions, our empirical methodology proposes a quasi-experimental design that enables us to measure the causal impact of leaders' public com-

munication on our variables of interest. Additionally, our survey data allow us to assess individuals' emotional reactions following a public speech. This constitutes an important aspect of leaders' crisis management, as citizens' personal feelings, especially negative ones, such as anger and fear, are closely related to the degree of blame attribution on the govern- ment (Madera and Smith, 2009; Jin, 2014).

The existing literature suggests that leaders' adherence to the standards of crisis communication affects citizens' support for health and economic measures and their level of government's trust and satisfaction. However, we do not expect the persuasiveness and effectiveness of political communication to be necessarily the same among all recipients. In fact, individuals are known to process and evaluate the same piece of information differently (Magee and Kalyanaraman, 2009). When engaging in crisis sensemaking and cognition, po- litical leaders typically adopt very different messages and strategies to target different groupsof citizens (Lamont et al., 2017; Smith, 1971; Mumford et al., 2007).

For instance, mental noise theories predict that an increase in risk perceptions can create resistance to recommended actions for certain subjects when emotional involvement causes difficulties in information processing (Baron et al., 2000). Those who are personally involved and affected tend to be more distrustful towards the authority, thus less likely to acceptand follow communications and recommendations[1] (Glik, 2007). The literature on economic egotropic voting also suggests a heterogeneous impact of the Italian PM's speech, according to socio-demographic categories (Naumann et al., 2016; Freire and Lobo, 2005; Freireand Santana-Pereira, 2012). In public communication involving economic issues, individuals negatively impacted by the economic consequences of the health emergency should show stronger reactions. Accordingly, we formulate our second hypothesis:

[1]Remarkable demographic differences emerged, for instance, in citizens' response to messages concerning the correct hygienic behavior to avoid the spread of COVID-19 (Everett et al., 2020)

*H2* : The positive effects of public communication are stronger for the beneficiaries of eco- nomic aid measures.

This article also complements the literature that studies the use of language and metaphors by public leaders in the communication of health emergencies and related crises. Militaristic metaphors are a very common rhetorical instrument for political leaders and have been used in a wide range of issues, from foreign policy (Campbell, 2015) to the fight against terrorism, poverty (Hartmann-Mahmud, 2002) or health emergencies, such as AIDS, SARS and the current COVID-19 pandemic (Nie et al., 2016).

Yet, the persuasive effectiveness of these metaphors has been largely discussed. In some instances, they have been recognized to mobilize the population and increase political participation and turnout rates, as well as confidence with and trust in government (Valentino et al., 2001). At the same time, they have also been largely criticized for promoting shame and guilt on the sufferers and for making it easier for governments to restrict people's freedom (Sontag, 1978; Ross, 1988). War metaphors also appeared in many leaders' speeches during the first wave of COVID-19. The situation was framed as a war against the pandemic, leaders argued to have a plan and asked the public for patriotism and support of the heroes, such as the medical teams (Benziman, 2020).

The use of war leadership metaphors in crisis speech might cause another source of heterogeneity in the impact, as they have a clear male-oriented connotation and appeal.[2] Indeed, they are strongly gendered and tend to reflect male experience more than female. This is shown also in the political communication literature studying the differences in campaigning styles between male and female leaders (Maier and Renner, 2018; Gidengil and Everitt, 2003). We thus expect the salience and persuasiveness of militaristic metaphors and rhetoric

[2]For instance, Koller (2004) argues that " *war can be considered a ' quintessentially masculine activity and an essential test of manhood' (Wilson, 1992, p.892) [...], the metaphor's effect on dominant masculinity is to further activate masculine patterns of behavior."*

to be stronger among men.[3]

Another tool commonly used in communications concerning emergencies and pandemic events is *mortality framing*. This language is not gender-neutral either. Subtle reminders of mortality statistics in political communication have been shown to increase the audience's preference for a charismatic candidate (Cohen et al., 2004), and to impact how people, especially men, process persuasive messages (Burke et al., 2013; Magee and Kalyanaraman,2009). This leads to the formulation of our third and last hypothesis:

*H3* : Public communication using war narrative is more effective among men.

## Empirical setting

To test these hypotheses, we consider the public speech detailing the economic aid plan delivered by the Italian Prime Minister, Giuseppe Conte, on March 28th, during the initial phase of the lockdown in Italy.[4] The first official contagion of COVID-19 in Italy was reported on February 21st, but in just a week the confirmed cases escalated to more than 1000. The first localized lockdown, with people allowed to leave their homes only to buy food and medicines, was implemented on February 23rd and affected around 50,000 residents of several small municipalities in Northern Italy. On March 5th, all Italian schools were closed. Three days later, the lockdown was extended to almost all Northern Italy, and, on March 11th, to the whole country. All commercial and retail businesses, except those providing essential services, were forced to close. Italian citizens could leave their homes only for urgent necessity reasons and carrying a self-declaration document. On March 21st the lockdown

[3]Gender differences in the use of war metaphors also emerge in the general public. In the UK, male Twitter users are more likely to frame COVID-19 in war-related terminology, whereas women to mention their anxiety about the health effects (Thelwall and Thelwall, 2020).

[4]The full English translation of the speech can be made available upon request.

was hardened, leading to an almost complete shutdown of the Italian production system,which lasted until May 4th.

During this difficult period, the Prime Minister addressed the nation on several occa- sions to announce the restrictive measures. On March 16th, he announced an economic plan worth 25 billion Euros. On the 28th, he detailed the economic aid measures decided by the government. Figure 2 shows a timeline of the events and Prime Minister's announcements.

Insert Figure 2 around here

The live broadcast on March 28th of the Prime Minister's speech was largely unexpected. Mr. Conte began his speech by providing the number of people thus far infected by the virus in Italy and the number of victims. These opening remarks represent a clear example of *mortality salience* in communication, with death-related information and cues used to maximize persuasiveness.

Mr. Conte reassured the audience that the government was carefully monitoring the trends of the contagion and following the recommendations of the technical and scientific committee[5]. He then turned to the core content of the speech, which was the descriptionof the economic measures taken by the government to counteract the negative effects of the crisis. Mr. Conte announced a Prime Minister Decree, which transferred a solidarity fund worth 4.4 billion Euros, plus an additional 400 million, to the Italian municipalities for themto issue shopping vouchers to citizens and families. He also guaranteed the effort of thepublic administration to speed up the payment of all welfare provisions. Importantly for testing Hypothesis 2, Mr. Conte cited the specific categories of workers who were eligible fora monthly bonus of 600 Euros.

[5]These have often been associated to lightning rods and scapegoat strategies for blame avoidance by public leaders during crises. See Baekkeskov and Rubin (2017) and Hood (2010)

In his speech, Mr. Conte used the semantic sphere of conflict and war. City mayors, who were crucial in the allocation of the new funds, were described as the first *watchmen* of the organizational machine of the State, the outposts of the territory as well as the first *antennas* directly exposed during the emergency phase. This speech represented an impor-tant element in the government strategy of consolidating trust and confidence – particularly among individuals likely to benefit from the announced economic measures.

## Data and methods

To evaluate the public response to the Prime Minister's communication, we use survey data collected from March 27 to March 30 as part of a cross-national and comparative project on COVID-19.

The large set of questions asked in the survey allows us to tease out several aspects of the individuals' perceptions and attitudes towards the government and the Prime Minister. Answers vary on a 1 to 5 scale from "very insufficient" to "too extreme". We construct a dummy variable taking value 1 if the individuals responded "insufficient" or "very insuffi-cient" (which occurred 35 percent of the time for the health measures and 55 percent for the economic measures) and 0 otherwise. We use two questions on the individuals' trust in the government and Prime Minister and one on government satisfaction, with answers being "Yes" or "No". Finally, we use questions on individuals' self-declared level of fear and anger regarding the overall pandemic situation and specifically towards how the government is handling it, on a 0-10 scale from "none" to "very high".

To identify the causal effect of Mr. Conte speech on these outcomes of interest, we exploit the fact that his TV appearance occurred during our survey, which ran from March 27 to March 30. Mr. Conte's speech took place on March 28th, 2020, and lasted 35 minutes from 7.35 p.m. to 8.10 p.m. Hence, some individuals–more precisely, 739– happened to respond to our survey before the speech, whereas others–exactly 247– after, and a few other– namely, 14– during the speech. The first group could not have been influenced by the speech

and can thus be taken as control group, while the second might have watched it and be affected. Hence, it represents our (treatment) group of interest. We drop from the sample the fourteen observations related to the individuals who responded during the speech. The Prime Minister TV appearance was unplanned and largely unexpected, as the announcement of the TV event came only approximately 45 minutes before the speech. Thus, the allocation of the respondents into the two groups (treatment and control) can be considered as good as random.

Table 1 confirms that the two groups of respondents, answering before and after thespeech, are balanced in terms of the main socio-demographic characteristics[6]. Table 2 pro- vides a correlation matrix.

Insert Table 1 and Table 2 around here

Moreover, Figure 3 shows that the frequency of the responses does not vary abruptly around the time of Mr Conte's speech (highlighted as red bars in Figure 3). Had some respondents waited till the end of the broadcast to fill the questionnaire, we would have observed an abnormal distribution of respondents right after 8.10 p.m. Hence, the smoothness of thedensity function in Figure 3 is reassuring about the fact that individuals did not select into answering before or after the speech.

Insert Figure 3 around here

To measure the causal effect of the Prime Minister's speech on the outcome variables of interest, i.e., our first hypothesis, we use the following models:

[6]Statistical t-tests are unable to reject the null hypothesis that the difference in the means of all the variables (but the dummies of being unemployed and a part-time worker) are equal between the treatment and the control group. In one specification of our regression model, we control for all these covariates.

$$Y_i = \alpha_0 + \alpha_1 \text{Treated}_i + \alpha_2 X_i + e_i \quad (1)$$

$$E(Y|X) = \Phi(\alpha_0 + \alpha_1 \text{Treated}_i + \alpha_2 X_i) \quad (2)$$

where the linear regression in Eq (1) is used when the outcome variable $Y_i$ is continuous (feeling of fear and anger regarding the pandemic situation and how the government is handling it) and the probit regression in Eq (2) is used when the outcome variable $Y_i$ is a dummy (government economic and health measures are inadequate, trust in the Prime Minister and government, government satisfaction).

Treated is a dummy variable taking value 1 for individuals responding to the survey after Mr Conte's speech and 0 otherwise. $X_i$ is a vector of individual control variables, which include: gender, age groups (young, i.e., 18-34 years old, adults, i.e., 35-59 years old,and old, i.e., 60+); income quartiles; education (no high school, high school, and college); occupation (blue-collar, service worker, white-collar, and no occupation); employment type (full-time worker, part-time worker, self-employed, unemployed, and out of the labor force);a dummy for self-reported health status (good or not); the self-reported number of diseases; macro-geographic areas (north-west, north-east, center and south); political party voted inthe 2018 political election (Forza Italia, Fratelli d'Italia, Lega, Liberi e Uguali, M5S, Noi Italia, PD, Potere al Popolo, no vote). Standard errors are clustered at province level.

To test our second and third hypotheses, we run two specifications, which include the interaction between the treatment dummy and an individual characteristic of interest. Asbefore, the linear regression in Eq (3) is for continuous variables and the probit regressionin Eq (4) for dummy variables.

$$Y_i = \alpha_0 + \alpha_1 \text{Treated}_i + \alpha_2 X_i + \alpha_3 Z_i + \alpha_4 Z_i * \text{Treated}_i + e_i \quad (3)$$

$$E(Y|X) = \Phi(\alpha_0 + \alpha_1 \text{Treated}_i + \alpha_2 X_i + \alpha_3 Z_i + \alpha_4 Z_i * \text{Treated}_i) \quad (4)$$

In this case, the main coefficient of interest is the interaction between the treatment dummy and the individual characteristics in vector $Z_i$. To test Hypothesis 2, we concentrate on the individuals who may expect to be directly affected by the announced economic measures. First, we construct a dummy variable "affected" that identifies the direct recipients of the policy, as described in Mr. Conte announcement.

Using the Italian national statistics professional codes, we identify the following categories of affected workers: self-employed entrepreneurs of small, medium or large enterprises; self-employed architects, engineers, merchants, artists and scientific or healthcare professionals; workers of the farming and agriculture industry or in construction or artisans or gardeners; show business workers and non-qualified workers in the commerce or service. Second, we consider the survey respondents who report that they stopped working. Third, we selectindividuals based on family income. We expect idle workers and low-income persons to more likely to be eligible for shopping vouchers. Finally, to test Hypothesis 3, we focus onthe interaction of the treatment dummy with the gender dummy. Standard errors are also clustered at province level.

## Results

Tables 3 to 5 present the results of our empirical analysis. In Table 3, Panel A, we show the marginal effects of Probit regressions for the dummy outcome variables, while in Panel B we report the estimated coefficients of the linear regression for the continuous outcome variables. The Prime Minister's speech had a strong impact on individuals' perceptions about the adequacy of the government's economic measures.[7] The probability of an individual

[7]Since we unable to verify whether respondents answering the survey after March 28th have effectively watched Conte's speech or read the related news, our results are to be

considering the economic measures inadequate drops by almost 11 percentage points, in both specifications, without (Panel A, column 1) and with individual controls (Panel A, column 2). Instead, the speech does not affect individuals' perceptions about the adequacy of the government health measures (Panel A, columns 3 and 4), nor their trust in the government (Panel A, columns 5 and 6) or in the Prime Minister (Panel A, columns 7 and 8), nor their satisfaction for the government (Panel A, columns 9 and 10). Hence, Mr. Conte's presentation of economic aid measures was extremely effective in modifying individuals' opinions on how the government was handling the economic crisis. Yet, this effect did not carry over to the health measures, nor to a more general appreciation of the government in terms of trust and satisfaction.

Mr. Conte's speech was instead quite successful in modifying individual feelings. As shown in Table 3, Panel B, the speech reduced the degree of anger towards the govern- ment (Panel B, columns 1 and 2), albeit not towards the overall COVID situation (PanelB, columns 5 and 6). Feelings of fear, both regarding the action of the government (PanelB, columns 3 and 4) and the overall COVID-19 situation (Panel B, columns 7 and 8), were unaffected. Taken together, these findings provide supporting evidence for a positive role of the leader's public communication during the crisis, as stated in Hypothesis 1. Mr. Conte's speech had a large positive effect on individuals' perceptions regarding the economic issues, which represented the core of his message, and it also managed to reduce anger towards the government.

Insert Table 3 around here

Table 4 presents the results of the second analysis, in which we test whether the positive effects of public communication are stronger among individuals who are more likely to be targeted by the announced economic measures. The workers we identify as directly affected

considered as Intention-To-Treat (IIT) effect.

by the economic aid plan presented in the speech are substantially more likely to deem the government measures insufficient. This result, which contradicts our Hypothesis 2, might be due to measurement error. In fact, with our data, we were able to identify only 42 workers directly affected by the measures – out of 535 workers in the sample. However, we cannot reject the alternative interpretation that these individuals were simply unsatisfied with the magnitude of the economic aids, as they might have faced large economic losses and expected more generous compensation packages. Results in Table 4 show that the other categories of people potentially targeted, the idle workers (column 2) and the low-income individuals (column 3), did not change their opinion on the effectiveness of the government economic measures. Contrary to Hypothesis 2, these findings thus suggest that the affected individuals were not more convinced than the other respondents by the leader's political communication.

Insert Table 4 around here

Table 5 reports empirical evidence regarding our third hypothesis, according to which the war narrative in Mr. Conte's speech was more appealing to men. Male individuals who responded to the survey after the speech were 18 percentage points more likely than (treated) women to find the government's economic measures adequate. Indeed, the resultsin Table 5 (column 1) suggest that the average treatment effect found in Table 3 (columns1 and 2) is entirely driven by men. No other gender difference emerges for the other outcomes.

Insert Table 5 around here

## Conclusions

Public communication is crucial during crises. The public needs to be informed about the existing risks and about the crisis management measures implemented by the government. In

a period of great uncertainty, this communication is aimed at reducing fear and anger about the situation, at inducing citizens to follow a safe and correct behavior, and at keeping (or restoring) confidence and trust in the authorities and in the government. In crafting public communication, important decisions have to be taken about the message to be conveyed as well as the tone and narrative to be used. To be effective, communication has to be timely, precise and credible. The persuasiveness and credibility of a political message is expected to vary according to the fit between its formulation and the personal characteristics of the audience.

We study public communication about the economic aid measures taken early on by the Italian government to respond to the economic crisis caused by the COVID-19 pandemic and by the subsequent lockdown measures. We analyze a crucial public speech by the Italian Prime Minister which announces the economic aid measures proposed by the government.We use novel survey data from a cross-country project and exploit the fact that the speechwas delivered on March 28th, while the survey was underway. Since the declaration of the Prime Minister was largely unexpected, we can compare the answers of respondents whotook the survey before and after the live broadcast. The speech presented the categories of beneficiaries from the economic aids in some detail and employed mortality cues and war narrative.

Our findings show that the communication of the Prime Minister was effective in improving individuals' opinion on how the government was dealing with the economic crisis caused by the pandemic and in reducing anger towards to government. This effect was particularly strong among men, but not among those respondents who were more likely to benefit from the economic aids. Overall, these findings suggest that the use of mortality cues and war narrative employed in the speech was more effective than the provision of detailed information about the recipients of the economic aids.

## Limitations and discussion

This study uncovers a causal effect of leaders' communication on citizens' believes in the adequacy of economic measures, but no effect on trust and satisfaction with the government and Prime Minister. This is perhaps not surprising, since the content of the speech was almost exclusively on economic matters. Unfortunately, we cannot evaluate the effectiveness of more general public communication of Mr. Conte, as we are unable to exploit similar quasi-natural experiments for other speeches.

The internal validity is guaranteed by the treatment assignment which appears as-good- as-random. Balance tests and the continuity of responses before and after the speech reassure on the lack of self-selection bias. The empirical results have to be taken as a Intention-to-Treat effects. In fact, we do not know whether respondents filling the survey after the speech actually saw the live broadcast or not. However, citizens' awareness of the news during the most critical phases of the epidemic in Italy was very high.

More studies should confirm the external validity and generalizability of our results with a comparative analysis of other speeches delivered by the Italian PM, and by other country leaders in similar circumstances. Likewise, it could be promising to explore, in an exper- imental setting, the underlying cognitive mechanisms behind the effectiveness of specific rhetoric tools and of leadership styles. More research on leaders' speeches would help politi- cians and policy-makers formulate convincing messages, to increase persuasiveness of public communication in times of health and economic emergency.

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Figure 1: Theoretical Framework

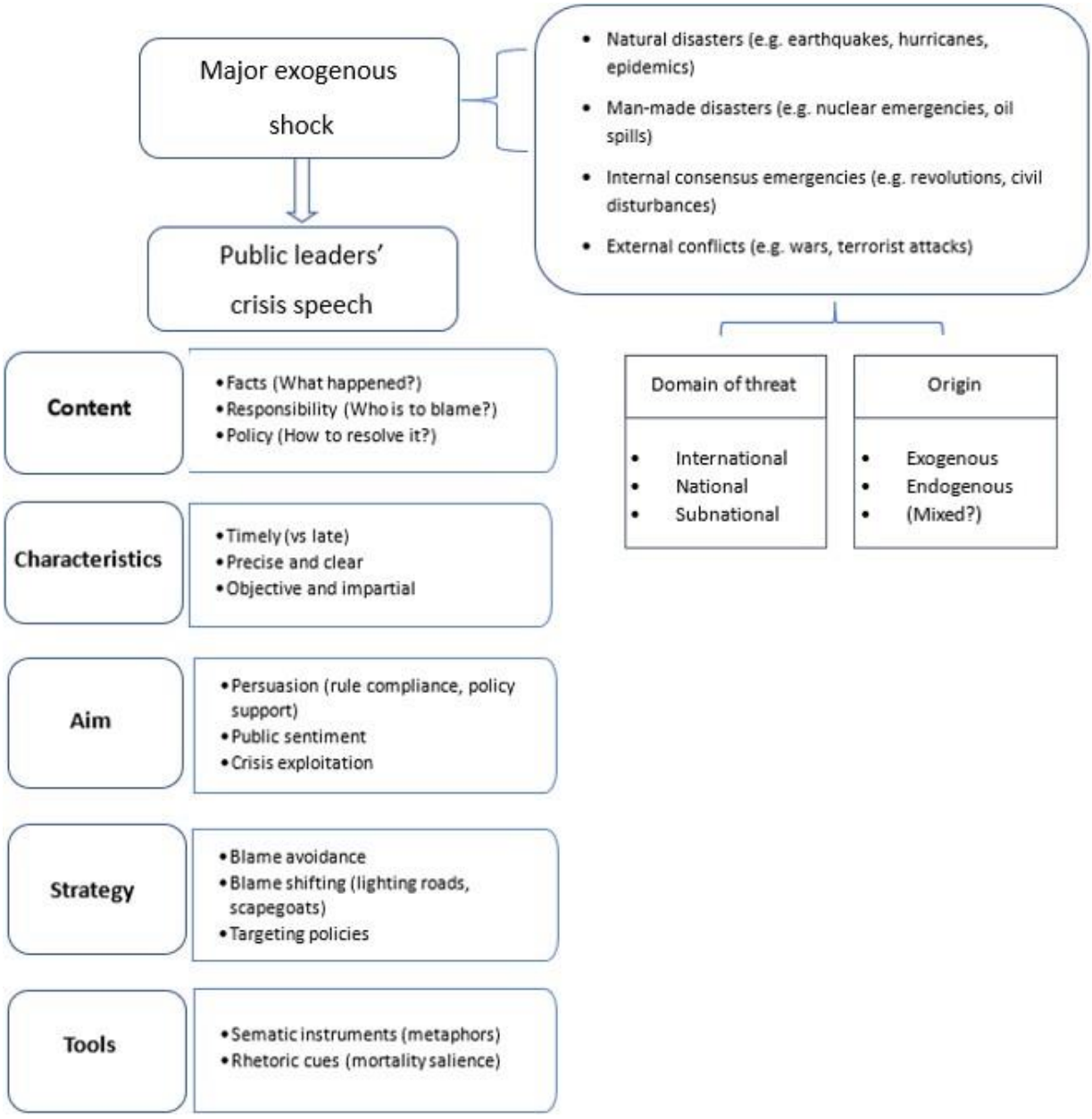

Figure 2: Timeline of COVID-19 events and PM speeches in Italy.
(Figure should be printed in colour)

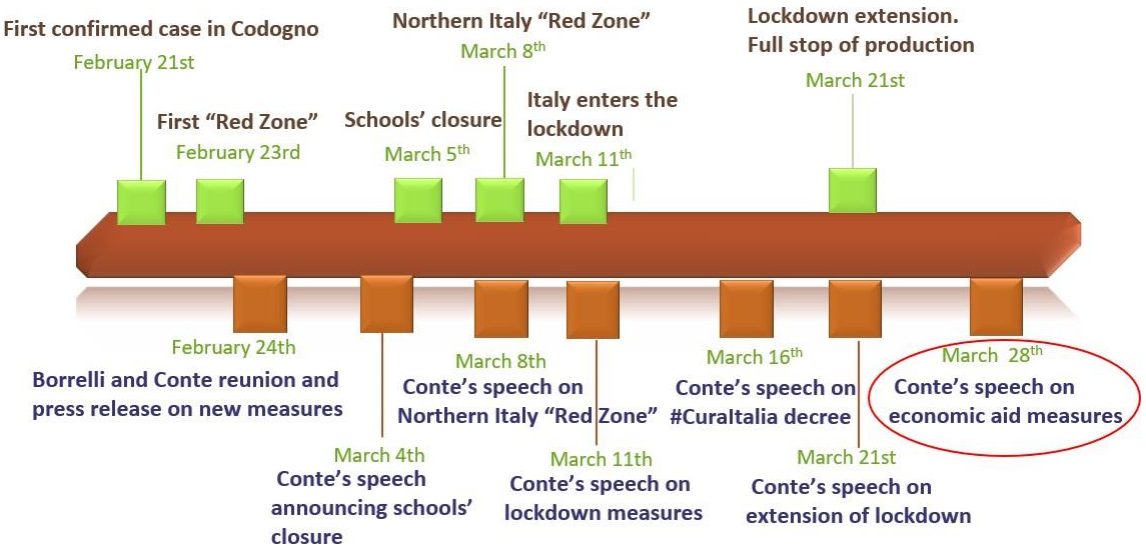


Figure 3: Time distribution of interview response on March 28th, 2020.
(Figure should be printed in colour)

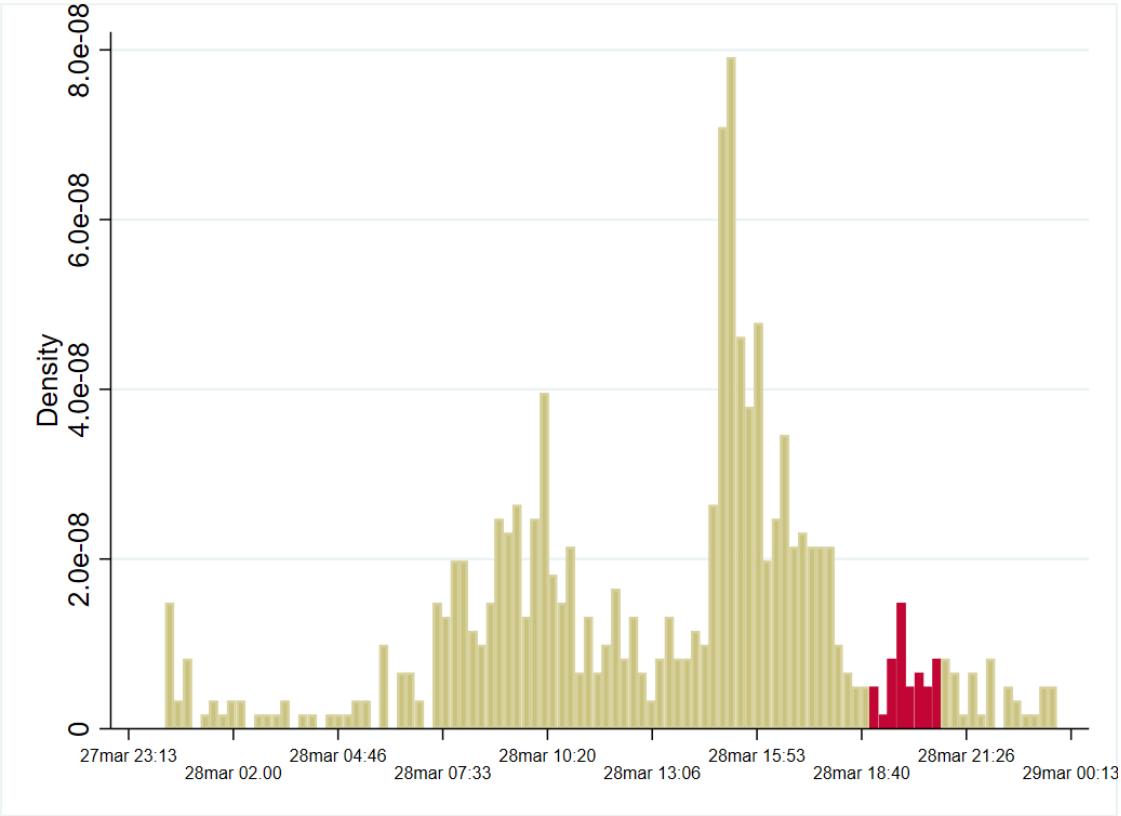

Table 1: Balance of treatment and control groups and summary statistics - Explanatory variables

| | Control group | | Treatment group | | | | Total sample | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean (sd) | N | Mean (sd) | N | Difference | p-value | Mean (sd) | N | Min | Max |
| Young | 0.0541 | 739 | 0.0607 | 247 | -0.007 | 0.696 | 0.05578 | 986 | 0 | 1 |
| | (0.2264) | | (0.2393) | | | | (0.2296) | | | |
| Male | 0.4899 | 739 | 0.4372 | 247 | 0.053 | 0.152 | 0.4766 | 986 | 0 | 1 |
| | (0.5002) | | (0.4971) | | | | (0.4997) | | | |
| Adult | 0.7551 | 739 | 0.7652 | 247 | -0.010 | 0.749 | 0.7576 | 986 | 0 | 1 |
| | (0.4303) | | (0.4247) | | | | (0.4287) | | | |
| North-west | 0.2720 | 739 | 0.2753 | 247 | -0.003 | 0.919 | 0.2728 | 986 | 0 | 1 |
| | (0.4453) | | (0.4476) | | | | (0.4456) | | | |
| North-east | 0.2016 | 739 | 0.2186 | 247 | -0.017 | 0.568 | 0.2058 | 986 | 0 | 1 |
| | (0.4015) | | (0.4142) | | | | (0.4045) | | | |
| Center | 0.1989 | 739 | 0.1700 | 247 | 0.029 | 0.319 | 0.1916 | 986 | 0 | 1 |
| | (0.3995) | | (0.3764) | | | | (0.3938) | | | |
| South | 0.2246 | 739 | 0.2065 | 247 | 0.018 | 0.552 | 0.22 | 986 | 0 | 1 |
| | (0.4176) | | (0.4056) | | | | (0.4145) | | | |
| High school | 0.5805 | 739 | 0.5830 | 247 | -0.002 | 0.946 | 0.5811 | 986 | 0 | 1 |
| | (0.4938) | | (0.4941) | | | | (0.4936) | | | |
| College | 0.3234 | 739 | 0.3360 | 247 | -0.013 | 0.715 | 0.3265 | 986 | 0 | 1 |
| | (0.4681) | | (0.4733) | | | | (0.4691) | | | |
| Income 1st Quartile | 0.2544 | 739 | 0.2065 | 247 | 0.048 | 0.128 | 0.2424 | 986 | 0 | 1 |
| | (0.4358) | | (0.4056) | | | | (0.4287) | | | |
| Income 2nd Quartile | 0.3072 | 739 | 0.2955 | 247 | 0.004 | 0.731 | 0.3042 | 986 | 0 | 1 |
| | (0.4616) | | (0.4572) | | | | (0.4603) | | | |
| Income 3rd Quartile | 0.0920 | 739 | 0.1012 | 247 | -0.009 | 0.669 | 0.0943 | 986 | 0 | 1 |
| | (0.2892) | | (0.3022) | | | | (0.2924) | | | |
| Income 4th Quartile | 0.2003 | 739 | 0.2105 | 247 | -0.010 | 0.729 | 0.2028 | 986 | 0 | 1 |
| | (0.4005) | | (0.4085) | | | | (0.4023) | | | |
| Part time worker | 0.1069 | 739 | 0.1579 | 247 | -0.051 | 0.033 ** | 0.1196 | 986 | 0 | 1 |
| | (0.3092) | | (0.3654) | | | | (0.3247) | | | |
| Self employed | 0.0866 | 739 | 0.0607 | 247 | 0.026 | 0.195 | 0.0812 | 986 | 0 | 1 |
| | (0.2814) | | (0.2393) | | | | (0.2716) | | | |
| Unemployed | 0.1488 | 739 | 0.0891 | 247 | 0.060 | 0.017 ** | 0.1338 | 986 | 0 | 1 |
| | (0.3562) | | (0.2854) | | | | (0.3407) | | | |

| | Control group | | Treatment group | | | | Total sample | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean (sd) | N | Mean (sd) | N | Difference | p-value | Mean (sd) | N | Min | Max |
| Out of Labor Force | 0.0054 (0.0734) | 739 | 0 0 | 247 | 0.005 | 0.247 | 0.0040 (0.0636) | 986 | 0 | 1 |
| Service Workers | 0.2788 (0.4487) | 739 | 0.2834 (0.4516) | 247 | -0.005 | 0.888 | 0.2799 (0.4491) | 986 | 0 | 1 |
| Good health | 0.9486 (0.2210) | 739 | 0.9474 | 247 | 0.001 | 0.941 | 0.9482 (0.2216) | 986 | 0 | 1 |
| Diseases | 0.3139 (0.7500) | 739 | 0.2713 (0.7066) | 247 | 0.043 | 0.432 | 0.3032 (0.7392) | 986 | 0 | 1 |
| White collar | 0.1069 (0.3092) | 739 | 0.0972 (0.2968) | 247 | 0.010 | 0.665 | 0.1044 (0.3060) | 986 | 0 | 1 |
| Blue collar | 0.1448 (0.3521) | 739 | 0.1822 (0.3868) | 247 | -0.037 | 0.159 | 0.1541 (0.361) | 986 | 0 | 1 |
| Service worker | 0.2788 (0.4487) | 739 | 0.2834 (0.4516) | 247 | -0.005 | 0.888 | 0.2799 (0.4491) | 986 | 0 | 1 |
| Forza Italia | 0.0433 (0.2037) | 716 | 0.0335 (0.1802) | 239 | 0.010 | 0.507 | 0.0408 (0.198) | 955 | 0 | 1 |
| Fratelli d'Italia | 0.0391 (0.1940) | 716 | 0.0377 (0.1908) | 239 | 0.001 | 0.920 | 0.03874 (0.1930) | 955 | 0 | 1 |
| Lega | 0.1872 (0.3903) | 716 | 0.1883 (0.3918) | 239 | -0.001 | 0.969 | 0.1874 (0.3904) | 955 | 0 | 1 |
| Liberi Uguali | 0.0307 (0.1727) | 716 | 0.0377 (0.1908) | 239 | -0.007 | 0.601 | 0.0324 (0.1773) | 955 | 0 | 1 |
| Five Stars | 0.2528 (0.4349) | 716 | 0.2803 (0.4501) | 239 | -0.028 | 0.401 | 0.2596 (0.4387) | 955 | 0 | 1 |
| Noi Italia | 0.0028 (0.0528) | 716 | 0.0000 | 239 | 0.003 | 0.414 | 0.002 (0.0457) | 955 | 0 | 1 |
| No vote | 0.1955 (0.3969) | 716 | 0.1590 (0.3664) | 239 | 0.037 | 0.210 | 0.1863 (0.3896) | 955 | 0 | 1 |
| Pd | 0.1746 (0.3799) | 716 | 0.1841 (0.3884) | 239 | -0.010 | 0.739 | 0.1769 (0.3818) | 955 | 0 | 1 |
| Potere al popolo | 0.0182 (0.1336) | 716 | 0.0126 (0.1115) | 239 | 0.006 | 0.559 | 0.0167 (0.1284) | 955 | 0 | 1 |

Table 2: Cross-correlation table

| Variables | male | young | adult | north | center | south | highschool | college | income1st | income2nd | income3rd | income4th | parttime | selfempl. | unempl. | outofLF | service | goodhealth | diseases | whitec. | bluec. | leftwing | rightwing | fivestar | novote |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| male | | | | | | | | | | | | | | | | | | | | | | | | | |
| young | 0.05 | 1.00 | | | | | | | | | | | | | | | | | | | | | | | |
| adult | -0.07 | -0.43 | 1.00 | | | | | | | | | | | | | | | | | | | | | | |
| north | 0.02 | 0.09 | -0.07 | 1.00 | | | | | | | | | | | | | | | | | | | | | |
| center | -0.01 | -0.06 | 0.06 | -0.47 | 1.00 | | | | | | | | | | | | | | | | | | | | |
| south | -0.028 | -0.03 | 0.03 | -0.51 | -0.26 | 1.00 | | | | | | | | | | | | | | | | | | | |
| highschool | -0.01 | 0.09 | -0.048 | 0.07 | -0.04 | -0.040 | 1.000 | | | | | | | | | | | | | | | | | | |
| college | -0.03 | -0.08 | 0.14 | -0.09 | 0.05 | 0.03 | -0.82 | 1.000 | | | | | | | | | | | | | | | | | |
| income1st | -0.01 | 0.07 | -0.01 | -0.14 | -0.04 | 0.16 | -0.01 | -0.12 | 1.000 | | | | | | | | | | | | | | | | |
| income2nd | -0.01 | -0.03 | 0.01 | 0.02 | 0.01 | -0.04 | 0.11 | -0.06 | -0.37 | 1.000 | | | | | | | | | | | | | | | |
| income3rd | 0.03 | -0.02 | -0.03 | 0.06 | -0.02 | -0.03 | 0.06 | -0.01 | -0.18 | -0.21 | 1.000 | | | | | | | | | | | | | | |
| income4th | 0.02 | -0.04 | 0.027 | 0.10 | 0.06 | -0.13 | -0.10 | 0.19 | -0.28 | -0.33 | -0.16 | 1.000 | | | | | | | | | | | | | |
| parttime. | -0.16 | 0.01 | 0.10 | -0.04 | 0.03 | 0.00 | 0.04 | -0.01 | 0.06 | 0.01 | -0.01 | -0.08 | 1.000 | | | | | | | | | | | | |
| selfempl. | 0.02 | -0.04 | 0.10 | 0.00 | -0.00 | -0.00 | -0.05 | 0.11 | -0.02 | -0.02 | -0.01 | 0.07 | -0.11 | 1.000 | | | | | | | | | | | |
| unempl. | 0.08 | -0.07 | 0.19 | -0.08 | 0.06 | 0.07 | -0.02 | -0.02 | 0.26 | -0.08 | -0.09 | -0.14 | -0.14 | -0.12 | 1.000 | | | | | | | | | | |
| outofLF | 0.03 | -0.02 | 0.04 | 0.03 | -0.03 | 0.01 | -0.04 | -0.01 | 0.01 | -0.01 | -0.02 | -0.03 | -0.02 | -0.02 | -0.02 | 1.000 | | | | | | | | | |
| service. | 0.04 | -0.07 | 0.20 | -0.01 | 0.05 | -0.04 | -0.06 | 0.16 | -0.16 | 0.08 | 0.05 | 0.07 | 0.17 | -0.04 | -0.15 | -0.04 | 1.000 | | | | | | | | |
| goodhealth | 0.012 | 0.017 | 0.071 | 0.004 | 0.009 | -0.042 | -0.022 | 0.055 | -0.050 | 0.015 | -0.034 | 0.049 | 0.016 | 0.018 | -0.016 | 0.015 | 0.013 | 1.000 | | | | | | | |
| diseases | 0.10 | 0.01 | -0.12 | -0.05 | 0.03 | 0.07 | -0.01 | -0.01 | 0.03 | -0.03 | 0.03 | -0.03 | -0.03 | -0.02 | -0.08 | 0.04 | -0.01 | -0.24 | 1.000 | | | | | | |
| whitec. | 0.04 | 0.01 | 0.06 | -0.01 | -0.01 | -0.01 | -0.22 | 0.29 | -0.07 | -0.04 | -0.02 | 0.16 | 0.027 | 0.351 | -0.105 | -0.022 | -0.213 | 0.080 | -0.028 | 1.000 | | | | | |
| bluec. | 0.08 | -0.04 | 0.14 | 0.03 | -0.02 | -0.02 | 0.13 | -0.17 | 0.06 | 0.02 | 0.03 | -0.09 | 0.23 | 0.13 | -0.11 | -0.03 | -0.27 | 0.01 | 0.01 | -0.15 | 1.000 | | | | |
| leftwing | -0.02 | -0.07 | 0.00 | -0.01 | 0.07 | -0.08 | -0.02 | 0.08 | -0.10 | -0.02 | 0.05 | 0.17 | -0.04 | -0.03 | -0.06 | 0.0 | 0.02 | -0.03 | 0.05 | 0.04 | -0.09 | 1.000 | | | |
| rightwing | 0.03 | -0.06 | -0.01 | 0.13 | 0.02 | -0.13 | 0.07 | -0.09 | -0.02 | 0.02 | 0.07 | 0.01 | 0.04 | -0.04 | 0.01 | -0.00 | -0.05 | 0.04 | -0.02 | -0.06 | 0.07 | -0.31 | 1.000 | | |
| fivestar | 0.06 | -0.05 | 0.09 | -0.15 | -0.07 | 0.11 | -0.00 | -0.00 | 0.08 | 0.06 | -0.04 | -0.08 | -0.00 | -0.03 | 0.02 | 0.01 | 0.04 | 0.01 | 0.01 | -0.01 | 0.01 | -0.32 | -0.36 | 1.000 | |
| novote | -0.07 | 0.19 | -0.08 | 0.01 | -0.02 | 0.05 | -0.04 | -0.02 | 0.07 | -0.05 | -0.06 | -0.09 | 0.01 | 0.06 | 0.02 | -0.03 | -0.01 | -0.04 | -0.02 | 0.02 | 0.00 | -0.26 | -0.29 | -0.28 | 1.000 |

Table 3: Effect of March 28th speech

Panel A

| | (1) Economic Measures | (2) Economic Measures | (3) Health Measures | (4) Health Measures | (5) Trust Government | (6) Trust Government | (7) Trust PM | (8) Trust PM | (9) Satisfied Government | (10) Satisfied Government |
|---|---|---|---|---|---|---|---|---|---|---|
| Treated | -0.106*** | -0.107*** | -0.0352 | -0.0392 | 0.0374 | 0.0205 | 0.00031 | -0.0248 | 0.0625 | 0.0473 |
| | (0.0332) | (0.0311) | (0.0414) | (0.0396) | (0.0402) | (0.0409) | (0.0375) | (0.033) | (0.0385) | (0.0307) |
| Ind. Controls | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| *N* | 986 | 955 | 986 | 955 | 986 | 955 | 986 | 955 | 986 | 955 |
| Pseudo $R^2$ | 0.0062 | 0.00694 | 0.0008 | 0.0915 | 0.0008 | 0.1364 | 0.000 | 0.1764 | 0.0022 | 0.1410 |

Panel B

| | (1) Anger Government | (2) Anger Government | (3) Fear Government | (4) Fear Government | (5) Anger Covid | (6) Anger Covid | (7) Fear Covid | (8) Fear Covid |
|---|---|---|---|---|---|---|---|---|
| Treated | -0.750*** | -0.666*** | -0.223 | -0.299 | -0.272 | -0.231 | -0.0140 | -0.0729 |
| | (0.242) | (0.225) | (0.220) | (0.219) | (0.192) | (0.187) | (0.197) | (0.202) |
| Ind. Controls | No | Yes | No | Yes | No | Yes | No | Yes |
| Constant | 5.717*** | 8.351*** | 6.355*** | 9.172*** | 6.361*** | 9.441*** | 6.914*** | 9.148*** |
| | (0.104) | (0.718) | (0.0928) | (0.710) | (0.113) | (0.616) | (0.0972) | (0.591) |
| *N* | 986 | 955 | 986 | 955 | 986 | 955 | 986 | 955 |
| adj. $R^2$ | 0.010 | 0.135 | 0.000 | 0.075 | 0.001 | 0.092 | -0.001 | 0.043 |

Panel A reports marginal effects from Probit regressions. Panel B reports the estimated coefficients from linear regressions. Standard errors in parentheses and clustered at province level * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Heterogeneous Effects-Marginal effects probit table

| | (1) economic measures | (2) economic measures | (3) economic measures |
|---|---|---|---|
| Treated | -0.123*** | -0.115*** | -0.134** |
| | (0.0309) | (0.0354) | (0.0632) |
| Affected | 0.0255 | | |
| | (0.0982) | | |
| Affected * Treated | 0.478*** | | |
| | (0.175) | | |
| Stop working | | 0.0400 | |
| | | (0.0575) | |
| Stop working * Treated | | 0.0414 | |
| | | (0.0800) | |
| Income 1st Quartile | | | 0.0421 |
| | | | (0.0552) |
| Income 1st Quartile * Treated | | | 0.0529 |
| | | | (0.0900) |
| Income 2nd Quartile | | | 0.0772* |
| | | | (0.0450) |
| Income 2nd Quartile * Treated | | | 0.000808 |
| | | | (0.112) |
| Income 3rd Quartile | | | 0.0505 |
| | | | (0.0736) |
| Income 3rd Quartile * Treated | | | 0.160 |
| | | | (0.121) |
| Income no answer | | | 0.0801 |
| | | | (0.0646) |
| Income no answer * Treated | | | -0.221* |
| | | | (0.123) |
| Ind. controls | Yes | Yes | Yes |
| *N* | 953 | 953 | 953 |
| Pseudo $R^2$ | 0.0705 | 0.0664 | 0.0733 |

Marginal effects from Probit regressions. Standard errors in parentheses and clustered at province level
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Gender effects-Probit marginal coefficients and OLS table

| | (1) Economic Measures | (2) Health Measures | (3) Anger Government | (4) Fear Government | (5) Anger Covid | (6) Fear Covid |
|---|---|---|---|---|---|---|
| Treated | -0.0261 | 0.00415 | -0.601** | -0.384 | -0.104 | 0.110 |
| | (0.0401) | (0.0557) | (0.301) | (0.264) | (0.284) | (0.283) |
| Male*Treated | -0.181*** | -0.0968 | -0.145 | 0.190 | -0.283 | -0.408 |
| | (0.0696) | (0.0694) | (0.435) | (0.392) | (0.466) | (0.386) |
| Male | 0.0613* | 0.0236 | -0.329 | -0.808*** | -0.326 | -0.596*** |
| | (0.0337) | (0.0309) | (0.218) | (0.226) | (0.202) | (0.218) |
| Ind. Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | | | 8.331*** | 9.198*** | 9.402*** | 9.091*** |
| | | | (0.712) | (0.726) | (0.618) | (0.613) |
| *N* | 953 | 950 | 955 | 955 | 955 | 955 |
| Pseudo/adj. $R^2$ | 0.0742 | 0.093 | 0.134 | 0.074 | 0.091 | 0.043 |

Columns 1 and 2 report marginal effects from Probit regressions.
Columns 3 to 6 report the estimated coefficients from linear regressions.
Standard errors in parentheses and clustered at province level
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$