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COMPLIANCE WITH COVID-19 SOCIAL-DISTANCING MEASURES IN ITALY:
THE ROLE OF EXPECTATIONS AND DURATION

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and Duration
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ABSTRACT

We study how intentions to comply with the self-isolation restrictions introduced in Italy to
mitigate the COVID-19 epidemic respond to the length of their possible extension. Based on a
survey of a representative sample of Italian residents (N=894), we find that respondents are more
likely to express the intention to reduce, and less willing to increase their self-isolation effort if
negatively surprised by a given hypothetical extension, i.e. if the extension is longer than what
they expected. These intentions are stronger among respondents who reported high compliance
with the isolation prescriptions. In a context where individual compliance has collective benefits,
but full enforcement is costly and controversial, communication and persuasion have a
fundamental role. Our findings provide insights to public authorities on how to manage people's
expectations in public health emergencies that require prolonged lockdown measures.

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1. Introduction

The governments of many countries hit by the COVID-19 pandemic have introduced, or are considering enacting, measures of "social distancing" to slow down the spread of the contagion, limit infections and casualties, and alleviate the pressure on health service providers [1]. These provisions include canceling group events, mandating people to work from home, closing schools and commercial activities, and limit people's freedom to leave their homes. The effectiveness of these measures crucially relies on compliance by the public [2]. There are several factors that may affect compliance, such as the awareness of the provisions, the severity of penalties for transgressions, the support and trust toward the authorities that enact them, and the severity of the (economic and psychological) costs of isolation.

In this study, we focus on whether and how people's planned compliance with self-isolation measures depends on their announced duration, as well as on the (mis)match between announced duration and people's expectations. In the Hubei province of China, where the virus originated and first spread, authorities imposed a strict version of social isolation, i.e. the prohibition of leaving one's home, without setting a defined end date [3, 4]. In Italy and other countries such as Canada, France, the United States, India and the United Kingdom, instead, the government announced that strong social distancing measures (including stay-at-home mandates) would be in place for a *defined* period. In the case of Italy, initially the provisions defined about one month for school closures and limitations to people's ability to leave their homes, and two weeks for the closing of commercial activities (see Figure 1 and Table SI1 for the timeline of COVID-19 events and policy responses in Italy). However, as COVID-19 cases continue to rise, several countries are considering extending these measures. In Ontario (Canada), for example, two weeks after enacting a two-week public-school closing, the provincial government issued a further extension of the closure without defining an end date. The governments of Italy and France are considering an extension of the lockdown measures, with politicians and commentators debating whether the extension should be in place for an additional specified period of time, or indefinitely until necessary [5, 6, 7]. The British Prime Minister announced on March 23rd, referring to the just-introduced lockdown measures in the UK: "[w]e will look again in three weeks, and relax them if the evidence shows we are able to" [8].

Figure 1: Cumulative cases in Italy: Jan-29 - Mar-23, 2020 and key policy responses
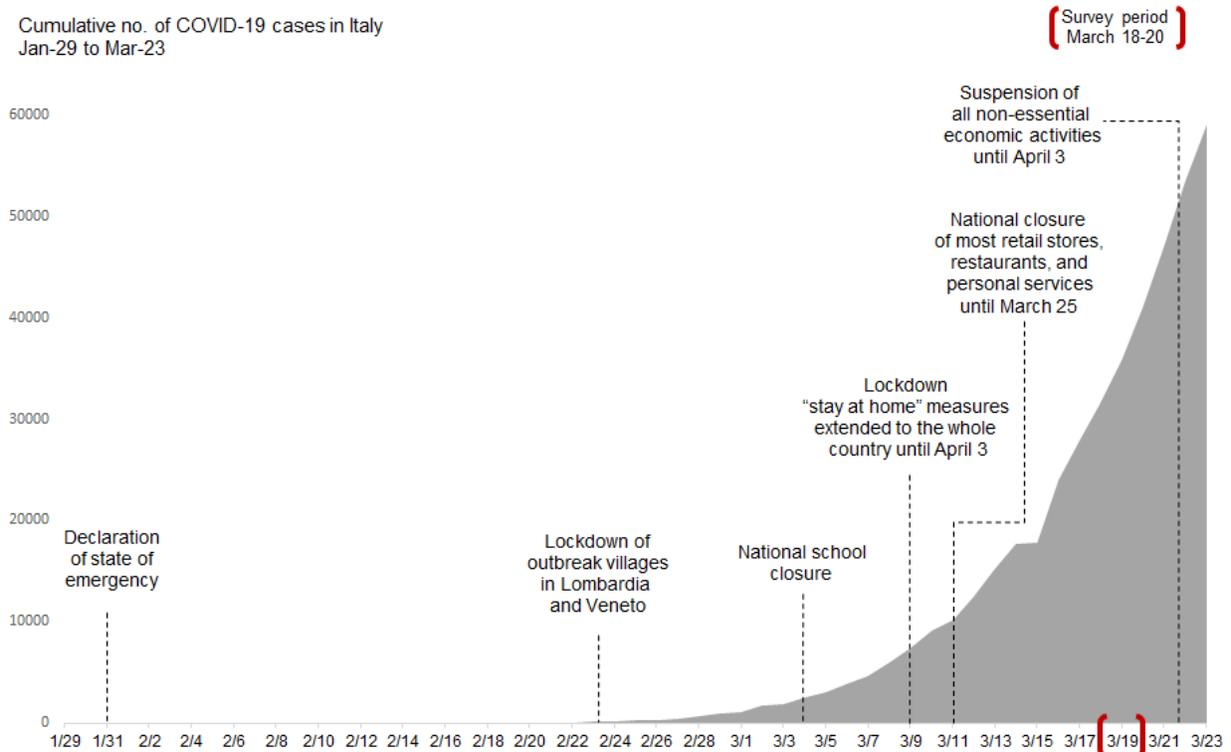
Notes: Source: authors' calculations based on European Centre for Disease Prevention and Control data. Last update March 23, 2020.

Are people more likely to comply when they are told that self-isolation measures will be in place for a specified period, or when the measures are in place for an indefinite period until the outbreak is under control? Moreover, does the relationship between extension announcements and planned compliance depend on people's expectations? Evidence-based answers to these questions provide policymakers with insights that are critically relevant in this contingency.

Limits to personal mobility with no specific end date could increase the perceived severity of the reason that motivated those limits, thus potentially increasing compliance. However, these measures may also increase anxiety and have other psychological costs because they may signal uncertainty. Previous research found that quarantine measures have negative short and long-term psychological effects, including anxiety and post-traumatic stress, with even more severe effects for longer quarantines [9]. Isolation provisions that specify a precise end date might be more acceptable in democratic regimes than indefinite-duration restrictions of personal freedoms.

However, they may convey the idea that the emergency is only temporary, and as such, not particularly severe. Moreover, given the uncertainty about the effectiveness of these limitations to mobility, it is likely that the authorities will need to extend them. Extending measures after creating the expectation that they would be limited in time might reduce people's acceptance, trust in the authority, and ultimately reduce compliance. Our study takes place in this framework; the Italian government introduced social isolation measures with a time limit but some of these measures, (e.g. closing of commercial activities) have subsequently been extended and others, such as the "stay-at-home" provision, are likely to be extended too.

Another potential implication of moving deadlines is the so-called "goal gradient" effect: the farther one is to a goal, the less likely to exert effort to achieve it [10, 11]. In the particular case of the coronavirus outbreak, moving the goalpost of when the isolation measures will be lifted may lead to frustration if the public begins to believe that the goal is unattainable [12, 13].

These psychological mechanisms and their behavioral consequences are akin to those studied in other contexts, such as the dissatisfaction that consumers may have from experiencing a lower quality of a good or service than what they expected, or that patients and airline passengers feel if wait times are longer than announced. These mis-confirmations may lead to lower consumption or slower technology adoption. Insights for good and service providers vary; for example, foot-in-the-door techniques (asking initially for a small commitment, and escalate later) may facilitate initial adoption, but lead to a negative shock in the future. Door-in-the-face approaches, whereby the proposer starts by asking a strong commitment, may discourage adoption but, conditional on adopting, may lead to positive surprises and higher satisfaction and retention [14, 15].

There are some key differences, however, between the contexts mentioned above and the timing of isolation measures in response to the COVID-19 pandemics, which make a specific analysis of this case warranted. First, this is a situation where noncompliance is harmful both for the noncompliant and for the community; as such, there are additional cost-benefit considerations, and potentially psychological mechanisms, at play. Second, the relationship between "proposer" and "receiver" is one of authority, and not of negotiation between equals. Concerns about penalties, therefore, may also affect psychological and behavioral responses. Because of the uncertainty about the evolution of the disease and its spread, citizens may interpret different messages and

provisions as more or less credible, and deem the policymakers enacting them as more or less trustworthy.

Italy represents a relevant case study as the first Western country to implement self-isolation policies in response to the COVID-19 outbreak, which was communicated as a temporary measure to the general public. Yet, Italian public authorities have struggled to ensure compliance with self-isolation despite fines and other severe sanctions for lawbreakers. Considering recent developments, it also appears that self-isolation measures will need to be extended. This will require authorities to communicate such changes effectively to update public expectations, but the effect that this will have on compliance is unclear.

To understand willingness or readiness to comply with self-isolation measures, we collaborated with SWG, a major Italian market research company, to conduct a survey on a representative sample of the Italian population. In the survey, we first asked participants about their current compliance behavior, their knowledge of the end date of the stay-at-home measures currently in place, and their expectations regarding the possible extension of these measures. Next, we elicited participants' compliance intentions under three scenarios varying in the duration of the hypothesized extension of the stay-at-home measures: by a few weeks, by a few months, or indefinitely ("until deemed necessary"). We ran the survey on March 18-20, at a time when the government had already introduced stay-at-home measures (on March 9, until April 3) and the closure of most retail stores throughout the country (on March 11, until March 25); the further suspension of all non-essential economic activities occurred on March 22 with an end date on April 3. (We provide more details about these measures and the time limits to their implementation in Appendix A in the Supplementary Information.) At the time of our survey, the media considered an extension to be likely. Further, because the escalation of the disease and the policy responses in Italy resemble those in other Western countries, our results have implications for the timing of upcoming policy announcements by other governments.

2. Methods

We collaborated with SWG, one of the most well established market research firms in Italy, and a member of the European Society for Opinion and Marketing Research. The company manages a panel of more than 60,000 adult individuals in the country, and usually compensates participants for their time. Respondents fill the surveys online or respond to questions via an online computer-assisted telephone interview (CATI) software. The firm began administering questions related to the COVID-19 epidemic in a weekly survey in late January 2020. We added five questions to the firm's survey (questions in Italian and their English translation are in Appendix C) on a nationally representative sample of 894 respondents over the period March 18-20 2020.

First, we asked respondents to indicate what actions they were adopting to reduce the likelihood of contagion. Six actions on the list referred to social distancing: "I try to keep a safe distance from people", "I do not go to crowded places", "I go to supermarkets as seldom as possible", "I no longer meet with friends", "I no longer meet with relatives who do not live with me", "I do not leave home except in an emergency". Next, we measured awareness of the timing communicated by the Italian government, or if there is confusion on the various measures (for example, at the time of the survey the reopening of shops was scheduled for March 25, while the self-isolation expires April 3). In the third question, we elicited respondents' subjective expectations on possible extensions of the measures. There were four options: "the measures will end on April 3", "the measures will be extended by a few weeks", "a few months", or "indefinitely, until deemed necessary". Finally, we told respondents to assume that the stay-at-home measures will be extended, and asked them to indicate their intentions regarding compliance with the restrictions. We presented three scenarios (in random order to avoid order effects), each with a different duration of the extension ("by a few weeks", "by a few months", "indefinitely, until deemed necessary"). In each scenario, respondents would choose one of five options: "I would significantly increase my isolation", "I would somewhat increase my isolation", "I would continue in my current behavior", "I would somewhat reduce my isolation", "I might decide not to comply with the rules".

This design allows us to determine whether any communications from the government on possible extensions of the stay-at-home measures would represent a surprise (positive if the extension is shorter than expected, negative otherwise) or will be rather in line with expectations.

3. Results

Characteristics of the sample

Our sample consists of 894 respondents, representative of the Italian population. Table SI2 in the Supplementary Information (Appendix B) reports statistics for some socio-demographic characteristics. 41.7% of respondents live in one of the five regions where the disease spread first on a large scale (the "Red Zone"), and where the authorities first introduced social-distancing measures; 17.6% reside in Lombardia, the most severely affected region so far, and 32.3% of the respondents are older than 60, and as such, are in the sub-population at highest risk of severe effects from COVID-19.

Awareness of end date of stay-at-home provisions

We first established whether participants were aware of the date the Italian government announced as the deadline for the stay-at-home measures (i.e., April 3, 2020). About three quarters of respondents accurately reported the correct date, 10.6% reported March 25 (at the time of the survey, the announced end date of store closures), and 15.9% reported some other date (see Figure SI1 in the Supplementary Information). The proportions are similar among residents of the regions mostly affected. However, respondents older than 60 were more likely to report a date different from April 3 than younger respondents (32.7% vs. 23.5%). This suggests that there is a sizable fraction of the population who is either confused or not well informed about the timeline of these measures.

Respondents' expectations

After reminding participants of the actual end date of the stay-at-home measures (thereby correcting any misinformation), we measured their expectations about the length of a possible extension beyond this deadline. Figure 2 shows that only 2.8% of respondents believed that the current measures would actually end on April 3. 42.7% expected that the government would extend the provisions by a few weeks, 20.4% by a few months, and 34.1% expected that the extension would be for an indefinite time ("until deemed necessary"). These proportions are similar among residents of the most affected areas and among respondents over 60 years old. Thus, consistent

with most of the public debates, respondents did expect the measures to stay in place longer than announced, but there is heterogeneity in the expectations about the length of this extension.

Figure 2: Expected end date of self-isolation measures
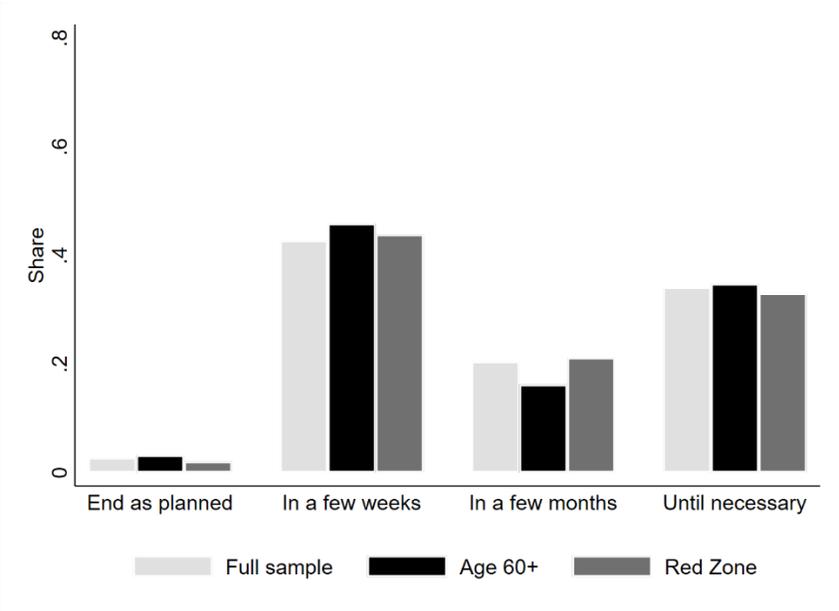
Notes: The graph reports the share of respondents who reported their expectation that the self-isolation measures would end as planned, or be extended by a few weeks, a few months, or until necessary. The light grey bars refer to the full sample; the black bars report the distribution for respondents aged sixty or older; and the dark grey bars represent the distribution of expectations for respondents who reside in one of the five "Red-zone" regions (Piemonte, Lombardia, Veneto, Emilia Romagna, Marche).

Self-isolation compliance intentions

When we asked respondents to assume that the government would extend the stay-at-home measures by a few weeks, 67.5% indicated that they would "continue with their current self-isolation behavior", 12.8% that they would increase it "to some extent", 9.3% that they would increase it "greatly", 8.3% that they would reduce it to some extent, and 2% said that they would "consider no longer respecting the rules". We observe similar proportions in the scenario in which we asked respondents to hypothesize that the measures would be extended by a few months, and in the scenario where the measures would continue indefinitely, until deemed necessary. Notice that the order of the options in the expectations question is such that the "indefinite period" option implies a duration potentially longer than a few months. Figure 3 reports these findings.

Figure 3: Self-isolation intentions, by duration of extension
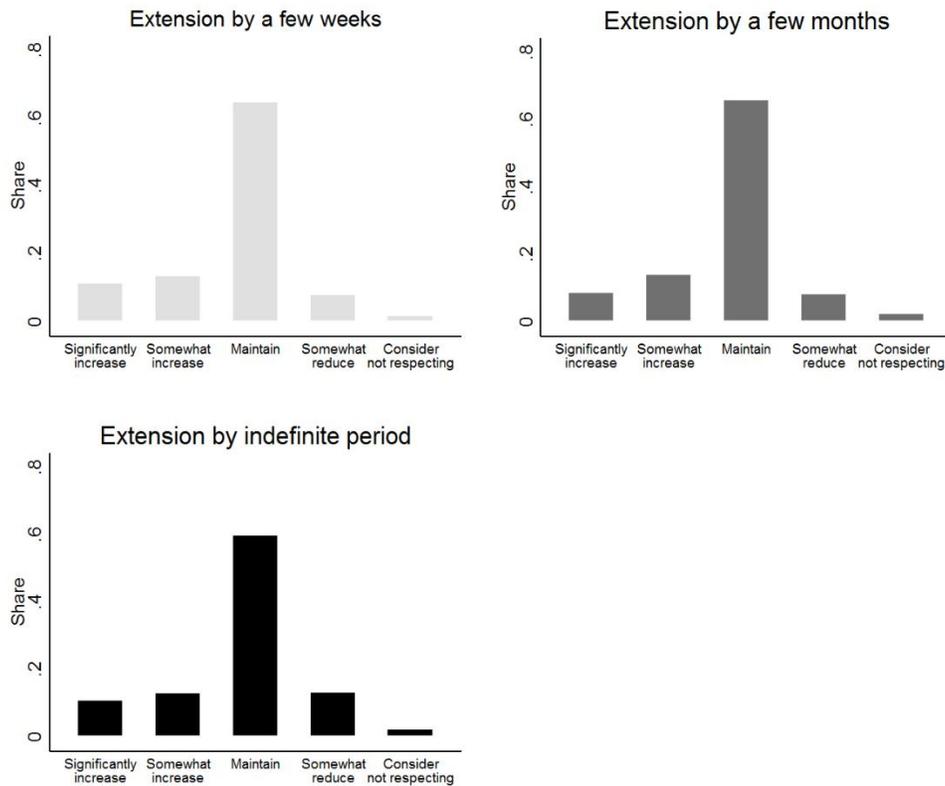
Notes: The graphs report the share of respondents who indicated their intention to maintain or change their compliance with self-solation provisions, separately by the different subjective expectations on how long the measures will extend. We corrected the distribution with frequency weights to guarantee the representativeness of the sample (SWG provided the weights).

To investigate how planned behavior depended also on individual expectations about how long the isolation measures would be in place, we constructed a measure of match (or mismatch) between expectations and extension scenarios. Table 1 shows the categories that we consider; we have a "match" when the proposed extension scenario matches with respondents' expectations. Mismatch cases can be positive or negative: "shorter" and "much shorter" indicate instances where the scenario hypothesizes the measures will end sooner than expected by the respondent, whereas "longer" and "much longer" denote cases in which the scenario hypothesizes the measures to end later than the respondent expects.

Table 1: (Mis)match between expectations and hypothesized length of extension of stay-at-home measures

		Scenario		
		Extended by a few weeks	Extended by a few months	Extended indefinitely (until necessary)
Expected end of stay-at-home measures	Extended by a few weeks	match	longer	much longer
	Extended by a few months	shorter	match	longer
	Extended indefinitely (until necessary)	much shorter	shorter	match

Notes: The rows of this table report the three durations of the extensions of self-isolation measures that we asked the respondents to assume; the columns refer to the different expectations about the extensions that the respondents reported. We indicate as a "match" the cases in which the expectations corresponded to the hypothetical extensions. "Shorter" and "much shorter" correspond to cases where the hypothesized duration of the measures is less than the expected duration; "longer" and "much longer" indicate that the scenario hypothesizes the measures to end later than expected.

Figure 4 shows the distribution of self-isolation intentions by the (mis)match between expectations and the hypothesized extension scenario, and Table 2 reports estimates from multinomial logit regression analyses. Because the more extreme intentions occurred relatively infrequently, to simplify the analysis we grouped the five categories into three: "maintain", "reduce" (combining "would reduce self-isolation" and "would consider no longer respecting the rules"), and "increase" ("increase somewhat" and "increase greatly" self-isolation). Similarly, because the group of respondents who expect the stay-at-home measures to end as planned is so small (21 individuals), we exclude them from the analysis that follows.

The intention to maintain current behavior does not vary with the degree of match between the scenarios and the respondents' expectations. However, there are differences in the intention to "increase" or "reduce" self-isolation efforts. In Table 2 we report the estimated coefficients of the

difference between the impact of shorter- or longer-than expected durations and the scenario where respondents' expectations match the hypothesized extension. Table 2 also shows Wald tests for differences between the coefficients on "much longer" and "much shorter" differences between assumed length of the extension and expected ones, and differences between the effects of "longer" and "shorter" mismatches. Altogether, these comparisons allow us to determine whether expectations (mis)match matters.

Respondents who experience a very negative surprise (hypothesized extension much longer than they expected) show a reduced intention to increase self-isolation compared to those with expectations matching the duration. This is true also when comparing the behavior of those with a very negative surprise to those with a very positive surprise. Moreover, in this case there is also an increase in intentions to reduce self-isolation. This overall result combines some different patterns in the regions most affected by COVID-19 (Red Zone) and in the rest of the country; in the former areas, the "increase compliance" margin is affected, whereas in the latter it is the "reduce compliance" outcome that responds to (mis)matches. Indeed, in the Red Zone (Figure SI3 in the Appendix and columns 3 and 4 of Table 2), respondents who experience a negative surprise are less likely to increase compliance than those with matching expectations and those who experience a positive surprise. In the rest of the country (columns 5 and 6 of Table 2), there is a larger difference in the likelihood of reducing compliance between those with a positive and those with a negative surprise.

Figure 4: Self-isolation intentions, by (mis)match between expectations and extension scenarios
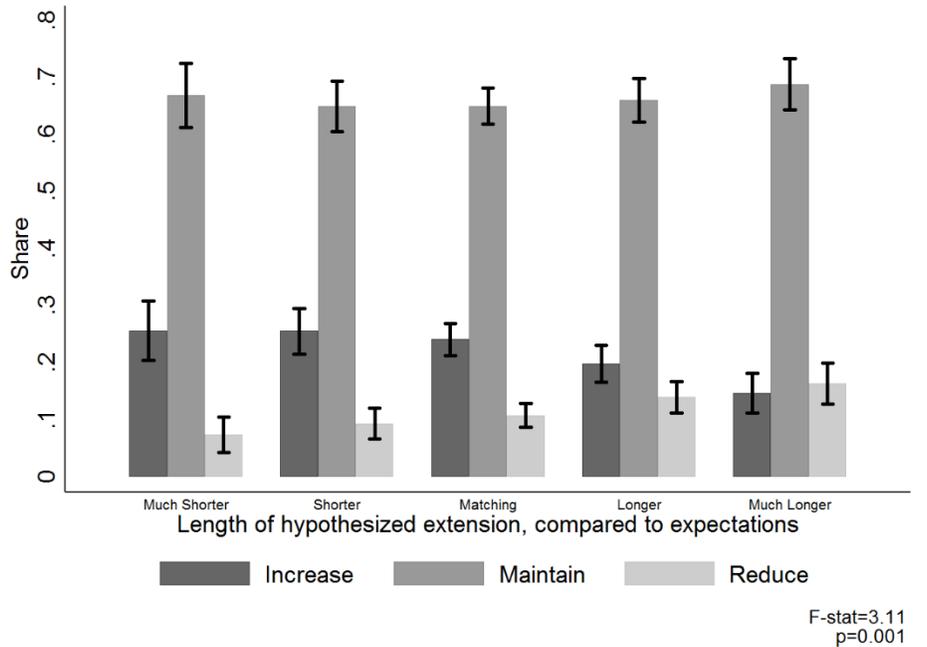
Notes: "Increase" corresponds to the intention to either "increase substantially" or "increase somewhat" self-isolation; "Reduce" includes the options "reduce somewhat" or "consider not complying with restrictions"; "Maintain" indicates intention to "continue with current behavior". We corrected the distribution with frequency weight to guarantee the representativeness of the sample (SWG provided the weights). The graph also reports confidence intervals and the value of the designed-based F-statistics from a test of differences in distributions.

"Maintain", "reduce" and "increase" self-isolation are obviously relative to each respondent's current behavior. Our survey included a question that measured respondents' adoption of the following set of social distancing measures: (i) avoid crowded places, (ii) avoid meeting friends, (iii) avoid meeting relatives, (iv) keeping safe distance from other people, (v) limit going to the supermarket, (vi) leave the house only when necessary. About half the sample reported being currently adopting all six measures, and the remaining half reported adopting between zero and five behaviors (Figure SI2 in the Supplementary Information). We use this variable to split the sample between "fully compliant" and "partially compliant" with recommended social distancing measures and perform our analyses separately for the two groups in Figure 5 and in columns 7 through 10 of Table 2 (Table SI3 in the Appendix reports descriptive statistics for the two groups).

Fully compliant respondents are most responsive to (mis)matches. First, they show a reduced willingness increase their self-isolation when they receive a negative surprise. Moreover, they show a stronger intention to *reduce* their self-isolation when they receive a negative surprise

11

compared to cases of matching expectations and positive surprises. Partially compliant respondents are generally not very responsive.

Figure 5: Self-isolation intentions, by (mis)match between expectations and extension scenarios, separately for "fully compliant" and "partially compliant" respondents
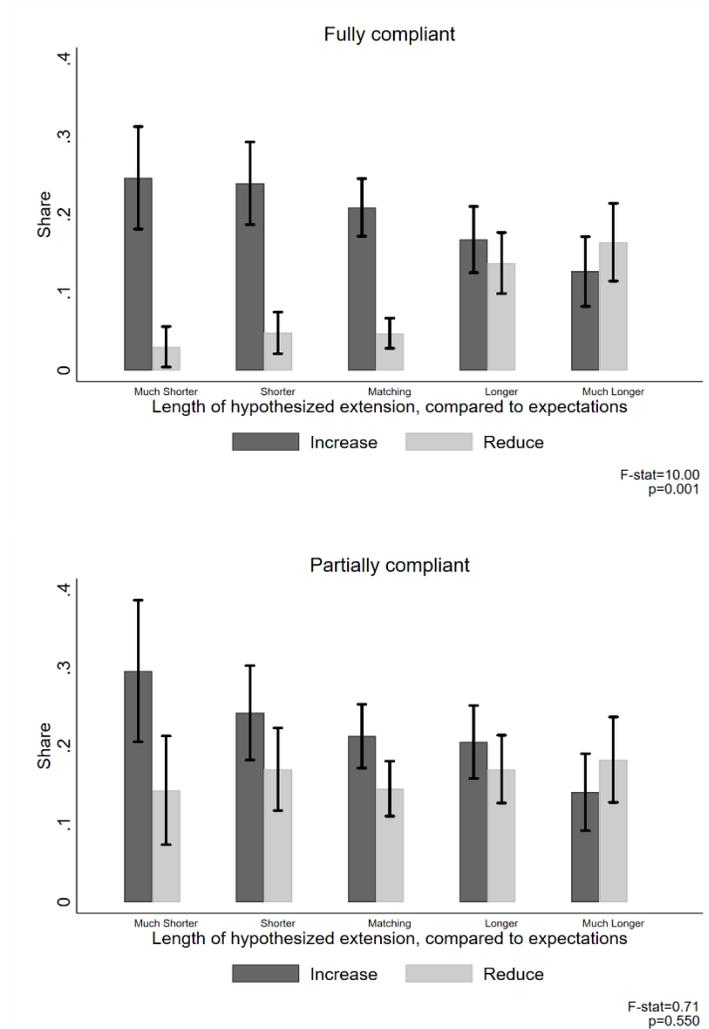
Notes: These graphs reports the share of respondents who expressed the intention to either increase or decrease their compliance with social-isolation provisions. "Increase" corresponds to the intention to either "increase substantially" or "increase somewhat" self-isolation; "Reduce" includes the options "reduce somewhat" or "consider not complying with restrictions". We exclude from the charts the share of those who stated that they would maintain the same compliance levels, to better show the differences in shares between the two reported options (the graphs that include also the "maintain" category are in Figure SI3 in Appendix B). We corrected the distribution with frequency weight to guarantee the representativeness of the sample (SWG provided the weights). The graphs also report confidence intervals and the value of the designed-based F-statistics from a test of differences in distributions that excludes the "maintain" options.

Table 2: Self-isolation intentions, by (mis)match between expectations and extension scenarios: Multinomial Logits estimates

	Sample:	Full sample		Red Zone regions		Rest of the Country		Fully compliant		Partially compliant	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Option: Increase compliance											
	Much longer	0.578***	0.602**	0.524**	0.497**	0.617*	0.606*	0.462***	0.472***	0.656	0.658
Length of hypothesized extension, relative to expectations:		(0.115)	(0.118)	(0.158)	(0.150)	(0.163)	(0.155)	(0.126)	(0.130)	(0.179)	(0.175)
	Longer	0.811	0.820	0.639**	0.657*	0.942	0.936	0.869	0.903	0.738	0.716
		(0.110)	(0.112)	(0.144)	(0.153)	(0.158)	(0.160)	(0.149)	(0.159)	(0.152)	(0.148)
	Shorter	1.060	1.015	1.326	1.377	0.903	0.894	1.214	1.182	0.987	0.966
		(0.143)	(0.138)	(0.272)	(0.297)	(0.158)	(0.155)	(0.192)	(0.188)	(0.217)	(0.217)
	Much shorter	1.034	1.000	1.632*	1.541	0.725	0.714	0.985	0.921	1.254	1.317
		(0.190)	(0.187)	(0.435)	(0.415)	(0.179)	(0.180)	(0.234)	(0.212)	(0.368)	(0.393)
Adjusted Wald test of differences (F-stat)	Much longer - Much shorter	4.10**	3.28*	6.83***	6.94***	0.18	0.21	4.06**	3.25*	2.32	2.88*
	Longer - Shorter	2.10	1.39	5.57**	5.82**	0.03	0.04	2.03	1.33	1.01	1.15
Option: Reduce compliance											
	Much longer	1.428*	1.413	1.316	1.232	1.528	1.505	2.842***	2.964***	0.933	0.905
Length of hypothesized extension, relative to expectations:		(0.301)	(0.311)	(0.407)	(0.406)	(0.441)	(0.470)	(1.009)	(1.095)	(0.252)	(0.256)
	Longer	1.273	1.242	1.223	1.197	1.308	1.287	2.381***	2.512***	0.809	0.745
		(0.221)	(0.224)	(0.340)	(0.363)	(0.279)	(0.287)	(0.636)	(0.626)	(0.189)	(0.184)
	Shorter	0.864	0.871	1.061	1.142	0.722	0.732	0.675	0.690	0.932	0.948
		(0.184)	(0.189)	(0.334)	(0.360)	(0.203)	(0.210)	(0.278)	(0.280)	(0.248)	(0.251)
	Much shorter	0.668	0.700	0.756	0.793	0.626	0.649	0.635	0.638	0.822	0.974
		(0.206)	(0.220)	(0.376)	(0.380)	(0.239)	(0.252)	(0.360)	(0.360)	(0.322)	(0.375)
Adjusted Wald test of differences (F-stat)	Much longer - Much shorter	4.50**	3.66*	0.88	0.60	4.21**	3.21*	6.02**	7.41***	0.08	0.03
	Longer - Shorter	2.63	2.12	0.15	0.02	4.08**	3.46*	9.27***	11.81***	0.22	0.59
	Control variables		x		x		x		x		x
	Observations	2,573	2,571	1,034	1,032	1,539	1,539	1,391	1,389	1,158	1,158
	F-statistic	1.879	2.286	1.435	1.850	1.530	2.193	3.853	3.728	0.593	1.476
	Respondents	858	857	345	344	513	513	464	463	386	386

Notes: The regressions include sample weights. The baseline option is "Maintain current behavior", and the omitted category is "scenario matches expectations". We report the estimates as relative risk ratios. Each respondent selected one option from each of three questions, therefore there are up to three observations per individual in the regression sample. The control variables are the respondents' gender, age, education, whether the respondent lives alone or with her/his parents, marital status, whether the respondent has children, whether s/he is currently employed, whether the respondents' household is currently facing economic difficulties, and whether they live in one of the "Red Zone" regions. Linearized standard errors are in parenthesis. *** p<0.01, ** p<0.05, * p<0.1

4. Discussion

Abiding by social isolation measures in response to the COVID-19 pandemic reduces the likelihood of both contracting the virus and infecting others, thus contributing to the public good by slowing down the otherwise exponential spread of the disease. Achieving full compliance via strong formal enforcement (e.g. deterrence, geo-tracking) is not only controversial in democratic countries, but also costly to implement. Hence, persuading the public to isolate is a critical mechanism.

To maximize the effectiveness of temporary isolation efforts, authorities must manage public expectations on when such measures will be relaxed or lifted. Our findings show that expectations about the duration of social isolation measures influence the public's intention to comply. Almost all of the respondents in our survey expect the deadline to be extended beyond the previously announced date; however, expectations about the length of an extension vary widely. Importantly, people's willingness to comply in case of an extension depends on how the length of this extension compares with their own expectations. In particular, negative surprises (i.e. extensions will take longer than expected) are associated with a lower willingness to increase compliance.

The negative response is stronger for responded who reported a high level of compliance with self-isolation norms who also display a higher propensity to reduce compliance in case of negative surprises. The fact that these individuals react to negative surprises might suggest "social isolation fatigue" and indicates that the efforts of compliant individuals should not be taken for granted, but rather considered as "time limited", with the specific time limit depending on individual expectations.

One limitation of this study is that compliance with social-distancing restrictions is self-reported; this creates concerns about imperfect recall and social desirability bias. However, at the time of the survey respondents were on actual lockdown during the course of a severe epidemic and were asked about current rather than past behavior; as such, imperfect recall is unlikely. We cannot rule out social desirability bias but that fact that, even in the middle of the epidemic, almost half of participants admitted not complying with some of the self-isolation measures, indicates that social

desirability is not a crucial concern. Another limitation is that we did not exogenously manipulate respondents' expectations, and are not able to investigate the reasons why people hold different beliefs about the duration of social-distancing measures. The heterogeneity that we document may be a signal of a lack of clear messages from the government.

Our findings imply that people's intentions to comply with time-limited self-isolation norms depend on how authorities communicate their duration, and on the (mis)match between such announcements and individuals' expectations. Because the evolution of policy responses to COVID-19 in Italy resembles that of other countries, our results extend beyond a specific case and have implications for the timing of policy announcements by other governments around the world. More broadly, our findings provide insights to public authorities on how to manage people's expectations in public health emergencies that require prolonged lockdown measures.

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Appendix A - 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 Lombardy, 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).

These were the most important measures in place at the time of the survey (March 18-20 2020). Throughout the period, there has been a discussion in the media, both traditional and social, about the possibility that the Government might extend the containment measures both in time and in scope. On March 22, the Government indeed 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. These stricter measures were also announced to be in place until April 3 at the time of writing this paper.

Table SI1. 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 15th
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
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 25.
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 3rd.

Appendix B - Survey questions

List of survey questions.
Original Italian (English translation below)

1.   Per prevenire il contagio, quali di questi comportamenti quotidiani sta adottando?
[Rotazione tipo: random]
   a. mi lavo le mani molto spesso
   b. vado in giro con la mascherina
   c. non stringo più la mano a nessuno
   d. cerco di stare a distanza dalle persone
   e. non frequento luoghi affollati
   f. vado il meno possibile nei supermercati
   g. non mi incontro più con gli amici
   h. non mi incontro più con i parenti che non vivono con me
   i. non esco di casa salvo urgenze
[Fine rotazione]
   j. nessuno di questi
   k. preferisco non rispondere

2.   Il Governo ha annunciato una serie di misure temporanee di autoisolamento per fronteggiare l'emergenza coronavirus, il cosiddetto decreto "io sto a casa". Si ricorda fino a che data resteranno in vigore queste misure?
[Inserire data: dd/mm/yyyy]

3.   La data di scadenza delle misure "io sto a casa" annunciata dal Governo è il 3 aprile. Secondo Lei queste misure:
   a. Termineranno nella data prevista
   b. Verranno prorogate di qualche settimana
   c. Verranno prorogate di qualche mese
   d. Verranno prorogate a tempo indefinito, fino a quando sarà ritenuto necessario

[Le prossime tre domande vengono presentate in ordine casuale]
4.   Se le misure di autoisolamento dovessero essere <u>prorogate di qualche settimana</u> oltre la scadenza del 3 aprile, quale di queste opzioni descrive meglio ciò che lei pensa di fare:
   a. Aumenterei significativamente il mio autoisolamento
   b. Aumenterei in qualche misura il mio autoisolamento
   c. Continuerei con i miei comportamenti attuali
   d. Ridurrei in qualche misura il mio autoisolamento
   e. Potrei decidere di non rispettare più le regole

5. **Se le misure di autoisolamento dovessero essere <u>prorogate di qualche mese</u> oltre la scadenza del 3 aprile, quale di queste opzioni descrive meglio ciò che lei pensa di fare:**
   a. Aumenterei significativamente il mio autoisolamento
   b. Aumenterei in qualche misura il mio autoisolamento
   c. Continuerei con i miei comportamenti attuali
   d. Ridurrei in qualche misura il mio autoisolamento
   e. Potrei decidere di non rispettare più le regole

6. **Se le misure di autoisolamento dovessero essere <u>prorogate a tempo indefinito</u> oltre la scadenza del 3 aprile,fino a quando sarà ritenuto necessario, quale di queste opzioni descrive meglio ciò che lei pensa di fare:**
   a. Aumenterei significativamente il mio autoisolamento
   b. Aumenterei in qualche misura il mio autoisolamento
   c. Continuerei con i miei comportamenti attuali
   d. Ridurrei in qualche misura il mio autoisolamento
   e. Potrei decidere di non rispettare più le regole
   [*Fine randomizzazione*]

ENGLISH TRANSLATION

1. **To prevent contagion, which of these everyday behaviours are you adopting?**
   a. I very often wash my hands
   b. I walk around with a mask
   c. I don't shake hands anymore
   d. I try to keep a safe distance from people
   e. I do not go to crowded places
   f. I go to supermarkets as seldom as possible
   g. I no longer meet with friends
   h. I no longer meet with relatives who do not live with me
   i. I do not leave home except in an emergency
   j. none of these
   k. I prefer not to answer

2. The Government announced and enacted a series of policies to address the COVID19 emergency, in particular the presidential decree known as "I stay at home". Do you remember until what date the social isolation measures are in place?
[enter date here]

3. The end of the "Stay at home" measures is set on April 3 2020. In your opinion, these measures:
   a. will actually end on the announced date
   b. will be extended for a few additional weeks
   c. will be extended for a few additional months
   d. will be extended indefinitely, until deemed necessary

[the next three questions three questions are in random order for each respondent]

4. If the self-isolation measures are extended for <u>a few additional weeks</u> after April 3, which of these options best represents what you plan to do:
   a. I would significantly increase my isolation
   b. I would somewhat increase my isolation
   c. I would continue in my current behavior
   d. I would somewhat reduce my isolation
   e. I might decide not to comply with the rules

5. If the self-isolation measures are extended for <u>a few additional months</u> after April 3, which of these options best represents what you plan to do:
   a. I would significantly increase my isolation
   b. I would somewhat increase my isolation
   c. I would continue in my current behavior
   d. I would somewhat reduce my isolation
   e. I might decide not to comply with the rules

6. If the self-isolation measures are <u>extended indefinitely</u> after April 3, <u>until deemed necessary</u>, which of these options best represents what you plan to do:
   a. I would significantly increase my isolation
   b. I would somewhat increase my isolation
   c. I would continue in my current behavior
   d. I would somewhat reduce my isolation
   e. I might decide not to comply with the rules

Appendix C - Figures and Tables

Table SI2: Socio-demographic characteristics of the survey sample

	Full sample	Age 18-59	Age 60+	Red Zone	Rest of the country	Lombardia
Women	51.9%	50.2%	55.7%	50.0%	50.9%	54.0%
Age	50.7	41.2	70.6	50.7	50.8	53.4
Completed high school	66.2%	66.8%	64.9%	62.8%	68.7%	60.3%
College degree	19.2%	23.4%	10.4%	19.7%	18.8%	23.4%
Lives alone	13.2%	12.0%	15.8%	12.8%	13.5%	8.2%
Lives with parents	11.7%	17.0%	0.6%	12.4%	11.2%	12.0%
Married	63.3%	56.9%	76.7%	63.8%	62.9%	74.2%
Has children	64.1%	52.1%	89.2%	63.4%	64.6%	67.4%
Employed	53.1%	69.7%	18.7%	55.5%	51.4%	53.3%
Economically disadvantaged	55.4%	55.1%	56.0%	52.5%	57.4%	50.6%
Age 60+	32.3%			32.7%	32.1%	39.1%
Lives in Red Zone	41.7%	41.5%	42.2%			
Lives in Lombardia	17.6%	15.8%	21.2%	42.1%		
N	894	583	311	356	538	149

Notes: The table reports the average age of the participants as well as percentages of participants belonging to various sub-categories. Red Zone includes residents of the following regions: Emilia Romagna, Lombardia, Marche, Piemonte, Veneto. We used sampling weights to adjust these statistics.

Table SI3: Socio-demographic characteristics of "full compliers" and "partial compliers"

	Partial compliers	Full compliers
Women	46.4%	57.4%
Age	49.4	52.3
Completed high school	64.9%	67.6%
College degree	18.5%	19.4%
Lives alone	15.9%	9.9%
Lives with parents	12.7%	10.8%
Married	59.3%	67.8%
Has children	64.0%	65.8%
Employed	56.2%	49.5%
Economically disadvantaged	59.4%	51.2%
Age 60+	29.2%	36.3%
Lives in Red Zone	40.8%	43.5%
Lives in Lombardia	18.8%	16.5%
N	409	476

Notes: "Full compliers" are respondents who declared they adopted all six measures of social distancing included in Question 1. "Partial compliers" are those who adopted fewer than six measures.

**Figure SI1: Knowledge of end date of current self-isolation measures**
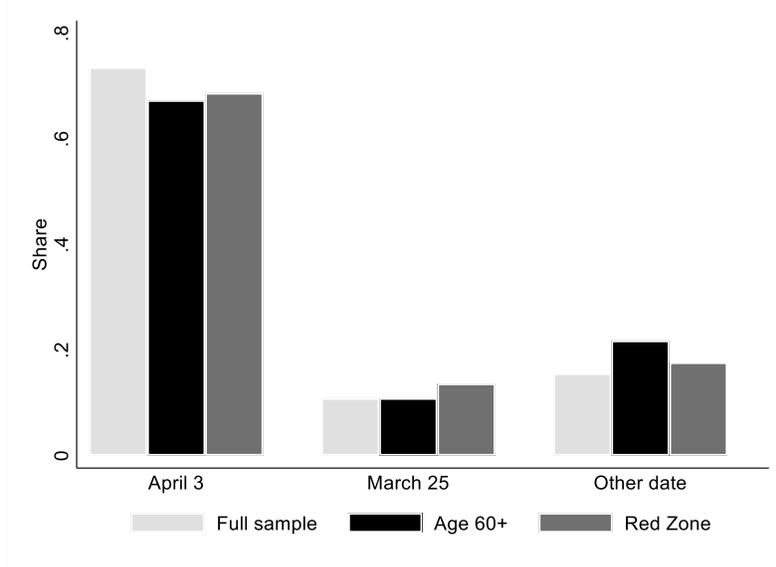
Figure SI2: Reported number of social distancing measures adopted since the start of the COVID-19 epidemic
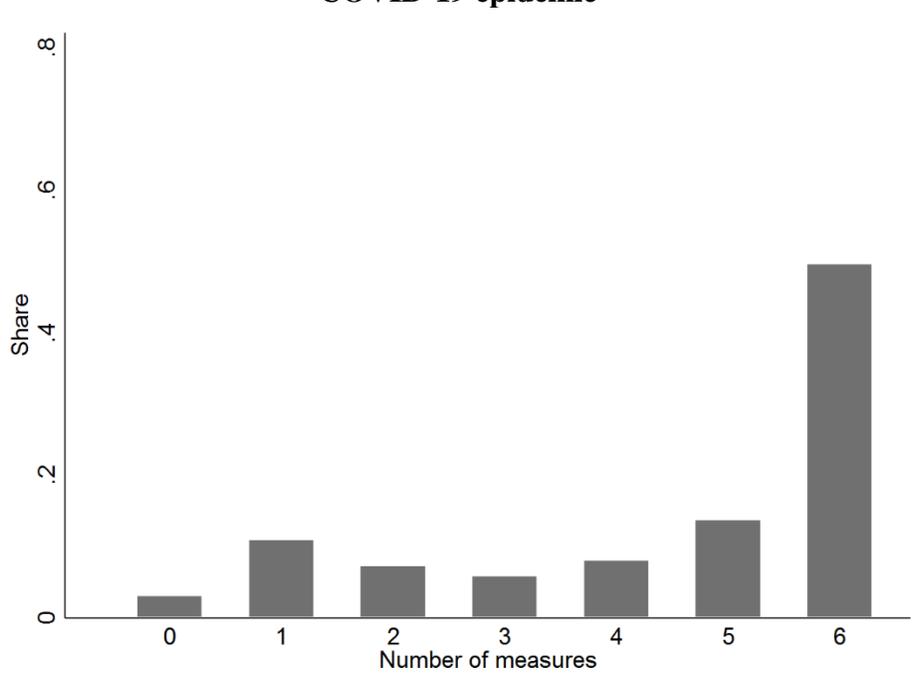
Figure SI3: Self-isolation intentions, by (mis)match between expectations and extension scenarios, separately for "Red Zone" and "Rest of the country" respondents
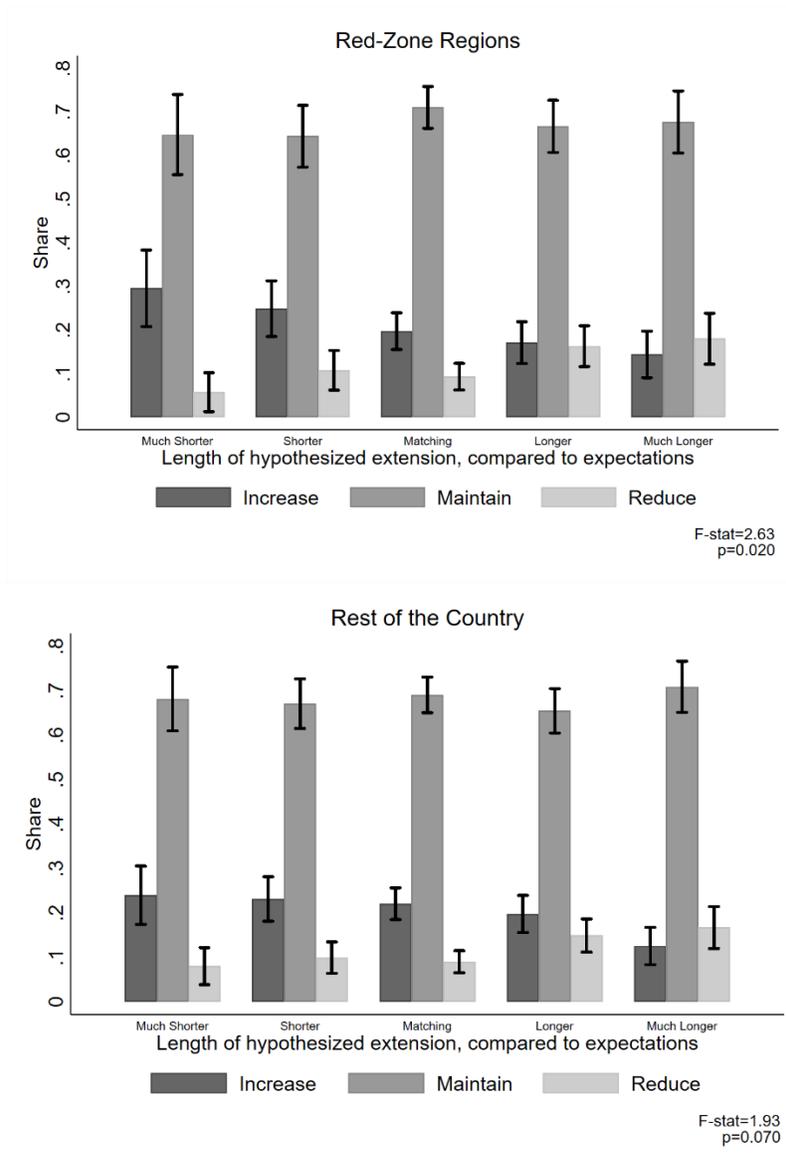
Figure SI4: Self-isolation intentions, by (mis)match between expectations and extension scenarios, separately for "fully compliant" and "partially compliant" respondents