

# Fear, Trust and Demand for Regulation: Evidence from the Covid-19 Pandemic in Russia

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# Fear, Trust and Demand for Regulation: Evidence from the Covid-19 Pandemic in Russia

## Abstract

Understanding demand for state regulation is a foundational issue for social science. To account for this demand, existing theories rooted in market failure and government failure have focused on various forms of trust, but have paid little attention to fear. We test how fear and trust shape demand for government regulation by drawing on especially precise measures of Covid-related regulations gathered in a survey of more than 23,000 respondents in 61 Russian regions. We show that fear of contracting the virus is directly related to greater demand for regulation. In addition, the impact of trust is conditional on the level of fear. Higher interpersonal trust is related to lower demand for Covid-19 regulation, while higher institutional trust is associated with greater demand, but, provided fear is sufficiently great, demand for regulation will be high regardless of levels of interpersonal and institutional trust. These results inform debates about theories of regulation, identify critical scope conditions for existing research on trust and demand for regulation, and open a fruitful line of research by examining how fear of social bads shapes support for state intervention.

JEL-Codes: D640, H110, I120, Z130.

Keywords: fear, trust, demand for regulation, Covid-19, Russia.

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## 1. Introduction

Understanding the sources of demand for state regulation is a foundational issue for social science. Some argue that market failures rooted in low levels of social trust and opportunism generate increased demand for regulation (c.f. [Pigou \(2013\)](#); [Aghion et al. \(2010\)](#)). In this view, those suffering from social bads like air pollution or public health threats express higher demand for regulation to mitigate their losses in expectation that state officials will respond to gain popular support or to increase economic efficiency ([Weimer and Vining, 2017](#); [Braithwaite and Levi, 1998](#)). Others emphasize government failure and argue that the public lacks the interest, time, and acumen to develop strong preferences for regulation. Instead state regulation is largely demanded by organized interests, elected officials, and bureaucrats who distort public policy in their favor with little regard to public preferences ([Baumgartner and Leech, 2001](#); [Carpenter, 2002](#); [Kolko, 1963](#); [Stigler et al., 1971](#); [Djankov et al., 2002](#)). These two views frame much of the academic and policymaking discussion about the proper role of the state in regulating the lives of its citizens.<sup>2</sup>

For all the normative discussions about public demand for regulation, we have little empirical evidence to back up the broad claims made in the literature. In recent years, scholars have begun to examine cross-national data to explore this question, but [Dimitrova-Grajzl et al. \(2012\)](#)'s observation from a decade ago still rings true: "existing literature on the determinants of demand for regulation is scarce." Indeed, studies of individual demand for redistribution by the state far outnumber studies of the demand for regulation by the state ([Rueda and Stegmueller, 2019](#); [Charron et al., 2021](#); [Harring, 2016](#); [Lupu and Pontusson, 2011](#)).<sup>3</sup>

In addition, those studies that have explored the issue have used highly aggregated measures of demand for regulation that fail to capture the nuance of policy choices. Moreover, these works often explore regulatory issues far removed from the respondent's personal experience.

Finally, recent literature has focused primarily on identifying the impacts of interpersonal and institutional trust on demand for regulation. Given the long-standing debate between those who emphasize that trust may mitigate market failures and government failures this makes sense. However, trust is not the only driver of public attitudes toward regulation. In particular, we argue that existing literature on the determinants of demand for regulation has largely neglected the role of fear of existential threats like pandemics and environment pollution.

For all its great human costs, the Covid-19 pandemic offers an excellent opportunity to study the demand

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<sup>2</sup>These two views have gone by various names. Some refer to the market failure argument as the "public interest" or "welfare-enhancing" view of government regulation, while others refer to the state failure argument as "public choice" or "capture" theory of government regulation ([Djankov et al., 2002](#)) See also [Wilson \(1980\)](#) and [Carpenter \(2004\)](#). On public support for private regulation, see [Malhotra et al. \(2019\)](#).

<sup>3</sup>[Charron et al. \(2021\)](#) find that the impact of trust on demand for government redistribution is different from its impact on demand for government regulation. For evidence from the United States, see [Franko \(2016\)](#).

for regulation at the individual level. While many regulatory issues take place beyond public scrutiny or are presented to individuals at a high level of abstraction, governmental responses to the global pandemic are widely covered by the media and affect far more citizens than do many types of regulation. Moreover, given the stakes involved in regulating Covid-19, individuals are highly motivated to gather information and develop clear preferences over policies. Our survey of more than 23,000 respondents in Russia provides unusually good data on the demand for government regulation.

To explore the sources of popular support for regulation, we exploit the substantial variation in fear of contracting the virus, trust, and demand for Covid-19 regulation across Russia's regions. By focusing on variation in a single country, we reduce the problems of omitted variable bias and measurement error commonly found in cross-national studies. In addition, we are able to obtain fine-grained measures on preferences for specific regulations at varying levels of severity from mask wearing to lockdowns.

Using precise estimates of demand for regulation from a survey of 23,000 respondents in Russia, we show that fear of catching the virus is directly related to greater demand for regulation. In addition, the impact of trust is conditional on the level of fear. In line with much existing literature, we find that higher interpersonal trust is related to lower demand for Covid-19 regulation, while higher institutional trust is associated with greater demand, but we also find that when fear is sufficiently great, demand for regulation will be high regardless of levels of interpersonal and institutional trust. Indeed, if fear of catching the virus is sufficiently great, then even those who greatly trust others and distrust the government will demand more regulation. Existing literature on the relationship between trust and demand for regulation is a useful guide when fear is low, but misleads when fear is high. These results hold for various regulatory measures, from support for restrictions on physical distancing to mandates to wear masks in public. They also hold for a range of trust measures and for instrumenting for fear.

Our results make several contributions. First, we advance the literature by exploring how fear shapes demand for regulation. Scholars have explored the role of interpersonal and institutional trust in generating demand for state regulation, but have paid far less attention to fear. This is unfortunate because fear of the virus is a far more powerful driver of behavior than is government policy ([Goolsbee and Syverson, 2021](#)). In addition, the tradeoff between market and government-based solutions to Covid-19 lies at the core of the debate about citizen preferences over regulatory policy. By showing that when fear of catching the virus is high, respondents increase demand for regulation we find support for market failure theories of regulation. In addition, by demonstrating that, at least for the high-stakes issue of Covid-19, respondents are able to develop clear preferences over policy responses, we undercut a key assumption in government failure theories of demand for regulation.

Second, we enrich our understanding of the role of interpersonal and institutional trust on demand for

regulation. When fear is low, we confirm the surprising finding that low interpersonal trust is associated with greater demand for regulation, but we also find that institutional trust is associated with greater demand - a finding starkly at odds with [Aghion et al. \(2010\)](#). More importantly, we identify a critical scope condition - low levels of fear - for much of the existing literature on trust and demand for state intervention.

Third, our results contribute to debates about the demand for regulation by distinguishing between demand for regulation and compliance with regulation. We have many excellent studies of compliance with Covid-related regulation, but far fewer studies of demand for Covid-related regulation. The two phenomenon are related but distinct. One can imagine citizens complying with regulations even as they would prefer much lower levels of regulation, and citizens violating regulations they support. Moreover, while several studies find that interpersonal trust is positively connected with compliance with Covid-19 regulations ([Barrios et al., 2021](#); [Brodeur et al., 2021](#); [Fang et al., 2021](#)), our argument predicts that interpersonal trust will reduce demand for regulation.

Finally, our study adds to our understanding of the global pandemic by exploring how the public response to regulation varies across issues. Most importantly, we obtain high quality measures of demand for a number of different policies related to Covid-19. Our results are robust and surprisingly consistent across a range of measures of demand for regulation. In addition, there is evidence that the impact of fear on demand for regulation is more pronounced on less costly forms of regulation, such as mask mandates than on more costly forms of regulation, such as physical lockdowns. This suggests that individuals are attuned to the nuances of particular forms of government regulation. At least in the case of Covid-19 - a case where the individual stakes of policy choices are high - citizens are able to generate reasonable preferences over complex policies.

## 2. Theory and Hypotheses

Studies of immigration, policing, terrorism, and national defense find that increased fear at the level of the individual may be associated with heightened demand for various forms of regulation ([Bove et al., 2019](#); [Kriesberg and Klein, 1980](#)). In a similar vein, we expect that fear of catching the virus may heighten demand for regulation to address this social bad. This argument rests on the simple claim that those who more greatly fear catching the virus may be willing to pay higher costs of restrictions on individual liberty often generated by increased regulations than those who do not fear catching the virus. This argument is in line with existing research that fear of Covid-19 positively affects compliance with pandemic-related regulations ([Harper et al., 2020](#); [Brouard et al., 2020](#)).<sup>4</sup>

We also expect that interpersonal trust, that is, trust between individuals and others, may interact with

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<sup>4</sup>But fear of Covid-19 reduces support for regulations if no safe and effective vaccine is expected ([Borisova and Ivanov, 2021](#)).

fear to shape demand for regulation. We expect that individuals who do not fear catching the virus will express weaker demands for government regulation when levels of interpersonal trust are high. Anticipating that others will engage in pro-social behavior of their own accord, trusting individuals will not demand government regulation to curb the negative externalities stemming from selfish behavior (Aghion et al., 2010; Dimitrova-Grajzl et al., 2012; Pinotti, 2012; Pitlik and Kouba, 2015; Charron et al., 2021). Thus, individuals who trust others will demand less regulation by the state when fear of catching the virus is low. This counterintuitive finding is becoming well established in the literature, but has not been studied in relation to the global pandemic and has not been studied conditional on fear. We expect that as fear of catching the virus increases so too will demand for government regulation, even among those who trust others to engage in pro-social behavior. At high levels of fear of catching the virus, we expect that even those who have great trust in others may demand greater regulation to combat the virus.

Similarly, we expect that fear will moderate the impact of institutional trust on demand for regulation. Existing research tends to argue that higher levels of institutional trust are associated with greater demand for government regulation. Individuals who trust the government to choose policies that will reduce the impact of the virus and who trust the government to comply with those policies may rationally express higher demand for regulation because they expect these policies to make them better off. Indeed, there is literature from a variety of settings suggesting a positive relationship between institutional trust and demand for government. For example, studies of individual support for government redistribution frequently find that those who express greater trust in government or who have a more capacious view of the proper role of the government also support more extensive government redistribution (Charron et al., 2021; Svallfors, 2013). Scholars studying the related issue of compliance with Covid-19 regulations detect a similar pattern for institutional trust. Bargain and Aminjonov (2020) use data at the regional level in Europe to show that institutional trust is positively associated with compliance with regulations related to the pandemic. Dincer (2021) shows that trust in government is associated with compliance with stay at home orders using data from the US states. Blair et al. (2017) find that during the Ebola crisis Liberians who distrusted the government were far less likely to abide by government-imposed restrictions than were those who trusted the government.

We argue that this positive relationship between institutional trust and demand for regulation may hold when fear is low, however, we expect that as fear increases the impact of institutional trust on support for state intervention will decline. In sum, we expect that fear of catching the virus will moderate the impact of both interpersonal trust and institutional trust on demand for regulation.

- H1: Heightened fear of Covid-19 is associated with greater demand for regulation.
- H2: The impact of interpersonal and institutional trust on demand for government regulation depends

on fear of catching Covid-19.

These arguments are related to several strands of the literature. Our argument is at odds with those who argue that institutional trust and demand for government regulation are inversely related. Most prominently, [Aghion et al. \(2010\)](#) develop a model in which regulation is enforced by government officials, who may tolerate citizens breaching the rules in exchange for a bribe. Because not all citizens can afford to pay the bribe, bribery is lower with higher regulation even if the government official is corrupt. Thus, individuals in environments with low interpersonal trust may desire more government-imposed rules even when the government is corrupt. The model has two stable equilibria: a good one with a large share of civic-minded individuals and no regulation, and a bad one where a large share of selfish individuals support extensive, though inefficient, regulation.

More closely related to our work is [Charron et al. \(2021\)](#) who argue that low interpersonal trust is associated with greater demand for regulation, but that this demand is moderated by strong governmental institutions. Using data from the European Quality of Government Index survey across 21 countries, they find a stronger link between interpersonal trust and individual preferences for regulation in countries with better institutions. While [Charron et al. \(2021\)](#) examine the impact of government capacity and measure demand for regulation using a preference for state ownership, we focus on institutional trust and measure regulation using support for various policies related to Covid-19.

Our argument also resembles [Pitlik and Kouba \(2015\)](#) who argue that interpersonal distrust increases demand for regulation, but that this effect is conditional on a respondent's trust in government relative to their trust in private companies. Using data from the World Values Survey, they find that low levels of interpersonal trust are associated with more demand for government regulation, and that this effect is moderated by trust in private companies, and to a lesser extent, by trust in state institutions. Our work is also related to [Dimitrova-Grajzl et al. \(2012\)](#) who argue that citizens take into account concerns for market failure and government failure in calculating their demand for regulation and find that the impact of interpersonal trust on demand for regulation is especially strong when citizens perceive corruption as high.

In contrast to all three of these arguments, we argue that the impact of interpersonal trust and institutional trust is conditional on fear of catching the virus. Most importantly, when fear is sufficiently great even those who trust others and distrust the government will express high levels of demand for state intervention.

Our work also differs in how we measure demand for regulation. Cross-national research on demand for regulation tends to rely on rather abstract measures that may be far removed from the experience of respondents. [Pitlik and Kouba \(2015\)](#) use data from the World Values Survey and European Values Study that measure regulation using three questions: "Private ownership of businesses should be increased; People should take more responsibility for themselves; Competition is good." In a similar vein, [Aghion et al. \(2010\)](#) use cross-



national data from the World Values Survey and the Life in Transition surveys and measure regulation by responses to questions about preferences for a planned versus a market economy and for state control of wages and prices. These questions are all pitched at high-levels of abstraction and may be capturing general attitudes toward the state rather than toward any particular regulatory policy.

The paper proceeds as follows. In part 3, we describe the Russian context; in part 4 we present our data; in part 5, we describe our empirical strategy; in part 6, we discuss our main results; and in part 7 we conclude with a discussion of our findings.

### **3. The Russian context**

Russia provides an excellent setting to examine the effects of fear and trust on the demand for regulation. First and foremost, Russia was severely hit by the Covid-19 pandemic, giving Russian citizens clear incentives to fear infection and demand regulation for their own protection. Covid-19 was confirmed to have spread to Russia already by the end of January 2020. Russia quickly resorted to non-pharmaceutical measures to contain the pandemic, including a set of restrictions similar to those introduced in other countries, like mask wearing, social-distancing, stay at home orders, border restrictions, cancellations of events, school closures, and the declaration of a so-called “non-working period” which is a Russian euphemism for lockdown. Russia was the first country to announce the successful development of a Covid-19 vaccine, under the name Sputnik V, and was far ahead of other industrialized countries in embarking on a program of mass vaccination with this self-developed vaccine. The Russian vaccine was however initially approved without large-scale testing or peer-reviewed results (Mahase, 2020). In addition, later published results contained a number of statistical anomalies, casting doubt on the vaccine’s effectiveness. Exceptionally high levels of vaccination hesitancy (Arce et al., 2021) left large swaths of the population unprotected.

By the end of 2020, when we conducted our survey, Russian regions had been hit (to a varying degree) by the first wave of the pandemic, especially big cities. Although Russia’s official casualty rate was not exceptional relative to world standards, Russia is characterised by the world’s highest rate of excess mortality, showing a rather grim picture of Russia’s true Covid-19 experience. Kobak (2021) computes excess mortality in Russia from April to November 2020, when we conducted our survey, and concludes there were 264,100 excess deaths during this period, compared to the 40,500 official Russian Covid-19 deaths in international dashboards during the same period. This massive underestimation of true Covid-19 casualties was found in all Russian regions under study. The ratio of 6.5 for excess deaths over official deaths obtained for the whole country was at the moment of the study the largest across all countries for which data were available, implying the official Russian Covid-19 death count may be utterly unreliable and uninformative for Russian citizens. In December 2020, after our survey, the Russian government in fact admitted that the real death

toll of Covid-19 was much higher than the official one,<sup>5</sup> but still continued to understate the true casualty rate and refrained from adjusting official statistics. Timonin et al. (2022) analyse Russia's excess mortality in some more detail. They find that the virus started to spread quickly in late spring in Moscow and Saint-Petersburg, by far the largest cities, and from there spread to all Russian regions by the end of 2020 with particularly high excess mortality in the fourth quarter of 2020, the period of our survey. They find underrecording to be a large problem in some regions. This context gives Russian citizens very good reasons not to trust government statistics and to fear catching the virus, conditional on experiencing an infection in their close environment. Despite the all too real human costs of Covid-19, there was on average still great variation in popular attitudes toward government measures for addressing the crisis. We take advantage of this variation to explore demand for Covid-19 regulation.

Russia is also fascinating because it is characterised by widely varying levels of interpersonal and institutional trust thanks to its vast territory and sharp regional differences. Although in Russia levels of interpersonal trust and institutional trust vary greatly across individuals and regions, reflecting different local cultures of trust, the two forms of trust seem uncorrelated with one another (see later Table 1). Together the strong incentives for individual Russians to fear the virus and the interesting pre-COVID-19 variation in both interpersonal and institutional trust make Russia an ideal ground for testing our hypotheses about the impact of fear on demand for regulation and the moderation of this effect by both interpersonal and institutional trust.

Finally, Russia presents an interesting puzzle for understanding demand for COVID-19 regulation: despite exceptionally high levels of excess mortality and low levels of interpersonal trust, factors which should in theory both increase demand for regulation, we still observe low demand for regulation and significant resistance to measures to contain the virus. In our logic this conundrum is largely explained by the artificially and unrealistically low levels of fear in Russia, driving people to demand less regulation than they would in the presence of perfect information. In our study we consider this effect of fear directly and disentangle it from the moderating effects of both interpersonal and institutional trust. These interactions may be relevant for other countries and other contexts, and governments would be wise to take these interactions into account when designing policy, or when their policy prescriptions run into popular resistance and discontent. In particular, if our theory is right, high-trust countries should be especially wary of underplaying the severity of health problems if they seek popular support for issuing non-pharmaceutical measures to contain a pandemic.

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<sup>5</sup><https://www.theguardian.com/world/2020/dec/28/russia-admits-to-world-third-worst-covid-19-death-toll-underreported>

## 4. Data

We employ unique data from the international collaborative project “Research on COVID-19 in Russia’s Regions (RoCiRR)”, which from November 4 to December 1, 2020, conducted an online survey to measure attitudes and behavior during the pandemic of Covid-19.<sup>6</sup> The authors took part in the development of methodology and questionnaire for the survey. Data from the survey was used in a cross-country study of vaccination preferences and published in [Arce et al. \(2021\)](#). All technical parameters of the survey are presented in [Appendix C](#). Recruiting of respondents was provided by OMI (Online Market Intelligence) - a reputable online polling company that conducts surveys through its panels in Russia, Ukraine, Kazakhstan, and Belarus, and is analogous to Amazon’s MTurk in the United States.

OMI largely draws its panel from the adult population of cities with more than 100,000 inhabitants and we use this group as a primary data source. Additionally we made a sub-sample of respondents in smaller cities and rural areas. We surveyed respondents in 61 federal subjects (regions) of Russia. In each subnational unit, we aimed to reach at least 150 respondents and imposed quotas on specific age groups, gender, and education levels to make the sample more representative for the Russian population (see [Appendix C](#) with the survey parameters for every region). The remaining 24 federal subjects of Russia did not allow us to meet the requirements of the sample size and quotas on age, gender, and education. Our final sample includes 23,064 respondents of the age 18 and older residing in 1,621 localities in 61 regions of Russia ([Figure A1](#)).

The quality of our data is guaranteed by verified profiles of respondents and regular cleaning of panels made by OMI. Additionally we included three attention checks and distributed them across the survey. Respondents received notifications when they failed attention checks. For those who failed all three attention checks, we required OMI to replace them with new respondents.

Three types of questions are particularly important for our research: one is about demand for regulation, while the others are about fear and trust. To measure the first, we use the following basic question: “In general, how stringent should the measures imposed by the state be to contain the spread of the coronavirus infection?” The scale is from 0 to 10, where 0 means minimum stringency of measures or no restrictions at all, while 10 means maximum stringency. In addition, we employ a more detailed question about people’s attitudes to particular measures like mask-wearing, restrictions on cafes, shops and services, mass gathering bans, religious services bans, lockdowns, and stay at home orders. We present a description of the variables in [Table B1](#).

To measure trust, we use two groups of questions described in [Table B2](#), namely interpersonal trust and

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<sup>6</sup>The survey was approved by Columbia IRB Protocol IRB-AAAT4453, funded and administered by the International Center for the Study of Institutions and Development (ICSID) at National Research University Higher School of Economics (Moscow, Russia) in collaboration with Ghent University (Belgium) and Columbia University (New York, US).

institutional trust. For interpersonal trust we use a conventional question about generalized trust: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" Respondents could choose either '1' meaning that most people can be trusted or '0' otherwise. In addition, we ask respondents about their trust in others' willingness to comply with the government's proposed self-isolation regime. To gauge institutional trust, we asked respondents how much they trust different branches of government, i.e. president, government, governor of the region and head of municipality. Finally to measure fear, we use the following perception-based question: "Are you afraid to get infected with the coronavirus?" with the answers on a scale from 1 to 4 corresponding to having no fear at all to being fearful, respectively (see Table B2).

To address endogeneity concerns, we use two survey questions to provide instrumental variables for fear (see Table B3). The first set of instrumental variables aims to measure the respondent's awareness of (the severity of) cases in his direct environment. In particular, we asked respondents whether they caught Covid-19 themselves, or know about any confirmed Covid-19 cases among specific groups of people. Our assumption here is that direct information about the severity of Covid-19 affects the demand for Covid-19 regulation through its effect on fear of catching the disease. The second set of instrumental variables for fear is based on a question about the respondent's reasons for using the Internet: chatting with friends, getting news or verifying news obtained from different sources, entertainment, banking, education, work, additional income, online purchase and other. Our assumption here is that the respondent's Internet use profile affects her demand for regulation through its effect on fear of catching the disease.

We show summary statistics for all the main variables in Table B4. The spatial distribution of the demand for regulation, fear, and trust measures is presented in Figures A2, A3, A4 and A5. All maps indicate substantial variability of the variables of interest.

Pairwise correlation coefficients between the variables of interest are in Table 1. We find little correlation among most of the three types of explanatory variables of interest, including fear, interpersonal trust, and institutional trust. Measures of institutional trust are correlated among each as expected, but the correlation coefficient between measures of interpersonal trust and institutional trust is always below 0.1. The correlation between fear of Covid-19 and trust in the compliance of others with Covid-19 restrictions is 0.27. In addition, fear of catching the virus is correlated with our measure of generalized trust at just 0.08. These very weak correlations provide some confidence that fear, interpersonal trust, and institutional trust are distinct concepts in our study.

Table 1. Pairwise correlations between trust and fear measures

	Fear	Generalized	Compliance	President	Government	Governor	Municipality
<i>Interpersonal trust</i>							
Generalized trust	-0.0781***	1					
Compliance of others	-0.271***	0.0797***	1				
<i>Institutional trust</i>							
President	0.155***	0.0713***	-0.0728***	1			
Government	0.155***	0.0747***	-0.0624***	0.842***	1		
Governor	0.116***	0.0562***	-0.0478***	0.631***	0.687***	1	
Municipality	0.105***	0.0685***	-0.0248***	0.568***	0.652***	0.761***	1

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## 5. Empirical strategy

Our baseline empirical model for the demand for regulation is the following:

$$\text{Demand for Regulation}_{ij} = \alpha_0 + \alpha_1 \text{Fear}_{ij} + X'_{ij} \Gamma + \epsilon_{ij}, \quad (1)$$

We complement it with the trust-based model for the demand for regulation:

$$\text{Demand for Regulation}_{ij} = \beta_0 + \beta_1 \text{Trust}_{ij} + X'_{ij} \Gamma + \epsilon_{ij}, \quad (2)$$

In both models  $\text{Demand for Regulation}_{ij}$  is a variable based on answers to questions about demand for government regulation in general as well as regulation of particular domains.  $X'_{ij}$  is a vector of controls that includes basic socio-demographic characteristics of the respondent  $i$  (age, gender, education, income, employment), date of the questionnaire completion, settlement type and region  $j$ 's fixed effects. Standard errors  $\epsilon_{ij}$  are clustered at the region level.  $\text{Fear}_{ij}$  is our proxy for fear and  $\text{Trust}_{ij}$  is one of our six proxies for trust of an individual respondent, encompassing both interpersonal and institutional trust. We expect that demand for regulation will be positively related to  $\text{Fear}_{ij}$  ( $\alpha_1 > 0$ ), but that it will decrease with the level of generalized trust and in the respondent's trust that others may comply with the Covid-19 measures ( $\beta_1 < 0$ ). If we consider trust in institutions, though, we expect (in contrast to the predictions for interpersonal trust) that the demand for regulation will decrease with trust in authorities, such as the president, the government, the governor of the region, and the municipality ( $\beta_1 > 0$ ).

To develop the model further, we introduce interactions of trust with the fear of catching Covid-19:

$$\text{Demand for Regulation}_{ij} = \gamma_0 + \gamma_1 \text{Fear}_{ij} + \gamma_2 \text{Trust}_{ij} + \gamma_3 \text{Fear}_{ij} \times \text{Trust}_{ij} + X'_{ij} \Gamma + \epsilon_{ij}, \quad (3)$$

We hypothesize that fear of catching the virus will mute the effects of both interpersonal and institutional trust on demand for regulation ( $\gamma_2$  and  $\gamma_3$  have opposite signs). If subjects are totally unafraid of the disease, then interpersonal and institutional trust will remain robust predictors of the demand for regulation.

In the final step of our analysis we deal with endogeneity concerns about fear of catching the virus in models (1) and (3). A particular issue in our study is that the fear of contracting the virus may itself be partly driven by interpersonal or institutional trust. Common problems of omitted variables and measurement error could further bias our estimates. We address these concerns by employing an instrumental variables strategy.

## 6. Results and discussion

We present our baseline results for fear and demand for regulation (specification 1) in Table 2 (the unconditional relation between fear and demand for regulation is illustrated in Figure A6 in Appendix). The first column analyses the general demand for Covid-19 regulation. Further columns then consider separately the demand for specific types of Covid-19 regulation, with varying levels of intensity and intrusiveness, and thus varying levels of incurred transaction costs. The coefficients in the first row show how individual fear of getting infected affects the respective measures of demand for regulation, controlling for gender, age, education, employment type, income group, settlement type as well as region and date of the interview fixed effects. We observe that, in line with our hypothesis, the fear of getting infected is strongly and positively related to demand for Covid-19 regulation ( $\alpha_1 > 0$ ). A 1 point increase in fear of getting infected (the variable ranges from 1 to 4) induces a 0.42 standard deviation increase in demand for regulation.

Although these baseline results are rather stable across various regulatory measures, we observe in Figure A7a that fear is especially effective in raising demand for regulatory interventions that are economically less costly yet more intrusive in daily life, like mandatory mask mandates, and that fear is somewhat less effective in raising demand for most costly measures like stay-at-home orders. Thus, fear is especially effective in raising demand for regulations that protect against contagion when these regulations impose psychological rather than economic costs on the regulated. By overcoming emotional hurdles against mask mandates fear nudges respondents into demanding regulation they might otherwise resist.

In the Appendix we also lay out the estimates of our interpersonal trust models (specification 2) in Table B5. Subjects with high levels of generalized trust (Panel A) and subjects who believe others will comply with the rules (Panel B), are found to demand less Covid-19 regulation of all sorts, from general regulation in column 1 to religious service bans in column 7. In short, we find  $\beta_1 < 0$  across the board, in line with our somewhat counterintuitive hypothesis about interpersonal trust. In our theoretical framework, and in line with the predictions of Aghion et al. (2010), this happens because trusting individuals expect others will behave properly to protect them from infection and therefore demand less regulation. Higher trust is associated with lower demand for regulation for all types of Covid-19 regulations. Figure A7b reveals that the effect of trust in the compliance of others on demand for regulation does varies consistently across different types of regulatory interventions. As with fear, the effect of trust in the compliance of others on reducing demand for regulatory measures is less pronounced with more costly measures. Trust in the compliance of others, that is, is less effective in reducing demand for most costly measures like stay-at-home orders, while it is much more effective in reducing demand for regulation with less costly measures like mask mandates.

Table 2. Baseline results: Fear of getting infected

	<i>Dependent variable</i>						
	(1) Demand for regulation	(2) Mask wearing	(3) Restrictions on cafes, shops and services	(4) Mass gathering ban	(5) Lockdown	(6) Stay home	(7) Religious services ban
Fear	1.10*** (0.03)	1.70*** (0.03)	1.40*** (0.02)	1.50*** (0.02)	1.35*** (0.02)	1.10*** (0.02)	1.20*** (0.03)
Female	0.09** (0.04)	0.17*** (0.05)	-0.05 (0.06)	0.18*** (0.05)	0.02 (0.05)	0.13*** (0.05)	-0.12** (0.05)
Age	-0.00* (0.00)	0.01*** (0.00)	-0.01*** (0.00)	-0.00 (0.00)	-0.02*** (0.00)	-0.01*** (0.00)	0.00 (0.00)
Education FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employment FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Settlement type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	21,463	21,463	21,463	21,463	21,463	21,463	21,463
R-squared	0.14	0.20	0.15	0.18	0.13	0.09	0.11
Number of regions	61	61	61	61	61	61	61

*Note:* Region-level cluster-robust standard errors in parentheses; \*p<0.1, \*\*p<0.05, \*\*\*p<0.01.

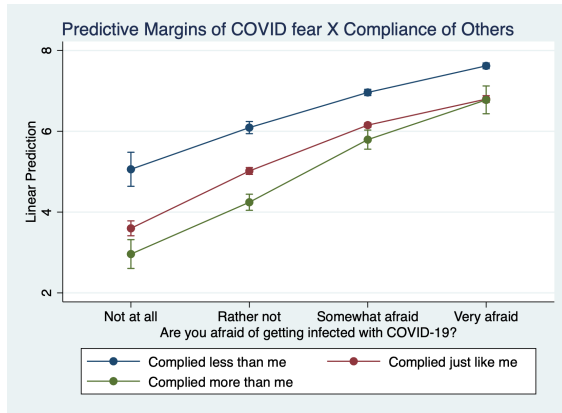


Similarly in the Appendix, we present the estimates of our institutional trust models (specification 2) in Table B6. In contrast to our findings about interpersonal trust, subjects with high levels of trust in institutions demand more, rather than less regulation. The different columns stand for trust in different institutions. We find a positive relationship between institutional trust and demand for regulation across measures of trust in various government institutions, such as trust in the president in column (1), the government (2), the governor (3), and the municipality (4). In short, we find  $\beta_1 > 0$  across the board. These results hold across various forms of regulation from less intrusive forms such as mask wearing (Row 2) to the most severe forms such as mass lockdowns, stay at home orders or religious services bans (rows 5-7) These results corroborate earlier findings of Bargain and Aminjonov (2020) and Dincer (2021). In Figure A7c we see that the effect of trust in the president on demand for regulation is consistently positive and especially pronounced in making people accept mandatory mask mandates and stay-at-home mandates.

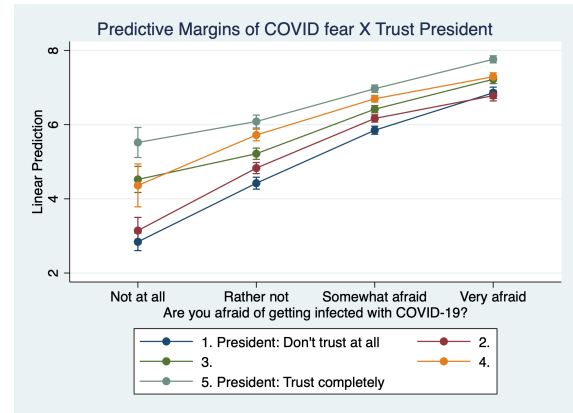
Table 3 presents the results of estimating a specification 3, where we allow trust to moderate the effect of fear. We observe that the main effect of a self-reported higher fear of being infected with Covid-19 translates into higher demand for Covid-19-regulation across the board. Fear also shows interesting interactions, however, with the other variables. Our results show that while fear of Covid-19 does not significantly moderate the effect of generalized trust, it does so for trust in the compliance of others with Covid-19 restrictions (Table 3, Column 2 and Figure 1a). People who fear catching the virus, *ceteris paribus*, will be less swayed by trust in others to reduce their demand for Covid-19 regulation.

In columns (3), (4), (5) and (6) of Table 3 and Figure 1b we see that fear of contracting Covid-19 also moderates the effect of trust in institutions on the demand for regulation. In this sense, fear of Covid-19 can be thought of as a substitute for institutional trust in the effect on demand for regulation: even subjects with little trust in their local, regional or federal government will demand Covid-regulation, provided they find the prospect of contracting the disease sufficiently frightening. In this way even little-trusted governments could be successful in implementing non-pharmaceutical measures to contain a severe pandemic, as long as they do not artificially reduce the fear of contracting the virus by sweeping the severity of the problem under a carpet of reassuring propaganda.

One concern in our study is that the fear of contracting the virus is not randomly assigned. To reduce the risk of endogeneity bias, we resort to a strategy of instrumenting fear of contracting the virus. We use two vectors of instrumental variables that, however imperfectly, could affect the demand for regulation mainly through their effect on fear and satisfy the exclusion restriction. The first group of variables is personal experience with Covid-19. We know whether subjects contracted the virus themselves, know about cases in their own household, among friends, among more distant relatives, among other people, or not at all. The logic here is that, while official statistics in Russia notoriously understate the true incidence of infection, people may still



(a) Covid-19 fear × Compliance of Others



(b) Covid-19 fear × Trust President

Figure 1. Demand for regulation margins plot: Covid-19 fear (presented are results for columns (2) and (4) of Table 3)

Table 3. Demand for regulation: Moderating effect of fear

	<i>Dependent variable: Demand for regulation</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Trust:</i>	Generalized	Compliance of others	President	Government	Governor	Municipality
Fear	1.06*** (0.03)	1.00*** (0.03)	1.42*** (0.05)	1.41*** (0.05)	1.49*** (0.05)	1.47*** (0.06)
Trust	-0.37** (0.18)	-1.35*** (0.12)	0.72*** (0.04)	0.82*** (0.05)	0.82*** (0.05)	0.77*** (0.06)
Fear × Trust	0.09 (0.06)	0.20*** (0.04)	-0.13*** (0.01)	-0.16*** (0.02)	-0.18*** (0.01)	-0.17*** (0.02)
Controls and FEs <sup>†</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Observations	20,284	21,463	19,443	19,786	20,132	19,209
R-squared	0.14	0.18	0.18	0.18	0.17	0.17
Number of regions	61	61	61	61	61	61

*Note:* Region-level cluster-robust standard errors; \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . <sup>†</sup>Controls included: age, gender, settlement type, education, employment status, income, date and region fixed effects.

have different personal experiences with the disease that are close to random. This is particularly true early in the pandemic when uncertainty about the sources of contagion was high. This largely random exposure to catching the virus may drive differences in fear which in turn affect variation in the demand for regulation. Those who catch the virus or know about cases around them may express different levels of fear than a neighbor who does not. It is unlikely that having a personal experience with Covid-19 influences demand for regulation directly and not through its logical effect on fear.

A second battery of variables asks respondents about their reasons for using the Internet, be it chatting with friends, reading news or verifying news with different sources, entertainment, banking, education, work, getting additional income, online purchase and other. We expect that people who use the Internet to chat, get news, or verify information are more likely to pick up signals about the severity of the pandemic than respondents who use the Internet for more mundane objectives like work, shopping, entertainment or banking. Using the Internet to get information should affect demand for regulation only through its effect on fear of catching the disease rather through a direct effect of simply using the Internet. Provided this assumption is correct, we are able to satisfy the exclusion restriction. We also find both sets of instrumental variables to be uncorrelated with both institutional and interpersonal trust, greatly reducing the chances that our instrumental variables would affect demand for regulation through our trust measures. Finally, while fear of contracting the virus is correlated neither with official death rates nor with excess mortality estimates<sup>7</sup>, our instruments, although imperfect, do explain variation in fear.

In Table 4 we repeat the baseline regression of Table 2 in a two stage least squares regression with the level of Covid-19 fear instrumented by a battery of individual instruments. In the first stage regression (column 3) we instrument the individual fear of contracting the disease with individual instruments capturing respondents' level of personal experience with Covid-19 and their reported reasons for using the Internet. We find, interestingly, that very direct experience of survivors (respondent or member of respondent's household infected) on average leads to less fear, while more distant, hearsay experience is related to more fear. Also, individuals who use the Internet to chat and get news, as expected, are more likely to fear the virus. The second stage regression, that employs the thus instrumented level of fear, confirms our earlier results that demand for regulation is strongly and positively related to fear of contracting the virus, in support of the thesis that our baseline results are not driven primarily by endogeneity concerns.

In Table 5 we use the same instrumentation strategy to repeat the interacted regression of Table 3. In all six columns, the positive effect of fear on demand for regulation is clearly robust. The estimates of the instrumented specification also confirm the negative effect of trust in the compliance of others and the positive effects of trust in the president, the government, the governor of the region or the head of municipality on

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<sup>7</sup>Results available upon request.

Table 4. Demand for regulation: Instrumenting fear

	<i>Dependent variable: Demand for regulation</i>		
	(1) OLS	(2) 2SLS	(3) First Stage
Fear	1.10*** (0.03)	2.00*** (0.10)	
<i>Covid-19 cases:</i>			
Had Covid-19 myself			-0.16*** (0.03)
In my household			-0.07** (0.03)
Among friends			0.10*** (0.01)
Among distant relatives			0.15*** (0.01)
Among other people			0.05*** (0.01)
Not aware of any cases			-0.44*** (0.02)
<i>Internet use:</i>			
Chatting			0.03*** (0.02)
Getting news			0.17*** (0.01)
News verification			0.06*** (0.01)
Entertainment			-0.03*** (0.01)
Banking			-0.01 (0.02)
Education			-0.07*** (0.01)
Work			-0.01 (0.01)
Additional income			-0.00 (0.01)
Online purchases			0.01 (0.01)
Other			-0.10 (0.10)
Controls and FEs <sup>†</sup>	Yes	Yes	Yes
Observations	21,463	21,463	21,463
R-squared	0.14		0.08
Wald $\chi^2$		3,881***	

*Note:* Region-level cluster-robust standard errors; \*p<0.1, \*\*p<0.05, \*\*\*p<0.01. <sup>†</sup>Controls included: age, gender, settlement type, education, employment status, income, date and region fixed effects.

Table 5. Demand for regulation: Instrumenting fear and trust interactions

<i>Trust:</i>	<i>Dependent variable: Demand for regulation</i>					
	(1) Generalized	(2) Compliance of others	(3) President	(4) Government	(5) Governor	(6) Municipality
Fear	2.06*** (0.12)	1.87*** (0.10)	2.32*** (0.16)	2.39*** (0.14)	2.38*** (0.15)	2.43*** (0.16)
Trust	1.11* (0.62)	-0.86** (0.37)	0.87*** (0.17)	1.08*** (0.21)	0.95*** (0.21)	0.99*** (0.21)
Fear × Trust	-0.37* (0.21)	0.14 (0.13)	-0.21*** (0.06)	-0.27*** (0.07)	-0.24*** (0.07)	-0.26*** (0.07)
Controls and FEs <sup>†</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Observations	20,284	21,463	19,443	19,786	20,132	19,209
Wald $\chi^2$	48173***	60325***	56127***	51279***	65815***	45807***
Number of regions	61	61	61	61	61	61

*Note:* Region-level cluster-robust standard errors; \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . <sup>†</sup>Controls included: age, gender, settlement type, education, employment status, income, date and region fixed effects. Instruments: Covid-19 cases and Internet use dummies and their interactions with the respective trust measures.

demand for regulation. Also, the earlier finding that fear and institutional trust are substitutes in their effect on demand for regulation is fully robust to using instruments for fear (columns 3 to 6). In contrast, the earlier finding that fear and interpersonal trust are complements in their effect on demand for regulation is not confirmed in this IV regression.

## 7. Conclusion

In response to the global pandemic, governments have adopted many new regulations that curtail individual freedom while also promising collective benefits. Some citizens supported these moves, while others vehemently opposed them. To better understand this variation and to evaluate theoretical arguments about the sources of demand for regulation, we study how fear and trust affect the demand for government regulation using an online survey of more than 23,000 respondents in 61 Russian regions conducted at the end of 2020.

We contribute to existing literature by focusing on the impact of fear on demand for regulation. We find that both greater fear of catching the virus and higher trust in government institutions are associated with greater demand for regulation, while higher interpersonal trust is associated with lower demand for regulation. More importantly, we find that fear moderates the impact of institutional trust on demand for regulation. When fear is low, institutional trust is associated with greater demand for state regulation. However, as fear of catching the virus grows, so does demand for state regulation. Eventually, even those who completely distrust state institutions express greater demand for state regulation, provided their fear of the disease is sufficiently high. The finding that fear and institutional trust are effectively substitutes in their effect on

demand for regulation is robust to instrumenting fear of infection with individual Covid-19 experiences and media consumption profiles. We also analyzed whether fear moderates the relationship between interpersonal trust and demand for regulation, but found that this moderating effect was not robust.

Our work highlights the direct impact of fear on regulation, but also identifies a condition under which existing literature that focuses on various forms of trust can and cannot account for demand for regulation. Existing accounts work well when fear is low, but not when it is high. More generally, our study suggests the benefits of incorporating fear into studies of demand for state regulation.

Our study also contributes to our understanding of demand for regulation by improving measurement. Rather than focusing on indicators of demand for regulation that are far removed from the experience of respondents, we measure attitudes towards a high-stakes issue that is difficult for respondents to ignore and about which they have likely given much thought. Moreover, we are able to measure demand for more and less invasive forms of regulation that provides nuance to our analysis.

More broadly, our findings are consistent with market failure theories of demand for regulation, as we find that those who fear the consequences of policy failure express higher levels of demand for state intervention. In addition, that respondents differentiate between more and less invasive forms of regulation indicates a considerable degree of sophistication over policy choices. This finding casts doubt on the assumption of government failure theories that individuals are largely ignorant of regulatory policy. At least for a high-stakes issue like Covid-19, individuals appear to be able to develop coherent preferences over policy details.

Finally, we contribute to understanding of the Covid-19 pandemic and popular response for the regulations imposed to contain the spread of the coronavirus. Our results suggest that revealing the truth about the severity of the disease is crucial as it will make people more fearful and thus more accepting of the government intervention in their daily lives even if they do not generally trust the government. It could save many lives and avoid costly forms of regulation.

Whether these results generalize to other types of demand for regulation is unclear. The findings may be especially relevant for types of regulation in which individual fear is high and outcomes depend on the behavior of others, such as potential environmental disasters, crime, and public health issues. This is a topic for future research.

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## Appendices

### Appendix A. Figures

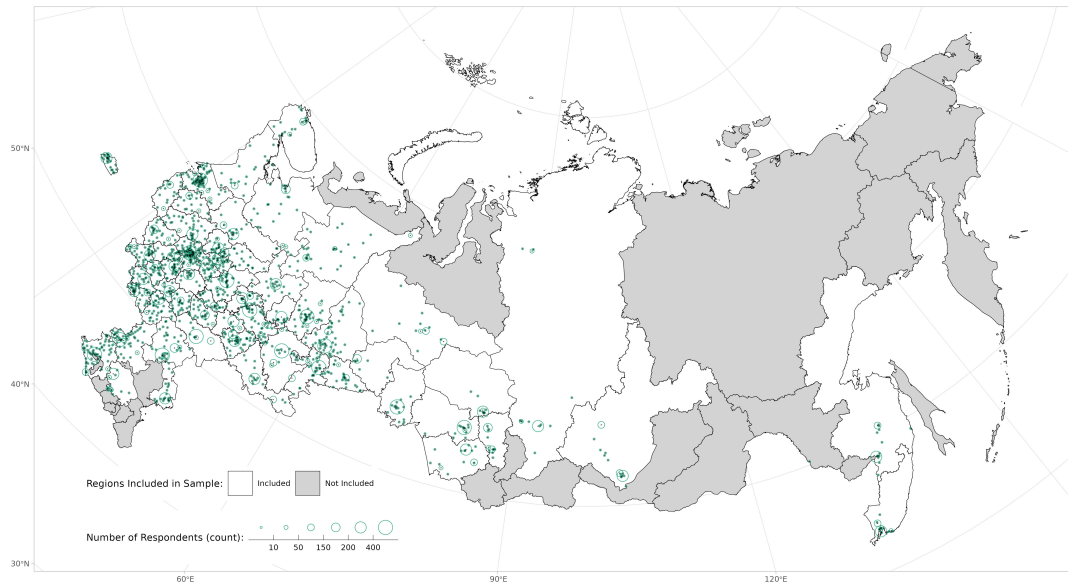


Figure A1. Regions and localities included in a sample

### Demand for Regulation

In general, how stringent should the measures imposed by the state be to contain the spread of the coronavirus infection?

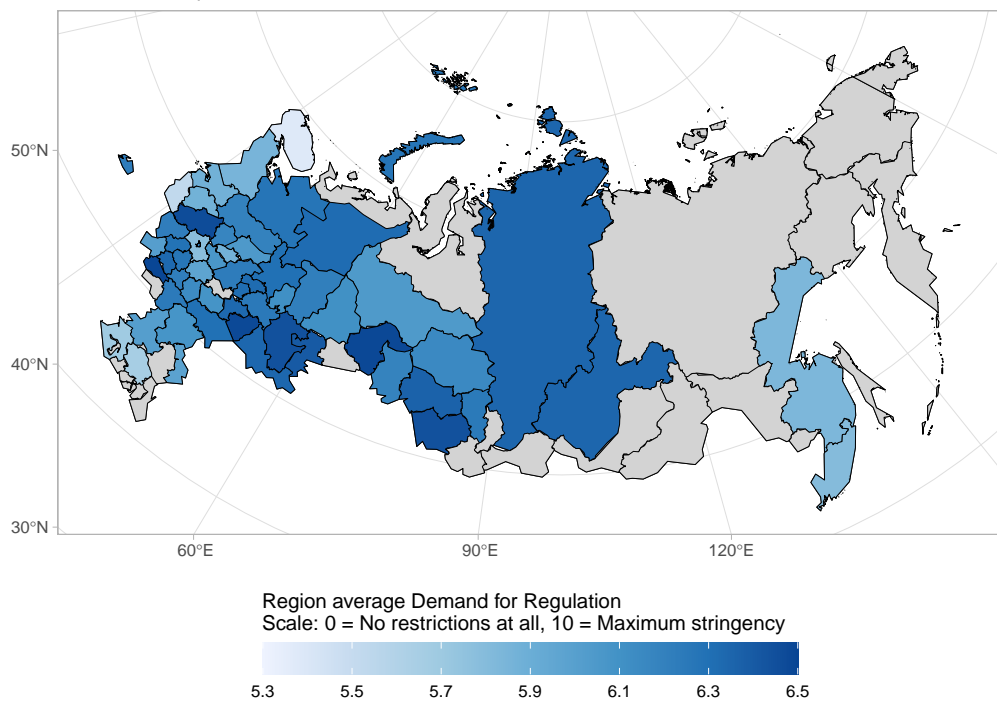


Figure A2. Demand for Covid-19 regulation in Russian regions

### Covid-19 fear

Are you afraid to get infected with the coronavirus?

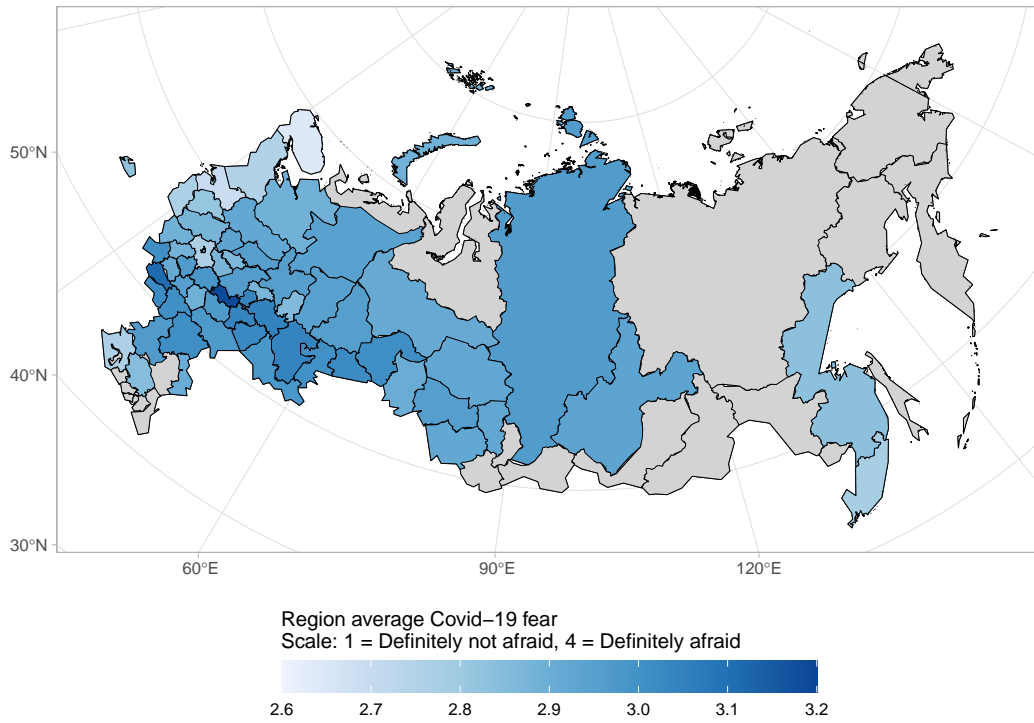


Figure A3. Covid-19 fear in Russian regions

### Institutional Trust

How much do you trust the President of Russia?

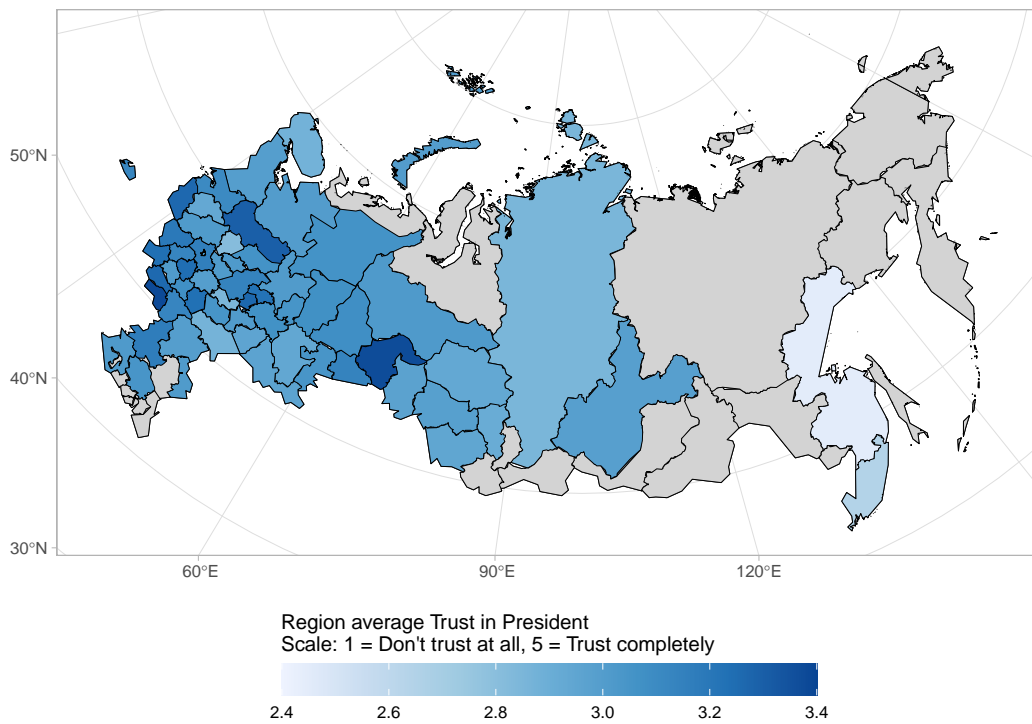


Figure A4. Trust to the president in Russian regions

### Compliance of others

To what extent did people around you comply with the self-isolation regime?

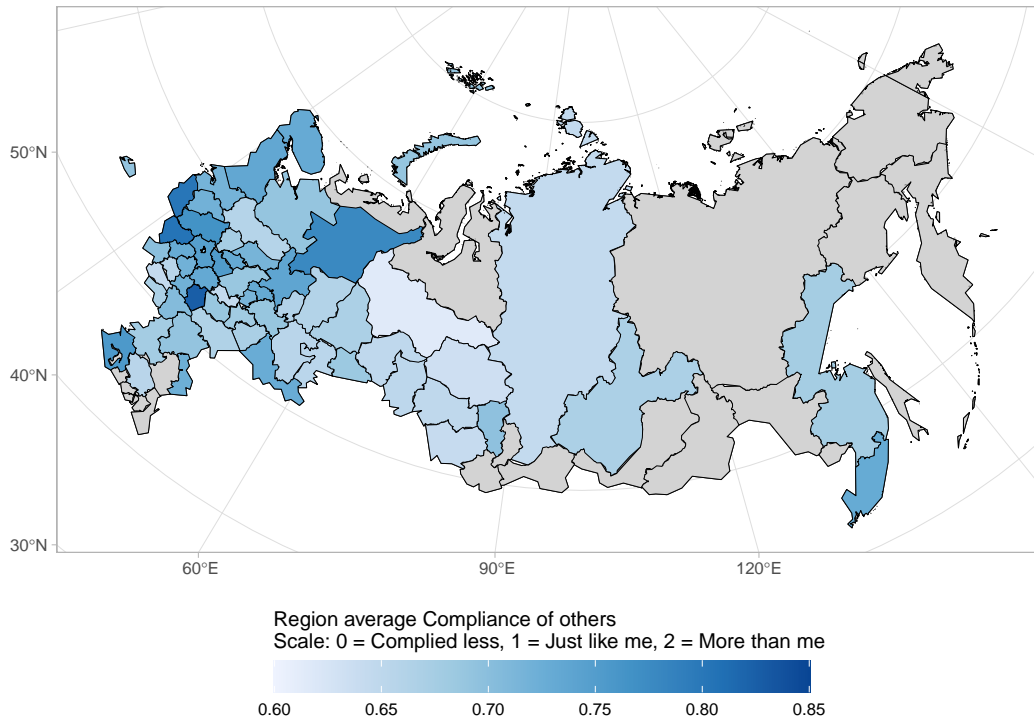


Figure A5. Trust in compliance of others with Covid-19 regulations in Russian regions

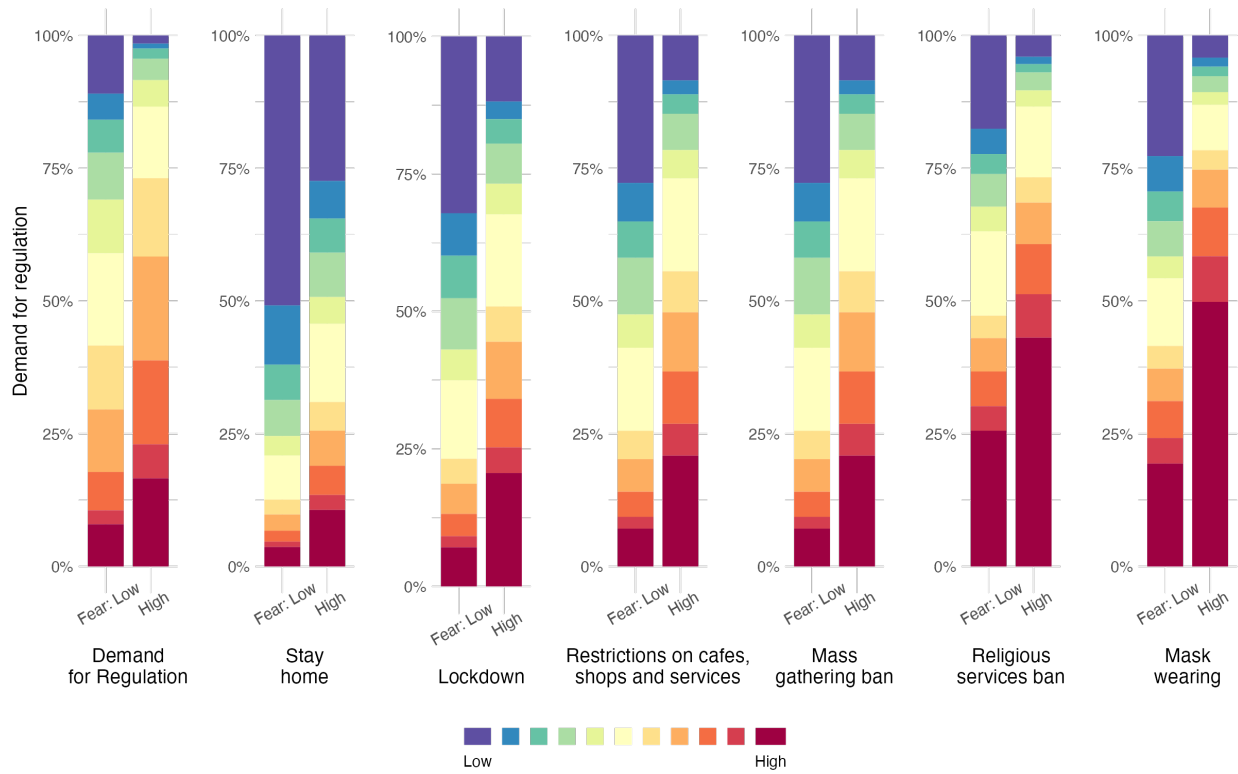
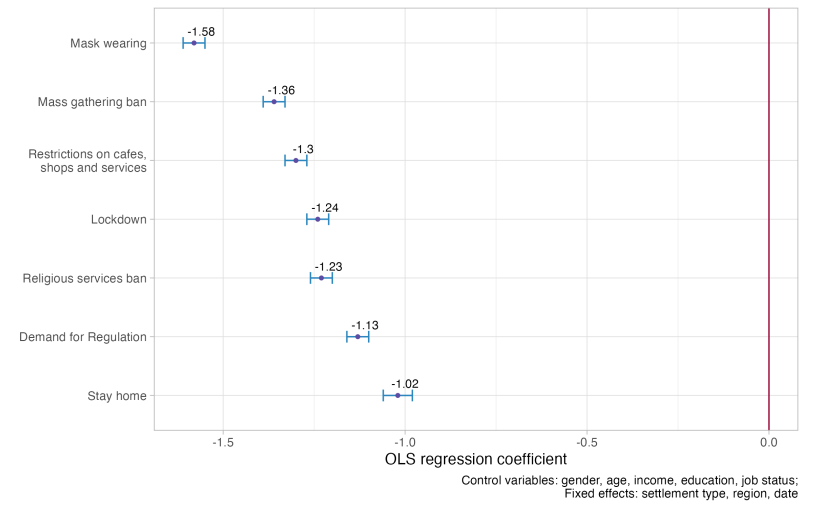


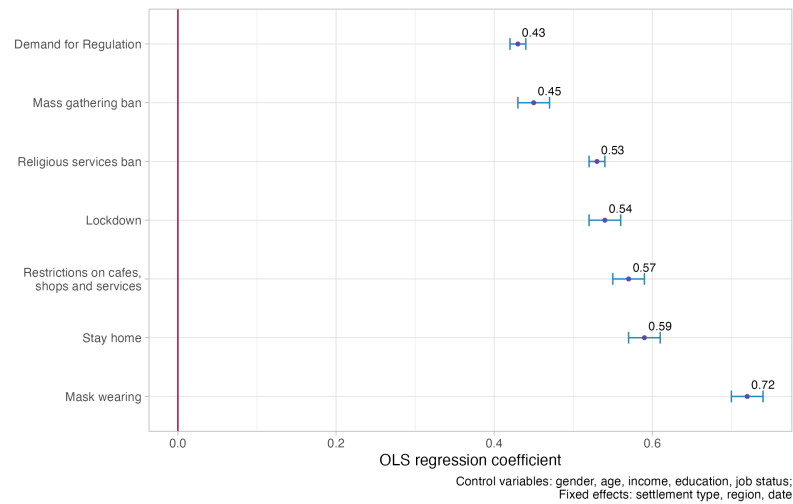
Figure A6. Relation between Covid-19 fear and demand for government regulation



(a) Effect of Covid-19 fear on demand for regulation



(b) Effect of compliance of others on demand for regulation



(c) Effect of trust in president on demand for regulation

Figure A7. Effects of fear and trust on demand for various regulatory measures



## Appendix B. Tables

Table B1. Demand for regulation variables

Variable	Survey question	Coding
Demand for regulation	<i>In general, how stringent should the measures imposed by the state be to contain the spread of the coronavirus infection?</i>	On a scale from 0 to 10, where 0 means minimum stringency of measures or no restrictions at all, while 10 means maximum stringency of measures.
	<i>How justifiable you think are the following temporary measures aimed to contain the spread of Covid-19?</i>	
Mask wearing	Mandatory wearing of masks in public places.	On a scale from 0 to 10, where 0 corresponds to absolutely non-justifiable, while 10 to absolutely justifiable.
Restrictions on cafes, shops and services	Restriction on the work of hairdressers, cafes, non-grocery stores.	
Mass gathering ban	Ban on holding sport and entertainment events	
Lockdown	Restrictions on the work of ALL enterprises and organizations, except for the vital.	
Stay home	Ban on leaving the house without special permission	
Religious services ban	Ban on the attendance of religious events	

Table B2. Fear and trust variables

Variable	Survey question	Coding
<i>Fear of getting infected</i>		
Fear	<i>Are you afraid to get infected with the coronavirus?</i>	1. Definitely no 2. Rather no 3. Rather yes 4. Definitely yes
<i>Interpersonal trust</i>		
Generalized trust	<i>Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?</i>	1. Most people can be trusted. 0. Need to be very careful.
Compliance of others	<i>In your opinion, to what extent did people around you comply with the self-isolation regime?</i>	1. Complied less 2. Just like me 3. Complied more
<i>Institutional trust</i>		
	<i>How much do you trust...</i>	
President	The president of Russia?	On a scale from 1 to 5, where 1 means don't trust at all, while 5 means trust completely.
Government	The government of Russia?	
Governor	The governor of your region?	
Municipality	The governor of your municipality?	

Table B3. Instrumental variables

Variable	Survey question	Coding
<i>Cases</i>		
	<i>Do you know about any confirmed Covid-19 cases?</i>	
Had Covid-19 myself	Had Covid-19 myself	Set of dummy variables with 1 attributed to the answers "Yes" and "0" meaning that respondent does not know about any cases
In my household	Yes, among relatives who live with me	
Among friends	Yes, among friends and colleagues	
Among distant relatives	Yes, among relatives who don't live with me	
Among other people	Yes, among people I don't know personally	
No	Not aware of any cases	
<i>Internet use</i>		
	<i>What for do you usually use the Internet? (Please select all that apply)</i>	
Chatting	Chatting with friends and acquaintances	Set of dummy variables
Getting news	Getting news	
News verification	Checking news from other sources	
Entertainment	Movies, books, games	
Banking	Banking and bill payment	
Education	Learning and self-education	
Work	Work, professional duties	
Additional income	To get additional income	
Online purchases	Purchasing goods and services	
Other	Other	

Table B4. Summary statistics for the main variables

	Sum	Mean	SD	Min	Max	N
<i>Demand for regulation</i>						
Demand for regulation	142,385	6.17	2.63	0	10	23,064
Mask wearing	158,341	6.87	3.49	0	10	23,064
Restrictions on cafes, shops and services	121,250	5.26	3.32	0	10	23,064
Mass gathering ban	158,850	6.89	3.23	0	10	23,064
Lockdown	113,823	4.94	3.45	0	10	23,064
Stay home	76,162	3.30	3.35	0	10	23,064
Religious services ban	158,545	6.87	3.30	0	10	23,064
<i>Interpersonal trust</i>						
Generalized trust	25,306	1.17	0.38	1	2	21,613
Compliance of others	39,069	1.69	0.62	1	3	23,064
<i>Institutional trust</i>						
President	62,903	3.04	1.47	1	5	20,705
Government	53,453	2.53	1.33	1	5	21,102
Governor	56,140	2.61	1.32	1	5	21,479
Municipality	50,689	2.47	1.25	1	5	20,490
<i>Covid-19 fear</i>						
Fear	62,979	2.93	0.89	1	4	21,463
<i>Covid-19 cases</i>						
Had Covid-19 myself	1,868	0.08	0.27	0	1	23,064
In my household	1,529	0.07	0.25	0	1	23,064
Among friends	6,354	0.28	0.45	0	1	23,064
Among distant relatives	13,302	0.58	0.49	0	1	23,064
Among other people	9,206	0.40	0.49	0	1	23,064
Not aware of any cases	1,993	0.09	0.28	0	1	23,064
<i>Internet use</i>						
Chatting	18,545	0.80	0.40	0	1	23,064
Getting news	17,144	0.74	0.44	0	1	23,064
News verification	11,971	0.52	0.50	0	1	23,064
Entertainment	15,268	0.66	0.47	0	1	23,064
Banking	17,228	0.75	0.43	0	1	23,064
Education	11,954	0.52	0.50	0	1	23,064
Work	8,439	0.37	0.48	0	1	23,064
Additional income	8,755	0.38	0.49	0	1	23,064
Online purchases	16,420	0.71	0.45	0	1	23,064
Other	76	0.00	0.06	0	1	23,064

Table B5. Results: Interpersonal trust

	<i>Dependent variable</i>						
	(1) Demand for regulation	(2) Mask wearing	(3) Restrictions on cafes, shops and services	(4) Mass gathering ban	(5) Lockdown	(6) Stay home	(7) Religious services ban
<i>Panel A</i>							
Generalized trust	-0.30*** (0.05)	-0.16** (0.07)	-0.31*** (0.06)	-0.36*** (0.06)	-0.34*** (0.06)	-0.23*** (0.07)	-0.42*** (0.06)
Female	0.29*** (0.04)	0.48*** (0.05)	0.20*** (0.06)	0.43*** (0.05)	0.25*** (0.06)	0.32*** (0.05)	0.09** (0.04)
Age	0.00* (0.00)	0.02*** (0.00)	-0.00 (0.00)	0.01*** (0.00)	-0.01*** (0.00)	-0.01** (0.00)	0.01*** (0.00)
Observations	21,613	21,613	21,613	21,613	21,613	21,613	21,613
R-squared	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<i>Panel B</i>							
Compliance of others	-1.13*** (0.03)	-1.58*** (0.03)	-1.30*** (0.03)	-1.36*** (0.03)	-1.24*** (0.03)	-1.02*** (0.04)	-1.23*** (0.03)
Female	0.22*** (0.04)	0.37*** (0.05)	0.10* (0.05)	0.34*** (0.05)	0.16*** (0.05)	0.25*** (0.05)	-0.01 (0.04)
Age	0.00** (0.00)	0.03*** (0.00)	0.00 (0.00)	0.01*** (0.00)	-0.01*** (0.00)	-0.01** (0.00)	0.01*** (0.00)
Observations	23,064	23,064	23,064	23,064	23,064	23,064	23,064
R-squared	0.08	0.09	0.07	0.08	0.06	0.04	0.06
Education FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employment FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Settlement type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of regions	61	61	61	61	61	61	61

Note: Region-level cluster-robust standard errors in parentheses; \*p<0.1, \*\*p<0.05, \*\*\*p<0.01.

Table B6. Results: Institutional trust

	<i>Dependent variable</i>						
	(1) Demand for regulation	(2) Mask wearing	(3) Restrictions on cafes, shops and services	(4) Mass gathering ban	(5) Lockdown	(6) Stay home	(7) Religious services ban
<i>Panel A</i>							
Trust in government	0.43*** (0.02)	0.56*** (0.01)	0.50*** (0.01)	0.39*** (0.01)	0.46*** (0.02)	0.53*** (0.02)	0.20*** (0.01)
Female	0.10*** (0.02)	0.12*** (0.02)	0.02 (0.02)	0.11*** (0.02)	0.04** (0.02)	0.06*** (0.01)	0.02 (0.02)
Age	-0.00* (0.00)	0.00*** (0.00)	-0.00*** (0.00)	0.00 (0.00)	-0.01*** (0.00)	-0.00*** (0.00)	0.00 (0.00)
Observations	18,219	18,219	18,219	18,219	18,219	18,219	18,219
R-squared	0.05	0.09	0.07	0.05	0.06	0.07	0.02
<i>Panel B</i>							
Trust in president	0.45*** (0.01)	0.58*** (0.01)	0.48*** (0.02)	0.39*** (0.01)	0.44*** (0.02)	0.48*** (0.02)	0.19*** (0.02)
Female	0.08*** (0.02)	0.10*** (0.02)	0.00 (0.02)	0.10*** (0.02)	0.03 (0.02)	0.06*** (0.02)	0.01 (0.02)
Age	-0.00* (0.00)	0.00*** (0.00)	-0.00*** (0.00)	-0.00 (0.00)	-0.01*** (0.00)	-0.00*** (0.00)	0.00 (0.00)
Observations	18,964	18,964	18,964	18,964	18,964	18,964	18,964
R-squared	0.06	0.10	0.06	0.05	0.06	0.06	0.02
Education FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employment FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Settlement type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of regions	61	61	61	61	61	61	61

*Note:* Region-level cluster-robust standard errors; \*p<0.1, \*\*p<0.05, \*\*\*p<0.01. †Controls included: age, gender, settlement type, education level, employment status, income level, region and date fixed effects.

## Appendix C. Parameters of the survey

OMI panel consists mostly of respondents in cities with more than 100,000 inhabitants. However only the most populated regions allow us to have the required sample size with the required parameters in those cities. Thus our sample breaks down into 39 regions where all our parameters could be met (Tables C1 and C2) and 22 regions where additional survey of the population in smaller cities and rural areas is needed in order to meet the criteria (Tables C3 and C4). Finally, for the sake of comparison, we provide an additional survey in cities with a population of less than 100,000 (Table C5).

1. The first part includes at least 16,550 respondents in 39 regions. All respondents surveyed should live in cities with more than 100,000 inhabitants. This survey consists of two sets which differ in quotas for age, gender and education.
  - (a) The first set includes 28 regions that are presented in Table C1. The following parameters should be satisfied in each of these regions:
    - i. At least 40 per cent men
    - ii. At least 40 per cent do not have a university degree
    - iii. At least 3 per cent over 55 years old
    - iv. At least 10 per cent at the age of 18-24 years old
  - (b) The second set includes 11 regions that are presented in Table C2. The following parameters should be satisfied in each of these regions (these parameters are less strict than in the first set due to the limitations of the OMI panel):
    - i. At least 30 per cent men
    - ii. At least 40 per cent do not have a university degree
    - iii. At least 3 per cent over 55 years old
    - iv. At least 10 per cent at the age of 18-24 years old
2. The second part includes at least 5,000 respondents in 22 regions. Respondents are surveyed mostly in cities with more than 100,000 inhabitants however they could be recruited also in smaller cities and villages (e.g. in Leningradskaya oblast there are only cities with a population of less than 1000,000 thus it's not feasible to have a survey in cities with more than 100,000 inhabitants). This part also consists of two sets which differ in quotas for age, gender and education. Overall parameters of this part are less strict than for the first part.

- (a) The first set includes 3,650 respondents in 16 regions that are presented in Table C3. The following parameters should be satisfied in each of the regions:
    - i. At least 30 per cent men
    - ii. At least 40 per cent do not have a university degree
    - iii. At least 2 per cent over 55 years old
    - iv. At least 5 per cent at the age of 18-24 years old
  - (b) The second set includes 1,350 respondents in 6 regions that are presented in Table C4. The following parameters should be satisfied in each of the regions (again they are less strict than for the first set):
    - i. At least 30 per cent men
    - ii. At least 35 per cent do not have a university degree
    - iii. At least 2 per cent over 55 years old
    - iv. At least 5 per cent at the age of 18-24 years old
3. The additional survey in cities with less than 100,000 inhabitants includes at least 1270 respondents in 17 regions that are presented in Table C5. Additionally, at least 30 people are interviewed in those of the 17 regions indicated in Table C5 in which the number of respondents was less than 100. Moreover, the following parameters should be satisfied in each of the regions:
- i. At least 30 per cent men
  - ii. At least 35 per cent do not have a university degree
  - iii. At least 2 per cent over 55 years old
  - iv. At least 5 per at the age of 18-24 years old



Regions	N of respondents in a region	Minimum N of respondents			
		Male	18-24 years	Over 55 years	W/o a university degree
Altai Krai	350	140	35	11	140
The Republic of Bashkortostan	570	228	57	17	228
Volgograd Oblast	570	228	57	17	228
Voronezh Oblast	570	228	57	17	228
Irkutsk Oblast	350	140	35	11	140
Kemerovo Oblast	350	140	35	11	140
Krasnodar Krai	570	228	57	17	228
Krasnoyarsk Krai	350	140	35	11	140
Moscow	570	228	57	17	228
Moscow Oblast	350	140	35	11	140
Nizhny Novgorod Oblast	570	228	57	17	228
Novosibirsk Oblast	570	228	57	17	228
Omsk Oblast	570	228	57	17	228
Orenburg Oblast	350	123	35	11	140
Perm Krai	570	228	57	17	228
Rostov Oblast	570	228	57	17	228
Samara Oblast	570	228	57	17	228
Saint-Petersburg	570	228	57	17	228
Saratov Oblast	570	228	57	17	228
Sverdlovsk Oblast	570	228	57	17	228
Stavropol Krai	350	140	35	11	140
The Republic of Tatarstan	570	228	57	17	228
The Udmurt Republic	350	105	35	11	140
Ulyanovsk Oblast	350	105	35	11	140
Chelyabinsk Oblast	570	228	57	17	228
Yaroslavl Oblast	350	140	35	11	140
Tyumen Oblast and Khanty-Mansi AO	350	140	35	11	140
Total number of respondents	12970	5101	1297	393	5188

Table C1. Regions and parameters for the first set of the first part

Regions	N of respondents in a region	Minimum N of respondents			
		Male	18-24 years	Over 55 years	W/o a university degree
Belgorod Oblast	350	105	35	11	140
Vladimir Oblast	340	102	34	10	136
Vologda Oblast	350	105	35	11	140
Kirov Oblast	325	98	33	10	130
Lipetsk Oblast	350	105	35	11	140
Primorsky Krai	350	105	35	11	140
Ryazan Oblast	330	99	33	10	132
Tomsk Oblast	315	95	32	9	126
Tula Oblast	350	105	35	11	140
Khabarovsk Krai	320	96	32	10	128
The Chuvash Republic	350	105	35	11	140
Total number of respondents	3730	1120	374	115	1492

Table C2. Regions and parameters for the second set of the first part

Regions	N of respondents in a region	Minimum N of respondents			
		Male	18-24 years	Over 55 years	W/o a university degree
Kurgan Oblast	200	60	10	4	80
Novgorod Oblast	150	45	8	3	60
Pskov Oblast	150	45	8	3	60
Archangelsk Oblast	300	90	15	6	120
Ivanovo Oblast	300	90	15	6	120
Leningrad Oblast	300	90	15	6	120
Tver Oblast	300	90	15	6	120
Astrakhan Oblast	250	75	13	5	100
Kaliningrad Oblast	250	75	13	5	100
Smolensk Oblast	250	75	13	5	100
Kaluga Oblast	200	60	10	4	80
The Komi Republic	200	60	10	4	80
Kostroma Oblast	200	60	10	4	80
The Republic of Karelia	150	45	8	3	60
The Mari El Republic	150	45	8	3	60
Murmansk Oblast	150	45	8	3	60
Total number of respondents	3500	1050	179	70	1400

Table C3. Regions and parameters for the first set of the second part

Regions	N of respondents in a region	Minimum N of respondents			
		Male	18-24 years	Over 55 years	W/o a university degree
Tambov Oblast	200	60	10	4	70
Orel Oblast	150	45	8	3	53
Bryansk Oblast	300	90	15	6	105
Kursk Oblast	250	75	13	5	88
Penza Oblast	250	75	13	5	88
The Republic of Mordovia	200	90	15	6	105
Total number of respondents	1350	435	74	29	509

Table C4. Regions and parameters for the second set of the second part

Regions	Minimum number of respondents
Moscow Oblast	100
Sverdlovsk Oblast	100
Krasnodar Krai	100
Samara Oblast	70
Nizhny Novgorod Oblast	100
Chelyabinsk Oblast	100
Volgograd Oblast	70
Yaroslavl Oblast	30
Tula Oblast	60
Kirov Oblast	50
Vladimir Oblast	60
Voronezh Oblast	80
Belgorod Oblast	50
Rostov Oblast	100
The Republic of Tatarstan	100
Perm Krai	100
Total number of respondents	1270

Table C5. Regions and parameters for the additional survey