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Paul Bokern, Jona Linde, Arno Riedl, Peter Werner

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**Abstract**

Using incentivized decision tasks, we elicit risk, ambiguity, time and pro-social preferences in a heterogeneous sample from the Dutch population, directly before and over a one-year period during the COVID-19 pandemic in the Netherlands, including two lockdown phases. This allows us to draw causal inferences on how the Corona crisis affects preferences. By controlling for heterogeneity among participants' exposure to the COVID-19 crisis in a variety of domains we can also analyze if and how preferences respond to the degree an individual is affected by the pandemic. We find that economic preferences remain remarkably stable during the COVID-19 pandemic. Comparing preferences before the start and during the pandemic, we do not observe robust differences in any of the elicited preferences. Moreover, individual differences in the exposure to the crisis in the health and the career domain and differences in beliefs about the duration of the crisis do not seem to affect preferences. At the same time, we observe some shifts in risk and time preferences among participants with a high exposure to the crisis in the financial domain.

*Paul Bokern: Netspar & Maastricht University, Department of Microeconomics and Public Economics; Jona Linde: Netspar & Maastricht University,Department of Microeconomics and Public Economics; Arno Riedl (corresponding author): CESifo, IZA, Netspar & Maastricht University, Department of Microeconomics and Public Economics, P.O. Box 616, 6200 MD Maastricht, the Netherlands, a.riedl@maastrichtuniversity.nl; Peter Werner: Netspar & Maastricht University, Department of Microeconomics and Public Economics. Financial support from Netspar through the grant "Understanding and improving pension savings by combining incentivized experiments, surveys, and administrative big data – A general employed population sample with a focus on the self-employed" and from the Limburg University Fund/SWOL is gratefully acknowledged.

# 1 Introduction

The emergence of the COVID-19 pandemic at the beginning of 2020 will shape the world-wide economic conditions for years to come. In addition to the substantial health risks associated with COVID-19, the pandemic already has severe detrimental impact on the economy in many domains. Negative consequences of the crisis may emerge not only through the reduction of consumer demand, increases in unemployment rates, changes in labor conditions, and shocks on financial markets, but also in the social domain, for example, related to well-being and mental health (Brodeur et al., 2020 survey the literature). Insights from the social and behavioral sciences are an important source of knowledge for governments trying to cope with the negative societal effects of the crisis (Van Bavel et al., 2020 provide an extensive discussion). Thorough insights into preferences and beliefs is of vital importance for the design of effective polices, as indicated by the evidence for the heterogeneity in citizens' beliefs about the crisis and in the willingness to follow behavioral measures against the pandemic (see, among others, Allcott et al., 2020; Barrios and Hochberg, 2020; Fan et al., 2020).

As the evolution of the COVID-19 pandemic requires continuous policy adjustments, it is important to monitor how preferences and beliefs might change throughout the crisis. We therefore elicit an extensive set of preference measures within a large population sample from the Netherlands at different points in time before and during the pandemic. In altogether four waves of controlled online experiments, we collect measures for the risk, ambiguity, time and solidarity preferences of Dutch citizens. Our first experimental wave was conducted before the start of the COVID-19 crisis; the second, third and fourth wave took place during the first and the second lockdown phase in the Netherlands. Altogether, our experimental waves cover a period of more than one year of the COVID-19 crisis. Comparing data from the waves during the crisis with data elicited before the start of the pandemic enables us to identify causal effects of the crisis on preferences. In addition, with the data elicited during the crisis, we analyze if and how differences in the individual exposure to COVID-19 are correlated with differences in economic and social preferences.

From a theoretical perspective, preferences may respond to external circumstances, such as economic incentives and the environment a decision-maker is confronted with (Bowles and Polania-Reyes, 2012). Also, laboratory experiments show that previous exposure to economic institutions may have spillover effects on behavior (see, for example, Brandts and Riedl, 2020; Engl et al., 2017, and the references therein).[1] A possible shift in preferences following the ex-

[1] Recent evidence by Beine et al. (2020) suggests that exposure to a natural disaster, in this case two earth-

perience of the COVID-19 crisis might affect economic behavior in a wide range of domains, in particular in domains linked to longer term economic and social developments that determines a country's recovery from the crisis: Changes in risk, ambiguity or time preferences may affect the way citizens save and invest, with both micro- and macroeconomic consequences for wealth accumulation and productivity. For instance, risk preferences are found to be related to investing and becoming self-employed (Beauchamp et al., 2017; Menkhoff and Sakha, 2017). Time preferences are correlated with savings decisions (Sutter et al., 2013; Falk et al., 2018), wealth (Huffman et al., 2019), and saving and planning for retirement (Clark et al., 2019). Moreover, previous studies have established links between ambiguity preferences and stock market participation (Dimmock et al., 2016) as well as portfolio choices (Bianchi and Tallon, 2019).

Finally, social preferences influence attitudes towards redistributive policies and the willingness to donate money or to volunteer (see, for instance, Falk et al., 2018; Almas et al., 2020. Hence, changes in citizens' social preferences might shift support for welfare programs, potentially including support for those affected by the pandemic, and the attitude towards economic recovery initiatives with distributional consequences.

Despite a growing body of literature analyzing how the Corona crisis affects preferences, to the best of our knowledge, no study so far has investigated the impact of COVID-19 on a wide range of economic and social preference measures within a large non-laboratory population sample. Most of the previous studies are based on student samples that can be expected to be relatively homogeneous concerning the exposure to the crisis and the personal risks associated with COVID-19. Yet, to develop effective policy measures to mitigate the negative impact of the pandemic, it is crucial to consider potential shifts in the economic and social preferences of a broader range of population groups. Next, to the best of our knowledge, no study so far has collected data over a time period of similar length as ours; our data set is based on measures elicited over a time period of more than one year, allowing us to investigate potential medium-term preference responses and to take into account citizens' experience of repeated lockdowns. Moreover, while most previous studies focused on one specific way of preference measurement, we rely on multiple methods for the measurement of risk and time preferences. Finally, besides the measurement of causal effects of the pandemic on preferences across experimental waves, utilizing the data collected before and during the crisis, we can also observe within each experimental wave how various measures for self-stated individual exposure to COVID-19 during the crisis

quakes, leads to increased risk aversion and more impatience among subjects, using data elicited before and after the earthquakes. Chuang and Schechter (2015) review the impact of exogenous shocks on economic preferences more generally.

affect our preference measures.

We find that, while there seem to be short-term fluctuations in some of our measures, by and large economic and social preferences are remarkably stable both during both the first and the second lockdown. Comparing preferences of participants directly before the start of the crisis and at several points up to one year after the start of the first lockdown in the Netherlands, we do not observe robust significant differences in any preference domain. Within the sample of subjects who participated during the pandemic, we find that individual exposure to the crisis in the health and the career domain does not change preferences either. Also, beliefs concerning the duration of the crisis do not significantly affect our preference measures. At the same time, individual exposure in the financial domain seem to shift risk and time preferences somewhat, with stronger effects found for participants whose financial situation become worse during the pandemic.

In Section 2, we review the experimental economics literature that investigates the effect of the COVID-19 crisis on economic preferences. In Section 3 we describe all decision tasks and the experimental implementation in detail. The results are presented in Section 4. Section 5 discusses these results and concludes.

## 2 Related literature

A growing number of studies investigate the link between the Corona crisis and economic and social preferences. First, there is research that establishes links between economics and social preference measures and field behavior of individuals related to measures aimed at mitigating the negative impact of the pandemic. For instance, Alfaro et al. (2020) provide evidence that the distribution of time preferences and altruistic preferences within US cities is correlated with the impact of policy measures to reduce mobility. Müller and Rau (2021) find in a student sample that stated risk and time preferences are significantly correlated with the adherence to behavioral recommendations aimed at preventing the spread of the Corona virus. Also, in a study with a representative sample from Sweden, Campos-Mercade et al. (2021) show that incentivized measures of prosociality (here, the willingness to put someone else at a risk for one's own profit) predict socially responsible field behaviors in the context of the Corona crisis.

Most closely related to the approach of our research, a number of studies focus on the evolution of economic and social preferences during the pandemic. Yet, the evidence is fragmented so far; existing studies are based on a multiplicity of approaches, including both hypothetical and

incentivized decision tasks as well as surveys. First, several studies focus on social preferences and voluntary cooperation. Branas-Garza et al. (2020) investigate generosity (measured by charitable donations) in a sample of Spanish citizens during the initial phase of the crisis and find that generosity decreases with the degree of exposure to the crisis. Buso et al. (2020) find in a sample of Italian students that selfishness of proposer demand in ultimatum games increases with the severity of the lockdown; the effect of the lockdown on cooperativeness in a public goods game depends on individual-specific circumstances. In an extensive study with students from Wuhan in China where the COVID-19 crisis started, Shachat et al. (2020) repeatedly elicit measures for altruism and cooperation both before and over a six-weeks period during the crisis and report a general increase in both measures. Yet, the willingness to cooperate decreases for subjects who were quarantined in Wuhan during the crisis. Also in a sample of Chinese students, Lohmann et al. (2020) elicit prosocial and antisocial behavior in various incentivized experimental tasks and find that higher exposure to COVID-19 (measured by geographical location of the students) does not change prosocial behavior but is associated with more anti-social behavior. Finally, Cappelen et al. (2021) conduct a representative survey among US-citizens and find that making the Corona crisis salient increases stated attitudes towards solidarity, but also the acceptance of luck as a determinant of people's economic situation.

Other studies have considered the impact of the crisis on risk, time and ambiguity preferences, based on diverse methods. These studies have come to partially different conclusions on the impact of the COVID-19 pandemic: Drichoutis and Nayga (2020) elicit risk and time preferences among Greek students using multiple price list-formats both before and in two waves during the crisis and report that the preferences remain stable across all three waves. Likewise, Angrisani et al. (2020) collect risk preferences of students and professional traders with the Bomb Risk Elicitation Task (Crosetto and Filippin, 2013) before and at the beginning of the crisis and report no overall preference change.[2] Lohmann et al. (2020) measure risk preferences with as lottery choice task by Eckel and Grossman (2002) and the investment task by Gneezy and Potters (1997). Moreover, they measure time preferences with Convex Time Budgets (Andreoni and Sprenger, 2012a). On the aggregate, exposure to COVID-19 does not significantly affect preferences whereas there is some evidence for heterogeneous responses among men and women.[3] Harrison et al. (2020) measure atemporal risk preferences, time preferences and intertemporal

[2] At the same time, the authors find heterogeneous effects of personal experiences with COVID-19 (i.e. infection of oneself or of a close friend or family member) on preferences.

[3] Men decrease risk-taking in the Gneezy and Potters task and become less likely to be present-biased with higher exposure.

risk preferences among US students in several waves during the crisis with the help of incentivized lottery choices. The authors find that the atemporal risk premium increases during the crisis whereas time preferences and intertemporal risk preferences remain stable. Shachat et al. (2020) elicit risk preferences with multiple price lists and observe an increase in risk-tolerance in the early waves of their study. The authors also elicit a measure for ambiguity attitude based on multiple price lists and find an initial increase in ambiguity aversion in the crisis which, however, disappears in later waves. Moreover, Gassmann et al. (2020) collect incentivized measures for risk, time and ambiguity preferences and prudence using multiple price list formats. They collect data from a student sample over a three months period during and after the end of the first lockdown in France and compare this data to the preferences of participants of a similar age elicited in a general population sample several years before the crisis. The authors find that risk and ambiguity aversion decrease during the lockdown phase relative to their base levels and increase after the lockdown (at the same time, not reaching the original base level). Similarly, participants become less patient during the lockdown, but patience moves again in the direction of the base level after the lockdown phase. Also, participants are found to be more prudent during the crisis. Bu et al. (2020) collect three waves of hypothetical risk elicitation measures with a sample of students from Wuhan before the crisis, during the lockdown phase and after the release of the lockdown, exploiting geographical variation in the location of the students. Among other things, the authors find that subjects who are quarantined in Wuhan during the lockdown phase invest significantly less into a hypothetical risky option, but this effect vanishes after the release of the lockdown. Moreover, among all study participants the authors find a general decrease in the willingness to take risks based on a survey question from (Falk et al., 2018). Finally, Ikeda et al. (2020) collect data on risk attitudes focused on the loss domain in hypothetical choice tasks over 5 waves in a large population sample from Japan and observe an increase in risk tolerance.

Our paper adds to the literature on the evolution of economic and social preferences during the pandemic by repeatedly eliciting a comprehensive set of well-established preference measures. In contrast to most of the previous studies we collect our data in a large population sample and thus potentially capture a substantially larger individual heterogeneity in both demographic and socioeconomic backgrounds and in the exposure to the pandemic. Our data set allows us to analyze potential preference shifts over a period of more than a year from the start of the pandemic, thus incorporating both short- and medium terms responses to the crisis. To the best of our knowledge, no previous study has covered a comparable time horizon.

# 3 Methods

Our experiment was conducted in the Netherlands with participants from the general population. It consisted of altogether four waves. The first wave took place shortly before the first lockdown due to COVID-19 whereas the other waves were conducted after the outbreak of the pandemic in Europe. The second wave was implemented during the first strict lockdown phase in April 2020, the third wave during the second lockdown in November 2020, and the fourth and final wave in April 2021 when the second lockdown was still in place. In all four waves we elicited the same extensive set of economic preferences using a variety of decision tasks. Here we first describe the different tasks used to elicit risk, time, ambiguity and social preferences. Thereafter, we report in detail on the implementation and the timing of the experiment.

## 3.1 Preferences elicitation tasks

### Risk preferences, time preferences, and ambiguity attitudes

For the elicitation of risk and time preferences we used several complementary experimental methods.

***Convex Time Budget method.*** We implemented an adapted version of the Convex Time Budget method (CTB; Andreoni and Sprenger, 2012a,b, Potters et al., 2016) which jointly elicits risk and time preferences. In this task, participants allocated money between an earlier date, which was 8 weeks from the day of participation, and a later date.[4] In the first wave we implemented two versions of the decision situations which differed in the parameter sets of some tasks.[5] Specifically, the time horizon for the later payments in the CTB task was 12 and 16 weeks in CTB1 and 16 and 24 weeks in CTB2, respectively. Payments allocated to the early date were always certain, whereas payments to later dates were paid with a 50%, 70%, 90% or 100% chance, depending on the decision situation. These probabilities were known to participants. Depending on the decision situation, the amounts allocated to the later date paid an interest rate of 0%, 4% or 16% over the period by which the payment was delayed. The budget to be allocated by the decision-maker was always €75. When the chance of future payments was below 100% the

[4]Participants had to choose between altogether 13 predefined allocations that also included two dominated options (one related to allocating the entire budget to the early date and one related to allocating the entire budget to later date) in order to control for participants' understanding of the task. The instructions of the experiment are available upon request.

[5]The main reason for the implementation of the first wave was that we wanted to optimize the parameter values for another large scale study in which we elicited economic preferences within the Dutch population.

amount to be paid was increased such that the expected value of the future payment matched the certain payment in the 100% payout case.

***Multiple Price Lists.*** In addition, we elicited risk and time preferences separately using multiple price lists (MPL) in the spirit of Holt and Laury (2002) and Andersen et al. (2008). In two MPLs for *time preferences* (tMPL), participants had to choose between €75 at an early date (8 weeks from the day of participation, just as in the CTB) and varying amounts to be paid at a later date (in 12 or 16 weeks in tMPL1 and in 16 or 24 weeks in tMPL2), yielding interest rates between 0% and 21.3% over the delay period. There were 9 decision situations per tMPL where participants had to decide between the early and late option, over which the amount to be paid at the later dates was increased. The decision situation where participants switched from the early to the late option defined an interval for their individual time preferences.

First order *risk preferences* were similarly elicited using two rMPLs. In an rMPL, participants made nine choices between a certain payoff and a lottery that paid a lower and a higher payoff with a given probability. The probability for the low (high) payoff was either 0.50 (0.50) or 0.33 (0.67). The outcomes and probabilities remained the same within each MPL whereas the value for certain payoffs increased across rows. The decision situation at which participants switch from the certain payment to the lottery determines and an interval for participants' risk preferences.[6]

We also elicited *higher-order risk preferences*, that is, prudence and temperance, using the measures introduced by Noussair et al. (2014). To elicit prudence, participants faced a series of five binary decision situations in which they had the choice to add a lottery with an expected value of zero and equally likely, equally sized gains and losses, to either a state of high wealth or to a state of low wealth. Prudent decision-makers would add the lottery to the state of high wealth. To elicit temperance, participants again faced a series of five binary decision situations. In each of these decision situations they received a fixed payment and had to decide whether they wanted to aggregate or disaggregate two identical zero-mean lotteries. Temperate participants would prefer disaggregation of the lotteries.

For elicitation of *ambiguity attitudes* we implemented two MPLs in which participants had to choose between risky lotteries with known probabilities of winning and an ambiguous lottery where the probability of winning was unknown (aMPL). In addition, instead of choosing one of the two options, participants could also state indifference in which case a fair random device

[6]In all MPLs, we allowed for multiple switching points, thus not enforcing consistency among participants' choices.

chose between the options for them (see, Cettolin and Riedl, 2019). In the two aMPLs the winning probabilities in the lotteries were displayed with red and blue balls. Participants were asked to choose between two urns. The left urn contained 10 red or blue balls in a known and displayed proportion. The right urn also contained 10 red or blue balls, but in an unknown proportion. To indicate this the right urn was displayed as opaque. Participants were informed that the proportion of red and blue balls in the ambiguous urn stayed the same within each and between both aMPLs. The proportion of red and blue balls in the risky urn varied from all red in the first row of an aMPL to all blue in the last row. The two aMPLs differed only with respect to the color associated with winning the lottery. To control whether a participant fully understood the task, we added a dominated option to each aMPL consisting of an urn with a displayed proportion of 10 balls of the losing color.

**Social preferences**

*Social preferences* of the participants were elicited with a modified version of the solidarity game by Selten and Ockenfels (1998). Two participants were anonymously matched and could either win an amount of €80, or receive nothing. With a probability of 50%, both participants could win and receive €80, with a probability of 10% both participants could lose and received €0, and with the remaining 40% chance, one of the participants could win €80, while the other would lose, so that there would be one winner and one loser in the pair.[7] Social preferences of participants were measured by the share of the €80 a person was willing to give up in favor of the matched person in case they were the sole winner in the pair.

Applying the strategy method (Selten, 1967), we elicited social preferences towards different age groups, similarly to Riedl et al. (2019). Specifically, for the case where they would be the sole winner, participants had to decide on the amount of money they were willing to transfer to (a) a young participant (between 16 and 34 years, resembling people during education or at the beginning of their working lives), (b) a middle-aged participant (between 35 and 64 years, the main working population), and (c) an old participant (65 years and older, the group of retired citizens).

[7]From an ex-ante perspective, a participant would be the sole winner with a 20% chance and the sole loser with a 20% chance.

### 3.2 Implementation and timing

Our experiment consisted of altogether four waves. The field time of the first wave was from February, 20 to March 2, 2020, and thus shortly before the crisis was recognized as such in the Netherlands (and most parts of Europe, except for Italy). The lockdown in the Netherlands started on March 15, 2020, with the closing of schools, restaurants and sports clubs and was extended on March 23, 2020, with further restrictions on public gatherings. The second wave was conducted between April 22 and April 29, 2020, during the strict lockdown phase in the Netherlands.[8,9] The third wave took place between November 11, 2020 and November 18, 2020, and thus during the second lockdown phase (a "partial" lockdown) in the Netherlands that started on October 13, 2020 and implemented less restrictions than the first lockdown. Finally, the field phase of wave 4 was between April 21, 2021 and April 29, 2021, still during the second lockdown, but at a time where the relaxation of some restrictive measures had already been announced by the Dutch government.[10]

The preferences elicitation tasks described above were identical in the four waves. Waves 2 to 4 also included an extensive questionnaire on participants' exposure to the crisis, the effects of the crisis in various domains (e.g., health and economic), as well as their beliefs concerning the crisis and the future development of the economy.

To facilitate understanding of the decision tasks we used graphical elements for the display of the decision tasks. Moreover, the tasks were explained through short video clips that participants watched prior to each task. These videos explained the decision tasks step by step, successively highlighting the relevant parts of the decision screens. In addition to the video clips, written instructions were available for online reading and download.For the CTB task that was arguably the most complex from the participants' perspective, we additionally integrated three comprehension questions to control the understanding of the task. Importantly, the perceived clarity of the experimental instructions was high irrespective of the format (video or written instructions) and the experimental task, as Tables A1 and A2 in the Appendix show. The reported clarity of

[8]Plans to relax the general lockdown measures were published on May 6, 2020. Already before this date, on April 21, 2020, it was announced by the Dutch government that schools would be opened again by May 11, 2020. Darroch (2020) provides a timeline of the political decisions in the Netherlands during the initial phase of the COVID-19 crisis.

[9]As described above, the initial wave was also a pilot session for a large scale study among a representative sample of the Dutch population. Prior to the implementation of the large scale study, this study served as a final test run of the parameters and presentation of the elicitation tasks.

[10]On April 20, 2021 the Dutch government announced the start of its reopening plan that would become active on April 28, 2021. Among other things, as part of the reopening plan, the evening curfew would be lifted that had been in place since January 23, 2021, and shops and outdoor areas of restaurants and cafes would partially reopen.

the instructions generally range between values of 8 and 9 on a scale from 0 (completely unclear) to 10 (very clear).[11]

The experiments were run online with a sample of the Dutch general population. The experiments were programmed and implemented by the research agency Flycatcher that operates a panel of about 10,000 members recruited from the Dutch general population who are regularly invited for participation in online studies. Participants were recruited from this panel for our study via e-mail.

Altogether 1035 subjects between 18 and 67 years took part in our study (125 in wave 1, 290 in wave 2, 314 in wave 3 and 306 in wave 4). The age structure of the subjects across the waves correspond to the participant group of our large-scale study that focuses on the working population in the Netherlands. [12] Experimental waves 2 to 4 were conducted with participants from the Flycatcher panel who had not participated in any of the previous waves. Our sample covers a wide range of population groups of the Netherlands in terms of age, gender, education, gross annual income Tables A3 to A7 in the appendix for details). A comparison of the samples across waves shows that there are no significant differences in the composition of the waves concerning the background variables of participants, except for education levels. In our later analyses, we control for participants' demographic and socioeconomic background characteristics.

Participants were truthfully informed that one out of ten participants would be randomly selected to receive payments dependent on their decisions. One choice of these participants would then be randomly determined and paid out. Median participation time in our study was 36, 45, 46 and 44 minutes in waves 1, 2, 3 and 4 respectively. [13] Subjects received on average 7.66€ in wave 1, 8.06€ in wave 2, 6.61€ in wave 3 and 6.58€ in wave 4. These amounts were paid out via bank transfers with the help of Flycatcher in a way that guaranteed anonymity of the participants towards the research team.[14]

[11]Note that not every question reported in Tables A1 and A2 was answered by every participant, because each participant could select between video and written instructions for all tasks except for the solidarity game.

[12]In wave 1, 2, 3 and 4, 51, 146, 151 and 154 participants received version 1 of the experiment; the corresponding numbers for version 2 were 74, 144, 163 and 152 participants. Note that the number of participants is lower in wave 1 because this wave was originally planned only as a pilot study (see above). In wave 2, we conducted a third version of the task with additional 145 participants as a further test of parameters for our large-scale study. This third version was identical to version 2 in most aspects, but differed in the interest rates for later payments in the CTB and the MPLs for time preferences and the graphical display of the ambiguity task. As version 3 was elicited only in wave 2, we do not use this data for our further analyses.

[13]The longer participation time from wave 2 on was due to the additional survey questions related to COVID-19 which were included at the end of the study.

[14]Participants could choose at the end of the study whether they would like to be contacted for the payments. Across all waves, 92.6% of the participants selected to be contacted for payments (between 92.0% and 93.8%, depending on the specific wave).

# 4 Results

In the first part of our analysis, we report results concerning the causal impact of the crisis on elicited economic and social preferences, by comparing behavior between the waves. Thereafter, we conduct an in depth analysis among the participants of waves 2 to 4 to test to what extent heterogeneous exposure to the crisis affects preferences.

## 4.1 The causal effect of the COVID-19 crisis on preferences

The structure of the analyses reported in the following is very similar for all of our measures for preferences. We report on the results of regression models, with participants' choices in a particular task as the dependent variable. In the first specification for each task we only include dummy variables for the experimental waves, capturing changes in the economic and social preference measures in the course of the COVID-19 pandemic relative to the situation before the crisis. In the second specification for each task, we also integrate controls for the decision-makers' demographic characteristics (age and gender) as well their socioeconomic backgrounds (education level, being a tenant or a homeowner and yearly income), thus controlling for the possibility that preferences might be heterogeneous for different population groups. For decision tasks that differed in the parameters across the two versions of the experimental tasks, we control for the version of the task by including a dummy variable in all regression specifications.

### Risk preferences

In the first step of our analysis, we concentrate on first and higher order risk preferences. Table 1 reports on the results of regression models testing for the impact of the COVID-19 crisis on preferences.

Models 1 to 4 relate to first-order risk preferences. Here, we concentrate on participants' preferences for safe outcomes. In Models 1 and 2, we use the mean number of safe choices (out of 9 choices per rMPL in total) across both rMPLs as a simple measure for participants' risk aversion, with a higher number of safe choices resembling higher aversion against risk. Models 3 and 4 refer to CTBs. Using all decision situations of the CTBs, we calculate the difference between the amount allocated *to the early date* when the later payment was paid with a chance smaller than 100% (that is, the decision situations where the later payoff was obtained with respectively a 90%, 70%, and 50% chance) and the average amounts allocated to the early date under certainty (that is, the decision situations where the later payoff was obtained with a 100%

chance). Larger values of this proxy variable are thus associated with a stronger tendency of the participant to avoid risk.

Table 1: First and Higher Order Risk Preferences

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| Wave 2 | -0.044 | -0.041 | -0.879 | -0.655 | 0.325* | 0.332** | -0.176 | -0.160 |
| | (0.295) | (0.288) | (2.236) | (2.250) | (0.167) | (0.169) | (0.194) | (0.195) |
| Wave 3 | -0.293 | -0.289 | -3.967* | -3.781* | 0.058 | 0.055 | -0.147 | -0.121 |
| | (0.292) | (0.285) | (2.209) | (2.221) | (0.165) | (0.166) | (0.192) | (0.192) |
| Wave 4 | -0.458 | -0.440 | -1.620 | -1.497 | 0.112 | 0.096 | -0.361* | -0.325* |
| | (0.293) | (0.285) | (2.218) | (2.222) | (0.166) | (0.166) | (0.193) | (0.192) |
| Version 2 | | | -3.351** | -3.465*** | | | | |
| | | | (1.300) | (1.300) | | | | |
| Female | | 0.608*** | | 3.328** | | 0.008 | | 0.439*** |
| | | (0.177) | | (1.380) | | (0.104) | | (0.119) |
| Age | | 0.036*** | | -0.072 | | -0.006 | | 0.002 |
| | | (0.007) | | (0.053) | | (0.004) | | (0.005) |
| Middle Educated | | 0.549** | | 1.674 | | 0.259* | | -0.083 |
| | | (0.253) | | (1.973) | | (0.148) | | (0.171) |
| High Educated | | -0.361 | | 0.921 | | 0.207 | | -0.317* |
| | | (0.273) | | (2.125) | | (0.159) | | (0.184) |
| Tenant | | -0.220 | | -1.043 | | 0.046 | | -0.081 |
| | | (0.190) | | (1.480) | | (0.111) | | (0.128) |
| 36.500 euro or more | | -0.091 | | -1.198 | | 0.111 | | -0.060 |
| | | (0.231) | | (1.797) | | (0.135) | | (0.156) |
| Prefer not to state income | | -0.102 | | -0.376 | | 0.184 | | -0.063 |
| | | (0.267) | | (2.077) | | (0.156) | | (0.180) |
| Constant | 6.584*** | 4.733*** | 20.268*** | 21.567*** | 3.872*** | 3.805*** | 3.704*** | 3.587*** |
| | (0.247) | (0.556) | (2.019) | (4.401) | (0.140) | (0.325) | (0.162) | (0.375) |
| Observations | 1035 | 1035 | 1035 | 1035 | 1035 | 1035 | 1035 | 1035 |

Standard errors in parentheses
(1)(2) MPL Risk: avg number of safe choices
(3)(4) CTB Risk: [Avg amount allocated to early in decisions with risk]
- [avg amount allocated to early in decisions without risk]
(5)(6) MPL Prudence: avg number of prudent choices
(7)(8) MPL Temperance: avg number of temperate choice
Baselevels: Wave 1, Version 1, Male, Low Educated, Homeowner, Yearly income 36.500 euro or less
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Participants in our sample are relatively risk averse, with between 6 and 7 safe choices on average in the rMPLs, as shown in Table A8 with descriptive statistics in the Appendix. The amounts allocated to the early dates in the CTB are also in line with risk aversion – on average, some 15 to 18 €more are shifted to the earlier date when the later outcomes are risky

as compared to the situation when the later outcomes are paid with certainty.[15] Turning to the regression models, we find no robust evidence that risk preferences change in the course of the COVID-19 crisis within our sample. The control variables for both waves during the crisis are all insignificant in the models for rMPLs (Models 1 and 2); in the models for CTBs (Models 3 and 4) the control for wave 2 is insignificant whereas the coefficient for wave 3 seems to indicates some decrease in risk aversion in wave 3 relative to wave 1 before the crisis, but this effect is only marginally significant. This effect disappears over time, as in wave 4, we do not observe a behavioral difference in CTB as compared to wave 1. In both models for CTBs, the dummy variable for version 2 is negative and significant as expected: Participants allocate less money to the certain early date when the period for the later payoffs becomes longer (as is the case in version 2 relative to version 1, see the previous section).

Concerning higher order risk preferences, the average number of prudent and temperate choices range between 3 and 4 among the participants in our sample (see Table A8). We observe a (weakly) significantly higher number of prudent choices in wave 2 during the first lockdown (Models 5 and 6) which, however disappears again from wave 3 on. For the number of temperate choices (Models 7 and 8), we find a negative effect in wave 4 of our study, but again, this effect is only marginally significant. Overall, the COVID-19 crisis does not seem to strongly affect first and higher order risk preferences in our sample.

With respect to the impact of demographics and socioeconomic backgrounds, we find the female participants make significantly safer choices in our study, both in rMPLs and CTBs (Models 2 and 4). Moreover, females tend to make more a higher number of temperate choices. The effect of age is not unambiguous in our setting; older participants seem to act in a more risk-averse manner in the rMPLs, whereas there is no correlation of age with choices in the CTB or the measures for higher-order risk preference.[16]

**Ambiguity preferences**

Next, we turn to ambiguity preferences of the participants in our sample. To investigate whether ambiguity preferences changed between the waves, we count the number of choices of the risky lottery where a higher number can be interpreted as more ambiguity aversion. As Table A8 in the Appendix shows, subjects on average pick the risky lottery in some 5 of the choices, and this

[15] Non-parametric Mann-Whitney (MWU) tests indicate a decrease in the budget allocation to the early date in the face of risky later payments, but this effect is only marginally significant in wave 3 (compared to wave 1) and is not found in wave 4 any more.

[16] In addition, dummy variables for education are significant in some of the models, but not in a robust and systematic manner.

average value is roughly constant over the different waves.

Table 2: Ambiguity Preference

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Wave 2 | 0.191 | 0.191 | 0.021 | 0.006 |
| | (0.165) | (0.166) | (0.099) | (0.101) |
| Wave 3 | -0.014 | -0.018 | -0.077 | -0.093 |
| | (0.163) | (0.164) | (0.097) | (0.098) |
| Wave 4 | -0.056 | -0.063 | -0.038 | -0.048 |
| | (0.163) | (0.164) | (0.097) | (0.098) |
| Female | | -0.053 | | -0.068 |
| | | (0.102) | | (0.062) |
| Age | | -0.008** | | -0.002 |
| | | (0.004) | | (0.002) |
| Middle Educated | | 0.001 | | 0.029 |
| | | (0.146) | | (0.097) |
| High Educated | | 0.107 | | 0.004 |
| | | (0.157) | | (0.100) |
| Tenant | | 0.004 | | -0.053 |
| | | (0.109) | | (0.067) |
| 36.500 euro or more | | 0.026 | | 0.000 |
| | | (0.133) | | (0.082) |
| Prefer not to say | | 0.045 | | 0.077 |
| | | (0.154) | | (0.095) |
| Constant | 5.000*** | 5.302*** | 5.278*** | 5.382*** |
| | (0.138) | (0.320) | (0.081) | (0.200) |
| Observations | 1035 | 1035 | 708 | 708 |

Standard errors in parentheses
(1)(2)(3)(4) MPL Ambiguity: avg number risky urn choices
(3)(4) Exclude participants that make at least one dominated choice.
Baselevels: Wave 1, Version 1, Male, Low Educated,
Homeowner, Yearly income 36.500 euro or less
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2 summarizes the regression models of our measure for ambiguity preference that follow the same structure as our analysis of risk preferences. In line with descriptive statistics, we find no evidence that the pandemic affects ambiguity attitudes in our setting; the dummy variables for all three waves conducting after the start of the crisis are insignificant in the models. This is true for Models 1 and 2 which we calculate for the full sample of subjects, and also for Models 3 and 4 where we restrict the analysis to subjects who did not make any dominated choices in the ambiguity tasks (708 out of 1035 participants.) Moreover, we do not find a robust impact of background variables, as there is a negative correlation of age with risky urn choices in the model

for the full sample, which, however, is not found any more in the model excluding participants with dominated choices.

**Time preferences**

Regarding time preferences we use two different measures based on the tMPLs and CTB, respectively, to investigate a potential change in preferences during the pandemic. First, we look at the frequency of choices in favor of the late option aggregated over both tMPLs, with higher values indicating higher patience. Second, our measure for time preferences in the CTB is the average € amount allocated to the earlier payment date across all CTB decision situations with a certain late payout. Here, a higher value for this variable is associated with lower patience of a decision-maker.

The upper panel of Table A8 in the Appendix reports descriptive statistics of our measures for time preferences. It becomes apparent that the crisis has no robust impact also here. We find that the number of patient choices in the tMPL slightly (and marginally significantly) declines in the third wave relative to wave 1 before the crisis. Yet, from wave 4 on, no difference in the preference measure is found. Concerning CTBs, participants on average allocate between €35 and €37 (about 45% of the budget) to the earlier date. These average shares remain very stable between the waves, and no differences across waves are found.

These observations are confirmed in parametric analyses. Table 3 lists our regression specifications that follow the same structure as the analyses before: The dummy variables for the experimental waves are insignificant in all specifications. In line with the fact that the participants have to wait longer for the later payoff in version 2 of both time preference tasks, choices become more impatient in this version (captured by fewer patient choices in the tMPLs and higher amounts allocated to the early date in the CTB, as indicated by the signs of the respective coefficients).

Concerning demographics, we find that older participants tend to behave in a less patient way in both tasks, whereas this effect is only marginally significant in Model 2 for tMPLs. In addition, participants with middle and high education levels seem to make somewhat more patient choices in the tMPL task, but not in the CTB task.[17]

[17] Tenants seem to behave in a somewhat less patient way for tMPLs, but this effect is not found for CTBs.

Table 3: Time Preference

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Wave 2 | -0.308 | -0.280 | -0.115 | -0.081 |
| | (0.285) | (0.283) | (2.007) | (2.016) |
| Wave 3 | -0.441 | -0.454 | 1.769 | 1.837 |
| | (0.281) | (0.280) | (1.983) | (1.989) |
| Wave 4 | -0.051 | -0.098 | 0.605 | 0.700 |
| | (0.282) | (0.280) | (1.991) | (1.990) |
| Version 2 | -0.676*** | -0.677*** | 4.623*** | 4.650*** |
| | (0.165) | (0.164) | (1.167) | (1.164) |
| Female | | 0.099 | | 0.051 |
| | | (0.174) | | (1.236) |
| Age | | -0.013* | | 0.161*** |
| | | (0.007) | | (0.047) |
| Middle Educated | | 0.637** | | 0.824 |
| | | (0.249) | | (1.767) |
| High Educated | | 1.030*** | | -0.592 |
| | | (0.268) | | (1.903) |
| Tenant | | -0.515*** | | 0.176 |
| | | (0.186) | | (1.326) |
| 36.500 euro or more | | -0.088 | | -1.307 |
| | | (0.226) | | (1.610) |
| Prefer not to state income | | -0.047 | | -1.212 |
| | | (0.262) | | (1.861) |
| Constant | 6.140*** | 6.198*** | 32.690*** | 26.480*** |
| | (0.257) | (0.554) | (1.812) | (3.943) |
| Observations | 1035 | 1035 | 1035 | 1035 |

Standard errors in parentheses
(1)(2) MPL Time: avg number of patient choices
(3)(4) CTB Time: [avg amount allocated to early in decisions without risk]
Baselevels: Wave 1, Version 1, Male, Low Educated, Homeowner,
Yearly income 36.500 euro or less
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

**Social preferences**

Regarding social preferences we first observe that aggregated over all target age groups, in both waves, participants exhibited clear prosocial behavior by sending on average between some €24 and some €26, and thus between 29% and 32% of the endowment of €80. Comparing all four waves, solidarity preferences remain roughly constant, as indicated by Table A8.[18] Hence, we do not have evidence that solidarity shifts strongly during the pandemic.

Interestingly, participants on average show substantial pessimism about the solidarity from

[18]The shares of fully selfish choices, i.e. average transfers of €0, also do not fluctuate strongly across waves, with 26.4%, 20.0%, 18.8% and 22.2% for waves 1, 2, 3 and 4, respectively.

other participants: In all waves, expected transfers are substantially lower than the amounts sent, and the differences between transfers and expectations are significant in all cases.[19] Similar pessimistic expectations about solidarity has also been found before in a large population sample (see Riedl et al., 2019). However, expected solidarity does not change in our sample in the course of the pandemic, as the (insignificant) comparisons between wave 1 and the waves during the pandemic show (see Table A8).

Table 4: Solidarity Preference

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Wave 2 | 1.185 | 0.922 | 0.805 | -0.003 |
| | (1.839) | (1.853) | (1.691) | (1.703) |
| Wave 3 | 1.165 | 0.936 | 2.768* | 2.060 |
| | (1.817) | (1.830) | (1.671) | (1.682) |
| Wave 4 | 1.374 | 1.341 | 2.292 | 1.920 |
| | (1.824) | (1.830) | (1.678) | (1.682) |
| Female | | 0.460 | | -2.226** |
| | | (1.138) | | (1.046) |
| Age | | 0.057 | | -0.075* |
| | | (0.043) | | (0.040) |
| Middle Educated | | -1.323 | | -1.364 |
| | | (1.627) | | (1.495) |
| High Educated | | -2.086 | | -3.250** |
| | | (1.752) | | (1.610) |
| Tenant | | -2.404** | | -1.759 |
| | | (1.220) | | (1.121) |
| 36.500 euro or more | | 0.121 | | -1.203 |
| | | (1.481) | | (1.361) |
| Prefer not to state income | | -0.858 | | -1.927 |
| | | (1.712) | | (1.574) |
| Constant | 23.533*** | 23.299*** | 17.288*** | 25.783*** |
| | (1.537) | (3.570) | (1.414) | (3.282) |
| Observations | 1035 | 1035 | 1035 | 1035 |

Standard errors in parentheses
(1)(2) Solidarity Game: avg amount sent to others
(3)(4) Solidarity Game: avg amount expected from others
Baselevels: Wave 1, Male, Low Educated, Homeowner,
Yearly income 36.500 euro or less
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4 lists the respective regression models for both exhibited and expected prosocial behavior. We find that social preferences, as measured by the average amount transferred by a

[19] If we compare average transfers and average expected transfers on the level of the individual participant (and separately for each wave) using two-sided Wilcoxon Matched Pairs Signed Ranks tests, all tests yield $p < 0.001$.

participant do not change in the course of the pandemic when we control for the backgrounds of the participants as the insignificant coefficients for the experimental waves in Models 1 and 2 show. In line with the lack of a shift in prosocial behavior, we do not find a robust significant effect of the crisis on expected solidarity transfers either. Whereas the dummy variable for wave 3 is positive and marginally significant in Model 3, this effect vanishes when we control for the backgrounds of participants in Model 4. Concerning the effect of demographic background, we observe that females, older and highly educated participants expect (weakly) lower solidarity when becoming needy themselves (Model 4).[20]

Taken all results together, we observe a remarkable stability of economic and social preferences, as there is no systematic and robust difference between preferences elicited shortly before the crises and preferences elicited over a one-year period during the COVID-19 pandemic including two lockdown phases in the Netherlands.

### 4.2 Individual exposure to COVID-19 and economic preferences

There is the possibility that the lack of a difference in preferences between the different waves of our study masks individual heterogeneity in preference adjustments of participants, as these adjustments may depend on individual exposure to COVID-19. Specifically, we hypothesize that participants with a stronger health related exposure and participants who economically are hit severely will show a stronger response in preferences than other participants. In this section we test for this possibility.

For this part of our analysis we use data from waves 2 to 4 comprising 910 participants (see Section 3). In these three waves, next to the preferences elicitation tasks, participants answered questions about various dimensions of individual exposure to COVID-19 as well as their perceptions regarding the economic impact of the crisis. We focus on the following variables to measure individual exposure to the crisis (descriptive statistics can be found in Table A9): First, we measure the individual health-related exposure by a dummy variable equal to one if a family member or a close friend of the person had been infected with the Corona virus.[21] As the measure for financial exposure to the crisis, we asked participants to rate to what extent their

[20] In addition, tenants tend to transfer significantly less (Model 2) which might be related to a lower wealth compared to homeowners.

[21] Participants could answer to these questions by stating "Yes", "No", "I am not sure" or "I prefer not to answer.". In line with the spread of COVID-19 in the Dutch population in the course of the crisis, the shares of participants with infected relatives or friends rise across waves. In our survey, we also asked participants whether they had been infected with COVID-19 themselves. However, the shares of participants who indicated that they had been affected was too small (1.0%, 5.4% and 12.8% for wave 2, 3 and 4, respectively) to conduct meaningful analyses with this variable.

financial situation changed due to the corona virus (COVID-19). Similarly, to control for the impact of the crisis on an individual's career, participants had to rate how their career perspective changed in the course of the crisis.[22] Finally, to test for the effect of beliefs about the general speed of society's adjustment to the crisis, we asked participants to state their expectation when, according to their opinion, the situation would converge back to the normal situation before the start of the crisis.[23]

To control for the impact of personal exposure to the crisis, we calculate regression models similar to those reported in the previous subsection, integrating all previous preference measures as dependent variables. For this analysis, we only use data from waves 2 to 4 that were elicited during the pandemic. For better clarity, we summarize the results of these regression models regarding the effect of the variables controlling for exposure to the crisis on individual preferences in Table 5 for all preference measures we elicited. Models 1 to 4 use our measures for first and higher order risk preferences (rMPL, CTB, prudence and temperance) as the dependent variables. Models 5 and 6 focus on our measures for time preferences (tMPL, CTB); the dependent variable of model 7 is our ambiguity preference measure. Finally, models 8 and 9 refer to an individual's average solidarity preference as well as the average expected solidarity. All models control for demographic and socioeconomic backgrounds of the decision-maker and the version of the experimental parametrization where applicable. Table 5 only includes the coefficients of the variable capturing individual exposure to the crisis; the detailed overview of the set of regression models for each of the exposure variables can be found in the appendix in Tables A10 to A13.

Table 5 shows that most of the variables capturing exposure to the crisis have little impact on our preference measures. Personal exposure to the crisis in the health and career domain as well as beliefs about the further duration of the crisis have no impact on economic preferences in our sample.

Yet, we find the exposure to the crisis in the financial domain has significant effects regarding the preference measures: Participants who state that the financial situation has improved during the crisis, behave in a less risk-averse manner in the rMPL (Model 1), as they reduce the number of safe choices relative to participants who report that their financial situation has not changed (however, this effect is not observed for CTBs). On the contrary, participants who experienced a worsening of their financial situation tend to make more prudent choices (Model ii,3) as well

[22]Participants could answer both questions on a five-point Likert scale ranging from "clearly worsened" to "clearly improved", with "I prefer not to answer." and "Not applicable" as further answer options.

[23]Participants were asked when they would "expect that all measures concerning the so-called corona virus (COVID-19) can be lifted such that the situation in the Netherlands can return back the situation as before the crisis". Participants could state their answers in categories from "In one month" to "Never".

Table 5: Heterogenous Impact - Exposure to COVID-19 crisis

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (i) Health exposure | | | | |
| Infection | -0.141 | 0.401 | -0.012 | 0.062 | 0.117 | -0.770 | -0.069 | 1.221 | 0.054 |
| | (0.190) | (1.475) | (0.110) | (0.129) | (0.186) | (1.318) | (0.111) | (1.200) | (1.122) |
| | | | | | (ii) Financial situation | | | | |
| Worsened | 0.250 | -0.320 | 0.326** | -0.158 | -0.429* | 3.491* | 0.102 | 0.384 | -1.142 |
| | (0.257) | (2.007) | (0.149) | (0.175) | (0.251) | (1.791) | (0.152) | (1.634) | (1.527) |
| Improved | -0.483* | -2.819 | -0.120 | 0.105 | -0.308 | -0.604 | 0.201 | -0.843 | -0.474 |
| | (0.253) | (1.973) | (0.147) | (0.172) | (0.247) | (1.761) | (0.149) | (1.608) | (1.502) |
| | | | | | (iii) Career perspective | | | | |
| Worsened | -0.300 | -2.355 | 0.200 | 0.067 | -0.181 | -1.720 | -0.033 | 2.544 | 1.351 |
| | (0.244) | (1.902) | (0.141) | (0.167) | (0.237) | (1.691) | (0.141) | (1.555) | (1.452) |
| Improved | -0.478 | -1.687 | -0.129 | 0.039 | -0.251 | -3.289 | 0.136 | 2.524 | 2.548 |
| | (0.326) | (2.538) | (0.189) | (0.222) | (0.316) | (2.257) | (0.189) | (2.077) | (1.939) |
| | | | | | (iv) Situation in the Netherlands back to normal in one year or more | | | | |
| More than 1 year | 0.118 | 0.461 | 0.070 | 0.047 | 0.105 | 0.318 | -0.003 | -0.490 | -0.637 |
| | (0.178) | (1.382) | (0.103) | (0.121) | (0.174) | (1.235) | (0.105) | (1.127) | (1.053) |

Standard errors in parentheses

(1) MPL Risk: avg number of safe choices

(2) CTB Risk: [Avg amount allocated to early in decisions with risk] - [avg amount allocated to early in decisions without risk]

(3) MPL Prudence: avg number of prudent choices

(4) MPL Temperance: avg number of temperate choice

(5) MPL Time: avg number of patient choices

(6) CTB Time: [avg amount allocated to early in decisions without risk]

(7) MPL Ambiguity: avg number risky urn choices

(8) Solidarity Game: avg amount sent to others

(9) Solidarity Game: avg amount expected from others

All models include control variables for version of the task, gender, education level, homeownership and yearly income

Question (i): Was or is one of your family members or good friends infected with the so-called coronavirus (COVID-19)?

Question (ii): In your opinion, to what extent did your financial situation change due to the so-called coronavirus (COVID-19)?

Question (iii): In your opinion, to what extent did your career perspective change due to the so-called coronavirus (COVID-19)?

Question (iv): When do you expect that all measures concerning the so-called coronavirus (COVID-19) can be lifted such that the situation in the Netherlands can return back the situation as before the crisis?

Observations: excludes participants from round 1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

as more impatient choices (and this is true for both experimental tasks we include (Models ii,5 and ii,6). Hence, overall, individual exposure to the crisis in the financial domain seem to have some effect on risk and time preferences in our sample.

# 5 Discussion and Conclusion

We test the stability of economic and social preferences in the face of the Corona crisis in a variety of domains. Our findings suggest that preferences are largely stable over the period of

more than a year after the outbreak of the crisis: Comparing preferences within our heterogeneous population samples elicited before the crisis as well as during the first and second lockdown in the Netherlands, we do not find robust and significant shifts in preferences related to risk, ambiguity, time, and solidarity. In addition, exploiting participants' individual heterogeneity, we find that exposure to the Corona crisis in the domain of health and career has little impact on economic preferences. Participants' beliefs about the further duration of the crisis do not affect preferences either. Individual exposure in the financial domain seems to affect risk and time preferences to some extent, with stronger effects found for participants whose financial situation has worsened. By and large, however, the effects of individual exposure to the crisis on preferences turns out to be limited in our setting.

The stability of economic preferences in our sample seem encouraging from both a theoretical and a practical perspective: If economic preferences could be assumed to remain stable throughout the crisis, policy measures can be developed on the basis of existing knowledge about how preferences are distributed within the population. Moreover, a stability of economic preferences would increase the predictive value of theoretical models that try to forecast the dynamics of economic interaction in the crisis.

At the same time, of course, our results only allow for conclusions concerning medium-term effects, and we acknowledge that our study is only a first step in understanding the dynamics of preference development throughout the crisis. For the understanding of the negative impacts of the crisis and for formulating adequate policies to mitigate them, it is of crucial importance to assess preferences adjustments an ongoing basis over a longer period of time, and also after the most restrictive measures to fight the crisis have been relaxed. This is due to several reasons: First, the economic consequences of the crisis might become visible for many citizens only in the longer term, and the negative effects are differently pronounced among various population groups. Moreover, potential dynamic preference adjustments might interact with societal responses to the crisis, such as the degree to which the government supports those who are most adversely affected. Finally, it remains to be seen when and how societies converge to the frequently discussed "new normal". The way in which (economic) interactions are organized in this new normal might also have a potential impact on economic preferences. The uncertainty about the development of the COVID-19 crisis together with the understanding that the disease will remain with us for a long time calls for a repeated and comprehensive monitoring of economic preferences within societies. At the same time it is remarkable how stable preferences appear to be in light of this (background) uncertainty.

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# Appendix A. Additional results

Table A1: Self-reported understanding of video instructions

| | N | Mean | Median | Min | Max |
|---|---|---|---|---|---|
| **Video Instructions** | | | | | |
| Video CTB | 949 | 8.8 | 9.0 | 0.0 | 10.0 |
| Video MPL Risk | 928 | 8.9 | 10.0 | 0.0 | 10.0 |
| Video MPL Prudence | 924 | 8.4 | 9.0 | 0.0 | 10.0 |
| Video MPL Temperance | 922 | 8.5 | 9.0 | 0.0 | 10.0 |
| Video MPL Ambiguity | 924 | 8.4 | 9.0 | 0.0 | 10.0 |
| Video MPL Time | 935 | 8.8 | 10.0 | 0.0 | 10.0 |

Summary of responses to the question: "To what extent did you find the video instruction at the start of this section clear?" (0 = completely unclear, 10 = very clear).

Table A2: Self-reported understanding of written instructions

| | N | Mean | Median | Min | Max |
|---|---|---|---|---|---|
| **Written Instructions** | | | | | |
| Text CTB | 873 | 8.3 | 9.0 | 0.0 | 10.0 |
| Text MPL Risk | 819 | 8.6 | 9.0 | 0.0 | 10.0 |
| Text MPL Prudence | 815 | 7.9 | 8.0 | 0.0 | 10.0 |
| Text MPL Temperance | 809 | 8.1 | 8.0 | 0.0 | 10.0 |
| Text MPL Ambiguity | 813 | 8.1 | 8.0 | 0.0 | 10.0 |
| Text MPL Time | 818 | 8.5 | 9.0 | 0.0 | 10.0 |
| Text Solidarity Game | 1,035 | 8.1 | 8.0 | 0.0 | 10.0 |

Summary of responses to the question: "To what extent did you find the written instruction at the start of this section clear?" (0 = completely unclear, 10 = very clear). Original: "In hoeverre vond u de geschreven instructie aan het begin van dit deel duidelijk?" (0 = totaal niet duidelijk, 10 = zeer duidelijk).

Table A3: Age groups across waves

| | Wave | | | |
|---|---|---|---|---|
| | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| | Prop. | Prop. | Prop. | Prop. |
| **Age Category** | | | | |
| 15 to 19 years | 0.008 | 0.031 | 0.010 | 0.016 |
| 20 to 24 years | 0.056 | 0.107 | 0.115 | 0.088 |
| 25 to 29 years | 0.104 | 0.117 | 0.115 | 0.124 |
| 30 to 34 years | 0.128 | 0.103 | 0.115 | 0.108 |
| 35 to 39 years | 0.112 | 0.076 | 0.102 | 0.095 |
| 40 to 44 years | 0.088 | 0.059 | 0.073 | 0.078 |
| 45 to 49 years | 0.096 | 0.097 | 0.102 | 0.111 |
| 50 to 54 years | 0.160 | 0.141 | 0.096 | 0.131 |
| 55 to 59 years | 0.136 | 0.131 | 0.115 | 0.105 |
| 60 to 64 years | 0.048 | 0.107 | 0.092 | 0.105 |
| 65 years and older | 0.064 | 0.031 | 0.067 | 0.039 |
| Total | 1.000 | 1.000 | 1.000 | 1.000 |
| Obs | 125 | 290 | 314 | 306 |

Pearson: Uncorrected chi2(30) = 30.705
Design-based F(30.00, 35370.00) = 0.897
P-value = 0.628

Table A4: Distribution of participants' gender across waves

| | Wave | | | |
|---|---|---|---|---|
| | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| | Prop. | Prop. | Prop. | Prop. |
| **Gender** | | | | |
| Male | 0.392 | 0.510 | 0.510 | 0.484 |
| Female | 0.608 | 0.490 | 0.490 | 0.516 |
| Total | 1.000 | 1.000 | 1.000 | 1.000 |
| Obs | 125 | 290 | 314 | 306 |

Pearson: Uncorrected chi2(3) = 6.609
Design-based F(3.00, 3537.00) = 1.931
P-value = 0.122

Table A5: Education levels across waves

| | Wave | | | |
|---|---|---|---|---|
| | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| | Prop. | Prop. | Prop. | Prop. |
| **Education Level** | | | | |
| Low Educated | 0.160 | 0.197 | 0.156 | 0.105 |
| Middle Educated | 0.392 | 0.472 | 0.487 | 0.480 |
| High Educated | 0.448 | 0.331 | 0.357 | 0.415 |
| Total | 1.000 | 1.000 | 1.000 | 1.000 |
| Obs | 125 | 290 | 314 | 306 |

Pearson: Uncorrected chi2(6) = 17.167
Design-based F(6.00, 7074.00) = 2.507
P-value = 0.020

Table A6: Income levels across waves

| | Wave | | | |
|---|---|---|---|---|
| | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| | Prop. | Prop. | Prop. | Prop. |
| **Gross Yearly Income** | | | | |
| $<$ €14.100 | 0.048 | 0.045 | 0.057 | 0.052 |
| $\geq$ €14.100 - $<$ €36.500 | 0.152 | 0.172 | 0.140 | 0.134 |
| $\geq$ €36.500 - $<$ €43.500 | 0.208 | 0.210 | 0.220 | 0.193 |
| $\geq$ €43.500 - $<$ €73.000 | 0.224 | 0.203 | 0.242 | 0.268 |
| $\geq$ €73.000 | 0.104 | 0.159 | 0.134 | 0.147 |
| Prefer not to state income | 0.264 | 0.210 | 0.207 | 0.206 |
| Total | 1.000 | 1.000 | 1.000 | 1.000 |
| Obs | 125 | 290 | 314 | 306 |

Pearson: Uncorrected chi2(15) = 10.469
Design-based F(15.00, 17685.00) = 0.612
P-value = 0.868

Table A7: House ownership across waves

| | Wave | | | |
|---|---|---|---|---|
| | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| | Prop. | Prop. | Prop. | Prop. |
| **Type of Residence** | | | | |
| Homeowner | 0.608 | 0.686 | 0.701 | 0.657 |
| Tenant | 0.392 | 0.314 | 0.299 | 0.343 |
| Total | 1.000 | 1.000 | 1.000 | 1.000 |
| Obs | 125 | 290 | 314 | 306 |

Pearson: Uncorrected chi2(3) = 4.648
Design-based F(3.00, 3537.00) = 1.358
P-value = 0.254

Table A8: Preference measures across waves - Descriptive statistics

| | Wave 1 | Wave 2 | Wave 3 | Wave 4 | MWU 1-2 | MWU 1-3 | MWU 1-4 |
|---|---|---|---|---|---|---|---|
| MPL Risk | 6.6 | 6.4 | 6.3 | 6.1 | 0.826 | 0.275 | 0.156 |
| CTB Risk | 18.3 | 17.3 | 14.6 | 17.0 | 0.819 | 0.096 | 0.600 |
| MPL Prudence | 3.9 | 4.1 | 3.9 | 4.0 | 0.112 | 0.829 | 0.433 |
| MPL Temperance | 3.7 | 3.5 | 3.6 | 3.3 | 0.398 | 0.660 | 0.105 |
| MPL Ambiguity | 5.0 | 5.1 | 5.0 | 4.9 | 0.123 | 0.795 | 0.995 |
| MPL Time | 5.7 | 5.2 | 5.3 | 5.8 | 0.287 | 0.077 | 0.839 |
| CTB Time | 35.4 | 35.0 | 36.9 | 35.6 | 0.471 | 0.686 | 0.796 |
| Solidarity Game Sent | 23.5 | 25.5 | 24.7 | 24.9 | 0.548 | 0.577 | 0.546 |
| Solidarity Game Expect | 17.3 | 18.6 | 20.1 | 19.6 | 0.494 | 0.109 | 0.189 |

The table reports the p-values of two-sided Mann-Whitney U (MWU) tests.

(1) MPL Risk: avg number of safe choices

(2) CTB Risk: [Avg amount allocated to early in decisions with risk] - [avg amount allocated to early in decisions without risk]

(3) MPL Prudence: avg number of prudent choices

(4) MPL Temperance: avg number of temperate choices

(7) MPL Ambiguity: avg number risky urn choices

(5) MPL Time: avg number of patient choices

(6) CTB Time: [avg amount allocated to early in decisions without risk]

(8) Solidarity Game Sent: avg amount sent to others

(9) Solidarity Game Expect: avg amount expected from others

Table A9: Self-reported exposure to COVID-19

| | Wave | | | | | |
|---|---|---|---|---|---|---|
| | **Wave 2** | | **Wave 3** | | **Wave 4** | |
| | No. | % | No. | % | No. | % |
| **Health Exposure** | | | | | | |
| No infection close relation | 257 | 88.6 | 196 | 62.4 | 146 | 47.7 |
| Infection close relation | 33 | 11.4 | 118 | 37.6 | 160 | 52.3 |
| Total | 290 | 100.0 | 314 | 100.0 | 306 | 100.0 |
| **Financial Situation** | | | | | | |
| No change | 212 | 73.4 | 211 | 69.4 | 192 | 64.6 |
| Worsened | 58 | 20.1 | 44 | 14.5 | 34 | 11.4 |
| Improved | 19 | 6.6 | 49 | 16.1 | 71 | 23.9 |
| Total | 289 | 100.0 | 304 | 100.0 | 297 | 100.0 |
| **Career Perspective** | | | | | | |
| No change | 193 | 73.1 | 201 | 69.8 | 212 | 73.6 |
| Worsened | 58 | 22.0 | 57 | 19.8 | 41 | 14.2 |
| Improved | 13 | 4.9 | 30 | 10.4 | 35 | 12.2 |
| Total | 264 | 100.0 | 288 | 100.0 | 288 | 100.0 |
| **Situation back to normal** | | | | | | |
| Within 1 year | 147 | 50.7 | 139 | 44.3 | 185 | 60.5 |
| More than 1 year | 143 | 49.3 | 175 | 55.7 | 121 | 39.5 |
| Total | 290 | 100.0 | 314 | 100.0 | 306 | 100.0 |

Notes: the responses "not applicable" and "prefer not to answer" are excluded. The following questions are used. Health Exposure: "Was or is one of your family members or close friends infected with the so-called coronavirus (COVID-19)?" (Yes/No/I am not sure/I prefer not to answer). Financial Situation: "In your opinion, to what extent did your financial situation change as a result of the so-called coronavirus (COVID-19)?" (1-5 scale (1 = clearly worsened, 5 = clearly improved)/I prefer not to answer/Not applicable). Career Perspective: "In your opinion, to what extent did your career perspective change as a result of the so-called coronavirus (COVID-19)?" (1-5 scale (1 = clearly worsened, 5 = clearly improved)/I prefer not to answer/Not applicable). Situation back to normal: "When do you expect that all restrictions regarding the so-called coronavirus (COVID-19) will be lifted so that the situation in the Netherlands will return back to the pre-crisis situation?" (In one month/In three months/In six months/In nine months/In one year/In one and a half years/In more than one and a half years/Never).

Table A10: Heterogenous Impact Health - COVID-19 Infection of Close Friend or Family Member

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| Infection | -0.141 | 0.401 | -0.012 | 0.062 | 0.117 | -0.770 | -0.069 | 1.221 | 0.054 |
| | (0.190) | (1.475) | (0.110) | (0.129) | (0.186) | (1.318) | (0.111) | (1.200) | (1.122) |
| Version 2 | | -3.762*** | | | -0.639*** | 4.296*** | | | |
| | | (1.384) | | | (0.174) | (1.237) | | | |
| Female | 0.608*** | 3.175** | -0.017 | 0.423*** | -0.047 | 0.047 | -0.052 | 0.732 | -2.024* |
| | (0.190) | (1.472) | (0.110) | (0.129) | (0.185) | (1.315) | (0.111) | (1.200) | (1.122) |
| Age | 0.040*** | -0.053 | -0.006 | 0.002 | -0.015** | 0.180*** | -0.010** | 0.038 | -0.101** |
| | (0.007) | (0.056) | (0.004) | (0.005) | (0.007) | (0.050) | (0.004) | (0.045) | (0.043) |
| Middle Educated | 0.536** | 1.545 | 0.282* | -0.061 | 0.648** | 1.626 | -0.148 | -1.990 | -2.167 |
| | (0.271) | (2.106) | (0.157) | (0.184) | (0.265) | (1.882) | (0.159) | (1.717) | (1.606) |
| High Educated | -0.363 | 0.716 | 0.259 | -0.332* | 1.006*** | -0.298 | -0.029 | -2.924 | -3.941** |
| | (0.294) | (2.281) | (0.170) | (0.200) | (0.287) | (2.038) | (0.173) | (1.859) | (1.739) |
| Tenant | -0.305 | -0.662 | 0.079 | -0.046 | -0.425** | 0.056 | 0.020 | -2.008 | -1.394 |
| | (0.203) | (1.575) | (0.118) | (0.138) | (0.198) | (1.407) | (0.119) | (1.284) | (1.201) |
| 36.500 euro or more | -0.184 | -0.923 | 0.128 | -0.147 | 0.030 | -1.882 | -0.036 | 1.122 | -0.809 |
| | (0.245) | (1.901) | (0.142) | (0.166) | (0.239) | (1.699) | (0.144) | (1.548) | (1.448) |
| Prefer not to state | -0.117 | -0.513 | 0.220 | -0.142 | 0.075 | -1.301 | 0.007 | -0.344 | -1.479 |
| | (0.286) | (2.219) | (0.166) | (0.194) | (0.279) | (1.983) | (0.168) | (1.809) | (1.692) |
| Constant | 4.439*** | 18.678*** | 3.912*** | 3.432*** | 5.881*** | 26.858*** | 5.616*** | 24.439*** | 28.298*** |
| | (0.528) | (4.157) | (0.306) | (0.358) | (0.523) | (3.714) | (0.310) | (3.339) | (3.123) |
| Observations | 910 | 910 | 910 | 910 | 910 | 910 | 910 | 910 | 910 |

Standard errors in parentheses

(1) MPL Risk: avg number of safe choices

(2) CTB Risk: [Avg amount allocated to early in decisions with risk] - [avg amount allocated to early in decisions without risk]

(3) MPL Prudence: avg number of prudent choices

(4) MPL Temperance: avg number of temperate choice

(5) MPL Time: avg number of patient choices

(6) CTB Time: [avg amount allocated to early in decisions without risk]

(7) MPL Ambiguity: avg number risky urn choices

(8) Solidarity Game: avg amount sent to others

(9) Solidarity Game: avg amount expected from others

Baselevels: No infection close relation, Version 1, Male, Low Educated, Homeowner, Yearly income 36.500 euro or less

Question: Was or is one of your family members or good friends infected with the so-called coronavirus (COVID-19)?

Observations: excludes participants from round 1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A11: Heterogenous Impact Financial - Impact of COVID-19 on Financial Situation

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| Worsened | 0.250 | -0.320 | 0.326** | -0.158 | -0.429* | 3.491* | 0.102 | 0.384 | -1.142 |
| | (0.257) | (2.007) | (0.149) | (0.175) | (0.251) | (1.791) | (0.152) | (1.634) | (1.527) |
| Improved | -0.483* | -2.819 | -0.120 | 0.105 | -0.308 | -0.604 | 0.201 | -0.843 | -0.474 |
| | (0.253) | (1.973) | (0.147) | (0.172) | (0.247) | (1.761) | (0.149) | (1.608) | (1.502) |
| Version 2 | | -3.931*** | | | -0.699*** | 4.541*** | | | |
| | | (1.399) | | | (0.175) | (1.248) | | | |
| Female | 0.667*** | 3.301** | -0.007 | 0.454*** | 0.032 | -0.061 | -0.040 | 0.858 | -2.047* |
| | (0.191) | (1.492) | (0.111) | (0.130) | (0.187) | (1.332) | (0.113) | (1.216) | (1.136) |
| Age | 0.041*** | -0.062 | -0.005 | 0.004 | -0.015** | 0.180*** | -0.009** | 0.029 | -0.110** |
| | (0.007) | (0.057) | (0.004) | (0.005) | (0.007) | (0.050) | (0.004) | (0.046) | (0.043) |
| Middle Educated | 0.601** | 1.591 | 0.312** | -0.054 | 0.690*** | 1.520 | -0.117 | -2.160 | -2.505 |
| | (0.273) | (2.129) | (0.158) | (0.185) | (0.266) | (1.900) | (0.161) | (1.734) | (1.620) |
| High Educated | -0.240 | 1.088 | 0.323* | -0.342* | 1.030*** | 0.037 | 0.004 | -2.814 | -3.997** |
| | (0.297) | (2.311) | (0.172) | (0.201) | (0.289) | (2.063) | (0.175) | (1.883) | (1.759) |
| Tenant | -0.241 | -0.108 | 0.105 | -0.028 | -0.432** | -0.113 | 0.011 | -2.054 | -1.524 |
| | (0.204) | (1.592) | (0.119) | (0.139) | (0.199) | (1.421) | (0.120) | (1.297) | (1.212) |
| 36.500 euro or more | -0.069 | -0.807 | 0.210 | -0.190 | 0.021 | -1.435 | 0.003 | 1.230 | -0.962 |
| | (0.249) | (1.941) | (0.144) | (0.169) | (0.243) | (1.732) | (0.147) | (1.580) | (1.476) |
| Prefer not to state | 0.041 | 0.057 | 0.302* | -0.193 | -0.005 | -0.668 | 0.070 | -0.117 | -1.420 |
| | (0.292) | (2.272) | (0.169) | (0.198) | (0.284) | (2.028) | (0.172) | (1.851) | (1.729) |
| Constant | 4.203*** | 19.415*** | 3.748*** | 3.396*** | 6.036*** | 25.533*** | 5.434*** | 25.214*** | 29.239*** |
| | (0.541) | (4.278) | (0.314) | (0.367) | (0.535) | (3.819) | (0.319) | (3.432) | (3.207) |
| Observations | 890 | 890 | 890 | 890 | 890 | 890 | 890 | 890 | 890 |

Standard errors in parentheses

(1) MPL Risk: avg number of safe choices

(2) CTB Risk: [Avg amount allocated to early in decisions with risk] - [avg amount allocated to early in decisions without risk]

(3) MPL Prudence: avg number of prudent choices

(4) MPL Temperance: avg number of temperate choice

(5) MPL Time: avg number of patient choices

(6) CTB Time: [avg amount allocated to early in decisions without risk]

(7) MPL Ambiguity: avg number risky urn choices

(8) Solidarity Game: avg amount sent to others

(9) Solidarity Game: avg amount expected from others

Baselevels: Financial situation remained the same, Version 1, Male, Low Educated, Homeowner, Yearly income 36.500 euro or less

Question: In your opinion, to what extent did your financial situation change due to the so-called coronavirus (COVID-19)?

Observations: excludes participants from round 1 and participants that answered 'prefer not to answer' (2) or 'not applicable' (12)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A12: Heterogenous Impact Career - Impact of COVID-19 on Career Perspective

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| Worsened | -0.300 | -2.355 | 0.200 | 0.067 | -0.181 | -1.720 | -0.033 | 2.544 | 1.351 |
| | (0.244) | (1.902) | (0.141) | (0.167) | (0.237) | (1.691) | (0.141) | (1.555) | (1.452) |
| Improved | -0.478 | -1.687 | -0.129 | 0.039 | -0.251 | -3.289 | 0.136 | 2.524 | 2.548 |
| | (0.326) | (2.538) | (0.189) | (0.222) | (0.316) | (2.257) | (0.189) | (2.077) | (1.939) |
| Version 2 | | -4.090*** | | | -0.663*** | 4.661*** | | | |
| | | (1.435) | | | (0.179) | (1.276) | | | |
| Female | 0.677*** | 2.859* | 0.005 | 0.479*** | -0.072 | -0.062 | -0.073 | 1.097 | -1.979* |
| | (0.198) | (1.539) | (0.114) | (0.135) | (0.192) | (1.368) | (0.114) | (1.259) | (1.176) |
| Age | 0.042*** | -0.057 | -0.006 | 0.005 | -0.016** | 0.169*** | -0.010** | 0.046 | -0.087* |
| | (0.008) | (0.060) | (0.004) | (0.005) | (0.007) | (0.053) | (0.004) | (0.049) | (0.046) |
| Middle Educated | 0.541* | 0.744 | 0.404** | -0.150 | 0.711** | 2.080 | -0.146 | -2.109 | -2.190 |
| | (0.288) | (2.244) | (0.167) | (0.197) | (0.280) | (1.996) | (0.167) | (1.836) | (1.715) |
| High Educated | -0.341 | 0.818 | 0.370** | -0.332 | 1.032*** | -0.028 | -0.005 | -2.997 | -3.926** |
| | (0.308) | (2.400) | (0.179) | (0.210) | (0.299) | (2.134) | (0.178) | (1.963) | (1.833) |
| Tenant | -0.310 | -0.212 | 0.123 | -0.038 | -0.453** | -0.670 | 0.026 | -2.148 | -1.482 |
| | (0.210) | (1.633) | (0.122) | (0.143) | (0.203) | (1.452) | (0.121) | (1.336) | (1.248) |
| 36.500 euro or more | -0.072 | -0.529 | 0.286* | -0.090 | 0.060 | -2.604 | 0.075 | 0.679 | -1.595 |
| | (0.256) | (1.991) | (0.148) | (0.174) | (0.248) | (1.770) | (0.148) | (1.627) | (1.519) |
| Prefer not to state | -0.107 | 0.080 | 0.276 | -0.082 | 0.131 | -1.991 | 0.111 | -0.702 | -1.572 |
| | (0.301) | (2.345) | (0.174) | (0.206) | (0.292) | (2.085) | (0.174) | (1.919) | (1.791) |
| Constant | 4.348*** | 20.038*** | 3.657*** | 3.301*** | 6.037*** | 27.814*** | 5.470*** | 23.996*** | 27.701*** |
| | (0.564) | (4.455) | (0.327) | (0.385) | (0.555) | (3.961) | (0.326) | (3.592) | (3.354) |
| Observations | 840 | 840 | 840 | 840 | 840 | 840 | 840 | 840 | 840 |

Standard errors in parentheses

(1) MPL Risk: avg number of safe choices

(2) CTB Risk: [Avg amount allocated to early in decisions with risk] - [avg amount allocated to early in decisions without risk]

(3) MPL Prudence: avg number of prudent choices

(4) MPL Temperance: avg number of temperate choice

(5) MPL Time: avg number of patient choices

(6) CTB Time: [avg amount allocated to early in decisions without risk]

(7) MPL Ambiguity: avg number risky urn choices

(8) Solidarity Game: avg amount sent to others

(9) Solidarity Game: avg amount expected from others

Baselevels: Career perspective remained the same, Version 1, Male, Low Educated, Homeowner, Yearly income 36.500 euro or less

Question: In your opinion, to what extent did your career perspective change due to the so-called coronavirus (COVID-19)?

Observations: excludes participants from round 1 and participants that answered 'prefer not to answer' (4) or 'not applicable' (56)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A13: Heterogenous Impact Belief - Expectation Situation Back to Normal (before COVID-19)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| More than 1 year | 0.118 | 0.461 | 0.070 | 0.047 | 0.105 | 0.318 | -0.003 | -0.490 | -0.637 |
| | (0.178) | (1.382) | (0.103) | (0.121) | (0.174) | (1.235) | (0.105) | (1.127) | (1.053) |
| Version 2 | | -3.733*** | | | -0.631*** | 4.257*** | | | |
| | | (1.382) | | | (0.174) | (1.235) | | | |
| Female | 0.595*** | 3.191** | -0.020 | 0.426*** | -0.041 | -0.016 | -0.057 | 0.832 | -2.004* |
| | (0.189) | (1.469) | (0.110) | (0.128) | (0.185) | (1.313) | (0.111) | (1.198) | (1.119) |
| Age | 0.041*** | -0.054 | -0.006 | 0.002 | -0.015** | 0.182*** | -0.010** | 0.035 | -0.101** |
| | (0.007) | (0.056) | (0.004) | (0.005) | (0.007) | (0.050) | (0.004) | (0.045) | (0.042) |
| Middle Educated | 0.534** | 1.553 | 0.282* | -0.060 | 0.651** | 1.613 | -0.150 | -1.970 | -2.168 |
| | (0.271) | (2.106) | (0.157) | (0.184) | (0.265) | (1.882) | (0.159) | (1.717) | (1.605) |
| High Educated | -0.378 | 0.729 | 0.256 | -0.329* | 1.010*** | -0.368 | -0.034 | -2.814 | -3.912** |
| | (0.294) | (2.279) | (0.170) | (0.199) | (0.287) | (2.037) | (0.173) | (1.859) | (1.737) |
| Tenant | -0.306 | -0.625 | 0.081 | -0.041 | -0.415** | 0.035 | 0.017 | -1.975 | -1.419 |
| | (0.203) | (1.575) | (0.118) | (0.138) | (0.198) | (1.407) | (0.119) | (1.284) | (1.200) |
| 36.500 euro or more | -0.183 | -0.928 | 0.128 | -0.148 | 0.028 | -1.876 | -0.035 | 1.109 | -0.808 |
| | (0.245) | (1.901) | (0.142) | (0.166) | (0.239) | (1.699) | (0.144) | (1.549) | (1.448) |
| Prefer not to state | -0.108 | -0.523 | 0.222 | -0.144 | 0.072 | -1.259 | 0.010 | -0.408 | -1.493 |
| | (0.286) | (2.218) | (0.166) | (0.194) | (0.279) | (1.982) | (0.168) | (1.809) | (1.691) |
| Constant | 4.331*** | 18.600*** | 3.875*** | 3.434*** | 5.872*** | 26.441*** | 5.591*** | 25.128*** | 28.615*** |
| | (0.530) | (4.177) | (0.307) | (0.359) | (0.525) | (3.732) | (0.311) | (3.351) | (3.132) |
| Observations | 910 | 910 | 910 | 910 | 910 | 910 | 910 | 910 | 910 |

Standard errors in parentheses

(1) MPL Risk: avg number of safe choices

(2) CTB Risk: [Avg amount allocated to early in decisions with risk] - [avg amount allocated to early in decisions without risk]

(3) MPL Prudence: avg number of prudent choices

(4) MPL Temperance: avg number of temperate choice

(5) MPL Time: avg number of patient choices

(6) CTB Time: [avg amount allocated to early in decisions without risk]

(7) MPL Ambiguity: avg number risky urn choices

(8) Solidarity Game: avg amount sent to others

(9) Solidarity Game: avg amount expected from others

Baselevels: Situation back to normal within 1 year, Version 1, Male, Low Educated, Homeowner, Yearly income 36.500 euro or less

Question: When do you expect that all measures concerning the so-called coronavirus (COVID-19) can be lifted such that the situation in the Netherlands can return back the situation as before the crisis?

Observations: excludes participants from round 1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$