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## Consumer sentiment during the COVID-19 pandemic

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# Consumer Sentiment During the COVID-19 Pandemic

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## Abstract

We analyze consumer sentiment with a novel survey of Thai and Vietnamese consumers conducted in May 2020, that is, shortly after the end of the immediate lockdown due to the COVID-19 pandemic. In a randomized control trial, we expose subgroups of the survey respondents to four different information treatments: (1) how their country ranks in a global survey on agreement or disagreement with the government’s response to COVID-19, (2) how the country compares in a global survey on the appropriateness of the general public’s reaction to the pandemic, (3) the negative unemployment outlook due to the pandemic, and (4) the positive effects of social distancing for the spread of the virus. First, our results show that consumers are more optimistic if they expect higher GDP growth and trust the government in dealing with the crisis, whereas having stronger concerns about their household’s financial situation due to COVID-19 is related to less optimistic sentiment. Second, we find that the information treatments only weakly affect consumer sentiment. However, consumer sentiment is strongly affected by treatment (1) and (2) when they go against respondents’ previously held views. Finally, we discover large differences between the two countries.

**Keywords:** Consumer sentiment; COVID-19; randomized control trial (RCT); survey experiment; government trust; macroeconomic expectations; Thailand; Vietnam

**JEL classification:** E71; H12; I12; I18; Z18

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# 1 Introduction

Since early spring 2020, the COVID-19 virus has been spreading around the world, causing deep crises in many countries. Although originally a health issue, the virus has had a severe impact on politics, social life, and the economy. Experts find that the complexity of this situation and the tradeoffs involved do not lend themselves to easy solutions. Laypersons may find it even more difficult to understand the implications of the crisis, both for themselves as well as for the society in which they live.

From an economic perspective, the crisis can be described as a shock with three important aspects. First, it creates a high degree of uncertainty, as it is unclear how fast the virus will spread and how governments and societies will respond. Second, the crisis has elements of a supply shock, as temporary lockdowns and travel bans disrupt international supply chains. Some sectors of the economy have experienced a severe depression, with many firms being forced to reduce production or close. Third, the crisis also has elements of a demand shock, as lockdowns keep consumers away from stores and cause firms to shed labor, thereby increasing unemployment and depleting households' financial reserves.

These various economic shocks resulting from the COVID-19 pandemic likely affect consumer sentiment and, thereby, could dampen current and future spending. At the same time, expansive fiscal and monetary policy measures may ease the negative effect of the pandemic on sentiment. Other papers have analyzed consumer behavior during COVID-19 in industrialized countries such as the United States, but we still know relatively little about consumers' reaction in emerging markets. In this paper, we thus investigate consumer sentiment during COVID-19 in two emerging market economies, Thailand and Vietnam, constructing an index of consumer sentiment at the individual level.<sup>1</sup>

In early May 2020, that is, shortly after the end of the lockdown in both countries, we conducted an online survey of consumers in Thailand and Vietnam. The survey includes a randomized control trial (RCT) information experiment, where we subjected randomly assigned subgroups to four different information treatments. The first treatment tests how consumers respond to information about the relative rank of their own country in a global survey on agreement or disagreement with the government's response to COVID-19 (*government reaction*). In the global survey used for the treatment, Thailand was the country where respondents disagreed the most with their government's response, whereas Vietnam was the country where respondents showed the highest agreement with their government's response to COVID-19. This treatment tests how consumers respond to

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<sup>1</sup>Individual consumer sentiment is based on the responses to the same questions, which are used to calculate the *aggregate* consumer sentiment index in the University of Michigan survey. The index accounts for consumers' current and expected financial situation, several macroeconomic expectations, and their readiness to spend on durable goods. The aggregate consumer sentiment index is often employed as a leading indicator for macroeconomic forecasts. A large body of literature highlights the crucial link between consumer sentiment and (future) economic activity, such as consumer spending (Carroll et al., 1994; Ludvigson, 2004; Souleles, 2004; Dees and Soares Brinca, 2013; Ahmed and Cassou, 2016), future productivity (Barsky and Sims, 2012; Bachmann and Sims, 2012), and the stock market (Jansen and Nahuis, 2003; Chen, 2011).

information about other people’s views on their government and whether it makes a difference where the country ranks globally in terms of agreement with the government. The second treatment shows the share of Thai or Vietnamese respondents from another global survey who view the reaction of the general public to the pandemic as insufficient and compares it to the respective shares in China and India (*public reaction*). As in the first treatment, this tests how consumers respond to information about other consumers’ views. In this treatment, however, the response shares are relatively similar in Vietnam and Thailand, placing them between the response shares in China and India. *Ex ante*, therefore, we do not expect the treatment to affect respondents in the two countries differently. The last two treatments highlight the negative global unemployment outlook due to the pandemic by the International Labor Organization (ILO) (*ILO forecast*) and the importance of social distancing for reducing the number of COVID-19 cases (*social distancing*). Here, we assess whether emphasizing different aspects of the pandemic affects consumer sentiment.

Thailand and Vietnam were chosen because they are two emerging economies from the same region in South-East Asia of similar size, but also different in important ways. Economically, GDP per capita in Thailand is roughly twice that in Vietnam and the country ranks higher on the Human Development Index. However, Vietnam experienced high real GDP growth in the years preceding the pandemic. Politically, both nations are governed by unitary entities, but although the political situation is at present stable in Vietnam, Thailand has experienced repeated episodes of political unrest since the military coup in 2014 and, more recently, since the election of a new government in 2019 was effectively circumvented by the military. Regarding the COVID-19 pandemic, substantially more cases are reported from Thailand than from Vietnam (both in terms of absolute and per capita numbers) and public disagreement with government policies for handling the crisis is much higher in Thailand than in Vietnam (Fetzer et al., 2020b).

We find that consumer sentiment in both countries is correlated with macroeconomic expectations not included in the index, assessment of the government’s policies, and personal concerns about COVID-19. Consumer sentiment in Thailand and Vietnam is higher when respondents expect higher GDP growth, think the government did a good job in terms of economic policies before the pandemic, and trust the government in dealing with the economic aspects of the COVID-19 crisis. By contrast, consumers are less optimistic about the economic outlook when they are concerned about the effect of the COVID-19 crisis on their household’s financial situation. Hence, even after the easing of the lockdown, consumer sentiment is affected by variables related to the COVID-19 crisis.

When evaluating the impact of the information treatments on consumer sentiment and on the variables correlated with sentiment, we find only few significant effects. The effects we find are asymmetric across countries, as only respondents in our Vietnamese sample reacted significantly to the treatments. Among these, we find no significant effects of the ILO forecast treatment or of the social distancing treatment. This suggests that

either this information was already incorporated in respondents' views or was not deemed relevant for the questions contained in the consumer sentiment index.

In contrast, there are some significant effects of the government reaction and the public reaction treatments. After Vietnamese respondents were treated with information that about half the respondents in another survey viewed the general public's response to the virus in Vietnam as insufficient (with lower shares in China, and higher shares in India), they report somewhat more positive consumer sentiment, lower unemployment expectations, and lower concerns regarding their health, job security, and household financial situation due to COVID-19. At the same time, interviewees receiving information on how well other survey respondents rate the Vietnamese government's response to the pandemic compared to other countries report lower unemployment expectations, higher GDP growth expectations as well as less concern about their job security and financial situation due to COVID-19. One interpretation of this result is that both treatments are seen as good news by Vietnamese consumers.

Conditioning on consumers' assessment of their government's macroeconomic policy before the pandemic (which was elicited before the treatments), we show that significant treatment effects on consumer sentiment emerge when respondents are surprised by the information: For those Vietnamese consumers who think the government did a poor job before the crisis, both the government reaction and the public reaction treatment cause a significant increase in consumer sentiment. The size of this effect is economically meaningful, whereas the magnitude of the other effects is moderate. In the Thai sample, consumers who previously thought the government did a good job are found to be more pessimistic after receiving the government reaction or the public reaction treatment, although these effects are not statistically significant. This suggests that information about other people's views affects consumer sentiment more strongly if the information contradicts the individual's prior belief.

Our paper contributes to the growing literature that combines consumer surveys with RCTs to study economic aspects of the COVID-19 pandemic. So far, most studies focus on the United States. The paper most directly related to ours is [Fetzer et al. \(2020\)](#), in which the authors conducted two survey experiments at the start of the pandemic in the United States, that is, in early-mid March 2020. They show that respondents generally overestimate the contagiousness of and mortality related to the virus. Providing information about true contagiousness or mortality significantly lowers concerns about the individual or the aggregate economic situation. While [Fetzer et al. \(2020\)](#) measure economic sentiment using questions on personal economic concerns related to COVID-19, we calculate an individual index of consumer sentiment based on financial and macroeconomic expectations as well as the readiness to spend on durable goods.

[Binder \(2020\)](#) surveyed U.S. consumers on March 5 and 6, 2020, just before the pandemic really hit the United States. She finds that consumers concerned about COVID-19 expect higher unemployment and higher inflation and, thus, are more pessimistic about

the economic outlook. When treated with information about the Fed’s interest rate cut on March 3, 2020, consumers become more optimistic about future unemployment and inflation. Similarly, [Coibion et al. \(2020a\)](#) conducted a survey of Nielsen Homescan panelists in April 2020 and randomly provided several information treatments about the severity of the pandemic and monetary, fiscal, and health policies in the United States. In line with [Fetzer et al. \(2020\)](#), these authors also report that true contagiousness and mortality were significantly overestimated. Nevertheless, they find no notable effects of information about policy responses on macroeconomic expectations or planned spending. [Hanspal et al. \(2020\)](#) surveyed U.S. consumers in April 2020 and included RCT information treatments referring to several historical stock market crashes. The authors find that those who received information on a more severe stock market crash in the past are more pessimistic about current stock market development. Most recently, [Coibion et al. \(2020c\)](#) conducted a survey from October 19-21, 2020 in the United States to study the effect of the expected presidential election’s outcome on economic expectations. The authors find that providing public polling information significantly changes the opinions of only those respondents who are political independents and/or have no strong initial beliefs about the outcome.

We utilize the results from two global surveys as our first two information treatments. From March 23 to March 27, 2020, [Dölitzsch \(2020\)](#) at the Dalia Research Company ran a global survey to assess citizens’ rankings of their governments’ response to the COVID-19 crisis. The survey covered 45 countries across all continents and had more than 32,000 respondents. [Dölitzsch \(2020\)](#) reports that among the 45 surveyed countries, Thailand has the highest share of respondents who believe their government responds too little to the pandemic, while Vietnam has the highest share of respondents who believe their government responds appropriately. We take this result as our first information treatment (*government reaction*). The study by [Fetzer et al. \(2020a\)](#) evaluates the effect of the government’s reaction to COVID-19 on mental well-being in a large-scale survey covering 58 countries and over 100,000 respondents between March 20 and April 7, 2020. The authors find that the perception of an insufficient public and government response is associated with lower mental well-being, leading to pessimism or even psychological illnesses. We use [Fetzer et al. \(2020b\)](#) survey results on the global assessment of the public’s reaction to COVID-19 as our second information treatment (*public reaction*).

Our paper is also related to the growing literature using non-randomized control trials to study the impact of the COVID-19 pandemic on consumption, including, among others, [Andersen et al. \(2020\)](#), [Baker et al. \(2020\)](#), [Carvalho et al. \(2020\)](#), [Christelis et al. \(2020\)](#), and [Chronopoulos et al. \(2020\)](#). To our knowledge, the only other study to date on the impact of COVID-19 on consumers in Vietnam is by [Dang and Giang \(2020\)](#). The authors conducted an online survey from April 26 to May 9, 2020 to study the correlation of employment status with households’ financial situation and economic expectations.

They find that having a job is positively correlated with a better financial situation, fewer job concerns, and more optimism with respect to future economic development.

Our study extends the previous literature by employing a survey-based RCT framework to study consumer sentiment during COVID-19 in two emerging countries in Asia. We evaluate the causal effects on consumer sentiment of a set of different information treatments about COVID-19, namely, the assessment of the government’s and the public reaction to COVID-19, the global unemployment forecast, and the effect of social distancing on reducing the spread of the coronavirus. In our analysis, we focus on consumer sentiment, rather than on macroeconomic expectations, and evaluate the effects of information treatments. In addition, our analysis differs from most previous studies in terms of timing, as we focus on consumer sentiment after the immediate lockdown phase.

The rest of the paper is organized as follows. In the next section, we describe our survey and the treatments. Section 3 contains the results of our analysis. Section 4 concludes.

## 2 Data Description

In early May 2020, right after the start of the first easing period after the lockdown, we ran two online surveys on consumers in Vietnam and Thailand. This is a unique and novel dataset because it collects consumers’ opinions on trust in the government, macroeconomic expectations, and personal concerns, as well as consumer sentiment during the COVID-19 pandemic, in two emerging/frontier economies.

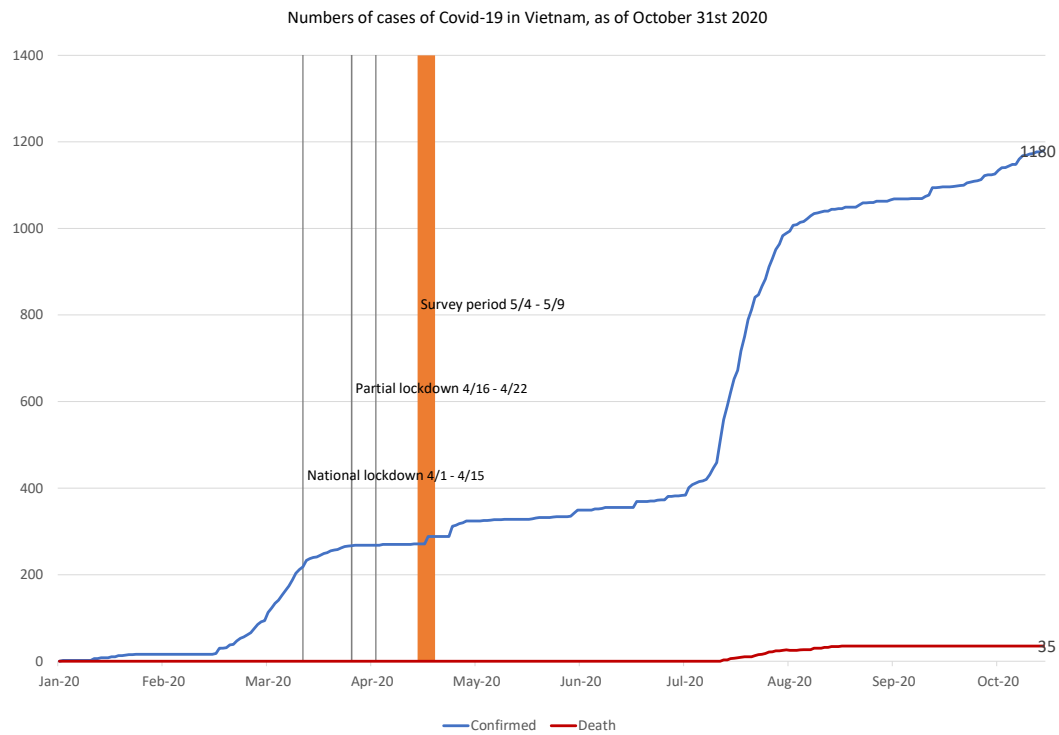
Thailand and Vietnam were chosen for several reasons. On the one hand, both are emerging countries from the same geographic region. Politically, they are both ruled by unitary entities: the Kingdom of Thailand is currently governed by the military and the Socialist Republic of Vietnam by the Communist Party. They also have fairly comparable population sizes (Thailand: 67 million, Vietnam: 95 million). On the other hand, there are interesting differences. Thailand has roughly twice the GDP per capita as Vietnam (about \$20,000 and \$8,000, respectively (U.S. dollar in PPP in 2019)) and ranks higher on the Human Development Index (ranks 77 and 118, respectively). The recent real GDP growth and inflation development in both countries are shown in Figure A1 in the Appendix.

As Figure 1 shows, substantially more COVID-19 cases are reported from Thailand than from Vietnam (both in terms of absolute and per capita numbers). Following the COVID-19 lockdown, widespread anti-government protests erupted in Thailand, whereas in Vietnam the situation remained calm. However, in August, well after our survey period, Vietnam experienced a second wave of infection. Moreover, the perceived government reaction to the crisis differs between the two countries. As shown by [Fetzer et al. \(2020b\)](#), in Vietnam, public agreement with policy measures is much higher than in Thailand and trust in the government is also substantially higher.

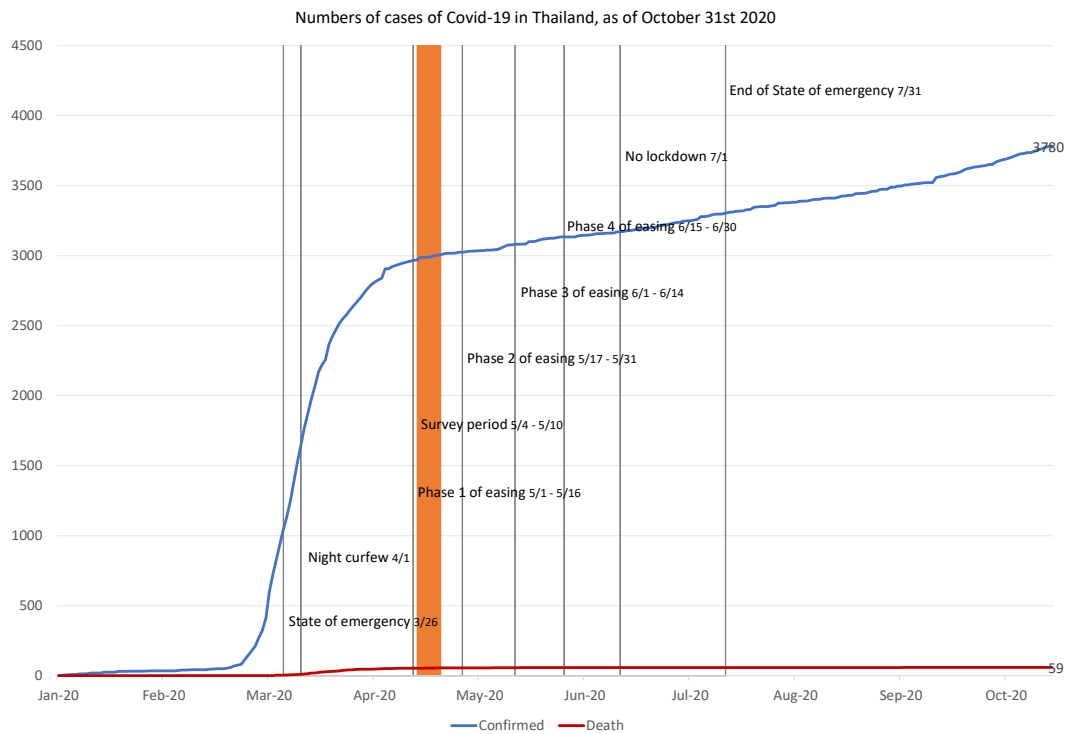
The survey in Vietnam was conducted in Vietnam May 4-9, 2020 and had 3,300 respondents; the survey in Thailand took place May 4-10, 2020 and had 2,200 respondents. Our data were collected by GMO-Z.com RUNSYSTEM, which is one of the largest private market research and public opinion survey companies in South-East Asia. The company has a large number of registered participants who are familiar with online surveys. In addition, participants can gain “reward points” by finishing the survey, which are redeemable into gifts. Reflecting a sampling bias, our datasets overweight the young, highly educated, and urban respondents in both countries. To improve the representativeness of our data, we construct and apply population weights based on the official age distribution, the main factor distorting our sample. We also make sure that our results are generally robust with respect to using weights additionally including education and the share of the urban population. All estimations control for these factors and several additional demographic characteristics, including income, employment status, gender, and marital status.



Figure 1: COVID-19 Pandemic Development in Thailand and Vietnam



(a) *Vietnam*



(b) *Thailand*

Source: John Hopkins University, Worldometers.

## 2.1 Information Treatments

The questionnaire starts with a set of standardized questions designed to elicit consumers' sociodemographic characteristics and their assessment of the government's macroeconomic policies before COVID-19 (*govt\_ass\_normal\_times*).<sup>2</sup> We then randomly divide our samples for each country and apply four different information treatments; there is also a control group that does not receive any information. The exact wording and the accompanying graphs of the information treatments are as follows.

### Treatment 1: *Government reaction*

- Thailand survey:

**COVID-19: Many Thai believe that their government responds too little.**

A global survey pointed out that about 8 out of 10 Thai surveyed said that the government has not implemented sufficient measures to control the spread of the COVID-19 pandemic. Among 45 countries, Thailand has the highest share of respondents who believe that their government responds too little.

- Vietnam survey:

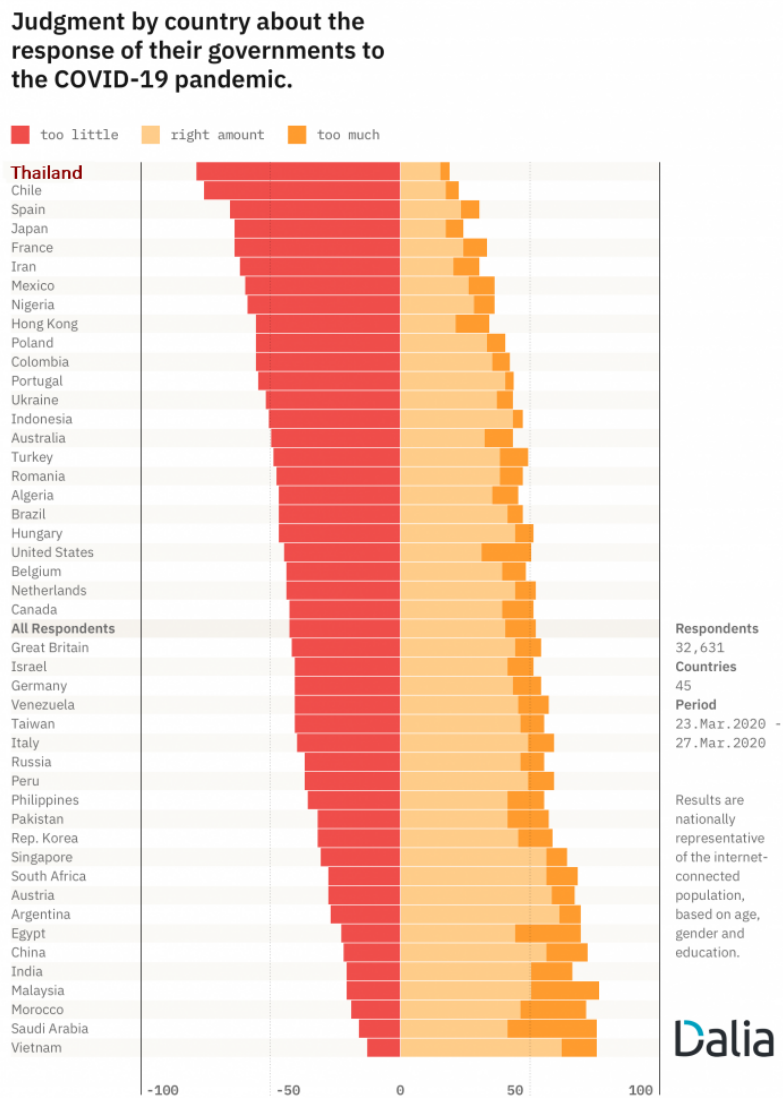
**COVID-19: Many Vietnamese people believe that their government responds appropriately.**

A global survey pointed out that about 6 out of 10 Vietnamese surveyed said that the government has implemented appropriate measures to control the spread of the COVID-19 pandemic. Among 45 countries, Vietnam has the highest share of respondents who believe that their government responds appropriately.

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<sup>2</sup>The question on *govt\_ass\_normal\_times* is taken from the Michigan Survey of Consumers.

Figure 2: Assessment of Government Reaction to Covid-19 Pandemic



Source: Dalia Research Company, Dölitzsch (2020).

## Treatment 2: *Public reaction*

- Thailand survey:

**About half of Thai said that the public's reaction in their country is insufficient.**

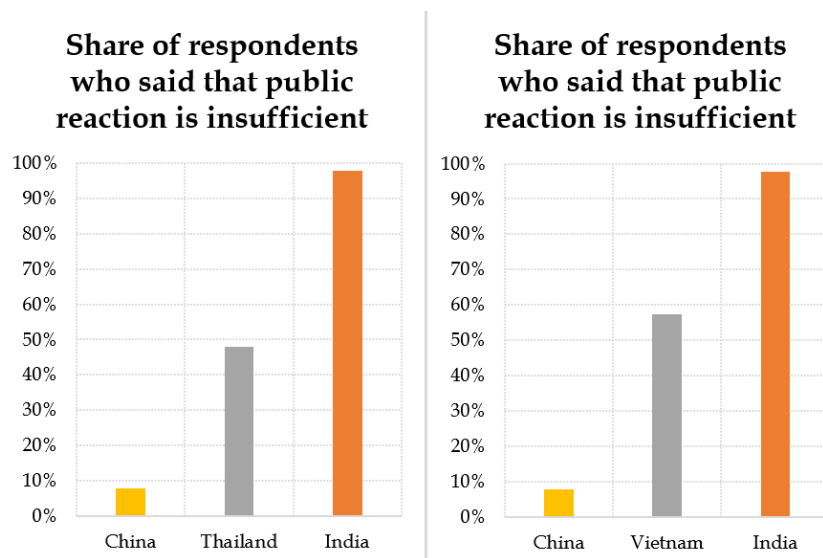
A recent global population survey asked how people assess the public's reaction in their country to the COVID-19 crisis. About 5 out of 10 Thai said that the reaction of their fellow citizens is insufficient. Worldwide, only about 1 out of 10 Chinese, but about 10 out of 10 Indians, gave the same answer.

- Vietnam survey:

**COVID-19 survey: About 6 out of 10 Vietnamese said that the public's reaction in their country is insufficient.**

A recent global population survey asked how people assess the public's reaction in their country to the COVID-19 crisis. About 6 out of 10 Vietnamese said that the reaction of their fellow citizens is insufficient. Worldwide, only about 1 out of 10 Chinese, but about 10 out of 10 Indians, gave the same answer.

Figure 3: Assessment of Public Reaction to Covid-19 Pandemic



Source: [Fetzer et al. \(2020b\)](#).

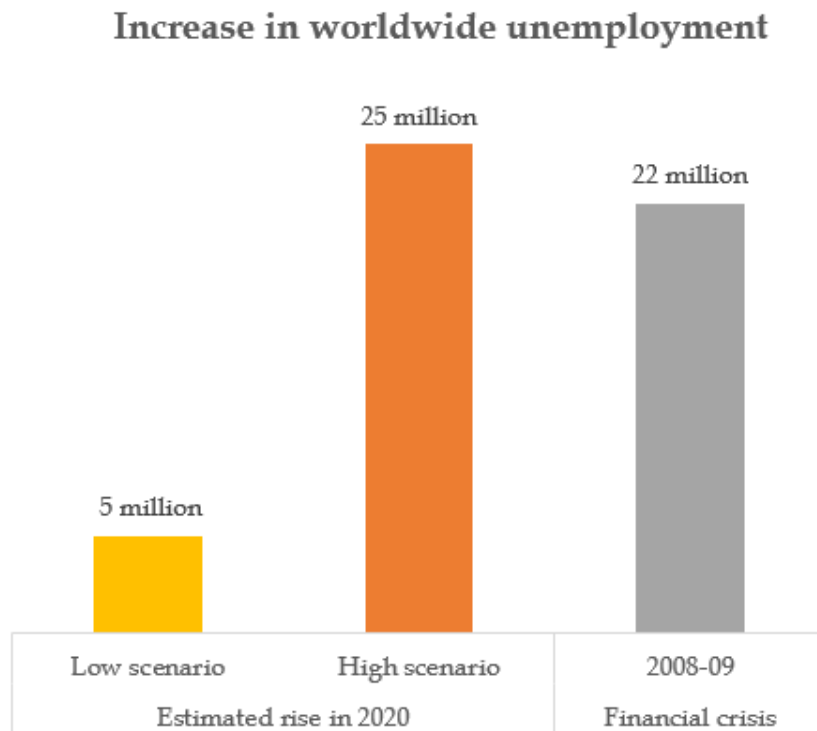
### Treatment 3: *ILO forecast*

- Both Thailand and Vietnam surveys:

**COVID-19: Millions of people will be pushed into unemployment, underemployment, and working poverty.**

In March 2020, the International Labour Organization (ILO) published its preliminary assessment of the economic impact of COVID-19. It expects that millions of people will be pushed into unemployment, underemployment, and working poverty. According to the ILO's estimates, global unemployment in 2020 will rise substantially, between about 5 million and about 25 million. Large income losses for workers are expected. The decline in economic activity likely devastates workers close to or below the poverty line. Worldwide, the ILO estimates that in 2020, there will be about 9 to 35 million additional people in working poverty.

Figure 4: International Labour Organization Forecast of Worldwide Unemployment



Source: [International Labour Organization \(2020\)](#).

#### Treatment 4: *Social distancing*

- Both Thailand and Vietnam surveys:

##### **COVID-19: Social distancing reduces the spread of the coronavirus.**

The following graph shows the effects of social distancing on the spread of a virus infection based on the calculations of Professor Robert Signer (University of California San Diego).

- With no changes in social behavior, one infected person will, on average, pass the virus to 2.5 people within five days and to 406 people after 30 days. - Reducing social contact by 1/2, one infected person will, on average, pass the virus to 1.25 people within five days and to 15 people after 30 days. - Reducing social contact by 3/4, one infected person will, on average, pass the virus to about 0.625 people within five days and to 2.5 people after 30 days.

Figure 5: The Vital Importance of Social Distancing



Source: [Armstrong \(2020\)](#).

Treatments 1 and 2 summarize the results of the global surveys by [Döhlitzsch \(2020\)](#) and [Fetzer et al. \(2020b\)](#) about respondents' assessment of the appropriateness of government reaction to the COVID-19 pandemic (Treatment 1 - *government reaction*) and of

the appropriateness of the public’s reaction (Treatment 2 - *public reaction*). Thus, both treatments test for an effect of information on other consumers’ views on our respondents’ sentiment. Although the treatments as such are symmetric across countries, Treatment 1 places the countries at opposite extremes, as Thailand is the country with the highest disagreement with government policies during the pandemic, whereas Vietnam is the country with the highest approval rate. In contrast, Treatment 2 places the similar appropriateness ratings in Thailand and Vietnam between the two largest Asian economies, China and India. Hence, this treatment is not asymmetric between the two countries. Finally, Treatments 3 (*ILO forecast*) and 4 (*social distancing*) provide information about two aspects of the pandemic. The ILO forecast treatment focuses on the negative effects on the economy, in this case the unemployment forecast, while the social distancing treatment highlights the benefits of social distancing for the dynamics of the pandemic. Although this might not be new information for the respondents, the treatments help us assess whether highlighting either the economic recession or the benefits of health policies, such as social distancing, affects consumer sentiment.

## 2.2 Key Variables of Interest

After providing information treatments, we collect a set of questions about people’s trust in and assessment of the government’s responses to COVID-19, their macroeconomic expectations, personal concerns related to COVID-19, and consumer sentiment. The exact wording of these questions can be found in Appendix A.4. We first ask about the perceived appropriateness of the government’s reaction to COVID-19 and create a dummy variable, *govt\_covid\_appropriate*, which takes the value of unity if the respondent thinks the reaction is “appropriate” and zero otherwise. We then ask about a qualitative level of trust in the government in overcoming the COVID-19 pandemic, *govt\_trust\_covid\_health*, and in mitigating the negative effects on the economy, *govt\_trust\_covid\_econ*. The questions on trust are taken from Fetzer et al. (2020b). Next, we collect qualitative macroeconomic expectations for the next 12 months, including expected inflation ( $\pi^e$ ), unemployment ( $u^e$ ), and GDP growth ( $y^e$ ). Personal concerns due to COVID-19 include respondents’ health (*concern\_health*), their job security (*concern\_job*), their financial situation (*concern\_finance*), and the economy in general (*concern\_econ*). The questions on personal concerns are taken from Binder (2020) and Fetzer et al. (2020). We calculate the consumer sentiment index for each respondent as a simple average of the five questions: (1) financial situation in the past 12 months, (2) expected financial situation in the next 12 months, (3) expected national business condition in the next 12 months, (4) national economic situation in the next five years, (5) current readiness to spend on durable goods.<sup>3</sup>

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<sup>3</sup>The consumer sentiment index of the University of Michigan is calculated only at the aggregate level by first computing the relative scores (the share of respondents giving favorable replies minus the share giving unfavorable replies) for each of the five questions, then taking the simple average of these five scores.





For the baseline analysis, we exclude respondents who do not know the answer or who do not have opinions on the survey questions. Our sample in the main paper then consists of 2,470 Vietnamese and 1,260 Thai respondents. In Appendix A.3, we re-estimate all regressions with an extended sample, assuming respondents can be categorized as having a neutral position (i.e. expecting “no change” or viewing policies as “neither appropriate or inappropriate” or being “not concerned at all”) when they do not know the answer or report that they do not form opinions. We thus recode missing answers as neutral for the variables of the index of consumer sentiment as well as the regressors in Table 2, that is, further macroeconomic expectations, trust in the government, and personal concerns related to COVID-19.<sup>4</sup> For these robustness checks, we have 3,300 observations in Vietnam and 2,200 observations in Thailand.

Table 1 presents the summary statistics of all our variables of interest. As a neutral consumer sentiment has a value of 3 (by construction, the minimum of the index is 1, the maximum 5), we can see that Vietnamese consumers in our sample are on average somewhat optimistic, while the opposite is true for the Thai sample. Regarding their macroeconomic expectations, consumers in both countries share similar opinions about inflation expectations, but the Thai consumers are more pessimistic about future unemployment and economic growth. Vietnamese consumers have strong agreement with and remarkable trust in government policies during normal times, and also in dealing with the health and economic aspects of the COVID-19 pandemic, whereas Thai interviewees express the opposite opinion. These results are consistent with Dölitzsch (2020) and Fetzner et al. (2020b). The final part of Table 1 shows the statistics of personal concerns due to COVID-19. Interestingly, despite having different assessments of and the trust in the government in dealing with the pandemic, health concerns due to the pandemic are quite similar in both countries. However, the Thai consumers report somewhat higher average concerns about their job security, their financial situation, and the economy in general.

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<sup>4</sup>A similar approach is taken by the University of Michigan Surveys of Consumers and Statistics Netherlands in their respective calculations of aggregate indices of consumer sentiment or consumer confidence. Since these indices are calculated by evaluating the difference in shares of positive and negative answers, all other answers (including missing values) are implicitly treated as neutral.

## 3 Results

### 3.1 Consumer Sentiment, Macro Expectations, Trust in the Government, and Concerns due to COVID-19

We commence our analysis by studying whether macroeconomic expectations, assessment of and trust in government policies, and concerns related to the pandemic are associated with consumer sentiment. In their survey of U.S. consumers during the early stages of the COVID-19 pandemic, [Fetzer et al. \(2020\)](#) show that overestimation of the contagiousness and mortality of the virus is negatively related to concerns regarding the negative effects of the pandemic on aggregate and personal economic outcomes, overall leading to higher economic anxiety. In contrast, we study consumer sentiment in Vietnam and Thailand shortly *after* the end of the lockdown. Thereby, we test whether adverse effects on sentiment persist beyond the immediate lockdown phase.

Note that consumers' macroeconomic expectations, which are not part of the consumer sentiment index, may be linked to sentiment via several channels. On the one hand, following an Euler equation logic, there could be a positive correlation of inflation expectations with consumer sentiment, at least when interpreting sentiment as a proxy for actual consumption spending ([Crump et al., 2015](#); [D'Acunto et al., 2016](#); [Vellekoop and Wiederholt, 2019](#); [Dräger and Nghiem, 2020](#); [Duca-Radu et al., 2020](#)). On the other hand, if consumers view higher expected inflation as a signal for bad future economic outcomes, a negative correlation would also be possible ([Bachmann et al., 2015](#); [Coibion et al., 2019](#)). Since expected unemployment and expected GDP growth are proxies for the future macroeconomic situation, we would expect a negative correlation of consumer sentiment with expected unemployment and a positive correlation with expected GDP growth.

Table 2 shows the results for Vietnam and Thailand, controlling for demographic effects. In both countries, higher expected GDP growth is related to more optimistic sentiment. The correlation is notable, but the estimated effect is not large, as a 1 standard deviation (s.d.) increase in expected GDP growth ( $y^e$ ) in both countries is associated with an increase in consumer sentiment of about 0.3 s.d.<sup>5</sup> In addition, we find that higher expected inflation is significantly associated with more optimistic consumer sentiment in Thailand, whereas the effect is not statistically significant in Vietnam. By contrast, unemployment expectations are significantly negatively correlated with sentiment in Vietnam, whereas the correlation is insignificant for Thailand.

Regarding assessment of and trust in government policies, we find that consumer sentiment significantly co-moves with a more positive assessment of the government's general economic policy during normal times in both Vietnam and Thailand: A 1 s.d. higher as-

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<sup>5</sup>To measure this relation, we use the respective cross-sectional standard deviations for each country given in Table 1.

assessment of the government is associated with a 0.2 s.d. higher consumer sentiment in both countries. In both countries, we also find similar effects of consumers’ trust in the ability of the government to fight the negative economic externalities of the pandemic. As expected, higher trust correlates with a more optimistic consumer sentiment. However, the overall assessment of the government’s policies during the pandemic or the level of trust in dealing with the health aspects of the pandemic do not significantly affect consumer sentiment in our sample.<sup>6</sup>

Finally, we find that greater concerns due to COVID-19 are negatively correlated with sentiment. In that sense, our results corroborate the findings by [Fetzer et al. \(2020\)](#) for the consumer sentiment index. In both countries, this effect is particularly significant for concerns about the effects on the household’s financial situation. However, the magnitude of this effect is small: an increase of 1 s.d. results in a 0.2 s.d. less positive consumer sentiment. In the Thai sample, we also find that concerns about health and the economy due to COVID-19 significantly reduce consumer sentiment, but the magnitude of these effects is about half that of the effect of financial concerns. Note that we find that concerns about job security are positively correlated with consumer sentiment in the Thai sample. However, if we estimate the regressions with *concern\_job* and *concern\_finance* separately, we discover that concerns about job security are significantly associated with less positive sentiment in both countries.

Overall, macroeconomic expectations and, to some extent, concerns raised by the pandemic and trust in the government’s ability to deal with it, are significantly related to consumer sentiment even after moving out of the immediate lockdown phase. We discover these effects in both Vietnam and Thailand, two emerging markets with marked differences in terms of agreement with and trust in the government. Our estimates suggest that the pandemic has relatively long-lasting negative effects on consumption spending, particularly when the resulting recession is anticipated to be bad and trust in the government’s ability to deal with the pandemic and the recession is low.<sup>7</sup>

### 3.2 Causal Effects of Information Treatments

To this point, we have considered multivariate correlations. In this section, we evaluate the causal effects of the information treatments discussed in Section 2. Treatments 1 and 2 summarize the results of the global surveys by [Dölitzsch \(2020\)](#) and [Fetzer et al. \(2020b\)](#) about respondents’ assessment of the appropriateness of the government’s reaction to the COVID-19 pandemic (Treatment 1 - *government reaction*) and of the appropriateness

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<sup>6</sup>If we estimate the regressions with *govt\_trust\_covid* and *govt\_trust\_covid\_econ* separately to gauge the influence of multicollinearity, we discover that *govt\_trust\_covid* is also significantly and positively correlated with consumer sentiment. The results are available on request.

<sup>7</sup>As shown in Table A3 in the Appendix, our results remain unchanged when we use the full sample, assuming respondents are neutral when they answer “don’t know” or “do not form opinions” to the survey questions. In the case of Vietnam, we find an additional significantly positive correlation of inflation expectations with consumer sentiment.

Table 2: Consumer Sentiment in Vietnam and Thailand

	(1) VN	(2) TL
$\pi^e$	0.02 (0.01)	0.04** (0.02)
$u^e$	-0.05*** (0.01)	-0.02 (0.02)
$y^e$	0.2*** (0.01)	0.3*** (0.02)
<i>govt_assess_normal_times</i>	0.1*** (0.03)	0.2*** (0.04)
<i>govt_covid_appropriate</i>	-0.03 (0.05)	0.0001 (0.06)
<i>govt_trust_covid_health</i>	0.003 (0.02)	0.03 (0.03)
<i>govt_trust_covid_econ</i>	0.06*** (0.02)	0.07** (0.03)
<i>concern_health</i>	-0.02 (0.02)	-0.1** (0.05)
<i>concern_job</i>	-0.04 (0.03)	0.1** (0.05)
<i>concern_finance</i>	-0.1*** (0.03)	-0.2*** (0.05)
<i>concern_econ</i>	-0.04 (0.03)	-0.1** (0.06)
Demographic controls	Yes	Yes
R <sup>2</sup>	0.323	0.383
N observations	2470	1260

Note: Demographic controls include the log of household income per capita, employment status, urban/rural area, age, age squared, gender and marital status. We report coefficients from OLS estimations with population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

of the public’s reaction (Treatment 2 - *public reaction*). As discussed in Section 2.1, in Treatments 1 and 2, we test for an effect of other consumers’ views. In addition, Treatments 1 and 2 test whether it makes a difference how average views in the respondents’ own country compare to those in other countries. Treatments 3 and 4 test for an effect of highlighting a particular element of the COVID-19 crisis, namely, the negative effects on the economy versus the positive effects of social distancing measures.

Table 3 shows that most information treatment effects are insignificant for the consumer sentiment index. The only exception is a significantly positive effect at the 10% level of the public reaction treatment on consumer sentiment in Vietnam. Compared to the control group, this implies that respondents receiving the public reaction treatment increase their consumer sentiment by about 0.15 standard deviations, a rather small upswing. However, this suggests that the information is perceived as good news. Overall, our finding of few information treatment effects is consistent with Coibion et al. (2020a), who find very small effects of information about various policy measures on respondents’ beliefs or spending plans in the United States during the start of the COVID-19 lockdown.

Table 3: Marginal Effects of Information Treatments on Consumer Sentiment

	(1) VN	(2) TL
<i>government reaction</i>	0.05 (0.05)	-0.09 (0.10)
<i>public reaction</i>	0.09* (0.05)	-0.1 (0.09)
<i>ILO forecast</i>	-0.06 (0.05)	0.02 (0.09)
<i>social distancing</i>	0.03 (0.05)	-0.04 (0.09)
Demographic controls	Yes	Yes
R <sup>2</sup>	0.031	0.041
N observations	2470	1260

Note: Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report OLS estimates based on population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Even if there are no direct treatment effects on consumer sentiment, there could be indirect effects via the variables affecting sentiment discussed in the previous section. This is what we test next, starting with the treatment effects on macroeconomic expectations (see Table 4). In neither country do we find significant treatment effects on inflation expectations. However, as Model (3) in Table 4 shows, Vietnamese consumers treated with either the government reaction or the public reaction treatment are 4% or 5%, respec-

tively, less likely to expect unemployment to increase a lot compared to the non-treated control group. This suggests that both treatments are regarded as good news, thus causing consumers to become more optimistic about the labor market outlook. Moreover, Vietnamese consumers receiving the government reaction treatment are 3% more likely to expect GDP growth to increase a lot than are consumers in the control group (see Model (5) in Table 4), which is also in line with a “good news” effect. Quite the reverse is found for Thailand, where the same treatments have no significant effects on macroeconomic expectations. Overall, the treatment effects suggest that information provision on other consumers’ views, in this case about the government/general public’s reaction to COVID-19, can have important implications for consumers’ macroeconomic expectations. Since we show in the previous section that both unemployment and GDP expectations are important drivers of consumer sentiment, the treatment effects could also have indirect effects on consumer sentiment. Our results also illustrate the danger of generalizing findings from just one country, for instance, the United States, as we observe clear differences between our two sample countries.

Table 4: Marginal Effects of Information Treatments on Macroeconomic Expectations

	$\pi^e$		$u^e$		$y^e$	
	(1) VN	(2) TL	(3) VN	(4) TL	(5) VN	(6) TL
<i>government reaction</i>	0.02 (0.02)	0.03 (0.03)	-0.04* (0.02)	0.06 (0.04)	0.03** (0.01)	-0.003 (0.02)
<i>public reaction</i>	0.009 (0.02)	0.006 (0.03)	-0.05*** (0.02)	0.02 (0.04)	0.02 (0.01)	-0.01 (0.01)
<i>ILO forecast</i>	-0.003 (0.02)	-0.008 (0.03)	-0.02 (0.02)	-0.002 (0.04)	-0.01 (0.01)	-0.005 (0.01)
<i>social distancing</i>	0.02 (0.02)	-0.02 (0.03)	-0.03 (0.02)	-0.03 (0.04)	0.02 (0.01)	-0.010 (0.01)
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R <sup>2</sup>	0.009	0.004	0.006	0.009	0.009	0.015
N observations	2470	1260	2470	1260	2470	1260

Note: Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects for choosing the highest answer category from ordered probit estimations based on population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

In Table 5, we test for information treatment effects on the variables measuring respondents’ assessment of government reaction to the COVID-19 pandemic. Similar to our results on consumer sentiment, we find no evidence of treatment effects on the likelihood of thinking the government reaction was appropriate or on the level of trust in the government’s ability to deal with the crisis. Finally, Table 6 presents the treatment effects on concerns related to COVID-19. In the Vietnamese sample, the government reaction

treatment reduces the likelihood of respondents answering that they are very concerned regarding the impact of the pandemic on the job security of household members or on the financial situation of their household by 9% and 7%, respectively (see Models (3) and (5) of Table 6). This reinforces our earlier interpretation that respondents tend to view this treatment as good news. The *public reaction* treatment has a similar effect and reduces by 9% and 10%, respectively, the likelihood of respondents stating that they are very concerned about job security or the financial situation of their household (see Models (3) and (5) of Table 6). Also, those who receive the *public reaction* treatment are 6% less likely to report that they are very concerned about their health, though the effect is only marginally significant at the 10% level (see Model (1) of Table 6). The *ILO forecast* and *social distancing* treatments do not significantly change any household concerns. In the Thai sample, we find no evidence of significant treatment effects on personal concerns.

In the Appendix, we re-estimate these results using the full sample based on the assumption that respondents can be categorized as neutral when they answer “don’t know” or “do not form opinions” to our main survey questions. Tables A4-A7 demonstrate that our results generally remain unchanged. A notable exception can be found in the Thai sample, where, surprisingly, the *government reaction* information treatment reduces Thai consumers’ concerns about their financial situation and the economy in general (see Table A7).

In summary, even though there is only little direct evidence of information treatment effects on consumer sentiment, we do find significant and economically meaningful treatment effects on some macroeconomic expectations and on personal concerns related to the pandemic in the Vietnamese sample. In particular, the *government reaction* and *public reaction* treatments make respondents in Vietnam more optimistic compared to the control group, and thus seem to be viewed as good news. In contrast, we find no significant treatment effects of the *ILO forecast* and *social distancing* treatments. A possible explanation for this outcome is that the treatment information was already incorporated in the respondents’ views or was not deemed relevant for the variables contained in the consumer sentiment index. Note, however, that there are no treatment effects at all in the Thai baseline sample. Our dataset does not shed light on why the Thai react differently than the Vietnamese. We can exclude the possibility that it is simply a matter of different sample sizes. Hence, yet again, we are reminded not to generalize findings from one country to others.

Table 5: Marginal Effects of Information Treatments on Government Assessment and Trust in Dealing with COVID-19

	<i>govt_covid_appropriate</i>	<i>govt_trust_covid_health</i>	<i>govt_trust_covid_econ</i>
	(1)	(3)	(5)
	VN	VN	VN
	TL	TL	TL
<i>government reaction</i>	0.006 (0.03)	0.03 (0.04)	0.006 (0.03)
<i>public reaction</i>	-0.02 (0.03)	-0.005 (0.04)	-0.007 (0.03)
<i>ILO forecast</i>	-0.03 (0.04)	-0.01 (0.04)	0.008 (0.03)
<i>social distancing</i>	0.010 (0.03)	0.03 (0.04)	-0.01 (0.04)
Demo. controls	Yes	Yes	Yes
Pseudo R <sup>2</sup>	0.046	0.011	0.009
N observations	2470	2470	2470

Note: Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects from probit estimations in models 1 and 2 and from ordered probit estimations in models 3-6 for choosing the highest answer category with population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



Table 6: Marginal Effects of Information Treatments on Concerns Due to COVID-19

	<i>concern_health</i>		<i>concern_job</i>		<i>concern_finance</i>		<i>concern_econ</i>	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	VN	TL	VN	TL	VN	TL	VN	TL
<i>government reaction</i>	-0.05 (0.04)	-0.02 (0.05)	-0.09** (0.04)	-0.05 (0.05)	-0.07* (0.04)	-0.08 (0.05)	-0.01 (0.04)	-0.02 (0.05)
<i>public reaction</i>	-0.06* (0.04)	0.06 (0.05)	-0.09** (0.04)	0.07 (0.05)	-0.1** (0.04)	0.08 (0.05)	-0.05 (0.04)	0.03 (0.05)
<i>ILO forecast</i>	-0.02 (0.04)	-0.04 (0.05)	-0.03 (0.04)	-0.04 (0.05)	-0.03 (0.04)	-0.06 (0.05)	-0.01 (0.04)	-0.05 (0.05)
<i>social distancing</i>	-0.04 (0.04)	0.03 (0.04)	-0.02 (0.04)	0.001 (0.05)	-0.07 (0.04)	-0.06 (0.05)	-0.05 (0.04)	-0.01 (0.05)
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R <sup>2</sup>	0.021	0.022	0.028	0.020	0.033	0.036	0.019	0.034
N observations	2470	1260	2470	1260	2470	1260	2470	1260

Note: Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects for choosing the highest answer category from ordered probit estimations with population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 3.3 Conditioning on the Previous Assessment of Government Policies

In this section, we evaluate whether there are heterogeneous treatment effects if we condition on respondents’ assessment of government policies during normal times. Note that this question was asked before any of the information treatments were applied. Therefore, we are able to distinguish the effect of information conditional on prior trust in government policies. We expect that “surprising” information, in the sense that the information is in contrast to the prior, will have a relatively stronger effect on consumer sentiment. For instance, information that, on average, consumers in the country approve of the government’s policies related to COVID-19 could have a stronger impact on those who had a poor prior assessment of government policies in normal times.

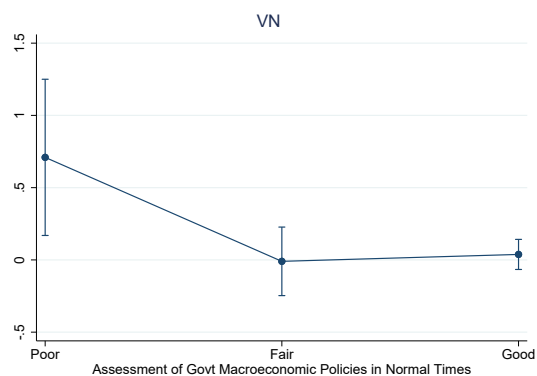
To study these heterogeneous effects, we regress consumer sentiment on an interaction term between the dummy capturing the information treatment and respondents’ prior assessment of government policies, while controlling for the same set of demographic factors. Figure 6 presents the marginal effects of information treatment on consumer sentiment across different categories of prior assessment of government together with a 95% confidence interval.

In the Vietnamese sample, the *government reaction* and the *public reaction* treatments, which are perceived as good news, significantly increase positive consumer sentiment among those who previously gave a poor assessment of government macroeconomic policies in normal times. By contrast, Vietnamese consumers who think the government did a fair or a good job in normal times do not react to either the *government reaction* or the *public reaction* information (see Figures 6a and 6c). Once they are informed about the ILO’s pessimistic unemployment forecast (see Figure 6e), those Vietnamese thinking that the government did a fair job during normal times express a (marginally) significantly lower consumer sentiment. The minority of Thai respondents stating that the government did a good job in normal times become more pessimistic after receiving the *government reaction* treatment, which shows that Thailand ranks lowest in terms of citizens’ agreement with their government’s policies during the crisis (see Figure 6b). However, the effect is statistically insignificant.<sup>8</sup>

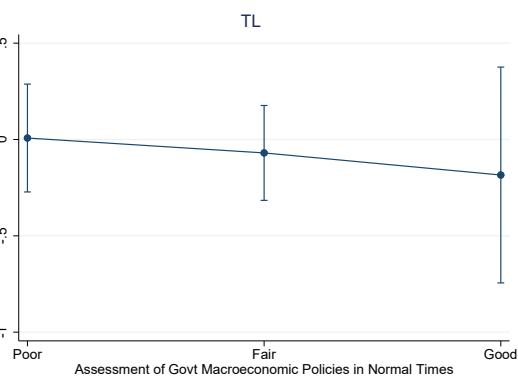
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<sup>8</sup>As shown in Figure A2 in the Appendix, our results remain roughly unchanged when using the full sample, treating “don’t know” and “no opinion” answers as neutral for our main questions. Figure A3 in the Appendix.

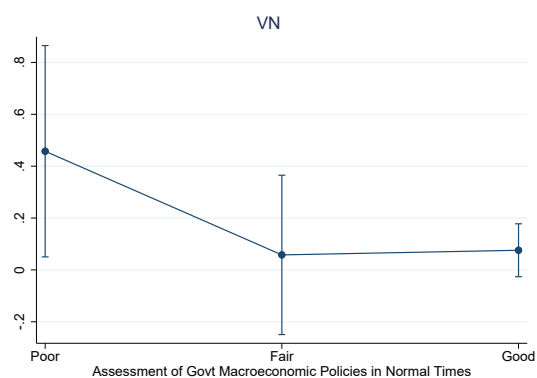
Figure 6: The Effect of Information Treatments on Consumer Sentiment with 95% Confidence Intervals



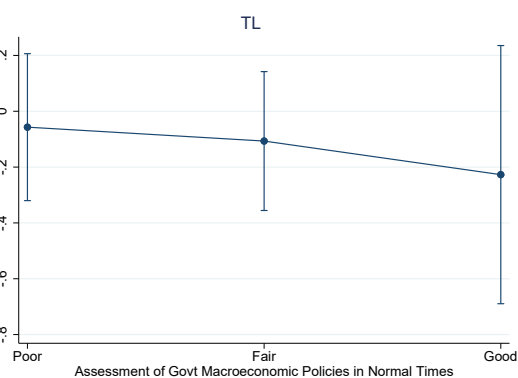
(a) *Government reaction*



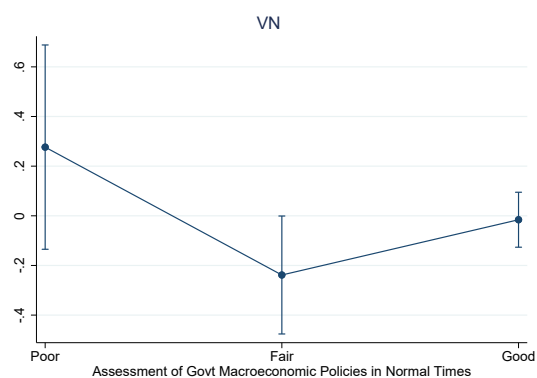
(b) *Government reaction*



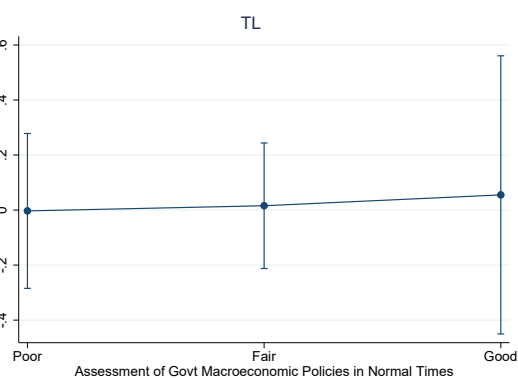
(c) *Public reaction*



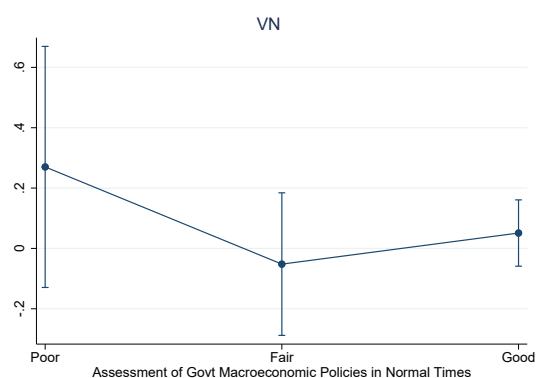
(d) *Public reaction*



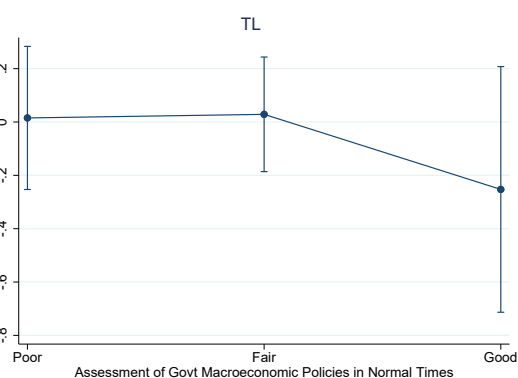
(e) *ILO forecast*



(f) *ILO forecast*



(g) *Social distancing*



(h) *Social distancing*

Tables A8, A9, and A10 in the Appendix contain additional results about the heterogeneity across the previous assessment of government policies of treatment effects on macroeconomic expectations, the assessment of and trust in government policies in dealing with COVID-19, and personal concerns due to COVID-19, respectively. Though we do not find many significant effects, we do find some results consistent with our hypothesis that “surprising” information will significantly affect respondents’ views. For instance, Table A8 shows that the *government reaction* and *public reaction* treatments reduce the likelihood of answering that unemployment will increase significantly in the next 12 months by 40% for Vietnamese consumers who thought the government did a poor job in normal times, but by only 4-6% for those who thought the government did a good job. In the case of Thailand, consumers with a positive assessment of the government’s job in normal times are 20% more likely to answer that unemployment will increase significantly if they receive the government reaction treatment.

Overall, our results suggest that prior beliefs may matter for the treatment effects on consumer sentiment and that only those consumers “surprised” by the information change their sentiment in a significant way, consistent with the results in Coibion et al. (2020b). Moreover, the point estimates suggest sizeable treatment effects on consumer sentiment in these cases of about 1.2 s.d. in the *government reaction* treatment and 0.8 s.d. in the *public reaction* treatment. Again, note the reaction asymmetry between our sample countries.

## 4 Discussion and Concluding Remarks

In this paper, we evaluate the impact of the COVID-19 crisis on consumer sentiment in Thailand and Vietnam. With data from a new online survey of consumers in both countries, we analyze how the index of consumer sentiment relates to macroeconomic expectations, trust in government policies during the COVID-19 pandemic, and personal concerns related to COVID-19. The survey was conducted after the first easing of lockdown measures in May 2020.

We find that consumers in both countries are more optimistic when they expect higher real GDP growth or when they trust their government in dealing with the negative economic consequences of the pandemic. In contrast, they are more pessimistic when they are concerned that COVID-19 will harm their household’s financial situation. While these associations are of moderate magnitude, they nevertheless indicate that even after the end of the strict lockdown, consumer sentiment, and thereby also spending attitudes, is still sensitive to trust in economic policy institutions as well as to personal financial concerns related to the crisis. This implies that the COVID-19 pandemic might have long-lasting negative effects on consumption, particularly in countries with poor institutions and for sectors of the population that are particularly vulnerable during the pandemic. This is in line with previous findings by Fetzner et al. (2020), who conducted their survey at the

beginning of the pandemic. These results may not necessarily be specific to emerging economies.

In the second part of our analysis, we evaluate the causal effect of four randomized information treatments on consumer sentiment and its determinants. We find only a few significant treatment effects in the Vietnamese sample and none in the Thai sample. There are no significant effects from the *ILO forecast* and the *social distancing* treatments, which could either be due to respondents already being aware of the information we provided or because respondents did not view the information as relevant for consumer sentiment. The effects from the *government reaction* and the *public reaction* treatments suggest that both are perceived as good news by Vietnamese consumers. Receiving these treatments causes consumers to expect lower unemployment and higher GDP growth and reduces COVID-19-related concerns about job security or household financial situation. In the case of the *public reaction* treatment, we also find a direct positive effect on consumer sentiment. Overall, even though treatment effects are again not very large, these results indicate that the framing of information may play an important role in the formation of consumer sentiment during the pandemic. In our case, highlighting that, compared to other countries, Vietnam ranks highest in terms of agreement with its government policies during the pandemic improves respondents' macroeconomic outlook and reduces anxieties related to the pandemic in comparison to the control group. Interestingly, also the *public reaction* treatment, which placed the citizens' degree of agreement with the public's reaction between that in China and India in both countries, seems to be regarded as good news in Vietnam, while there is no effect in Thailand.

We show that information treatments about other consumers' views can significantly and strongly affect consumer sentiment if it "contradicts" the prior of respondents. As proxy for this prior, we use the assessment of government policies during normal times, which was elicited before the information treatments. Vietnamese respondents who prior to the treatments gave a poor assessment of the government, strongly increase their optimistic sentiments after receiving the *government reaction* and *public reaction* treatments. We also show that consumers who give a "fair" assessment to the government prior to receiving the *ILO treatment*, which highlights the negative outlook for unemployment worldwide, significantly reduce their sentiment in comparison to the control group. This suggests that negative information against a positive prior also affects sentiment, although the effect is less pronounced. Whereas we found moderate treatment effects ranging from 0.15 to 0.3 s.d. for the significant effects in the first part of our analysis, now we find notable treatment effects ranging from 0.8 to 1 s.d. Thus, these effects are not only statistically significant; they also have potentially important economic consequences.

Overall, our results show that consumer sentiment remains affected by the COVID19 crisis even after the strict lockdown phase. Here, it should be noted that our two sample countries were affected relatively mildly by the pandemic and it seems plausible to assume that the effects are likely much larger in countries hit more strongly. In addition, it seems

that consumer sentiment is more significantly affected by information that is perceived as “good” news. This effect is particularly strong if the information goes against respondents’ prior views.

Finally, we discover striking differences between Thailand and Vietnam, with respondents from the former country reacting very little to any of the treatments. This serves as a forceful reminder that generalizing results from one country, even when they are obtained through RCTs, may be problematic, as external reliability is in no way guaranteed.

## References

- Ahmed, M. I. and S. P. Cassou (2016). Does Consumer Confidence Affect Durable Goods Spending during Bad and Good Economic Times Equally? Journal of Macroeconomics 50, 86 – 97.
- Andersen, A., E. Hansen, N. Johannesen, and A. Sheridan (2020). Consumer Responses to the COVID-19 Crisis: Evidence from Bank Account Transaction Data. CEPR Discussion Paper (14809).
- Armstrong, M. (2020, April). The Vital Importance of Social Distancing. Statista.com. <https://www.statista.com/chart/21198/effect-of-social-distancing-signer-lab/> (accessed April 15, 2020).
- Bachmann, R., T. O. Berg, and E. R. Sims (2015). Inflation Expectations and Readiness to Spend: Cross-Sectional Evidence. American Economic Journal: Economic Policy 7(1), 1–35.
- Bachmann, R. and E. R. Sims (2012). Confidence and the Transmission of Government Spending Shocks. Journal of Monetary Economics 59(3), 235 – 249.
- Baker, S. R., R. Farrokhnia, S. Meyer, M. Pagel, and C. Yannelis (2020). How Does Household Spending Respond to an Epidemic? Consumption During the 2020 COVID-19 Pandemic. Covid Economics (18).
- Barsky, R. B. and E. R. Sims (2012). Information, Animal Spirits, and the Meaning of Innovations in Consumer Confidence. American Economic Review 102(4), 1343–77.
- Binder, C. (2020). Coronavirus Fears and Macroeconomic Expectations. Review of Economics and Statistics (forthcoming).
- Carroll, C. D., J. C. Fuhrer, and D. W. Wilcox (1994). Does Consumer Sentiment Forecast Household Spending? If so, why? American Economic Review 84(5), 1397–1408.
- Carvalho, B. P., S. Peralta, and J. Pereira (2020). What and How did People Buy during the Great Lockdown? Evidence from Electronic Payments. Covid Economics (28).

- Chen, S.-S. (2011). Lack of Consumer Confidence and Stock Returns. Journal of Empirical Finance 18(2), 225 – 236.
- Christelis, D., D. Georgarakos, T. Jappelli, and G. Kenny (2020). The Covid-19 Crisis and Consumption: Survey Evidence From Six EU Countries. ECB Working Paper (2507).
- Chronopoulos, D. K., M. Lukas, and J. O. Wilson (2020). Consumer Spending Responses to the COVID-19 Pandemic: An Assessment of Great Britain. Covid Economics (34).
- Coibion, O., D. Georgarakos, Y. Gorodnichenko, and M. van Rooij (2019). How Does Consumption Respond to News about Inflation? Field Evidence from a Randomized Control Trial. NBER Working Paper (26106).
- Coibion, O., Y. Gorodnichenko, and M. Weber (2020a). Does Policy Communication During COVID work? CESifo Working Paper (8369).
- Coibion, O., Y. Gorodnichenko, and M. Weber (2020b). Political Polarization and Expected Economic Outcomes. NBER Working Paper (28044).
- Coibion, O., Y. Gorodnichenko, and M. Weber (2020c). The Cost of the COVID-19 Crisis: Lockdowns, Macroeconomic Expectations, and Consumer Spending. NBER Working Paper (27141).
- Crump, R. K., S. Eusepi, A. Tambalotti, and T. G. (2015). Subjective Intertemporal Substitution. Federal Reserve Bank of New York Staff Reports (734).
- D’Acunto, F., D. Hoang, and M. Weber (2016). The Effect of Unconventional Fiscal Policy on Consumption Expenditure. NBER Working Paper (22563).
- Dang, H.-A. H. and L. T. Giang (2020). Turning Vietnam’s COVID-19 Success into Economic Recovery: A Job-Focused Analysis of Individual Assessments on Their Finance and the Economy. Global Labor Organization Discussion Paper (566).
- Dees, S. and P. Soares Brinca (2013). Consumer Confidence as a Predictor of Consumption Spending: Evidence for the United States and the Euro Area. International Economics 134, 1 – 14.
- Dölitzsch, C. (2020, March). Global Study about COVID-19: Dalia Assesses How the World Ranks Their Governments’ Response to the Pandemic. Dalia Report.
- Dräger, L. and G. Nghiem (2020). Are Consumers’ Spending Decisions in Line With an Euler Equation? Review of Economics and Statistics (forthcoming).
- Duca-Radu, I., G. Kenny, and A. Reuter (2020). Inflation Expectations, Consumption and The Lower Bound: Micro Evidence From A Large Multi-country Survey. Journal of Monetary Economics. <https://doi.org/10.1016/j.jmoneco.2020.03.005>.

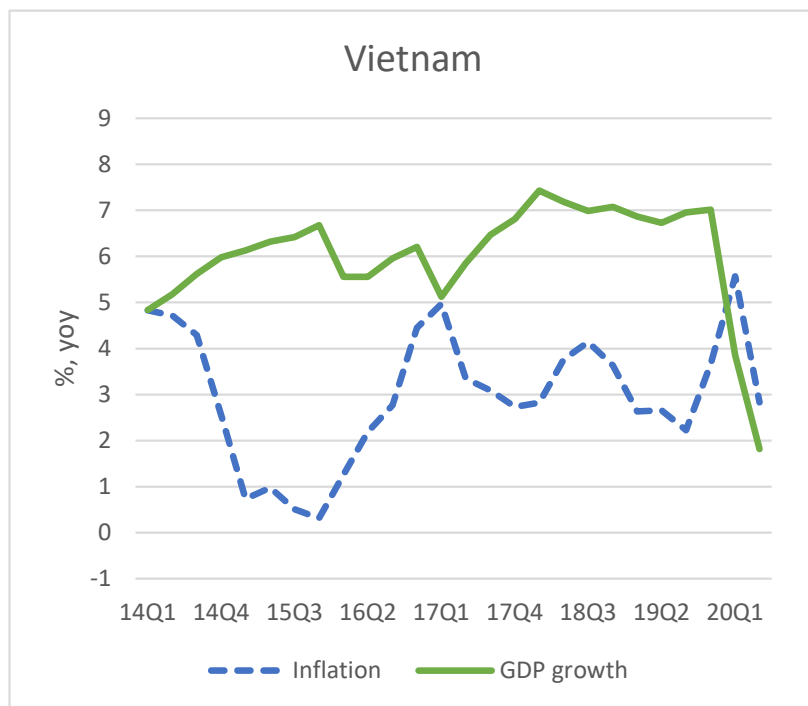
- Fetzer, T., L. Hensel, J. Hermle, and C. Roth (2020). Coronavirus Perceptions and Economic Anxiety. Review of Economics and Statistics (forthcoming).
- Fetzer, T., M. Witte, L. Hensel, J. M. Jachimowicz, J. Haushofer, A. Ivchenko, S. Caria, E. Reutskaja, C. Roth, S. Fiorin, M. Gomez, G. Kraft-Todd, F. M. Goetz, and E. Yoeli (2020a). Perceptions of an Insufficient Government Response at the Onset of the COVID-19 Pandemic are Associated with Lower Mental Well-Being. NBER Working Paper (27082).
- Fetzer, T., M. Witte, L. Hensel, J. M. Jachimowicz, J. Haushofer, A. Ivchenko, S. Caria, E. Reutskaja, C. R. Roth, S. Fiorin, M. Gomez, G. Kraft-Todd, F. M. Goetz, and E. Yoeli (2020b). Global Behaviors and Perceptions in the COVID-19 Pandemic. <https://doi.org/10.31234/osf.io/3kfmh>.
- Hanspal, T., A. Weber, and J. Wohlfart (2020). Exposure to the COVID-19 Stock Market Crash and its Effect on Household Expectations. CESifo Working Paper (8244).
- International Labour Organization (2020, March). COVID-19 and the World of Work: Impact and Policy Responses. International Labour Organization Note.
- Jansen, W. and N. J. Nahujs (2003). The Stock Market and Consumer Confidence: European Evidence. Economics Letters 79(1), 89 – 98.
- Ludvigson, S. C. (2004). Consumer Confidence and Consumer Spending. Journal of Economic perspectives 18(2), 29–50.
- Souleles, N. S. (2004). Expectations, Heterogeneous Forecast Errors, and Consumption: Micro Evidence from the Michigan Consumer Sentiment Surveys. Journal of Economic perspectives 18(2), 29–50.
- Vellekoop, N. and M. Wiederholt (2019). Inflation Expectations and Choices of Household. SAFE Working Paper (250).



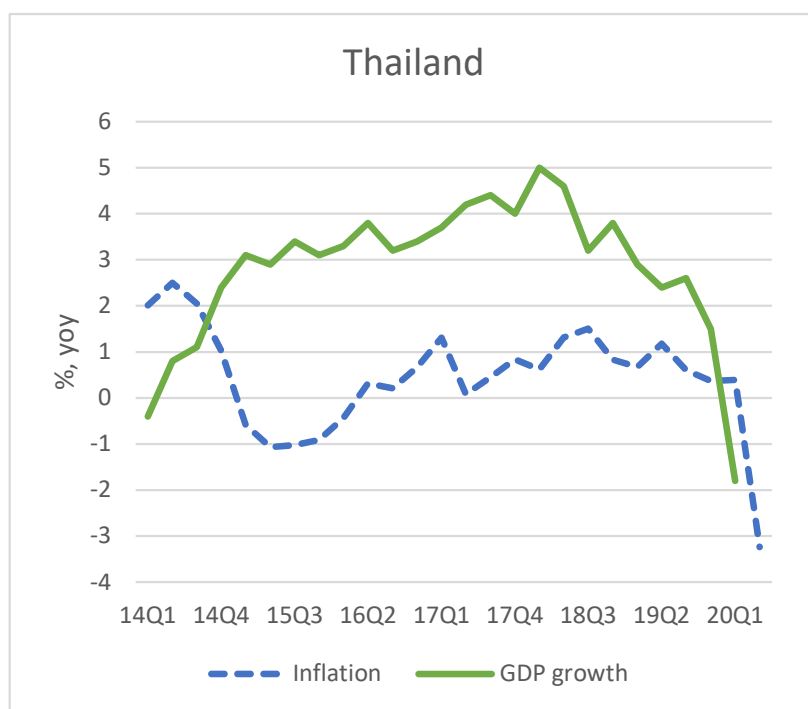
## A Appendix

### A.1 Macroeconomic Development in Thailand and Vietnam

Figure A1: Recent GDP growth and Inflation Development in Thailand and Vietnam



(a) Vietnam (Source: General Statistical Office of Vietnam.)



(b) Thailand (Source: Bank of Thailand)

## A.2 Cross-correlation Among Variables of Interest

Table A1: Cross-correlation Table: Vietnam

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) <i>consumer_sentiment</i>	1										
(2) $\pi^e$	-0.002	1									
(3) $w^e$	-0.16***	0.21***	1								
(4) $y^e$	0.46***	0.04**	-0.12***	1							
(5) <i>gout_ass_normal_times</i>	0.19***	-0.05**	-0.06***	0.15***	1						
(6) <i>gout_covid_app</i>	-0.11***	0.14***	0.06***	-0.14***	0.03	1					
(7) <i>gout_trust_covid_health</i>	0.14***	-0.08***	-0.10***	0.14***	0.29***	0.02	1				
(8) <i>gout_trust_covid_econ</i>	0.20***	-0.08***	-0.07***	0.17***	0.29***	-0.06***	0.52***	1			
(9) <i>concern_health</i>	-0.10***	0.04**	0.01	-0.04**	-0.004	0.08***	0.07***	0.02	1		
(10) <i>concern_job</i>	-0.19***	0.02	0.01	-0.08***	-0.05**	0.02	0.03	0.002	0.45***	1	
(11) <i>concern_finance</i>	-0.21***	0.03	0.01	-0.05***	-0.03	0.02	0.03	-0.03	0.39***	0.67***	1
(12) <i>concern_econ</i>	-0.13***	-0.02	-0.02	-0.06***	0.01	-0.01	0.06***	-0.003	0.37***	0.36***	0.43***

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table A2: Cross-correlation Table: Thailand

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) <i>consumer_sentiment</i>	1										
(2) $\pi^e$	0.12***	1									
(3) $u^e$	0.02	0.29***	1								
(4) $y^e$	0.51***	0.20***	0.12***	1							
(5) <i>gout_ass_normal_times</i>	0.38***	0.01	-0.06**	0.25***	1						
(6) <i>gout_covid_app</i>	0.09***	-0.10***	-0.03	0.07**	0.22***	1					
(7) <i>gout_trust_covid_health</i>	0.19***	-0.06**	-0.02	0.12***	0.35***	0.39***	1				
(8) <i>gout_trust_covid_econ</i>	0.25***	-0.09***	-0.10***	0.14***	0.43***	0.33***	0.67***	1			
(9) <i>concern_health</i>	-0.24***	0.03	-0.003	-0.11***	-0.16***	-0.08***	-0.04	-0.08***	1		
(10) <i>concern_job</i>	-0.20***	0.01	0.01	-0.14***	-0.13***	-0.06**	-0.04	-0.04	0.60***	1	
(11) <i>concern_finance</i>	-0.29***	0.04	0.05*	-0.13***	-0.19***	-0.08***	-0.07**	-0.12***	0.48***	0.553***	1
(12) <i>concern_econ</i>	-0.31***	0.02	0.04	-0.23***	-0.24***	-0.07**	-0.01	-0.09***	0.41***	0.47***	0.56***

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

### A.3 Robustness Checks

In this section, we re-estimate the baseline results using the full sample and assuming that respondents expect no change, neither trust/distrust, or are not concerned at all when they do not know the answer or do have opinions about the survey questions used for the individual index of consumer sentiment and the regressors in Table 2. We thus have a full sample of 3,300 observations in Vietnam and 2,200 observations in Thailand. Overall, most of our baseline results remain unchanged, except for two cases. First, Table A3 shows that the effect of inflation expectations on consumer sentiment becomes statistically significant and positive in both countries. Next, Table A7 shows that in the Thai sample, the *government reaction* information treatment, which is framed as bad news, reduces Thai consumers' concerns about their financial situation and the economy in general.

Table A3: Consumer Sentiment in Vietnam and Thailand

	(1) VN	(2) TL
$\pi^e$	0.03** (0.01)	0.05*** (0.02)
$u^e$	-0.03*** (0.01)	-0.02 (0.01)
$y^e$	0.2*** (0.01)	0.2*** (0.02)
<i>govt_ass_normal_times</i>	0.1*** (0.03)	0.2*** (0.03)
<i>govt_covid_appropriate</i>	0.02 (0.04)	0.001 (0.04)
<i>govt_trust_covid_health</i>	0.007 (0.02)	0.03* (0.02)
<i>govt_trust_covid_econ</i>	0.06*** (0.02)	0.07*** (0.02)
<i>concern_health</i>	-0.03 (0.02)	-0.09*** (0.03)
<i>concern_job</i>	-0.08*** (0.03)	0.002 (0.03)
<i>concern_finance</i>	-0.1*** (0.03)	-0.1*** (0.03)
<i>concern_econ</i>	-0.02 (0.02)	-0.1*** (0.03)
Demographic controls	Yes	Yes
R <sup>2</sup>	0.309	0.325
N observations	3300	2200

Note: Full sample. Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report coefficients from OLS estimations based on population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A4: Marginal Effects of Information Treatments on Consumer Sentiment

	(1) VN	(2) TL
<i>government reaction</i>	0.04 (0.04)	-0.04 (0.07)
<i>public reaction</i>	0.06 (0.04)	-0.09 (0.07)
<i>ILO forecast</i>	-0.07 (0.05)	0.004 (0.07)
<i>social distancing</i>	0.02 (0.04)	-0.07 (0.07)
Demographic controls	Yes	Yes
R <sup>2</sup>	0.039	0.041
N observations	3300	2200

Note: Full sample. Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report OLS estimates based on population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A5: Marginal Effects of Information Treatments on Macroeconomic Expectations

	$\pi^e$		$u^e$		$y^e$	
	(1) VN	(2) TL	(3) VN	(4) TL	(5) VN	(6) TL
<i>government reaction</i>	0.02 (0.02)	0.0010 (0.02)	-0.03** (0.02)	0.03 (0.03)	0.03** (0.01)	-0.004 (0.01)
<i>public reaction</i>	0.007 (0.01)	-0.03 (0.03)	-0.04*** (0.02)	0.02 (0.03)	0.007 (0.01)	-0.0001 (0.01)
<i>ILO forecast</i>	0.008 (0.02)	-0.03 (0.02)	-0.01 (0.02)	-0.004 (0.03)	-0.01 (0.01)	-0.0007 (0.01)
<i>social distancing</i>	0.01 (0.01)	-0.04 (0.03)	-0.03 (0.02)	-0.02 (0.03)	0.010 (0.01)	-0.01 (0.01)
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R <sup>2</sup>	0.007	0.007	0.005	0.007	0.009	0.009
N observations	3300	2200	3300	2200	3300	2200

Note: Full sample. Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects for choosing the highest answer category from ordered probit estimations based on population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A6: Marginal Effects of Information Treatments on Government Assessment and Trust in Dealing with COVID-19

	<i>govt_covid_appropriate</i>		<i>govt_trust_covid_health</i>		<i>govt_trust_covid_econ</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
	VN	TL	VN	TL	VN	TL
<i>government reaction</i>	-0.01 (0.03)	0.01 (0.04)	0.02 (0.04)	-0.009 (0.02)	-0.009 (0.03)	0.008 (0.01)
<i>public reaction</i>	-0.02 (0.03)	-0.02 (0.04)	-0.008 (0.03)	0.007 (0.02)	-0.01 (0.03)	-0.02 (0.01)
<i>ILO forecast</i>	-0.06* (0.03)	0.04 (0.04)	-0.007 (0.04)	-0.02 (0.02)	-0.008 (0.03)	-0.01 (0.01)
<i>social distancing</i>	-0.02 (0.03)	0.03 (0.04)	0.02 (0.04)	0.001 (0.02)	-0.02 (0.03)	0.0005 (0.01)
Demo. controls	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R <sup>2</sup>	0.035	0.012	0.008	0.017	0.011	0.008
N observations	3300	2200	3300	2200	3300	2200

Note: Full sample. Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects from probit estimations in model 1 and 2 and from ordered probit estimations in models 3-6 for choosing the highest answer category with population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

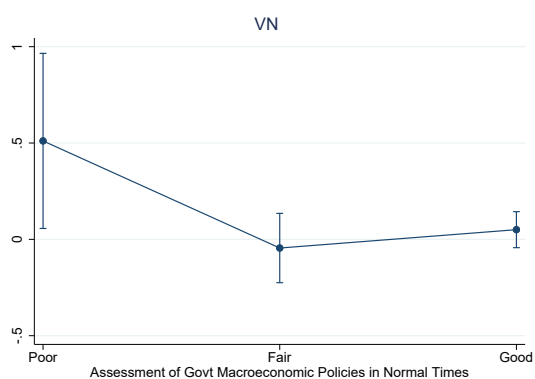


Table A7: Marginal Effects of Information Treatments on Concerns Due to COVID-19

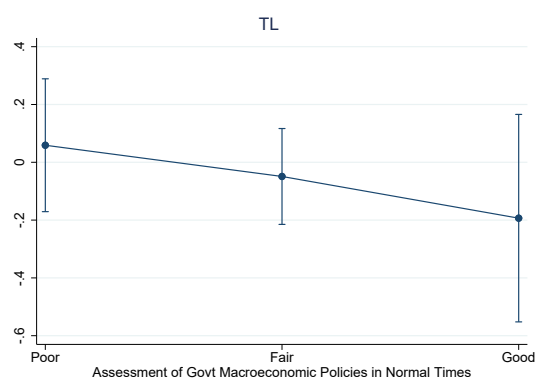
	<i>concern_health</i>		<i>concern_job</i>		<i>concern_finance</i>		<i>concern_econ</i>	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	VN	TL	VN	TL	VN	TL	VN	TL
<i>government reaction</i>	-0.05 (0.03)	-0.04 (0.03)	-0.09*** (0.04)	-0.02 (0.04)	-0.09*** (0.04)	-0.09** (0.04)	-0.03 (0.04)	-0.1*** (0.04)
<i>public reaction</i>	-0.06* (0.03)	0.006 (0.04)	-0.08** (0.04)	0.03 (0.04)	-0.08** (0.04)	-0.02 (0.04)	-0.04 (0.03)	-0.04 (0.04)
<i>ILO forecast</i>	-0.01 (0.04)	-0.04 (0.03)	-0.04 (0.04)	-0.03 (0.04)	-0.02 (0.04)	-0.05 (0.04)	-0.05 (0.03)	-0.01 (0.04)
<i>social distancing</i>	-0.05 (0.04)	0.01 (0.03)	-0.04 (0.04)	0.03 (0.03)	-0.08** (0.04)	-0.006 (0.04)	-0.05 (0.04)	0.008 (0.04)
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R <sup>2</sup>	0.020	0.041	0.024	0.024	0.024	0.031	0.012	0.036
N observations	3300	2200	3300	2200	3300	2200	3300	2200

Note: Full sample. Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects for choosing the highest answer category from ordered probit estimations based on population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

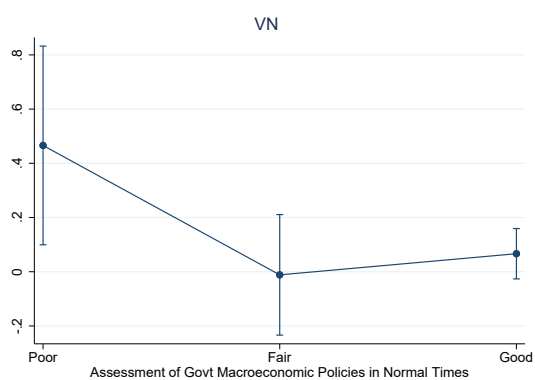
Figure A2: The Effect of Information Treatments on Consumer Sentiment with 95% Confidence Intervals  
Full Sample



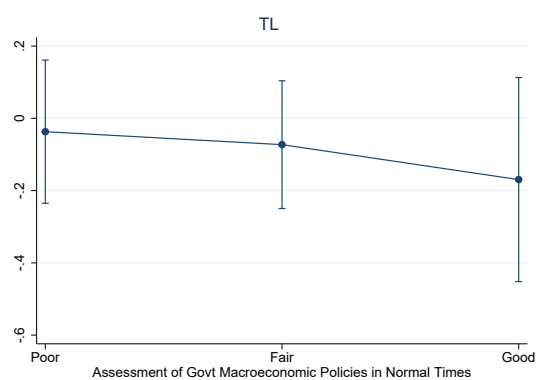
(a) *Government reaction*



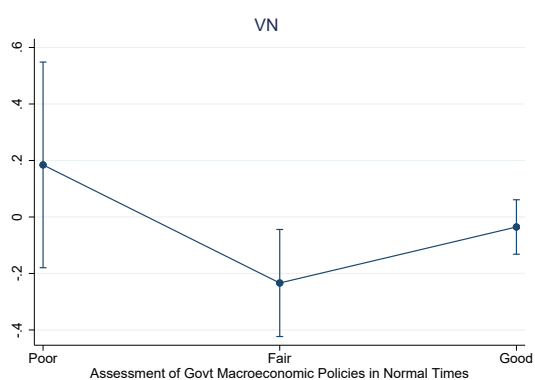
(b) *Government reaction*



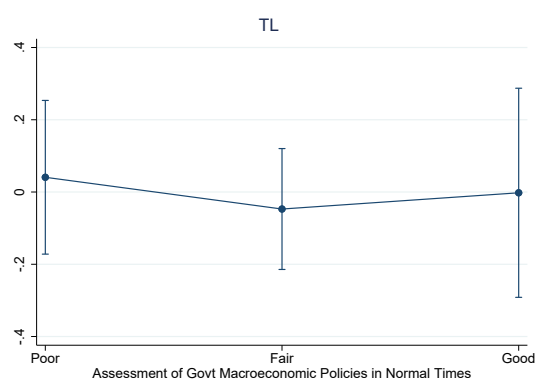
(c) *Public reaction*



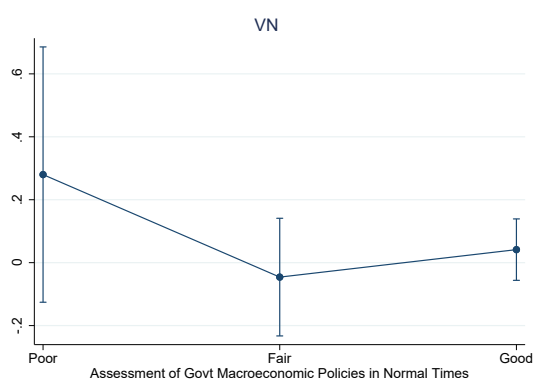
(d) *Public reaction*



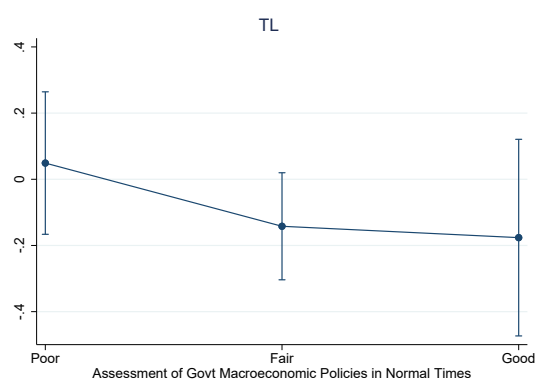
(e) *ILO forecast*



(f) *ILO forecast*

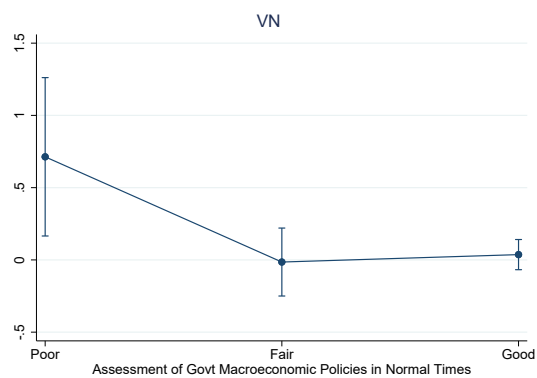


(g) *Social distancing*

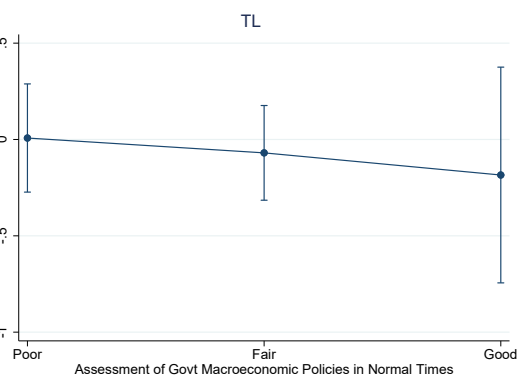


(h) *Social distancing*

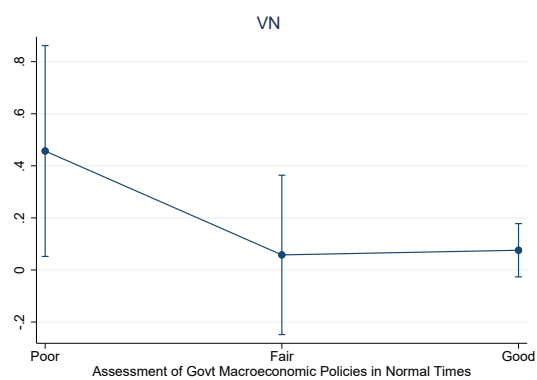
Figure A3: The Effect of Information Treatments on Consumer Sentiment with 95% CI  
Baseline Sample, Additionally Control for Current Mood



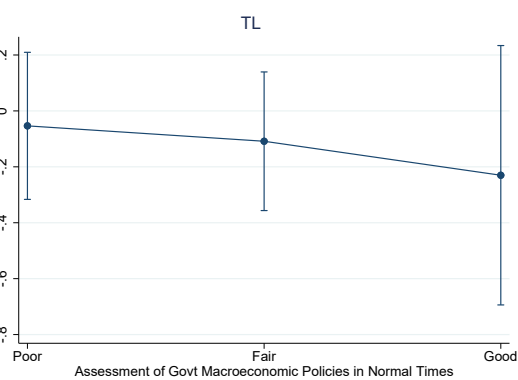
(a) *Government reaction*



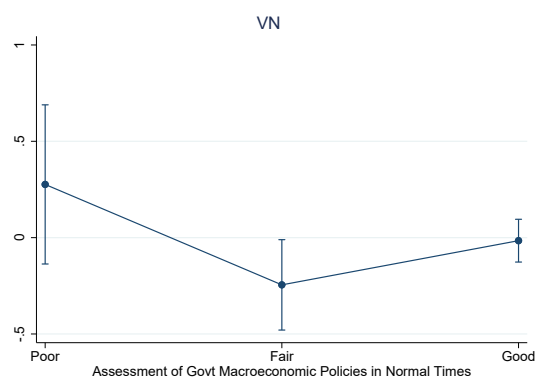
(b) *Government reaction*



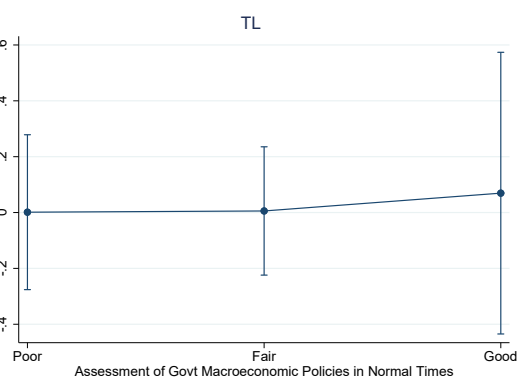
(c) *Public reaction*



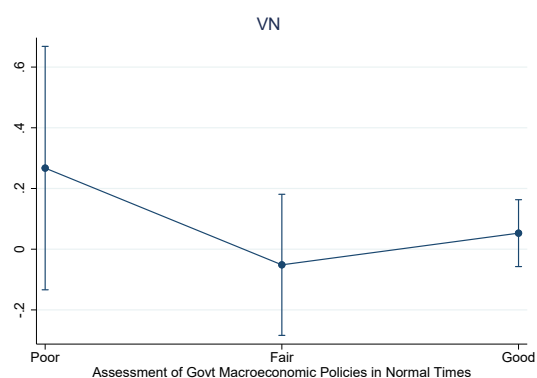
(d) *Public reaction*



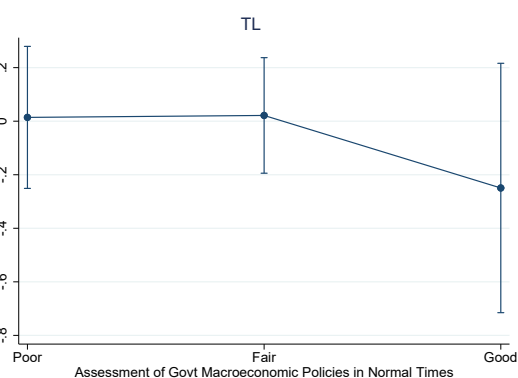
(e) *ILO forecast*



(f) *ILO forecast*



(g) *Social distancing*



(h) *Social distancing*

Table A8: Heterogeneous Marginal Effects of Information Treatments on Macroeconomic Expectations across the Previous Assessment of Government Policies

	$\pi^e$		$u^e$		$y^e$	
	(1) VN	(2) TL	(3) VN	(4) TL	(5) VN	(6) TL
<i>govt reaction</i>						
Govt_Poor_Job	0.1 (0.08)	0.02 (0.07)	-0.4*** (0.13)	-0.06 (0.09)	0.04 (0.04)	-0.010 (0.01)
Govt_Fair_Job	0.007 (0.03)	0.01 (0.04)	0.01 (0.04)	0.07 (0.05)	-0.0002 (0.02)	0.006 (0.02)
Govt_Good_Job	0.02 (0.02)	0.1 (0.09)	-0.04* (0.02)	0.2** (0.09)	0.03* (0.02)	0.06 (0.07)
Pseudo R <sup>2</sup>	0.010	0.014	0.017	0.034	0.026	0.048
N observations	994	484	994	484	994	484
<i>public reaction</i>						
Govt_Poor_Job	0.05 (0.08)	-0.008 (0.06)	-0.4*** (0.14)	-0.1* (0.08)	0.03 (0.02)	-0.009 (0.01)
Govt_Fair_Job	0.05 (0.03)	0.001 (0.04)	0.01 (0.04)	0.07 (0.06)	-0.03 (0.02)	-0.003 (0.02)
Govt_Good_Job	0.0008 (0.02)	0.01 (0.08)	-0.06*** (0.02)	0.1 (0.09)	0.03 (0.02)	0.02 (0.05)
Pseudo R <sup>2</sup>	0.013	0.011	0.020	0.025	0.027	0.042
N observations	975	492	975	492	975	492
<i>ILO forecast</i>						
Govt_Poor_Job	0.3 (0.18)	-0.03 (0.06)	-0.3 (0.19)	-0.003 (0.09)	0.02 (0.02)	-0.01 (0.01)
Fair	0.02 (0.04)	-0.007 (0.04)	0.008 (0.04)	-0.007 (0.05)	-0.04** (0.02)	0.002 (0.02)
Govt_Good_Job	-0.02 (0.02)	0.02 (0.09)	-0.03 (0.02)	0.06 (0.09)	0.0005 (0.02)	-0.01 (0.05)
Pseudo R <sup>2</sup>	0.017	0.008	0.017	0.041	0.026	0.034
N observations	975	506	975	506	975	506
<i>social distancing</i>						
Govt_Poor_Job	0.02 (0.09)	-0.04 (0.06)	-0.2* (0.14)	-0.1 (0.08)	0.008 (0.01)	-0.006 (0.01)
Govt_Fair_Job	0.09** (0.04)	-0.04 (0.04)	0.04 (0.04)	-0.03 (0.05)	0.004 (0.02)	-0.008 (0.02)
Govt_Good_Job	-0.0001 (0.02)	0.1 (0.10)	-0.05** (0.02)	0.005 (0.09)	0.02 (0.02)	-0.005 (0.05)
Pseudo R <sup>2</sup>	0.016	0.014	0.024	0.026	0.031	0.034
N observations	999	546	999	546	999	546

Note: Baseline sample. Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects for choosing the highest answer category from ordered probit estimations based on population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A9: Heterogeneous Marginal Effects of Information Treatments on Assessment of and Trust in Government across the Previous Assessment of Government Policies

	<i>govt_covid_appropriate</i>		<i>govt_trust_covid_health</i>		<i>govt_trust_covid_econ</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
	VN	TL	VN	TL	VN	TL
<i>govt reaction</i>						
Govt_Poor_Job	0.06 (0.25)	0.05 (0.06)	0.09 (0.09)	0.02** (0.01)	0.01 (0.03)	0.008 (0.01)
Govt_Fair_Job	-0.05 (0.08)	0.03 (0.08)	0.04 (0.06)	-0.0008 (0.03)	-0.004 (0.05)	-0.0003 (0.02)
Govt_Good_Job	0.02 (0.03)	0.2 (0.14)	0.03 (0.05)	-0.09 (0.10)	0.02 (0.04)	-0.07 (0.09)
Pseudo R <sup>2</sup>	0.045	0.133	0.069	0.125	0.055	0.127
N observations	994	484	994	484	994	484
<i>public reaction</i>						
Govt_Poor_Job	-0.1 (0.22)	-0.02 (0.06)	0.09 (0.10)	0.007 (0.01)	0.1 (0.07)	0.005 (0.00)
Govt_Fair_Job	-0.06 (0.08)	0.1 (0.08)	-0.07 (0.05)	0.02 (0.03)	-0.05 (0.04)	0.010 (0.02)
Govt_Good_Job	-0.01 (0.04)	0.1 (0.13)	-0.02 (0.05)	-0.05 (0.12)	-0.01 (0.04)	-0.1 (0.10)
Pseudo R <sup>2</sup>	0.067	0.152	0.068	0.131	0.049	0.128
N observations	975	492	975	492	975	492
<i>ILO forecast</i>						
Govt_Poor_Job	0.09 (0.19)	0.1 (0.08)	-0.04 (0.05)	0.02* (0.01)	0.001 (0.02)	0.006 (0.00)
Govt_Fair_Job	-0.1 (0.08)	0.009 (0.08)	-0.02 (0.06)	-0.01 (0.03)	-0.003 (0.05)	0.009 (0.02)
Govt_Good_Job	-0.03 (0.04)	0.2 (0.12)	0.01 (0.05)	-0.1 (0.09)	0.04 (0.04)	-0.2** (0.09)
Pseudo R <sup>2</sup>	0.069	0.112	0.074	0.114	0.070	0.118
N observations	975	506	975	506	975	506
<i>social distancing</i>						
Govt_Poor_Job	0.3 (0.16)	0.1 (0.07)	0.1 (0.07)	0.03** (0.01)	0.1 (0.09)	0.006 (0.00)
Govt_Fair_Job	0.05 (0.06)	0.03 (0.07)	0.09 (0.07)	0.03 (0.03)	-0.02 (0.05)	0.02 (0.02)
Govt_Good_Job	-0.02 (0.04)	-0.03 (0.13)	0.007 (0.05)	-0.10 (0.11)	-0.03 (0.04)	-0.08 (0.10)
Pseudo R <sup>2</sup>	0.081	0.102	0.047	0.105	0.041	0.129
N observations	999	546	999	546	999	546

Note: Baseline sample. Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects from probit estimations in models 1 and 2 and from ordered probit estimations in models 3-6 for choosing the highest answer category with population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A10: Heterogeneous Marginal Effects of Information Treatments on Concerns Due to COVID-19 across the Previous Assessment of Government Policies

	<i>concern_health</i>		<i>concern_job</i>		<i>concern_finance</i>		<i>concern_econ</i>	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	VN	TL	VN	TL	VN	TL	VN	TL
<i>govt reaction</i>								
Govt_Poor_Job	0.04 (0.23)	-0.1 (0.09)	-0.4 (0.26)	-0.10 (0.09)	-0.2 (0.21)	-0.2* (0.08)	0.09 (0.19)	-0.02 (0.07)
Govt_Fair_Job	-0.2*** (0.08)	0.01 (0.06)	-0.04 (0.09)	-0.03 (0.07)	-0.03 (0.10)	-0.008 (0.07)	-0.10 (0.09)	-0.01 (0.07)
Govt_Good_Job	-0.01 (0.04)	0.03 (0.13)	-0.08* (0.04)	-0.09 (0.12)	-0.06 (0.04)	-0.2 (0.12)	-0.003 (0.05)	-0.1 (0.11)
Pseudo R <sup>2</sup>	0.028	0.040	0.034	0.053	0.039	0.094	0.023	0.113
N observations	994	484	994	484	994	484	994	484
<i>public reaction</i>								
Govt_Poor_Job	-0.3 (0.21)	-0.06 (0.09)	-0.2 (0.22)	-0.05 (0.09)	-0.04 (0.22)	-0.05 (0.08)	-0.2 (0.21)	-0.03 (0.07)
Govt_Fair_Job	-0.04 (0.11)	0.08 (0.06)	-0.02 (0.11)	0.08 (0.07)	-0.05 (0.12)	0.2** (0.07)	-0.1 (0.11)	-0.04 (0.07)
Govt_Good_Job	-0.06 (0.04)	0.10 (0.13)	-0.09** (0.04)	0.2 (0.13)	-0.1** (0.04)	0.1 (0.13)	-0.04 (0.05)	0.3*** (0.12)
Pseudo R <sup>2</sup>	0.030	0.042	0.039	0.048	0.031	0.078	0.014	0.090
N observations	975	492	975	492	975	492	975	492
<i>ILO forecast</i>								
Govt_Poor_Job	-0.1 (0.25)	-0.05 (0.09)	-0.06 (0.21)	-0.07 (0.09)	0.04 (0.21)	-0.07 (0.09)	-0.10 (0.21)	-0.07 (0.07)
Govt_Fair_Job	-0.1 (0.09)	0.02 (0.06)	-0.09 (0.08)	-0.0009 (0.06)	-0.2 (0.10)	-0.05 (0.07)	-0.1 (0.09)	-0.03 (0.07)
Govt_Good_Job	0.008 (0.05)	-0.1 (0.09)	-0.008 (0.05)	-0.08 (0.11)	-0.004 (0.05)	-0.05 (0.12)	0.01 (0.05)	-0.06 (0.12)
Pseudo R <sup>2</sup>	0.024	0.056	0.018	0.047	0.032	0.078	0.025	0.069
N observations	975	506	975	506	975	506	975	506
<i>social distancing</i>								
Govt_Poor_Job	-0.3 (0.20)	-0.07 (0.09)	-0.3 (0.20)	-0.04 (0.09)	-0.09 (0.22)	-0.1* (0.08)	-0.4** (0.19)	-0.007 (0.07)
Govt_Fair_Job	-0.08 (0.10)	0.02 (0.05)	-0.09 (0.09)	-0.04 (0.06)	-0.09 (0.11)	-0.02 (0.06)	-0.05 (0.10)	-0.05 (0.07)
Govt_Good_Job	-0.02 (0.04)	0.1 (0.13)	0.01 (0.05)	0.1 (0.13)	-0.05 (0.05)	-0.05 (0.12)	-0.03 (0.05)	-0.02 (0.13)
Pseudo R <sup>2</sup>	0.034	0.039	0.033	0.045	0.054	0.060	0.036	0.079
N observations	999	546	999	546	999	546	999	546

Note: Baseline sample. Demographic controls include log of household income per capita, employment status, urban/rural area, age, age squared, gender, and marital status. We report marginal effects for choosing the highest answer category from ordered probit estimations with population weights. Standard errors are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## A.4 Survey Questions

**Assessment of and trust in the government** Before providing information treatments, we ask all respondents about their assessment of the government’s macroeconomic policies before COVID-19, as follows:

- *govt\_ass\_normal\_times*: As to the macroeconomic policy of the government before the COVID-19 outbreak -- we mean steps taken to fight inflation or unemployment--would you say the government was doing a good job, fair job, or a poor job? [Poor job, Fair job, Good job, Don’t know]

After providing information treatments, we ask all respondents about their assessment of and trust in the government’s policies in dealing with COVID-19, as follows:

- *govt\_covid\_appropriate*: Do you think the reaction of the government to the current COVID-19 outbreak is appropriate or not? [The reaction is not at all sufficient, The reaction is somewhat insufficient, The reaction is appropriate, The reaction is somewhat extreme, The reaction is much too extreme, I don’t know]. *govt\_covid\_appropriate* is a dummy variable that takes value of unity if the answer is “appropriate” and zero otherwise.
- *govt\_trust\_covid\_health*: How much do you trust the government to overcome the COVID-19 pandemic? [Strongly distrust, Somewhat distrust, Neither trust nor distrust, Somewhat trust, Strongly trust, I don’t know]
- *govt\_trust\_covid\_econ*: How much do you trust the government to mitigate the negative side-effects of social distancing on the economy, such as an increase in unemployment and a fall in production? [Strongly distrust, Somewhat distrust, Neither trust nor distrust, Somewhat trust, Strongly trust, I don’t know]

### Macroeconomic expectations

- $\pi^e$ : How do you think prices in general (which are used to measure the inflation rate) will develop over the next 12 months compared to the previous 12 months? They will [Decrease a lot, Decrease a little, Stay about the same, Increase a little, Increase a lot, I do not form opinions about future general price level, Don’t know.]
- $u^e$ : How do you think unemployment will develop over the next 12 months compared to the previous 12 months? It will [Decrease a lot, Decrease a little, Stay about the same, Increase a little, Increase a lot, I do not form opinions about future unemployment, Don’t know]
- $y^e$ : How do you think national economic growth (GDP growth) will develop over the next 12 months compared to the previous 12 months? It will [Decrease a lot, Decrease a little, Stay about the same, Increase a little, Increase a lot, I do not form opinions about future economic growth, Don’t know]

## Personal concerns

- *concern\_health*: How concerned are you about the effects that COVID-19 might have on your health or the health of other members of your household [Not at all concerned, Somewhat concerned, Very concerned, Don't know]
- *concern\_job*: How concerned are you about the effects that COVID-19 might have on your job security or the job security of other members of your household [Not at all concerned, Somewhat concerned, Very concerned, Don't know]
- *concern\_finance*: How concerned are you about the effects that COVID-19 might have on the financial situation of your household [Not at all concerned, Somewhat concerned, Very concerned, Don't know]
- *concern\_econ*: How concerned are you about the effects that COVID-19 might have on the economy [Not at all concerned, Somewhat concerned, Very concerned, Don't know]

**Consumer sentiment index** Following the construction of the index of consumer sentiment by the University of Michigan (Surveys of Consumers), we calculate this index for each respondent as a simple average of the following five questions:

- Did the current financial situation of your household get better or worse over the past 12 months? [Got much worse, Got a bit worse, Stayed the same, Got a bit better, Got much better, Don't know]
- How do you think the financial situation of your household will develop over the next 12 months? [Get much worse, Get a bit worse, Stayed the same, Get a bit better, Get much better, Don't know]
- How do you think the national business conditions will develop over the next 12 months? [Get much worse, Get a bit worse, Stayed the same, Get a bit better, Get much better, Don't know]
- How do you think the national economic situation will develop over the next 5 years? [Get much worse, Get a bit worse, Stayed the same, Get a bit better, Get much better, Don't know]
- Generally speaking, do you think now is a good or bad time for people to buy major household items, such as furniture, a refrigerator, stove, television, and things like that? [Very bad, Bad, Neither good or bad, Good, Very good, Don't know]