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## When good news backfires: Feelings of Disadvantage in the Corona Crisis

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Abstract:

The Corona crisis is an unprecedented challenge for societies. Lockdowns and physical distancing orders have generated economic, social and health-related consequences in many countries. In this regard, we evaluate how information about positive economic expectations during the crisis affects citizens' attitudes. Using a real-world survey experiment, our analyses indicate that information about a positive economic outlook and governmental support to mitigate the crisis actually promote people's subjective feelings of disadvantage rather than reducing them. Interestingly, it seems that information about economic recovery that opens up opportunities may backfire due to increased upward comparisons and perceived competition. Structural equation analyses suggest that this relationship is mediated by critical views about democratic institutions during the crisis. Citizens lose confidence in their governments and democratic decision-makers to uphold principles of fairness after the crisis ends. Our results have important implications on how to communicate measures that aim to deal with the crisis.

Keywords: COVID-19, Survey Experiment, Relative Deprivation, Mediation, Switzerland

## **Introduction**

In this article we focus on the impact of optimistic information during the coronavirus crisis on citizens' attitudes. The source of the crisis is 'severe acute respiratory syndrome coronavirus 2' (SARS-CoV-2), more commonly known as 'Coronavirus disease' or 'COVID-19'. According to Johns-Hopkins-University, by the end of November 2020 over 60 million people had been infected with Coronavirus (Johns Hopkins University, 2020). In March 2020, many governments took unprecedented measures and enacted lockdowns which slowed or stopped economic activity (e.g. closure of restaurants, retail stores and industrial plants) to slow the spread of the virus (Flaxman et al. 2020; Haug et al. 2020). These measures had a large impact on both the macro economy and individual economic circumstances and increased worry about a large-scale recession in the months ahead (Esaiasson et al. 2020; Fetzer et al. 2020; Pitas and Ehmer 2020; Schraff 2020).

This is where our investigation finds its starting point. In this article, we evaluate the development of relative deprivation, i.e. subjective feelings of disadvantage during the COVID-19 crisis. We aim to ascertain to what extent optimistic information influences the 'judgment that one or one's in-group is disadvantaged compared to a relevant referent' (Pettigrew 2016, 9) during the crisis. For this purpose we conducted a real-world survey experiment during the first peak phase of the crisis in Switzerland between 26 March and 6 April 2020. Respondents were randomly assigned to a treatment condition with an optimistic real-world scenario and a control condition. The frame presented a positive outlook on the economy (state provisions and future economic recovery). Significantly, the information given in the frame stemmed from real-world examples and was not artificially constructed, thereby reflecting typical experiences and information during the current crisis (Bechtel et al. 2015). Consequently, our study is designed to identify the impact of information about

positive economic expectations during the crisis on the development of feelings of relative deprivation.<sup>1</sup>

Our experimental analyses indicate that information about positive economic projections during the COVID-19 crisis enhances feelings of group relative deprivation. It seems that information about economic recovery that opens up opportunities to move ahead may backfire due to increased upward comparison and perceived competition (Smith and Huo 2014, 231). Moreover, mediation analyses indicate that this positive information might spark skepticism towards democratic institutions during the Corona crisis, thereby promoting feelings of disadvantage.

We contribute to the literature in several ways. First, we offer an analysis of how the COVID-19 pandemic and its economic consequences affect citizens' attitudes. For Western Europe the pandemic constitutes a dramatic experience with economic and social shutdowns unprecedented in modern times. Second, we offer a timely analysis of feelings of disadvantage in a society severely affected at the time of the survey. Third, although relative deprivation has moved from being a bit player to central stage in social science (Smith et al. 2012, 203), an imbalance in the evaluation of the concept remains obvious: While a large number of studies deal with the consequences of relative deprivation, research into the causes continues to lag behind. Thus, scrutinising the impact of information about the economic circumstances of the COVID-19 crisis contributes to filling this gap. Moreover, we focus on positive expectations during a crisis, adding additional evidence on how crises and their consequences affect subjective relative deprivation. Fourth, we use a real-world survey experiment and expand our understanding of the effects of issue frames based on real-world information, thereby reflecting typical experiences of the current times of crisis (Bechtel et al. 2015). In addition, we contribute to the discussion on how political communication which

fosters feelings of threat and insecurity influences citizens (Albertson and Gadarian 2015, see also Abulof et al., this issue).

### **Theory and hypotheses: How information about the economic consequences of crises impact feelings of disadvantage**

Challenging conventional wisdom about the importance of absolute deprivation, relative deprivation ‘occurs when people compare themselves to those who are better off and conclude that their disadvantage is undeserved’ (Smith and Huo 2014, 232). Thus, people see that somebody is better off and regard this as unfair. In this regard, relative deprivation is a subjective impression that one or one’s in-group is disadvantaged. This disadvantage is not necessarily objective but is based on a subjective evaluation of the individual that s/he deserves more than s/he currently has. It is important to distinguish between individual- and group-level relative deprivation (Runciman 1966). Individual-level relative deprivation (IRD) means that the comparison is on the individual level, i.e. between an individual and another individual or between an individual’s present and past or future situation. Group-level relative deprivation (GRD) ‘is an intergroup comparison between an individual’s group and another group, or between the group’s current situation and that group’s past or future situation’ (Smith and Huo 2014, 233).

The concept of relative deprivation was originally developed by Stouffer and colleagues as a post-hoc explanation in their study about why soldiers in the military police were more satisfied than air corpsmen even though the latter had faster promotions than the former (Pettigrew 2015; Stouffer et al. 1949). Gurr (1970) then used the concept to investigate violent behaviour and (civil) wars. Today it functions as a prominent social science concept that has been used to explain a wide variety of outcomes ranging from physical and mental

health (Smith and Huo 2014) to individual behaviours such as crime, drug use or academic achievement (Smith et al. 2012) to individual and inter-group attitudes such as prejudice and nationalism, as well as collective action such as protest participation, extreme right-wing voting or violence (Abrams and Grant 2012; Meuleman et al. 2020; Pettigrew et al. 2008; Rüdiger and Karyotis 2014; Urbanska and Guimond 2018). In comparison, research into the causes of relative deprivation is still in its infancy.

In this article, we argue that information about positive economic expectations during the difficult conditions of the COVID-19 crisis impacts the feeling of relative deprivation, i.e. feelings of disadvantage. Information is key in the threatening times of crisis. According to the affective intelligence model, for example, humans rely on dispositions and heuristics as long as no threat is present (Marcus and MacKuen 1993; Marcus et al. 2000). New and dangerous situations, however, trigger fear and anxiety, which lead people to search for and pay greater attention to new information. With the help of the newly acquired information, the unfamiliar conditions are assessed and attitudes are formed following either a memory-based or an online process model. That is, individuals make judgments either based on information easily available and retrievable from their memory or right away when the information is encountered (Matthes 2007; Scheufele 2000). With respect to the impact of information about positive economic expectations during the COVID-19 crisis on subjective group relative deprivation among individuals, two competing hypotheses can be formulated.

On the one hand, following Beck (1992) and Podder (1996) one could argue that in times of the pandemic, everybody is exposed to difficult economic conditions. In this regard, in such a transboundary crisis all individuals suffer to a certain extent and class differences become less important. Under such circumstances there should be no feelings of discontent and societies subject themselves to the pursuit of the common goal to overcome the crisis as

quickly as possible. Even more so, in such a situation, information on a positive outlook could reduce or prevent relative deprivation because the recovery could be seen as an opportunity to increase people's welfare. In addition, optimistic information for future developments offers optimism and hope, thereby decreasing feelings of relative deprivation (Grofman and Muller 1973). '[F]eelings of deprivation or frustration should not just be seen as a reaction to objective conditions, but they arise out of the distance between expectations and experiences' (Hooghe et al. 2017, 218). Thus, an optimistic vision for the future should decrease the gap between expectations and experiences. Information about policies aiming to mitigate the economic crisis may evoke feelings of hope and optimism, thereby decreasing feelings of relative deprivation. In sum, we formulate the first hypothesis as follows:

*Hypothesis 1: Information about positive economic expectations decreases group relative deprivation.*

On the other hand, the confrontation with a silver-lining and positive outlook could potentially lead to a break with these common interests as self-interest is now the main priority. Research has shown that a *positive* economic outlook does not necessarily imply satisfaction (Dambrun et al. 2006; Greitemeyer and Sagioglou 2019; Ishida et al. 2014; Power 2018). Referring to China, Brockmann et al. (2009) found that despite massive increases in income, happiness decreased considerably. Drawing on the concept of relative deprivation, they argue that despite personal income increases, the skewed income distribution in China implies a 'worsening [of] most people's relative position despite absolute gains' (Brockmann et al. 2009, 392; Graham and Pettinato 2002). These so-called 'frustrated achievers' feel disadvantaged despite having ample resources but their upward comparisons result in relative deprivation due to the skewed income distribution (Brockmann et al. 2009; Graham and Pettinato 2002). Thus, obvious improvements could inadvertently induce relative deprivation

(Smith and Huo 2014, 235). Comparisons with others in particular might prompt relative deprivation when people ask why others are even better off (Greitemeyer and Sagioglou 2019; Smith and Huo 2014). Relative deprivation is prompted by the relative standing of the individuals when compared to others and not by his or her absolute position.<sup>2</sup> In addition, feelings of relative deprivation can also be triggered by crisis-mitigating policies such as redistribution that offer opportunities to move to more favourable environments for some citizens but might be regarded as status threatening for others. That is, governmental interventions can be accompanied by the fear of losing previous advantages or by the impression that others are undeservingly treated better (Attewell 2021; Dambrun et al. 2006; Grofman and Muller 1973; Guimond and Dambrun 2002). Thus, ‘people may perceive a larger discrepancy between their actual (or anticipated) outcomes and the outcomes to which they feel entitled’ (Guimond and Dambrun 2002, 902). Altogether, we formulate hypothesis 2 as follows:

*Hypothesis 2: Information about positive economic expectations increases group relative deprivation.*

## **Research design**

In the following section the relationships presented above will be put to an empirical test. To understand the effect information about economic expectations during the crisis has on the development of relative deprivation, we conducted a survey experiment during the peak phase of the crisis in Switzerland between 26 March and 6 April 2020. The data was collected by LeeWas GmbH through an online survey with over 1,800 respondents with probability sampling in the German-speaking part of Switzerland. Respondents were offered the chance to win one of 10 vouchers (valued at 100 CHF) for different online retail shops. The overall response rate was 19.4 percent (RR1, The American Association for Public Opinion

Research 2016). The mean age in the sample is 49 years which is slightly above the average age in Switzerland of around 42 years (Bundesamt für Statistik 2020). Fifty six percent of the respondents are female, a little more than the Swiss average (50.4%) (Bundesamt für Statistik 2020). Regarding education, we encounter the well-known problem of online surveys as highly educated individuals are somewhat overrepresented while respondents with below secondary education are underrepresented (9% compared to 11%; OECD 2020). In general, however, our sample matches the demographics of Switzerland except for the share of the respective language regions as we only focus on the German-speaking part of the country. All descriptive statistics are presented in table S4 in the supplemental material. Our analysis is based on approximately 900 respondents consisting of the experimental condition (N= 300) and a control condition (N= around 600).<sup>3</sup>

At the time of the survey, Switzerland was one of the COVID-19 hotspots of the first wave in Europe with about 1,000 new cases per day (Bundesamt für Gesundheit 2020; Johns Hopkins University 2020). The number of infections rose sharply from around 14,000 to almost 24,000 between 26 March and 6 April. Moreover, the number of deaths more than doubled in this period from 230 to over 700 (Bundesamt für Gesundheit 2020; Johns Hopkins University 2020). We chose to conduct the survey only in the German-speaking part as we wanted to hold cultural characteristics constant.

For the survey, respondents were randomly assigned to a treatment or control condition.<sup>4</sup> The experimental condition is a frame that covered information on economic expectations during the Corona pandemic. Although the negative expectations are dominant in the current situation, one can observe several positive outlooks. Many governments provided financial support to mitigate the negative consequences of the pandemic (for the exact translation see supplemental material).



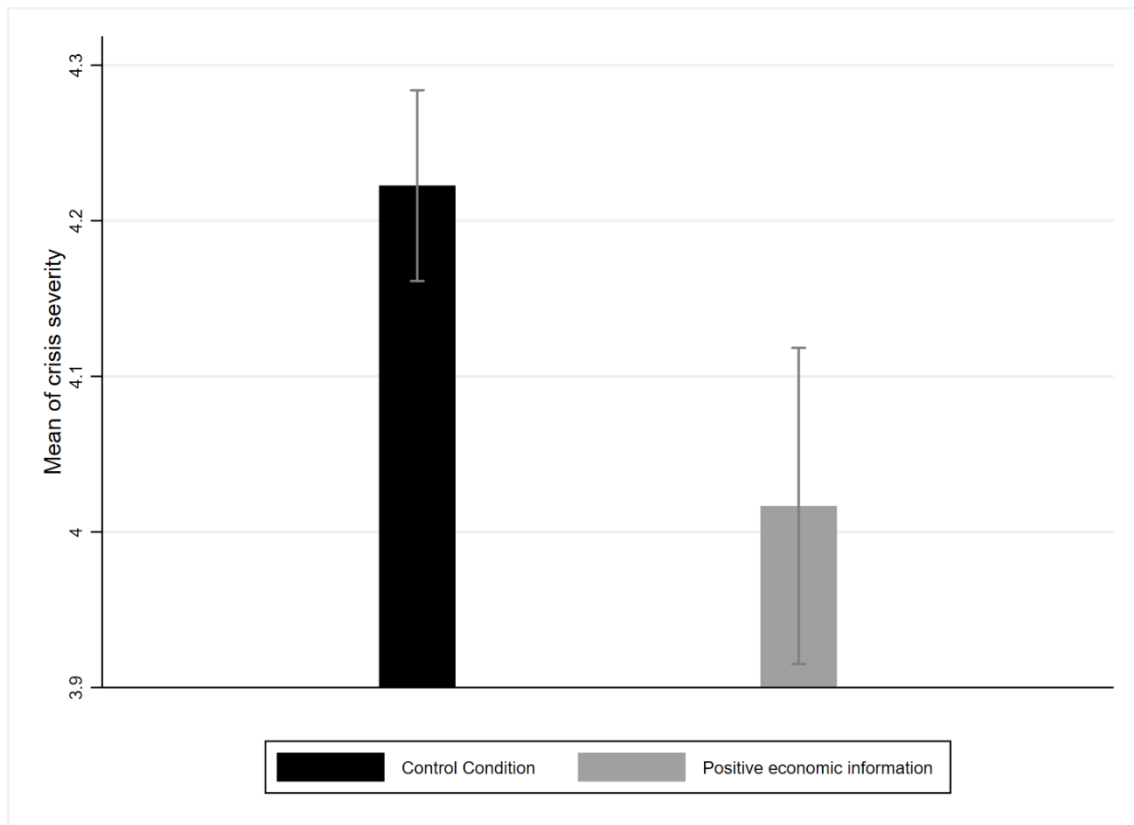
In our treatment condition, we presented a frame that begins with a statement about the difficulties the Swiss economy had experienced due to the pandemic. Following that was a prognosis from the ‘Staatssekretariat für Wirtschaft (SECO)’ (State Secretariat for Economic Affairs) saying that if the epidemiological situation improves Switzerland would experience economic growth in the second half of 2020. Moreover, the frame highlights the federal measures taken to mitigate the economic consequences, such as a stimulus package of 40 billion Swiss francs. The frame ends with a statement by the Minister of Economy and Finance, Guy Parmelin that the government is ready to help even more and that there are already optimistic signs of economic recovery. The rationale behind this frame was to offer an optimistic view of the (long-term) economic development and to show that the Swiss government has already passed measures to mitigate the consequences and is ready to step in more if necessary. This should spark feelings of optimism or hope and thus people should perceive the consequences of the pandemic as less severe.

The information provided in this treatment condition is taken from the website of SECO and includes parts of a press release from March 2020. Moreover, the Minister’s statements were given to the SRF (public service broadcasting). The information provided to respondents is real-world information and not constructed artificially. It reflects typical information citizens encounter when reading the newspaper or when watching TV. Therefore, we expect that our findings can at least partially be applied to real-world relationships outside of our experimental set-up.

We first performed a manipulation to check on whether our frame had the intended effects, i.e. whether respondents who received the positive outlook regarded the consequences of the crisis as less severe than those in the control condition. Figure 1 shows the mean for both experimental conditions for the question of how severe respondents regard the

consequences of the crisis. As expected, respondents receiving the positive frame ( $M= 4.02$ ,  $SD= .9$ ) were less concerned than those in the control condition ( $M= 4.22$ ,  $SD= .81$ ), with this difference being significant at the 5-% level. Thus, the difference is around .2 which amounts to a quarter of a standard deviation. Given that the frames are based on real-world sources at the height of the first wave of the COVID-19 pandemic, we consider this a significant difference.

Figure 1 Manipulation check for the treatment



Notes: Bar graph with mean of how severe respondents judge the consequences of the crisis by frame with 95-% confidence intervals.

Regardless of the treatment condition, all respondents completed a short survey including one question on relative deprivation. To measure relative deprivation, people were asked to state whether they agree or disagree with the following statement: 'People like me are

systematically disadvantaged, while other groups receive more than they deserve.<sup>55</sup> This item is suitable to measure group relative deprivation as it clearly includes a comparison between expectation and reality for the individual and his/her in-group. Furthermore, the wording implies an unwarranted advantage for the out-group, likely evoking feelings of entitlement and deservingness. Both elements are essential characteristics of relative deprivation. The formulation of the items signifies that subjective group relative deprivation is an individual-level phenomenon where individuals see themselves as part of a disadvantaged group. Figure A1 in the appendix shows the distribution of the variable. The overall mean is 2.28 on a scale from 1 to 5 (where higher values correspond to stronger agreement with the statement above).

To increase the accuracy of our estimates, we used several control variables based on other items included in the survey. While the inclusion of these control variables should not affect the substantiality of the estimated effects, it increases the precision in the estimation of the standard errors (Angrist and Pischke 2009). Additionally, this also allows us to control for baseline differences in the covariates. First, we used standard socio-demographic variables such as age (squared), sex, education, income, occupation, marital status, and the type of community people live in. Socio-economic circumstances (such as income and occupation) but also educational attainment play an important role in structuring feelings of relative deprivation (Meuleman et al. 2020). We included a question on self-rated health which is an important control variable in pandemic times as people who are in worse health are particularly vulnerable to the virus and are likely to be especially affected by stay-at-home orders and social distancing. We also included a dummy variable for the day respondents filled out the survey to account for temporal effects and the time people spent on the treatment. Summary statistics for all variables can be found in table S4 in the supplemental material.

We conducted linear regression models using heteroscedasticity-robust standard errors to test our hypotheses. Our dependent variable is group relative deprivation. Our main independent variable is a binary variable indicating the respondent's treatment condition, i.e. whether s/he received an experimental frame or the control condition. Our main model excluded respondents with response times that were too short to allow for exposure to the treatment, i.e. respondents who spent less than five seconds reading the frame. For reasons of lucidity, we only presented the coefficients for the frame but the full tables are presented in the supplemental material.

### **Empirical findings**

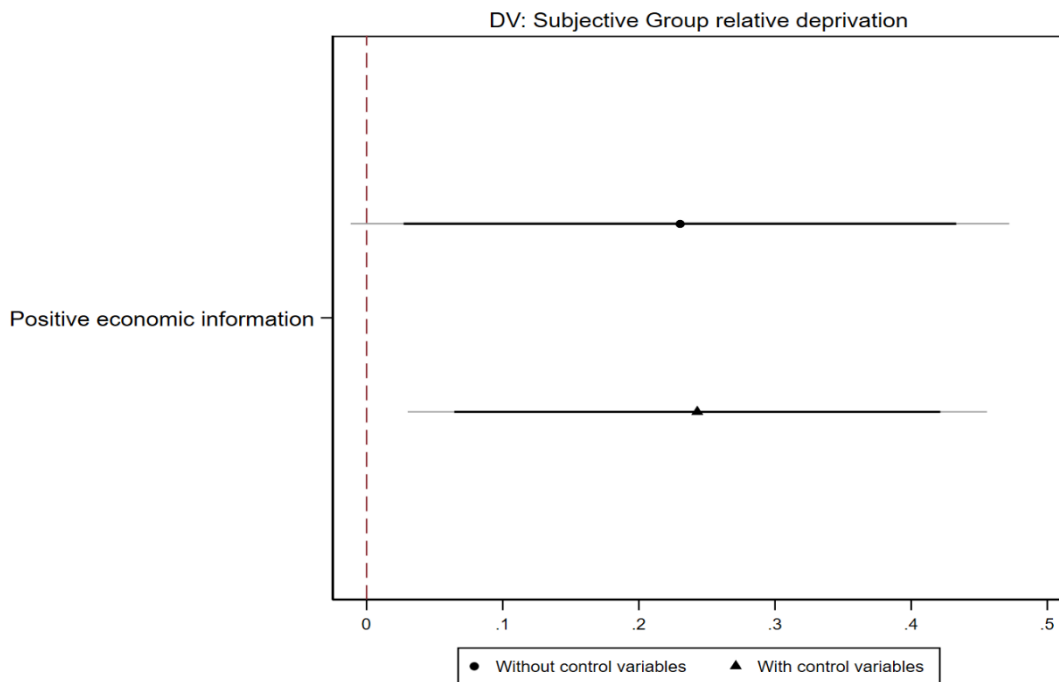
We started by investigating the effects of our frame on subjective group relative deprivation with and without control variables. To ensure that respondents were fully exposed to the treatment we excluded the fastest 5% of respondents (less than five seconds exposed to the treatment). Figure 2 displays the coefficients of the linear regression models with 90% and 95% confidence intervals. Referring to the impact of the positive economic frame, our analyses indicate a positive effect. The coefficient is statistically significant at the 10% level without control variables and significant at the 5% level when including covariates as the estimates of standard errors are more precise (Angrist and Pischke 2009). People who read about the support measures of the Swiss government and possible economic growth in the second half of 2020 felt more relatively deprived than those in the control group. It seems that such positive information does not spark optimism but evokes feelings of disadvantage, thus supporting hypothesis 2 and rejecting hypothesis 1.

In terms of size of the effects, we found that for the positive economic frame group, relative deprivation is around 2.3 for the control group and around 2.55 for the group that receives

the positive frame. This effect is around a fifth of a standard deviation. Considering that we used real-world frames and show typical and unexaggerated experiences during the crisis, we regard these sizes as substantial.

Regarding the controls, people with higher incomes feel less relatively deprived than people with lower incomes. We find the same for education. People with higher levels of education feel less relatively deprived than lesser educated respondents. Young and old respondents feel less relatively deprived than middle-aged respondents.

Figure 2 Regression coefficients of the effect of frames on group relative deprivation

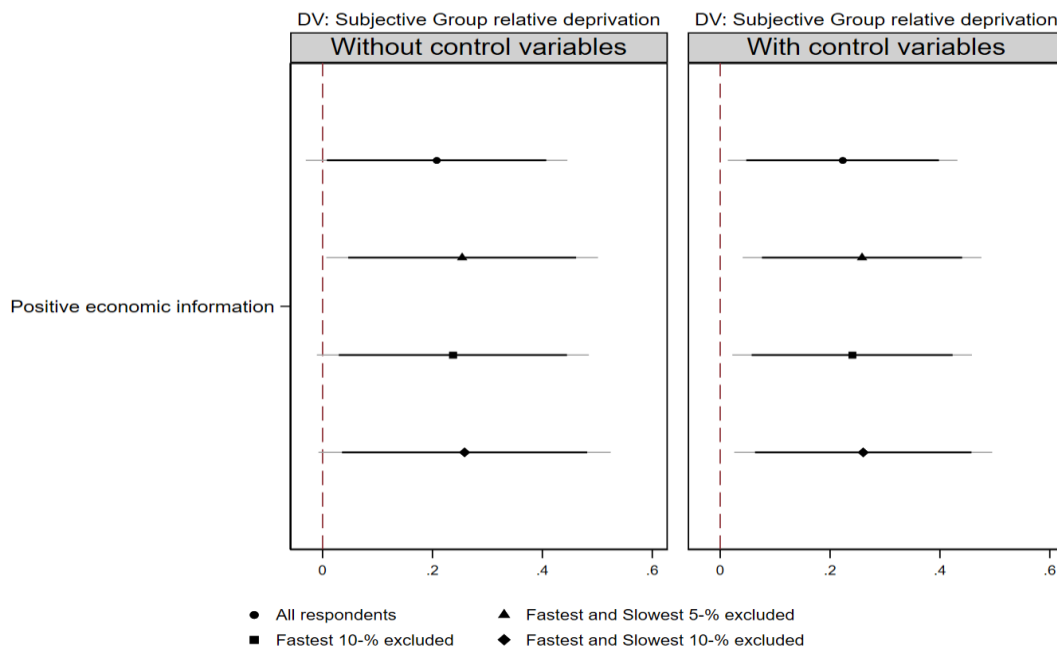


*Note: Displayed are linear regression coefficients with 95% (light grey bars) and 90% confidence intervals (dark grey bars). Models exclude the fastest 5% respondents.*

We conducted several robustness checks to see whether our findings hold for different model specifications. In our main model, we restricted the sample based on the time respondents spent on the frame to ensure that respondents who were unlikely to have been fully exposed to the treatment were excluded (e.g. with response times too short to read the

whole frame). As our first robustness check, we estimated an additional model that included all respondents irrespective of the time they spent reading the frame. The second additional model excluded the fastest and slowest 5%, i.e. respondents who spent less than five or more than 59 seconds reading the frame. The third model excluded the fastest 10%, i.e. respondents who spent less than seven seconds reading the frame. The fourth model excluded the fastest and slowest 10%, i.e. respondents who spent less than seven or more than 48 seconds reading the frame. Figure 3 shows that the results remain robust. The positive economic frame has a positive effect in every model specification that is significant at the 10% level without control variables and at the 5% level with control variables. In the following section, we scrutinise the link between positive economic expectations and relative deprivation with the help of mediation analyses using structural equation models.

Figure 3 Regression coefficients of the effect of frames on group relative deprivation with different samples without and with control variables



Note: Displayed are linear regression coefficients with 95% (light grey bars) and 90% confidence intervals (dark grey bars).

## Mediation analyses

In this section, we analyse the effect of positive information on group relative deprivation in more detail. We argue that the positive information presented gives an impression of a new beginning, a starting point for a different setting compared to the present situation. During a crisis, the various conflicting interests subject themselves to the pursuit of a common goal, i.e. overcoming the crisis as quickly as possible. Consequently, everyone pulls in the same direction as threats and fear lead to the pursuit of self-interest being put on hold. Yet, being confronted with the positive outlook of overcoming the crisis potentially breaks these common interests. From now on, self-interest rather than the common good must be ensured. Thus, the prospect of a positive development could spark status anxiety or the fear of losing out. Furthermore, governmental action to overcome the moment of crisis could imply a change in the present rules of the game. Such interventions may include a possible redistribution of life chances which threaten one's own status and possibly benefit others who do not 'deserve' it. Since equal treatment cannot be guaranteed, people will evaluate the democratic system more critically. As the belief in justice, equal treatment and fairness of the given institutions might be challenged, feelings of disadvantage arise. In this vein, well-intended policies to compensate for disadvantages could induce feelings of relative deprivation when respondents are afraid that they will not profit from such an improvement but others will, although they might not deserve it (Attewell 2021). Lastly, in such a severe crisis, people might not believe the positive information provided (Mukhtar 2020). Respondents may anticipate policy failures of the political elite as they expect an unfair distribution of potential support measures. We propose three different ways to capture this evaluative element: Feelings of patriotism, which are defined as a critical love of the country and the attachment to its humanistic and democratic values (Blank and Schmidt 2003; Sapountzis 2008), trust in the federal government and anti-elitism.

Table 1 Results from structural equation models on group-relative deprivation

	Direct effects	Indirect effects
<i>DV: Group relative deprivation</i>		
Constructive Patriotism	-.39*** (.054)	-
Positive economic expectations	.094 (.085)	.057** (.023)
<i>DV: Constructive Patriotism</i>		
Positive economic expectations	-.146** (.060)	-
Observations	961	961

Notes: Bootstrapped standard errors (with 1000 replications) in parentheses \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  Models exclude the fastest 5% respondents. Models are estimated without control variables, but remain the same with controls.

Tables 1, 2 and 3 show the results of structural equation models using patriotism, trust in the federal government and anti-elitism as potential mediators that link information about positive economic expectations and group relative deprivation (UCLA: Statistical Consulting Group).<sup>6</sup> The model in Table 1 reveals that reading information about positive expectations regarding the economy has an indirect significant effect on relative deprivation ( $b = .057$ ,  $SE = .023$ ,  $p < .05$ ). This effect is mediated by a respondent's feelings of patriotism. Dissecting the effects, reading the positive frame significantly decreases pride in the democratic rules of the game ( $b = -.146$ ,  $SE = .060$ ,  $p < .05$ ). Moreover, patriotism decreases relative deprivation ( $b = -.39$ ,  $SE = .054$ ,  $p < .01$ ). Put differently, respondents who read about positive economic expectations and governmental actions against the current crisis evaluate their country much more critically, which in turn increases their feelings of deprivation. When accounting for this mediation, there is no direct significant influence of our treatment on relative deprivation ( $b = .094$ ,  $SE = .085$ ,  $p < .270$ ). The mediated effect is around 38 percent of the total effect ( $.057 / .151 = .38$ ), which is a reasonable amount (UCLA: Statistical Consulting Group).

Table 2 Results from structural equation models on group relative deprivation

	Direct effects	Indirect effects
<i>DV: Group relative deprivation</i>		



Trust in federal government	-.28*** (.038)	-
Positive economic expectations	.106 (.087)	.045** (.021)
<i>DV: Trust in federal government</i>		
Positive economic expectations	-.16** (.077)	-
Observations	961	961

Notes: Bootstrapped standard errors (with 1000 replications) in parentheses \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  Models exclude the fastest 5% respondents. Models are estimated without control variables, but remain the same with controls.

Tables 2 and 3 show the respective results of two further mediation analyses. Respondents who read the positive frame are significantly less trusting of the federal government ( $b = -.16$ ,  $SE = .077$ ,  $p < .05$ ), while trust on the other hand significantly reduces relative deprivation ( $b = -.28$ ,  $SE = .038$ ,  $p < .001$ ). The indirect effect of positive expectations on relative deprivation is positive and significant ( $b = .045$ ,  $SE = .021$ ,  $p < .05$ ). There is no direct significant influence of our treatment on relative deprivation when accounting for this mediation ( $b = .106$ ,  $SE = .087$ ,  $p < .22$ ). The mediated effect is around 37% of the total effect ( $.045/.151 = .29$ ), which is slightly smaller than that of patriotism.

Table 3 Results from structural equation models on group relative deprivation

	Direct effects	Indirect effects
<i>DV: Group relative deprivation</i>		
Anti-elitism	.34*** (.034)	-
Positive economic expectations	.083 (.081)	.068** (.029)
<i>DV: Anti-elitism</i>		
Positive economic expectations	.203** (.080)	-
Observations	961	961

Notes: Bootstrapped standard errors (with 1000 replications) in parentheses \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  Models exclude the fastest 5% respondents. Models are estimated without control variables, but remain the same with controls.

Lastly, respondents who read the positive frame are significantly more anti-elitist ( $b = .203$ ,  $SE = .080$ ,  $p < .05$ ) and anti-elitism significantly increases relative deprivation ( $b = .34$ ,  $SE = .034$ ,  $p < .01$ ). The indirect effect of positive expectations on relative deprivation is positive

and significant ( $b=.068$ ,  $SE = .029$ ,  $p < .05$ ). Again, there is no direct significant influence of our treatment on relative deprivation when accounting for this mediation ( $b= .083$ ,  $SE = .081$ ,  $p < .34$ ). The mediated effect is around 45% of the total effect ( $.068/.151 = .45$ ) which is a very reasonable amount.

To sum up, the mediation analyses shows that information about positive economic expectations for the future and large-scale governmental interventions form the picture that fairness and democratic norms are undermined. Thus, information demonstrating a positive economic outlook might lead to the fact ‘that although people are increasingly able to fulfil their material needs, experiencing that others have even more still leads to frustration’ (Greitemeyer and Sagioglou 2019, 531). Moreover, linking our findings to the literature on populism, we see that being confronted with positive expectations increases anti-elitism, which then promotes feelings of subjective relative deprivation. That is, people do not believe the positive information they are given and rather think this is propaganda by the (political) elite which results in a feeling of disadvantage because the crisis still challenges the situation of individuals (Bos et al. 2020). Moreover, information about mitigating policies might give people the impression that only the elite and those close to them profit from these policies, increasing the representation gap between the people and the elite resulting in an increase of relative deprivation.

## **Conclusion**

In this article, we evaluated the influence of information about positive economic expectations in times of the COVID-19 pandemic on subjective relative deprivation. Our aim was to confront respondents with a realistic scenario to discover how this information affects subjective group relative deprivation. We used information that respondents are likely

to encounter in real life, providing realistic cues that affect people's evaluation of their own situation.

Using an information frame from real-world sources, our analyses indicate that information about a positive economic outlook and state provisions induces subjective group relative deprivation because people have the impression that others are undeservingly treated better. Thus, economic recovery that provides opportunities to move ahead to more advantaged settings may backfire due to increased upward comparisons and perceived competition (Smith and Huo 2014, 231). In other words: 'when it becomes obvious that there is enough to go around, but despite that, all boats are not being lifted' (Dorling 2018, 777). To uncover potential mechanisms, we performed mediation analyses and found that feelings of patriotism, trust in the federal government and anti-elitism potentially mediate the relationship between positive expectations and relative deprivation. We argued that when confronted with positive expectations and governmental support programs people are more critical towards the system and come to the conclusion that they are disadvantaged while others are undeservingly treated better. Additionally, citizens lose confidence in their governments to uphold principles of fairness after the crisis is overcome.

Our study offers several important implications for the development of politics and society during a crisis. To begin with, we have to realise that feelings of disadvantage are not just a phenomenon of difficult times that occur as a response to adverse developments (Meuleman et al. 2020). We have shown that relative deprivation can also arise when people are confronted with positive outlooks during a crisis. Future growth potential and governmental support to mitigate the consequences of the crisis may trigger relative deprivation instead of decreasing feelings of disadvantage and subjective inequality. To some extent our findings indicate that governments are damned if they do and damned if they don't. This has

important implications for how to communicate measures that aim to deal with the crisis (see also Mao, this issue). In this regard, measures to overcome the crisis should account for trade-offs and an equal distribution of costs and benefits. Moreover, political actors should try to communicate such measures in a way that avoids the perception of unequal distribution and unfair disadvantage. It is conceivable that positive economic outlooks during a crisis do not necessarily increase social cohesion. In particular, increasing inequality is shown to be a driving force of social polarisation and can hamper the development of togetherness (Uslaner 2010; Uslaner and Brown 2005). In this regard, our findings also link to the literature on populism which has recently shown that inequality affects support for populist parties (Engler and Weisstanner 2020). Thus, perceived disadvantages are amplified by inequality making people more susceptible to populist actors. Moreover, feelings of discontent and disadvantage impact emotions, behaviour, and physical health, thus possibly intensifying the crisis (Smith and Huo 2014, 232). In addition, research has shown that subjective relative deprivation is also linked to radical voting and protest behaviour (Rüdiger and Karyotis 2014; Urbanska and Guimond 2018).<sup>7</sup> This has important implications for the current context, especially as support for the countermeasures is decreasing in some countries. Thus, relative deprivation could act as an accelerator of potential protests and increasing vote shares for radical parties.

While the COVID-19 crisis has been accompanied by calls for increasing solidarity among citizens, it seems that optimistic signs in the economy can induce competition and envy that is counter-productive for a society that values solidarity. In addition, social polarisation and inequality may also have political ramifications, especially when decision makers try to capitalise on the subjective and objective grievances of the public (Urbanska and Guimond 2018). Our results imply that crisis-hit societies do not necessarily remain a community of common destiny but may rather quickly transform into polarised societies. Finally, our

preliminary mediation analyses point to the importance of political legitimacy and institutional trust in mediating the relationship between information and relative deprivation.

It has to be noted that our study bears several caveats that must be kept in mind when interpreting the results. First, in assessing their situation, people often draw inferences from their immediate surroundings. Thus, perceptions of relative deprivation driven by this kind of limited information lead to problematic conclusions about disadvantages and discontent (Power 2018, 779). Second, as certain limits are imposed on this research design by the limited availability of survey data, we can only offer a single measurement for our dependent variable – relative deprivation – and cannot test all potential mediators. However, we believe that our measurements and the proposed mediation model still offer important insights and can be used as a starting point for future research. Third, we used a frame that was intended to display information about positive economic expectations during the current crisis. Although we could not test the effect of crises directly but rather how information and experiences of a crisis affect the feeling of group relative deprivation, we paid great attention to employing credible frames portraying real-world information. To that end, our information is realistic and respondents are likely to be confronted with such information in their normal life during the crisis. This makes it likely that our findings can be transferred beyond the experimental set-up. Fourth, we focus only on the German-speaking part of Switzerland and it is unclear how our findings relate to other nations. Thus, the general problem of how to comparatively approach the present findings beyond the Swiss case remains. According to the late Stein Rokkan (1970), however, Switzerland can be thought of as a microcosm of Europe because of its cultural, linguistic, religious, and regional diversity. Rokkan recommended that anyone wishing to study the dynamics of European politics should immerse him or herself in the study of Switzerland. In addition, Switzerland has been described as composed of three groups that ‘stand with their backs to each other’ (Steiner

2001, 141) In other words, conclusions drawn from empirical analyses in the German-speaking part of Switzerland are likely to be valid for other German-speaking contexts in Europe (Germany and Austria). In addition, regarding the situation of the pandemic in Spring 2020, Switzerland had a comparable situation to many Western European countries with similar numbers of infections and countermeasures. Lastly, we conducted our experiment at the height of the first wave in March and April 2020. When looking at the second wave of the pandemic, we can see that the countermeasures are parallel, indicating that the social and economic consequences are similar. This suggests our results might still be valid in late 2020.

Altogether, our findings should be viewed as the provisional results of an empirically-oriented analysis of feelings of disadvantage in times of crises. In this regard, this investigation has taken the first step toward greater clarity in this research area and future research should use our analyses as a starting point to uncover the mechanism underlying the relationship between the course of an existential crisis and group relative deprivation. Nevertheless, our study contributes to the understanding of why the end of a crisis and the glimmers of hope associated with it could go hand in hand with an emerging polarised landscape.

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Endnotes:

1 Positive economic expectations are current perceptions of future economic developments that include an improvement in current circumstances

2 An improvement in an individual's situation does not necessarily imply a difference in relative standing to others. For example, if the situation improves or might improve for one individual (or group that an individual identifies with) but somebody else's situation improves more, the (subjective) gap between the first and the second person (or group) increases resulting in subjective relative deprivation.

3 Since our survey covered different facets of the Coronavirus crisis, the full experiment included four treatment conditions and one control condition. The conditions were randomised and are thus fully independent of each other. In this paper, we focus on the condition treating mechanisms related to the positive economic outlook.

4 We conducted balance tests to see whether the randomisation worked. Only two are significant at the 10-% level which is lower than the mean expected value. The table is presented in the supplemental material table S2.

5 In this dataset, we have to limit ourselves to one item to measure group relative deprivation. However, factor analysis using an alternative dataset shows that additional items measuring relative deprivation load highly on the same factor (see table S3). This might remedy the drawbacks of using a single item measurement in this study.

6 Constructive patriotism is measured with three items that form a single scale. The exact question wording is 'Could you please state how proud you are of Switzerland in each of the following'? (1) Its social security system (2) The way democracy works (3) Its fair and equal treatment of all groups in society? Trust in government is measured with the question: How much do you trust the Federal Council? Answers range from 1 'do not trust at all' to 5 'trust completely'. Anti-elitism is measured by asking the level of agreement with the following statement 'I would rather be represented by a citizen than by a specialised politician'. Answers range from 1 'strongly disagree' to 5 'strongly agree'.

7 In our data, relative deprivation relates positively to voting for the SVP (a conservative, right-wing party) and negatively to trust in strangers, albeit very moderately. Yet, the results are influenced by our experimental conditions and can thus only give a first indication on the consequences of relative deprivation.



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