Conditional Solidarity - Attitudes Towards Support for Others During the 2020 COVID-19 Pandemic

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Abstract

The COVID-19 pandemic presents a unique opportunity to study how humans allocate scarce resources in times of hardship. We study public preferences regarding who should get access to government aid for the self-employed, a bed in the intensive care unit, and permission to cross the border using original conjoint survey experiments administered to an incentivised online panel in Switzerland during the first and second waves of the pandemic in 2020. We find that across the three areas, even in extraordinary circumstances such as the COVID-19 pandemic, evaluations of deservingness to aid and support are still based on an underlying logic of conditional solidarity and identity: in all experiments, contributing to the community, be it through past actions and contributions or through current efforts, plays a crucial role in determining an individual's deservingness, as does their nationality (and legal status) with nationals being perceived as more deserving than non-nationals.

Keywords: COVID 19 – deservingness perceptions – solidarity – conjoint experiment

Introduction

As the first wave of the COVID-19 pandemic reached Europe, pictures of people hoarding toilet paper and flour started making the rounds in the media. The pandemic, it appeared, brought to light the most basic human instinct of "me first, everyone else second". However, as the news cycle moved on, another story emerged: one of increased solidarity, wherein neighbours, whose interactions were limited to a polite "Hello" or "Goodbye" in the hallways prior to the pandemic, now took care of each other's groceries. Similar developments occurred among countries, where on the one hand, hygiene products were subject to export embargoes, but on the other hand, doctors were posted to the hardest hit regions in other countries, and patients in such regions were relocated to hospitals with intensive care capacities abroad.[1]

In this paper, we study how individuals choose to whom to extend support in times of crisis by analysing deservingness perceptions regarding three central policy areas of this pandemic: 1) with much of the economy in suspense for months as a consequence of the social distancing measures, should self-employed individuals – who by law could not access short-time work schemes – be eligible for state support? 2) Given rising hospitalization rates, who should be admitted to the intensive care unit (ICU) in the case of shortages? And, 3) With extensive travel restrictions and border controls in place, who should still be able to enter a given country?

To analyse how people decide on these essential distributive questions, we conducted three original conjoint survey experiments (Hainmueller *et al.*, 2014) administered to an incentivised online sample in Switzerland between late April and early May 2020 and again between late November and early December 2020.[2] In Switzerland, similar to other countries, extensive policies in the economic, health and mobility domain were implemented by the government to counter the negative effects of the crisis.

The results show that, overall, people's decision-making during times of crisis follows the logic of conditional solidarity. In other words, also during the pandemic people allocate scarce resources according to the logic of conditional solidarity as we know it from other policy domains (Bowles and Gintis, 1998, 2000; Fong *et al.*, 2006; Knotz *et al.*, 2021a; Petersen, 2012, 2015; Petersen *et al.*, 2012; van Oorschot, 2000; van Oorschot *et al.*, 2017). Conditional solidarity means those perceived as deserving of collective help are those who 1) have shown themselves to be faithful contributors to the common good in the past; 2) make efforts to improve their own situation or give back to the community at present or in the near future; and 3) are perceived as similar in terms of national or ethnic background. In contrast, those who have not contributed in the past, those who have acted counter to the common interest, and those who are perceived as different are less likely to be considered deserving of collective support.

Our findings are important for two reasons. For one, the COVID-19 pandemic is already now seen as a "once-in-a-century" crisis. And while this was at the time also true for the Great Recession not long ago (e.g. Pontusson and Raess, 2012), the current crisis is different due to the fact that it combines a public health and an economic crisis, and, one might add, a crisis for many who rely on free cross-border mobility. Research on deservingness perceptions has developed mostly with a focus on "normal times". Yet, solidarity is a human disposition that acquires its utmost importance in times of crisis. As a result, it is important to document for the historical record what determines solidarity also in situations that are uncommon in the extent of suffering that they generate. Second, our study contributes to a more general understanding of deservingness perceptions and their variation across policy areas and target groups. We study deservingness perceptions in policy areas that have received different amounts

of scholarly attention, ranging from moderate (health care in general; e.g. Jensen and Petersen, 2017; van der Aa *et al.*, 2017) to very little (international mobility; see e.g. De Coninck and Matthijs, 2020). Deservingness perceptions in the case of aid to the self-employed have, to our knowledge, not been studied yet.

This article continues with a literature review of the determinants of deservingness perceptions. We then formulate expectations regarding how people are likely to attribute deservingness during the COVID-19 crisis. Next, we present our data, methodology, and the three experiments. Finally, we discuss the results and conclude by situating our findings in the larger context of deservingness research and its policy implications.

Who deserves to be helped?

The COVID-19 pandemic is a unique event in recent history. Consequently, public reactions to this novel situation are equally without a blueprint. To provide a theoretical basis for our research, we first turn to studies of deservingness to welfare state programmes. Here, we can rely on a large body of literature that has identified the factors that determine perceptions of deservingness to social benefits in "normal" times, and in particular on more recent sub-strands that focus on deservingness to health care and migration. Second, we consider studies on the impact of different types of crises on people's inclination to help others. Within this field, we rely on the literature investigating the impact of economic crises and natural disasters. Both fields of the literature are briefly reviewed in the next sections.

Conditional solidarity

Who will be helped by a community is closely linked to how deserving of help an individual is perceived to be (see e.g. Meuleman *et al.*, 2020; Reeskens and van der Meer, 2019; van Oorschot, 2000, 2006, 2008; van Oorschot *et al.*, 2017). Studying deservingness perceptions to social benefits for the unemployed, van Oorschot and colleagues identify five criteria that are relevant for the assessment of deservingness (van Oorschot, 2000, 2006; van Oorschot *et al.*, 2017): control, attitude, reciprocity, identity, and need (CARIN). Individuals who request assistance due to bad luck and thus cannot be considered responsible for their situation (control), who are docile and thankful in their interactions with the state services (attitude), who have contributed in the past or are making efforts to do so in the present (reciprocity), who are members of the same in-group (identity) and who are under financial strain (need) are considered deserving of state help.

Research inspired by evolutionary psychology provides theoretical underpinnings for these results. From this perspective, assessments of deservingness are based on automatic and deeply rooted decision-making processes that stem

from small-scale social exchanges in early human societies. Under these conditions, supporting each other and protecting the group from free riders were essential features for a group's survival (Petersen, 2015; Petersen et al., 2010). From an evolutionary psychological perspective, Petersen and colleagues (2012) argue that mechanisms developed in early human societies have survived and are now visible in deservingness perceptions – for instance, regarding social benefits. A person in need activates compassion and thus increases society's support for help if they signal the intention or (credible) effort to reciprocate in the future. Conversely, individuals activate anger and thus cause a lower inclination to help in their peers if they signal the opposite. Sharing is thus conditional on (credible) effort to reciprocate, protecting against potential cheaters who might exploit unconditional generosity within a society (Petersen, 2015).[3]

To sum up, and building on both bodies of work, our starting assumption is that deservingness perceptions are driven by the level of the person's need, the extent to which they are seen as having a shared social identity, their level of control over their situation, their current efforts to contribute, and their past reciprocal behaviour (see also Knotz et al., 2021a, p. 3).

Deservingness across policy areas

The underlying logic of conditional solidarity has been found to be a powerful predictor of people's perceptions of deservingness in different policy fields also beyond unemployment benefits (see e.g. Aarøe and Petersen, 2014; Buss, 2019; Buss et al., 2017; Knotz et al., 2021a; Reeskens and van der Meer, 2019; van Oorschot, 2008) – that is, other social benefits (see e.g. De Wilde, 2017; Kootstra, 2016), health care (see e.g. Jensen and Petersen, 2017; Van Der Aa et al., 2017) and, recently, migration policy (De Coninck and Matthijs, 2020). While the literature on the deservingness of the unemployed to respective benefits is rather extensive (as highlighted above), to our knowledge the deservingness to such aid specifically for the self-employed has not been studied. We therefore limit ourselves in the following to a review of deservingness in the context of health care and migration.

Research on deservingness to health care services shows that in this policy field, perceptions are very much driven by need (van Delden et al., 2004; van der Aa et al., 2017). Indeed, Jensen and Petersen (2017) argue that health care "is fundamentally special" (2017, p. 68), as deservingness heuristics automatically categorise the sick as deserving. Similarly, van der Aa and colleagues (2017), applying the CARIN criteria to health care policy in the Netherlands, find medical need to be the most important factor in the allocation of health care resources. However, control, attitude, and reciprocity also matter in this context.[4] Indeed, there are other studies on deservingness perceptions to health care that find similar patterns to those in other policy areas such as unemployment benefits. These studies find, for example, that a patient's deservingness to medical

care depends on whether their own behaviour contributed to their illness (Ubel *et al.*, 2001; Wittenberg *et al.*, 2003), but also their nationality (O'Dell *et al.*, 2019), or their gender (Furnham, 1996). Thus, when it comes to deservingness perceptions, it is overall still an open question whether or not health care really is different.

In the context of public attitudes on migration issues, deservingness also matters (see e.g. Monforte *et al.*, 2019; for a critical discussion see Carmel and Sojka, 2021). Here too, similar criteria as above inform the attribution of what is in essence the deservingness to access, settle or naturalise. Bansak and colleagues (2016) find that humanitarian concerns have a pronounced effect on European voters' assessments of asylum seekers. Those who face prosecution, have consistent asylum testimonies, and have a special vulnerability are "substantially more likely to be accepted" (Bansak *et al.*, 2016, p. 221). Other important factors for the assessment were economic considerations and anti-Muslim sentiment. Similarly, Hainmueller and Hangartner (2013) find that in Swiss referendums on citizenship applications of foreign residents, the country of origin was the main determinant of an application's success. Other applicant characteristics, such as better economic credentials, being born in Switzerland or having a longer residency period, increased the chances for a naturalisation success – however, much less so than origin. A recent application of the CARIN criteria to the context of migrant settlement, based on data of the European Social Survey and a cross-national survey, also underlines the relevance of, particularly, reciprocity, attitude, and identity in this policy field (De Coninck and Matthijs, 2020).

Solidarity in times of crisis

In the above section, we describe how people attribute deservingness in different policy areas in "normal" times – namely, based on conditional solidarity. While we are not able to directly compare attitudes before and during the pandemic, we believe it is important to consider that sudden shocks can change political attitudes – and that insights learned from pre-pandemic research might not necessarily apply during the pandemic. To look for clues as to how notions of solidarity and deservingness may look in this unprecedented context, we resort to literature developed for economic crises and natural disasters to provide relevant indications.

On the one hand, economic crises have been shown to impact people's inclination to share. Research shows that the redistribution policy preferences of the public strongly respond to changes in the economic situation of a country (Durr, 1993). For the United States, Durr (1993) finds that expectations of a strong economy lead to greater support for redistributive policies, whereas expectations of economically difficult times ahead lead to a shift towards more conservative policies. In a close examination of the political consequences of two great

economic crises of the past century, the Great Depression (1929) and the Great Recession (2008), Lindvall (2014) detects similar patterns regarding citizens' voting behaviour. In both cases, the author finds a shift towards more right-wing parties in the immediate years after the beginning of the crisis, which he attributes in part to economic voting but also to a punishment of the incumbent government.

On the other hand, studies have also found that people become more supportive of redistribution and the welfare state (Blekesaune, 2007) in times of economic downturns, and that they see the unemployed as more deserving when unemployment increases (Jeene et al., 2014; Uunk and van Oorschot, 2019). Likewise, research on people's predisposition towards sharing with those in need during natural disasters suggests that people show increased pro-social behaviour towards others directly after events such as floods or earthquakes (Cassar et al., 2017; Chantarat et al., 2019; Rao et al., 2011). Rao et al. (2011) in the aftermath of the 2008 earthquake in Wenchuan, China, find, for instance, that with increasing proximity to the epicentre, people displayed more pro-social behaviour.

Expectations

Given the novelty and the uniqueness of the context we study, we decided not to develop precise hypotheses but to formulate expectations based on the literature discussed in the above sections. Additionally, as we have pointed out throughout the paper, we are unable to map any *change* of preferences within respondents (before/after the pandemic). Rather, we are only able to map their preferences at two points of the pandemic and thus assess their attitudes during the pandemic.

Conceivably, and as suggested by the literature on solidarity during economic crises and in natural disasters, an event like the COVID-19 pandemic could affect peoples' support for redistribution and consequently who they perceive to be deserving of support. However, it is unclear if and how exactly this would affect the attribution mechanism behind the deservingness perceptions – namely, which criteria matter and how.

We therefore adopt a more exploratory approach regarding the differences in the relative roles of deservingness criteria during the pandemic. That said, a comparatively large effect of the level of need, in line with some of the findings on deservingness in health care, may be plausible for the attribution of ICU beds. The same would be plausible for reciprocal behaviour in the context of economic aid and identity in the context of migration. The self-employed, who as a group remain outside most contribution-based welfare state agreements (although they of course pay taxes), might incite more scepticism than "regular unemployed" and thus reciprocal behaviour may become more important. In the context of migration, the importance of origin or identity is evident.

At the same time, based on the literature on deservingness in the context of different policies, we could expect broadly similar patterns across these three areas, with past and present reciprocal behaviour and the similarity of identity playing large roles. Consequently, we could expect that regardless of the crisis situation, *the criteria of reciprocity, effort, control, identity and (medical) need collectively matter for deservingness perceptions across the three policy fields also during this pandemic*. Despite the differences in how scarce the "good to share" (ICU beds, state-funded aid packages, or access permissions to a given country) is, respondents are faced in essence with a redistributive question and rely on the deeply rooted heuristics for assessing potential partners in sharing agreements.

Data and method

In our empirical analysis, we focus on three important policy problems that became topical during the health crisis and imply deservingness assessments: 1) providing financial help to self-employed people who could not work because of the lockdown; 2) prioritising access to ICU beds in the case of insufficient supply; and 3) determining who could access the country despite travel restrictions. To investigate people's assessments of deservingness in these three situations, we conducted three original survey experiments in Switzerland. The analysis relies on data collected from late April to early May and between late November and mid December 2020 by means of an incentivised online panel provided by an international market research firm. To ensure that the sample is as representative of the Swiss population as possible, we introduce quotas for age (18-24, 25-34, 35-44, 45-54, 55-64, 65-74, over 75), gender, education (low, middle, high) and region (French or German speaking). Our data comprise 1535 respondents who rated a total of 3,070 vignettes for three separate experiments in wave I and 1498 respondents who rated 2996 vignettes in wave II.[5]

Switzerland is a representative case to study deservingness perceptions because the per capita COVID-19 infection rate was broadly comparable to that of other countries, but not so high that the health care system could no longer cope with the number of infected residents. Moreover, at least during the first wave of the pandemic, policy reactions were similar to those adopted in many other countries: a partial lockdown was adopted, and public life slowed conspicuously, although the measures were less drastic than those introduced in extreme cases such as Italy, Spain, or France. Finally, Switzerland is ideal to study the perception of travel restrictions in the population given its large number of migrant workers and cross-border commuters and the high salience of the migration issue, as the history of popular votes on the topic of (im)migration has shown.

We use survey experiments, as they allow testing causal relationships while minimising social desirability bias (Hainmueller *et al.*, 2015), since assessing the

deservingness of individuals to government help, to an admission to the ICU and to entering Switzerland is likely to be subject to social desirability. This assessment can be achieved by randomly varying specific traits in schematic descriptions that respondents are asked to evaluate, which in turn makes it harder for survey participants to identify the manipulated dimensions, thereby minimising social desirability bias. Especially when studying sensitive topics, this is a very important precondition to gather valid measurements. Furthermore, this approach allows us to study multiple theoretical mechanisms simultaneously while gathering respondent-level information to test for sub-group heterogeneity. Of course, this way we are only able to capture an intent and not actual behaviour. However, studies that do compare stated and real behaviour show a high degree of correspondence between the two (Hainmueller et al., 2015).

For each experiment, respondents were presented two fictitious individuals and were asked to indicate on a scale from 0 to 10 ("lowest priority" to "highest priority") the priority with which these individuals should 1) receive financial aid if self-employed and unable to work because of the pandemic; 2) have priority access to an ICU bed; and 3) be granted entry into Switzerland.[6] Based on the respondents' rating we created a continuous dependent variable on deservingness, with higher values indicating higher deservingness of the vignette person. The levels of each attribute in an experiment and the order in which the experiments were presented to the respondents were randomised. The experimental section was followed by several questions relating to the respondent's personal situation and political opinions.

We presented the descriptions in bullet points, including several attributes at once, to reduce the cognitive effort for respondents. While order effects of the attributes cannot be excluded, as we did not randomise the order of attributes, flow vignette texts are a common choice in factorial survey experiments (Auspurg and Hinz, 2015), and ratings do not differ depending on whether vignettes are presented as running texts or tables (Sauer et al., 2020). Finally, we exclude implausible combinations of attributes in each experiment to ensure that the scenarios appear as realistic as possible. Indeed, as the robustness checks show, the scenarios are assessed to be (very) realistic by respondents overall.[7]

We estimate the average marginal component effects (AMCE), as presented in Hainmueller et al. (2014), for each experiment separately. The AMCE represents the marginal effect of an attribute (dimension) averaged over the joint distribution of the remaining attributes (Hainmueller et al., 2014, p. 10). This approach allows for the estimation of causal effects of each attribute in the experiments. We conducted the analyses using the cjoint R package created by Barari and collaborators (2018) specifically for the estimation of such effects.

We run a number of tests to ensure the assumptions necessary to run the AMCE are met (Hainmueller et al., 2014).[8] For wave I, the tests for experiments

I and II indicate that there are indeed carry-over effects between the first and second evaluation of vignettes present in our data. We therefore follow the recommendation by Hainmueller *et al.* (2014) and use only the data of the first evaluation task for those experiments. For wave II, we find no carry-over effects and therefore use both evaluation tasks of all three experiments. Finally, we drop observations where respondents performed the experiments either implausibly quickly (<5 seconds) or very slowly (>180 seconds). This leaves us with the following number of evaluations for wave I and II, respectively: 1461 and 2016 evaluations for experiment I; 1457 and 2014 evaluations for experiment II; and 2978 and 2032 for experiment III.

Experiments

In all experiments, we seek to describe a realistic individual and hold the basic demographic information constant: gender (male, female), age (25, 40, 55, or 70 years old), and nationality (Swiss, German/French, Turkish or Nigerian).[9] For the first experiment on *state help for the self-employed*, we present respondents with fictitious profiles of self-employed individuals and ask them to indicate the respective priority with which each described person should receive economic support by the state. The profiles vary on ten dimensions with the intention to capture past and current behaviour. In addition to the basic information, the vignette includes information on: the employment situation of the person's partner (employed, self-employed or unemployed) and their financial responsibilities towards others (no responsibilities, two children, sister in Switzerland or sister abroad); the activity they exercise (hairdresser, Uber driver, undeclared household help or dentist) and how long they have been exercising this activity (just started, 5 or 10 years); whether they sought to find other sources of revenue (yes or no); and, finally, whether they had been engaging in any volunteering activities (none, cleaning in hospital or buying groceries for elderly neighbours).[10] Figure 1 below provides an examplary illustration of the vignettes in this experiment.

In the second experiment, we present profiles of fictitious patients diagnosed with COVID-19 and seeking *admission to the ICU* of the local hospital (also discussed in Knotz *et al.*, 2021b). Notably, as we also underlined for our respondents, we are concerned with access to the unit overall and not to ventilators specifically. Respondents are asked to indicate the respective priority by which they would attribute ICU access to each described patient. Aside from the basic dimensions, the patient's characteristics vary on five dimensions: the severity of the disease (light, moderate, severe breathing difficulties) and the prognosed chances of recovery (good, unclear, no chance); their behaviour prior to the diagnosis (complying or not with social distancing guidelines, volunteering as in experiment I); and their behaviour since their diagnosis (complying exactly or only partially with doctor's recommendations).[11] These characteristics
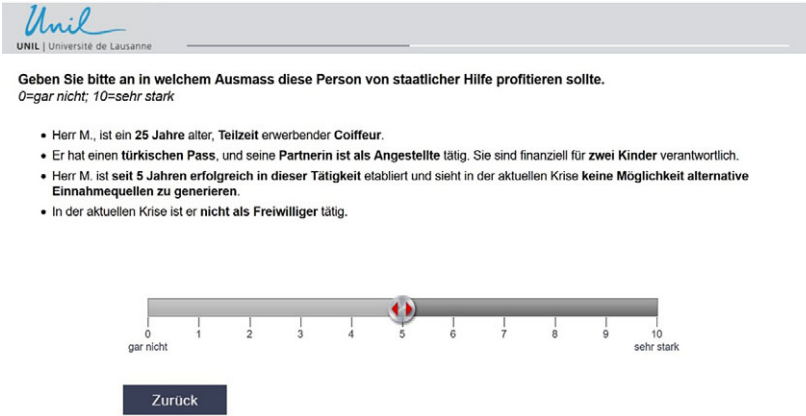
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Geben Sie bitte an in welchem Ausmass diese Person von staatlicher Hilfe profitieren sollte.
0=gar nicht; 10=sehr stark

- Herr M., ist ein **25 Jahre** alter, **Teilzeit** erwerbender **Coiffeur**.
- Er hat einen **türkischen Pass**, und seine **Partnerin ist als Angestellte** tätig. Sie sind finanziell für **zwei Kinder** verantwortlich.
- Herr M. ist **seit 5 Jahren erfolgreich** in dieser **Tätigkeit** etabliert und sieht in der aktuellen Krise **keine Möglichkeit alternative Einnahmequellen zu generieren**.
- In der aktuellen Krise ist er **nicht als Freiwilliger** tätig.

0 — gar nicht 1 2 3 4 5 6 7 8 9 10 — sehr stark

Zurück

Figure 1. Example of the online implementation of vignettes from experiment 1 on government support for the self-employed, German language version.

provide information about past behaviour, but also about medically relevant criteria that would inform a medical professional's decision making.

For the final experiment, we choose a simplified setup of a person *seeking to enter Switzerland* as it may occur in everyday life. The basic dimensions are the same as previously. Additionally, we vary legal status over four levels (Swiss citizenship (dual for those with other nationalities), permanent residency permit, a simple work and stay permit or visa) and the reason for seeking to cross the border over six levels: three of these are work-related (work in health sector, as farm help, or in a supermarket) and three are more personal (visit a doctor, family, or friends). Respondents are asked to indicate the respective priority to cross the border they attribute to each fictional vignette person.[12]

Results

While the results initially appear to paint a diverse picture of solidarity, a common story emerges in all three experiments and across both waves: respondents are willing to share on the basis of the past and current behaviour of the person in need and their characteristics. In other words, people follow the logic of conditional solidarity also during the pandemic.

In all experiments, *reciprocity* in the form of contributing to the community, be it through past actions and contributions or current efforts, plays a crucial role in determining an individual's deservingness. For the self-employed, the results for both wave I and II are summarised in Figure 2, there is a clear distinction between declared and undeclared workers concerning their perceived deservingness of state help. Individuals who remain outside of sharing arrangements (by failing to declare their incomes) are attributed a very low priority for
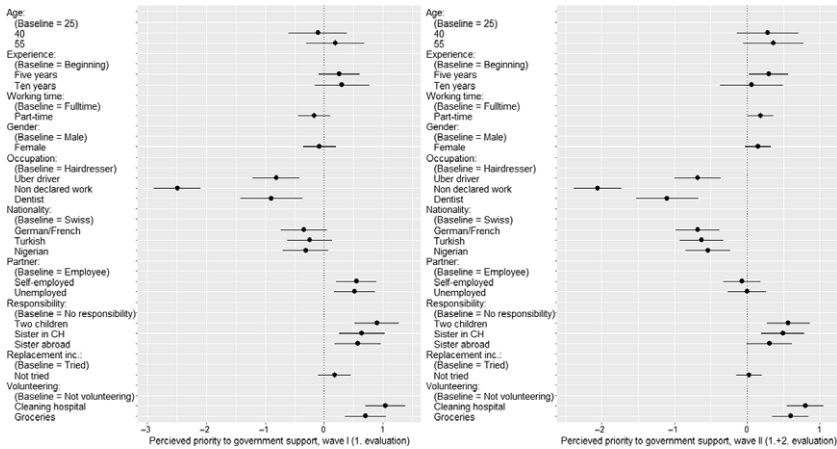
Figure 2. Average Marginal Component Effects of self-employed attributes on perceived priority for government support. Horizontal lines indicate 95% confidence intervals. Wave I: N = 1464, first evaluation task only; wave II: N = 2016, both evaluation tasks.

receiving financial help. This negative effect of non-compliance is the strongest in the experiment, even though household help or gardening are typically low-skilled, low-paid jobs and probably characterised by a high incidence of undeclared work. Similarly, individuals not following the social distancing recommendations in the ICU experiment (results summarised in Figure 3), are severely punished by being attributed the lowest deservingness, while those complying conscientiously with their doctor's recommendations are perceived as more deserving than those who do not comply. Finally, efforts to contribute to society through volunteering are rewarded in both experiments.

This distinction between those who will contribute or are committed to Switzerland and the well-being of its citizens and those who will or are not (or at least are perceived that way) is also apparent in the experiment on access to Switzerland during the lockdown (results summarised in Figure 4). Those wishing to cross the border to work in Switzerland are clearly more deserving than those who wish to see family or friends. Among workers, those in the health sector are most deserving. Here, however, it is possible that expectations around reciprocity are mixed with collective selfishness, as health care workers are in high demand during a pandemic. However, in the same experiment, no difference is made between Swiss (dual) citizens and those with a residence permit (and work/stay permit in wave II), indicating that long-term ties to the community favour the deservingness of help of the individual. Moreover, those with less stable permits (visas) are considered less deserving than citizens.

Another rather stable and consistent effect across all three experiments is that of *identity*, which we operationalised with nationality, age, and gender, as
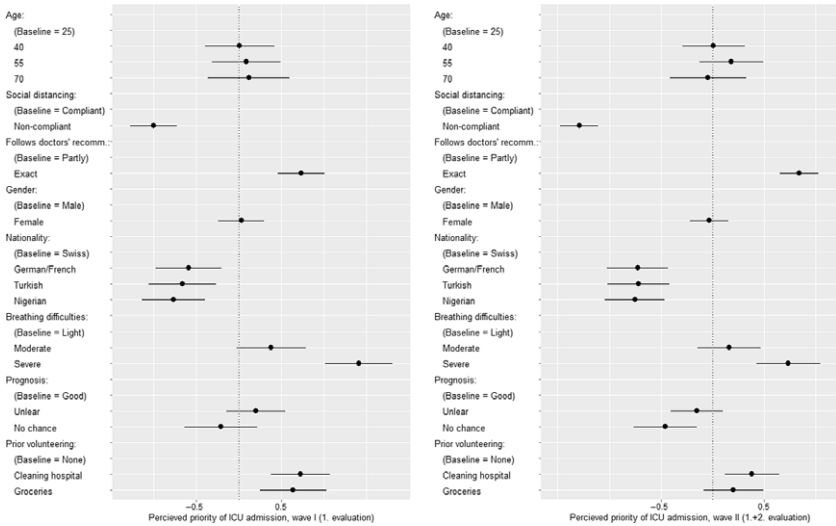
Figure 3. Average Marginal Component Effects of patient attributes on perceived priority of ICU admission. Horizontal lines indicate 95% confidence intervals. Wave I: N = 1457, first evaluation task only; wave II: N = 2014, both evaluation tasks.
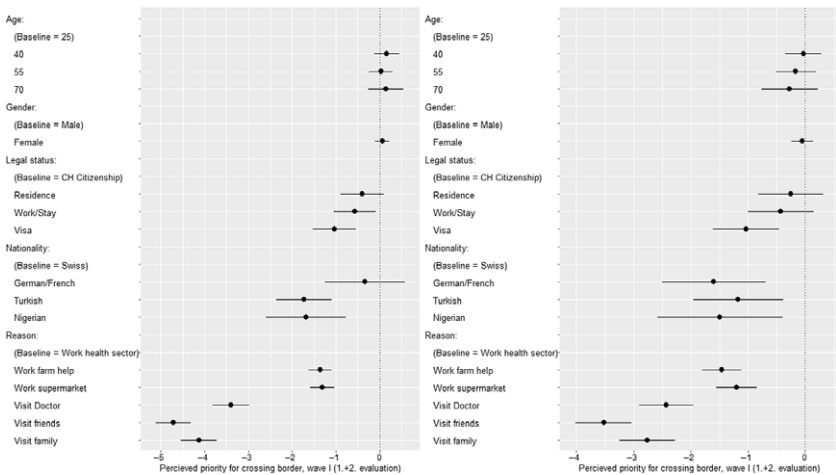

Figure 4. Average Marginal Component Effects of individual attributes on perceived priority for access to Switzerland. Horizontal lines indicate 95% confidence intervals. Wave I: N = 2978, both evaluation tasks; wave II: N = 2032, both evaluation tasks.

well as legal status in the third experiment. In all three experiments we find no significant effect of gender and no significant effect of age – the latter is somewhat encouragingly surprising in the context of the ICU experiment, as age was such a prevalent point of public debate surrounding possible shortages.[13]

Nationality is significantly linked to solidarity in all experiments: there is a distinction in deservingness between Swiss and non-Swiss individuals, supporting the theories on in- and out-group formation. Even if the effect is not significant in wave I for the self-employed experiment and in the third experiment, the distinction is made between Swiss and German/French individuals on the one hand and Turkish and Nigerian individuals on the other.

Finally, the effect of *need* on deservingness varies across the three experiments. In the experiment concerning state help for the self-employed, the negative effect of non-compliance is actually stronger than the positive effect of need. Nevertheless, a higher priority for such help is attributed to individuals with financial responsibilities for more than just themselves – namely, partners who are self-employed or unemployed (in wave I only), children, or other family members. For the ICU experiment, individuals with severe breathing difficulties are most deserving of a bed in the unit. This is unsurprising since, as discussed in the theory section, research on deservingness to health care services highlights the overwhelming importance of need in this context. However, this is only true for individuals with severe breathing difficulties, not those with moderate breathing difficulties. In the third experiment, we find that those wishing to see a doctor are less deserving than those who seek entry to work. Thus, it appears, at least in the case of who should be allowed to enter Switzerland, that economic considerations outweigh the need of the individual wishing to cross the border, a fact that others have also noted in the evaluation of asylum seekers (Bansak *et al.*, 2016).

Taken together, these results show that assessments concerning an individual's deservingness indeed follow a logic of conditional solidarity (Bowles & Gintis, 1998, 2000; Fong *et al.*, 2006; Petersen, 2015; van Oorschot, 2000). Giving back to the community, through both past contributions and forward-looking actions, is important across scenarios, as is the respect for norms and responsible behaviour and the person's identity. Thus, the criteria of reciprocity, effort, identity, and need are relevant for deservingness assessments, irrespective of the context. Our experiments were not suitable to investigate the relevance of another important determinant of deservingness perception: control. The situations we asked respondents to assess were the result of the pandemic, and the vignette-persons had very little control over the situation of need they found themselves in. The only exemption is non-compliance with social distancing rules in the ICU experiment, where we see that control matters significantly.

Conclusion

The COVID-19 pandemic represents a unique opportunity to analyse deservingness assessments in a crisis context: specifically, the provision of government

aid to the self-employed; the rationing of ICU care; and the restriction of cross-border movement. Based on three survey experiments at two points during the pandemic, we demonstrate that in times of crisis, solidarity with the needy follows the logic of conditional solidarity, with the well-known deservingness criteria playing a very important role: reciprocity, effort, identity, (medical) need and control (Bowles and Gintis, 2000; Petersen, 2015; Petersen *et al.*, 2012; van Oorschot, 2000, 2006; van Oorschot *et al.*, 2017).

However, as the differentiated impact of the different criteria across policy fields indicates, the importance of a given criterion may depend on the specific context or situation in which the deservingness of a given individual is assessed. In the context of relief for Hurricane Katrina victims, for example, Fong and Luttmer (2009) find strong evidence of subjective ethnic or racial group loyalty, which proves to be a powerful predictor for giving to members of that same group. This predictor of racial bias is even stronger than the objective race of the respondent (Fong and Luttmer, 2009, p. 85). It could very well be that in a context such as the United States, where race and racially based discrimination are such salient issues, questions of identity may outweigh or dominate other deservingness criteria, such as control, even in the aftermath of a natural disaster (Henkel *et al.*, 2006; Reid, 2013).

With this study, we contribute to the literature on deservingness perceptions by showing that, first, even in times of a global pandemic, traditional models of conditional solidarity apply. These results are stable across the first two waves of the pandemic (i.e. April and October 2020). Additionally, we innovate by demonstrating that beyond traditional applications of deservingness theory, the criteria of conditional solidarity apply to other policy areas, including economic support for the self-employed and cross-border mobility. Third, our study shows that identity also matters in relation to deservingness to health care, confirming recent findings within the literature on deservingness perceptions (Larsen and Schaeffer, 2021).

We also contribute to a growing literature on deservingness in times of crisis (Larsen and Schaeffer, 2021; Reeskens *et al.*, 2021). True, ideally, in order to assess the impact of the pandemic on deservingness perceptions, we would have fielded a first wave of the experiment prior to the pandemic. However, we still believe that it is worthwhile to map which attitudes people display in such an unprecedented time. Clearly, future research would also need to validate whether our findings indeed translate to other (crisis) settings. Here, it would be of interest to understand which circumstances trigger the relative importance of each of the criteria in a given crisis situation or policy field.

Our research has policy implications as well. The COVID-19 pandemic demonstrates that solidarity is crucial in times of crisis. Despite certain groups being at a greater risk of experiencing more severe (and in some cases deadly) courses of the disease, everyone is more or less equally susceptible to contracting

or spreading it. Many of the measures to curb the spread of the virus, such as physical distancing and wearing a mask, rely on everyone accepting small limitations on the part of the individual for the common good. While the great majority of people do follow these official guidelines, at the time of writing they have been called into question by some parts of the population.[14] To successfully maintain the support of the various health safety measures and the support packages for those suffering economically as a consequence of the de facto halt of public life in the first half of 2020, understanding the mechanisms that underlie people's solidarity with those in need is crucial for political authorities to successfully appeal to said solidarity.[15] It is also important to accessibly communicate to the public the reasoning behind a given decision making, e.g. of the ethical rationale behind triage guidelines to the public (Knotz *et al.*, 2021b).

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Competing interests

The author(s) declare none.

Supplementary material

To view supplementary material for this article, please visit https://doi.org/10.1017/S0047279421001070

Notes

1 *Germany bans export of medical protection gear due to coronavirus*, Reuters, 4 March 2020, available at: https://www.reuters.com/article/health-coronavirus-germany-exports/germany-bans-export-of-medical-protection-gear-due-to-coronavirus-idUSL8N2AX3D9.

    Coronavirus: EU Medical Teams deployed to Italy, European Commission, 7 April 2020, available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_613.

    Burger L., Miller J., *German, Swiss hospitals to treat coronavirus patients from eastern France*, Reuters, 21 March 2020, available at: https://uk.reuters.com/article/uk-health-coronavirus-germany-france/german-swiss-hospitals-to-treat-coronavirus-patients-from-eastern-france-idUKKBN2180TH.

2 The panel was representative in terms of the distributions of age, gender, education, and language region (German- and French-speaking).

3 Indeed, the notion of reciprocity has also been identified as an important factor for sharing in the field of economics (see also Bowles and Gintis, 1998, 2000; Fong, Bowles, and Gintis, 2006).

4 The authors do not measure the impact of identity, as the application of identity-based criteria is unconstitutional in the Netherlands and thus beyond the scope of potential policy reforms (Van Der Aa *et al.*, 2017, p. 247).

5 For more details regarding the experimental set up see the experimental protocol in the supplementary material. For the distribution of basic demographic information of the respondents please refer to figures S12 to S15.

6 The exact rating tasks were: Experiment 1: Please indicate to which degree this person should benefit from state support. Experiment 2: Please indicate with which priority this person should be attributed a bed in the ICU. Experiment 3: Please indicate with which priority this person should be permitted to enter Switzerland.

7 Please refer to figure S7 in the supplementary material.

8 Please refer to the section on Assumptions tests for AMCE and tables S8 to S13 in the supplementary material.

9 The German language questionnaire referred to Germans, the French language questionnaire referred to French.

10 In this experiment we exclude the category of 70 years old, as we are concerned with working individuals. We exclude the implausible combinations of the vignette person being 25 years old and having ten years of experience or being a dentist, as a person is unlikely to have finished the necessary education at that age.

11 Again, we exclude the implausible combination of the vignette person being 70 years old and buying groceries for their elderly neighbours, as well as that of a person having light breathing difficulties and no chances of survival.

12 We exclude the implausible combination of the vignette person being Swiss and having any other legal status than citizenship or being 70 years old and wanting to enter to work.

13 In order to test the expectation of an identity driven effect for gender and age, we checked for the existence of an interaction effect between the respondent's own identity and the characteristics of the vignette person (e.g. female respondents would give priority to female vignette-persons). We found no consistent evidence of such an effect.

14 See, e.g. *Tausende demonstrieren in Liestal gegen Corona-Massnahmen*, Swissinfo, 20 March 2021; available at: https://www.swissinfo.ch/ger/alle-news-in-kuerze/tausende-demonstrieren-in-liestal-gegen-corona-massnahmen/46465010 or *Mehrere tausend Massnahmen-Gegner demonstrieren in Winterthur,* SRF, 18 September 2021, available at: https://www.srf.ch/news/schweiz/protest-gegen-corona-politik-mehrere-tausend-massnahmen-gegner-demonstrieren-in-winterthur.

15 This was successfully done e.g. in the Swiss Canton of Geneva where an initiative to exclude non-declared works from receiving aid packages failed to receive the majority. *Les Genevois d'accord d'indemniser les travailleurs précaires,* Swissinfo, 7 March 2021, avialable at : https://www.swissinfo.ch/fre/toute-l-actu-en-bref/les-genevois-d-accord-d-indemniser-les-travailleurs-pr%C3%A9caires/46427256

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