Private health insurance and redistribution preferences in the Austrian health care system: A case of mere self-interest?

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Research Article

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Abstract

Background: Private health insurance (PHI) is a relevant financing source in many health care systems, including the Austrian one where more than a third of the population possess such an insurance. The effect of PHI on redistribution preferences in health care has been an understudied phenomenon. This article examines such a relationship. Further the mediating effect of fairness attitudes within said relationship is analysed.

Methods: The data for this study come from the Austrian Corona Panel Project (ACPP). OLS regression models are employed to elicit the links between the variables.

Results: In this article evidence for considerable self-interest in support for redistribution in health care with matching fairness attitudes is found. Additionally, social redistribution preferences for benefits and taxation, political party preferences and pandemic risk perception play a role.

Conclusion: Health policy makers should carefully consider these relationships when adapting the public health care system to challenges, such as increased financing pressure or a pandemic. This could be done by incorporating vulnerable groups and public preferences at large in an open debate about the design of the health care system, its financing and its consequences for redistribution.

Introduction

“A fundamental principle of WHO's work in health financing is the concept of universal coverage. This requires access for all people to appropriate promotive, preventive, curative and rehabilitative health care at an affordable cost.” (Evans et al. 2005, p. 83).

The spread of the SARS-CoV-2 virus and governments' responses to the pandemic resulted in significant changes of collective and individual behaviour, attitudes, preferences, and emotions, as well as of moral norms (Van Bavel et al. 2020). Many scholars have highlighted that the COVID-19 pandemic disproportionately affects marginalised and vulnerable groups when it comes to health care (e.g. Shadmi et al. 2020; Fortuna et al. 2020; Devakumar et al. 2020; Marmot and Allen 2020; Bambra and Lynch 2021; Ismail et al. 2021). Numerous studies deliver rigorous evidence for such exacerbated inequity in health amidst the pandemic in various countries (e.g. Azar et al. 2020; Baqui et al. 2020; Adams-Prassl et al. 2020; Birenbaum-Carmeli and Chassida 2021; Dimopoulos-Bick et al. 2021; Mackey et al. 2021). Due to concerns of equity and of pandemic preparedness many scholars and the public have also increasingly (re-)discovered health care policy (e.g. Fuchs 2020).

Private health insurance (PHI)^[1] plays a significant role in health policy and in many health care systems, as primary, complementary, supplementary and/or substitutive means of covering and funding health care. Therein, PHI can have profound effects on redistribution and equity in health (e.g. Van Doorslaer et al. 1999; Ataguba 2021). In the COVID-19 pandemic insurance companies introduced new costs and delayed or reduced others, as many workers globally lost their jobs and with them their insurance

coverage (e.g. Roehr 2020; Blumenthal et al. 2020; Bundorf et al. 2021). However, little is known about the nexus between the possession of PHI and redistribution preferences in health care. Additionally, the current pandemic might have fundamentally altered such a causal relationship.

I suggest using individual survey data to explore the effect of PHI on support for redistribution in health care. As Austria has statutory health insurance (SHI), yet a high degree of PHI, it is an ideal case to study said effects.

Insurance is a dilemma in health care rationing and priority setting because health care needs are distributed very heterogeneously across society and because such needs very often arise unexpectedly in brute luck (Brock 2007). While this dilemma has been addressed in theory, empirical research has so far not considered what people with PHI and people without PHI actually want in terms of redistribution in their health care systems. Thus, the questions asked in this study are: How do the health care redistribution preferences of people with PHI differ from those of people without PHI? And do these persons consider treatment prioritisation of privately insured as fair?

Existing Research

Redistribution in health care

Previous research has shown that possession of PHI seems to decrease the political support for the public health care systems in nations with private duplicate health insurance systems, yet not in countries with private primary health insurance (Mou 2013). Pfarr and Schmid (2016, p. 624.) find in a German sample that “Persons who benefit from public coverage exhibit a positive willingness to pay for an extension of the coverage beyond the status quo. The others are not willing to contribute to this end”. Jensen and Naumann (2016) find different levels of support for public health care between demographic groups and between people leaning toward the political left or right in 17 European countries. Further research indicates that income affects willingness-to-pay for public health care in 29 countries included in the ISSP (International Social Survey Programme; Azar et al. 2018) and that perceptions of inequities in health care impact preferences for government provision of health insurance in the USA (Lynch and Gollust 2010). Age also matters for the preferences towards health maximisation and for egalitarian concerns in health care in a Polish study (Kolasa and Lewandowski 2015). Akkazieva et al. (2006) investigate health policy preferences of patients in Hungary. They find that patients primarily have a preference for solidary measures in health care. Read et al. (2021) analyse an English sample and demonstrate that the majority of respondents prefer social care in later life to be paid for by the user and the state in a shared way. Lu et al. (2021) show that the UK public seems to prefer a collective approach to raising additional funds for health and social care by a public organisation. Soroka and Lim (2003) find for the USA and UK that issue framing defines the responsiveness of health care expenditures to public preferences. Wendt et al. (2010) compare 14 European countries and find that higher income is associated with less desire for state involvement in health care in all studied countries, except for the Netherlands. Henderson and Hillygus (2011) show that self-interest and partisan attachments strongly

affect health care attitudes in the USA. In an Icelandic sample the majority of respondents favour higher health care expenditure and health provision by the state (Vilhjalmsson 2016). Choma et al. (2018) find that in the USA preferences for the distributive fairness perceptions of equality and need in health care mediate the relationship between political orientation and attitudes on the ACA (Affordable Care Act).

Further, personal experiences with the health care system shape attitudes towards health care policies in many countries (Larsen 2020) and in the USA specifically (Lerman and McCabe 2017). Chavanne (2020) finds for an US sample that support for redistributive health care increases as bad luck becomes more important in causing poverty yet is unaffected as good luck becomes more important in causing wealth. Kullberg et al. (2021) do not find evidence that voluntary health insurance, i.e. PHI, changes the willingness to pay higher taxes for public health care in Sweden. Yet, the authors do not consider redistribution in Swedish health care from a wider angle that would include anything but readiness to contribute more personally.

Heap et al. (2020) demonstrate that people in the UK and USA highly prefer health over wealth, when being presented with a trade-off between lives lost to COVID-19 and disposable income losses. Barry et al. (2020) show that in the early stage of the COVID-19 pandemic the majority of US adults supported social and health policies, such as paid sick leave, universal health insurance, an increased minimum wage, as well as various unemployment support policies.

As redistribution in health care is expected to increase with public spending on public health care, health care expenditure and finance is a key part of health policy. Research with Danish survey data shows that respondents exhibit a willingness to improve the quality of the public health care system at the expense of private consumption (Gyrd-Hansen and Slothuus 2002). Empirical evidence suggests that Australians mostly care about outcome egalitarianism and not about cost per life year in their preferences for the allocation of the health budget (Richardson et al. 2012). Research with a Greek sample finds that preferences for public health expenditure allocation have more support among relatively poor citizens (Xesfingi et al. 2016). Foremmy et al. (2020) find that preferences for health care expenditure almost doubled in the COVID-19 pandemic in Spain compared to a 2018 benchmark and that Spanish citizens would on average allocate 22.5% of the public budget to the health sector, which is considerably higher than the 15% of real public spending on health in Spain.

One debate relevant to PHI deals with two-tier medicine. “Today, that prevailing question focuses rather on what society could do for its citizens in optimizing their lives. Such an approach amounts to loading the dice in favor of redistribution” (Breyer and Kliemt 2015, p. 149). Further: “The concept of solidarity provided for a long time the ideological rationale for the transfer of financial contributions by individuals by way of compulsory health insurance schemes or national taxation to a universal health care system that should guarantee equal access to health care for those who are in need” (Ter Meulen and Jotterand 2008, p. 191). While health care has functioned averagely well in Austria in OECD comparison (Tchouaket et al. 2012), increasing pressures towards two-tier medicine threaten such proper functioning of health care systems globally (cf. Ter Meulen and Jotterand 2008; Breyer and Kliemt 2015). Results for health

care preferences in Zambia, which de-facto has a two-tier system, show that socioeconomic status has an effect on various preferences for health care quality attributes (Hanson et al. 2005). Shickle (1997) investigates public preferences for health care prioritising in the UK and develops arguments for and against certain criteria of priority setting, wherein health care professionals, managers and the general public partly exhibit different preferences. Barbosa and Cookson (2019) find for Brazil that possession of private health insurance coverage and residing in an urban location both contribute more to health inequity than income does. Overall, PHI seems to increase health inequity in the EU (Mossialos and Thomson 2002), as failures in private health insurance markets (such as moral hazard, monopoly, adverse selection and risk selection) can result in inequality and inefficiency (Powers and Faden 2006; Thomson et al. 2020).

Fairness in prioritisation

When trying to employ purely rationality-based economics to medical priority setting one soon runs out of road (cf. Robinson 1999). While often Quality-adjusted life years (QALYs) or Disability-adjusted life years (DALYs) are evaluated (cf. Sassi 2006), questions of fairness remain. In addition, decision makers often encounter political and institutional constraints when setting medical priorities (Goddard et al. 2006). So far research has focused on stated preferences for health care prioritisation (cf. Whitty et al. 2014).

Previous research already demonstrated that there is self-interest in fairness attitudes towards priority setting across countries (Álvarez and Rodríguez-Míguez 2011; Rogge and Kittel 2016; Ryen et al. 2019). In the context of the COVID-19 pandemic some self-interest also seems to be present (Grover et al. 2020). To investigate treatment prioritisation of people based on their health insurance status, i.e. possession of PHI, opens a gap in the literature. What has been done so far is research on income-related health care inequalities, where findings of 23 countries suggest that the majority of people regard income-based health privileges as unfair, which is particularly true for persons with insufficient health insurance coverage (Von dem Knesebeck et al. 2016). Moreover, lower cost barriers in health care and higher public health care spending correlate with higher perceived unfairness of health inequalities in an investigation of 28 OECD countries (Immergut and Schneider 2020).

As for priority setting preferences, evidence from Germany shows that the public only considers effectiveness without the cost component in determining whether health care insurance should pay for treatment (Diederich and Salzmann 2015). A Swedish investigation shows that citizens think the public health services should always offer the best possible care irrespective of cost, while doctors support this approach less strongly. When it comes to health care financing, Swedish policy makers favour higher taxes, whereas doctors prefer complementary private insurance and increased patient fees (Rosén and Karlberg 2002). Also addressing the financial aspect of prioritisation, Damm et al. (2014) show that the economic-based cost-effectiveness ratio (CER) is supported by advanced economics students significantly more than by law, philosophy or medicine majors in Germany. Mirelman et al. (2012) demonstrate that there are priority setting preferences for efficiency criteria over equity criteria among

policy makers in four countries (Norway, Nepal, Brazil, Uganda) but not in Cuba. Thus, it appears that preferences for medical prioritisation depend on context, i.e. where and whom one asks (cf. Orton et al. 2011). Overall, there is evidence that the general public emphasises health equity (e.g. Reckers-Droog et al. 2018), while medical decision makers include efficiency and cost-effectiveness criteria more strongly (e.g. Tanios et al. 2013). However, to explicitly consider monetary contribution in prioritisation decisions is rejected by both medical professionals and laypersons, as also evidence from Switzerland shows (Krütli et al. 2016).

Theoretical Background

Solidarity, equity, fairness and reciprocity in health care

Prainsack and Buyx (2011; 2017) argue that solidarity is the acceptance by a person or by a group to carry financial, practical and/or emotional costs to support others with whom they recognise similarity in a relevant aspect. This similarity can be a common goal, shared risk or an objective, as well as subjective, characteristic. Particularly, in health care such solidarity comes in three tiers: It can be interpersonal, communal on the group level or contractually incorporated into institutions. Solidarity in public health care systems with SHI is a prime example of institutionalised solidarity because citizens contribute based on their wages and salaries and receive medical treatment and care that correspond to their needs. Solidarity in an ideal state can be seen as the outcome of a ‘social contract’, in which personal and ethical allocation preferences of a collective are reconciled through impartial consideration, i.e. under the veil of ignorance (cf. Dolan et al. 2003).

Olsen (2011) provides an account of equity in health care. He suggests that in countries with publicly funded health care two principles are paramount: Equal access for equal need and reduction of health inequalities. While the former represents the ideal of universalist welfare, the latter recognises that some health inequalities are perceived to be inherently unfair. Daniels (2001) argues that there is a social obligation to guarantee the existence of institutions, such as social insurance or subsidies for PHI, that protect equal opportunity in a rebuke to efficiency maximisation, aggregate welfare maximisation and utilitarian objectives. Yet, equity and inequity in health care remain to be normative concepts. First, as Anand (2002) argues, inequality aversion differs between different domains in health care and such an aversion ought to be higher across some population groups than others. Second, equity and equality are not the same, even though health equity incorporates the idea of equal opportunity to be healthy. Third, health equity cannot be directly measured but merely be grasped “... as the absence of disparities in health (and in its key social determinants) that are systematically associated with social advantage/disadvantage” (Braveman and Gruskin 2003, p. 256).

Fairness denotes the “... view that some important types of health inequalities are considered unfair” (Olsen 2011, p. 815). Therein, fairness also remains normative. Brock (2002) points out that ‘fair’ treatment priority can be given to the worst off, according to benefits aggregation or so that fair chances can be pinned against best possible outcomes. All of these, and more, may seem fair to certain people in

certain circumstances. Daniels (2007) advocates three core concerns for fairness in health that are equity, efficiency, and accountability, that should be fulfilled to meet central criteria of fairness in health policy.

Reciprocity can be direct, generalised (indirect), strong, weak, conditional, unconditional, negative, and/or positive. Generally, "... a reciprocal action is modeled as the behavioral response to an action that is perceived as either kind or unkind" (Falk and Fischbacher 2006, p. 294). Framed differently, "Reciprocity demands proportionate balancing of the benefits and burdens of social cooperation between participants..." (Viens 2008, p. 1). I argue that in its essence reciprocity should be evaluated insofar it can or cannot alleviate the 'tragedy of the commons' and whether it can establish a social norm in a given context. A scenario with identical individual incentives but absent cooperation is known as the tragedy of the commons (e.g. Gächter et al. 2017). Gross and De Dreu (2019) demonstrate that attenuation of said tragedy depends on the costs of individual solutions. If they are low, cooperation deteriorates, even if individual negative reciprocity (punishment) is available. However, centralised punishment institutions or establishment of social norms of cooperation and of generalised reciprocity^[2] can solve the dilemma. Thus, when individualism is reasonably cheap, cooperation depends on a type of governmental enforcement and/or on the establishment of a social norm that facilitates cooperation.^[3]

Solidarity is a collectivised practice in public health care systems with SHI. Equity in health care encompasses an ideal to aspire to and to work towards and fairness involves the individual and normative attitudes on redistribution dilemmas and decisions about allocation of scarce medical resources. In theory reciprocity, in its generalised form, can amplify or replace continuous state monitoring of and intervention in health insurance markets. However, the state often may be a required institution to generate and stabilise such generalised reciprocity through governmental constraints on resource consumption (cf. Hardin 1968; Frischmann et al. 2019).

PHI & redistribution preferences

There is a debate of whether the state should retrench from health care or should rather guarantee its provision to the public (cf. Taghizadeh and Lindbom 2013; Del Pino and Ramos 2018). While people can be found on a continuum between those two positions, public opinion on health care is shaped by welfare regime type, type of health care system and individual characteristics (Gevers et al. 2000).

While PHI can add benefits to society (cf. Colombo, and Tapay 2004), it also can manipulate health care systems' pursuits for equity by circumventing guiding principles, rules and regulations. Additionally, PHI is regressive, whereas social insurance is progressive in high-income countries (Hsiao and Liu 2001). PHI is not equally accessible to all social strata, minorities and vulnerable groups alike (e.g. King and Mossialos 2005; Kiil 2012; Jin et al. 2016).

People who possess PHI might cut short waiting times and lists, get different drugs or have access to private health care providers, thus distorting medical priority setting and aggravating health inequities (e.g. Borrell et al. 2001; Blendon et al. 2002; Schoen and Doty 2004; Van Doorslaer et al. 2008; Allin and

Hurley 2009; Grignon et al. 2010; Lapidus 2017). For Austria Cypionka et al. (2018, p. 13) note: “Although illegal to prioritize patients with VHI, empirical evidence shows that VHI policy holders can obtain faster access to elective care in public hospitals”. Similar observations can be made for instance in Germany (Lungen et al. 2008; Ramos et al. 2018) and in Ireland (Whyte et al. 2020).

British evidence shows that longer waiting lists result in more frequent purchases of PHI (Besley et al. 1999). Research also indicates that people with PHI use health care services and prescription medicines more frequently and intensely than people without PHI, for example in France (Buchmueller et al. 2004) and in Denmark (Kiil and Arendt 2017). Summarising, those who contribute to PHI do so expecting a benefit from their premium payments, be it shorter waiting lists, more advanced drugs or more frequent use of health care overall. Thus, people with PHI exhibit a higher and perhaps exacting demand for health care. Supporting this, Olsen et al. (2004) find that Danes who were subjected to taxation contribution framing more often use altruistic arguments for being willing to pay, while respondents who encountered insurance premium framing are more likely to name selfish reasons.

Now addressing the supply side, doctors have a competing interest to provide sound treatment to their patients (Tollison and Wagner 1991). This manifests as doctors seem to be driven by both self-interest and ideology in their attitudes towards private welfare services (Martinussen 2008), where doctors’ self-interest can be furthered by financial incentives (e.g. Rodwin 2004). In fact, doctors nowadays frequently promote and prescribe novel drugs albeit there may be no evidence of those drugs’ superior efficacy. Even medical professionals follow market forces and self-interest (Light 2010) and such self-interest for private practice can increase inequity for patients and medical professionals alike (Oliver 2018). As patients follow doctors’ advice they might also utilise private health care services provided by some doctors (cf. Wiles and Higgins 1996; Waring and Bishop 2013). Summarising, when health care providers receive payments from public and private sources “... doctors and hospitals will have incentives to prioritize VHI-financed patients” (Sagan and Thomson 2016, p. 99; cf. Oxholm et al. 2021).

H1: People with PHI disfavour redistribution in health care, whereas people without PHI favour redistribution.

Perceived fairness: Beyond self-interest

“Few individuals in the developed world will be able to afford the health care they will need in their lifetimes” (Latham 2012, p. 130). Thus some kind of health insurance is necessary to guarantee basic treatment and minimum standard of equity in health care. The fairness of possible health insurance schemes is closely tied to issues of distributive justice and consequently also relates to how health care is financed (cf. Clark and Weale 2012).

Context has been shown to significantly affect which distributive justice principles people apply, i.e. people exhibit different justice attitudes in different situations (Liebig and Sauer 2016). Van Hootegeem et al. (2020) show that in health, equality is the most popular justice principle in a Belgian sample, but not

when it comes to unemployment benefits or pensions.^[4] People have different justice attitudes within the health care domain as well, when high resource scarcity is pinned against medium or low resource scarcity in health-health trade-offs (cf. Scott and Bornstein 2009).

To alleviate the dilemma of scarcity between health and wealth and within health people need to form some kind of bond. They need to find an equilibrium where they can cooperate, without levying health-related costs on any individual that this individual could not afford and without causing unfair costs for all other group members, while also not reducing the health of these other group members. I now provide two rationales for distinguishing SHI and PHI on grounds of fairness in order to address such a dilemma.

First, both PHI and SHI require the reciprocity^[5] and shared interest of its members that are in an interdependent state with possibility of sanctions^[6]. Also, both kinds of health insurance require a level of chance solidarity (Lehtonen and Liukko 2011).^[7] But while PHI relies on voluntary contribution, SHI is solidaristic in terms of generalised reciprocity (cf. Koos and Sachweh 2019). Reciprocity also plays a crucial role in PHI (cf. Leitner and Lessenich 2003), where PHI rather follows a market-logic of reciprocal exchange with risk-adjusted premiums. I suggest that PHI constitutes direct reciprocal exchange as 'risk reciprocity' and SHI is a form of generalised indirect exchange with a long-term outlook (cf. Molm et al. 2007; Ullrich 2002). Thus, PHI and SHI are distinguishable on the basis of their modes of reciprocity. Some duties are conditional on reciprocity, such as the duty to share fairly. These duties result from someone's status as a moral person or are binding and conditional on mutual exchange. Thus, even non-contribution on the part of a person, who is unable to contribute, does not imply that they are exempt from distributive justice (Lister 2011). It is important to note, that SHI does not discriminate on the basis of factors that can cause inability to contribute, while PHI discriminates through exclusion and through setting high risk premiums. Hence, SHI is de-facto luck-egalitarian, i.e. does not differentiate between bad brute luck and bad option luck (cf. Vallentyne 2002; Segall 2007; Cavallero 2011; Björk et al. 2020).

Second, I share the view that health care constitutes a public good in its fundamental properties (e.g. Karsten 1995; Abdalla et al. 2020; and more broadly cf. Kallhoff 2014; Sunstein and Ullmann-Margalit 2001). Kohn (2020) presents solidarism as a way out of the public-private dilemma, where "Reallocation can take the form of universal insurance that secures the individual against misfortune or collective benefits such as hospitals and infrastructure" (Kohn 2020, p. 1109). Further, there needs to be compensation for negative externalities produced by commodification. The solidarist position includes "... that the positive achievements are produced collectively and a critique of modes of allocation that reflect power and luck rather than justice". (Kohn 2020, p. 1113). Therefore, SHI and the public provision of health care address redistribution, which functions as a protection against misfortune. In addition, it is argued that gains are achieved collectively and should be fairly allocated, rather than according to luck and power.

By contrast, PHI concerns the voluntary and private provision of a public good. Evidence for cooperation in such a scenario points towards inequity and individualistic-opportunistic behaviour (e.g. Chan et al. 1996; Heap et al. 2016; De Geest and Kingsley 2019; Gross et al. 2020). PHI faces two fundamental

issues: the free rider problem and the assurance problem.^[8] Both can be solved via contracts and centralised punishments. “Overall, public provision tends to produce less efficient outcomes than private provision by allowing the possibility of severe underprovision of the public good. On the other hand, if a society dislikes income inequality and prefers progressive taxation, then public provision may deliver more desirable outcomes” (Slavov 2014, pp. 253-254). Thus, (economic) efficiency is positioned in a trade-off with equity, which further indicates that PHI is associated with a market-logic of direct reciprocity, i.e. tit-for-tat^[9], and a sense of solidarity that is limited to the interpersonal tier^[10] but that does not extend to collective or contractual tiers.

Seeing health care as a (global) public (solidarity) good versus through the lens of private provision has some serious and differing ethical implications.^[11] If we accept the latter, then “There are clear indications that in a market-driven medical system with poor regulation, the poor are not getting appropriate services for what they are paying” (Das 1999, p.118). And if we trust in market mechanisms for resource allocation in health care and health insurance, then we also accept the cost-effectiveness-equity trade-off and the trust in private firms to provide healthcare more efficiently than public entities. In this case market justice is preferred over social justice in health care (cf. Budetti 2008). To sum up, SHI and PHI are distinguishable on grounds of them being different reciprocal exchange types and on grounds of the division over fairness in public good provision that the two exhibit. In short, the different reciprocal exchanges and the division over fairness in public good provision ought to generate fairness differences between those, who only hold statutory insurance, and those, who possess PHI.

H2: Finding the prioritisation of privately insured persons fair increases the effect in H1.

Auxiliary explanations

The auxiliary variables employed in this study are located on the micro-level. However, they are attitudes and preferences directed towards institutions, i.e. the public health care system, the government, political parties, and the Austrian population's public health.

There is ample research on the role of trust in institutions and redistribution preferences in general welfare. Overall, higher trust is associated with higher demand for redistribution (e.g. Hetherington and Husser 2011; Yamamura 2014; Silva et al. 2016). Busemeyer (2021) finds that higher trust in the performance of the health care system and higher political trust increase support for additional health care spending in Germany. It is reasonable to expect that higher trust in relevant institutions corresponds to a stronger support of redistribution in health care as well.

H3: The higher the trust in the government and in the public health care system, the more a person favours redistribution in health care.

Some partisan theory suggests that left-wing voters tend to be people on low incomes, whereas right-wing voters are more likely high income earners (cf. Borck 2007). Additionally, left-wing parties spend

more on public health care than right-wing parties when long enough in power (Herwartz and Theilen 2014). In line with this Koos and Leuffen (2020) find that Germans with party preferences for left-wing parties are slightly more financially solidary than supporters of mainstream parties and potential voters of right-wing parties are considerably less financially solidary in context of the COVID-19 pandemic. However, when it comes to medical solidarity Koos' and Leuffen's (2020) results suggest that party preferences become less distinct factors when compared to financial solidarity.^[12] So, it seems people exhibit both partisan differences overall and differences in solidarity in differential domains, where solidarity in health-related areas may be higher than in others. Hence, there may be notable differences between voters of different parties in their redistribution preferences in health care, as they might not share fundamental beliefs and expectations in the welfare state and the role of government in health care.

H4: People who would vote for a conservative, liberal or right-wing party disfavour redistribution in health care while left-leaning party voters are in favour of it.

Generally health care can be seen as a vital part of the welfare state (e.g. Moran 2000). Yet, the provision of high-quality health care can be located with the state, with private entities or with both as the private-public mix. Missinne et al. (2013) investigate 24 European countries and find that support for state responsibility to provide universal health care is high, setting significant self-interest and ideological disposition aside. It seems plausible that people who think the state should provide high-quality health care also support redistribution in health care.

H5: The more a person supports state-provision of health care, the more they favour redistribution in health care.

The Meltzer-Richard Theorem (Meltzer and Richard 1981) suggests that the relatively poor want more government and the relatively rich want less government. The median voter, i.e. the person(s) with median income, will get the decisive vote on the size of government. Andreoli and Olivera (2020) lend support for this in finding that receiving social net benefits results in supportive preferences for redistribution and Armingeon and Weisstanner (2021) find that political ideology and self-interest interact when predicting redistribution preferences. Therein lies a trade-off between taxation and social spending or social benefits. High taxes can guarantee generous social benefits, while low social benefits can make low tax rates feasible. I propose that from preferences about said trade-off, which concerns the role of the state and welfare more broadly, one can also derive preferences for redistribution in health care more specifically.

H6: The more people favour social redistribution, the more they are also in favour of redistribution in health care.

Last, the COVID-19 pandemic poses a risk to public health and risk perception has for instance been linked to protective health behaviour (e.g. de Bruin and Bennett 2020). As health care systems, particularly ICUs, are in danger of being overburdened (e.g. Moghadas et al. 2020), there should be more

support for redistribution in health care when perception of COVID-19 induced risk to the population is high.

H7: The higher the population-level COVID-19 risk perception of a person, the more they support redistribution in health care.

The Austrian health care & insurance system

The Austrian health care system is solidaristic in the sense that people contribute on the basis of their ability (e.g. a specific percentage of people's salaries that is taken off automatically) and receive services based on need (Ter Meulen 2017; Spahl and Prainsack 2021). Austria has a Bismarckian public health system.^[13] Its core funding mechanism is compulsory social security contributions that are directly or indirectly tied to employment and to occupational status. Insured persons can include children or other family members without separate insurance. In addition, there is a growing sector of PHI for those who want services beyond the services covered by the statutory health insurance. PHI covers 'extras', such as access to private doctors, a single-occupancy room during hospital stay et cetera. Austria has very high health insurance coverage (about 99%) and its population reports few unmet medical needs (Toth 2019).

In a previous analysis Austrians exhibited the highest satisfaction with their health care system out of 14 investigated Western European countries, but Austrians also had the third lowest rank in wanting extensive state involvement in health care (Wendt et al. 2010).

McAlister and Helton (2021) describe Austria as a publicly funded health care model with equality of care by the providence of universal healthcare for all citizens. Income-related inequalities in health care in Austria are on comparatively (OECD and EU) low levels (Devaux 2015; Ásgeirsdóttir and Ragnarsdóttir 2013). According to Bambra (2005) Austria has a medium level of decommodification in health care. Further, Reibling et al. (2019) put Austria in a health care cluster that includes high supply-and choice-oriented public systems, which means Austria has a publicly financed health care system that is personnel-intensive and offers relatively free choices to patients. However, there seems to be potential for 'institutional corruption' that undermines the principles of good health, equity and efficiency in the Austrian health care system (Sommersguter-Reichmann and Stepan 2017), as it does in Europe and the USA more broadly (Sommersguter-Reichmann et al. 2018).

Table 1

Private health insurance in Austria. Thomson and Mossialos (2009, p. 16)

Market roles	Eligibility	Examples of benefits covered	% of population covered (2006)	% of total expenditure on health (2006)
Complementary (services)	Whole population	Dental and eye care, physiotherapy, home visits, psychotherapy,	33% ^[14]	5.3%
Supplementary	Occupations opting out of the	health resorts, rehabilitation, drugs, CAM		
Substitutive	statutory scheme (some self employed),	Private wards/hospitals and doctors, choice of hospital doctor, faster		
	individuals not	access (elective care), per diem cash benefits for inpatient care		
	eligible for statutory cover	Similar to statutory cover		

Data & Variables

The data analysed in this paper stem from the Austrian Corona Panel Project (ACPP), an online panel survey conducted among the Austrian resident population, which started in late March 2020 and is ongoing to date (cf. Kittel et al. 2020). The ACPP respondents have a minimum age of 14 and the age range is not restricted towards old age. Respondents were quota sampled based on the key demographics of age, gender, region, municipality size, and educational level based on official statistics, with the quota sample being structured to closely mirror the Austrian resident population. For the subsequent analysis data of ACPP wave 22 is used, which was fielded mid-April 2021. The full data paper is available in Kittel et al. (2021).

Redistribution preferences

The dependent variable is an additive index of eight variables of preferences for redistribution in health care. These were developed for the ACPP and answers are on 5-point Likert scales. Three preferences directly grasp the relationship between public and private medicine.^[15] The other five preferences encompass equality of treatment, public spending increase on health care, personal willingness to pay higher contributions, higher contributions for cost-intensive patients, and handling of medical excess payments (user charges). More information on these preferences and the index is located in the Appendix (Fig. A1-A5).

Private health insurance, fairness and auxiliary variables

The main predictor variables are possession of PHI (dichotomous) and attitudes on fairness of prioritising privately insured persons, where the latter is on a 5-point Likert scale. Auxiliary variables are trust in government and in the public health care system. Further, party preferences are considered, wherein conservative, liberal and right wing parties are pooled, as well as left-wing parties, and also other parties and non-voters with those who would cast a void ballot and 'do not know' responses. Government responsibility to provide high-quality health care grasps the concept of state welfarism versus retrenchment. Redistribution preferences in distributive welfare are considered where high taxes and high social benefits are pinned versus low taxes and low social benefits. Perceived health risk is the personally assessed threat of COVID-19 to the Austrian population's public health.

All predictor and auxiliary variables are standardised. Multiple imputation is applied for all auxiliary variables and consequent listwise deletion of missings yields a final sample size (N) of 1027 respondents.

Methods

The analyses are done using OLS regression models^[16] with demographic and political sample weights to examine the association between PHI-possession, attitudes on fairness of prioritising privately insured and redistribution preferences in health care. Auxiliary variables are examined independently and then inserted into the main model. An interaction model is computed to test the interplay between the two main predictors in their effect on redistribution preferences. To test robustness Generalised Structural Equation Modelling with Confirmatory Factor Analysis (CFA) is conducted, where the eight redistribution preferences form a dependent latent variable. To additionally check robustness I employ Polychoric Principal Component Analysis (PCA) in OLS regressions.^[17] All statistics were carried out with the Stata 16.1 software.

Results

In the demographically weighted sample 74% do not possess PHI, while 26% do. The distributions of eight redistribution preference statements show considerable variances (see Fig. 1 and in Appendix Fig. A1), and so do the attitudes on fairness of prioritising privately insured (see Fig. 2).

Fig. 1 shows that some health redistribution policies are more contested than others. Agreement to guarantee equal treatment and care for all is the most agreed upon answer, followed by support to increase public spending on health care. However, to personally pay higher contributions to finance the public health care system is rather unpopular, and so is to levy costs on patients. The largest cleavages between people that possess PHI and the ones who do not show in the three redistribution preferences that explicitly address expansion or restriction of private and respectively of two-tier medicine (for more details see Figures A1-A3 in the Appendix).

On average people with PHI exhibit lower support for redistribution in health care than persons without (see Appendix Exhibit A6).

Table 2

OLS Regression Models

Dependent variable: Additive index of redistribution preferences in health care

Demographic & political sample weights

	<i>Baseline Model</i>	<i>Fairness Model</i>	<i>Auxiliary Model</i>	<i>Full Model</i>	<i>Interaction Model</i>
Possess PHI	-0.261*** (0.05)	-0.170*** (0.05)		-0.181*** (0.04)	
Fairness of prioritising privately insured		-0.147*** (0.02)		-0.129*** (0.02)	
Trust in public health care system			0.026 (0.03)	0.024 (0.03)	0.020 (0.03)
Trust in government			-0.090** (0.03)	-0.072** (0.03)	-0.071* (0.03)
Party preference for left-wing			0.121* (0.05)	0.113* (0.05)	0.103* (0.05)
Party preference for conservatives, liberals, right-wing			<i>Reference</i>	<i>Reference</i>	<i>Reference</i>
Other/No party preference			0.118* (0.06)	0.104 (0.06)	0.108 (0.06)
Government responsibility			0.086*** (0.03)	0.084** (0.03)	0.084** (0.03)
Social redistribution			0.077*** (0.02)	0.071*** (0.02)	0.072*** (0.02)
Health risk for Austrian population			0.081** (0.03)	0.073** (0.02)	0.073** (0.02)
Do not possess PHI X Fairness of prioritising privately insured					-0.128*** (0.03)
Possess PHI X Fairness of prioritising privately insured					-0.202*** (0.04)

Constant	2.335 ^{***}	2.321 ^{***}	2.219 ^{***}	2.279 ^{***}	2.244 ^{***}
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R-sqr	0.043	0.109	0.101	0.193	0.178
dfres	1025	1024	1019	1017	1017
BIC	1647.5	1581.6	1625.3	1528.3	1547.7
N	1027	1027	1027	1027	1027

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (all VIFs are below 2)

The inferential analysis shows that the possession of PHI is significantly and negatively associated with support for redistribution in health care ($p < 0.001$). This effect holds true across all employed models.

When adding the variable ‘fairness of prioritisation of privately insured persons’ to the Baseline Model the results show that assessing such a priority setting as fair is significantly and negatively related to support for redistribution in health care as well ($p < 0.001$). This also applies to the Full Model, which includes the auxiliary variables.

The Auxiliary Model only consists of the auxiliary covariates. It shows that trust in government has a significant and negative effect on support for redistribution in health care ($p < 0.05$). This effect persists in the two further models as well. In addition, preferring a left-wing party is significantly and positively associated with such a redistribution. People that think it is the government’s responsibility to provide and guarantee high-quality health care are also more in favour of redistribution of health care ($p < 0.01$). Preferring higher taxes and more generous social benefits has a highly significant and positive effect on redistribution preferences in health care throughout all models ($p < 0.001$). Perceiving COVID-19 to be a greater risk for the Austrian population also results in more support for redistribution in health care ($p < 0.01$).

Figure 4 shows that in the Full Model having no PHI but finding prioritisation of privately insured as (somewhat) fair results in lower support for redistribution. Possessing PHI and having the same fairness attitude yields even lower support for redistribution in health care (see also Fig. A7 in the Appendix).

In the Interaction Model it is evident that regarding the prioritisation of privately insured persons as fair reduces the support for redistribution in health care in not privately insured and even more so in privately insured people.

The GSEM yields similar results as the Full Model, with the only difference that trust in the public health care system becomes significantly and positively associated with redistribution preferences in health care (see Appendix Table A2). The OLS regressions with the Polychoric Principal Component Analysis (PCA)

index also corroborate the initial results, with exception of the political party effects, which do not show significance anymore (see Appendix Table A3).

Conclusion

As H1 has been corroborated in this study, it appears that self-interest plays a considerable role in redistribution preferences in health care. However, self-interest cannot explain the whole picture. In this study fairness attitudes for prioritising privately insured persons have been considered as well. This is novel insofar usually prioritisation principles such as severity of illness, fair innings or proportional shortfall are discussed (cf. Stolk et al. 2005) and not explicit prioritisation of privately insured persons. The second rationale besides self-interest that can explain the findings in this study rests on reciprocity and the prosperity of health care being a public good.

Dolan et al. (2003, p. 546) argue that in a social and personal perspective people ask ex ante “What value do I attach to treatment being available to a group of people amongst whom I might find myself?” This question does not foreground mere self-interest but similarity with a shared group, namely the group of privately insured. When a person accepts to share costs to aid others with whom they recognise similarity in a relevant aspect this may be a case of solidarity (cf. Prainsack and Buyx 2011, 2017). This aspect of similarity may even be the possession of PHI, where people agree to share burdens and benefits beyond public insurance and pay premium payments into private insurances.

While trust in the public health care system has no significant effects, trust in government exhibits, contrary to expectations, a negative effect on support for redistribution in health care. The most straightforward explanation for this is that at the time of the survey there was a conservative-led government coalition in Austria and, as argued, conservative-leaning persons tend to dislike redistribution. Thus, people who put more trust in the government might simply be conservative party voters.

People with a preference for left-wing parties support redistribution in health care. This might be because the left wing traditionally finds more backing in lower-income groups, who cannot afford to pay PHI premiums. It can also be because left-wing supporters are ideologically more ready to favour redistribution, irregardless of their own social stratum or status.

Persons who think high-quality health care provision is a government responsibility supported redistribution in health care as well. This indicates that people who want a strong public health care system, also want one that public resources are redistributed to potentially reduce inequity in health care.

Austrian residents who support higher taxes and more social spending or social benefits also favour redistribution in health care. This highlights that people are consistent in their welfare choices and that health care, while having special ethical importance, does not stand out compared to social welfare and government redistribution overall.

Last, health risk to the general Austrian population has a significant positive effect on support for redistribution in health care. This may be because the pandemic has aggravated inequity in health care and people with a high risk perception feel this inequity needs to be addressed through increased redistribution in the public health care system.

Discussion & Policy context

Various scholars call for 'evidence-based medicine' and public engagement, also by including health care preferences of the public for issues such as prioritisation (e.g. Dolan and Tsuchiya 2012) or economic evaluations of health care interventions (Versteegh and Brouwer 2016). Shickle (1997) advocates including public preferences in health care policy, though to a limited degree: First, surveys are not a satisfactory tool to solely derive such preferences from. Second, the preferences and attitudes of vulnerable minorities must be heard. Third, the public may be reluctant to actually take responsibility for implementations of their own preferences. Thus, an in-depth debate about health care system changes and prioritisation rules that includes the public can be a solution.

Overall, states should foster health integration, financing, resilience, and equity, as well as strengthen and align global health security and universal health coverage (Lal et al. 2021). The implementation of an health equity framework for practitioners, e.g. Peterson et al. (2020), with special attention to socio-economic determinants of health and redistribution in health care is also advised. The same applies to priority setting guidelines for ICU triage (e.g. Persad et al. 2009; Nates et al. 2016; Emanuel et al. 2020) and for non-ICU prioritisation, particularly in primary health care (e.g. O'Connor et al. 2017; Núñez and Chi 2021). Such prioritisation decisions should not solely be delegated to the medical professionals on duty, but also be informed by policy makers, by experts in relevant fields (medicine, public health, bioethics, law, etc.), and by public preferences. Yet, public preferences for resource allocation in health care should cautiously be evaluated under consideration of the special interests of vulnerable and marginalised groups and be vetted by an ethics committee, as such preferences are likely to be biased, context-sensitive and not made under the proverbial veil of ignorance. Concerns for generalised reciprocity, fairness, solidarity, and equity should all be incorporated in priority setting decisions.

This study has shown that privately insured survey respondents exhibit considerable self-interest and also justify this to be fair. The implications of this are manifold. First, policy makers should be clear and explicit about whether they want to foster a medical two-tier system or not. If the answer is yes, then preferences of privately insured persons should be considered. If not, the findings in this study are thought-provoking because privately insured people may create a demand for practises that endanger the principles of equity, efficiency and good public health for the population as a whole. In the long term PHI might also undermine solidarity in the health care system because people who possess PHI may exclude non-PHI holders in their understanding of reciprocity, fairness and solidarity, which have to be foregrounded and reinforced especially amidst a pandemic.

Second, if policy makers want to safeguard existing solidaristic health care systems, they might want to actively counter the self-interest of the privately insured through dialogue and proactive policies. This could work by strictly regulating what PHI can encompass and what not, enabling incentives for PHI that however do not in any way threaten the principles of equity, efficiency, public health and the practice of solidarity. Tax subsidies for and deductibles of PHI should be carefully evaluated. Third, 34% in the sample of this study were undecided whether privately insured should be prioritised for treatment. This large group of 'uncertainty' ought to be involved in a publicly open debate about health care systems with questions about the structure and funding thereof, as well as concerns for equity.

Leiber et al. (2015) see a divergence in health insurance systems in comparing Germany, Austria and the Netherlands. They also note that political stakeholders look at other countries when thinking about reform in their own country. Thus, health care policy and health insurance policy are not isolated and purely national issues, but rather a transnational, if not global, concern. Leopold et al. (2020, p. 1) show when it comes to national reimbursement decisions for health care in New Zealand and in Belgium the most relevant aspects are "1) political commitment to initiate change, 2) broad involvement of all stakeholders, and 3) commitment of all to engage in a long-term process". Similar guidelines are recommendable for the adaptations and reforms of health care and of health insurance in any nation.

Additionally, "When PHI is a major mechanism for health care financing, the sicker tend to purchase PHI, but when PHI is complementary or supplementary, the better off, who have the capacity to pay, may have higher tendency to purchase PHI" (Jeon and Kwon 2013, p. 75). Therefore, in social insurance systems with a statutory insurance scheme, like the Austrian one, it seems possible that PHI is purchased not only to receive supplementary services but also in the expectation to be potentially prioritised for treatment. This generates serious pressure for health care policy makers to avoid the establishment of two-tier medicine.

Following Miller and Horowitz (2000) it would be beneficial for patients if doctors made their financial incentives explicit and openly communicated their private practice, if existent, to patients in order to foster transparency. It would also be advantageous to health policy stakeholders and the public at large if medical priority setting standards and practises were to be made explicit.

It is a lasting concern that shifting the balance between solidarity and self-reliance in favour of the latter would decrease redistribution in health care (cf. Hinrichs 1995). Nevertheless, health care in Europe has become more privatised (e.g. Maarse 2006; Albrecht 2009), liberalised and marketised (e.g. Borges 2011; Krachler et al. 2021). But "... the commitment to solidarity, equity and universality is still a reality in the EU" (Borges 2016, p. 82). Wouters and McKee (2017) ask for caution about any expansion of private health care and Assa and Calderon (2020, p. 17) emphasise: "... to make health systems sustainable at various levels of development and given the expectation of worsening environmental conditions, there is an urgent need to reconsider the neoliberal impulse to privatize health care systems. The short-term benefits from such privatization policies - e.g. reduced costs, shorter waiting times - must be weighed against the long-term damage such policies can do to countries' ability to cope with a rapidly-spreading

infectious disease”. Some scholars are alert when it comes to more privatisation of health care, as a strong public health care system is equipped better to manage pandemics than a weakened one (e.g. De Ceukelaire and Bodini 2020; Armocida et al. 2020; Buzelli and Boyce 2021). Even more alarming is that in health systems of low- and middle-income countries (LMICs) private medicine has largely failed to provide adequate prevention, treatment and care in the COVID-19 pandemic (Williams 2020; Williams et al. 2021).

In Germany pay-dependency and inflexibility of SHI, incomplete risk adjustment for sickness funds, risk segmentation in the insurance market, and shorter lists waiting for PHI-holders make PHI schemes more attractive than SHI for many people (Normand and Busse 2002; Nuscheler and Knaus 2005; Bünnings and Tauchmann 2015; Lungen et al. 2008) Wörz and Busse (2005) highlight high costs, long waiting lists and user charges (excess payments) as issues in the German SHI. Bauhoff (2012) finds supply-side selection can emerge even in stringently regulated health insurance markets as the German one. The Dutch health insurance reforms brought along enhanced consumer choice, which, while not benefiting everyone equally, adds value to some patient-groups through risk pooling (Maarse and Ter Meulen 2006). Further, the reforms in the Netherlands induced shifts from residential to non-residential care, decentralisation of non-residential care, and expenditure cuts (Maarse and Jeurissen 2016).

These examples show systemic developments in European health insurance markets and health care financing. The commodification, segmentation, and differentiation of health insurance schemes also mark a shift in reciprocity, away from a generalised indirect exchange towards risk reciprocity, which embraces the ‘liberal egalitarian ethos’. This implies that people’s trajectories and misfortunes become increasingly individualised, i.e. emphasis is put on individual agency and self-governance. Overall, the dominating narrative and its consequent policies move in the direction of ‘residual provision’ and ‘weak conditionality’. The former means that basic necessities of the ones (most) in need are covered, but these needs must mostly be demonstrated to be within the realm of bad brute luck. The latter denotes that contributions are not strictly dependent on certain expected reciprocations (cf. Mau 2004). Therefore, it can be argued that PHI-holders contribute in the anticipation of (vague) future ‘risk benefits’, in a rather interest-rational mode (cf. Ullrich 2002).

Lessons from the Nordic European countries raise concerns that PHI could undermine trust in and support of the public health care system and could result in suboptimal allocation of resources because public and private health care providers have to compete with each other (Tynkkynen et al. 2018). In Sweden privatisation of health care services preceded a rise in demand for PHI, which is likely to result in less equal and less fair access to health care overall (Lapidus 2020). A comparison of SHI and PHI in Germany and Chile shows that PHI can even in a niche role undermine overall health care funding and equitable access, treatment and care, as the whole system is at risk to drift towards ‘two-tier medicine’ (Roman-Urrestarazu et al. 2018).

Over the past decades the private sector and private capital have become gradually more involved in the public sphere of health policy and health care. This has happened on the political level and particularly in

health care management, finance and provision, for example in Britain and Australia (e.g. Greenaway et al. 2004; Petratos 2005; McDonald and Duckett 2020). However, this trend came at a cost. Promoting efficiency and cost-effectiveness has amplified the trade-off with health equity, which becomes even more obvious in the COVID-19 pandemic (e.g. Sandiford et al. 2018; Galea and Vaughan 2019; Galea 2021).

A related pivotal argument is that PHI reproduces and magnifies asymmetrically distributed socio-economic determinants of health, e.g. income and socio-economic status. So, rather wealthy, healthy and high-status persons receive access to PHI coverage and thus to higher quality health care or shorter waiting times. Yet, treatment of pre-existing conditions, emergency medicine, highly specialised health care and continuous chronic care are left to the state because their provision is not profitable, as for instance evidence from Sweden shows (Kullberg et al. 2019). Addressing these issues, Starfield and Birn (2007) suggest that universal social programmes together with greater income redistribution would significantly reduce inequity in health.

While public preferences for redistribution are illuminating to further understand health care financing and redistribution, one should be very cautious in interpreting, let alone implementing, these public preferences. If we are to include representatives of the PHI industry or customer base in negotiations and decisions on health care policy, we must be aware of the underlying interests of this lobby and know the respective consequences, which seem particularly disconcerting regarding health equity and the socioeconomic gradient in health.

Limitations and future research

This study is limited both in space and in time. To address the former, future research should consider comparative analyses across different welfare regimes and health care systems in various countries. While this study offers a good vantage point and can represent social insurance models with statutory health insurance, different health care systems may produce very different redistribution preferences and effects of PHI on them. This study is also temporally limited as the data used stems from pandemic contexts. Post COVID-19 redistribution preferences in health care may show different patterns under different contingencies. Thus, ideally panel-survey data should be gathered to make amid- and post-pandemic comparisons feasible.

Declarations

Ethical approval and consent to participate

Research ethics approval for this study was not required according to institutional and national guidelines.

Consent for publication

Not applicable

Availability of data and materials

Kittel, Bernhard; Kritzinger, Sylvia; Boomgaarden, Hajo; Prainsack, Barbara; Eberl, Jakob-Moritz; Kalleitner, Fabian; Lebernegg, Noëlle S.; Partheymüller, Julia; Plescia, Carolina; Schiestl, David W.; Schlogl, Lukas, 2020, "Austrian Corona Panel Project (SUF edition)", <https://doi.org/10.11587/28KQNS>, AUSSDA.

The datasets generated during and/or analysed during the current study are available in the AUSSDA repository, <https://data.aussda.at/>

Competing interests

The authors declare that they have no competing interests.

Authorship

All authors contributed equally in production of this manuscript.

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Figures

Figure 1

Differences in mean dis/agreement in 8 redistribution preferences in health care between persons with and without private health insurance (PHI), (with demographic & political sample weights).

Fairness of prioritising privately insured

Figure 2

Fairness of prioritising privately insured persons grouped by health insurance status (with demographic & political sample weights).

Predictive Margins with 95% CIs

Figure 3

Predictive margins based on Full Model (with demographic & political sample weights, average marginal effects)

Predictive Margins with 95% CIs

Figure 4

Predictive margins based on Full Model (with demographic & political sample weights, average marginal effects)

Supplementary Files

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