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# Is European attachment sufficiently strong to support an EU fiscal capacity: Evidence from a conjoint experiment<sup>☆</sup>

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## ABSTRACT

Based on a conjoint survey experiment with 10,000 respondents from France, Germany, Italy, Netherlands and Spain at the end of March/beginning of April 2020, we explore how individual characteristics shape support among Eurozone citizens for a European Union (EU) budgetary assistance instrument to combat adverse temporary or permanent economic shocks hitting EU Member States. We consider particularly the role of socioeconomic factors, such as income and education, covid fears and European attachment. Remarkably, how covid worries and European attachment affect the support for specific designs of the assistance instrument is not affected by other factors, in particular not by socioeconomic factors. These latter factors play an important role affecting support, independent of European attachment. Programs with European Commission monitoring (and recommendations) and cross-country redistribution, possibly even mandatory towards poor countries, can count on stronger support from those with higher European attachment. Those with strong covid fears are generally more in favour of EU budgetary assistance, mandatory spending of assistance on healthcare and redistribution to poor countries. Programs with Commission monitoring (and recommendations) receive extra support from high-income and highly-educated individuals. Also, the latter group specifically favors potential or mandatory cross-border redistribution. The independent role of individual European attachment suggests that instruments other than socioeconomic policies, e.g. better information provision about its use, may help raise support for an EU assistance instrument.

## 1. Introduction

Following the global financial and eurozone debt crises, the current corona crisis has once more made clear that the EU, and the eurozone in particular, is not well placed to deal with extreme shocks (e.g., see [European Fiscal Board, 2020](#)). To be sure, the EU

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reacted to the current crisis more forcefully than to previous crises, introducing the temporary SURE and NextGenerationEU in addition to country-level discretionary measures.<sup>1</sup> However, none of these initiatives creates permanent facilities to respond to such shocks, despite the fact that someday a new crisis will surely hit the EU.<sup>2</sup>

In contrast to existing instruments and competences, an "EU central fiscal capacity" would be an instrument to support countries in economic trouble.<sup>3</sup> Many proposals for such a capacity have been made in the past. Proposals by officials are found in, for example, Van Rompuy et al. (2012), Juncker et al. (2015) and Von der Leyen (2019). However, the feasibility of such a capacity depends on the public support for it, no less for such a broad fiscal authority as for more narrowly focused EU instruments.<sup>4</sup> Such support is often associated with certain socio-demographic characteristics (e.g. Foster and Frieden, 2021),<sup>5</sup> and – importantly – it has at times been linked with European identification or attachment, which in turn moves slowly and is often driven by external shocks (Gehring, 2022).

This paper first develops and then tests arguments about precisely such support for a broad EU fiscal capacity. It does so by setting out an organizing theoretical framework that undergirds key hypotheses on the preferences regarding the design of such a capacity. The paper then uses an original survey which embeds a type of survey experiment often referred to as a "conjoint experiment" (Hainmueller et al., 2014) to investigate how support for the EU capacity in five Eurozone countries depends on the proposed capacity's design and on respondents' individual socioeconomic and background attitudinal characteristics.<sup>6</sup> We consider a number of individual features, in particular socioeconomic characteristics, covid fears and the individual attachment to Europe. Interestingly, while individual socioeconomic factors play a modest role when it comes to the design of an EU fiscal capacity, covid fears play an independent role in this regard and this is even more so the case for European attachment. We consider this an important finding, because it is often conjectured that an individual's stance on the EU is determined by her or his socioeconomic circumstances.<sup>7</sup>

These findings contribute to a number of inter-linked research agendas, exploring for instance the causal determinants of public support for economic policy (Bechtel et al., 2017; Burgoon et al., 2022), the development of European identities (Negri et al., 2021; Gehring, 2022) and the link between cultural and attachment orientations and economic policy institutions (Hahn, 2014; Kuhn et al., 2020).

Political science and political economy literature have long sought to identify the individual and socio-tropic determinants of support for European integration, but this has seldomly led to extensive formal models, let alone combined with experimental results. Typically, this literature originates from economic voting theory and adapts it to the context of European integration (Gerhards et al., 2016; Gehring, 2022; European Fiscal Board, 2020). Broadly speaking, economic voting theory argues that economic matters impact one's judgement of a government, hence (in the case of the EU) good economic outcomes lead to support, while bad economic outcomes to rejection, of European integration. While theories derived from economic voting tend to focus on short-term effects and the economic cycle, a second line of inquiry, stemming from the seminal work of Leeper et al. (2020), has looked instead at the role of economic and cultural "fractures" in the society and their effects in structuring the long-term fault-lines of European integration. This scholarship tends to interpret preferences towards European integration as the result of the interplay of one's positioning on two different dimensions: a classical, left-right economic dimension, and a cultural dimension (Hahn et al., 2019; Kuhn et al., 2020). In the aftermaths of the 2010s shocks to the European Union, from the global financial crisis to Brexit, a rich scholarship has emerged in the intersection between economic and cultural explanations of support for European integration. Amongst many others, De Grauwe (2018) argues that past economic experiences constitute the counterfactual benchmark individuals use to assess contemporary developments; Kuhn and Stoeckel (2014) suggest that preferences for economic governance depend, in part, on individuals' degree of European identity as well as their economic situation. In line with Kuhn and Stoeckel (2014) this literature tends to recognise the role played by the intensity of European identity or attachment to Europe in shaping preferences (for instance, Gerhards et al., 2016; Lahusen and Grasso, 2018, Kuhn et al., 2020a, Nicoli et al., 2020), although the relevance of this effect remains highly contested, since some work (e.g., Verhaegen, 2018, among others) finds little effect of European identity on solidarity.

<sup>1</sup> SURE is the Temporary Support to Mitigate Unemployment Risks in an Emergency, a 100 billion capacity loan program to maintain employment in the face of corona, while "NextGenerationEU is a more than €800 billion temporary recovery instrument to help repair the immediate economic and social damage brought about by the coronavirus pandemic" ([https://ec.europa.eu/info/strategy/recovery-plan-europe\\_en](https://ec.europa.eu/info/strategy/recovery-plan-europe_en)).

<sup>2</sup> Risk sharing via private instruments in the EU may have gone up over time (Cimadomo et al., 2020).

<sup>3</sup> Earlier contributions on such capacities include the "MacDougall Report" (Marjolin et al., 1975), Padoa-Schioppa et al. (1987) and Italianer and Van Heukelen (1993). More recent contributions are Beblavý et al. (2015), Beblavý and Lenaerts (2017), Carnot et al. (2017), Claeys (2017), Dolls et al. (2017), Arnold et al. (2018), Buti and Carnot (2018), Koester and Sondermann (2018), Berger et al. (2019) and Burriel et al. (2020).

<sup>4</sup> Preferences on the design of particular EU-wide assistance have been investigated by, among others, Bechtel et al. (2014) on bailouts and Burgoon et al. (2022) on European unemployment reinsurance schemes.

<sup>5</sup> Foster and Frieden (2021) show that economic factors, both at the individual and at the macroeconomic level, shape support for European integration. Foster and Frieden (2017) explore the role of these factors for trust in governments.

<sup>6</sup> Conjoint experiments are randomised survey experiments with several advantages (see Hainmueller et al., 2014). In particular, they enable causal inference of the effect of varying the treatment along a specific policy dimension on the preference for a policy package. Further, they allow for the estimation of interaction effects between dimensions and, compared to regular surveys, they reduce the risk that respondents give socially-desirable answers, because contentious elements are buried in a broader policy package. The use of conjoint experiments in the literature has been limited so far. Examples are Bechtel et al. (2017), Von der Leyen (2019) and Hahn et al. (2019).

<sup>7</sup> This is suggested, for example, in Colantone and Stanig (2018), whose findings show that individuals from areas more exposed to import competition (in their case, modelled via an increase in imports from China in the period well before the Brexit referendum) were more likely to vote for leave. Becker et al. (2017) find that deprived areas with low average income and education and high unemployment were more likely to vote for leave. Exposure to the EU in terms of immigration does not seem to have played a major role.

While suggestive, this literature is limited in a number of ways. First, its empirical basis for sharp causal inferences is quite soft, being based on research designs focused on off-the-shelf, EU-wide observational datasets such as Eurobarometer. Second, it tends to treat preferences for European integration as unidimensional; even when care is put into constructing multidimensional indices of preferences for economic governance (Kuhn and Stoeckel, 2014; Nicoli et al., 2020), these are the result of different survey items artificially bundled together, representing broad options on the table, but they usually do not include potential trade-offs and never provide a multidimensional understanding of such policies.

To address such limitations, a number of more recent contributions have built on the seminal work of Bechtel et al. (2017) to use multidimensional experimental methods to tackle both the causality and the multidimensionality problems of previous studies. Among these, Von der Leyen (2019) look at design preferences for European unemployment reinsurance schemes (EURS); Kuhn et al. (2020) and Nicoli et al. (2020) explore that further, the former exploring how the cultural and economic cleavages interplay in determining preferences, the latter looking at the relationship between preferences and multilevel identities. More recently, Hahm et al. (2019) explore preferences for EU-level institutional designs, Beetsma et al. (2022) look at different European-level fiscal capacity designs, and Berger et al. (2019) explore preferences towards specific pandemic recovery fund options. While in general experimental studies of this kind greatly help in addressing both the multidimensionality and the causality issues that plague observational research, none of these succeed in developing a credible, formal theoretical framework reconciling economic theory with experimental results.

In this paper, we aim to address this limitation. We start by presenting a simple organizing two-period theoretical framework with uncertain survival, in which individuals value public consumption, healthcare spending and growth-promoting public spending, such as on education and public investment. More growth-promoting spending raises second-period income. Higher healthcare spending raises the survival chances into the second period. Further, individuals differ in their perceived survival probability, which is decreasing in their starting age and in covid worries. Finally, individuals also attach utility to the mere presence of an EU assistance program. This European attachment is heterogeneous across individuals.

The theoretical framework allows us to formulate a number of hypotheses that are subsequently investigated empirically. The framework predicts that the stronger an individual's European attachment, the larger its support for an assistance program, and this support is higher when support is conditional and when the program allows for ex-post and ex-ante transfers. High-income or highly-educated individuals are more in favour of a program when there are conditions attached to it. Older individuals and those with more health worries are relatively more (less) supportive of programs that mandate assistance to be spent on healthcare (growth promotion). Many of the hypotheses find support in the data.

Our conjoint experiment was fielded at the end of March and beginning of April 2020 to 10,000 representative respondents from the five largest eurozone economies (France, Germany, Italy, Netherlands and Spain), to elicit their support for EU budgetary assistance packages of various designs for countries in economic distress. Respondents are provided with a frame either describing a temporary shock or describing a permanent shock. An example of the former is a severe business-cycle downturn, while an example of the latter is a sustained decline or end of an important economic sector. The distinction is relevant in the context of the optimum-currency-area theory (De Grauwe, 2018), and the way a given assistance scheme deals with these different types of shocks may affect the public support for the scheme. For instance, the policy response to a permanent negative shock – as opposed to a response to a temporary shock – might be perceived as generating long-term redistribution, thereby eliciting a critical stance from respondents who expect to be net contributors to such a scheme.

In our conjoint experiment, respondents see side-by-side two different policy packages pitched against each other. These are constructed along a number of “dimensions”, of which the possible outcomes (“features”) are randomised. The dimensions are selected to represent real-world policy packages that draw on proposals debated in policy circles. Specifically, the dimensions concern potential conditions on the fiscal support, potential restrictions on what the support is spent on, how domestic taxation will be affected, whether there can be long-run redistribution among countries, the potential role of the European Commission and what to do in the case of non-compliance with the program's conditions. A package is formed by the combination of one feature for each of the six dimensions. Out of the pair of packages respondents see each time, they select the preferred one, while moreover they have to indicate the degree to which they support each of these packages. This setup allows causal inference of how varying the policy features along a specific dimension, holding the features of all other dimensions constant, affects the support or preference for a policy package.

The role of socioeconomic factors for the assessment of the assistance packages appears to be largely in line with what one would expect. Including budgetary conditions, Commission monitoring (and recommendations) and mandatory spending of assistance on healthcare is particularly appreciated by high-income and highly-educated individuals. Commission monitoring (and recommendations) and potential cross-country redistribution or mandatory redistribution to poor countries are particularly favored by the highly-educated. However, how both covid worries and individual European attachment affect the support for specific designs of the assistance instrument is unaffected by any other factors we control for and, in particular, not by socioeconomic factors. Packages with Commission monitoring (and recommendations) and potential or mandated cross-country redistribution can count on stronger support from those with higher European attachment. Those with strong covid fears are generally more in favour EU budgetary assistance, a requirement to spend assistance on healthcare and redistribution to poor countries.

Our analysis may have broader implications. The independent role of European attachment suggests that policies playing to particular socioeconomic groups are not specifically needed to raise the support for a central fiscal capacity. Support could, for example, be improved by better explaining what are the values that the EU stands for and what are the potential benefits of such a capacity. The other side of the coin is that national policymakers putting blame on the EU for adverse events may have a larger negative effect on support for EU arrangements than if socioeconomic circumstances were the sole driving factor of support. Another implication of our analysis is that, since socioeconomic factors play their own role in the support of various program designs, there may be scope for raising support by compensating specific socioeconomic groups for the costs they perceive of certain EU arrangements. Also

covid worries are found to play a role independent of socioeconomic factors, suggesting that support for EU assistance programs can be raised if they specifically help to alleviate the concerns of those strong covid worries. The results suggest, in short, that socioeconomic demographics and broader attitudinal conditions of citizens are imperfect substitutes in public support for EU fiscal capacity, and that majority coalitions supporting such capacity can be found by even among the most “unfavorable” socioeconomic groupings so long as moderate European attachment obtains among these groupings.

The remainder of this paper is structured as follows. Section 2 presents our simple organizing theoretical framework. Section 3 describes the conjoint experiment in detail and presents the empirical model. Section 4 presents the general econometric framework. Section 5 reports some descriptive results and the purely experimental findings. The main part of the empirical analysis, Section 6, presents and interprets the individual level effects on support for various aspects of EU budgetary assistance programs. Section 7, then, turns to the substantive meaning of these effects, focusing on how individual level socioeconomic and more attitudinal features combine to shape support for particular combinations of EU fiscal capacity programs. Finally, Section 8 concludes the main body of the paper.

## 2. A simple theoretical framework

This section presents a simple organizing theoretical framework to allow the formulation of a number of relevant hypotheses. Because the emphasis of the paper is on the empirics, we keep the theoretical framework deliberately simple, while also making a number of simplifying assumptions to keep matters tractable.

There are two periods, labeled 1 and 2, and there is an EU made up of an infinite number of countries, each consisting of a mass 1 individuals. The set of countries forms a continuum also of mass 1. Utility of an individual  $j$  of country  $i$  is given by:

$$u(c_{1ij}) + v(g_{1i}) + \pi_{ij}[u(c_{2ij}) + v(g_{2i})] + (\gamma_{ij} + \delta_{ij}z) w^{pr}, \delta > 0, \quad (1)$$

where  $c_{1ij}$  ( $c_{2ij}$ ) is individual consumption in period 1 (period 2) and  $g_{1i}$  ( $g_{2i}$ ) is public good provision in period 1 (period 2). Functions  $u(\cdot)$  and  $v(\cdot)$  are strictly increasing and strictly concave. They are positively valued for positive values of private and public consumption. Further,  $\pi_{ij}$  is the individual’s perceived probability of survival into the second period. It is higher if healthcare spending  $h_{1i}$  by the government of country  $i$  is higher, i.e. we can write  $\pi_{ij} = \pi_j(h_{1i})$ , where  $\pi_j(\cdot) > 0$ . Given  $h_{1i}$ , the perceived survival probability  $\pi_j(\cdot)$  is lower when individual  $j$  is older or has more health worries associated with corona.

The final term in (1) is a separate utility component that arises from the potential presence of an EU assistance programme. Here,  $pr$  is an indicator for whether such a programme is present, in which case  $pr = y$  (yes), or not, in which case  $pr = n$  (no). We have  $w^y = w > 0$  and  $w^n = 0$ . In the following, we will use the superscripts “ $y$ ” and “ $n$ ” also on other variables to indicate their values in the presence, respectively absence, of an assistance program. Further,  $\gamma_{ij}$  captures an individual-specific component of the degree of attachment to Europe.<sup>8</sup> It can be negative or positive. The additional utility that the individual receives from the presence of an EU assistance program is higher, if  $\gamma_{ij}$  is higher.

We assume that the effectiveness of the assistance program is one-to-one related to the efficiency with which the resources available to the program are deployed. This efficiency is captured by the parameter  $z$ , with  $0 \leq z \leq 1$ . Maximum efficiency is reached when no resources are wasted, which happens if  $z = 1$ , while efficiency is at its minimum when all resources are wasted, i.e. if  $z = 0$ . Anticipating the program features our respondents are confronted with (see below), efficiency  $z$  is higher in the presence of budgetary conditions on a country receiving help, Commission monitoring of the implementation of the assistance program (and the possibility to make recommendations to the country) and the termination and a fine in the case of non-compliance with the program’s conditions. For brevity, we just use for all these program features the term “conditions”. The impact of the program’s effectiveness on individual utility is also governed by the individual-specific parameter  $\delta_{ij}$ . It is always positive, so that each individual benefits from an increase in effectiveness. However, this benefit differs across individuals, because individuals may differ in their concern about a well-functioning EU. Quite naturally, we assume that individuals with a higher “basic” attachment  $\gamma_{ij}$  also feature a stronger positive utility effect of an increase in program effectiveness, i.e. a higher value of  $\delta_{ij}$ . Summarizing, an individual who is more attached to Europe features both a higher  $\gamma_{ij}$  and a higher  $\delta_{ij}$ . We also allow for the possibility that individuals from country  $i$  may exhibit systematically more attachment to Europe than individuals from another country  $m$ , which corresponds to  $\gamma_{ij} > \gamma_{mj}$  and  $\delta_{ij} > \delta_{mj}$ , assuming the  $j$ th individual in the two countries is the same in all other respects.

We assume that in each country there are two income classes in both periods, low (subscript  $l$ ) and high (subscript  $h$ ). A given individual  $j$  belongs to one of these income classes. Period-1 income of individual  $j$  in country  $i$  of income class  $v$ , where  $v = l$  (low) or  $v = h$  (high), is given by:

$$y_{1ij,v} + \varepsilon_{1i} = e_{i,v} + \omega_{ij,v} + \varepsilon_{1i}$$

where  $e_{i,v}$  is education at level  $v$  with  $e_{i,l} < e_{i,h}$ ,  $\omega_{ij,v}$  ( $> -e_{i,v}, \forall j$ ) an idiosyncratic shock to take account of the fact that the education

<sup>8</sup> European attachment is a multi-faceted concept, capturing both the perceived economic benefits from the EU as well as the degree to which Europe is seen as a normative role model (humanitarian, promoting social inclusion and championing peace) elsewhere, e.g. see Antonsich (2008). Levy and Phan (2014) explore how European attachment is shaped by the interaction of economic and identity-based factors. Here, we do not delve into the different aspects of European attachment.

level and income are not linked perfectly, and  $\varepsilon_{1i}$  a macroeconomic shock having the same effect on all incomes in country  $i$ . The  $\varepsilon_{1i}$  shocks are independent across countries. We have defined  $y_{1ij,v} \equiv e_{i,v} + \omega_{ij,v}$  as the income level when the macroeconomic shock is zero. The mean value of  $\omega_{ij,v}$  is zero for each income class. For convenience we have chosen for the simplest possible relationship between education and income. A more general formulation of the relationship does not bring additional insight, so we stick to the assumed linear relationship. Finally, without loss of generality we set the sizes of the two income groups in each country at  $\frac{1}{2}$ .

Period-2 income of individual  $j$  in country  $i$  of income class  $v$  is given by

$$y_{2ij,v} + \varepsilon_{2i} = F_i(p_{1i}, e_{i,v}) + \varepsilon_{2i}$$

where  $p_{1i}$  is growth-promoting public spending (in particular, public investment or education spending),  $\varepsilon_{2i}$  a period-2 macroeconomic shock hitting country  $i$ , and  $F_i(\cdot, \cdot)$  is a function which is strictly increasing in both its arguments. Hence, holding everything else equal, a higher education level  $e_{i,v}$  leads to higher income in both periods, hence in line with reality incomes in both periods are positively correlated.

Further, we assume for convenience that shock  $\varepsilon_{1i}$  can assume two values:  $\varepsilon_{1i} = -\bar{\varepsilon} < 0$  with probability  $\varphi > 0$ , and  $\varepsilon_{1i} = \bar{\varepsilon}$  with probability  $1 - \varphi$ . In line with the ensuing experiment, we distinguish two cases: one is when the first-period shock is *temporary*, in which case  $\varepsilon_{2i} = 0$ . The other when the first-period shock is permanent, in which case  $\varepsilon_{2i} = \varepsilon_{1i}$ .

We consider two possible tax schedules for period 1, assuming that the period 2 tax rate is uniform. One is a uniform tax rate on all income levels in period 1. The other schedule is one with progressive taxation, specifically with a zero tax rate on low income and a positive tax rate on the excess of income over some threshold level  $\hat{y}_{1i}$ . The threshold level exceeds the low level of income, i.e.  $\hat{y}_{1i} > y_{1ij,l} + \varepsilon_{1i}$ , for any possible realisation of the idiosyncratic component  $\omega_{ij,v}$  and the macroeconomic shock  $\varepsilon_{1i}$  (see below). Hence, individual  $j$ 's budget constraints for the different cases in periods 1 and 2 read:

$$\begin{cases} c_{1ij,l} = (1 - \tau_{1i,l})(y_{1ij,l} + \varepsilon_{1i}), \text{ low income} \\ c_{1ij,h} = (1 - \tau_{1i,h})(y_{1ij,h} + \varepsilon_{1i} - \hat{y}_{1i}) + (1 - \tau_{1i,l})\hat{y}_{1i}, \text{ high income} \end{cases}$$

$$c_{2ij,v} = (1 - \tau_{2i})(y_{2ij,v} + \varepsilon_{2i}) = (1 - \tau_{2i})(F_i(p_{1i}, e_{i,v}) + \varepsilon_{2i}), \text{ for } v = l, h$$

where  $\tau_{1i}$  ( $\tau_{2i}$ ) is country  $i$ 's income tax rate in period 1 (period 2). In the case of uniform taxation we have  $\tau_{1i,l} = \tau_{1i,h} > 0$ . With differentiated taxation, we have  $\tau_{1i,l} = 0$  and  $\tau_{1i,h} > 0$ .

In the *absence* of an EU assistance program the government budget constraints of country  $i$  in periods 1 and 2 are:

$$\begin{cases} \frac{1}{2} \tau_{1i,l}^n (y_{1i,l} + \varepsilon_{1i}) + \frac{1}{2} \tau_{1i,l}^n \hat{y}_{1i} + \frac{1}{2} \tau_{1i,h}^n (y_{1i,h} + \varepsilon_{1i} - \hat{y}_{1i}) = g_{1i} + p_{1i} + h_{1i} \\ \tau_{2i} \left( \frac{1}{2} y_{2i,l} + \frac{1}{2} y_{2i,h} + \varepsilon_{2i} \right) = g_{2i}^n \end{cases}$$

where the left-hand side of the first expression is the sum of the tax revenues collected in period 1 from the low-income individuals, the low-bracket revenues collected from the high-income people and the high-bracket revenues collected from the high-income people. We assume that the (positive) amounts of (non-growth promoting) public consumption  $g_{1i}$ , growth promoting spending  $p_{1i}$  and healthcare spending  $h_{1i}$  are all fixed, hence they do not carry a superscript for the presence or absence of an EU assistance program, for example because they are all determined by longer-term plans. Hence, the period-1 tax rates  $\tau_{1i,l}^n$  and  $\tau_{1i,h}^n$  adjust to ensure that the period-1 government budget constraint holds. The left-hand side of the second equation are period-2 revenues for given tax rate  $\tau_{2i}$  and average income realisation in period 2, where  $y_{2i,v}$  is the average period-2 income of an individual with education level  $v$ . Public consumption  $g_{2i}^n$  follows automatically from the tax revenues.

Now consider the *presence* of an EU assistance package. The assistance can be spent in different ways, and spending on a specific item may be mandatory or the government may be free in how it spends the assistance. We assume that the size of the assistance spending is given by  $k > 0$ . In the case of mandatory growth-promoting spending, the latter becomes:

$$\tilde{p}_{1i} = p_{1i} + k.$$

In the case of mandatory spending on healthcare, total healthcare spending becomes:

$$\tilde{h}_{1i} = h_{1i} + k.$$

Finally, if the government is free (superscript  $f$ ) in how it allocates the assistance, it chooses an allocation over government consumption, growth-promoting spending and healthcare spending, such that:

$$\tilde{g}_{1i}^f = g_{1i} + \alpha^g k, \tilde{p}_{1i}^f = p_{1i} + \alpha^p k, \tilde{h}_{1i}^f = h_{1i} + \alpha^h k,$$

where  $\alpha^g + \alpha^p + \alpha^h = 1$  and  $\alpha^g, \alpha^p, \alpha^h \geq 0$ .

Assistance spending is financed through contributions by the countries participating in scheme. A country  $i$  pays a given contribution  $q_i$  in period 1 and receives assistance when  $\varepsilon_{1i} = -\bar{\varepsilon}$ , but not when  $\varepsilon_{1i} = \bar{\varepsilon}$ . In view of the assumed infinite number of countries in the EU, and assuming that there is no aggregate borrowing or lending for EU assistance, the budget constraint of the assistance program simply reads:

$$\varphi k = \int q_i di,$$

where the left-hand side is the product of the chance  $\varphi$  of experiencing a bad shock  $-\bar{\varepsilon}$  and the amount of assistance spending  $k$  provided in that case.

There are both poor and rich countries and without loss of generality we assume that both groups of countries are equally large and that within each group the countries are ex ante identical in terms of individuals' incomes. We assume that, for the  $j$  th individual in a country (where  $j$  ranks individuals according to income for a given education level),  $y_{1j,l}^r > y_{1j,l}^p$  and  $y_{1j,h}^r > y_{1j,h}^p$ , where superscript  $r$  ( $p$ ) denotes a rich (poor) country. Hence, a low-income (high-income) individual from a rich country has a higher income than a low-income (high-income) individual from a poor country. Further, we assume that  $g_1^r > g_1^p$ ,  $p_1^r > p_1^p$  and  $h_1^r > h_1^p$ , hence the rich country features higher public spending in all dimensions. We then consider two possible cases: one is when all countries contribute equally to the assistance program, hence  $q_i = \varphi k/z$  for all  $i$ , and the other is when only the rich countries contribute to the assistance program, in which case  $q_i = 0$  if country  $i$  is poor and  $q_i = 2\varphi k/z$  in case country  $i$  is rich. Because the amounts of assistance spending are given, we need to correct for the amount of resources that is wasted, i.e. we need to divide by the degree of efficiency  $z$ .

In the following, we will use superscript "b" to indicate that the period 1 shock is bad, i.e.  $\varepsilon_{1i} = -\bar{\varepsilon}$  and  $\varepsilon_{2i} = \varepsilon_{2i}^b = 0$  ( $\varepsilon_{2i} = \varepsilon_{2i}^b = -\bar{\varepsilon}$ ) in the case of non-persistence (persistence) of the shock, and "g" to indicate that the period 1 shock is good, i.e.  $\varepsilon_{1i} = \bar{\varepsilon}$  and  $\varepsilon_{2i} = \varepsilon_{2i}^g = 0$  ( $\varepsilon_{2i} = \varepsilon_{2i}^g = \bar{\varepsilon}$ ) in the case of non-persistence (persistence). With an assistance program the government budget constraints read in the case of a good shock:

$$\begin{cases} \frac{1}{2}\tau_{1i,l}^{yg}(y_{1i,l} + \bar{\varepsilon}) + \frac{1}{2}\tau_{1i,l}^{yg}\hat{y}_{1i} + \frac{1}{2}\tau_{1i,h}^{yg}(y_{1i,h} + \bar{\varepsilon} - \hat{y}_{1i}) = g_{1i} + p_{1i} + h_{1i} + q_i \\ \tau_{2i}\left(\frac{1}{2}F_i(p_{1i}, e_{i,l}) + \frac{1}{2}F_i(p_{1i}, e_{i,h}) + \varepsilon_{2i}^g\right) = g_{2i}^{ng} \end{cases}$$

and in the case of a bad shock:

$$\begin{cases} \frac{1}{2}\tau_{1i,l}^{yb}(y_{1i,l} - \bar{\varepsilon}) + \frac{1}{2}\tau_{1i,l}^{yb}\hat{y}_{1i} + \frac{1}{2}\tau_{1i,h}^{yb}(y_{1i,h} - \bar{\varepsilon} - \hat{y}_{1i}) = \tilde{g}_{1i} + \tilde{p}_{1i} + \tilde{h}_{1i} + q_i - k = g_{1i} + p_{1i} + h_{1i} + q_i \\ \tau_{2i}\left(\frac{1}{2}F_i(\tilde{p}_{1i}, e_{i,l}) + \frac{1}{2}F_i(\tilde{p}_{1i}, e_{i,h}) + \varepsilon_{2i}^b\right) = g_{2i}^{yb} \end{cases}$$

where in the case of a good shock we make use of fact that period 2 government spending is the same as in the absence of program (hence, equal to  $g_{2i}^{ng}$ ) and where, consistent with the notation above, the superscript "y" denotes the presence of an assistance program of one of the three types presented above. Since the received assistance spending is used in its entirety in period 1, the right-hand side of the period 1 budget constraint is the same both in the case of a good shock and the case of a bad shock.

With this in hand, we can posit a number of hypotheses based on comparisons that are written out in Appendix C. Since in the above expressions we do not restrict the period 2 shock  $\varepsilon_{2i}$ , the hypotheses stated below hold irrespective of whether the period 1 shock is temporary, hence  $\varepsilon_{2i} = 0$ , or whether it is permanent, hence  $\varepsilon_{2i} = \varepsilon_{1i}$ .

Our hypotheses are based on comparing expected utility in the presence of an assistance program with expected utility in the absence of an assistance program or on comparing utilities under different assistance programs. We refer to the preference for having a program or for having some specific program instead of some other program as in terms of "likelihood", where the preference for one versus the other should be read as including both weak and strict preference.<sup>9</sup> In this connection we assume a continuous probability distribution of the individuals in each country over the parameters  $(\gamma_{ij}, \delta_{ij})$ . These parameters are statistically independent of all other stochastic variables in the model. This yields the following hypotheses that we can group in blocks.

Hypotheses related to European attachment.

1. An increase in individual European attachment, i.e. an increase in each of the parameters  $(\gamma_{ij}, \delta_{ij})$ , increases the likelihood that an assistance program is preferred to no program.
2. The stronger is an individual's European attachment, the more likely this individual is to prefer an assistance program that allows for the possibility that each country can ex-post and on net benefit from the program to there being no assistance program.
3. The stronger an individual's European attachment, the more likely this individual is to prefer a program expected to shift resources from rich to poor countries over the prospect of no program.
4. The stronger is the individual's European attachment, the more positive is the effect of the introduction of conditions ( $z$  is raised) on the likelihood that an assistance program is preferred to no program.

Hypotheses related to income and education <sup>10</sup>

<sup>9</sup> For example, in the case of Hypothesis 1 below, a given change in  $(\gamma_{ij}, \delta_{ij})$  for some individual may be insufficient for her to switch her preference from one option to the other option regardless of the realisation of the other shocks, which is why weak preferences are allowed for.

<sup>10</sup> Hypotheses related to education are formulated for utility comparisons of individuals with  $\omega_{ij,v} = 0$ .

5. For high-income individuals the introduction of conditions ( $z$  is raised) raises the likelihood that the individual prefers an assistance program to no program. If the tax burden falls entirely on high-income individuals, then the increase in the likelihood that they prefer an assistance program is strictly larger than for low-income individuals.
6. For highly-educated individuals the introduction of conditions ( $z$  is raised) raises the likelihood that the individual prefers an assistance program to no program. If the tax burden falls entirely on high-income individuals, then the increase in the likelihood that highly-educated individuals prefer an assistance program is strictly larger than for low-educated individuals.

Hypothesis related to health worries.

7. Ceteris paribus, older individuals or individuals with more health worries are more likely to prefer an assistance program with mandatory healthcare spending to no assistance program than are younger individuals or individuals with fewer health worries.

Hypothesis 1 is based on taking the utility difference between having an assistance program and no program. For each individual, this difference features the term  $(\gamma_{ij} + \delta_{ij}z)w$ . Hence, holding everything else constant, an increase in European attachment, i.e. an increase in each of the parameters  $(\gamma_{ij}, \delta_{ij})$ , makes support for the assistance program more likely. Hypothesis 2 follows immediately from the fact that the assistance package automatically produces a shift in resources from countries hit by a good shock to countries hit by a bad shock. Individuals with higher European attachment are more likely to prefer such an assistance package to no package, in case the assistance package results into a shift of resources away from them.<sup>11</sup> Now, turn to Hypothesis 3, and note that when all countries pay the same contribution, there is no ex ante redistribution among countries of a program, because all countries benefit with the same probability from assistance out of the program. However, when only rich countries contribute to the scheme, there will be an ex-ante redistribution from rich to poor countries, since all countries continue to feature the same probability of receiving assistance. Higher European attachment makes it more likely that a given individual, whether from a rich or poor country or whether on low or high income, benefits on net from the presence of an assistance program that redistributes from rich to poor countries. Hence, Hypothesis 3. Hypothesis 4 follows from differentiating with respect to  $z$  the difference in expected utility between a program and no program. The marginal effect is  $\delta_{ij}w$ , which is more positive the higher is  $\delta_{ij}$ .

Hypotheses 5 and 6 follow immediately from the fact that high-income and highly-educated individuals see their period 1 (marginal) tax rate fall with an increase  $z$ , while nothing else changes for them. The second part of the two hypotheses follows from the fact that if the tax rate on low incomes is zero then low-income and low-educated individuals are indifferent about the introduction of conditions.<sup>12</sup>

Hypothesis 7 results from the utility effect of introducing a program with mandatory healthcare spending being more positive for older individuals and individuals with more health worries. This follows from  $\pi_j(\tilde{h}_{1i}) - \pi_j(h_{1i})$  being higher for older individuals and individuals with more health worries.

In the following, we will explore whether our findings are consistent with the various hypotheses formulated above.

### 3. Description of the experiment

Our experiment combines a framing experiment with a “conjoint experiment”. The latter is a randomised survey experiment, which should be distinguished from a regular survey in which respondents are directly asked about their views on individual policy items. By contrast, our conjoint experiment presents our respondents with policy packages, i.e. combinations of features on a set of policy dimensions.

The experiment was conducted via an online platform by the firm IPSOS in late March and beginning of April 2020 in five eurozone countries – France (FR), Germany (DE), Italy (IT), the Netherlands (NL) and Spain (ES). Respondents completed the experiment in their own language, including Catalan. The possibility of a central fiscal capacity is of particular interest for the eurozone, because its members have lost monetary policy as a stabilization tool. Our sample countries were chosen with a view to the differences in their economic structure and their usual political stance on EU assistance packages. Moreover, these are the five largest countries of the eurozone. Including more countries in the experiment was not possible because of the limited budget.

For each sample country we have 2000 respondents, hence 10,000 in total. We achieve representativeness of each country’s

<sup>11</sup> Notice that the case in which ex-post redistribution would not be allowed, would call for some offsetting period-2 tax to be paid into the capacity by the country that has benefited from the assistance in period 1. The revenues of this tax would then be shared over the countries that have not benefited from the support in period 1. We do not work out this case here, because it demands extra space without generating much additional insight. Of course, an increase in the parameters  $(\gamma_{ij}, \delta_{ij})$  would make it more likely that an individual prefers the program described in the main text also to this alternative program. A similar logic holds for Hypothesis 3.

<sup>12</sup> Whether the higher educated are more likely to support a program with mandatory growth promoting spending cannot be unambiguously deduced from the model assumptions and, hence, no hypothesis is formed to that extent. The answer depends on the tax rate that the poor face. If it is relatively low, the poor can be expected to contribute little to the financing of the program, while they enjoy the benefit of their higher productivity under the program. Moreover, the comparison in terms of likelihood to be in favour of such a program depends on  $\partial F_i / \partial p_{1i} \partial e_{ij}$ , of which the sign can be positive or negative. The higher educated may be better able to take advantage from growth-promoting when it comes to boosting productivity, but it may also be the other way round: the effect on productivity of more growth-promoting spending may be highest for those who are least educated. For example, an alphabetic person’s productivity may benefit enormously from an simple language course.



population in terms of education, age, gender, profession and regional distribution; moreover, we apply a quota to the respondents' equivalised income distribution. The discrepancy between the full population and the sample with respect to these characteristics is generally small – an overview table is available up on request.

We start by presenting respondents with one of two possible framing descriptions of an economic policy problem to be addressed by a new EU policy package. Appendix A presents the exact texts. The first frame lays out a temporary decline in the economy, which could be a severe business cycle deterioration or a temporary hit to the economy due to for example a pandemic. The second frame presents a permanent decline in the economy, for example caused by the permanent shrinkage of an important business sector.

The design of the conjoint experiment strikes a balance between the need to present realistic policy packages that include the most important elements likely constituting such packages and the need for a presentation simple enough to be understood by the respondents. As a result, we present our respondents with pairs of randomly generated policy packages composed of the six dimensions listed in Table 1.<sup>13</sup> The table reports for each dimension the questions and the different possible answers constituting the actual treatments, whose randomization thus allows for robust causal inference. The frames aim to lay out the economic context and the assistance packages as neutrally as possible, in order to prevent biasing respondents into a particular direction. Hence, we do not explicitly mention the “pros” and “cons” of the packages.

The first dimension addresses whether receiving support should be subject to budgetary conditions. Such conditions would typically be imposed to alleviate potential moral hazard. Conditionality is one of the most contentious elements in the discussion about access to assistance to, for example, the funds provided by NextGenEU or the ESM. The second dimension concerns the potential presence of a restriction on how the assistance money is spent. The baseline is no such restriction, while the alternatives capture mandatory spending in important areas, such as on growth-promoting causes like education and transport and infrastructure versus unemployment benefits or healthcare. The third and sixth dimensions address the potential role of the European Commission, in particular which degree of “intrusion” by the Commission is acceptable, and how to deal with possible non-compliance with the program's conditions. Dimension four addresses the question whether the program is allowed to or has to be redistributive. This question thus touches upon the worries of some countries that they might end up in a transfer union in which they are forced to permanently support other countries. Finally, dimension five turns to the longer-run financing of the assistance program, possibly requiring a permanent increase in taxes. As is standard for this type of survey experiment, the baseline alternative of this dimension is to have unchanged long-run taxes, which enables us to explore how support for the program is affected by the introduction of a cost of the program either to the population at large or only to the rich.

We confront each correspondent with three pairs of randomly drawn policy packages consisting of a combination of six answers, one for each dimension. Appendix B (reproduced from Beetsma et al., 2022) provides an example of a screenshot seen by respondents. We ask the respondent to identify the preferred package out of the pair shown on the screen, which yields binary choice information: 0 = judged as worse than the alternative, while 1 = judged as better than the alternative. We also ask the respondent to rate how much (s)he likes or dislikes each of the two packages, before moving to the next pair. Specifically, the respondent has to assign an absolute-level rating on a 5-point Likert scale ranging over “strongly in favour”, “somewhat in favour”, neutral”, “somewhat against” and “strongly against”. Hence, for each package we know whether it was chosen or not, its rating, and its composition in terms of the features of each of the dimensions.

Following the experimental part of the survey with the presentation of the policy packages, we ask the respondents a large number of individual-specific questions, ranging from socioeconomic status, political preferences, concerns about future economic and societal developments, concerns about covid to attachment to the Europe. Finally, we subject each respondent to an attention check, which is failed by about 15 percent of the respondents. The check poses a question presenting different possible answers, but asking the respondent to tick one specific answer. The attention check is a common way to filter out individuals who do not read the questions or the answers carefully. Robustness analysis shows that the outcomes for the full sample do not differ in any meaningful way from those for the subsample that excludes those who failed the attention check.

#### 4. The econometric model

We deploy a simple regression model, shown in Equation (2). In this baseline specification, the dependent variable is either whether the package is chosen or supported, and the independent variables are fixed effects, the settings of the dimensions of the treatment, a set of individual-level control variables and interaction terms of the dimensions of the treatment and the individual-level controls:

$$\begin{aligned} OUTCOME_{i,j,k,f} = & \alpha_j + \varphi_f + \sum_f \Delta_f \left( \beta_{1f} BUDGETCOND_{i,j,k,f} + \beta'_{2f} POLAREA_{i,j,k,f} + \beta'_{3f} COMROLE_{i,j,k,f} + \beta'_{4f} REDISTR_{i,j,k,f} \right. \\ & \left. + \beta'_{5f} TAX_{i,j,k,f} + \beta_{6f} FINE_{i,j,k,f} \right) + \gamma' INDCHAR_{i,j,k,f} + \delta' DIM_{i,j,k,f} \otimes INDCHAR_{i,j,k,f} + \rho' CONTROL_{i,j,k,f} + \varepsilon_{i,j,k,f} \end{aligned} \quad (2)$$

The outcome of the respondent's assessment of the package,  $OUTCOME_{i,j,k,f}$ , is either  $CHOOSE_{i,j,k,f}$ , a binary variable that indicates whether (from the presented pair) the package is chosen ( $CHOOSE_{i,j,k,f} = 1$ ) or not ( $CHOOSE_{i,j,k,f} = 0$ ), or  $SUPPORT_{i,j,k,f}$ , also a binary variable, which is 1 in case the package is supported, i.e., if it is rated “strongly in favour” or “somewhat in favour”, and 0, otherwise, i.e. if it is rated “neutral”, “somewhat against” or “strongly against”. Hence, we take a conservative approach by counting “neutrals” as against. Parameter  $\alpha_j$  is a country-specific constant (with  $\alpha_1 = 0$ ),  $\varphi_f$  is a frame-specific constant (with  $\varphi_1 = 0$ ; here,  $f = 1$  for a

<sup>13</sup> More elaborate motivation for including these specific dimensions is found in Beetsma et al. (2022).

**Table 1**

Conjoint experiment – questions for each dimension and the possible answers.

(1) Are there budgetary policy conditions that countries must fulfil to get support?	<ul style="list-style-type: none"> <li>- No conditions</li> <li>- Countries should reduce their public debt in good economic times; otherwise they will not receive support in bad times.</li> </ul>
(2) Are there restrictions on the spending areas on which the budgetary support may be used?	<ul style="list-style-type: none"> <li>- No restriction. Participating countries may use budget support to spend on any policy or purpose.</li> <li>- Yes. Budget support must be used for spending on education.</li> <li>- Yes. Budget support must be used for spending on unemployment benefits.</li> <li>- Yes. Budget support must be used for spending on investment in transport and infrastructure.</li> <li>- Yes. Budget support must be used to protect the banking system and depositors.</li> <li>- Yes. Budget support must be used for spending on healthcare.</li> </ul>
(3) What is the role of the European Commission in the management of the programme?	<ul style="list-style-type: none"> <li>- No role: monitoring is in the hands of national authorities</li> <li>- The European Commission monitors the national implementation of the programme</li> <li>- The European Commission recommends specific actions to national governments to address their economic problems, and it monitors the implementation of the programme.</li> </ul>
(4) May some countries receive more support from the programme than they pay into it?	<ul style="list-style-type: none"> <li>- No, over the long run countries cannot receive more support from the programme than they pay into the programme.</li> <li>- Yes, over the long run countries can receive more support from the programme than they pay into the programme</li> <li>- Yes, over the long run, poor countries will receive more support from the programme than they pay into it, while rich countries will receive less support from the programme than they pay into it.</li> </ul>
(5) What is the long-term impact on the taxes that people in your country have to pay?	<ul style="list-style-type: none"> <li>- No impact over the long-run: the level of taxes stays the same in your country</li> <li>- Over the long run, taxes increase by 0.5% of income for everyone in your country</li> <li>- Over the long run, taxes increase by 1% of income only for the rich in your country</li> </ul>
(6) Are there any extra penalties for governments that violate the conditions of the European budgetary support programme?	<ul style="list-style-type: none"> <li>- No automatic termination of budgetary support, but reasons for non-compliance will be examined</li> <li>- Budgetary support shall be terminated and countries pay an additional fine.</li> </ul>

temporary shock and  $f = 2$  for a permanent shock), dummy  $\Delta_f$  is 1 if the frame is  $f$  and zero otherwise,  $\Sigma_f$  sums over  $f$ , while  $(i, j, k, f)$  indexes the  $k$ th package ( $k = 1, \dots, 6$ ) presented to individual  $i$  of country  $j$  with frame  $f$ . The regression in addition controls for the “conjoint pair”, the round (first, second or third) in which the respondent sees the policy package. The dimension-related variables are  $BUDGETCOND_{ij,k,f}$ , a dummy variable equal to 1 if budgetary conditions are present;  $POLAREA_{ij,k,f}$ , a vector of five dummy variables equal to 1 when spending is mandatory on the area indicated;  $COMROLE_{ij,k,f}$ , a vector of two dummies taking a value of 1 when the Commission monitors, respectively when it monitors and makes recommendations;  $REDISTR_{ij,k,f}$ , a vector of two dummies taking a value of 1 when long-term redistribution to any participating country is allowed, respectively, when redistribution from richer to poorer countries is explicitly mandated;  $TAX_{ij,k,f}$ , a vector of two dummies taking a value of 1 when taxes go up by 0.5% for everyone, respectively when they go up by 1% for the rich only; and  $FINE_{ij,k,f}$ , a dummy equal to 1 when non-compliance leads to termination of the program and a fine. Hence, for each possible answer to each dimension-related question in Table 1, except for the first one (the baseline), there is a dummy variable. For each dimension the coefficient estimate of each dummy is the effect *relative* to the first (baseline) feature on  $OUTCOME_{ij,k,f}$  of implementing the specific feature corresponding to the dummy. The coefficients of our experimental treatments (in bold in (2)) capture a causal effect on support thanks to their random assignment. Further,  $INDCHAR_{ij,k,f}$  is a set of individual-level characteristics and  $DIM_{ij,k,f}$  stacks in one column vector the sets of dummies corresponding to the possible features of all six dimensions in Table 1. In our baseline specifications we also model the interaction between key individual-level respondent characteristics  $INDCHAR_{ij,k,f}$  with each element of  $DIM_{ij,k,f}$ . The interaction is denoted by  $\otimes$ , defined as the operator that takes the product of each element of  $DIM_{ij,k,f}$  with each element of  $INDCHAR_{ij,k,f}$  and stacks the resulting products into a column

vector. Finally,  $CONTROL_{i,j,k,f}$  is a set of additional control variables and  $\varepsilon_{i,j,k,f}$  is an error term. Further,  $\beta_1, \dots, \beta_6, \gamma, \delta$  and  $\theta$  are scalars or column vectors of appropriate dimensions. Equation (2) is the general formulation of the various regressions in this paper, though we also consider simpler formulations without the interactions and focused instead on key subsamples based on individual-level characteristics (e.g. low-income respondents versus high-income respondents).<sup>14</sup> We estimate equation (2) with OLS and standard errors clustered at the individual level.

## 5. Descriptive analysis and experimental findings

### 5.1. Descriptive analysis

Beetsma et al. (2022) provide a descriptive overview of the main outcomes. Here, we merely note that support for the shown policy packages is generally quite large: if we exclude neutral ratings, even in the most sceptic country, the Netherlands, almost 60% of the packages are supported (i.e. rated as “in favour” or “strongly in favour”), while in the country where support is highest, Spain, 70% of the packages are supported.<sup>15</sup> Importantly, this substantial support is the result of randomizations over all possible treatments over the different dimensions. Hence, many of the packages seen by respondents may contain one or more undesirable elements to them. In particular, the descriptive stage does not yet select specific packages that can count on broader support than other packages. Overall, the strong support for EU assistance programs in general suggests that it is possible to design programs that can count on sufficient support in each of our sample countries. This is confirmed in Beetsma et al. (2022).

### 5.2. Purely experimental results

In this paper we are specifically interested in the individual-level effects on the outcomes, i.e. the direct effects of the individual-level variables included as controls and the effects of the interactions of the individual-level variables with the dimension features captured by the estimates of  $\delta$  in (2). However, before turning to the effects of the individual-level variables, we repeat for completeness the baseline experimental estimates (hence, setting  $\delta = 0$  and excluding the individual-level variables as controls) of Beetsma et al. (2022), imposing that the dimension features have identical effects for both frames, i.e.  $\beta_{11} = \beta_{12}$ , etcetera. The so-estimated treatment effects are the averages of the responses across the different subgroups in society.

Fig. 1, which is reproduced from Beetsma et al. (2022), reports the resulting Average Marginal Component Effects (AMCEs) for  $SUPPORT_{i,j,k,f}$  or  $CHOOSE_{i,j,k,f}$  as the dependent variable. Such AMCEs are useful for gauging predicted marginal changes in voter/respondent positions (Hainmueller et al., 2014). They clarify how individual package attributes might alter *marginal* support for a particular feature of EU fiscal capacity package. Upon clarifying such marginal component effects one can then consider support for how combinations of programme characteristics combine to affect predicted support using further counterfactual analysis, such as mean marginal effects discussed below.<sup>16</sup>

Fig. 1's AMCEs, hence, capture how budgetary conditions raise the likelihood that a package is supported by about 7 percentage points, and the likelihood of being chosen from a pair by about 10 percentage points, compared to packages with no budgetary conditions. Regarding the second dimension, the baseline of no spending restriction only dominates mandatory spending on protecting the banking system and depositors. Besides the latter, and except for mandatory spending on unemployment benefits, the other possible mandatory spending causes dominate the option of no restrictions on spending. In particular, mandatory spending on healthcare has a strong positive effect on the appreciation of a package. One may suspect this to be the result of the timing of the experiment, during or just before the peak of the corona crisis. However, in a test trial we ran the same experiment on a sample of Dutch respondents in October 2019, so before the corona outbreak. There was also a strong preference for mandatory spending on healthcare at the time, although significance of the result was weaker due to the relatively small sample size. A strong positive effect on support also obtains for monitoring (and making recommendations) by the Commission and for redistribution, whether ex-post through chance or whether mandatory from rich to poor countries. Having to pay for the program through an increase in long-run taxation for everyone strongly undermines the appreciation for the package. The positive effect of redistribution may reflect the

<sup>14</sup> In this simpler split-sample set up, for a given sub-sample an individual  $i$ 's estimated support is given by the following equation, where hats above the coefficients denote their estimated values:  $SUPPORT_{i,j,k,f} = \hat{\alpha}_j + \hat{\varphi}_f + \sum_f \Delta_f (\hat{\beta}_{1f} BUDGETCOND_{i,j,k,f} + \hat{\beta}_{2f} POLAREA_{i,j,k,f} + \hat{\beta}_{3f} COMROLE_{i,j,k,f} + \hat{\beta}_{4f} REDISTR_{i,j,k,f} + \hat{\beta}_{5f} TAX_{i,j,k,f} + \hat{\beta}_{6f} FINE_{i,j,k,f}) + \hat{\rho}' CONTROL_{i,j,k,f}$ .

<sup>15</sup> The broad public support may seem remarkable in view of the rather confrontational positions taken by politicians from different countries (Blesse et al., 2021). Beetsma et al. (2022) suggest that the respondents' views are largely “pre-political”, i.e. based on respondents' own reasoning rather than shaped by a political debate that seeks confrontation. Another hypothesis is that the corona-crisis itself has made individuals more altruistic towards fellow-EU citizens, for which there seems to be evidence from the experiment in Aksoy et al. (2021). While corona may indeed have promoted altruism, we suspect that the moment of our experiment was too short after the start of the crisis for this to explain the rather broad support for our assistance packages. Moreover, in a trial experiment on only Dutch participants conducted in November 2019, so before corona, we found similarly broad support (see Beetsma et al., 2022).

<sup>16</sup> Abramson et al. (2022) and Leeper et al. (2020) clarify the limits of focusing on average marginal component effects, underscoring the importance of reporting mean marginal effects and other counterfactual modeling to clarify how support for components aggregate into predicted support for package combinations, in our case policy proposals with a particular combination of policy-design characteristics.

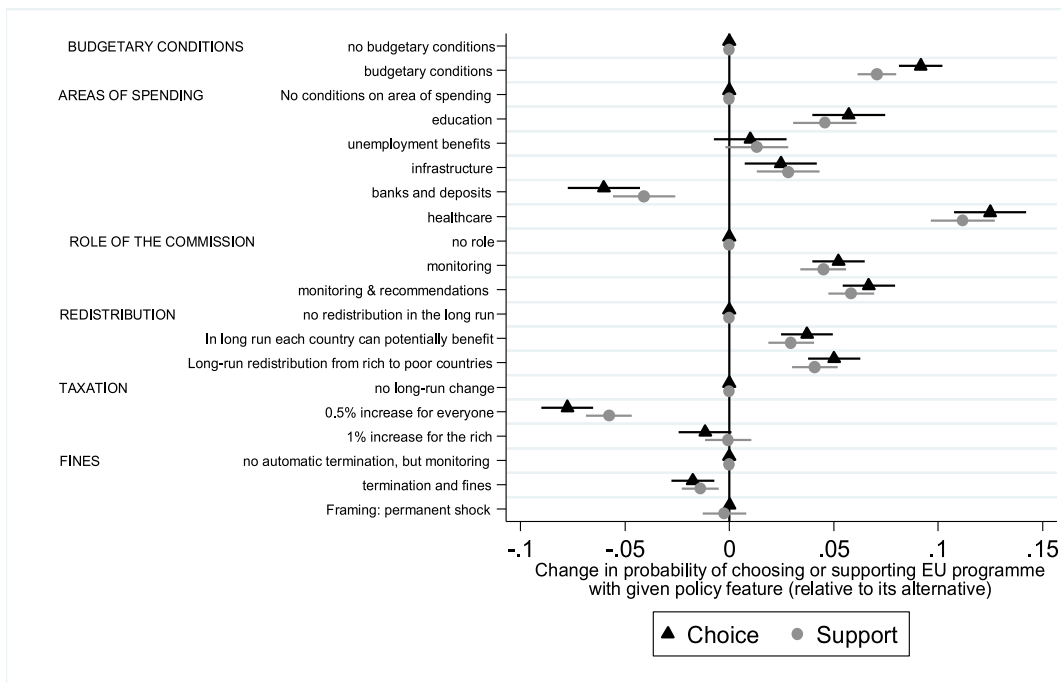


Fig. 1. EU assistance program – AMCE plot full sample of respondents. Note: horizontal line pieces depict the 95% confidence intervals. Reproduced from Beetsma et al. (2022).

survey's timing, when parts of the EU were visibly suffering from the pandemic and other parts could have reasonably expected to become victim soon. Finally, termination of the program in combination with a fine in response to non-compliance with the conditions lowers the attractiveness of the program.

## 6. Individual-level effects

We turn now to the role of individual-level characteristics on the assessment of an EU assistance program. When looking at the roles of respondent-level characteristics, we focus on the Support variable rather than the Choice variable. The package support-based variable measures whether respondents accept or reject a package (each package judged separately on a 5-point Likert scale), whereas the choice-based measure codes packages as chosen even when respondents choose them as packages they least dislike (relative to the alternative shown). Hence, the Support variable is substantively more precise when interacted with variables that are theoretically linked not just with preferences of one package over the other, but with actual support or rejection of fiscal integration (for instance, the degree of a respondent's Euroscepticism).<sup>17</sup> We focus on the binary transformation of the Support variable throughout the paper, allowing us to properly account for individual level factors and their influence on support or opposition to fiscal integration.

In doing so, we discuss the results in four steps. The first concerns the role of the socioeconomic factors. Second, since the survey was taken in the midst of the corona crisis, we explore the role of corona worries. Third, we investigate how the stated European attachment affects the appreciation of the various possible assistance packages. Fourth and finally, we probe the extent to which the effects of socioeconomic factors are separate from or can instead be reduced to the role of European attachment – given the possibility that individual economic risks like poverty or unemployment might undergird attachment. We will see below that these steps yield patterns in line with the predictions of our theoretical framework, particularly that the effect of European attachment on the judgment of the policy packages is significant and also *not* affected by individual socioeconomic characteristics or the effects of corona worries.

Table 2 below reports the main results. Column (1) tabulates for comparison the estimates of the purely experimental variant of the model ( $\delta = 0$ ) – with results already summarised in Fig. 1 above. The remaining columns, then, summarise the regression results of the interaction between dimension values of packages shown to respondents on the one hand and the respondent's individual-level moderating characteristic on the other: income (model 2); education (model 3); covid worry (model 4); and European attachment

<sup>17</sup> To make sure that the level of support identified in the paper is not an artefact of the experiment, we conduct a robustness check (Appendix D3, not for publication) focused on an alternative specification of 'support-and-choose', where we recode the choice variable as '0' for those packages that a respondent chose as least disliked but towards which respondent was 'neutral', 'somewhat against' or 'strongly against'. We thank an anonymous reviewer for recommending this robustness test.

**Table 2**  
Estimates parsimonious models.

VARIABLES	(1) baseline	(2) income		(3) education		(4) covid-19 worries		(5) European attachment	
		main effects	interactions	main effects	interactions	main effects	interactions	main effects	interactions
Budgetary conditions	0.0706*** (0.00469)	0.0527*** (0.0127)	0.00920 (0.00616)	0.0596*** (0.0103)	0.00294 (0.00250)	0.106*** (0.0213)	-0.00436* (0.00254)	0.0458*** (0.0108)	0.00421** (0.00168)
Education	0.0459*** (0.00776)	0.0429** (0.0211)	0.00157 (0.0102)	0.00692 (0.0172)	0.0105** (0.00416)	0.111*** (0.0356)	-0.00792* (0.00423)	0.0334* (0.0171)	0.00210 (0.00272)
Unemployment benefits	0.0130* (0.00768)	0.0404* (0.0206)	-0.0142 (0.0101)	0.0301* (0.0171)	-0.00445 (0.00411)	0.0507 (0.0351)	-0.00460 (0.00419)	0.0207 (0.0176)	-0.00136 (0.00275)
Infrastructure	0.0282*** (0.00765)	0.0400* (0.0208)	-0.00613 (0.0101)	0.0106 (0.0169)	0.00468 (0.00406)	0.0513 (0.0350)	-0.00279 (0.00417)	0.0420** (0.0172)	-0.00235 (0.00268)
Banks & deposits	-0.0409*** (0.00756)	-0.0182 (0.0207)	-0.0119 (0.0100)	-0.0226 (0.0169)	-0.00485 (0.00402)	0.0230 (0.0343)	-0.00779* (0.00409)	-0.00629 (0.0172)	-0.00595** (0.00269)
Healthcare	0.112*** (0.00781)	0.0989*** (0.0213)	0.00679 (0.0103)	0.103*** (0.0173)	0.00247 (0.00417)	0.0971*** (0.0371)	0.00183 (0.00440)	0.107*** (0.0178)	0.000723 (0.00279)
Monitoring	0.0452*** (0.00558)	-0.000209 (0.0151)	0.0235*** (0.00734)	0.0240* (0.0124)	0.00570* (0.00299)	0.0993*** (0.0251)	-0.00657** (0.00298)	-0.0106 (0.0127)	0.00944*** (0.00201)
Monitoring & recommending	0.0584*** (0.00559)	0.0167 (0.0150)	0.0214*** (0.00728)	0.00216 (0.0123)	0.0150*** (0.00294)	0.0747*** (0.0252)	-0.00198 (0.00302)	0.00950 (0.0129)	0.00826*** (0.00201)
Redistribution (all countries)	0.0296*** (0.00554)	0.0294* (0.0151)	0.000120 (0.00738)	0.0231* (0.0122)	0.00174 (0.00295)	-0.00168 (0.0258)	0.00382 (0.00307)	-0.00380 (0.0124)	0.00561*** (0.00194)
Redistribution (from rich to poor)	0.0411*** (0.00559)	0.0279* (0.0153)	0.00688 (0.00739)	0.0355*** (0.0124)	0.00149 (0.00301)	-0.0311 (0.0257)	0.00878*** (0.00307)	-0.0120 (0.0124)	0.00895*** (0.00195)
0.5% increase for everyone	-0.0575*** (0.00554)	-0.0756*** (0.0150)	0.00933 (0.00731)	-0.0725*** (0.0122)	0.00401 (0.00293)	-0.00873 (0.0261)	-0.00592* (0.00310)	-0.0631*** (0.0126)	0.000932 (0.00197)
1% increase for the rich	-0.000396 (0.00566)	0.0213 (0.0155)	-0.0112 (0.00758)	-0.0148 (0.0125)	0.00384 (0.00303)	0.00434 (0.0264)	-0.000551 (0.00314)	0.00114 (0.0129)	-0.000292 (0.00200)
Termination and fines	-0.0140*** (0.00451)	-0.0224* (0.0122)	0.00444 (0.00596)	-0.0256** (0.0100)	0.00305 (0.00240)	0.0334 (0.0208)	-0.00575** (0.00248)	0.0125 (0.0101)	-0.00449*** (0.00160)
Education (9 categories)	0.00629*** (0.00149)	0.00630*** (0.00149)		-0.00868* (0.00455)		0.00629*** (0.00149)		0.00628*** (0.00149)	
income (10 categories)	0.000674 (0.00372)	-0.0189* (0.0114)		0.000692 (0.00373)		0.000673 (0.00373)		0.000674 (0.00373)	
Covid-19 worry (10 categories)	0.00492*** (0.00166)	0.00493*** (0.00166)		0.00493*** (0.00166)		0.0143*** (0.00476)		0.00492*** (0.00166)	
European attachment (10 categories)	0.0106*** (0.00108)	0.0106*** (0.00108)		0.0106*** (0.00108)		0.0106*** (0.00108)		0.000960 (0.00311)	
Constant	0.192*** (0.0199)	0.230*** (0.0287)		0.248*** (0.0255)		0.115*** (0.0415)		0.250*** (0.0260)	
Observations	44,850	44,850		44,850		44,850		44,850	
R-squared	0.031	0.032		0.032		0.032		0.032	

Notes: (i) Dependent variable for all models (1–5): support for package ( $SUPPORT_{i,j,k,f}$ ). (ii) Estimation with OLS and standard errors clustered at the individual level, neutrals as against, controls added and inattentives excluded. (iii) Extra controls for age, gender, pairing, union membership, country, type of shock, unemployment and social-policy dependence included but not shown. See [Appendix D1](#), unabridged [Table 2](#), for full results.

(model 5). The role of these variables was already briefly touched upon in Beetsma et al. (2022, Subsection 4.6). The regression models shown here are special cases of (2) in which in each regression  $INDCHAR_{ij,k,f}$  contains the different levels of the specific variable under consideration. We consider the interaction with one individual characteristic at a time. In addition, we include  $INDCHAR_{ij,k,f}$  directly in the regression. For each model of how a given individual characteristic moderates the role of a given package dimension, models 2–5 in Table 2 show the key results for the dimension values and key individual-level characteristics in one column, and a second column showing the interaction terms capturing how each individual-level characteristic moderates the effect of the dimension values on support for an EU fiscal capacity. For these models, the first column coefficients capture the conditional effect of a given dimension (conditional upon the individual-level characteristic being ‘0’), and the second column showing the direction of how much that former dimension coefficient goes up or down with rising values of the individual-level characteristic (Brambor et al., 2006; Franzese and Kam, 2009). The full results for other controls can be found in Appendix D1 (not for publication), which reports the unabridged version Table 2.

While Table 2 summarises the results based on interactions between individual moderators and each program dimension for the full sample of packages-respondents, clarification of the substantive meaning of the interactions is easiest to visualise by comparing the AMCEs for subsamples of respondents based on lower versus higher values of the key moderating respondent attributes in our analysis. We can consider, hence, the key results based on both the full-sample regression summarised in Table 2 as well as AMCE plots based on split samples in separate figures – for income, education, corona worries and European attachment.<sup>18</sup>

### 6.1. Socioeconomic and other factors

The socioeconomic factors we consider are income, education, unemployment status and whether an individual lives on benefits. We consider in addition the roles of age, gender and membership of a trade union. The format of the variables is as follows. Age is divided into three categories. The first, baseline category are those below 35 years, the second are those aged 35–54, while the third are those of 55 and older. Also education consists of three levels, with the lowest education level treated as the baseline. Income is a continuous variable, while gender, unemployment, trade union membership and being on benefits are variables with two possible values.

The results on the role for individual income are summarised in Table 2’s two columns for model (2). The direct effect of higher income on support for an assistance capacity is not significant. Regarding the interactions of the dimension features the following findings stand out. First, the higher the income, the stronger the support for packages with Commission monitoring or Commission monitoring plus guidance, which may provide support for Hypothesis 5 of our theoretical framework. Higher-income individuals may perceive themselves as more likely contributors to the financing of the program. The absence of monitoring (and guidance) would lead to more assistance funding, because countries may end up more frequently eligible for funding (moral hazard) and because governments may spend assistance funding less prudently, requiring more assistance funding to overcome economic troubles. Monitoring (and guidance) would reduce the expected cost to those facing the highest tax rate, i.e. those on high incomes. When it comes to how the support is spent, mandating spending on unemployment benefits makes a package significantly less attractive among richer respondents. While leaving the government free to spend the assistance allows spending on areas that high-income people care about, unemployment spending is less likely to benefit higher-income respondents. Spending on banks and deposits also makes a package significantly less attractive with higher income, while a flat tax increase makes a package more attractive with higher income.

Fig. 2 clarifies the substantive marginal meaning of these results in terms of average marginal component effects (AMCEs) – leaving our reporting of how predicted marginal component effects might combine into support for particular mixes of policy-design characteristics to later discussion (in Section 7 below). The Figure summarises the results after splitting our sample into three groups (low, middle and high income) and comparing the AMCEs for low and high incomes. Low income refers roughly to income below mean income minus one standard deviation, while high income refers to income above mean income plus one standard deviation. Concretely, since income is on a 1-to-10 point scale, categories 1–3 are “low income” and categories 9 and 10 are “high income”. Fig. 2 shows the AMCEs of the dimension options for high- and low-income respondents. To read the figure, take as an example Dimension 1 on the budgetary conditions. The differences in AMCEs between the two income groups are statistically significant in the case of Commission monitoring and Commission monitoring and guidance, and close to significance for mandatory healthcare spending and redistribution to poor countries. All these features increase the support for a package from high-income individuals relative to the support from low-income individuals. Low-income individuals are about 3% (between 1.5% and 5%) more likely to support a package with such monitoring and guidance than a package without monitoring, whereas high-income respondents are more than twice as likely to do so – an average of 7.5% (between 6% and 9%) more likely to support monitoring and guidance than no such Commission oversight. The effect of the interaction with redistribution to poor countries runs seems at odds with the hypothesis individuals care only about their personal finances.

Next, we can turn to the role of education. In the full regression set up, this is captured in model (3) of Table 2. Individuals are more likely to support an assistance package the higher is their education level. Compared to the case of no spending restriction, support for a package with mandatory spending on education, is higher the more highly-educated an individual is.<sup>19</sup> Further, the positive effect on support of monitoring or monitoring plus guidance by the Commission is significantly increasing in an individual’s education level,

<sup>18</sup> Small differences between the two sets of results may sometimes arise.

<sup>19</sup> In terms of our theoretical framework, this amounts to a situation with a sufficiently high cross-derivative  $\partial F_i / \partial p_{1i} \partial e_{ij}$ . See Footnote 12.

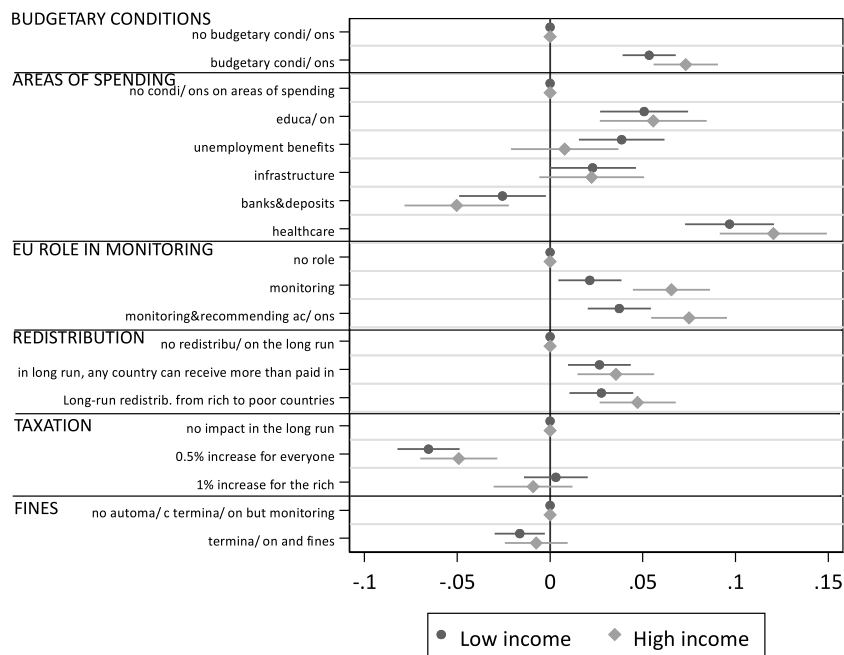


Fig. 2. AMCEs of high-versus low-income respondents

Notes: (i) Dependent variable is *SUPPORT*, with value of 1 for “strongly in favour” and “in favour”, and value of 0, otherwise. (ii) Horizontal line pieces denote 95% confidence intervals.

which may provide support for Hypothesis 6 of our theoretical framework. Splitting the sample into those with low, middle and high education, Fig. 3 clarifies the interactions of the dimension options with the high-education versus low-education groups. A preview of these results is already found in Beetsma et al. (2022, Subsection 4.6). Compared to the low educated, support for packages with Commission monitoring or Commission monitoring plus guidance is significantly higher among the highly educated. And here the pattern is stronger than that for income: a low-educated respondent is about 2.5% (between 0.5% and 4%) more likely to support a package with such monitoring and guidance than a package without monitoring, whereas highly educated respondents are more than *three times* more likely to do so – an average of 8.3% (between 7% and 11%) more likely to support monitoring and guidance than no such oversight). The difference is not surprising, given that the highly educated are likely to have a higher income and high-income individuals have good economic reasons to appreciate these features in assistance packages, as explained above. The highly educated may also better understand the potential usefulness of monitoring (and guidance) for the proper functioning of the assistance program (to avoid a moral hazard effect). Further, in line with what we found for high-versus low-income individuals, support for packages with potential redistribution to any country or mandatory redistribution to poor countries seems slightly higher for the highly educated than for the low-educated, although the difference is not significant.

As for the remaining moderating conditions related to socioeconomic experience – unemployment, social-benefit dependency, trade union membership, age and gender – we can be more brief. The direct effect of being unemployed on the support for an assistance package is not significant – captured in Column (4) of Appendix D1, unabridged Table 2. Relative to the employed, however, support from the unemployed for budgetary conditions is significantly lower. This is also the case when assistance is mandated to be spent on transport and infrastructure. The latter may be not surprising, since the unemployed will benefit relatively little from these expenses. They rather prefer the government to be free in how the assistance is allocated, so some of the additional spending might go to them. As for trade union membership, the direct effect on support for an assistance package is insignificant (see Appendix D1, Column (5) in unabridged Table 2). But compared to non-union members they support packages with redistribution to poor countries significantly more and also with a flat tax increase, both patterns possibly reflecting how trade-union members are more solidarity-oriented than average. Being on social benefits also does not have a significant direct effect on support for an assistance package (see Appendix D1, unabridged Table 2, Column (6)), but relative to those not on benefits support those on benefits are more supportive of packages with budgetary conditions. This may seem surprising since this group contains those on unemployment benefits, but the group is broader and also includes the elderly who may appreciate budgetary conditions in the packages they get to see (see below). Support from those on benefits for a package with a flat tax increase or a tax increase only falling upon the rich is significantly higher than from those not on benefits, likely because the tax incidence on those on benefits is relatively low and so they may have to contribute only little or nothing to the assistance program.

We can also briefly discuss the moderating role of key demographic conditions. Age (Appendix D1, unabridged Table 2, Column (7)) exerts a significant negative direct effect on support for an assistance package. The older an individual the stronger its support for a package with budgetary conditions. A potential explanation is that elderly are more conservative and, hence, dislike debt more. Further, the older an individual the more negative (s)he is about mandatory education spending, likely because older individuals will

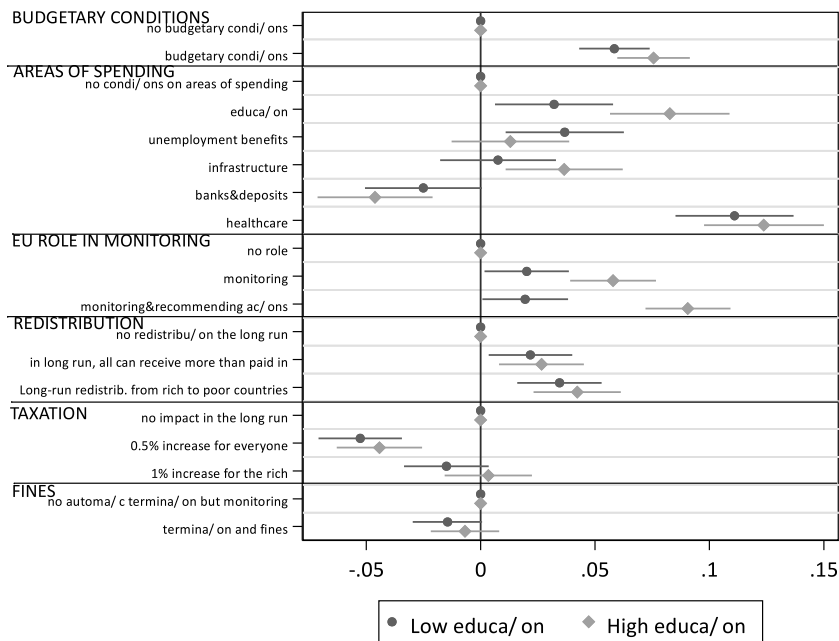


Fig. 3. Splitting the sample into low- and highly-educated respondents

Notes: (i) Dependent variable is *SUPPORT*, with value of 1 for “strongly in favour” and “in favour”, and value of 0, otherwise. (ii) Horizontal line pieces denote 95% confidence intervals.

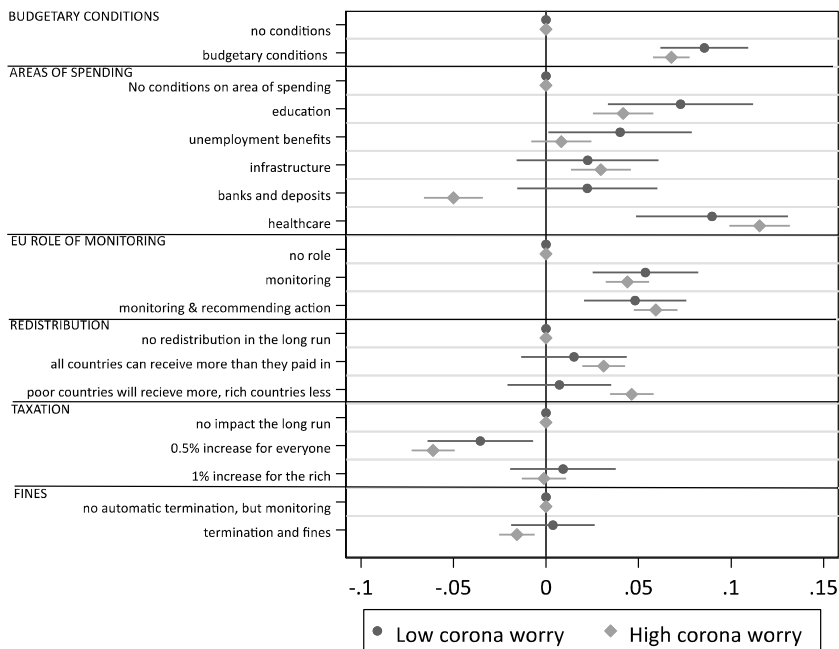


Fig. 4. Splitting the sample into respondents with low and high corona fears

Notes: (i) Dependent variable is *SUPPORT*, with value of 1 for “strongly in favour” and “in favour”, and value of 0, otherwise. (ii) Horizontal line pieces denote 95% confidence intervals.



not benefit from such spending. Finally, the older an individual becomes the more negative (s)he is about termination and a fine in the case of non-compliance. This seems difficult to reconcile with the increased support for budgetary conditions. An explanation for the apparent contradiction could be that older individuals are more averse against the EU intruding into national policies. Finally, [Appendix D1](#), unabridged [Table 2](#), Column (8), shows that women only differ from men in that women support more packages with mandatory spending on healthcare.

### 6.2. Corona worries

Our experiment was designed before the corona crisis arrived. However, when it was about to be fielded to the respondents, it was clear that in parts of the world the pandemic was taking hold of economies and societies and so we decided to add a question about the intensity of corona worries. The actual fielding of the experiment took place during the height of the first wave of the corona crisis in Italy, while the peak of the first wave was to arrive soon in other countries.

[Table 2](#), model (4), adds to the experimental part the direct effect of corona worries and the interactions of these worries with all the dimension options. Covid is a continuous variable on a 0–10 scale with value 0 corresponding to no corona worries and value 10 to maximum possible worries. The estimated direct effect of the degree of covid worries is 0.011, which is significant at the 5% level. Hence, going from the lowest level of covid worries to the highest level raises the support for an assistance program by 11%-points. Individuals might foresee part of financial assistance going to healthcare spending, from which those with the highest level of corona worries would expect to benefit most. This would provide some support for Hypothesis 7 from the theoretical framework. However, while the interaction effect of mandatory healthcare spending with corona worries is positive, it is not statistically significant.

Higher corona worries make individuals significantly more negative about termination plus a fine in the case of non-compliance, a potential reason being that assistance spending and, therefore, also assistance spending on healthcare, is less likely to come about, and this would hurt those with the strongest worries most. Higher corona worries further make individuals significantly more positive about redistribution from rich to poor countries, possibly because such redistribution makes it easier for poor countries to finance healthcare spending, but significantly less supportive of a package with mandatory spending on banks and deposits, which presumably would come at the cost of more useful spending, and about a flat tax increase.

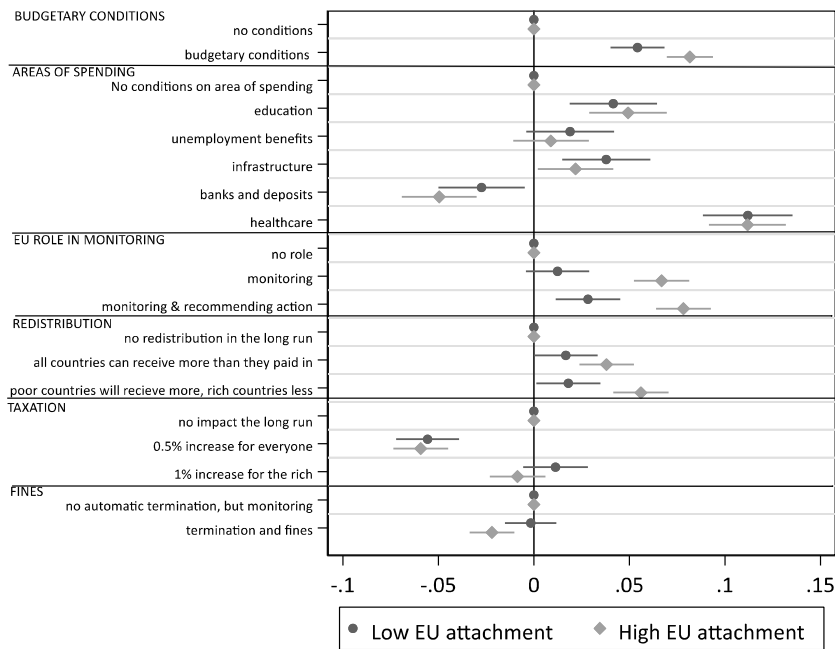
[Fig. 4](#) depicts the effects of interacting the dimension features with a dummy for low/high corona fears, where based on the 1–10 point scale high covid fears correspond to scales 9 and 10, while low covid fears correspond to scales 1–6. This larger range for low fears is the result of the high average level of fears on the 1–10 point scale. Although most differences are not statistically significant, there is some indication that those with high corona worries support to a lesser extent packages with budgetary conditions, mandatory spending on banks and deposits, a flat tax increase for everyone and termination and a fine in case of non-compliance, while they seem somewhat more supportive for packages with mandatory spending on healthcare, which would be consistent with Hypothesis 7, and monitoring and guidance by the Commission and redistribution to poor countries. The latter finding may be driven by those with high corona fears benefitting in particular from good use of the assistance funding.

### 6.3. European attachment

Based on the survey question “How attached do you feel with respect to Europe” we measure European attachment as a continuous variable on a 0–10 scale with value 0 corresponding to no attachment at all and value 10 to maximum possible attachment.<sup>20</sup> We report the direct effect and the interaction effects of higher European attachment—see [Table 2](#), the two columns under model (5). Regressing support for an EU fiscal capacity on European attachment involves links between opinions, attachment being a subjective judgment (more than respondent answers reporting socio-economic position and demographic status). However, judged *European* attachment is conceptually distinct from an EU fiscal capacity and is nigh impossible to measure without a subjective judgment. In any event, the estimated effects appear to be strongly in line with what one would expect when attachment is higher. The higher the European attachment, the significantly more an individual appreciates a package with budgetary conditions than a package without such conditions. This would be in line with Hypothesis 4 of our theoretical framework. Higher European attachment makes respondents also significantly more supportive of packages with Commission monitoring or Commission monitoring and guidance than about packages without these features. Further, potentially supportive of Hypotheses 2 and 3 respectively, higher European attachment makes individuals significantly more supportive of packages with redistribution to any country or redistribution to poor countries instead of no redistribution. In addition, higher European attachment makes individuals significantly less supportive of packages with termination and a fine in the case of non-compliance. These results suggest that higher European attachment increases the degree of solidarity with countries in need. Finally, the higher is the European attachment, the less supportive individuals are of packages with mandatory spending on banks and deposits.

Based on the 1–10 point scale, we define “high European attachment” as scales 8–10 and “low European attachment” as scales 1–3. [Fig. 5](#) depicts the AMCEs for individuals with low and high European attachment. The estimated interaction effects appear to be consistent with the findings just described. In line with the significant effects for income and education discussed above, for instance, those less attached to the EU are (2.5%) more likely to prefer Commission monitoring and guidance than no Commission oversight, whereas those reporting high European attachment are three times more likely to do so (7.5%). For Commission monitoring only, the

<sup>20</sup> Actually, this is formally an 11-point ordinal variable with discrete scoring 0 to 10. But conceptually and in modelled interactions we treat this as a continuous variable.



**Fig. 5.** Splitting the sample into respondents with low and high European attachment. Note: (i) Dependent variable is *SUPPORT*, with value of 1 for “strongly in favour” and “in favour”, and value of 0, otherwise. (ii) Horizontal line pieces denote 95% confidence intervals.

differences between the two groups are as large, although each group’s preference relative to no Commission oversight is slightly smaller. Unlike most of the socioeconomic conditions, however, European attachment predicts significantly different preferences with respect to other features of fiscal capacity. For instance, individuals with high European attachment are also significantly more supportive of packages with budgetary conditions and mandatory redistribution to poor countries than are low European attachment respondents. Finally, high-attachment respondents are (marginally) less supportive, compared to low-attachment respondents, towards fiscal-capacity packages with mandatory spending on banks and deposits and with termination and a fine in the case of non-compliance.

#### 6.4. Do socioeconomic factors drive the effects of corona fears and European attachment?

Important to understanding how individual characteristics affect attitudes towards EU fiscal capacities is whether the aforementioned socioeconomic factors underly the effects of the key attitudinal characteristics of respondents in our analysis: corona worries and European attachment. For instance, socioeconomic factors are well-known to have a strong influence on the health and life expectancy of individuals, and also on European attachment. Estimates of the interactions of the dimensional treatments with corona worries or with European attachment may not be the same if we control for other individual-level characteristics and consider their interactions with the dimensional treatments.

To consider the story about corona worries, we first compare results from: (i) a parsimonious model in which we include only the interactions with corona worries (i.e., we do not include any other interactions); (ii) a model that also adds the interactions between dimension features and the socioeconomic variables of interest; and (iii) fully-fledged models with all the interactions. The estimated interactions between corona worries and dimension features are very similar across these three specifications. In terms of significance versus insignificance the only difference is with respect to the budgetary conditions, whose interaction with corona worries enters significantly in the fully-fledged model and in the parsimonious model, but loses significance in the model with socioeconomic interactions only. Further, the point estimates for how a given dimension value increases or decreases the likelihood of supporting the EU fiscal capacity are very similar across the three regressions. We can also compare the estimates of the interactions of the other variables in the models with interactions with corona worries and without interactions with corona worries. Again, the differences are very small, and in those cases where there is a difference in terms of significance, the point estimates of the coefficients are close to each other.

Because corona worries may be driven not only by health worries, but also by worries about the consequences of corona for the economy, which may differ systematically across individuals for example according to their socioeconomic status, as a robustness check of the above findings, we consider a two-stage approach in which we first project individual corona worries on the individual-level variables used above and then enter the residuals of this first-stage into the above baseline (model (1) in Table 2) regression (thus

replacing the variable corona worries by these residuals), which thus forms the second stage. We find that, while most of our individual level variables enter the first stage regression (highly) significantly, the explanatory power of these variables is only around 5%. Indeed, the correlation coefficient of the corona worries variable and the residuals from the first stage is on the order of 97–98%. Therefore, the results (available upon request) of the second stage regression are very similar to the results described above.

We conduct the same kinds of analyses to explore whether socioeconomic conditions shape the effects of European attachment on support for different features of EU fiscal capacities. Since ample research suggests that socioeconomic conditions shape European attachment and matter in our own analyses above also for support for EU fiscal policy, we might expect that socioeconomic conditions might drive apparent effects of European attachment on support for an EU fiscal capacity. However, further analysis again shows that how dimension features interact with European attachment is unaffected by interactions with socioeconomic characteristics (or, for that matter, other individual-level characteristics).<sup>21</sup> This would provide some support for Hypothesis 1 from our theoretical framework, which suggests that, irrespective of the specific design of the assistance package, more European attachment ought to raise the likelihood that an individual prefers an assistance package to no package.

Analogous to above, now we first compare different estimates of how dimension characteristics of a proposed EU fiscal capacity might interact with – that is, be moderated by – European attachment: (i) the parsimonious model discussed above (in which we do not include any other interactions); (ii) the model with the interactions with the socioeconomic variables; and (iii) the fully-fledged model with all interactions. The estimated interactions are, like those involving corona worries, very similar. In terms of significance versus insignificance the only differences are with respect to the budgetary conditions, whose interaction with European attachment enters significantly in the fully-fledged model and in the parsimonious model, but loses significance in the model with socioeconomic interactions only, and with respect to mandatory spending on banks and deposits, which enters significantly negatively in the parsimonious model and the model with socioeconomic interactions, but loses significance in the fully fledged model. In those cases where significance is lost, the point estimates remain close to those that are significant. Hence, the new regressions confirm that stronger attachment to the EU leads to significantly more appreciation of packages with budgetary conditions, packages with Commission monitoring or Commission monitoring and guidance, and packages with redistribution to any country or to poor countries, but less appreciation for packages with mandatory spending on banks and deposits and packages with termination and a fine in the case of non-compliance. Second, comparing the estimates of the interactions of the other variables in the models with and without interactions with European attachment, we find again that the differences are extremely small.

As a further test, we also consider a two-stage robustness check first projecting European attachment on our individual level variables and then redoing the above baseline regression, Equation (1), in which we replace European attachment by the residuals from this regression. Again, the results of the second stage regression are very similar to the results described above.

As a final exploration of how socioeconomic conditions might undergird or alter the effects of European attachment for support of an EU fiscal capacity, we investigate separately the effects of higher European attachment interacted with the dimension features for the low and for high socio-economic risks: low- and high-income respondents in the left-hand panel, and low- and high-education respondents in the right-hand panel. In effect, we thus explore a three-way interaction. Fig. 6 shows the AMCEs for these analyses. Obviously, the confidence intervals are relatively wide because the number of respondents per subsample is smaller than in the full sample.

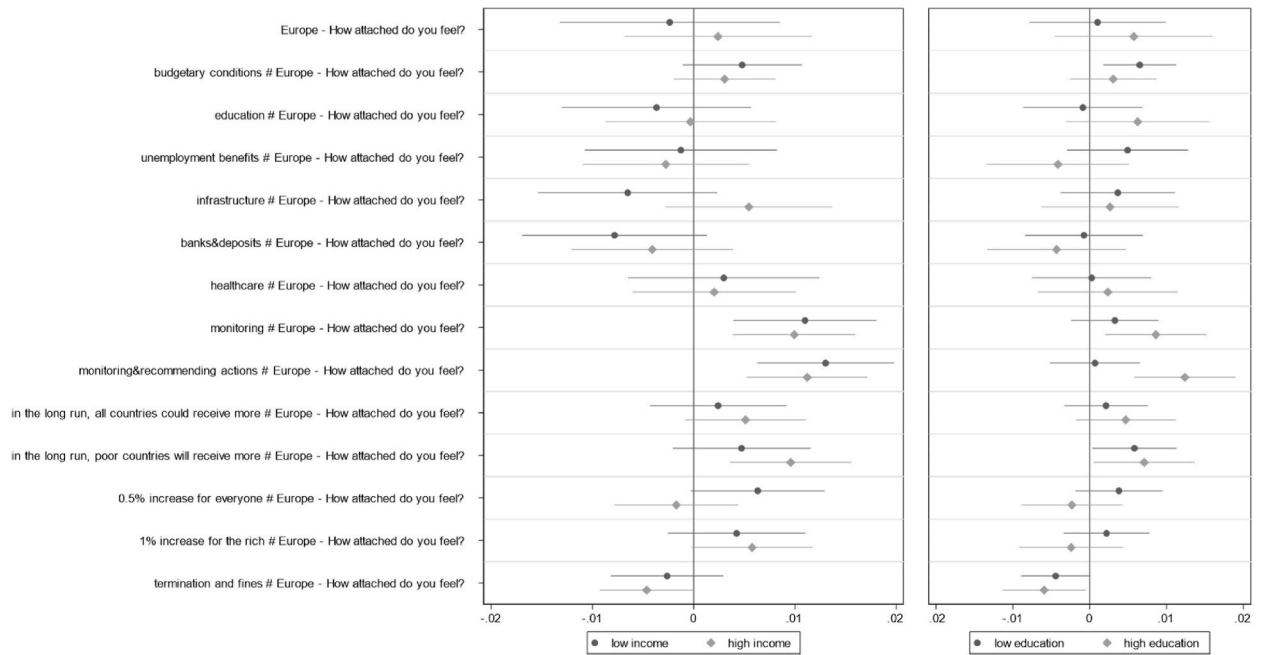
The left-hand panel of Fig. 6 summarises the results for low- and high-income groups, showing that the results are rather similar for these two groups. Potentially supportive of Hypothesis 4 from the theoretical framework, for each group an increase in European attachment significantly raises the support for a package with Commission monitoring or Commission monitoring and guidance relative to a baseline without this feature, while the effect on the support for a package with potential redistribution to any country or redistribution to poor countries compared to a package without these features is slightly larger for the high income group. Somewhat remarkably, the effect of higher European attachment on the support for a package with a tax increase only for the rich relative to a package without tax increase is slightly larger for the high-income group than for the low-income group. Further, the negative effect of higher European attachment on the desirability of including termination and a fine for non-compliance is slightly stronger for the high-income individuals. The main difference between the two groups is with regard to mandatory spending on transport and infrastructure. Higher European attachment increases the support for a package with this feature relative to not earmarking assistance spending for those on high income, but reduces it for those with low income.

The right-hand panel of Fig. 6 shows the results for the sample split into low- and highly-educated respondents. The interactions of European attachment with the dimension options are similar for the two groups. For both, higher European attachment significantly raises the appreciation of packages with long-run redistribution to poor countries, which would be supportive of Hypothesis 3 above, while significantly decreasing the appreciation of packages with termination and a financial penalty for non-compliance. There are also some differences between the two groups. Only for the highly-educated does an increase in European attachment significantly raise support for Commission monitoring (or monitoring and guidance). Further, a significant positive effect of higher European attachment in the case of budgetary requirements holds only for the low-educated (though remains positive for the highly-educated).

## 7. Constructing acceptable packages across broad groups

Clarifying the substantive importance of the role that individual-level correlates play in support for EU fiscal capacities requires

<sup>21</sup> There is a correlation between European attachment and education, for example, but at 0.13 it is lower than one might a priori expect; the correlation of European attachment with income is even lower, 0.09.



**Fig. 6.** Effects of higher European attachment for different income and education levels

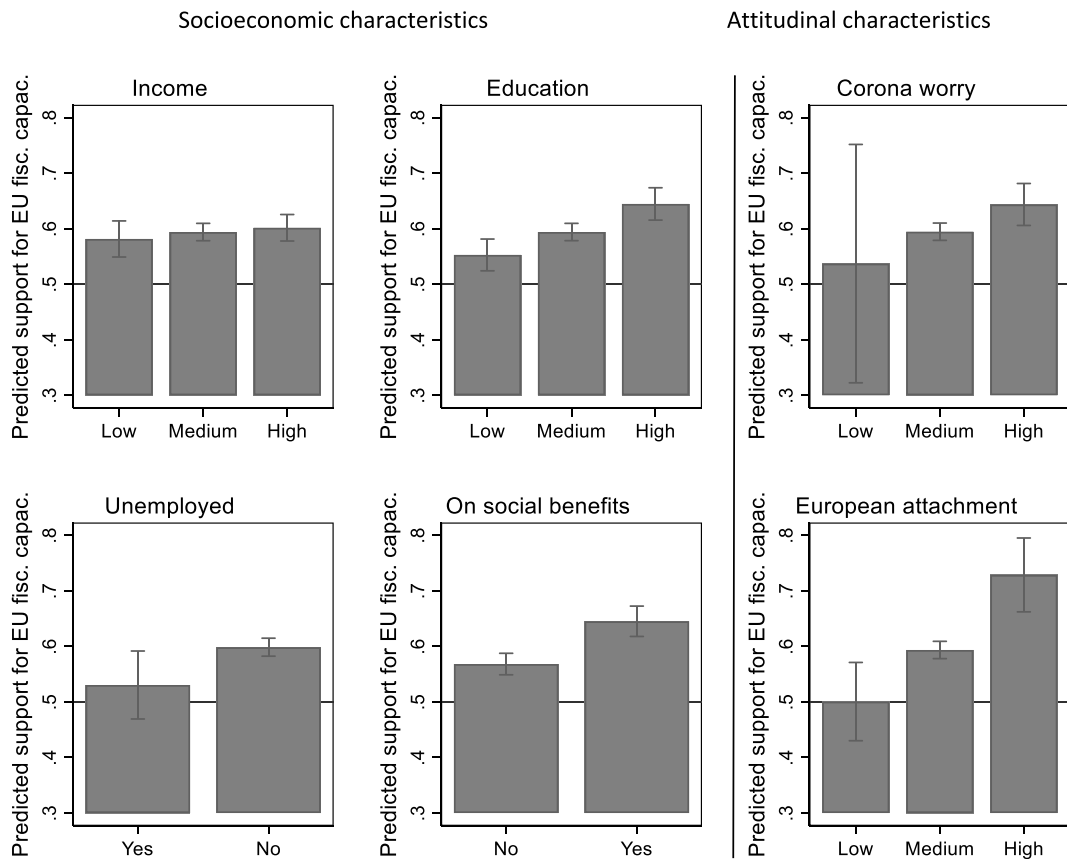
Notes: (i) Dependent variable is *SUPPORT*, with value of 1 for “strongly in favour” and “in favour”, and value of 0, otherwise. (ii) Horizontal line pieces denote 95% confidence intervals.

moving beyond what we have so far identified: how a given individual-level correlate moderates the way a given dimension-value enhances (or diminishes) support for an EU fiscal capacity. It requires also identifying how individual-level conditions shape support for particular packages that combine characteristics of the various dimensions. We do so, using the full experimental results to counterfactually model how individual-level conditions shape support for an EU fiscal-capacity package characterised by a given combination of values on the six dimensions of an EU fiscal capacity. Such counterfactual support for a given package is an estimate of the expected support for a particular EU fiscal capacity proposal. We explore, in particular, how socioeconomic characteristics of respondents, as opposed to their attitudinal positions (with respect to European attachment and corona worry), skew expected support levels.

Our analysis focuses particularly on a generally popular and economically viable package of EU fiscal capacity – one that combines budgetary conditions, mandatory healthcare spending, monitoring and recommending, potential redistribution to all countries, progressive taxation and investigation but no termination and fine in the case of non-compliance. We thus make the implicit assumption that the strong preference for mandatory healthcare spending will persist. Our trial from October 2019 suggests that this is a plausible assumption.<sup>22</sup> As can be surmised by the per-dimension marginal effects in Figs. 1–5, such a combination of characteristics is close to the most-preferred package for the general population (Fig. 1) and for all the key sub-groups in our respondent population (Figs. 2–5). The only difference between this package and that most preferred by respondents (generally, and for each sub-group with respect to the individual characteristics under study) is that it considers a package with the tax basis least opposed rather than the preferred package without any tax burden – a free lunch version of EU fiscal capacity. Such a “free lunch” option is very likely non-viable economically, if not politically. The package explored in Fig. 7 can be seen, hence, as the most generally preferred *and* viable EU fiscal capacity – more popular, for instance, than a flat tax version (see Beetsma et al., 2022). For our present purposes, what is important and perhaps surprising is that the same such package is the most preferred, non-“free lunch”, package for all of the key sub-groups with respect to the individual correlates we are studying – again, something that can be surmised from Figs. 2–5.

Fig. 7 shows, however, that the socioeconomic and other individual-level conditions on which we focus predict different levels of support for such plausible and preferred EU fiscal capacity. The results are based on the respective estimation models shown above in

<sup>22</sup> Additional evidence points towards long-lasting preference. First, a separate study from October 2018 on a different respondent sample shows strong support for a EU-level fiscal instrument aiming at unemployment risk-sharing (Burgoon et al., 2022). Given that unemployment risk-sharing is among the *least* preferred (but still rather approved) options in the current survey, there is reason to believe that a floor of support for fiscal sharing existed then. Second, a separate survey run among our respondents in July 2020, focused on the EU Recovery and Resilience Facility, showed that support for an EU-level fiscal capacity *increased* in the first months of the pandemic (Berger et al., 2019). Overall, while the pandemic has probably played a role, support for fiscal integration has been quite high both before and in later stages of the pandemic.



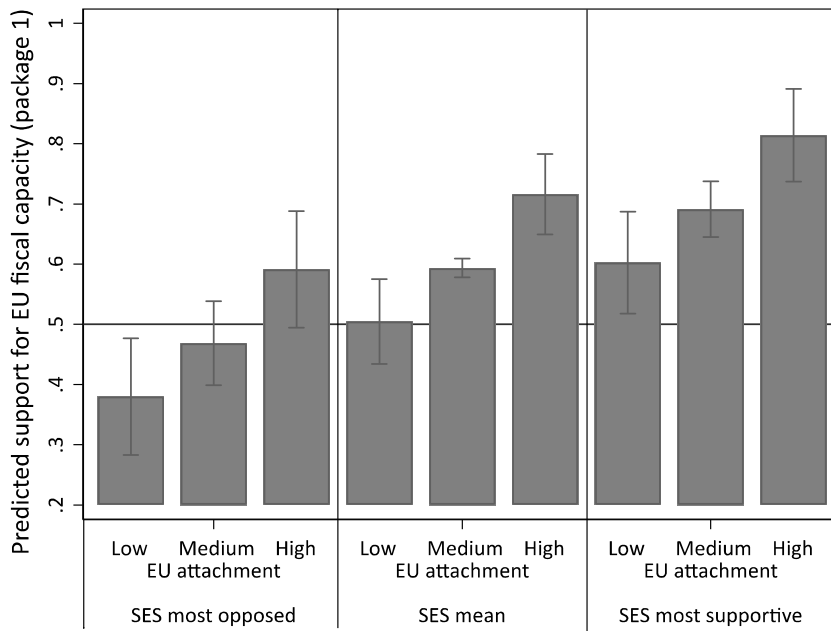
**Fig. 7.** Effects of individual-level correlates on preferred-and-viable EU fiscal capacity

Notes: proposed package is a combination of budgetary conditions, mandatory healthcare spending, monitoring and recommending, potential redistribution to all countries, progressive taxation and investigation but no termination and fine in the case of non-compliance. Further, vertical line pieces denote 95% confidence intervals.

**Table 2** – where “support” is being somewhat or strongly supportive of the package and “non-support” is being neutral or somewhat strongly or strongly against the package. If we treat such results as counterfactual estimates of a vote, then we are basing the predictions on a conservative gauge: that respondents neutral about the EU fiscal capacity package would vote, as it were, against the package.<sup>23</sup> The Figure compares the effects across key levels of individual-level correlates, given on the horizontal axes of each of the six distinct panels – arrayed from the value of a given individual-level that predicts low support, to the value predicting higher support, for the modelled package of EU fiscal capacity. The vertical axes in these panels are on the same scale, to allow comparison across the panels to see which individual characteristic tends to predict the most or least variation in support for EU fiscal capacity. We also include the horizontal line demarcating the .50 threshold relevant to the (conservatively-gauged) minimum level of support in a majority-rule vote or decision-making context.

We see that the differences across the individual-level characteristics predict meaningful differences in likelihood of supporting this modal EU fiscal capacity. The first four panels on the left show the results for four key socioeconomic conditions: income, education, unemployment and social-benefit dependency. The right-hand two panels, in turn, show the results for the attitudinal conditions of corona worry and European attachment. In all cases, we see that the individual-level correlates matter to levels of support. But it is clear that the attitudinal conditions matter more, in the sense that variation in the individual-level correlate predicts larger shifts in support, and that at the least favourable values (low covid worry and low European attachment) the predicted level of support for this modal EU fiscal capacity ranges below the 50% threshold. Among the socioeconomic conditions, the predicted shifts are more modest, varying above that 50% threshold; only unemployment status matters to being above or below that 50% threshold (the unemployed not being significantly likely to support EU fiscal capacity at the 95% confidence level). Among the socioeconomic conditions,

<sup>23</sup> Indeed, basing the estimates on specifications excluding these neutrals – as it were, assuming such neutrals would either not vote or be basically evenly split between voting against and for the package – we have higher levels of predicted support but also a similar skew. Results available upon request.



**Fig. 8.** Least-to-most-likely socioeconomic conditions and low-to-high European attachment shaping a preferred-and-viable EU fiscal capacity. Notes: Socioeconomic status captures education, income, unemployment and being on social benefits. Further, vertical line pieces denote 95% confidence intervals.

however, it is noteworthy that variation in education predicts the strongest shifts in support for this plausible-and-viable EU fiscal capacity – more so than income, unemployment and social-benefit status. And of all the individual-level correlates, European attachment is the most meaningful predictor.

While European attachment may matter more than any given socioeconomic status condition, further analysis shows that socioeconomic risk conditions and European attachment may also be imperfect substitutes in shaping a basis of public support for EU fiscal capacity. One way to see this is summarised in Fig. 8, based on a model of EU fiscal capacity that combines all the interactions between package dimensions on the one hand and the different individual-level correlates on the other. Based on such estimation, we can counterfactually model combinations of socioeconomic conditions that are least likely, moderately likely and most likely to elicit support for the plausible-and-viable EU fiscal capacity, and we map these patterns across different levels of European attachment. As one can surmise from Fig. 7, ‘SES most opposed’ in Fig. 8 refers to respondents who are unemployed,<sup>24</sup> have no post-secondary education, earn less than the third decile of income, and are not on social benefits; ‘SES mean’ is the mean value for these socioeconomic correlates; and ‘SES most supportive’ are (counterfactually) employed, higher-than-seventh decile income, some tertiary education completed, and yet also on benefits.<sup>25</sup> Fig. 8 shows how support for the modal EU fiscal capacity rises across these three combinations of individual socioeconomic orientations, calculated for three groups of respondents with respect to European attachment: those stating low European attachment (2 on the 0–10 scale); mean European attachment; and high European attachment (8 on the 0–10 scale).

This provides a basis to see how socioeconomic conditions and European attachment can function as imperfect substitutes in the political bases of support for EU fiscal capacity. Among respondents with the least-favourable SES conditions for EU fiscal capacity (the first 3 bars) we see that the predicted support is never statistically-significantly above the 50% threshold, regardless of level of European attachment. At medium-favourable SES conditions (the middle trio of results), however, support rises above the 50% threshold if European attachment is medium or high. And at favourable SES conditions (the last trio of results) we see that support for EU fiscal capacity clears the 50% threshold even among those expressing the least European attachment.

In short, European attachment turns out to be the stronger basis for support for an EU fiscal capacity than are socioeconomic conditions, and yet also both sets of individual-level correlates matter and are imperfect substitutes to achieving political majorities behind such capacity. The patterns hold even if one relaxes some of the assumptions of the analyses behind Figs. 7 and 8. For instance, the story holds also if one considers other kinds of modal packages that depart from that which is most preferable-and-viable.

These results are stable across a range of sensitivity and robustness tests. They hold in analyses based on specifications that split the sample rather than the full sample with interactions between individual-level characteristics and dimension conditions. The results

<sup>24</sup> SES = socioeconomic status.

<sup>25</sup> The results are virtually the same if one assumes no benefit dependency in this combination.

remain similar to those presented above. The same is true for analyses based on the support among different socioeconomic subgroups for particular packages that differ along one dimension from our baseline package (the one that combines budgetary conditions, mandatory healthcare spending, monitoring and recommending, potential redistribution to all countries, progressive taxation, and investigation but no termination and fine in the case of non-compliance) – see [Appendix E](#) (not for publication). Large reductions in support across the different socioeconomic subgroups occur in the absence of budgetary conditions, when long-term redistribution is prohibited, and in the absence of any role for the European Commission.

## 8. Concluding remarks

Based on a conjoint experiment conducted on a large sample of respondents from France, Germany, Italy, the Netherlands and Spain, we explore popular support for EU-level financial assistance packages to countries hit by a temporary or permanent economic decline. The relevance of the experiment is heightened by the corona crisis and the resulting discussion about the need for a central fiscal capacity at the EU level. Of course, this discussion was already active before the corona crisis. However, the corona crisis forcefully underscored the need for such a capacity. Beyond the experimental component, consisting of different dimensions of a policy package with different treatments, we explore in particular the role of individual-level characteristics in determining the support for such assistance packages. To this end, we interact those individual-level characteristics with the various treatments of the different dimensions of the policy packages proposed. Among the individual-level characteristics we distinguish socioeconomic variables plus age and gender, covid worries and attachment to the EU. The outcomes are largely in line with what one would expect. The most important results in our view concern the role of European attachment in the support of assistance packages, where the effect of such attachment is substantial, more so than the effects of socioeconomic characteristics, and where this effect is not substantially altered by the role of the socioeconomic and other determinants, including covid worries. The result can be rationalised in a simple theoretical framework. This finding has some potentially relevant policy implications. It suggests that support for a central fiscal capacity can be increased, not so much by deploying socioeconomic policies, but by raising European attachment through improving communication about the values the EU stands for and the benefits of the EU. For example, the European Commission might take a more assertive stance in deflecting the blame for their own policy failures that national governments often try to shift to the EU.

We also explored whether policy packages command majority support from the various subgroups of the full sample obtained by dissecting the latter along different dimensions. The question is relevant, because groups with specific interests or features can exert disproportionate influence on the outcomes of a political process, and potentially block the adoption of an assistance program that is beneficial for the population at large. The package that comes as most preferable and also viable (in terms of having a tax basis for its provision) for the key sub-groups is the combination of budgetary conditions, mandatory healthcare spending, monitoring, potential redistribution to all countries, progressive taxation, but no termination of the assistance and fine in the case of non-compliance. And we find that such a package of EU fiscal capacity can command majority support among those with socioeconomic characteristics most reluctant to support such capacity, so long as even moderate levels of European attachment obtain.

Such findings underscore the relatively strong political traction for the development of an EU-level fiscal capacity beyond the status quo, and show that such traction is surprisingly durable across levels of socioeconomic risks experienced by member-state citizens. Consistent with our framework, we do unearth meaningful differences in the preferred kinds of capacity, for instance with higher educated and wealthier respondents supporting stronger monitoring roles for the Commission. Worries about the effects of corona and about social benefits also nudge the kinds of capacities supported. However, the more remarkable pattern is that such differences tend not to wash away general patterns of support. With a modicum of such attachment, the study reveals strong support for EU fiscal capacities with significant monitoring and some redistribution between countries and in tax burdens to sustain the capacities.

The extensive study of individual opinions about European political economy has devoted only spotty attention to individual correlates of EU fiscal policy design, certainly attention to experimental results on such correlates that combine socio-economic objective conditions and normative-subjective collective identity. This paper reported the results of just such analytical attention. Naturally, that analysis has confronted limitations that deserve highlighting. First, we have not considered a fiscal capacity of which the explicit intention was to redistribute among countries and individuals (see [Bellani and Ursprung, 2019](#)), a form and framing of capacity that we expect would provoke substantial political resistance of some countries. Redistribution, in our study's formulation, was instead a by-product of the capacity's design. Second, we did not explore the role of political ideology for the position that individuals take on the experiment's design, as for example is the case in [Angelopoulos et al. \(2012\)](#). EU integration has led to trade liberalisation and increased financial integration. These developments have distributive consequences (e.g., see [Jha and Gozgor, 2019](#)), depending also on the fractionalisation within a country (e.g. see [Pleninger and Sturm, 2020](#)) and may skew individuals' support for new integration instruments. Third, socioeconomic circumstances may also affect the support for an EU fiscal capacity *indirectly* through their effect on populism, the rise of which may be linked to import competition from China in [Barone and Kreuter \(2021\)](#) and economic uncertainty in [Gozgor \(2022\)](#). Future research should explore all these issues to better understand political support for and opposition to EU fiscal capacity.

## Data availability

Data will be made available on request.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ejpoleco.2023.102357>.

Appendices.

A: Formulation of the frames

FRAMING 1 (TEMPORARY SHOCK)	FRAMING 2 (PERMANENT SHOCK)
European governments spend money on policies such as infrastructure, education, social assistance, military defence, housing, etc. When a country is hit by a severe but temporary economic downturn, it can be difficult to maintain these policies during the downturn.	European governments spend money on policies such as infrastructure, education, social assistance, military defence, housing, etc. However, when a country is confronted with long-lasting economic problems (such as a permanent decline in an important industrial sector), it can be difficult to maintain these policies.
We would like to hear your opinion about a new European programme discussed by European governments to address such difficulty. This new programme would provide temporary budget support to countries in need. Such support would never be larger than 1% of the receiving country's GDP.	We would like to hear your opinion about a new European programme discussed by European governments to address such difficulty. This new programme would provide budget support to countries in need. Such support would never be larger than 1% of the receiving country's GDP.
The budget support would help governments maintain their policies during the economic downturn and stabilize the economic situation. This mutual assistance programme would be financed by the participating countries.	The budget support would help governments in maintaining their policies and to address these long-lasting economic problems. The mutual assistance provided by this programme would be financed by the participating countries.
This European assistance programme can be organized in different ways. Different conditions can be imposed on countries that benefit from the support. Therefore, in the next pages you will be shown alternative options. You will be asked to indicate which options you prefer (or dislike the least), and how much you are in favour or against these proposals.	This European assistance programme can be organized in different ways. Different conditions can be imposed on countries that benefit from the support. Therefore, in the next pages you will be shown alternative options. You will be asked to indicate which options you prefer (or dislike the least), and how much you are in favour or against these proposals.

B: Example of a screenshot with the questions and a pair of policy packages

	Option 1	Option 2
Are there budgetary policy conditions that countries must fulfil to get support?	Countries should reduce their public debt in good economic times; otherwise they will not receive support in bad times.	No conditions
What is the role of the European Commission in the management of the programme?	The European Commission recommends specific actions to national governments to address their economic problems, and it monitors the implementation of the programme.	The European Commission recommends specific actions to national governments to address their economic problems, and it monitors the implementation of the programme.
May some countries receive more support from the programme than they pay into it?	Yes, over the long run, poor countries will receive more support from the programme than they pay into it, while rich countries will receive less support from the programme than they pay into it.	Yes, over the long run, poor countries will receive more support from the programme than they pay into it, while rich countries will receive less support from the programme than they pay into it.
What is the long-term impact on the taxes that people in your country have to pay?	Over the long run, taxes increase by 1% of income only for the rich in your country	No impact over the long-run: the level of taxes stays the same in your country.
Are there restrictions on the spending areas on which the budgetary support may be used?	Yes. Budget support must be used for spending on unemployment benefits.	Yes. Budget support must be used for spending on investment in transport and infrastructure.
Are there any extra penalties for governments that violate the conditions of the European budgetary support programme?	Budgetary support shall be terminated and countries pay an additional fine.	Budgetary support shall be terminated and countries pay an additional fine.

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