INAPP PAPER

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SECULAR ECONOMIC CHALLENGES AND PUBLIC SUPPORT FOR POLICY INTERVENTIONS

Technological change and globalization in a randomized survey experiment in eight countries

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ABSTRACT

SECULAR ECONOMIC CHALLENGES AND PUBLIC SUPPORT FOR POLICY INTERVENTIONS

Globalization and technological change are arguably the most prominent sources of structural labour market changes in advanced industrialized economies. Policy experts and economists frequently debate many possibilities for policy responses to these structural changes, discussing a wide array of political initiatives that vary in terms of generosity, level of governance, different kinds of income maintenance together with or instead of different types of more activating education, and with or without extra protectionist interventions. Public opinions towards a given policy response have been widely researched, both regarding technological change and globalization, to disentangle this wide array of policy options. However, much less understood or researched is how public support compares across policy responses or mixes of policy responses. This is also true of the respected realms of how people view the appropriate policy alternatives or combinations regarding technological change and globalization. Which sources of economic risk inspire the most or least support from populations for policy interventions to address the risks? And what policy mixes are seen as most or least attractive to address such risks? More income maintenance or educational adjustment assistance? More or less (progressive or flat) taxation? More protectionism or more social policy assistance? National, local or more global governance?

The paper summarized the findings of a large-scale survey experiment that provides answers to these questions. The analysis are based on two randomised survey experiments fielded in the second half of 2020 among 20,000 respondents and carried out in eight industrialised democracies (Germany, Italy, Japan, the Netherlands, Poland, Sweden, the United Kingdom and the United States of America). Randomised survey experiments allow establishing causal links between certain policy features and the respondents' preferences. In detail, the two 'conjoint experiments' used in this study, one framed and focused on policies to address technological risks and another framed and focused on policies to address globalization risks, allow to understand, in the eight economies analysed, the level of public support on specific policies aimed at mitigating structural changes due to two risks considered. Overall, findings indicate that policies proposed are generally well-received by respondents. Contrary to our expectations, respondents do not meaningfully differ in assessing the policies to address technology instead of globalization risks. This result suggests that respondents' preferences for social policy remedies are consistent no matter which particular threat they face. Furthermore, the analysis reveals that respondents express a consistent preference against several policy options transversal to the policy dimensions considered in the study.

Keywords: globalization, technological change, public policies

SFIDE ECONOMICHE E SUPPORTO PUBBLICO PER INTERVENTI DI POLICY

Nelle economie avanzate, la globalizzazione e il cambiamento tecnologico sono fonti importanti delle modifiche strutturali del mercato del lavoro. Ampio dibattito, soprattutto in ambito politologico ed economico, è dedicato all'individuazione di misure di policy necessarie a sostenere questi cambiamenti strutturali. Tale dibattito ha riguardato diverse possibili combinazioni di iniziative di riforma sia rispetto ai livelli di governo interessati che ai contenuti specifici, come il grado di generosità delle potenziali iniziative, il relativo orientamento verso servizi di attivazione piuttosto che di trasferimenti di supporto economico, sino all'introduzione di misure protezionistiche. A tal riguardo numerosi studi sono stati realizzati per comprendere le opinioni dei cittadini rispetto ad interventi di policy riguardanti appunto il cambiamento tecnologico e la globalizzazione. Tuttavia, molto meno analizzato è il modo in cui il sostegno pubblico si pone nei confronti di combinazioni di misure di policy, ossia di come i cittadini valutino alternative o combinazioni di politiche pubbliche riguardanti questi rischi. In altre parole, quali fonte di rischio ispira, nella popolazione, maggiore o minore richiesta di supporto di intervento pubblico? E quale combinazione di policy sono percepite maggiormente attrattive per affrontare questi rischi? Un orientamento più marcato verso il supporto economico o verso servizi e politiche di attivazione? Un approccio protezionistico o assistenziale? Con quali meccanismi di tassazione? E a quale livello di governo? Questo paper cerca di colmare questa lacuna analizzando i risultati di due randomised survey experiments realizzati nella seconda metà del 2020 in otto Paesi (Germania, Italia, Giappone, Paesi Bassi, Polonia, Svezia, Regno Unito e Stati Uniti) su un campione di 20.000 individui. I randomised survey experiments permettono di stabilire relazioni causali tra specifiche caratteristiche di policy e le preferenze dei rispondenti. Nello specifico, i due *coinjoint experiments* utilizzanti in questo studio, il primo sviluppato rispetto ai rischi di cambiamento tecnologico, il secondo rispetto al rischio della globalizzazione, permettono di comprendere, nelle otto economie avanzate analizzate, il livello di supporto pubblico rispetto a specifiche politiche rivolte a mitigare i cambiamenti strutturali riconducibili ai rischi qui considerati. Nel complesso, i risultati ottenuti indicano che le politiche per mitigare gli effetti della globalizzazione e del cambiamento tecnologico sono generalmente ben accolte dagli intervistati. Contrariamente alle aspettative iniziali, gli intervistati non mostrano differenze significative nel valutare le politiche per affrontare il cambiamento tecnologico rispetto a quelle sulla globalizzazione. Questo risultato suggerisce che le preferenze dei cittadini per i provvedimenti di politica sociale sono coerenti a prescindere dalla particolare questione da affrontare. Infine, l'analisi rivela che gli intervistati esprimono una ampia e significativa preferenza a sfavore di diverse opzioni di policy trasversali alle dimensioni politiche considerate nello studio.

Parole chiave: globalizzazione, cambiamento tecnologico, politiche pubbliche

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INTRODUCTION

Globalization and technological change are arguably the most prominent sources of structural labour market changes in advanced industrialized economies. Both processes threaten the jobs and livelihoods of many workers and have induced an ever-increasing job-polarization, thereby making them two of the most important challenges for social policymakers. Many possibilities for policy responses to these structural changes are frequently debated by policy experts and economists, and public opinions towards a given policy response (e.g. taxation, redistribution, unemployment benefits, …) have been widely researched with regards to both technological change and globalization. However, much less understood or researched is how public support actually compares across policy responses or across mixes of policy responses. This is true also of the respected realms of how people view the appropriate policy alternatives or mixes with respect to technological change and globalization.

This paper seeks to address this gap by analysing the results of two randomized survey experiments carried out on respondents in eight industrialized democracies. Randomized survey experiments, such as the conjoint experiments used in this study, allow to establish causal links between certain policy features and the preferences of the respondents. The conjoint experiments presented in this study was fielded in November 2020 among 20,000 respondents from eight countries – Germany, Italy, Japan, the Netherlands, Poland, Sweden, the United Kingdom and the United States of America – aim to shed light on public support in these countries for policies to address the structural changes caused by globalization and technological change. We confront each respondent with two conjoint experiments, presented in a randomized order, one focused on various features of policy responses to globalization change and one on very similar features of policy responses to technological change. In each experiment, respondents are presented three pairs of policy packages and asked to assess each pair comparatively, leading to a total of 120,000 packages rated per conjoint experiment. Each policy package randomly varies on a total of seven dimensions (size, taxation, distribution between income and education support, type of education support, type of income support, governance and additional regulatory measures), leading to a total of 3072 possible combinations. This method not only allows a comparison of the effect of each individual policy dimension on a respondent's policy support for each kind of programmatic assistance, but also enables assessing which combinations of policy dimensions characterizing such assistance command the largest support among the public.

In general, we find that policies to mitigate the effects of globalization and automation are generally well-received by respondents, in the narrow sense that a higher share of respondents favour introducing new assistance programmes with respect to the share which is against such new programmes. Contrary to our own expectations, respondents do not meaningfully differ in their

assessment of the policies to address technology as opposed to globalization risks. Whilst this does not say much about how individuals see or compare these risks, it certainly suggests that their preferences for social policy remedies are consistent no matter which particular risk they are confronted with. Averaging the attitudes of individual profiles and countries facing risks, the ultimate source of labour market risks (globalization or technological change) seems to matter less than the actual policy response chosen to deal with risks. In that regard, our analysis reveals that respondents express a consistent preference against debt accumulation: for assistance targeting workers or citizens more than firms; for balancing distribution of support measures between activation (i.e. education and training assistance) and direct financial support (i.e. income assistance); for activation measures targeting vocational or life-long learning programs more than general higher education or focused STEM-education; and for implementing these measures through national or sub-national rather than the supra-national level of governance.

The remainder of this paper develops these claims in four steps, or sections. Section 2 reviews literature on political preferences and the policy options to deal with the structural changes caused by globalization and technological change. Section 3 provides a full description of our survey and Section 4 presents our main results. Section 5 concludes with our findings' implications for policies.

1 GLOBALIZATION AND AUTOMATION IN THE PUBLIC OPINION

For decades, the impact of globalization on labour markets has been widely discussed in political economy research of public opinion and policymaking, whilst impacts of technological change and automation on labour markets, public opinion, and policymaking have only more recently gained substantial scholarly attention. Increasingly, machines and artificial intelligence systems are able to perform a large range of tasks previously performed by humans. Although technological change has traditionally been treated as a threat to low-skill jobs in manufacturing and services (Goldin and Sokolo 1982; Acemoglu 1998), recent advances in artificial intelligence have made technological change a threat to higher-level jobs by enabling the automation of more complex tasks. For instance, self-driving cranes can now stack containers at ports, and voice recognition and translation algorithms have enabled precise, real-time translations from any human-spoken language. The advancing automation of traditionally human-performed tasks has important implications for employment and wages, as it contributes to an increasing wage and wealth gap (Moll *et al*. 2021), job displacement (Acemoglu and Restrepo 2020) and job polarization (Goos and Manning 2007). Furthermore, projections about the likely future impact of technological change, also varying between modest (Arntz *et al*. 2016) and more alarmist (Frey and Osborne 2017) projections, fundamentally agree that technological change will massively change and transform labour markets in the coming years (Autor *et al*. 2020).

The structural changes to labour markets caused by technological change have sparked an ongoing scholarly debate whether and how these labour market disruptions can and should be combatted by policies. Most of these proposed policy responses are of redistributive nature and are debated to this day (Prettner and Strulik 2020). Such proposals range from the progressive taxation of wealth and income to the taxation of robots to finance universal basic income payments (Abbot and Bogenschneider 2018; Standing 2017), or the collective state ownership of robots. Other proposals emphasize the importance of (re-)education to strengthen the comparative advantage of humans over machines (McAfee and Brynjolfsson 2016). To this day, the feasibility and effectiveness of such policy proposals to combat the labour market disruptions caused by automation are widely debated by political economists.

Despite the threats that both automation and globalization pose to workers, the public seems to be rather more concerned with the effects of globalization than with the effects of automation. In comparison, globalization is more often seen as a threat to welfare, while technology is more often seen as an opportunity. Furthermore, globalization issues have become much more salient in public debate compared to technological change issues. International trade and migration restrictions are highly debated topics in advanced democracies and have become driving forces in elections and policy making, and Economic disintegration has emerged as a new policy dimension.

People seem more hesitant in limiting technological progress, as restrictions of automation or the slowing-down of technological change are less reflected in policy decisions and public debate. Rather, the opposite seems to be the case, as governments worldwide seem to be racing to the top to advance robotics and artificial intelligence. The Japanese government's 2014-formed "Robot Revolution Council" to promote the development of autonomous machines and enhance human-robot coexistence (Kovacic 2018), follows a long-lasting public support for advancing technological change (Wagner 2016; Robertson 2017); the USA Artificial Intelligence Initiative invests in artificial intelligence research and development with the goal to "accelerat[e] America's leadership in artificial intelligence" (trumpwhitehouse.archives.gov, 2019); and the European Commission's Strategy on Artificial Intelligence aims to foster artificial intelligence research and development to place Europe "ahead of technological developments in AI" (European Commission 2018 and 2021).

Complementing research that studies the socio-economic implications of globalization or technological change, a growing research looks at political implications of such change. In a pioneering study, Thewissen and Rueda (2019) found a positive association between individual-level automation risk and support for redistribution. Other studies have found no association between automation risk and support for a universal basic income (Dermont and Weisstanner 2020). Findings are mixed regarding the link between tech-related risks and support for active labour market and social investment policies (Sacchi *et al.* 2020; Busemeyer and Sahm 2021; Guarascio and Sacchi 2021; Im 2021). Regarding globalization-related risks, the important work of Walter (2010 e 2017) has shown that globalization (more specifically at individual level: the risk of offshoring) is an important driver of redistribution support as well. Later work by Busemeyer and Garritzmann (2019), however, shows that globalization-related risks primarily shore up support for social investment policies rather than compensatory measures.

Despite the fact that public opinion on and policy responses to globalization seems to differ strongly from public opinion on and policy responses to automation, little research directly compares the impact of both challenges on citizens' preferences for different policy responses. To our knowledge, the only two studies doing so are by Rodrik and Di Tella (2020) and by Gallego *et al.* (2021). In a survey experiment among 5,685 US-American respondents (recruited via Amazon's MTurk), Rodrik and Di Tella (2020) find that, while people are more likely to demand protectionist measures (e.g. policies blocking or dampening source of disruption) in the face of job loss due to technological replacement, they are significantly more likely to demand such protectionist measures in the face of job loss due to offshoring. Similarly, in their survey experiments among 3,100 Spanish citizens, Gallego *et al.* (2021) find that respondents significantly favour protectionist measures when workers' jobs are threatened through offshoring, but not when jobs are threatened by automation. However, Gallego *et al.* (2021) also find no differences in support for redistribution to workers losing their jobs due to offshoring or technological replacement.

2 THE SURVEY EXPERIMENT

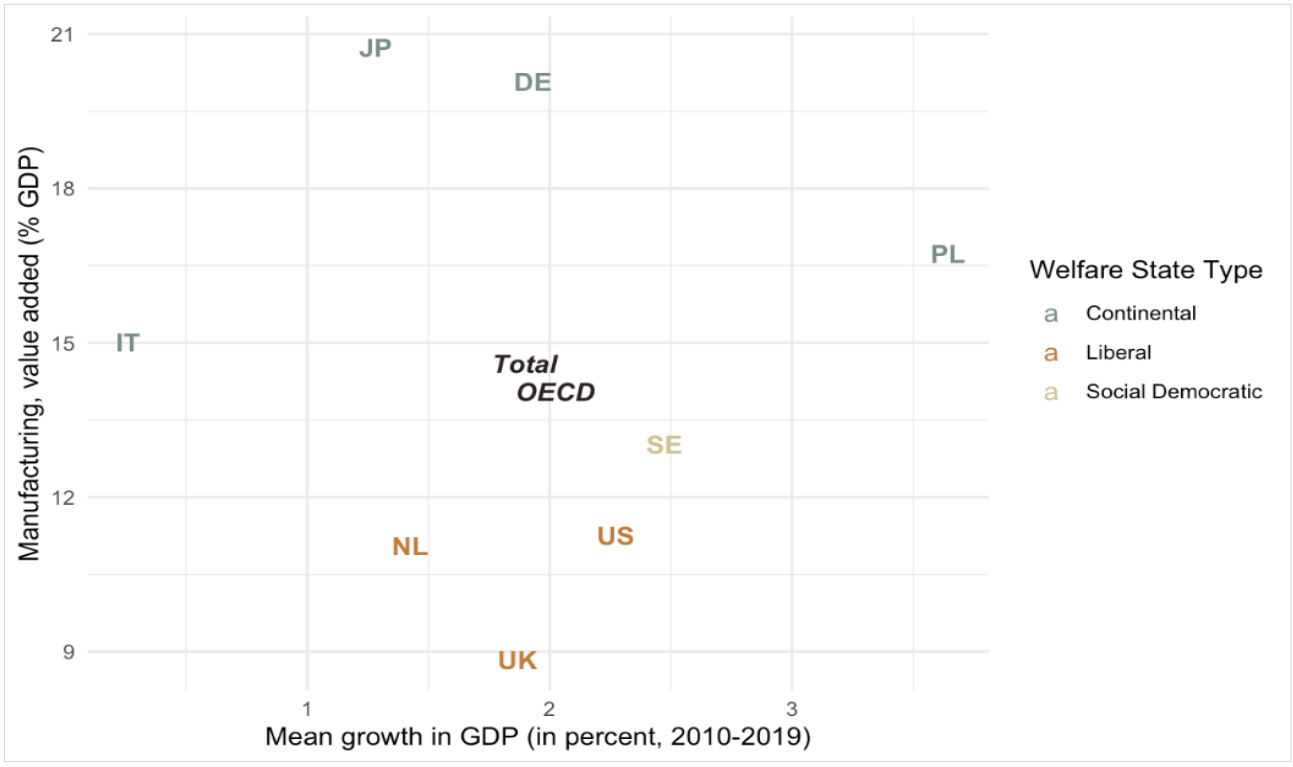
Our research design relies on a particular type of survey experiment: a conjoint experiment. In conjoint experiments, participants rate a set of alternating packages, in our case policy packages (i.e., combinations of various policies), each varying in a set of attributes or, in our case, policy features, throughout seven policy dimensions. This method has several advantages over simple survey questions or more commonly used framing or vignette experiments on policy support (Hainmueller *et al*. 2014, 3). First and foremost, conjoint experiments allow robustly determining the causal effect of multiple treatments in a single study. In our case, we are able to assess both the distinct effect of each policy feature on support for the policy, as well as the effects of feature combinations across dimensions. Ultimately, this enables us to determine which policy package finds the highest support among the respondents. Second, conjoint experiments enable assessing the relative explanatory power of the dimension, as it assesses the effect of multiple treatment components on a single outcome variable. Therefore, we are able to determine which policy dimensions are the most influential in determining public support. Third, by asking respondents to make choices based on multiple pieces of information, conjoint experiments assess preferences by resembling decision-making scenarios relevant to actual programmatic or legislative policymaking, in contrast to single-item preference evaluations. Lastly, conjoint experiments limit validity problems associated with social desirability in survey research, where the choice-set being evaluated can have various plausible justifications for each choice or evaluation that do not directly or obviously reveal preference.

2.1 Sample

We conducted our survey (Survey of technological or globalization risks) in eight industrialized democracies: Germany (DE), Italy (IT), the Netherlands (NL), Japan (JP), Poland (PL), Sweden (SE), the United Kingdom (UK) and the United States of America (USA). We selected these countries to ensure variation in (1) welfare state models and industrial structure, (2) economic performance in the past 10 years and (3) geographical location.

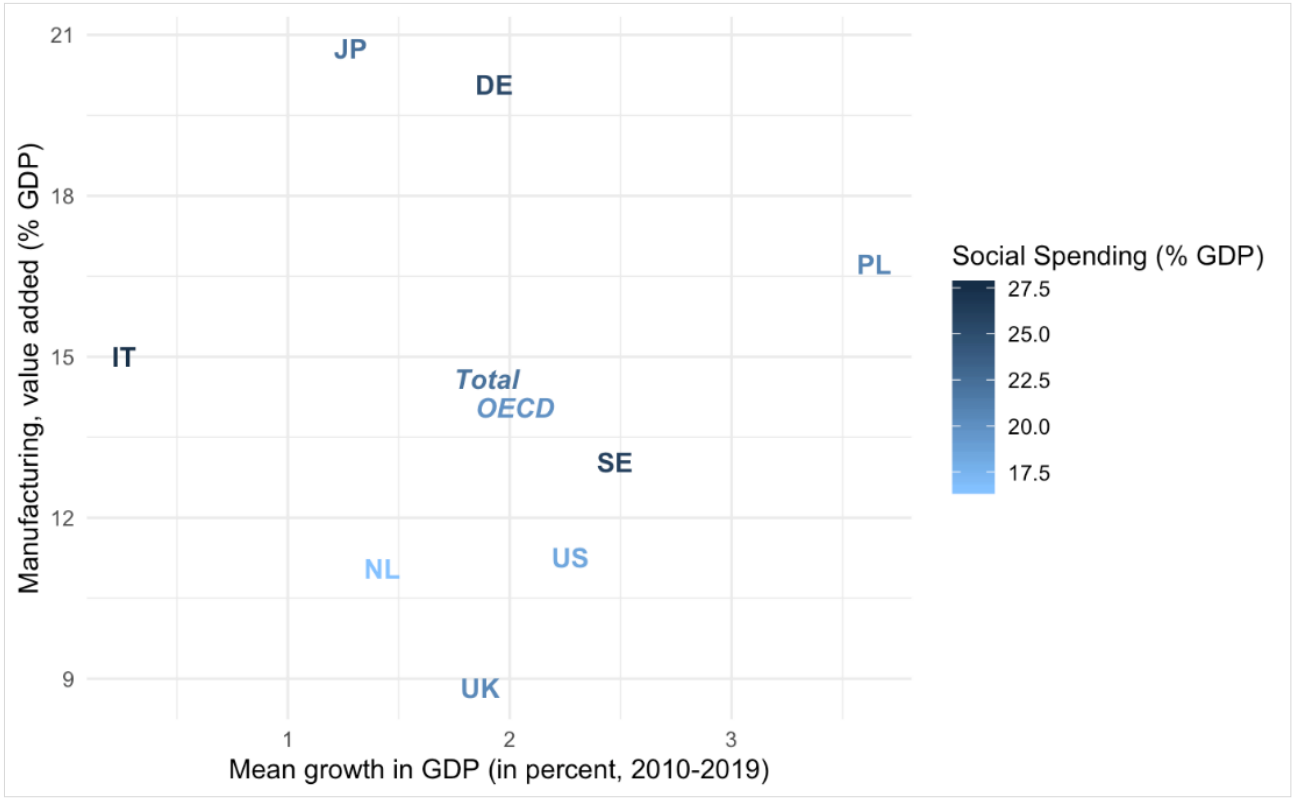
Figure 2.1 demonstrates how the selected countries vary with regards to their past economic performance, industrial structure, and geographical location. Our sample's mean growth in GDP from 2010 to 2019 ranges from 0.26% in Italy to 3.64% in Poland. Furthermore, the sample's highest share in manufacturing (Japan, 20.75% of GDP) is more than twice the share size of the lowest manufacturing share (UK, 8.84% of GDP).

Figure 2.1a Overview of the countries surveyed



Source: World Bank 2021

Figure 2.1b Overview of the countries surveyed



Source: World Bank 2021, OECD 2021

The sampling design used involved non-probabilistic quota sampling (Cochran 1953 and 1977; Sudman 1976). In quota sampling, as is well known, participants are selected non-randomly according to a percentage of the population based on one or more characteristics. The quotas selected in our sample are proportional to the actual resident population distributions by specific characteristics (see below)[1].

A total of 20,000 respondents and 2,500 respondents per country were reached via a representative web panel, fielded in September-October 2020. In order to test the validity of the survey instruments, a pilot survey has been carried out in July 2020 on a sample of 420 individuals: the results did not lead to substantial changes of the survey design. Furthermore, we preregistered our leading expectations behind the experiment, as a formal condition for the data deliver.

The survey was administered through IPSOS' online platform and respondents were able to take the survey in their own language. Although IPSOS panels are already quite representative of the country populations, we further strengthen the representativeness by setting hard and soft quotas[2]. Hard quotas were set to the sample's distribution regarding gender (male, female), age class (15-29 years old, 30-49 years old, 50+ years old), level of education (3 categories based on the ISCED-11 classification[3]) regional distribution (a mix of NUTS 1 and NUTS 2) and employment status (employed, not employed). Soft quotas were set to Occupation (ISCO 1 - digit classification, 10 categories) and economic activity (ISIC classification[4]).

In general terms, the data collection phase has guaranteed a significant level of adherence with the hard quotas identified. Tables A1-A5 in the appendix present, for each country, the relative deviation between the theoretical sample and the actual sample for the five hard quotas employed. As expected, the youngest cohort is characterized by higher complexity in fulfilling the quotas across countries (except for Poland) and was compensated by the older cohorts. However, deviations between the theoretical sample and population structure are moderate: excluding Japan, where the variation is -14.7%, in the other countries they are below 10%. Concerning gender, the adherence between theoretical and obtained samples is almost perfect, with Japan and the Netherlands presenting the highest underrepresentation, respectively 4.0% (female) and 1.7% (male). In online surveys, educational level, and in particular, low educational level, constitutes the most challenging quota to respect. However, this issue has slightly influenced our samples. Excluding Japan, deviations between the theoretical sample and population structure are limited — below 13% — and no educational level

[1] For more information on methodological aspects of the survey or detailed information on the data collection phase, please contact the Inapp statistical office (serviziostatistico@inapp.org).

[2] In the sampling design adopted, the hard quotas define the structure of the target population. In contrast, the soft quotas used during the data collection monitoring phase inform the respondents' selection but do not constrain sample definition.

[3] Less than primary, primary and lower secondary education (ISCED levels 0-2); Upper secondary and post-secondary non-tertiary education (ISCED levels 3 and 4); Tertiary education (ISCED levels 5-8).

[4] Agriculture (A); Manufacturing (C); Construction (F); Mining and quarrying, Electricity, gas and water supply (B, D, E); Market Services (G, H, I, J, K, L, M, N); Non-market services (O, P, Q, R, S, T, U); Not elsewhere classified (X).

quota is particularly underrepresented across countries. The very high overrepresentation of low-educated respondents of Japan can be considered 'expected', given the minimal share of the population with low education reported by the official statistics, according to which this quota for Japan had to be below 1%. Concerning the territorial distribution, the population structure satisfies the hard quotas with only two cells (Sweden: North Middle Sweden and Poland: Warsaw's capital city), characterized by a deviation close to 25%.

Following the data collection, sample weights were built in order to correct the deviations between the theoretical and the actual sample. The auxiliary information used to build the sample weights was the same as that adopted in the definition of the hard quotas (gender, age class, level of education, region, and employment status).

2.2 Design of the survey experiment

In the experimental part of our survey, we confront each participant with two conjoint experiments: one on globalization and one on automation, presented in a randomized order. To familiarize respondents with the policy questions under review, both conjoint experiments are introduced with the following, similar, introductory texts (differences italicized and in brackets):

> We would like you to think about a new public initiative on work and [*automation* / *globalization*] to help citizens prepare for or deal with [*rapid technological change* / *the risks of economic globalization*], including *the* [*automation of production processes, the rise of robotics, and artificial intelligence* / *trade, foreign investment and global production chains*].
>
> The public initiative being discussed can combine different policy measures.
>
> Some measures provide direct income support to compensate workers who lose their jobs to [*automation* / *globalization*].
>
> Other measures provide educational support to help citizens adjust to or prepare for new jobs and generally thrive in a more [*automated* / *globalized*] economy.
>
> Still other policy measures limit or slow [*automation* / *globalization*] itself to protect workers from employment risks.
>
> People disagree about which combination of such policy measures is best for the new public initiative.
>
> In addition, some people say that any such public initiative will be ineffective or too costly, or will delay job creation and harm those workers who lose their jobs to [*machines* / *global competition*].
>
> We would like your opinion on such a possible public initiative on work and [*automation* / *globalization*].
>
> On the following pages, you will be presented with two program options at a time which differ from one another on several policy measures that will be combined within the program.

> For each pair of options, you will be asked to tell us which of the two options you prefer or find least objectionable, and also how much you would support or oppose each option.
> This will be repeated three times.

We then confront respondents with three successive pairs of randomly selected policy packages (from a total of 3,072 possible combinations) varying across seven dimensions. For each pairing, respondents see on a single page the questions associated with the seven dimensions along with how each of the packages being shown addresses a given question – side-by-side with the given feature shown being randomly selected. Table 2.1 gives an overview of the policy dimensions we test (by formulating questions) and each dimension's corresponding options.

The dimensions are also nearly identical, with minor linguistic differences relating to the words and concepts of 'globalization' or 'automation', when relevant. The first dimension concerns the economic size (related, of course, to the generosity) of each proposed programme, its two alternative options (0.35% of each country's GDP, approximately half of what advanced economies now spend on unemployment; and 0.7% of each country's GDP, approximately the same as what advanced economies now spend on unemployment). The second dimension focuses on how each programme would be financed and varies between four options (no change, a tax increase for everyone, a tax increase only for the rich, or an increase of government debt). The third dimension concerns the distribution of each programme's spending on income support and education support, and includes three options (50%/50% split between the two, an 80%/20% split in favour of income support, or an 80%/20% split in favour of education support). The fourth and fifth dimensions address the type of education and income support provided by the programme. In the fourth dimension, the possibilities for education support are four-fold (support to higher education generally, support to higher education but only to science and technology fields, support to vocational and higher education within companies, and support for 'lifelong learning' programmes). The fifth dimension addressing income support includes four options (regular payments to workers losing their jobs due to automation/globalization, regular payments to all citizens, subsidies to firms, and public-funded extra jobs for the unemployed). The sixth dimension concerns the programmes level of governance, with four options (subnational level, the national level, a supranational but not global level, or the global level). The last dimension addresses whether additional measures should be taken to limit extensive automation or globalization or not, with two options that vary for the globalization and the technology conjoint: in the conjoint experiment on globalization the options are 'no' or 'yes' referring to tariffs in form of a 5% taxation of companies engaged in extensive multinational operations; in the conjoint experiment on automation, the options are 'no' or 'yes' referring to a 5% sales tax for companies engaged in extensive automation activities.

Table 2.1 Overview of the dimensions (respondents see all the questions, and, depending on package, alternative answers)

Dimension 1: Size	
How large is the programme?	- 0.35% GDP (about half of what advanced economies spend on unemployment) - 0.7% GDP (about the same as what advanced economies spend on unemployment)
Dimension 2: Taxation	
What is the programme's impact on the taxes paid in your country?	- No change: the program is funded by cutting expenditures in other areas - By increasing taxes for everyone - By increasing taxes, but only for the rich - By increasing government debt, to be paid by future generations
Dimension 3: Distribution between income and education support	
How much does the initiative's spending focus on education support as opposed to income support?	- 20% on income support, 80% on educational support - 50% on income support, 50% on educational support - 80% on income support, 20% on educational support
Dimension 4: Type of education support	
What kind of educational support is provided?	- Support to higher education - Support to higher education, but only for science and technology fields - Support to vocational training and education within companies - Support to 'lifelong learning' programmes, such as adult education
Dimension 5: Type of income support	
What kind of income support is provided?	- Support for workers losing their jobs to [automation / globalization], through regular payments - Support for all citizens, through regular payments - Support for firms to keep them in the market, through subsidizing payments - Support for the unemployed, through public-funded extra jobs
Dimension 6: Governance	
At what level of governance is the programme to be established?	- At [nuts1/nuts2/other sub-national] level - At national level - At [supra-national - regional organization] level - At global level
Dimension 7: Additional regulatory measures	
Are there extra measures to limit extensive [automation / globalization]?	- No extra limit - for the globalization conjoint: Yes, tariffs/duties entailing a 5% tax on sales of companies engaged in extensive multinational operations (trade, foreign investment etc.) - for the automation conjoint: Yes, a 5% tax on sales of companies engaged in extensive automation activities

After studying each pair of policy packages, the respondents are asked to answer the following three questions: (1) *Which one of the following two options do you prefer?* (answer categories: Option 1; Option 2); (2) *How much are you in favour or against Option 1?* (answer on a 5-point Likert scale ranging from 'strongly against' to 'strongly in favour'); (3) *How much are you in favour or against Option 2?* (answer on a 5-point Likert scale ranging from 'strongly against' to 'strongly in favour').

Presenting respondents with two highly parallel conjoint experiments on responses to technological or globalization risks, respectively, might obviously introduce question-order effects – including 'halo effects' where respondents may consciously or subconsciously think about whichever battery of

questions comes second in a way that is coloured by the answers given to the first battery (Zaller 1990). Several features of our survey instrument, however, should limit such biasing effects. First and most importantly, the conjoint character of the survey includes looking at randomized combinations of policy features that makes it harder for a respondent to pin-point (or confess) which aspect of a policy might be driving his or her preference – and less likely also to let that carry-over to the next conjoint. Second, as already mentioned, the randomization should at least avoid question-order biasing in a particular direction of how thinking about one issue area shapes thinking about another. Third, the two distinct texts invite distinct evaluation, an invitation made explicit in the text introducing the second shown conjoint experiment, where we explicitly ask respondents to respond independently from their responses in the previous experiment ("Regardless of the opinion you expressed on the previous questions about [automation / globalization], …").

Apart from the conjoint experiments, the survey also includes several demographic questions, assessed prior to the experimental modules, as well as attitudinal and socioeconomic questions, assessed after exposure to the conjoint experiments, including, but not limited to, assessment of respondents' profession, political preferences, attitudes towards automation and globalization, regional attachment and the impact of the Covid-19 pandemic. Furthermore, an attention check concludes the survey to identify and potentially weed-out inattentive, low quality respondent answers, and to allow robustness checks on the subsamples of respondents passing or failing the test.

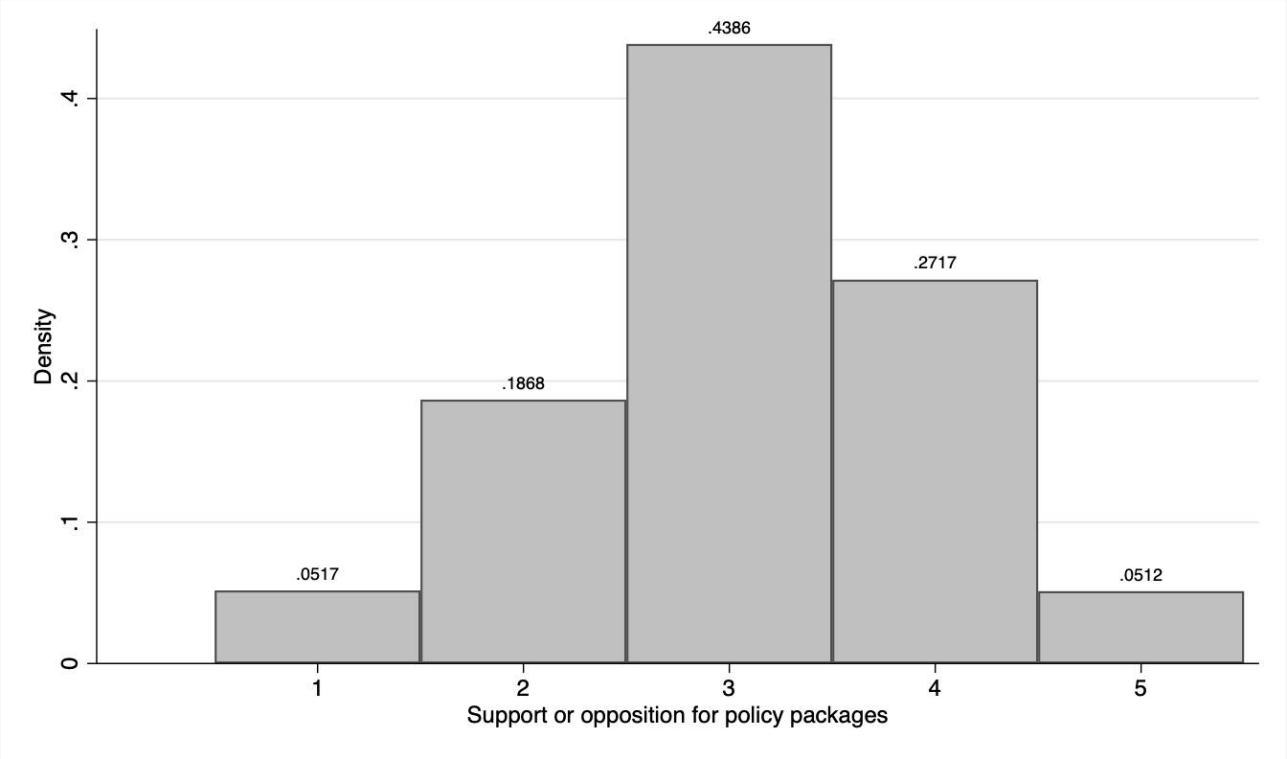
3 RESULT

We present our findings in three steps, gradually increasing the level of specificity with each step. Section 4.1 therefore focuses on the broadest metrics of support and opposition to policies to moderate the effects of globalization and automation. Generally, we find that respondents rather support than oppose the proposed policy packages. In the sections dedicated to the econometric analysis of our data, sections 4.2 and 4.3, we focus on the causal effect of policy features on support for the proposed policies, based on the full sample (Section 4.2) and the country samples (Section 4.3). We find that respondents do not meaningfully differentiate between the risks associated with globalization or with automation in their preferences for social policy packages, and that respondents consistently support packages that provide national-level programmes of adjustment assistance and income assistance to working people, not to firms, and that are financed by progressive taxation rather and do not increase government debt.

3.1 Descriptive analysis

Figures 3.1-3.3 show the distribution of support scores for the overall sample (figure 3.1), by conjoint experiment (globalization/automation, figure 3.2) and by conjoint experiment and country (figure 3.3). Figure 3.1 demonstrates that the fraction of packages judged as 'somewhat in favour' exceeds the fraction of packages judged as 'somewhat against', while the fraction of packages judged as 'strongly in favour' is roughly as large as the fraction of packages judged as 'strongly against'. Furthermore, respondents have a neutral position towards most of the packages they see.

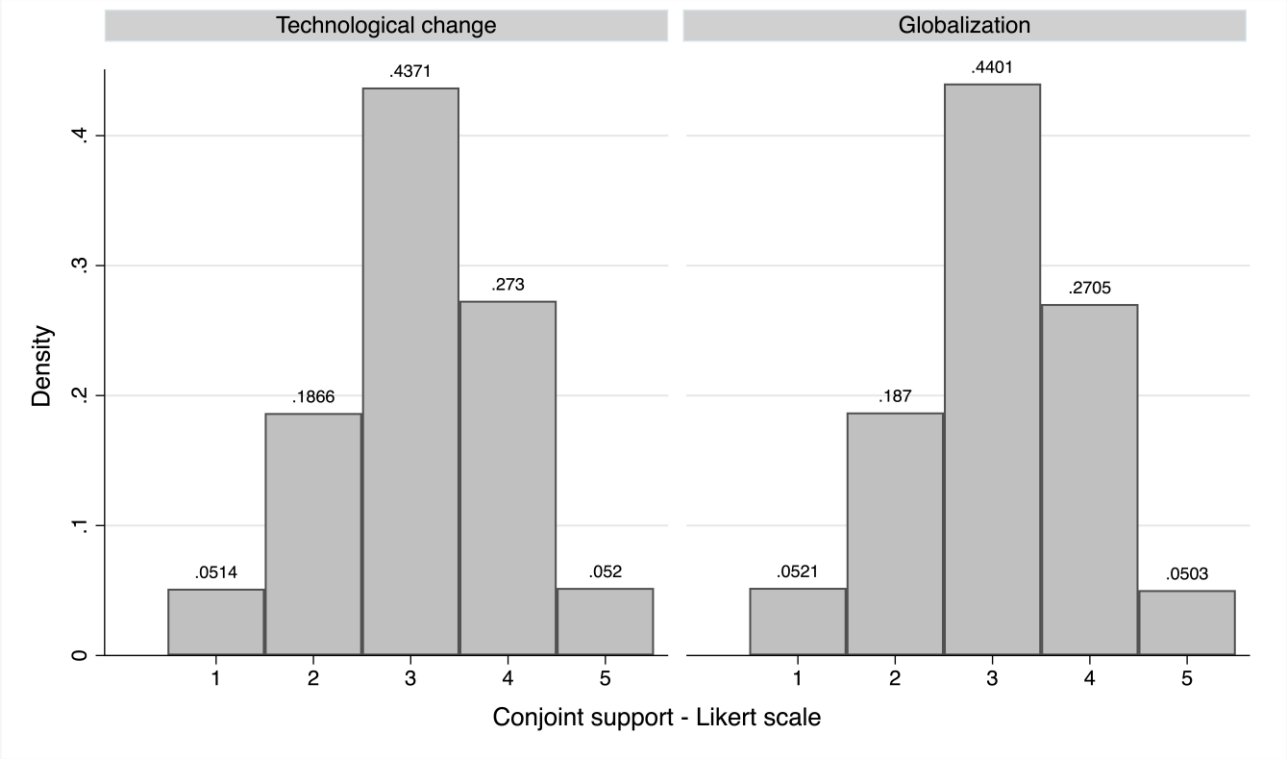
Figure 3.1 Distribution of support, overall



Source: Survey of technological or globalization risks 2020

This general pattern remains in figure 3.2, which displays the distribution of support across the automation and globalization conjoint experiments. The distribution of support for packages in the globalization conjoint is almost identical to the distribution of support for packages in the automation conjoint, thereby demonstrating that respondents do not differentiate between the threats posed by globalization and the threats posed by automation when it comes to their general support for counteractive policies.

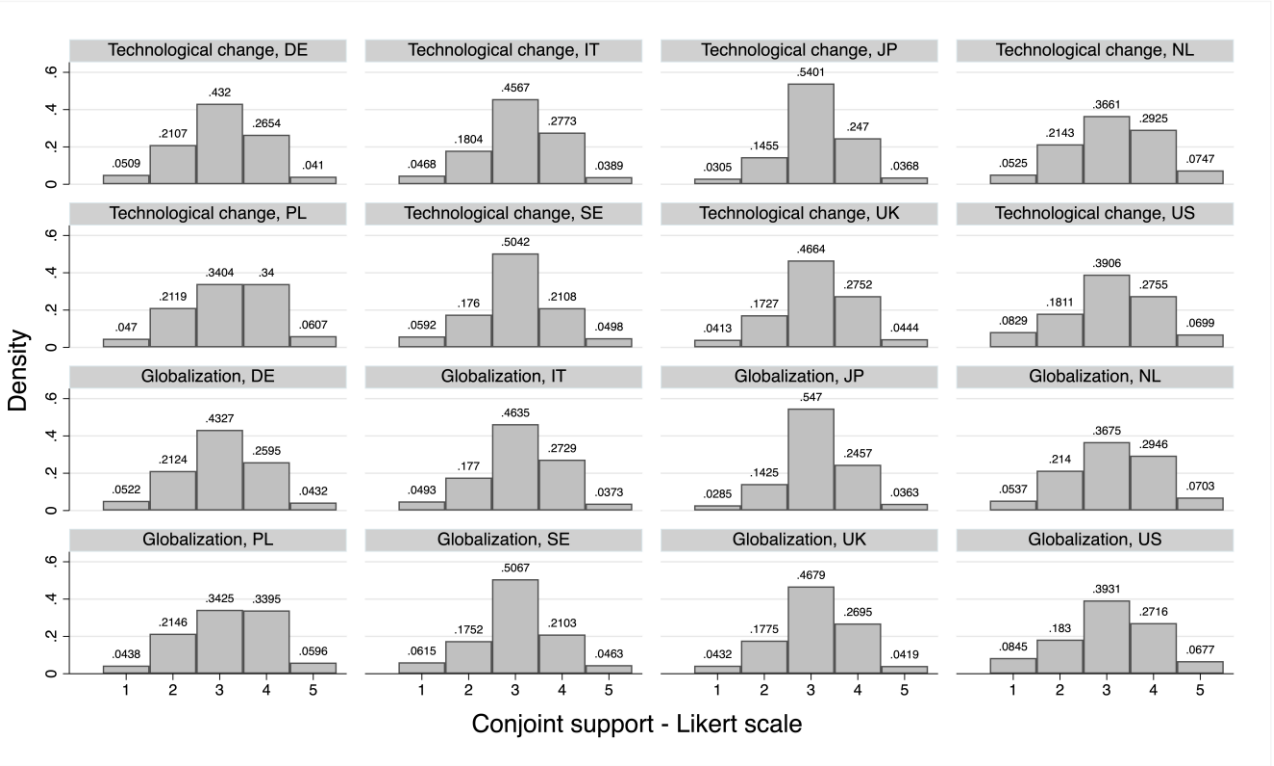
Figure 3.2 Distribution of support, by conjoint



Source: Survey of technological or globalization risks 2020

Figure 3.3 shows that in all countries and across both conjoint experiments the overall pattern of a higher support than opposition to the policy packages remains, as for each conjoint experiment in each country the general level of support ('somewhat in favour' and 'strongly in favour') always exceeds the general level of opposition ('somewhat against' and 'strongly against'). However, the margin of such 'net' support is most modest in Germany and Sweden and most substantial in Poland and Japan. And countries vary in their degree of polarization when it comes to expressed support or opposition to the presented policy packages relative to neutral positioning. And while some countries like Sweden and Japan have a high share of neutral positions towards the packages, other countries, such as Poland and the Netherlands comparatively display a lower share of neutral positions and higher shares of support and opposition.

Figure 3.3 Distribution of support, by country and conjoint



Source: Survey of technological or globalization risks 2020

3.2 Aggregate results

A key advantage of conjoint experimental designs over traditional surveys is the ability to test the causal effects of a multiplicity of policy features of a given policy package on public support for any one or some combination of those features in policy packages. Following this central research objective, we therefore now move from a simple descriptive analysis of policy support to an inferential analysis of the patterns of preference.

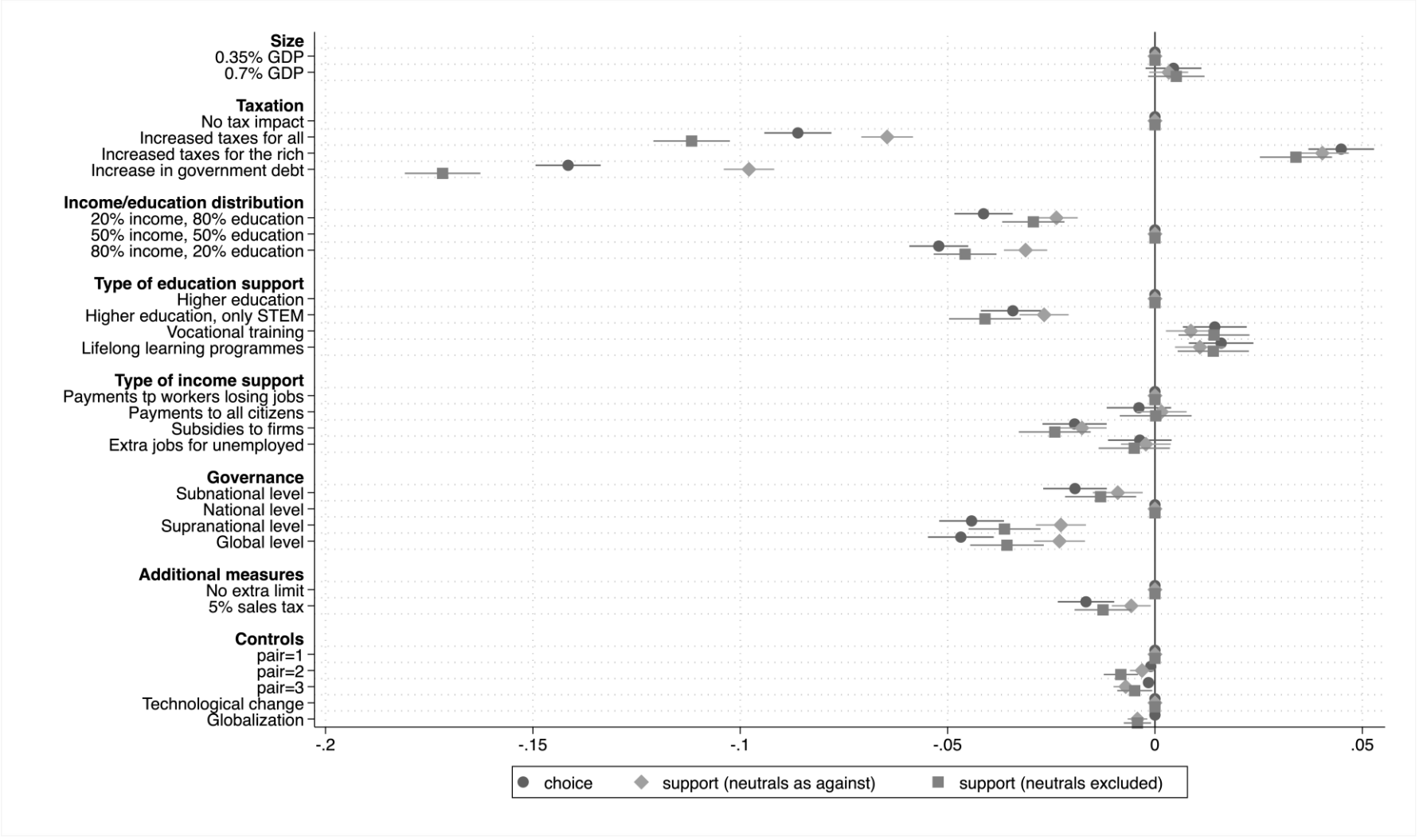
We test the influence of policy features on policy support through a series of linear ordinary least squares regression models, where the unit of observation is the policy package. As each respondent is exposed to a total of 12 policy packages, our total number of observations amounts to 240,000. Each regression model predicts the dependent variable policy support as a function of the 7 policy dimensions' features, while controlling for country, package placement (first, second or third pair) and conjoint (automation or globalization) effects. To assess the robustness of our results, we specify three variations of each regression equation, varying in the dependent variable support: (1) a binary package choice variable, (2) a binary indicator of package support including neutrals as against, and (3) a binary indicator of package support excluding neutrals.

Furthermore, we cluster standard errors at the individual level to account for the fact that every individual has multiple observations. To visualize the results of our regression analysis in the following results sections,

we plot the Average Marginal Component Effect (AMCE) for each feature (in reference to a chosen baselevel feature) across our seven dimensions, as well as the fixed effects estimates included in the regression term. The AMCE measures the average causal effect of the treatment (or feature) in relation to its reference treatment (or reference feature) on support for a specific package (i.e., a combination of features), holding all other independent variables constant. In practice, therefore, the AMCEs displayed in the figures in this section represent the percentage change in the likelihood of choosing or supporting a package having the displayed characteristics, in respect to the baseline treatment.

Each of the 7 dimensions of the experiment has at least two alternatives. So in analyses of how features affect propensity of respondents to support programmes we focus on each dimension with respect to an (arbitrary) baseline feature and at least one randomized alternative. Figure 3.4 displays the AMCEs for each feature across our 7 dimensions, as well as the marginal effects of the experimental controls (pair, conjoint), for the full sample of 20,000 individuals (i.e., 240,000 observations), differentiated on the dependent variable. Country fixed effects were included in the regression models shown but omitted from the figure.

Figure 3.4 Baseline specification, by types of dependent variable, attention fails included



Note: models are differentiated on the dependent variable. The models include the experimental dimensions, the experimental controls (pair, conjoint), and country fixed effects (omitted from the figure). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

All else equal, respondents tend to be slightly more likely, but insignificantly, to support packages if they are larger in size (0.7% GDP vs. 0.35% GDP). Generally, a policy package's size plays a subordinate role for respondents.

Turning to the second dimension, taxation, respondents are about 6% less likely to be supportive of a package if it features an increase in taxes for all compared to having no tax impact, all else equal. Furthermore, with respect to having no tax impact, respondents are 3% more likely to be supportive of a package if it features an increase in taxes only for the rich. Increase in government debt is the feature with the largest impact on support, of all features tested. All else equal, respondents are 10% less likely to be supportive of a specific package when it leads to an increase in government debt, compared to no tax impact.

With regards to the distribution between income and education support, respondents are most supportive of a 50%/50% split, and least supportive of an 80%/20% split in favour of income support. Compared to the 50%/50% split, respondents were about 2% less likely to choose a package with an 80%/20% split in favour of education support and about 3% less likely to support a package with an 80%/20% split in favour of income support.

When it comes to the type of educational support, respondents are about equally likely to support vocational training and lifelong training programmes, with an increase in likelihood to prefer a policy containing either of these features over the reference feature of higher education support of about 1%. Of all education support features, respondents are least in favour of higher education support to only STEM curricula, with a decrease in support of 3% compared to unconditional higher education support.

With regards to the fifth dimension, the type of income support, respondents do not significantly differentiate between payments to workers losing their jobs and payments to all citizens, meaning that citizens are neither more nor less supportive of basic income models in comparison to unemployment benefit programmes. Furthermore, respondents are least supportive of subsidies to firms, with an about 2%-decrease in likelihood of support compared to payments to workers losing their jobs. Lastly, creating extra jobs for the unemployed neither significantly increases nor significantly decreases respondents' likelihood to support a specific package, compared to otherwise identical packages featuring payments to workers losing their jobs.

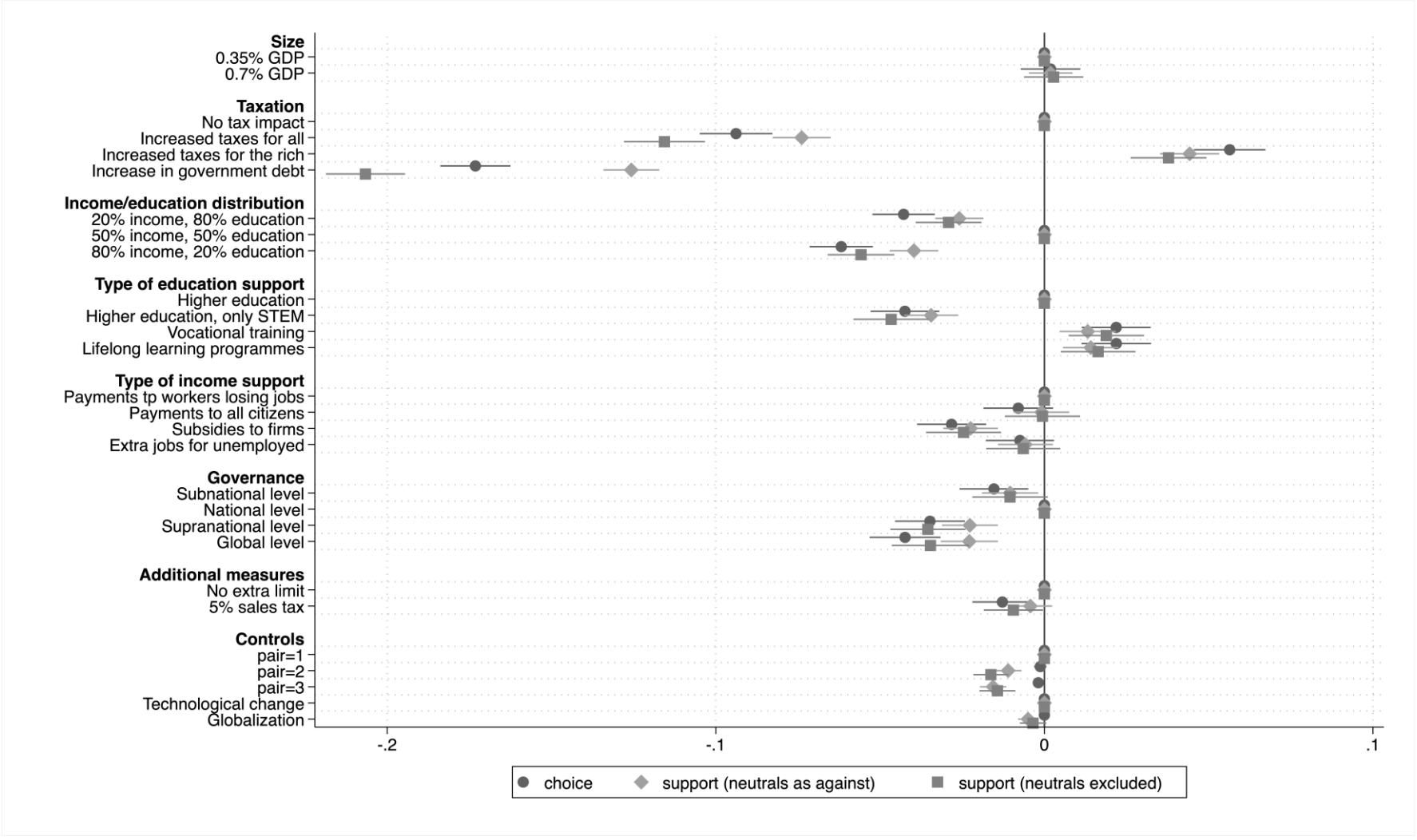
Furthermore, respondents are most supportive of packages to be implemented at national governance level and least supportive of packages to be implemented at supranational or global level. Compared to governance at national level, respondents are 1% less likely to support a package if it is to be implemented at subnational level, and 2% less likely to support a package if it features either global or supranational governance.

Lastly, respondents are 1% less supportive of a package when it features a 5% sales tax compared to an otherwise identical package featuring no extra no additional measures to limit extensive globalization or automation.

Figure 3.5 depict the AMCEs in an identical fashion as figure 3.4, except that those respondents who failed our attention check are excluded from the sample, leading to a sample size of 132,168 policy evaluations (unit of observation) from 11,014 individuals. Removing inattentive respondents does not affect the results of the regression models with regards to the experimental dimensions. Therefore, we continue with our country-specific analyses using each country's full sample.

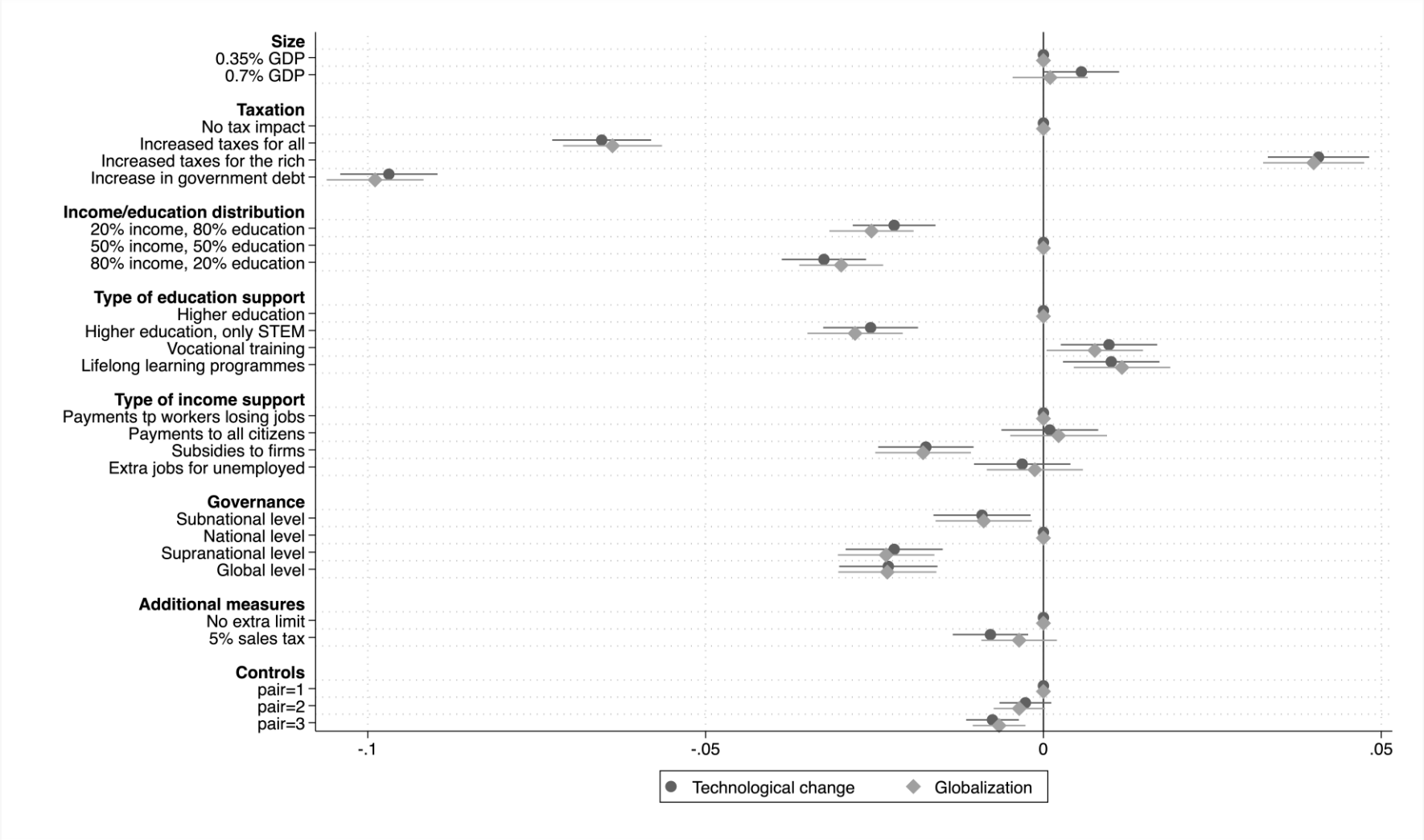
Finally, in figure 3.6 we compare the two main conjoint treatments: globalization and technological change. It is reasonable to expect citizens attitudes to differ substantively between the two framings, as respondents are faced with clearly differentiated descriptions and they display different underlying attitudes towards globalization and technological change. Yet, on the aggregate, we observe little meaningful difference between the two alternative framings: the patterns in the respondents' preferences regarding the alternative policy options remain strikingly similar across all dimensions of the experiment, with no significant difference in any dimension. Albeit counter-intuitive, these results suggest that – on average – respondents' preferences are more enticed by the inherent features of a policy or of an institution, rather than by the characteristics of the underlying problem that the policy or institution is deemed to address. Of course, there might be experimental reasons behind this lack of significant differences between the two framings: for instance, the introductory descriptions might have been too close to each other to stimulate genuinely different thinking about the problems. It may also be that we are facing an aggregate compositional issue, whereby different individuals react differently to each of the two fundamental problems, but on the aggregate these effects disappear. For instance, Nicoli *et al*. (2021) show – using a different conjoint experiment – that individuals who have high fears of globalization or of technological change respond in slightly different ways when faced with alternative supranational unemployment policies. Yet, Gallego *et al*. (2021) using a very different setup come to similar conclusions, finding that many respondents do not substantively differentiate between these two sources of potential unemployment risk as much as expected.

Figure 3.5 Baseline specification, by types of dependent variable, attention fails excluded



Note: models are differentiated on the dependent variable. The models include the experimental dimensions, the experimental controls (pair, conjoint), and country fixed effects (omitted from the figure). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

Figure 3.6 Baseline specification, by conjoint theme



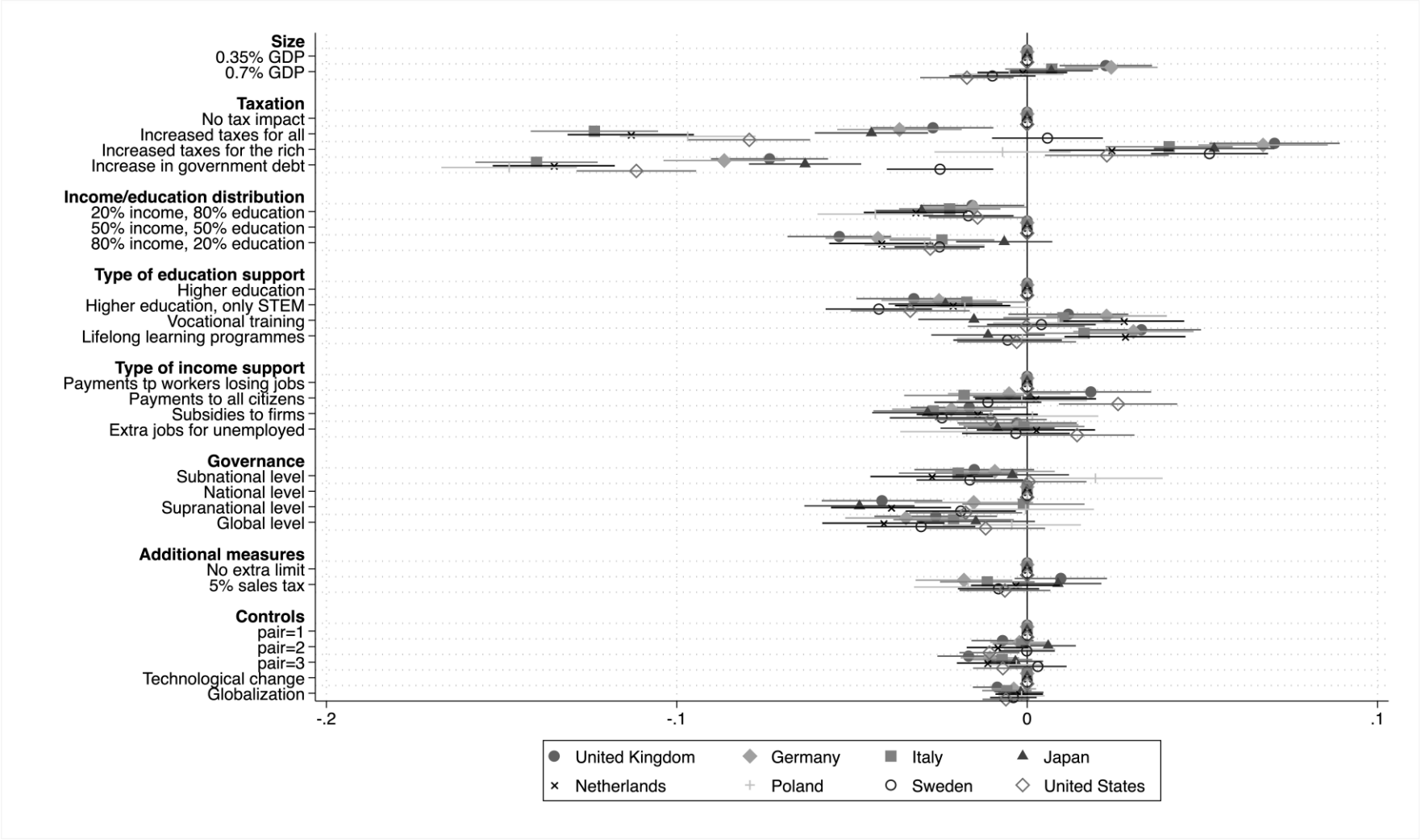
Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair), and country fixed effects (omitted from the figure). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

3.3 Country-level analysis

It is possible and important that the pooled patterns of how respondents in our sample countries look at policy assistance to address globalization and technological risks vary a lot across the countries in our pooled sample. After all, the levels of risks and policy and political traditions for dealing with risks vary considerably across the sample countries. The country samples are comparable with one another not just because all received the same conjoint experiments (in the respective native language of the sample country), but also because in all countries we surveyed 2,500 respondents to be similarly representative for regional distribution, age, income, education and broad categories of profession.

In figure 3.7, we compare all countries; in figures 3.7-3.14 we focus instead on each country individually. Figure 3.7 looks at the dimension effects per country, comparing all countries. This bird-eye overview shows that significant differences exist between some of the countries studied. For instance, while Sweden and the USA oppose the more generous version of the programme, Germany and the UK tend to favour it. Sweden is also the only country to have a favourable view of flat taxation increases, while Italy is the country that dislikes it the most. Poland is the only country whose population does not significantly most prefer progressive taxation over other financing options, with most countries differing only in degree of support for progressive taxation (the UK being substantively the most supportive polity). Finally, while all polities express net distaste for accumulation of public debt, Italy and the Netherlands are the strongest opponents of paying for the programme by such debt (Sweden the least outspoken opponents).

Figure 3.7 Baseline specification, by country



Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions and the experimental controls (pair). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

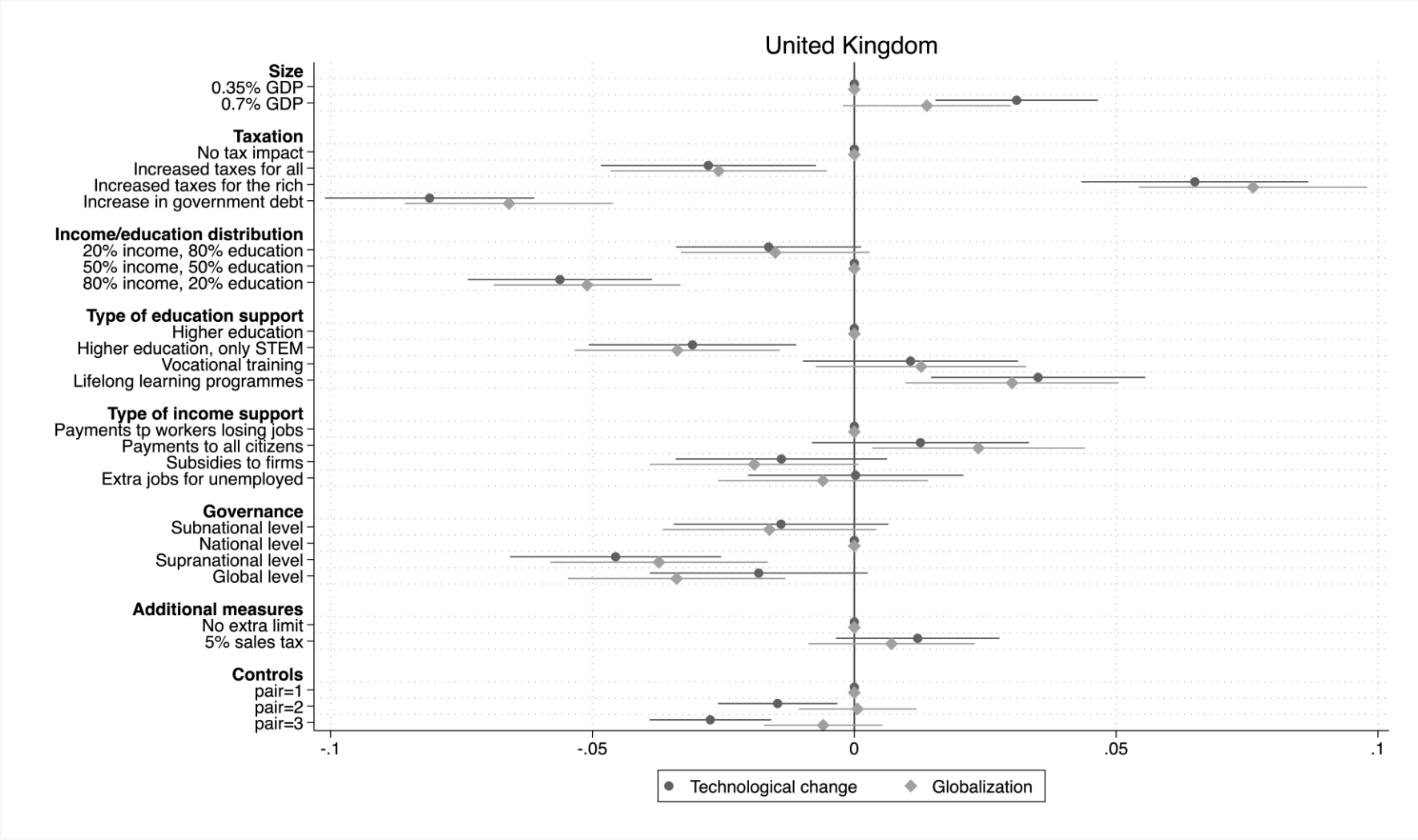
All countries prefer a balanced distribution of spending between income support and education support, albeit opinions tend to be slightly less clustered when income support is prioritized, with significant differences between UK and Germany on one hand, and Japan (the only country where higher income support is not statistically different from equal splitting of resources) on the other. When it comes to the specific type of education support, all countries reject supporting STEM education only. Opinions are relatively polarized when it comes to lifelong programmes and vocational training instead, with especially Japanese, but to some extent also American and Swedish respondents, having a less positive/more-negative view of these schemes, while other countries supporting these more than the alternative of simple higher education investment.

With regard to income support, with respect to the baseline option of better unemployment benefits, the USA and UK publics prefer forms of basic income for all citizens, while all other country populations tend to dislike the idea; all countries's publics reject the idea of subsidies to firms, and the USA is the only polity somewhat supporting the idea of income support in the form of extra public jobs.

All country public options, Poland prefer national governance as opposed to subnational, continental or global governance. Poland has a preference for local governance above all other arrangements, while the USA is the country which opposes global governance the least. By contrast, Japan rejects continental coordination (in their case, at the ASEAN level) the most, while Italy and Poland are virtually indifferent between national or EU-level governance, and Germany has only a slightly negative view of European governance as opposed to the national one. Finally, the UK and Japan also slightly favour stronger penalties in the form of tax increases for companies engaged in globalization and automation activities, while Germany and Italy are the most opposed to extra taxation towards corporations.

Figures 3.8-3.15 clarifies the respective portraits per-country story, allowing us to highlight country-whole differences and judge whether there are differences between frames focusing on globalization and technological change. With respect to the latter, in most countries respondents think about the two sources of economic disruption very similarly, without much differentiation in the way they affect their patterns of response. Even when differences exist, these are seldom statistically significant. In the UK, for instance, respondents seem rather less favourable to generous programmes targeting globalization rather than automation, but the differences are statistically non-significant.

Figure 3.8 UK only: baseline specification, by conjoint type

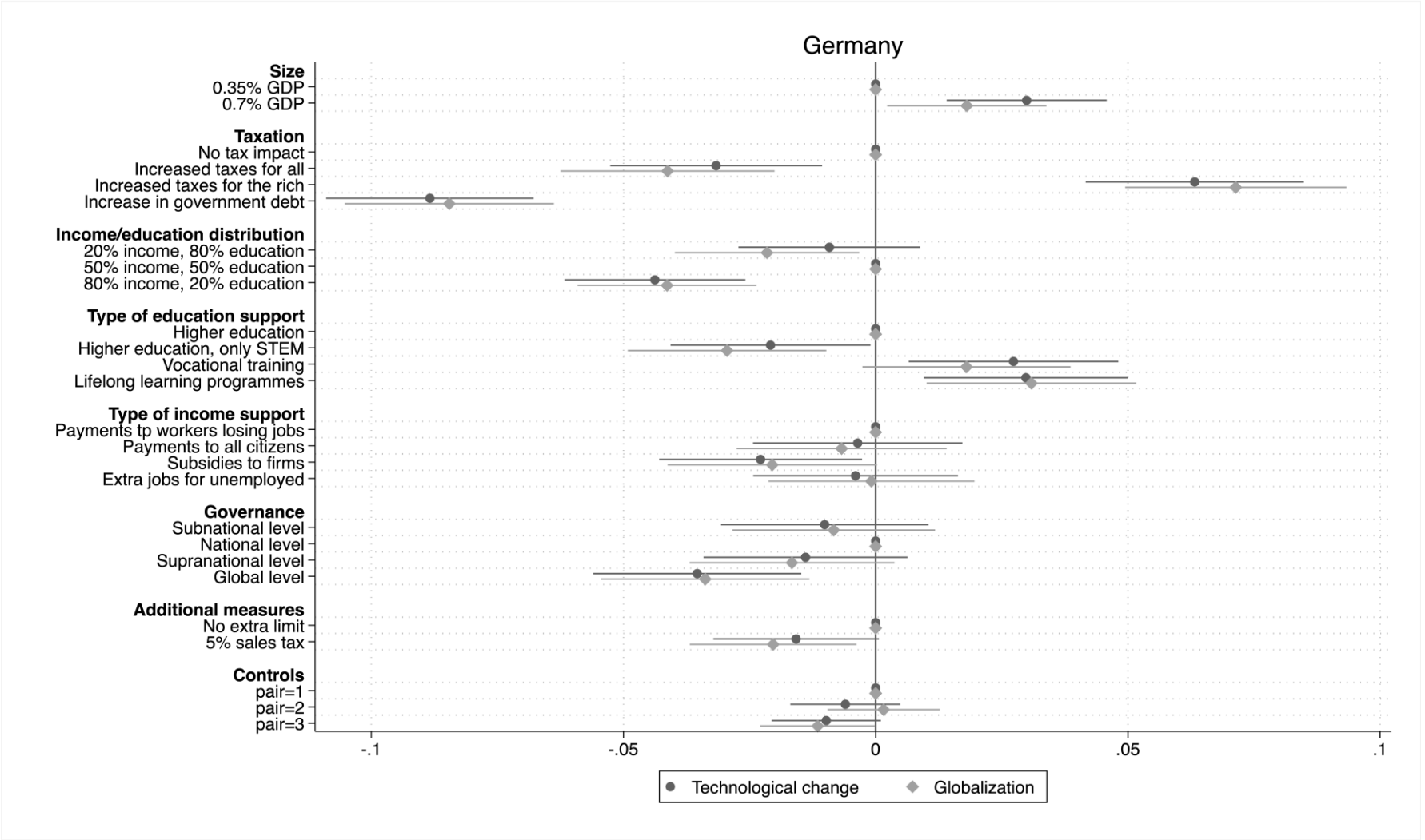


Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair, conjoint). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

German respondents seem not to differentiate in any meaningful way between the two sources of potential disruption: they tend to provide very consistent answers on the nature of the support policy at stake regardless of the source of risk. Along with the Italian respondents, they tend to have a less negative view of supranational governance as compared to other countries, but again without fundamentally differentiating between sources of risk; compared with Italians, they also tend to have a more negative view of global governance arrangements, which are clearly opposed by the respondents in then German sample.

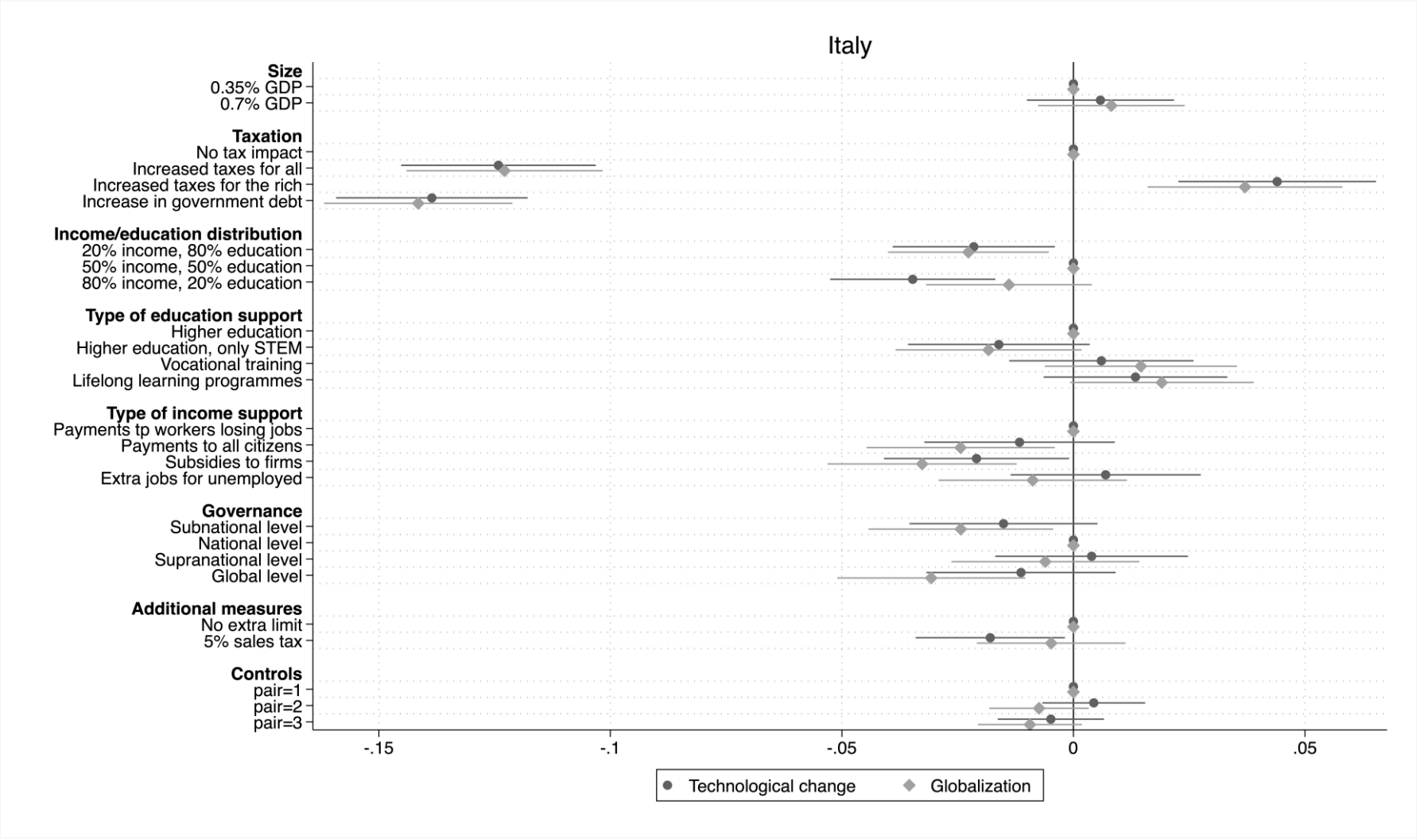
In the Italian case, interesting differences (which remain, however, statistically non-significant at the 5% threshold) pertain the distribution of monetary benefits between education and income, the type of income support, and the governance of the programme. Income support is less objected upon when it targets globalization. When income support is provided, however, Italians have a slightly favourable view of creating public jobs to counter technological change, but not to counter globalization. Regarding governance, Italians tend to support EU-level governance of technological change, but not when it comes to globalization.

Figure 3.9 DE only: baseline specification, by conjoint type



Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair, conjoint). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

Figure 3.10 IT only: baseline specification, by conjoint type

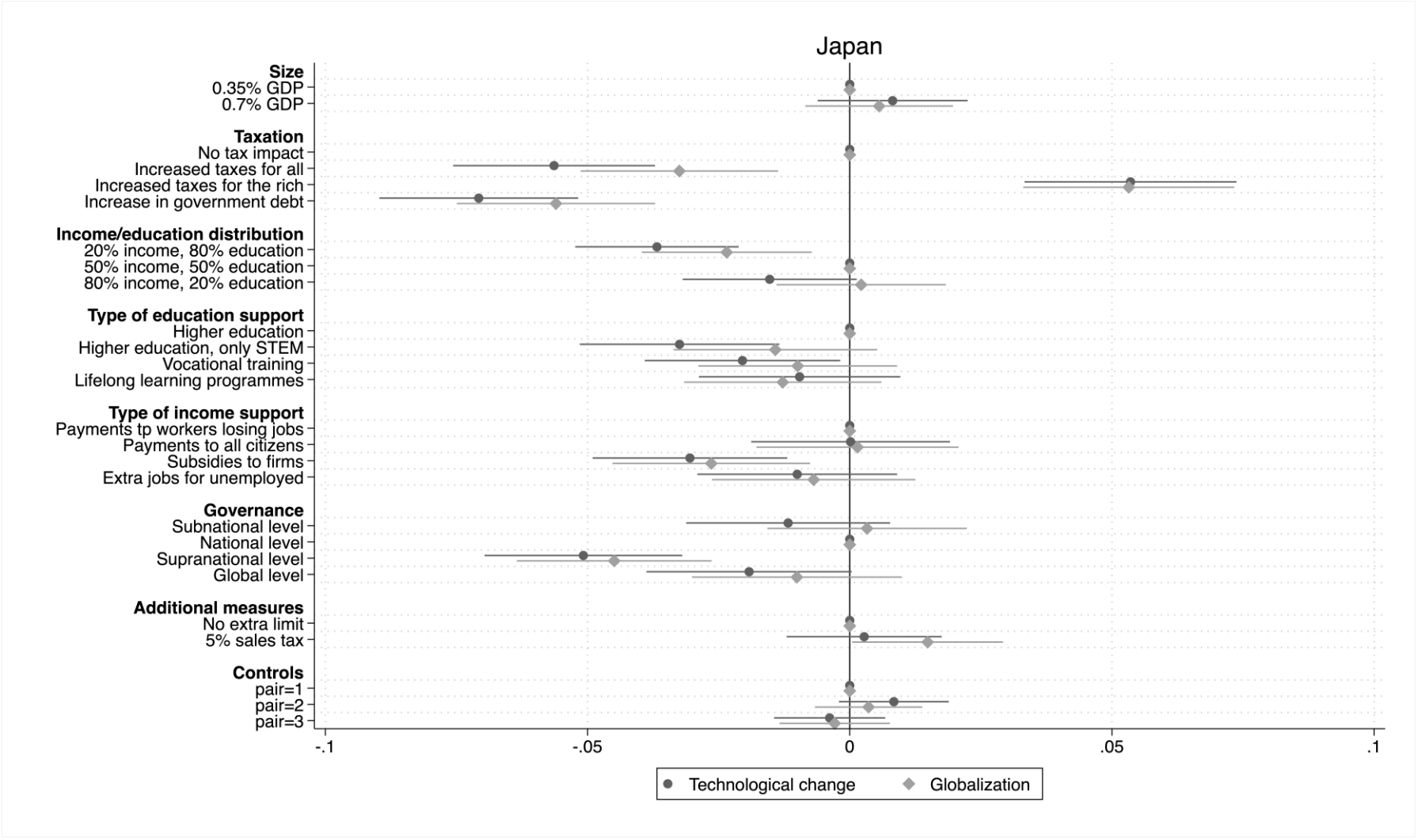


Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair, conjoint). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

Japanese respondents, in general, tend to have more supportive views of policies targeting globalization than policies targeting automation. This emerges across various specifications: respondents are less willing to suffer linear tax increases or extra debt to face disruptions induced by technological change, they are less interested in local governance forms, and are relatively less in favour of additional taxes on companies when it comes to automation as compared to globalization. More importantly, they hold rather negative view of income support to counter the negative effects of automation, while they hold an indifferent or even positive view of income support to counter the negative effects of globalization.

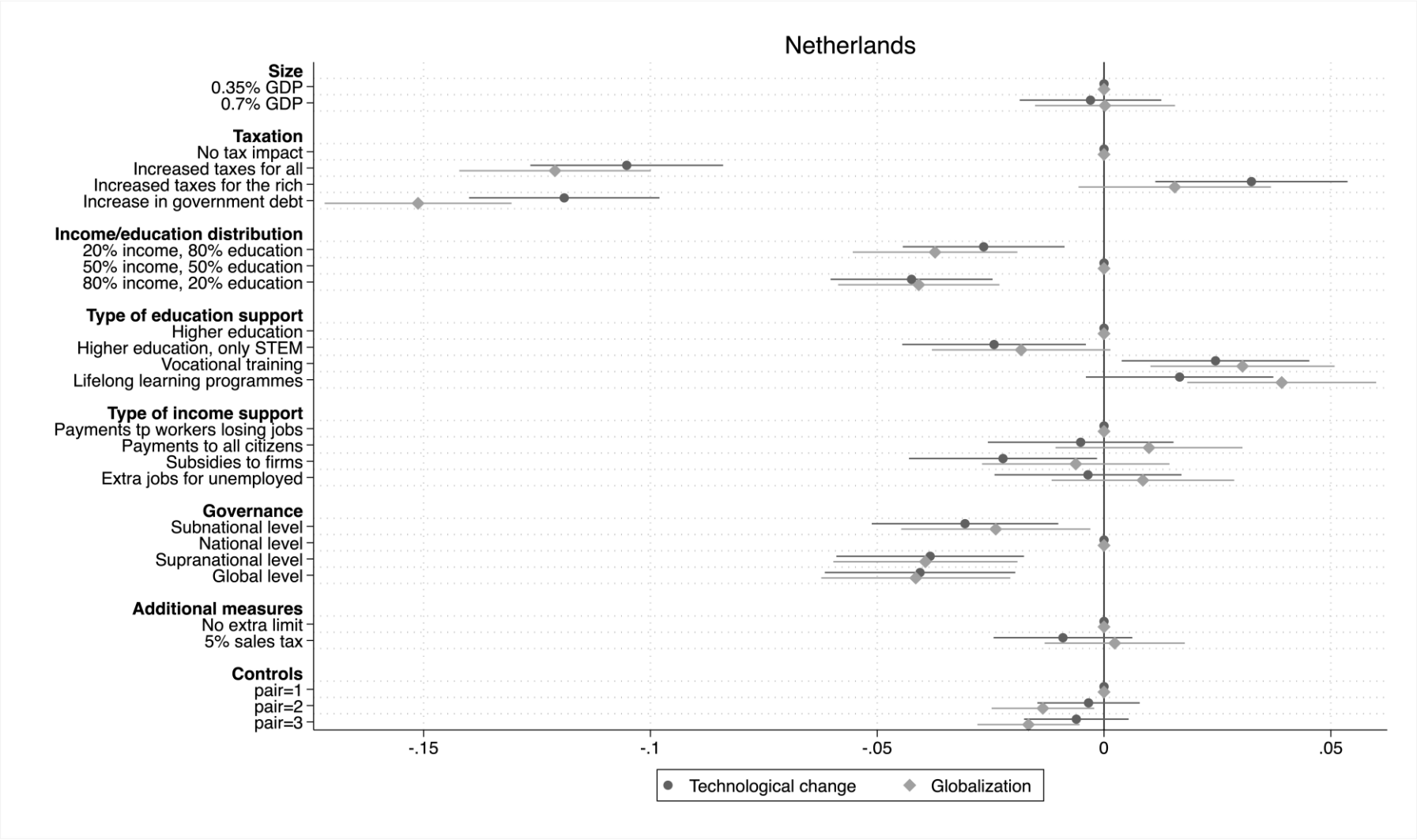
Conversely, Dutch respondents tend to have different priorities when compared with Japanese respondents. Dutch respondents are in general more wary of technological change than they are of globalization, and this is reflected to some extent in the marginally more favourable views they hold regarding policies addressing automation as compared to globalization. While they generally dislike public debt, for example, they tend to be much more negative to extra public debt undertaken to counter globalization than to counter automation. However, when it comes to the types of income support characterising the potential policies, Dutch respondents have a more positive view of direct transfers to all citizens in the case of globalization-induced shocks, which suggests that they perceive globalization as a broader and more general source of potential issues. Notably, the Dutch respondents have a strong preference for national governance, which they prefer over all other types of coordination.

Figure 3.11 JP only: baseline specification, by conjoint type



Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair, conjoint). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

Figure 3.12 NL only: baseline specification, by conjoint type



Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair, conjoint). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

Respondents from Poland, not differently from German respondents, tend not to differentiate much between the two sources of potential disruption. However, they seem generally slightly more concerned with automation, and they tend to be less negative with regard to income transfers in the case of disruptions induced by technological change as opposed to disruptions induced by globalization; they also tend to be more supportive of firms in the case of automation, supporting subsidies and opposing extra sale taxes. Interestingly, when compared with respondents from other countries, Polish respondents tend to have very favourable views of subnational governance, indicating a quasi-unique mistrust in national institutions which does not emerge in any other country-specific sample.

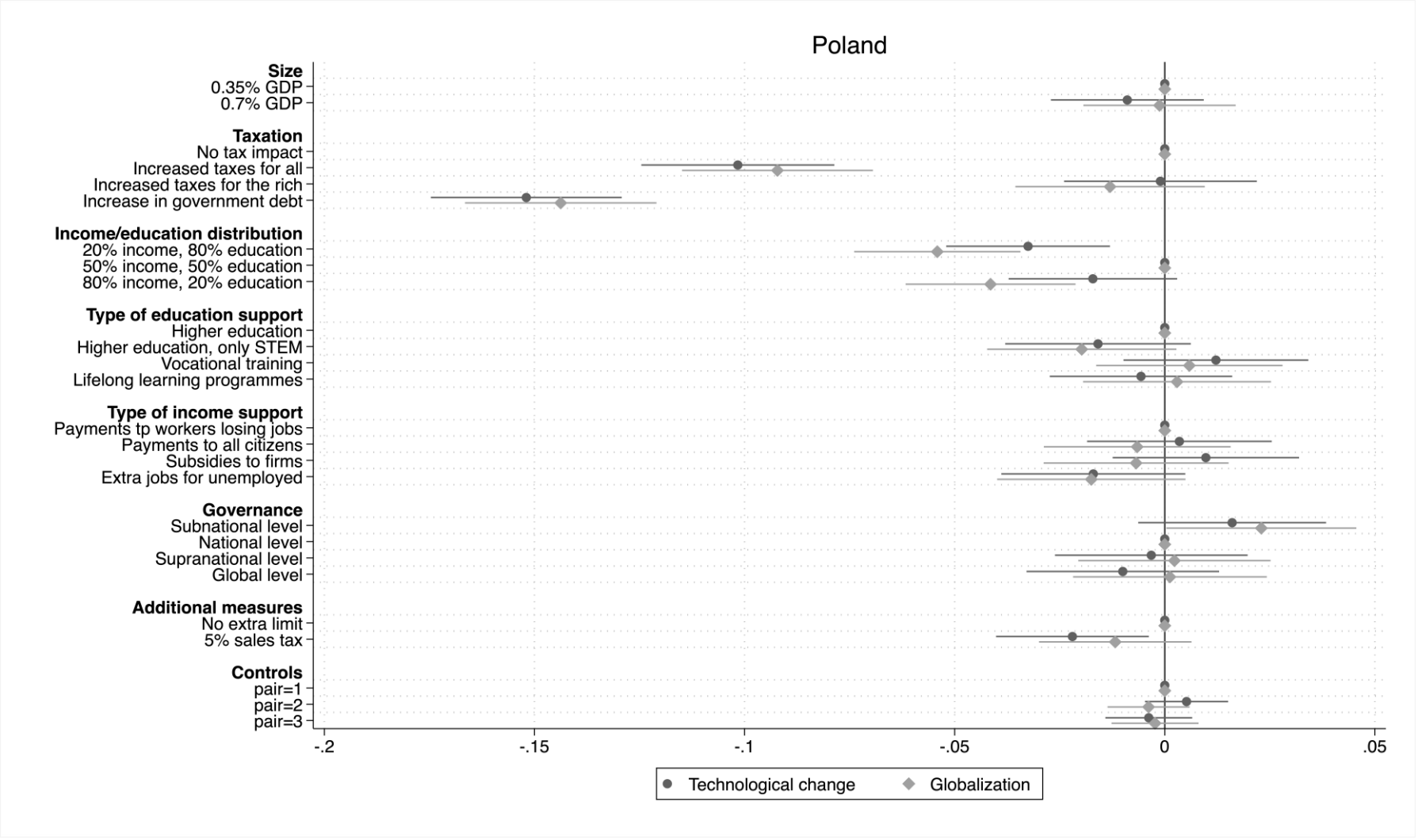
Respondents from Sweden tend not to differentiate between sources of risk. Notably, they display a very strong support for forms of progressive taxation, even when compared with other countries, and tend to have a less negative attitude towards public debt.

However, these attitudes follow very similar paths both with regard to policies addressing globalization, and to policies addressing automation. The only policy dimension where Swedish respondents display a somewhat differentiated attitude pertains investment in vocational training, which tends to be slightly preferred over broad higher education investment (the baseline level) in case of policies addressing automation, whereby the same policy appears to be slightly disliked when the focus of the programme is on globalization.

Finally, the last country in our sample is the USA. The American patterns of preferences do not dramatically differ from European ones. However, in line with patterns of opinion and policy, the USA respondents tend to prefer a less generous variant of government-provided assistance provisions than do their European counterparts. And Americans tend to be less supportive than their European counterparts of packages inclusive of progressive taxation. Less intuitively, USA publics' preferences are relatively differentiated when it comes to income support alternatives to counter globalization or automation. In particular, USA respondents are quite supportive - in the case of policies addressed to globalization - of income support directed to all citizens and to the provision of public jobs, and tend to be less sceptical than other countries when it comes to subsidizing firms.

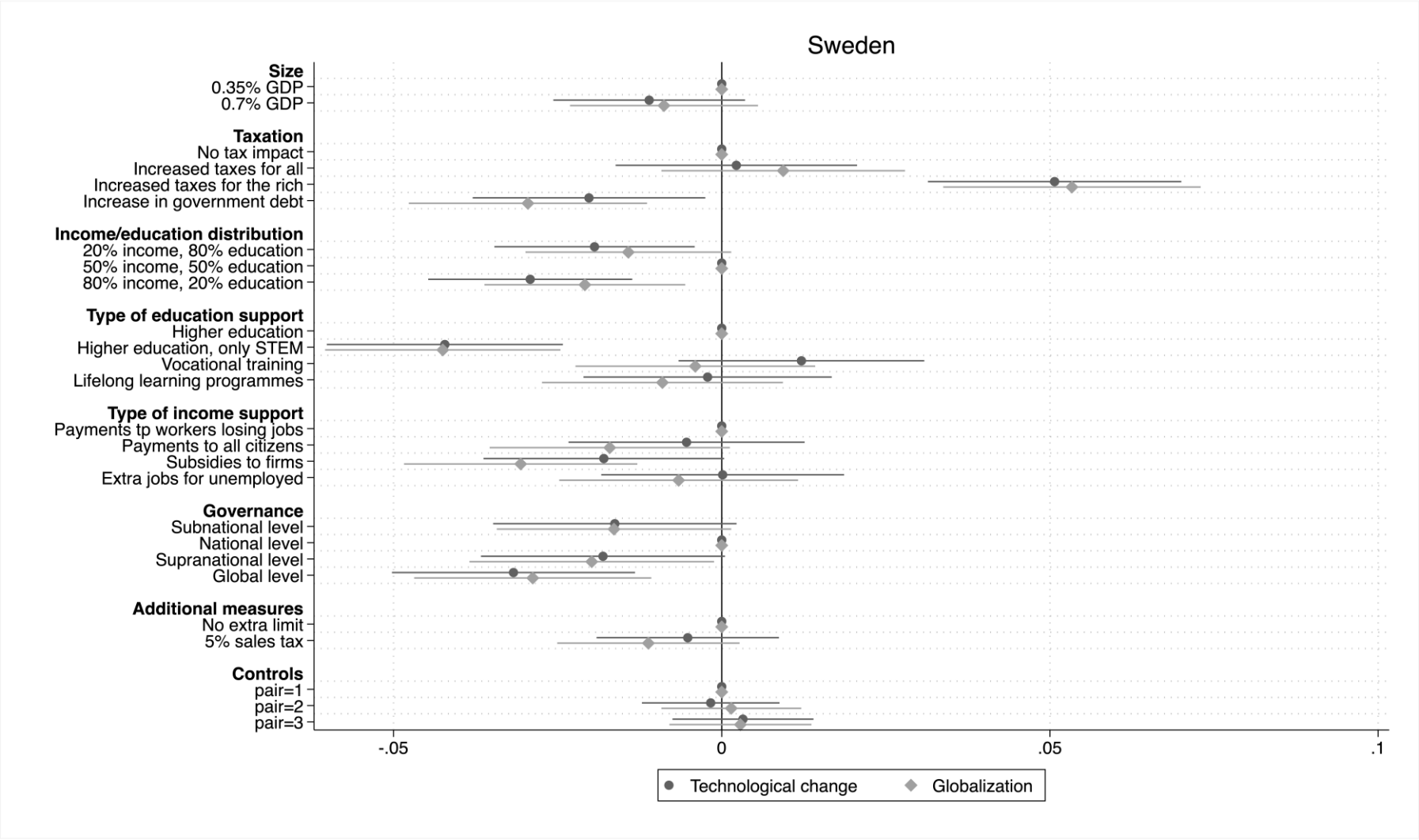
Overall, the country-by-country analysis shows that, with some exceptions, respondents do not fundamentally differentiate between sources of risk. When differences emerge, these are generally statistically non-significant, and are more indicative of broad patterns rather than precisely identifying a distinction between policies addressing different risks.

Figure 3.13 PL only: baseline specification, by conjoint type



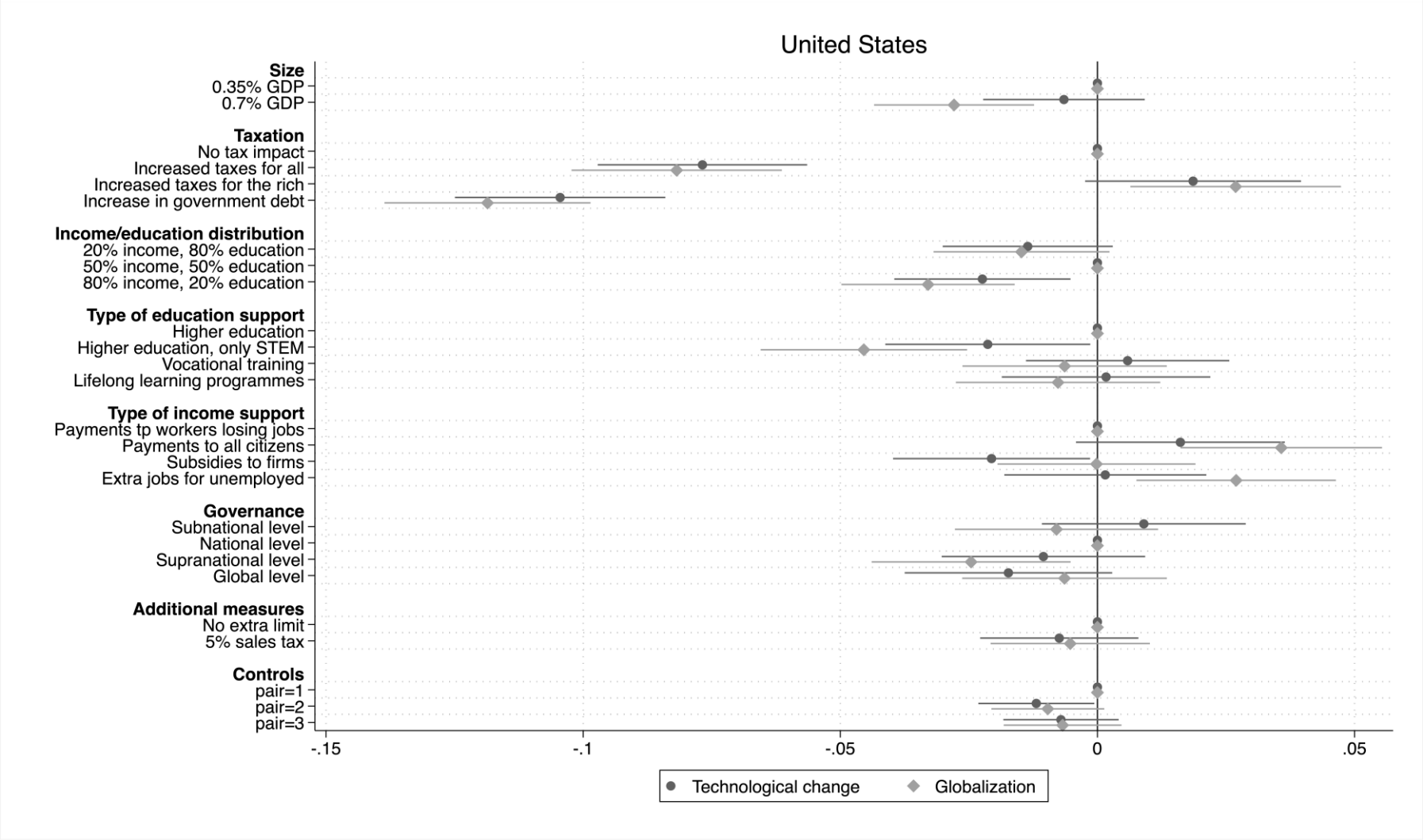
Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair, conjoint). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

Figure 3.14 SE only: baseline specification, by conjoint type



Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair, conjoint). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

Figure 3.15 USA only: baseline specification, by conjoint type



Note: the dependent variable is package support (neutrals as against). The models include the experimental dimensions, the experimental controls (pair, conjoint). Standard errors are clustered at the individual level to account for the fact that every individual has 12 observations.
Source: Survey of technological or globalization risks 2020

CONCLUSION

This policy paper has sought to shed light on the political attitudes towards diverse policies to address and mitigate economic risks posed by the twin forces of economic globalization and technological change. Both globalization and tech-change have been on the political agendas in industrialized democracies, where both conditions are thought to pose major economic risks, insecurities and disruption, at least for some countries and groups. To address such risks, insecurities and disruption, policymakers and scholars have long debated a wide array of political initiatives that vary in terms of generosity, level of governance, different kinds of income maintenance together with or instead of different kinds of more activating education, and with or without extra protectionist interventions. Key to such debate is how this plays out for voting publics in democratic settings. Which sources of economic risk inspire the most or least support from populations for policy interventions to address the risks? And what policy mixes are seen as most or least attractive to address such risks? More income maintenance or educational adjustment assistance? More or less (progressive or flat) taxation? More protectionism or more social policy assistance? National, local or more global governance?

The policy paper summarized the findings of a large-scale survey experiment that provides answers to these questions. The experiment included two conjoint, or factorial, experiments – one framed and focused on policies to address technological risks and another framed and focused on policies to address globalization risks. The two sub-experiments were designed to compare and contrast attitudes towards policy answers to the two kinds of risks and the wide array of policy mixes across representative population samples in eight countries, capturing the key variation in industrialized democratic experience (Germany, Italy, Japan, the Netherlands, Poland, Spain, the United Kingdom, the United States of America). The experimental study means that the results allow causal inferences about which kinds of policies can be expected to elicit more or less support for various policy mixes.

The key results of the study are three-fold. First, the average levels of support in populations for all the packages judged in the survey suggest that the respondents modestly support some or other mix of policies to address economic challenges of globalization and technological change. The positive orientation of this average level resides in the fact publics in all the sample countries were more supportive than opposed to the various assistance packages shown, but that average is modest in that the strong or somewhat positive position expressed is usually not more likely than being neutral about new policy assistance. This suggests that in real political settings, much will ride on whether and how actual political debates mobilize publics to take positions on policy interventions to address global and tech-change risks.

Second, the study reveals surprisingly little difference in the extent to which and how publics think about policy interventions to address globalization risks as opposed to technological change. This pattern holds not only for the pooled results of the eight country samples, but also for the individual

country samples. This 'non-effect' or lack of differences might well be artefacts of the subtleties of the survey instrument or a tendency to adjust the way one thinks about one kind of risk having already thought about another kind of risk. However, it might also reflect substantively meaningful similarities in the ways publics think about technological and globalization risks – given that both are often written about in similar terms in the press and in political debate.

Third and most importantly, the study reveals the mixes of policy interventions that garner the most and least political support in the eight surveyed populations. Based on the experimental design – hence allowing strong causal inferences based on randomized treatment rather than observational association – policy interventions with the following characteristics are the most favoured: (1) a modest preference for assistance that is more generous; (2) a strong and consistent preference for progressive taxation to finance assistance; (3) a modest preference across countries for balancing education assistance and income maintenance; (4) a clear preference for education activation provisions that target workers through vocational education or life-long learning rather than general or STEM education; (5) a clear preference for income maintenance targeting workers rather than firms/employers, though not consistent preference across the kinds of worker income assistance (e.g. general income support for all workers or mainly those losing their jobs); (6) a clear preference for national governance as opposed to supra-national governance (i.e. regional or global regulatory institutions) in providing assistance; and (7) finally a clear, if modest, preference for *not* accompanying the aforementioned range of social safety net assistance with extra, more protectionist targeted taxation that punishes and hence likely limits the extent of globalization or technological change. Each of these seven findings speaks to distinct and important debates about policies to help redress or mitigate economic insecurities in the face of globalization and technological automation. This allows inferences about the particular kinds of education activation can be expected to garner support, or about the kind of income maintenance, or about EU or other supranational governance compared to national sovereignty. But taken together, we have a portrait of the policy mixes that can be expected to win public support.

We hasten to add that the patterns should be interpreted in light of the clear limits of the research presented. First, we have only reported on the main aggregate results, considering in the reports most fine-grained discussion the country level nuance but not the intra-country nuance – except in appendices. And yet we are fully aware that public attitudes on assistance packages can be expected to differ significantly between more or less educated respondents; or respondents with lower or higher incomes; or for that matter across any range of demographic or socio-economic cleavages (e.g. gender, ethnicity, migration status, region of residence, occupation). Using the dataset overviewed in this paper we can and shall explore such possibilities in other research. However, it is important to see in this first and most general overview of the data what broad publics eschew or embrace – as all groups amidst such cleavages deserve equal representation in democratic polities.

Second, our study covers only simplified and in any event limited variation in the policy realms actually relevant to mitigating economic pain from globalization or technological change. There are many more fine-grained distinctions that might matter – for instance, within education activation, there are differences in training versus relocation and conditionality arrangements relevant to adjustment and each likely to elicit distinct public attitudes. And at the same time there are more policy interventions that we ignore in the existing study – for instance, various kinds of technology policies (investment or education provisions for particular inventions and sectors) or anti-globalization interventions (Foreign Direct Investment or offshoring policies, trade regulations and linkage to standards etc.).

Third, our study is by its very nature 'pre-political', taking place in a survey interaction that might be very different and not translate into a political setting in past or future political debates about assistance packages to address globalization and/or technological risks. This raises some important issues with respect to external validity, or the generalizability of our findings beyond our surveyed sample setting. This is a potential shortcoming, even while our experiment provides strong leverage for the internal validity of our claims about how our sample respondents value different aspects of policies to address technological and globalization risks. In fact, there is a quite generic trade off between internal validity and external validity with respect to most any experimental design. And our framing and wording of the experiments take some pains to reflect actual locution and bases of real political debate. But only further research, including observation study of the kinds of dimensions and issues problematized in our experimental research design, will address whether the inferences we draw hold in actual political conflict and policy development.

Accepting these shortcomings and calls for further research qualify the analysis informing this paper, the aggregate and pooled findings we report here do provide a strong basis for believing that there is meaningful traction for new policy-political initiatives to redress technological and globalization risks on equal footing. And there is strong political traction for policy initiatives addressing either risk realm that focus on active workers rather than firms, on progressive-taxation financing rather than flat taxes or a running-up of debt, on national level safety nets more than regional or global governance forms, and on safety nets without extra taxes limiting the globalization or technological innovation itself.

Appendix

Table A1 Deviations between the theoretical sample and the actual sample: age (%)

Country	15-29	30-49	50+
Germany	96.6	101.2	101.2
Italy	86.6	103.4	105.1
Netherlands	98.9	100.4	100.4
Poland	103.8	97.5	100.4
Sweden	98.4	100.6	100.9
United Kingdom	90.1	102.6	106.3
USA	96.4	101.4	101.9
Japan	85.7	103.0	107.0

Table A2 Deviations between the theoretical sample and the actual sample: gender (%)

Country	Males	Females
Germany	99.3	100.7
Italy	102.0	98.0
Netherlands	98.3	101.7
Poland	98.8	101.2
Sweden	100.2	99.7
United Kingdom	101.8	98.2
USA	99.4	100.6
Japan	103.9	96.0

Table A3 Deviations between the theoretical sample and the actual sample: age classes (%)

Country	Less than primary, primary, and lower secondary education (levels 0-2)	Upper secondary and post-secondary non-tertiary education (levels 3 and 4)	Tertiary education (levels 5-8)
Germany	102.2	98.2	102.2
Italy	94.4	102.9	106.0
Netherlands	101.8	97.3	101.9
Poland	98.7	98.1	104.9
Sweden	102.2	98.6	100.4
United Kingdom	105.4	92.4	105.2
USA	89.5	101.5	101.1
Japan	2950.0	87.2	103.3

Table A4 Deviations between the theoretical sample and the actual sample: employment status (%)

Country	Employed	Not employed
Germany	100.5	98.5
Italy	101.6	97.8
Netherlands	101.1	96.2
Poland	102.5	94.8
Sweden	99.8	100.8
United Kingdom	100.5	98.4
United States of America	99.7	100.8
Japan	103.6	88.2

Table A5 Deviations between the theoretical sample and the actual sample: regional distribution (%)

Germany	Delta %
DE1: Baden-Württemberg	101.2
DE2: Bavaria	99.5
DE3: Berlin	100.0
DE4: Brandenburg+DED - Sachsen+DEE - Sachsen-Anhalt	98.7
DE5: Bremen+DE9 – Niedersachsen	99.8
DE6: Hamburg	97.6
DE7: Hessen+DEG – Thüringen	99.9
DE8: Mecklenburg-Vorpommern+DEF - Schleswig-Holstein	94.1
DEA: Nordrhein-Westfalen	101.7
DEB: Rheinland-Pfalz+DEC - Saarland	101.2
Italy	**Delta %**
ITC1: PIE+ITC2 VDA	100.8
ITC3: Liguria	108.9
ITC4: Lombardy	103.6
ITF1: ABR+ITF2 MOL	103.0
ITF3: Campania	85.6
ITF4: Apulia+ ITF5: Basilicata	103.3
ITF6: Calabria	100.5
ITG1: Sicily	88.9
ITG2: Sardinia	109.3
ITH1: BZ+ITH2 TN+ ITH4 FRI	102.4
ITH3: Veneto	99.4
ITH5: Emilia-Romagna	102.9
ITI1: Tuscany	102.7
ITI2: UMB+ITI3 MAR	105.8
ITI4: Lazio	102.6
The Netherlands	**Delta %**
NL11: Groningen	103.8
NL12: Friesland	103.2
NL13: Drenthe	101.2
NL21: Overijssel	102.4
NL22: Gelderland	95.0
NL23: Flevoland	101.3
NL31: Utrecht	103.1
NL32: North Holland	107.4
NL33: South Holland	93.2
NL34: Zeeland	100.6
NL41: North Brabant	98.4
NL42: Limburg	105.1

Table A5 follows

follows Table A5

Poland	**Delta %**
PL21: Lesser Poland	102.4
PL22: Silesia	103.8
PL41: Greater Poland	103.2
PL42: West Pomerania	100.5
PL43: Lubusz	100.4
PL51: Lower Silesia	101.1
PL52: Opole region	100.1
PL61: Kuyavian-Pomerania	106.9
PL62: Warmian-Masuria	95.1
PL63: Pomerania	100.4
PL71: Lodzkie	101.8
PL72: Swietokrzyskie	101.2
PL81: Lublin Province	101.0
PL82: Podkarpacia	102.7
PL84: Podlaskie	104.4
PL91: Warsaw's capital city	74.1
PL92: Mazowiecki region	103.6
Sweden	**Delta %**
SE11: Stockholm	114.8
SE12: East Middle Sweden	94.2
SE21: Småland with Islands	97.2
SE22: South Sweden	106.4
SE23: West Sweden	102.3
SE31: North Middle Sweden	74.4
SE32: Central Norrland	111.5
SE33: Upper Norrland	58.4
United Kingdom	**Delta %**
UKC: North East England	104.5
UKD: North West England	101.9
UKE: Yorkshire and The Humber	101.0
UKF: East Midlands	104.6
UKG: West Midlands	98.8
UKH: East of England	93.9
UKI: Greater London	101.6
UKJ: South East England	101.8
UKK: South West England	107.6
UKL: Wales	84.3
UKM: Scotland	101.1
UKN: Northern Ireland	79.0

Table A5 follows

follows Table A5

United States of America	**Delta %**
USAA: North East	101.1
USAB: South	97.1
USAC: Midwest	100.3
USAD: West	103.5
Japan	**Delta %**
JPA: Hokkaido	101.8
JPB: Tohoku	91.5
JPC: Northern-Kanto, Koshin	108.9
JPD: Southern-Kanto	100.2
JPE: Hokuriku	65.0
JPF: Toukai	104.3
JPG: Kansai region	108.5
JPH: Chugoku	104.1
JPI: Shikoku	97.2
JPJ: Kyushu, Okinawa	91.8

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