Attitudes towards policy alternatives vis-à-vis automation and globalization

1. Survey authors

1.1 Survey controller

INAPP (Italian National Institute for Public Policy Analysis)

1.2 Research team

This survey is the outcome of an international research team created to develop scientific cooperation to implement survey research into citizen support for public policy to deal with technological changes and emerging labor market risks. The international research team is composed by (in alphabetic order):

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Furthermore, Lukas Hetzer (University of Amsterdam) provides research assistance to the project team.

The team's members are based at INAPP-Italy, the University of Konstanz, the University of Amsterdam, the University of Gent and the Polytechnic University of Turin

The survey is carried out by IPSOS-IT on behalf of INAPP.

2. Survey information

2.1 *Survey design*

This is a conjoint experiment aimed at testing attitudes towards alternative schemes to balance or counter-act the effects of societal changes, such as automation and globalization. We model the different schemes as varying across seven dimensions (a-d):

1. Size
    a. 0.35% GDP (about half of what advanced economies spend on unemployment)
    b. 0.7% GDP (about the same of what advanced economies spend on unemployment)
2. Taxation
    a. No change: the programme is paid by cutting expenditure in other fields
    b. By increase in taxation, for everyone
    c. By increase in taxation, but only for the rich
    d. By increases in government debt, to be paid by future generations.
3. Distribution between income and education support
    a. 20% on income support; 80% on education support.

   b. 50% on income support; 50% on education support
   c. 80% on income support; 20% on education support.
4. Type of education support
   a. Support to higher education
   b. Support to higher education but only for Science and Technology fields.
   c. Support to Vocational training and education within companies
   d. Support to "lifelong learning" programmes, such as adult education
5. Type of income support
   a. Support for workers losing their jobs to globalization/automation, through regular payments
   b. Support for all citizens, through regular payments
   c. Support for firms to keep them in the market, through subsidizing payments
   d. Support for the unemployed, through publicly funded extra jobs.
6. Governance
   a. At [nuts1/nuts2/other sub-national] level
   b. National level
   c. At [supra-national regional organization] level
   d. At global level
7. Additional regulatory measures
   a. No extra limit
   b. **for the globalization conjoint:** Yes, tariffs/duties entailing a 5% tax on sales of companies engaged in extensive multinational operations (trade, foreign investment, etc.).
   c. **for the automation conjoint:** Yes, a 5% tax on sales of companies engaged in extensive automation activities

Each of these dimensions has multiple levels; these are detailed in the excel file attached to this application. In each conjoint, there is a total of 3072 possible combinations.

There are two conjoint experiments: one on globalization and one on automation. These are introduced with nearly identical introductory texts. The dimensions are also nearly identical, with minor linguistic differences contained to the term "globalization" or "automation", when relevant. Each respondent answers three times each conjoint; for each respondent, the order of the conjoint experiments is randomly distributed. After having seen their assigned description, each respondent is confronted with a randomly selected pair of policy packages and he/she is asked (1) to pick the preferred (or least disliked) option, and (2) report how much each combination is liked or disliked (independently from each other). Each experiment is repeated three times.

The third part of the survey includes several demographic, attitudinal and socioeconomic questions. An attention check concludes the survey so to ensure that robustness checks can be carried out on the subsamples of respondents passing/failing the test. Further consistency checks will also be carried out by dropping inconsistent responses. A dedicated section of the survey analyses the impact of the Covid-19 pandemic.

2.2 *Data collection*

The survey is carried out in 8 countries: IT, NL, UK, DE, PL, SE, USA and JAP. The countries have been selected to ensure variation in (1) welfare state models and industrial structure, (2) economic performance in the past 10 years (3) geographical location.

A pre-test of the experiment has been carried out in July on a sample of 420 individuals. The full survey will include 2500 respondents in each country. The survey is administered through IPSOS' online platform. While IPSOS panels are already quite representative of the population of each country, we further strengthen the representativeness of the sample by setting hard and soft quotas as follows.

Hard quotas

- Gender: male, female

- Age class: 15-29 years old, 30-49 years old, 50+ years old
- Education, 3 categories based on ISCED-11 classification: 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)
- Regional distribution: a mix of NUTS 1 and NUTS 2 ,
- Employment status: employed, not employed

Soft quotas (counters)

- Occupation: ISCO 1 digit classification, 10 categories
- Economic activity: ISIC classification, 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).

Respondents will be able to take the survey in their own language.

At the moment of this registration, **fieldwork is completed, but data are still with IPSOS, have not been seen in any form by any of the co-authors, and have not been analysed by anyone in IPSOS or outside.** Completing the registration is a condition for data delivery.

3. Hypotheses & analysis

The nature of a conjoint experiment is so that each dimension of the experiment is a separate treatment, and therefore can have independent hypotheses or expectations associated with it. For this reason, the following section provides an overview of all hypotheses raised by the team, starting with the (1) expectations for experimental effects of the conjoint treatments, followed by the (2) expected differences between the two experiments (globalization / automation), by the (3) expected country or regional difference, and lastly by the (4) expected interactions between experimental features and other individual characteristics.

All hypotheses will be tested by means of statistical analysis. Hypotheses pertaining main effects- overall, between experiments, and between countries- will be tested by means of Average Marginal Component Effects (AMCEs). Hypotheses pertaining differences in treatment effects in subgroups other than countries will be tested by means of interaction effect models and /or Marginal Means (AMEs). Hypotheses pertaining individual-level covariate interactions with treatments will be tested by interaction effect models, or otherwise be considered as subgroup analyses.

3.1 *Main effects (both conjoints)*

HA1a & HA1b: With respect to both the (a) globalization and (b) technological-change conjoint experiments, larger and more generous packages (entailing .70% GDP) will be preferred (ceteris paribus) over smaller, less generous packages (entailing .3% GDP)

HA2.1a & HA2.1b: With respect to both the (a) globalization and (b) technological-change conjoint experiments, increase in taxation only for the rich will be preferred relative all other options (ceteris paribus).

HA3a & HA3b: With respect to both the (a) globalization and (b) technological-change conjoint experiments, "increase taxes for everyone" will be the least preferred relative to other options (ceteris paribus).

HA4a & HA4b: With respect to both globalization and technological-change conjoint experiments, packages with some higher tax burden AND higher generosity (.7% GDP size of program) will be preferred (ceteris paribus) over packages entailing higher government debt AND lower generosity (.35% GDP).

HA5a & HA5b: With respect to both globalization and technological-change conjoint experiments, packages with some higher tax burden AND higher generosity (.7% GDP size of program) will be preferred (ceteris paribus) over packages entailing lowering spending elsewhere AND lower generosity (.35% GDP).

HA6a & HA6b: With respect to both globalization and technological-change conjoint experiments, packages entailing lowering spending elsewhere will be less preferred (ceteris paribus) over packages that are paid for with higher taxes or government.

HA7a & HA7b: With respect to both the (a) globalization and (b) technological-change conjoint experiments, packages with the spending focused evenly divided between income support and education support (50% on income support, 50% on education support) will be preferred relative to other divisions of spending (ceteris paribus).

HA8.1 (competing with HA7b and HA8.2): "The policy view": With respect to the technological-change conjoint experiment, packages with the spending focused on more education support will be preferred (ceteris paribus) more than packages with higher relative focus on income support.

HA8.2 (competing with HA7b and HA8.1): "The olympic rationality view": with respect to the technological change conjoint experiment, packages with spending focused on income support will be preferred (ceteris paribus) more than packages with higher relative focus on income support.

HA9a & HA9b: With respect to both the (a) globalization and (b) technological-change conjoint experiments, support for "lifelong learning" programmes will be less preferred over other educational support options

HA10: With respect to the technological-change conjoint experiment, packages with the spending focused on more Higher STEM education support will be preferred (ceteris paribus) to packages with higher education support generally speaking.

HA11a & HA11b: With respect to both (a) globalization and (b) technological-change conjoint experiments, packages with the spending focused on more vocational training support will be preferred (ceteris paribus) more than packages with higher relative focus on higher education.

HA12a & HA12b: With respect to both (a) globalization and (b) technological-change conjoint experiments, economic support for workers losing their job will be preferred over the other options of type of income support.

HA13a & HA13b: With respect to both (a) globalization and (b) technological-change conjoint experiments, packages with the spending focused on support for firms to keep them in the market will be less preferred (ceteris paribus) over other packages focusing assistance on workers or citizens.

HA14a & HA14b: With respect to both (a) globalization and (b) technological-change conjoint experiments, national level of governance will be most supported in respect to other levels

HA15a & HA15b: Additional measures: With respect to both (a) globalization and (b) technological-change conjoint experiments, additional regulatory measures will be preferred in respect to no other action.

3.2 *Differences between experiments (globalization / automation)*

HB1: In general, average support for policy packages addressing globalization will be higher (ceteris paribus) than for packages addressing automation.

HB2: Packages entailing higher government debt to finance policy to address automation (compared to other means for paying for programs) will be more preferred (ceteris paribus) than packages entailing higher government debt to finance policy to address globalization.

HB3.1 (competing): "The policy view": Packages that focus spending more on education support than on income support should be preferred (ceteris paribus) with respect to the technological-change conjoint experiment more than with respect to the globalization conjoint experiment.

HB3.2 (competing): "Olympic rationality view": Packages that focus spending more on income support than on education support should be preferred (ceteris paribus) with respect to the technological-change conjoint experiment more than with respect to the globalization conjoint experiment.

HB4: With respect to the technological-change conjoint experiment more than with respect to the globalization conjoint experiment, packages with the spending focused on support for firms to keep them in the market will be less preferred (ceteris paribus) over other packages focusing assistance on workers or citizens.

HB5: Protectionist options will be more attractive in packages dealing with globalization than with in packages dealing with technological-change. Stated fully, hence: Limits on imports will more positively affect support for packages in the globalization conjoint experiment than do taxes on automating companies in the technological-change conjoint experiment.

HB6.1 (competing): "Rationality" view: supranational governance is relatively preferred in the globalization conjoint, than it is for automation.

HB6.2 (competing): "National embedding" view: national governance is relatively preferred in the globalization conjoint, than it is for automation

HB7: With respect to the technological-change conjoint experiment more than with respect to globalization conjoint experiment, packages with the spending focused on more STEM education support will be preferred (ceteris paribus) to packages with higher relative focus on higher education.

3.3 *Country and regional differences*

HC1: With respect to both (a) globalization and (b) technological-change conjoint experiments, European Union will be comparatively preferred in EU countries, than other regional organizations' levels are in other countries

HC2: With respect to both (a) globalization and (b) technological-change conjoint experiments , The higher the average socioeconomic status in a given country, as represented by income and education, the lower the support.

HC3a & HC3b: The stronger the autonomy and the stronger the regional/local identity of a region, the stronger the support for regional governance, in both the (a) globalization and (b) technological-change conjoint experiments.

HC4: With respect to both (a) globalization and (b) technological-change conjoint experiments, respondents in federalist countries (US/DE) and countries with strong regional identities (UK/IT) will be relatively more supportive of regional levels of governance, than respondents in all other countries.

HC5.1: With respect to both (a) globalization and (b) technological-change conjoint experiments, respondents in regions that have suffered from de-industrialization in the past 30 years will display higher overall levels of support, than regions that have performed well in the last 30 years.

HC5.2: With respect to both (a) globalization and (b) technological-change conjoint experiments respondents in regions that have suffered from de-industrialization in the past 30 years will display higher overall levels of support for packages, than regions that have performed well in the last 30 years, if the package displays national level of governance.

HC6a: With respect to globalization conjoint experiment, respondents in regions that have suffered from trade exposure in the past 30 years will display higher overall levels of support, than regions that have benefited from trade exposure in the last 30 years.

HC6b: With respect to technological-change conjoint experiment, respondents in regions that have suffered from automation exposure in the past 30 years will display higher overall levels of support, than regions that have benefited from automation exposure in the last 30 years.

HC7a: With respect to technological-change conjoint experiment, respondents in regions whose economy (measured by sector-specific employment and GDP) is more vulnerable to automation, will display higher overall levels of support, than regions that are less vulnerable to automation

HC7b: With respect to globalization conjoint experiment, respondents in regions whose economy (measured by sector-specific employment and GDP) is more vulnerable to trade will display higher overall levels of support, than regions that are less vulnerable to trade.

HC8.1 (competing): Support levels for educational support will be higher in countries/welfare states that already have a strong social investment pillar (self-reinforcing feedback effects).

HC8.2 (competing): Support levels for educational support will be higher in countries/welfare states in which the social investment pillar is not yet strongly developed (self-undermining feedback effects).

HC9: Respondents in countries with more generous national government welfare state programs (measured either in terms of program generosity or in terms of spending as % GDP) will tend to prefer packages administered at the national level rather than at lower or higher levels of governance.

HC10a & HC10b: With respect to both the (a) globalization and the (b) technological-change conjoint experiments, respondents living in a more liberal oriented welfare state will be less in favour of extra measures to limit extensive automation/ globalization.

HC11: Respondents in countries with more state capacity (measured in terms of rule of law and other composite measures of capacity) will tend to prefer packages administered at the national level rather than at lower or higher levels of governance.

HC12: Respondents in countries with more corruption (measured in terms various corruption measure composites) will tend to prefer packages administered at the supra-national rather than national level of governance.

3.4 *Interactions between experimental features and other individual characteristics*

HD1: Respondents with lower education and in a lower income position are more likely to prefer income support rather than educational support, whereas high-education and high-income citizens are more likely to prefer educational support

HD2a & HD2b: With respect to both the (a) globalization and the (b) technological-change conjoint experiments, respondents will tend to trade-off limits/protection versus the size of an assistance program. Hence, respondents preferring more generous programs will tend to prefer lower limits on (a) globalization (via higher tariff limits) or (b) technological-change risk (via taxation on automating companies).

HD3a & HD3b: With respect to both the (a) globalization and the (b) technological-change conjoint experiments, respondents self-identifying as supporting left parties will tend to be more supportive of more generous packages and progressive taxation than are respondents supporting right or other parties.

HD4: With respect to the technological-change conjoint experiment, women will be less supportive of packages focused on income support than men.

HD5a & HD5b: With respect to both the (a) globalization and the (b) technological-change conjoint experiments, secondary earners will be more in favour of economic support rather than education support compared to primary earners

HD6a & HD6b: With respect to both the (a) globalization and the (b) technological-change conjoint experiments, older respondents will be more in favour of income support rather than educational support.

HD7: The stronger is the "GAL" profile of a respondent, the stronger the support for packages, all else equal.

HD8: With respect to both the (a) globalization and the (b) technological-change conjoint experiments, the higher the employment risk profile of an individual (e.g. measured with respect to socio-economic status, non-standard labor-market status, measured vulnerability to technological change and economic openness), the higher the support for packages, all else equal