The regional heterogeneity of wellbeing "expenditure" preferences: evidence from a simulated allocation choice on the BES indicators[§]

Abstract

With an online survey on major Italian newspapers we ask respondents to simulate the typical policymaker decision, that is, the dilemma of allocating scarce financial resources among alternative competing goals using the domains of the newly defined Italian BES (sustainable and equitable wellbeing) indicators. Our main finding is that homogeneity of choices is rejected since preferred allocations are strongly affected by socio-demographic factors and mainly by political orientation, age, education and gender. An important related result is that education and political orientation significantly affect preferences toward sustainable development. We as well find that respondents' expenditure preferences on a given BES domain are mainly affected by the relative scarcity/abundance of wellbeing on that given domain at the regional level.

Keywords: regional wellbeing indicators, political preferences, wellbeing preferences.

JEL numbers: H5 (national government expenditure and related policies); I0 (health education and welfare); H0 (public economics); R10 (general regional economics).

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1. Introduction

For a long time academics and policymakers explicitly or implicitly considered GDP as a synthetic measure sufficient to capture also the broader concepts of wellbeing and life satisfaction[1]. Several contributions have recently shown however that the nexus between GDP growth and wellbeing is quite complex.[2]

First, even a variable such as satisfaction in the economic domain (which should be more closely related to GDP than life satisfaction) depends more directly on disposable household income after paying taxes and fundamental public goods such as health and education. As a consequence, since it is not granted that GDP growth and household disposable income move in the same direction for each individual in a given country, GDP and wellbeing may partially diverge.[3] Second, life satisfaction also depends on "relative income", that is, on comparisons of our economic wellbeing with that of our peers, so that "treadmill effects" and rising inequality may counteract the positive impact of GDP growth on life satisfaction (see, among others, Ferrer-i-Carbonell, 2005; Senik, 2004 and Jiang and Sato, 2009).[4] Third, household disposable income is neither a necessary nor a sufficient condition to gain access to some goods which contribute significantly to life satisfaction such as common goods, public goods and relational goods.[5]

All these considerations led many to argue that the wealth of nations is not just GDP but the stock of economic, environmental, cultural, relational and spiritual goods which a given community may enjoy. As a consequence, while GDP growth is crucially needed in order to fight unemployment and service the government debt, broader concepts of wellbeing and life satisfaction should be pursued and taken into account as well if politicians in charge want to maintain the support of their voters in order to be reelected.[6] This explains their growing interest on these issues.

[1] An exception is Buthan where in 1972 a system of surveys was set up in order to measure the population wellbeing through the so called "Gross National Happiness" Index.

[2] For the debate on the relationship between income and happiness see, among others, the opposite views of Easterlin and Angelescu (2009).

[3] A relevant example being Ireland which, in the data of Bartolini et al. (2008) displays one of the largest increases in GDP in the last decade, coupled by one of the lowest changes in life satisfaction among EU countries. One of the factors explaining this finding is that fiscal advantages led companies to set their accounting profits in Ireland, even though the economic value is actually not enjoyed in the same country.

[4] More recently Author citation (2013a) show that countries, and not only individuals, may be reference groups documenting that life satisfaction is reduced by higher income in neighbouring countries in proportion to the media exposure of each individual.

[5] On the debate on relational goods and their impact on wellbeing see, among others, Gui (2005), Ulhaner (1989) and Bruni and Stanca (2008). For the role of relational goods in explaining the Easterlin paradox see Bartolini et al. (2008).

[6] A divergence between per capita GDP growth and life satisfaction trends similar to that observed by Easterlin occurred in the Arab spring countries and the neglect of life satisfaction indicators may be at the root of the limited capacity of political leaders of those countries to understand and prevent social and political unrest. Domestic life satisfaction levels and their differences are currently measured and used to predict migration flows across countries.

An important recommendation to policymakers for the adoption of more articulated wellbeing indicators came from the Sen-Stiglitz commission.[7] Following this suggestion the Italian National Statistical Institute (henceforth ISTAT) launched in 2011 a three-step process for the creation of an index of equitable and sustainable wellbeing (BES)[8] starting from consultation with a council of representative members of the different interest groups in the Italian society (CNEL).[9] In a first step CNEL members were asked to identify what they thought were the most important wellbeing domains. In a second step, ad hoc commissions of experts started their work in each domain in order to determine proper indicators. In a third step the indicators were in turn evaluated and validated again by CNEL members in a second round of consultations which led to the definition of the final composite BES indicator.

This process led to the identification of the following twelve BES domains, each one articulated in a set of subdomains:[10]

01. Health
02. Education and training
03. Work and life balance
04. Economic well-being
05. Social relationship
06. Politics and Institutions
07. Safety
08. Subjective wellbeing
09. Natural and cultural heritage
10. Environment
11. Research and innovation
12. Quality of services

The first BES report (2013) providing a snapshot of wellbeing domains and indicators in Italy was officially released on 12th March 2013.

The articulated framework adopted to produce the BES index, though complex, is able to overcome the two opposite critiques to objective and subjective wellbeing indicators advanced

[7] See Stiglitz et al. (2012).

[8] The BES comes last in a long history of broader wellbeing indexes such as the UNDP Human Development Index, the OECD Better Life Index, the Genuine Progress Indicator, the Ecological Footprint the Happy life Planet index. A critical survey of these indicators is beyond the scope of our paper.

[9] CNEL (National Council of Economics and Labour) is a committee of sixty-four councillors whose composition is aimed to mimic the economic and civil heterogeneity of the Country: the members of the Council hold their office for five years and may be reconfirmed. Ten experts are chosen among qualified representatives of the economic, social, and legal fields: eight of these are chosen and nominated by the President of the Republic and two are nominated by the President of the Republic upon the Prime Minister's proposal and the Cabinet's deliberation. Forty-eight members are chosen to represent public and private-sector producers of goods and services with the following composition: twenty-two among the employees, three within the public and private management category, nine among self-employed workers and seventeen are industry representatives. Finally six members are representatives of social service and voluntary organisations and the President of CNEL is an external member of the council.

[10] The complete set of 134 specific indicators falling in the 12 domains validated by CNEL members is attached in Appendix B that is available upon request. For additional related information on the BES see the English version of the ISTAT/BES official website http://www.misuredelbenessere.it/index.php?id=48.

by the academic literature. The main critique to objective indicators is about their claimed paternalism; even in the more "enlightened" proposals, it is always a commission of experts which decides what is good for the society (Sugden, 2008). Subjective indicators, though not affected by paternalism, are subject to the Amarthya Sen's "happy slave" critique, as people might be so deprived of their rights not to yearn for a better life.[11] These "happy slaves" may be willing to accept a low level of aspirations and their life would never improve if political decisions were based on their revealed subjective wellbeing preferences.

The ISTAT process yielding the BES indicators contains elements partially overcoming both critiques. It is non paternalistic since it is the result of a three-step process prompted and eventually delivered by a representative body (i.e. the CNEL) mimicking the heterogeneous composition of the economic and civil society. It overcomes the "happy slave critique" since it dedicates to subjective measures only one domain (n.8 "subjective wellbeing") and uses very few subjective indicators in other domains (see Appendix B).[12] The BES is also intentionally made of a set of indicators with no attempt to produce a synthetic index which would inevitably raise problems related to its interpretation and aggregation. The final outcome of the BES is, in fact, a list of equally weighted indicators which are assumed to represent wellbeing for all individuals in the country. Though parsimonious and originated by a bottom-up process, the BES retains the traditional problems of composite indicators mainly due to the heterogeneity of their components. In order to have a fair representation of wellbeing, then, it scomponents heterogeneity should be addressed and this is the main aim of our research.

The importance of context in shaping such heterogeneity is a well-known result.[13] As the most recent literature on heterogeneous wellbeing determinants claims, both the personal and the socio-geographic contexts play a remarkable role in shaping and affecting wellbeing conditions through psychological (i.e. idiosyncratic) and geographical (i.e. regional) dimensions.[14] Both dimensions have the same effect on wellbeing measures: they convey heterogeneity in the weights associated to its drivers.

Our research aims primarily to identify such weights addressing two main dimensions of heterogeneity in subjective wellbeing preferences: individual characteristics and contextual attributes. In particular we are interested in addressing whether and how they are affected by

[11] "*The defeated and the downtrodden come to lack the courage to desire things that others more favourably treated by society desire with easy confidence"* (Sen, 1985: 15).

[12] Note as well that, even though maximising subjective wellbeing is not advisable since subjective indicators depend too much on the heterogeneity of individual expectations, it is crucial to measure such variable since unhappiness may have strong consequences on objective indicators such as health, social capital, political stability etc. On the different measures of subjective wellbeing see, among the others, Helliwell and Barrington-Leigh (2010) and Anand et al. (2011). The appendixes A and B are available upon request.

[13] The issue was introduced by Herbert Simon (See Simon, 1956) whose evocative scissors metaphore defined behaviour as the conjunction of the cognition and context blade. See also Clark (2015) for the analysis of behaviour in context.

[14] Among others, see Grubium (2000) and Sointu (2005) for an overview of the contextualist interpretation of wellbeing, Atkinson and Fleuret (2007) for a critical review of the relationship between wellbeing and the geographical context, Kahneman and Krueger (2006) for the development of subjective wellbeing measures and OECD (2014) for the dichotomy in developed/developing countries.

individual socio-demographic factors such as political orientation, age, gender, income, education and by (the characteristics of) the geographical area of residence. In this respect, we will assess whether respondents' expenditure preferences on a given BES domain are affected by the relative scarcity/abundance of wellbeing on that given domain at the regional level. One of the main strengths of our research is the direct link to a list of wellbeing indicators not created ad hoc for research purposes, but resulting from a long, participated process and publicly adopted as a benchmark in Italy. An apparent limit may be that such benchmark is country specific. It has to be considered, though, that Italy is the first country to adopt this participated process stemming from the recommendation of the Sen-Stiglitz commission and that other countries may follow in the future. Hence, our empirical findings may (and in fact do) provide relevant policy suggestions for such countries. Furthermore, even if applied to other countries, the process is extremely likely to identify a list of indicators not so different from those considered in this paper. Hence, results on preference weights based on the Italian indicators may provide relevant insights even for countries not adopting such measures at the moment.

The search for proper weights in the aggregation of composite wellbeing indicators is a crucial issue in the literature and our empirical analysis based on a representative sample of respondents proposes a methodology providing such weights as a result of the aggregation of their revealed preferences. In addition our work provides valuable and precious information to policymakers focusing on:

- wellbeing preferences and the socio-demographic factors explaining their heterogeneity;
- the geographical dimension of wellbeing and its distribution across the country;
- the effect of political orientation on between- and within-domain preferences;

With respect to the last point our aim is to contribute to the extensive literature on retrospecting voting [15] by providing an in-depth analysis of domains/items affected/not affected by political orientation where the latter are defined as “large coalition items and/or domains”. Our claim is that once widely adopted, the BES can help to identify a map of large coalition domains/items to be matched with those of policy makers and their political orientation. The result would be a geography of “easier adoption” policy measures, i.e. those issues for which the probability of reaching an agreement is maximized notwithstanding the potentially different political orientation. Such a result is particularly useful when there is the need of coordinating a centralized decision making process with heterogeneous regional governments and electoral bodies. The European Union is a typical example: the actual policy maker (the EU Commission), though formally relying on a unified elected body (the Parliament), is still deeply influenced by national governments and their heterogeneous constituencies. This might (and in fact did in the

[15] There is a considerable amount of literature about how citizens use diagnostic information such as macroeconomic or personal conditions to evaluate policy makers achievements, see, among the others, Bélanger et al. (2013) for an updated analysis of the economic perception and voting. Liberini et al. (2014) enhance the analysis introducig a model with (subjective) wellbeing measures. Differently Psycharis et al. (2015) provide a description of the link between politics and the distribution of the regional public investments in Greece.

past) result in a slow and unsuccessful decision process at the local (national and sub-national) level.

Our contribution is innovative since, by allowing for differentiated weights, it enables a fairer and more effective representation of the heterogeneous wellbeing conditions of the country. It is also innovative since most of the empirical works investigating the determinants of political preferences have focused their attention on specific factors affecting support for a specific wellbeing domain (i.e. environmental sustainability, redistribution etc.), neglecting how the weights on the different domains are distributed. In this respect Oswald and Powdthavee (2010) find that children gender significantly affects political preferences. The authors argue that this depends on the influence that sons and daughters have on their parents and on the impact that gender has on political preferences. Males have been proven to be primarily concerned about lower taxes, while females about the quality of health services (Campbell, 2004). These findings are somewhat consistent with the behavioural economic literature showing that women tend to be more risk averse, less overconfident, more inequity averse and more competitive averse than men in lab experiments (Croson and Gneezy, 2009) and, again, claiming a direct effect of socio-demographic characteristics on behaviour. On the nexus between context and behaviour Kuhn (2011) finds that East Germans are more oriented toward state redistribution and progressive taxation vis-à-vis West Germans. As it is well known, differences in redistribution preferences may depend on the perception of vertical mobility and/or the belief that luck, birth, connections and/or corruption determine wealth (Alesina and Angeletos, 2005). Alesina and Glaeser (2004) document that such difference is wider between Americans and Europeans, with the latter declaring in a much higher proportion that the poor have to be blamed. De Silva and Pownall (2012) find that educated females are more likely to have green preferences. It is worth noting, though, that all these papers look at just one specific aspect of political preferences (redistribution, environmental concerns) at a time, whereas our paper deals with all the dimensions of wellbeing as defined by the BES indicators.

Our approach contributes to this strand of literature by asking the respondents to simulate the policymaker decision, that is, the dilemma of allocating scarce financial resources among alternative competing goals. A standard result of the contingent evaluation literature is that survey answers may be biased when respondent choices are virtual and do not imply monetary losses/gains for them (Carson et al., 2001). For instance, the risk of manipulation is very high when trying to calculate consumer surplus by asking respondents' willingness to pay for a given product since, in that case, the respondent believes that strategic answering may potentially bring monetary benefits (or avoid costs) to him. In our case the risk of manipulation is much smaller since the respondent has to decide about a virtual government (and not her own) outlay. We therefore expect that the respondent's allocation choice coincides exactly with the message that the latter wants to convey to policymakers, namely with her/his own wellbeing expenditure preferences.

1.1 The geographic dimension of the BES Domains

The BES expenditure preferences and the local level policies in a specific wellbeing domain vary greatly in the geographical space because of the characteristics of the regions and localities where respondents live, study and work. In this vein the OECD report "*Making Better Policies for Better Lives*" (2013) aims at identifying the local social and political drivers of individual well-being. What do people value about their regional conditions? Are regional differences in subjective respondents' preferences on a given BES domain affected by the relative scarcity/abundance of wellbeing on that given domain at the regional level?

There are several reasons why specific characteristics pertaining to a region may influence individual wellbeing expenditure preferences over the various BES domains. Rampichini and D'Andrea (1997) stress that regions are important, since individuals from the same region share common socio-economic, political and cultural environments which contribute, alongside individual characteristics, to well-being. A similar point is made by Schyns (2002) as people will have different access to collective provisions (education, wealth, health care, political climate, etc.) depending on their region. Oswald and Wu (2010), in their recent use of objective measures of well-being as a means of corroborating subjective measures, focus on such geographical factors when analyzing the impact of living in different US states on reported well-being.

Author citation (2012) also find that the inclusion of regional effects is important for understanding the degree to which individual well-being is driven by both personal and local factors. In particular, absolute regional factors dominate the effect of an individual's position relative to their region for certain non-economic variables. This aspect is also recognized by various EU policies that focus on correcting wide-ranging subnational disparities at the economic and social level: hence, from a policy perspective regional effects should be considered when developing adequate social and economic policies.

We therefore wish to assess whether regional differences in respondents' preferences on a given BES domain are affected by the relative scarcity/abundance of wellbeing on that given domain at the regional level. We expect that two opposite effects may be at work. On the one side, where the wellbeing factor is relatively scarce its marginal impact on wellbeing and, consequently, respondents' relative preferences for it, should be higher (*marginal effectiveness hypothesis*). On the other side a relatively abundant wellbeing factor may be the effect of stronger preferences of local population for that wellbeing component and of a sorting mechanism by which people with higher preferences in a specific domain come and match with the relative abundance of wellbeing that domain (*sorting/preference hypothesis*). Note that the two effects produce opposite sign in the correlation between wellbeing factor and preferences thereby making the observed sign uncertain. Whatever the dominant effect, the original contribution of our work for policymakers is to assess the distribution of respondent preferences at regional level and their correlation with socio-demographic factors.

To this extent, alongside the individual (subjective) *wellbeing expenditure preferences* over the 11 BES domains, we also consider a set of (objective) BES indicators at regional level for each specific BES domain (see Table 1) to reflect the relative scarcity/abundance of wellbeing on that given domain induced by local level policy. This set up allows us to focus both on individuals and on geographical factors, as people's well-being is shaped by a combination of individual and local characteristics. Italy is the first country to adopt such a process hence the results on preference weights on the Italian indicators may provide relevant insights even for countries which do not adopt them at the moment. Identifying such weights is important in order to evaluate whether and in which direction they are affected by socio-demographic factors such as political orientation, age, gender, income, education and/or (characteristics of) the place of residence such as the values of the (objective) BES indicators for a given geographical area.

The paper is organized in five sections (including introduction and conclusions). In the second section we illustrate a simple benchmark theoretical model which is the background of our analysis and helps to clarify our research framework. In the third section we illustrate the survey design and in the fourth section we present and discuss empirical findings. The fifth section concludes.

2. The benchmark model

The reference for our analysis is a simple theoretical framework where each individual has her/his own expectations on how one euro invested in one of the BES domains may positively affect the domain indicators and how progress in such domains may affect her/his own wellbeing.

More formally, we assume the following utility function defined over the set of the *j=1,…,J* domains for individual *i*:

$$U_i = \left(W_{i1}(M_{i1}), W_{i2}(M_{i2}), \cdots, W_{iJ}\left(M_{iJ}\right)\right)$$

$$M_{i1} + M_{i2} + \cdots + M_{iJ} = M$$

where W_{ij} is the *j*-th wellbeing domain for the individual *i* and M_{ij} is the amount of the total sum (*M* euros) invested in the specific domain (where the same total amount, *M*, is virtually allocated to each respondent).

Any interviewed utility maximizing individual should equalize with her/his allocation choices the marginal utility of investing one euro in each domain.

$$\frac{\partial U_i}{\partial W_{i1}} \cdot \frac{\partial W_{i1}}{\partial M_{i1}} = \frac{\partial U_i}{\partial W_{i2}} \cdot \frac{\partial W_{i2}}{\partial M_{i2}} = \cdots = \frac{\partial U_i}{\partial W_{iJ}} \cdot \frac{\partial W_{iJ}}{\partial M_{iJ}}$$

where the above written marginal utilities are given by the product of the marginal impact of one euro invested in the progress of the domain indicator, $\frac{\partial W_{ij}}{\partial M_{ij}}$, and the marginal impact of such progress on her/his own utility, $\frac{\partial U_i}{\partial W_{ij}}$. Unfortunately, it is hard to disentangle these two components.

However, the allocation decision represents in itself a good indication on how voters would like politicians to allocate resources among the different domains and gives the possibility to evaluate how different socio-demographic and contextual factors affect such preferences. As it is obvious, expectations on the marginal impacts of one euro invested in the progress of given domains may not coincide with the effective trade-off in investing resources in different domains (that is, the respondent perception of the contribution of each euro invested to the progress in a given domain may be wrong). Nonetheless, the allocation choices to the domain are signalling the effort they would like politicians to exert in each domain. To make a paradoxical example, a respondent may consider of vital importance health but she/he may have the wrong belief that government expenditure on health is totally ineffective. In such case she/he will respond zero to the amount to be invested in health. Even though being biased by her/his wrong perception on the effect of government expenditure on health, such response expresses her/his own true preference on how government expenditure should be allocated. This is why we consider more correct to define what we measure *wellbeing expenditure preferences* and not just *wellbeing preferences*. Under a more restrictive assumption we may however assume that these wrong perceptions cancel out in the aggregate and therefore wellbeing expenditure preferences grossly coincide with wellbeing preferences as well.

For some of the BES components, the marginal impact of one euro invested in the progress of the domain indicator can be estimated at the regional level, albeit roughly. For example, the decrease in crime associated with an extra euro spent on law enforcement may be a good proxy for the marginal return to a euro spent on the *safety* component of the BES.[16]

Since we have several regional indicators for each BES domain we derive a composite index as a proxy for the marginal impact of one euro invested in the progress of the domain indicator. Note that our regional BES indicators are collected in 2012 while the individual BES *wellbeing expenditure preferences* refer to 2013.

In order to match properly our wellbeing indicators with information on wellbeing expenditure preferences recorded at aggregate BES domain level we aggregate the regional indicators in each domain listed in Table 1. More specifically, we define the composite BES index for the *j*-th domain in the *r*-th region:

$$I\_BES_{j,r} = \sum_{b=1}^{B_j} \frac{Z\_BESIndicator_{rb,j}}{B_j} \qquad r = 1,2,\dots,R \quad j = 1,2,\dots,J \qquad (1)$$

[16] An alternative route would be to use public expenditure in each domain. However, inefficiencies and waste in public spending would lead to overestimate the marginal return of an extra euro spent in each domain.

as the average of the z-scores of the regional BES indicators for the *j*-th domain in the *r*-th region.[17] The aggregation requires that for each *j*-th domain all the B_j BES indicators are normalised, i.e., all indicators are on the same scale in order to avoid distortions due to variables with large values or variances. Since the indicators use different scales of normalization is necessary to remove the scale effects of different measurement units. For this reason we convert all the BES indicators into z-scores that are obtained by subtracting the mean from the observation and dividing the result by the standard deviation of the variable. For indicators in which high values correspond to low levels of that specific BES domain, we reverse the order by subtracting the observation from the mean and dividing the result by the standard deviation. In other words for indicator such as "share of over-qualified employees" in the *work and life balance* domain we use the conventional z-score, whereas for indicators such as "work accidents" we produce a z-score in which higher percentage of work accidents correspond to lower levels in the *work and life balance* domain.

Figure 1 shows the map of the regional BES composite indices. There is indication that certain macroeconomic areas are relatively more abundant/scarce in a given domain. For example, regions in the North display a higher level of *economic well-being, work and life balance, health, research and innovation* and *quality of services*. The econometric analysis that follows will tell us whether the relative abundance of the wellbeing indicator at regional level is correlated with lower (higher) wellbeing expenditure preferences according to the marginal effectiveness (sorting/preference) hypothesis.

Based on our theoretical framework our research may contribute originally to the literature in four respects. First, we can test how much the assumption of homogeneous weights in wellbeing domains (typical of representative consumer models, or implicit in the use of composite wellbeing indicators at national level) sacrifices about the knowledge of individual preferences. With our data and theoretical framework the hypothesis that the weights are the same for each individual or socio-demographic group may be directly tested and accepted or rejected. Second, our empirical findings may provide precious information to policymakers and social scientists about which drivers affect (and which do not) heterogeneity in invidual preference weights according to the differential impact of one euro invested in the progress of the domain indicator. Third, by using the regional BES indicators as controls, we may test how relative abundance/scarcity of wellbeing in the specific domain at local level affects wellbeing expenditure preferences thus making a specific case for the need of regional policies. Fourth, we propose a methodology which can be used to calculate preference weights as a result of the aggregation of revealed preferences of representative samples of respondents.

A final remark is that, as documented in the previous section, the list of domains and the set of indicators created by groups of experts for each domain contain a few purely subjective

[17] We follow the aggregation method implemented in the construction of similar composite indicators. See, for example, the aggregation method to build the Environmental Sustainability Index (2005 Environmental Sustainability Index Benchmarking Environmental Stewardship, Appendix A Methodology) available at http://sedac.ciesin.columbia.edu/data/set/esi-environmental-sustainability-index-2005/data-download.

elements (i.e. subjective wellbeing among domains and, as an example, job satisfaction among indicators in specific domains). Since subjective domains are too general and make unclear what it means investing economic resources to improve them we exclude them from our empirical analysis (i.e. the 8th domain of subjective wellbeing is excluded).

3. The research design

Our empirical analysis is based on data collected with an online survey where respondents are asked to allocate the hypothetical sum of 100 million euros to promote wellbeing improvement in one of the 11 considered BES domains (see the attached questionnaire in the Appendix A). The sub-questions which follow ask respondents to identify, within each domain, the first five priorities (ranked in ascending order) among the indicators included in that domain.[18] The questionnaire also collects data on standard socio-demographic variables and the database is enriched with data on characteristics of the province/region in which the respondent lives including values of BES indicators at that level in order to provide the contextual framework.

The survey has been launched on the websites of three main Italian newspapers on March 2013. The first, Messaggero, is the fifth most read Italian newspaper (excluding sport newspapers) with a reputation of being at the center-right of political orientation. The second, Avvenire, is the main Italian catholic newspaper. Its readers reflect the ideological divide of Italian believers since they are balanced between right and left wing orientation. The third, l'Unità, is more left wing oriented being the official newspaper of the Democrat Party. Beyond these three major newspapers which accepted to participate to our research, the online survey appeared as well on several minor newspapers and websites whose list is reported in the footnote below.[19]

The online questionnaire has a control check which prevents respondents from filling the form more than once from the same web address. At end of July, after five months from the start of the online survey we collected 2,605 complete questionnaires. An inevitable bias of our survey is that the sample of respondents is not representative of the Italian population and biased toward those who use the web who tend to be relatively younger and more educated.

[18] Note that the survey question changes when we ask preferences about subdomain specific indicators (from the simulation of an invested sum to a more general indication of priorities). This is because some of these indicators are subjective and it is not clear whether other of them may be affected by government expenditure (see Appendix B).

[19] These are Forum Nazionale Terzo Settore, FQTS, ARCI, ConVol, CSV Net, Labsus, Dignità del lavoro, Auser, Avis, Anpas, Bandiera Gialla, La perfetta letizia, Mondo alla Rovescia, Confini online, Il Metapontino.it, ARCI, Campania, Blog vitobiolchini, Domos (domotica sociale).

3.1 Weighting Our Sample

Table 2 provides a comparison of the characteristics of survey respondents with those of the national population. We use demographic information from the Italian Office for National Statistics (ISTAT)[20] to create population weights in order to correct for the biasedness of the survey sample (which is not sampled at random).
As Table 2 shows there is a substantial bias (as it is expected to be in online surveys) in particular in terms of gender, age, education and regional location of the surveyed respondents. More specifically, our sample under represents males (women account for 55.5 percent of the sample), respondents with a primary/middle school degree (0.31 and 6.56 percent against 20.10 and 29.77 percent respectively in the national population) and over represents respondents aged 25-34, 35-44 and 45-54 (22, 22.65 and 24.61 percent against 11.87, 15.75 and 15.01 percent respectively in the national population). In the sample 57.7 percent of respondents have at least a University degree against 10.80 percent in the national population. These findings confirm that the community of internet users who respond to our survey is imbalanced toward highly educated and middle aged individuals. Concerning geographic location all regions are either over or under-represented (except Basilicata, Marche, Liguria, Marche, Puglia, Piemonte and Valle D'Aosta and Calabria).

We use sampling weights to account for these design-based inequalities. Specifically, we use a raking ratio estimation (Deming 1943, Kalton 1983, Izrael at al. 2009) that adjusts the sampling weights of the cases in the sample so that the marginal totals of the adjusted weights on the specified characteristics (gender, age, education and geographic location) match the corresponding totals for the national population. The actual algorithm involves repeatedly estimating weights across each set of variables in turn until the weights converge and stop changing. Essentially, raking forces the survey totals to match the known population totals by assigning a weight to each respondent.
We also use a weight trimming method[21] implemented during the last step of the raking iterative process in order to ensure that: i) limits are placed on *low and high* weight values in the final weights, ii) the convergence criteria are satisfied, and the weights sum to the population total. Weight trimming increases the value of extremely low weights and decreases the value of extremely high weight values to reduce their impact on the variance of the estimates. For example, all the weights that are less than 0.2 are increased to 0.2, and all the weights that are greater than 5 are reduced to 5. That is we truncate weights above the 95-th percentile and below the 5th percentile and trim that weight by making it equal to the limit. The objective of weight trimming method is to reduce the mean squared error (MSE) of the outcome estimates. It

[20] Italian National Institute of Statistics ISTAT 15° Censimento della Popolazione e delle Abitazioni 2011. http://www.istat.it/it/censimento-popolazione/censimento-popolazione-2011. The italian population Census takes place every 10 years.
[21] We use the command *ipfweight* in Stata to implement the trimming method during the raking iterative process.

is worth noting that the main findings that follow are not substantially different when we use the unweighted sample or the sample weighted on the characteristics of the subpopulation reading online journals. Results are partially available in a former version of this paper, omitted here for reasons of space and available upon request.

4. Statistical findings

In Table 3 we summarize descriptive statistics on the variables used for our empirical analysis. Note that in the case of the *economic wellbeing*, *politics and institutions*, *security, education, work and life balance, health* and *quality of services* domains the maximum is 100, that is, for each of the four domains at least one respondent allocates all her/his virtual sum in them. For all domains the minimum is zero implying that there is at least one respondent investing no money in them. Looking at other variables gender is quite balanced average political orientation is slightly left wing biased (-2.70)[22] and 56 percent of them are married or cohabiting.

Descriptive evidence from Figure 2 documents that the BES domain for which the Italians are willing to pay more is the *health* domain. According to our findings, sample respondents would allocate on average 17.4 percent of their virtual sum on it. The *health* domain is followed by *education and training* (12.8 percent) and by *work and life balance* (around 10.7 percent). All the other domains are between 8.9 (*economic wellbeing*) and 6.6 percent (*safety*), with the exception of *politics and institutions* where we fall to 3.8 percent.[23]

The five socio-demographic discriminants we expect may affect preference weights are left/right wing political orientation, gender, education, income and North/South geographical location.

As Figure 3 shows we start by inspecting the contribution of the political orientation variable. From a descriptive point of view we look at average weights and 95 percent confidence intervals for the adjoining sets of those with positive (right wing), vis-à-vis those with negative (left wing) variable values. In spite of our split criteria which do not enhance the left/right divide (we could have taken top and bottom terciles to rule out an intermediate moderate group and enhance dissimilarities between the two selected subgroups) we find many significant differences.

The most remarkable difference is in the *health* domain where the right wing group allocates 17.99 percent of the sum against 16.99 percent of the left wing group. The difference among subgroup means is significant under the normal distribution assumption since the two 95% confidence intervals do not overlap. The difference on *economic wellbeing* is similarly high (9.65

[22] The political orientation variable classifies respondents in a range going from -10 (extreme left) to +10 (extreme right). The question actually asks respondents to locate themselves on a range going from 0 to 10 at the right and 0 to 10 at the left to avoid association between minus/plus signs and a given political orientation. We however recode the variable giving a negative sign to values at the left of the zero for obvious reasons of monotonicity of the political orientation variable.

[23] This first descriptive evidence is consistent with a preliminary descriptive inquiry run by ISTAT (2012) on BES preferences.

percent of the money allocated by the right wing group against 8.39 percent by the left wing group) and statistically significant. The difference on *security* is smaller (7.34 percent of the money allocated by the right wing group against 6.08 percent by the left wing group), but still statistically significant. The left wing group also allocates significantly more in the *education* (13.32 against 12.22 percent), in the *environment* (8.84 against 8.03 percent), in the *research and innovation* (8.94 against 8.31 percent) and in *social relationships* (7.22 against 6.56 percent) domains. "Large coalition domains" in which we do not register significant differences between the two political orientations are *work and life balance*, *quality of services*, and *natural and cultural heritage*. Based on these findings, in a hypothetic trade-off between economic growth and environmental sustainability left wing orientation seems much more supportive of sustainable wellbeing claims, given its relatively stronger orientation for the environment and natural and cultural heritage and its relatively lower orientation for the economic wellbeing domain.

What appears noteworthy is that, if we take into account the second potential discriminant (gender), we find significant differences between males and females in only three of the BES domains. Females allocate more in h*ealth* (17.93 percent against 16.91 of males) and *economic wellbeing* (9.54 percent against 8.33), whereas males allocate more in *education* (13.62 percent against 12.08). The same occurs for the third discriminant (income by comparing those below 30,000 euros and those above 30.000 euros) where three domains show some differences. As expected, low income allocate more in *economic wellbeing* (9.59 percent against 7.47), whereas top earners show a higher preference for *work and life balance* (11.14 percent against 10.50) and for *social relationships* (7.24 against 6.24 percent). Along this line and geographic location shows even weaker differences.[24]

In order to investigate the role of the fourth potential discriminant (education) we compare respondents with a university degree with those who have less than a high school qualification. The differences are in this case relevant. The low education group allocates significantly more on *health* (17.82 against 15.27 percent) and *economic wellbeing* (9.22 against 7.43 percent), while significantly less on *education and training* (12.75 against 13.36 percent), *social relationships* (6.67 against 8.40 percent), *natural and cultural heritage* (7.40 against 8.33 percent), *environment* (8.35 against 9.22 percent) and *research and innovation* (8.61 against 8.98 percent). It seems that this group suffers from a relatively lower economic wellbeing which forces its members to rely more on public health, be less environmentally sensitive in a hypothetical trade-off between economic growth and environmental sustainability. In spite of its lower education level, the group allocates relatively less resources to *education and training* and to *research and innovation* (which is myopic and contradictory if we believe to a positive contribution of these two variables to economic wellbeing). Note that some of these differences (notably those on *health* and *education and training*) remain significant if we narrow distances between the two

[24] Differences among subgroup means for the four Italian macroareas (North East, North West, Centre and South) are not significant as well. They are omitted for reasons of space and available upon request.

subgroups by comparing those with a university degree with a complementary group which includes also respondents who achieved a high school degree.

Last but not least, age discriminates on three domains when we compare those over 50es with those below 40es. A first difference is that the elders want to invest more in *education* (13.21 against 12.47 percent), *work and life balance* (11.17 against 10.21 percent) and, as expected, in *health* (17.80 against 17.05 percent). Conversely the younger want to invest more in *economic wellbeing* and *social relationships* (respectively 10.12 against 7.79 percent and 7.34 against 6.54).

Our final remarks are that, at least when we consider descriptive evidence on major domains, only three of the five potential discriminants matter (left/right wing political orientation, education and age). More specifically, highly educated and left wing oriented respondents result to be more inclined toward environmental sustainability, defense of the cultural heritage, research and innovation and education, while right wing oriented respondents toward security and economic wellbeing. Domains on which all respondents have similar preferences are *quality of services*, *politics and institutions, work and life balance* and *social relationships*.

4.1 The Geographic Dimension of BES Domains.

The maps of the BES domains reported in Figure 4 show a high regional variability indicating that where people live matters for well-being. A higher geographic variability in the expenditure allocation to the various BES domains may, indeed, reflect the fact that the outcomes in each dimensions vary greatly between regions because of the characteristics of the regions and localities where respondents live, study and work including the relative scarcity/abundance of that specific domain.[25] Comparing the objective and subjective BES measures in Figures 1 and 4 we can see that the impact of the relative scarcity/abundance of the specific BES indicators at the regional level are mixed when examined at descriptive level. In some cases the scarcity effect prevails, i.e. where the domain is scarce the marginal effectiveness of each additional euro spent is higher and people would like to invest relatively more in that specific domain. In other cases the opposite occurs and a higher wellbeing expenditure preference for a certain domain is associated to its relative abundance.

Geographic clustering generated by sorting/preference effects reflects the fact that many of the policies that influence most directly people's live are local or regional; this generates endogeneity between the individual regressors and the unobserved effects at the local level (Benabou, 1996). Such choice involves information that is in part unobservable, and therefore requires making inferences among the possible factors which contribute to the outcome (Moffitt,

[25] This is broadly confirmed by the analysis of variance where the unobserved variation between regions accounts for a larger proportion of the overall variation in the (subjective) *wellbeing expenditure preferences* over the 11 BES domains. The ANOVA results are available upon request.

2001). We assume as well that individual preferences on the BES domain depend on the characteristics of the region and locality (province) where each individual lives (see also Author citation, 2012). Specifically, we assume that individuals decide where to live on the basis of certain characteristics of the area represented by its social, institutional and economic environment and by place-based policy actions affecting the regional endowment of the various wellbeing domains that respond to their specific expectations (Author citation, 2013b). Ultimately, the characteristics of the area chosen affect the subjective allocation over the BES domains. As the BES domains are a mix of both material and non material conditions we look at how they are influenced by local characteristics to provide direct information on well-being distribution in the population and across places within a country.

We formalise this notion and consider that the dependent variable related to the *j*-th BES domain for the *i*-th individual living in the *r*-th region and *p*-th province, $BES_{ij,pr}$, depends on a set of inidividual controls, $X_{i,pr}$, and by an unobservable quality effect, $\eta_{j,pr}$, that reflects the attractiveness of locality *p* within region *r* for the specific *j-th* domain. We assume that the attractiveness of a locality depends on its specific observable attributes, Z_p, on the observable attributes of the region, Z_r, on the (objective) BES composite indicators at the regional level for the *j*-th BES domain, $I\_BES_{j,r}$, and on an unobservable component, $u_{j,pr}$, which is normally distributed:

$$BES_{ij,pr} = X_{i,pr}\beta_j + \varepsilon_{ij,pr} + \eta_{j,pr}$$

$$\eta_{j,pr} = Z_p\beta_{jp} + Z_r\beta_{jr} + I\_BES_{j,r}\alpha_{jr} + u_{j,pr} \qquad (1)$$

$$i = 1,2,\dots,N, \quad j = 1,2,\dots,J \quad r = 1,2,\dots,R \quad p = 1,2,\dots,P$$

$$E(u_{j,pr}) = 0 \;\; Var(u_{j,pr}) = \sigma_u^2$$

The two set of variables Z_r and Z_p enter model (1) with coefficients β_{jp} and β_{jr}, respectively, while the regional BES indicators, $I\_BES_{j,r}$, enter the model with coeffcient α_{jr}.

Given that regional clustering generated by sorting/preference effects generally induces correlation between the observed individual attributes, $X_{i,pr}$, and the unobserved attributes at the local level, $\eta_{j,pr}$, we follow Mundlak (1978) and assume that the unobservable effects, $\eta_{j,pr}$, are normally distributed, conditional on contextual effects at the regional, Z_r, and local level effects, Z_p, which account for clustering of individuals into groups associated with groups' unobserved characteristics (see also Bayer and Ross, 2006).[26] Among the set of contextual effects we also consider the set of (objective) BES indicators at the regional level for each specific BES

[26] In model (1) Z_r and Z_p denote the set of contextual effects at the regional and local level such as regional per capita GDP, the share of provincial population with no more than middle school degree and the percent of senate voters at regional level (Author citation, 2015).

domain to reflect sorting/preferences effects generated by the relative scarcity/abundance of wellbeing on that given domain induced by regional level policy.

4.2 Econometric findings: OLS estimates

We check whether tendencies observed in descriptive statistics, and tests on the differences of subgroup means, are confirmed in econometric estimates where we control for the concurring effects of age and income classes, civil, family and work status, industry dummies, web source of survey compilation and other characteristics of the place of residence.

Our first econometric approximation is the following baseline OLS model[27]

$$
\begin{aligned}
BES_{ij,pr} = {} & \alpha_{0j} + \alpha_{1j}\, RightWing_i + \alpha_{2j} Bachelor_i + \alpha_{3j} Low/MiddleEdu_i + \alpha_{4j} Female_i \\
& + \sum_{g=1}^{G} \kappa_{gj}\, Macroregion_{i,g} + \sum_{k=1}^{K} \gamma_{kj}\, DAgeClass_{i,k} + \sum_{l=1}^{L} \delta_{lj}\, DIncomeClass_{i,l} \\
& + \sum_{m=1}^{M} \zeta_{mj}\, DMaritalStatus_{i,m} + \sum_{s=1}^{S} \theta_{sj}\, DFamilyStatus_{i,s} \\
& + \sum_{q=1}^{Q} \lambda_{qj}\, DJobStatus_{i,q} + \sum_{z=1}^{Z} \xi_{zj}\, DIndustry_{i,z} + \sum_{v=1}^{V} \chi_{vj}\, DSource_{i,v} + \alpha_{5j} GDP_r \\
& + \alpha_{6j} MiddleSchool_p + \alpha_{7j} SenateVoters_r + I\_BES_{j,r} + e_{ij,pr} \\
& i = 1,2,\dots,N, \quad j = 1,2,\dots,J \quad r = 1,2,\dots,R \quad p = 1,2,\dots,P
\end{aligned}
\tag{2}
$$

where the dependent variable (*BES*) is the share invested by subject *i* in the *j*-th BES domain, *RightWing* is the respondent's political orientation expressed (as explained above) on a -10/+10 scale (-10 extreme left, +10 extreme right), *Bachelor* is a (0/1) dummy for those having a university degree or above, *Low/MiddleEdu* is a dummy for those having no more than Middle School degree (High School is the omitted benchmark), *Female* is a (0/1) gender dummy taking value one if the respondent is of female gender and zero otherwise. The specification includes a geographic dummy (*Macroregion*), the observation coming from the North-East, North-West or South and Islands macro regions of Italy as defined from the National Statistical Institute categories. Age is controlled for with a set of age class dummies picking up five-year age intervals starting from 25-30 and ending up with 75-80. *Under 25* and *Over 80* are two end-

[27] The OLS estimation uses the sampling weights derived in section 3.1.

classes also included as age dummies in the estimate, while the 30-35 age class is the omitted benchmark. *DIncomeClass* are five income dummies which pick up income classes as included in the questionnaire (the class between 15,000 and 30,000 euros per year is the omitted benchmark). *MaritalStatus* dummies pick up the Divorced, Single, Separate and Widowed conditions (Married/Cohabitant being the omitted benchmark), *FamilyStatus* dummies pick up the following family status conditions (Living Alone, Living with my Original Family, Living with my Partner without Children, Single Parent) with Living with my Partner with Children being the omitted benchmark, *JobStatus* dummies pick up the following conditions (Fixed Term Contract, Seasonal Contract, Self/Employed, Not Working/Unemployed/Looking for a Job, Redundancy Fund Benefits, Redundancy Worker, Housewife, Student, Retired), Open-Ended contract being the omitted benchmark. Industry dummies pick up the industry in which the respondent works (Agriculture, Manufacturing, Personal Services) with Tertiary being the omitted benchmark. *Dsource* are three dummies picking up characteristics of respondents who filled the questionnaires on the websites of the three main newspapers involved (Avvenire, Unità, Messaggero) and are presumably readers of those journals. The omitted benchmark is represented by those who filled the questionnaire from other websites. The inclusion of the *Dsource* variables is important, especially for the Avvenire newspaper since it may capture religious (beyond political) orientation in our econometric estimates.

Last but not least, we include two types of contextual variables. First, we add three proxies of local economic development, human capital and social capital such as regional per capita GDP[28] (*GDP*), the share of provincial population with no more than middle school degree (*MiddleSchool*) and the percent of senate voters at regional level (*SenateVoters*). Second, we include the composite BES index for the *j*-th domain in the *r*-th region ($I\_BES_{j,r}$). In equation (1) the subscript *p* denotes provinces and the subscript *r* denotes regions. This last set of regressors is important to check whether respondent preferences on a given BES domain are affected by the relative scarcity/abundance of wellbeing on that given domain as measured by the regional composite BES indicators. From a theoretical point of view the expected sign is not clear. There are equal reasons to expect that the relative quality of wellbeing indicators at local level should produce a negative sign (for decreasing marginal utility) or a positive sign when such quality reflects a higher weight of local preferences on that specific domain which actually created consensus for more political effort on the given indicator. Note that the endogeneity between our dependent variable measuring subjective well-being expenditure preferences on the various BES domains and the set of (objective) regional BES indicators is ruled out since our regional contextual controls are collected in the year preceding the survey. Last, $e_{ij,pr}$ is an idiosyncratic error. In all estimates, errors are clustered at province level. In the estimation we use the population weights described in section 3.1.

Econometric estimates reported in Table 4 confirm the results from descriptive findings and subgroup mean differences commented in the previous section. Right-left wing orientation remains a strongly significant driver of allocation choices. We recall that individuals have been

[28] It is measured in thousands of euros.

asked to place themselves on an algebraic segment of integers reclassified from -10 (extreme left) to +10 (extreme right). From an economic point of view we find that one integer shift toward right from average political orientation (-2.7 in our sample) leads to an increase of 270,000 euros investment in the *economic wellbeing* domain (out of the 100 million euros to allocate).

Political opinions matter also in other domains. The effect of one integer move to the right (from sample mean political orientation) leads to a reduction in investment of 110,000 euros in the *social relations* domain, an increase of 160,000 euros in the *security* domain, a reduction of investment of 100,000 euros in the *natural and cultural heritage* and a reduction of 140,000 euros in the *environment* domain. Overall, econometric findings confirm that the significant differences observed with simple subgroup means in Figures 3a-3f are robust to the inclusion of all the controls we introduce in the econometric estimates.

To sum up, respondents who classify themselves as right wing invest significantly less in *social relations*, *politics and institutions*, *environment* and *natural and cultural heritage* and significantly more in *safety* and *economic wellbeing*. The other factor we found as having a deep impact on welfare preferences in subgroup mean comparisons was education. In econometric findings graduate respondents invest 1,520,000 euros more on *social relations* vis-à-vis the high school benchmark. Note as well that respondents with a middle school degree invest significantly less in *research and innovation* (minus 1,790,000 euros). Note, also, that graduated respondents have a more leftist political orientation (-3.10 against -2.14 of the complementary group). [29]

Among other controls those filling the questionnaire from the Avvenire website invest significantly more in *natural and cultural heritage* (1,070,000). This finding presumably indicates that religious beliefs, net of political orientation, affect preferences in this domain. Respondents filling the questionnaire from the Messaggero website (right wing) invest significantly more in education (5,700,000) and less in social relations (-3,190,000). Finally, readers of Unità (left wing) are more concerned about investing in *politics and institutions* (1,630,000) and less in *health* (5,810,000). The lack of significance of the female dummy is confirmed in all considered domains.

4.3 Econometric findings: Tobit system estimates

In order to evaluate the robustness of our findings we must consider at least two specific characteristics of our dependent variables. First, they are left and right censored given the 0 and 100 limit values they can achieve. More specifically on this point, individuals may have liked to go beyond the limits imposed by our questions (the 0-100 percent choice range) by actually "going short" and disinvesting resources from a domain in which they may believe that the government is overinvesting. As well, they may have decided to use some of the disinvested resources to increase above 100 percent investment in domains which they regard as essential. Second,

[29] Additional statistics available on request.

choices on the different domains are correlated with each other since the decision to allocate one euro more in one of them implies that one euro has to be "disinvested" from the others.

We tackle both problems by estimating (1) with a system Tobit specification[30] where standard errors are clustered at the province level. Using a left censored limit of zero and a right censored limit of 100 a multivariate Tobit model of the J BES domains can be expressed as

$$BES_{ij,pr} = X_{i,pr}\beta_j + Z_p\beta_{jp} + Z_r\beta_{jr} + I\_BES_{j,r}\alpha_{jr} + e_{ij,pr}$$

$$\begin{aligned} BES_{ij,pr} &= BES^*_{ij,pr} && if \;\; 0 < BES^*_{ij,pr} < 100 \\ BES_{ij,pr} &= 100 && if \;\; BES^*_{ij,pr} \geq 100 \\ BES_{ij,pr} &= 0 && if \;\; BES^*_{ij,pr} \leq 0 \end{aligned} \qquad (3)$$

$$i = 1,2,\dots,N, \quad j = 1,2,\dots,J \quad r = 1,2,\dots,R \quad p = 1,2,\dots,P$$

where $e_{ij,pr}$ are multivariate normally distributed error terms with zero mean, variance σ^2, correlation ρ, and covariance matrix

$$\Sigma_{e_j} = \begin{pmatrix} \sigma^2_{e_1} & \cdots & \rho_{e_J e_1}\sigma^2_{e_J}\sigma^2_{e_1} \\ \vdots & \ddots & \vdots \\ \rho_{e_1 e_J}\sigma^2_{e_1}\sigma^2_{e_J} & \cdots & \sigma^2_e \end{pmatrix} \qquad (4)$$

Given that choices on the different domains are correlated with each other, and assuming a covariance matrix for the error terms given by Σ_{e_j}, we use a Seemingly Unrelated Estimation approach to estimate the (co)variance matrix of the multivariate normal distribution of the estimators for the system of Tobit equations.[31] In the estimation we use the population weights described in section 3.1.

When comparing OLS and system Tobit estimates, reported in Table 5, we find that the statistical significance is generally similar while magnitudes tend to be larger with the second estimation approach. The rationale is that Tobit estimates consider that border decisions (such as those of investing 0 or all the sum in a single domain) may actually be a lower bound of the true decisions,

[30] The Tobit estimation uses the sampling weights derived in section 3.1.

[31] To estimate the system of Tobit equation we use the SUEST command in STATA. SUEST combines the estimation results -parameter estimates and associated (co)variance matrices- into one parameter vector and simultaneous (co)variance matrix for Σ_{e_j} of the sandwich/robust type. This (co)variance matrix is appropriate even if the estimates were obtained on the same or on overlapping data.

would the implicit constraint of limiting the choice in the 0-100 percent interval be removed (i.e. allowing respondents to disinvest resources from a domain which they regard as overinvested to invest more than the total in a domain which they regard as underinvested). Our main finding confirms that homogeneity of choices is rejected since preferred allocations are strongly affected by socio-demographic factors and mainly by political orientation, age, education and gender. An important related result is that education and political orientation significantly affect preferences toward sustainable development.

More specifically, with regard to our new estimates, we find that the effect of one-integer move to the right of political orientation reduces investment in *education and training* from -100,000 to -110,000 in *social relations* from -110,000 to -140,000 and in *natural and cultural heritage* from -100,000 to -110,000. While a more right wing orientation increases investment preferences in *economic wellbeing* from 270,000 to 320,00 euros and in *security* from 160,000 to 180,000. Large coalition domains where political orientation does not matter are those of Work and Life Balance, Quality of Services, Research and Innovation.

Gender is now significantly affecting well-being expenditure preferences. Females would like to invest more in *economic well-being* (1,540,000) and less in *education* (-1,220,000) and *work and life balance* (-1,240,000).

Keeping into account the censored structure of our data increases also substantially magnitudes of the effect of a University degree over the high school omitted benchmark of the sample. The effect on investment is now 1,810,000 euros in the *social relations* domain and 1,350,000 euros less on *health*. People with a middle school degree would like to invest relatively more in the *health* domain (2,080,000 euros) and less in *education* (-1,600,000 euros), in *environment* (-820,000), in *security* (-810,000), in *natural and cultural heritage* (-1,160,000) and *innovation* (-2,370,000).

In the new estimates those filling the questionnaire from the Avvenire website are still investing significantly more in *natural and cultural heritage* (1,280,000) and respondents filling the questionnaire from the Messaggero website (right wing) significantly more in *education* (6,010,000) and less in *social relations* (-4,180,000). Finally, the new results confirm that readers of Unità (left wing) are more concerned about investing in *politics and institutions* (2,300,000) and less in *health* (5,730,000).

With respect to the common controls regional GDP is positively correlated with the propensity to invest in *education* and inversely related with the propensity to invest in *health* and *natural and cultural heritage*. The share of people with education up to the middle school correlates positively with the propensity to invest in *education* and *research and innovation* and negatively with the propensity to invest in *social relations* and *health*. Finally political participation at the regional level (percentage of voters at the senate elections) correlates positively with the propensity to invest in *economic well-being* and *work and life balance* and negatively with *education*.

4.3.1 Expenditure Preferences and BES Regional Endowment

We now assess whether regional differences in respondents' preferences on a given BES domain are affected by the relative scarcity/abundance of wellbeing on that given domain at the regional level.

Based on our considerations formulated in section 2 we consider what follows

i) If the relative abundance of the wellbeing factor at regional level has a positive and significant effect on wellbeing expenditure preferences the "preference/sorting" hypothesis applies.
ii) If the relative abundance of the wellbeing factor at regional level has a negative and significant effect on wellbeing expenditure preferences the "marginal effectiveness" story applies.

To discriminate between i) and ii) we use the composite BES index ($I\_BES_{j,r}$) described in section 2.

Our findings from the modified specification document the significance of the synthetic indicators. More specifically, in five out of seven cases the "marginal effectiveness" hypothesis applies since respondents are willing to invest more resources, the lower the quality of the aggregate indicator of the BES domain. The five domains where the "marginal effectiveness" dominates are *education*, *work and life balance, economic well-being, environment* and *security.* The two domains where the result is reversed (and the preference/sorting hypothesis applies) are *health* and *natural and cultural heritage*.

While *natural and cultural heritage* is a typical domain where preferences may apply, it may less intuitive why the same reasoning works for the Health domain. It must be however considered that the quality of health in the Italian regions is very polarized with high quality in the North and low quality and widespread episodes of corruption in the South. What may happen is that respondents in regions with low quality of health infrastructure are inclined to believe that the marginal utility of investing in health in their regions is very low and just fueling corruption.

4.4 Subdomain findings

As it is clear from the list of BES indicators, not all of them are suitable for improvement with more public expenditure. This is why our type of sub-domain question changes and concerns a scale of priorities and not a simulated investment. Our dependent variable has fixed outcomes that are rank orderable (with values from 1 up to 5 or 0 when the indicator is not ranked among the first five). In addition to it, ordering choices within each domain are correlated for each individual (if the respondent decides to rank one indicator first the other indicators in the domain cannot be first).

Given these characteristics the best option to tackle our subdomain research question is the rank ordered logit (Beggs et al., 1981) applied in many fields such as voter preferences (Koop and Poirier, 1994), school choice (Mark et al., 2004), marketing (Ahn et al., 2006), demand for classical music (Van Ophem et al., 1999) and transportation studies (Kockelman et al., 2006; Calfee et al., 2001) among others. As is well known however the rank ordered logit approach is feasible when having variables varying not only at individual level (socio-demographic variables) but also at the alternative level (that is, characteristics of the subdomain). Unfortunately our variables do not vary at the alternative level. Since a ranked ordered logit model with no variables varying at subdomain level collapses to a multinomial logit model (Allison and Cristakis, 1994) we opt for this "second best" option.

More in detail, we specify the following multinomial logit model within the *j*-th domain to estimate the probability that the s_j-th subdomain, $S\_BES_{is_j}$, is ranked first:

$$p_{is_j,pr} = log\frac{Pr\left\{S\_BES_{is_j} = s_j\right\}}{Pr\left\{S\_BES_{is_j} = S_j\right\}} = X_{i,pr}\beta_{s_j} + Z_p\beta_{s_jp} + Z_r\beta_{s_jr} + I\_BES_{s_j,r}\alpha_{jsr} + e_{is_j,pr}$$

$$S\_BES_{is_j} = s_j \quad if \quad Rank(s_j) = 1 \qquad \textbf{(5)}$$

$$s_j = 1,2,...S_j$$

where S_j is the reference subdomain [32] and the probability distribution of the individual response, $p_{is_j,pr}$, is multinomial with S_j-*1* equations. The control variables and the related notation are already described in section 4.3. The suffixes *r* and *p* denote, respectively, the region and province where the *i*-th respondent lives. In the estimation we use the population weights described in section 3.1.

[32] We use the largest subdomain as reference. In the multinomial logit model a change in the reference subdomanin does not change the sign of the the marginal effects (Wooldridge, 2002 p. 497-498).

In order to know more about the effect of left/wing political orientation on preference heterogeneity, in Table 6 we summarize the results from within-domain effects by identifying the priority item in each domain on which political orientation has a significant impact.[33]

Subdomain findings are necessarily different from econometric findings on wellbeing expenditure preferences since they measure within- and not between-domain effects. That is, the fact that there are no significant items in the security domain is perfectly consistent with the significantly higher wellbeing expenditure preferences of right wing respondents for the security domain. It implies however that within that domain there is no significant divergence between left and right respondents about the within domain ranking of priorities for the different security items. Table 6 shows that right wing oriented respondents prioritize relatively more some subdomains in health, economic wellbeing, education, research and innovation and the quality of services. More specifically, they are relatively more concerned about reducing traffic accidents and dependencies (sedentarity), increasing per capita net wealth, increasing literacy, promoting accessibility to basic services and prioritizing productive specialization in knowledge intensive sectors. Conversely, left wing oriented respondents prioritise relatively more some subdomains in health, social relations, politics and institutions and the quality of services. Specifically, they prioritise fighting against cancer mortality, funding of associations, supporting participation of women in decision-making bodies and in board of directors and are interested in reducing prison density. In a comparative perspective it worth noting that in the Social Relations domain left wing respondents prioritise relative more a socially structured aspect (funding of associations), while right wing respondents an individual aspect (providing free and voluntary help) of it.

If we look at anecdotal evidence on declarations of Italian policymakers we find the overall results of the analysis broadly consistent with our between and within findings. Between-domain findings (Tables 4 and 5) are consistent with right wing politician declarations minimizing the importance of culture and education[34] and declare themselves very concerned about safety problems (the Lega organized voluntary groups of citizens patrolling cities in the night ("ronde") in the last years in some municipalities of the North). The strategy of enhancing the perception of insecurity of right wing media in the last elections has been acknowledged ex post as one of the most successful. Care for the environment is, on the other hand, typically considered a left issue in Italy (and the Green party which actually did not have much success was clearly identified and placed itself at the left of the political spectrum). Looking at within domain findings (Table 6) care for gender issues both in the workplace and in politics and for the quality of certain public services (i.e. reducing prison density which is part of the political propaganda of the Radical Party) are, on the other hand, typically considered a left issue in Italy. While increasing per capita

[33] We calculate the average marginal effects of a of one-integer move to the right of political orientation on the probability to a specific subdomain is ranked first. Errors are clustered by individual since the ordering of choices within each domain are correlated. Full evidence of multinomial logit estimates according to political orientation is collected in an online appendix available upon request.

[34] On November 22nd, 2010, the ministry of Treasury Mr. Tremonti declared: "con la cultura non si mangia" (you cannot eat culture), while Mr. Berlusconi stated that in Italy there are too many graduated individuals and too few artisans.

net wealth and prioritising productive specialization in knowledge intensive sectors are typically associated with growth enhancing policies proposed by right wing politicians.

5. Conclusions

The original contribution of our paper to the wellbeing literature hinges upon the analysis of the heterogeneity of individual wellbeing expenditure preferences and on the expenditure trade-offs among different wellbeing domains. More specifically, respondents to an online survey are asked to simulate the policymaker dilemma of allocating a limited sum among alternative policies aimed at increasing wellbeing in different domains. Our reference is a wellbeing indicator, the BES (Sustainable and Equitable Wellbeing) indicator, recently created and adopted as a benchmark in Italy by the National Statistical Institute (ISTAT), with the cooperation of a coalition of representatives of different interest groups of the Italian society (CNEL). We demonstrate that the null of equal expenditure preference weights on different welfare domains among survey respondents is rejected by our empirical analysis since political orientation, education, gender and age significantly affect allocation choices.

More specifically on this point we show that right wing respondents desire to invest relatively more in economic wellbeing and safety, while left wing respondents in education, social relations and the environment. Overall, our findings seem to suggest that sustainable wellbeing goals may more easily achieved with left wing oriented citizens who, in a hypothetic dilemma between economic growth and environmental sustainability, are relatively more inclined toward the latter.

The impact of education is also relevant and is mainly represented by the difference made by a university degree. Graduated respondents would invest significantly more in the environment, social relations, natural and cultural heritage and quality of services.

We as well assess whether respondents' expenditure preferences on a given BES domain are affected by the relative scarcity/abundance of wellbeing on that given domain at the regional level. Our findings show the prevalence of the marginal impact hypothesis since in most cases wellbeing expenditure preferences are higher in areas where the quality of a given wellbeing domain is relatively lower.

Last but not least, the importance of the political factor (left/right wing political orientation) in between and within domain effects (and the identification of areas in which political orientation does not matter) suggests that our methodology may be used to identify areas where it is possible to form large coalitions by creating bridges and consensus between left and right political wings.

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Figures

Figure 1. Regional (objective) BES composite indices.

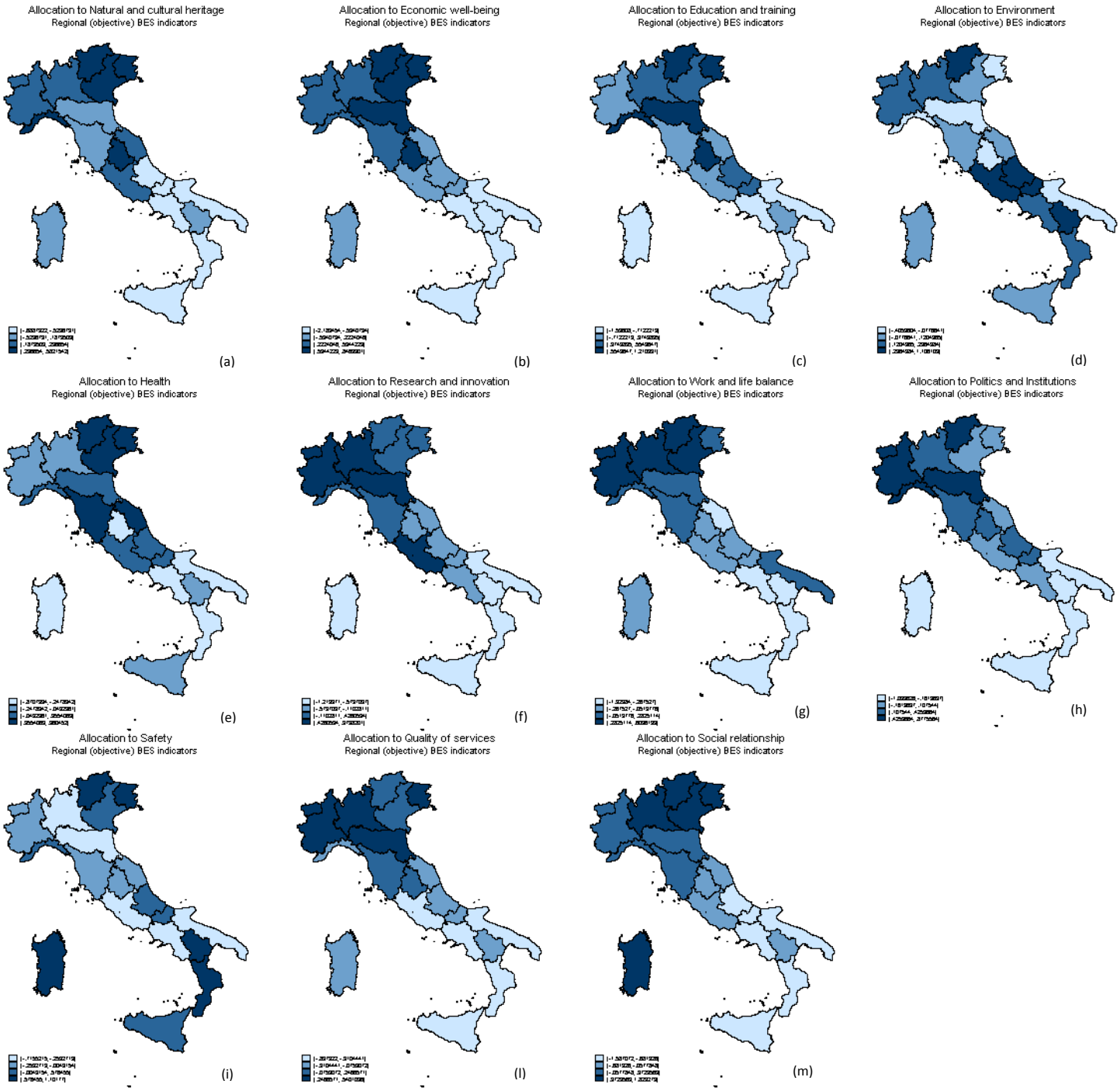


Figure 2. Average investment shares (preference weights) in the different BES domains (weighted)

Legend= Health=health, Education=education and training; Job=work and life balance; Social=social relationships; Politics=politics and institutions; Culture=natural and cultural heritage; Environment=environment; Security=safety; Innovation=research and innovation; Services= quality of services

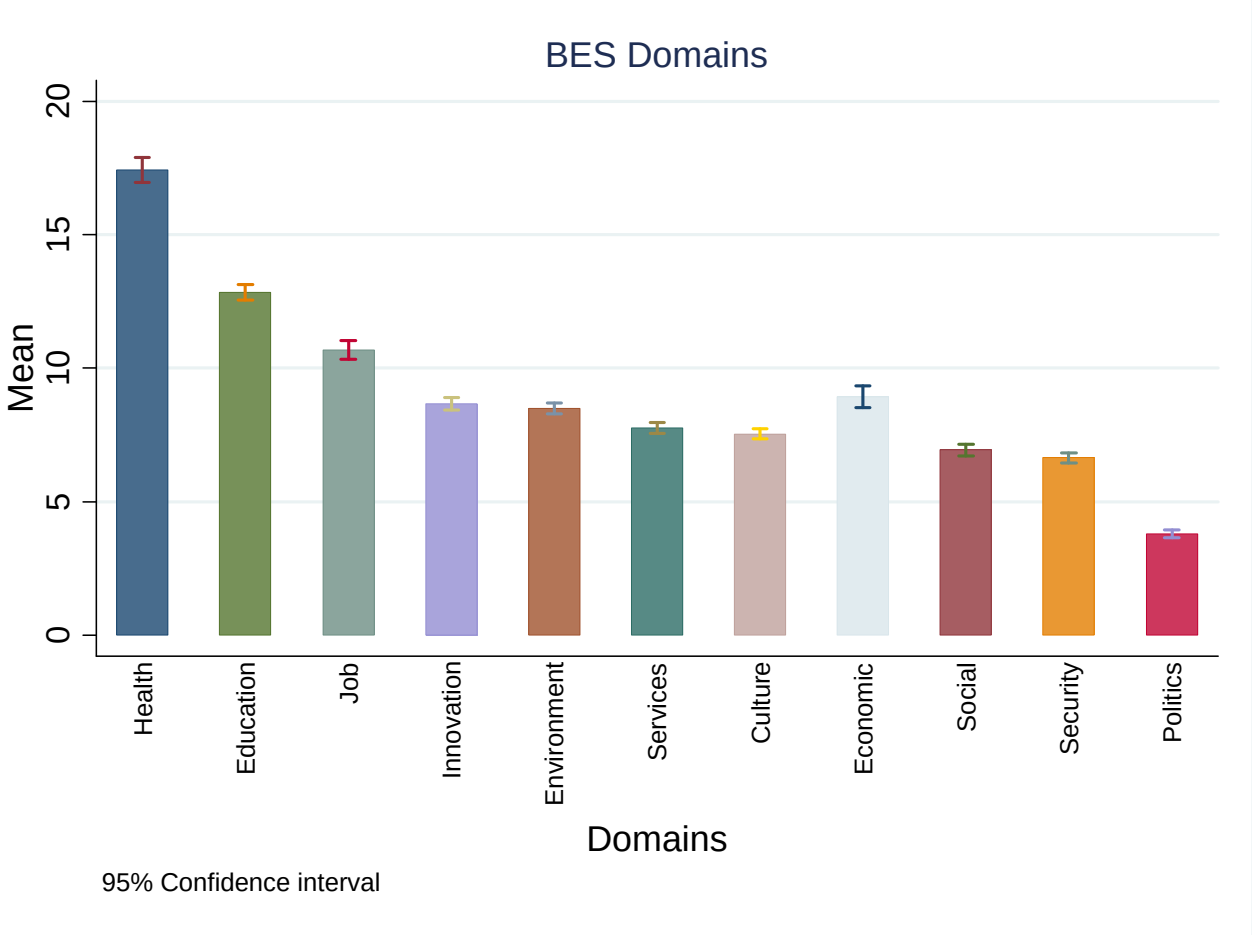


Figure 3. Average investment shares in the different BES domains (weighted)

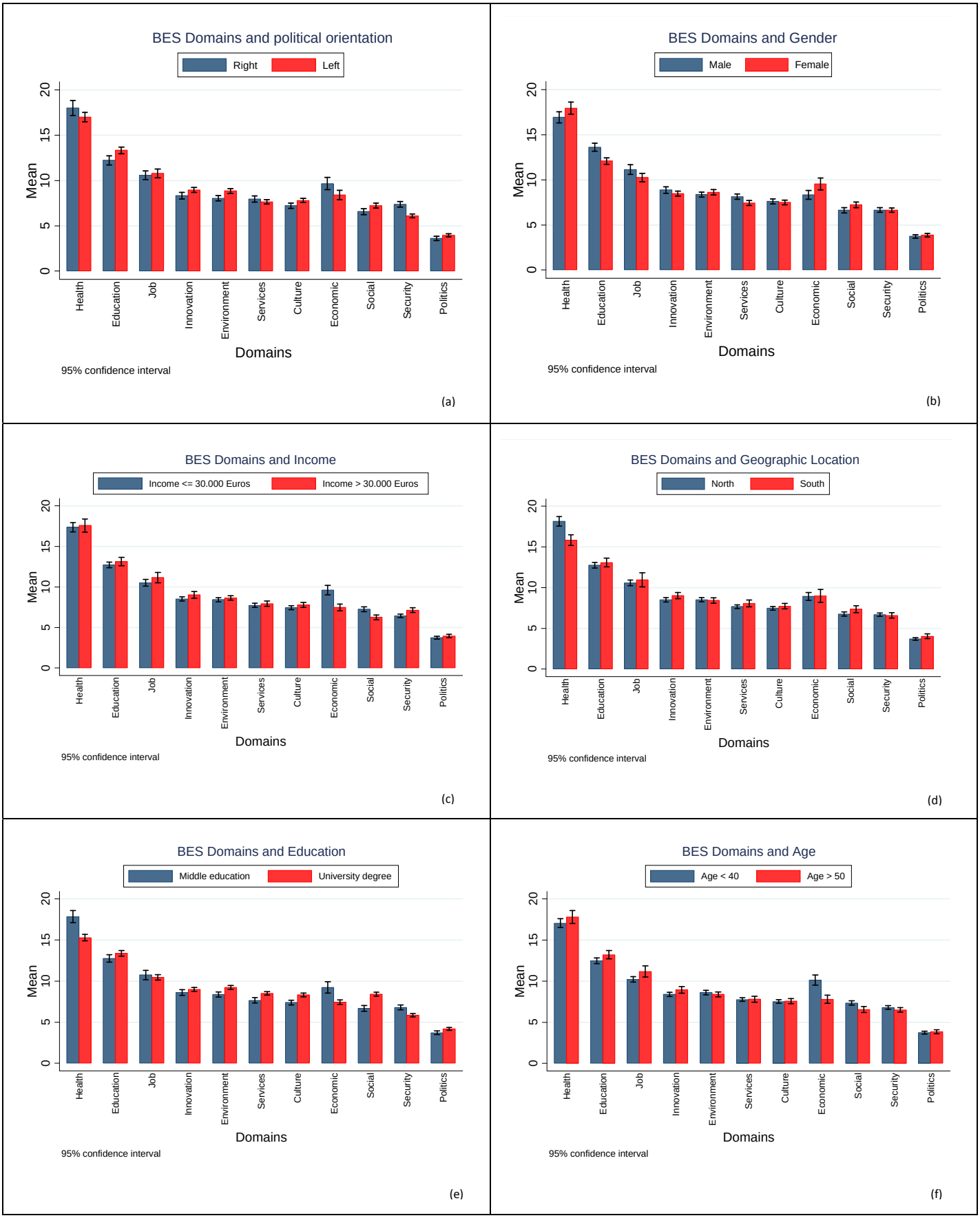
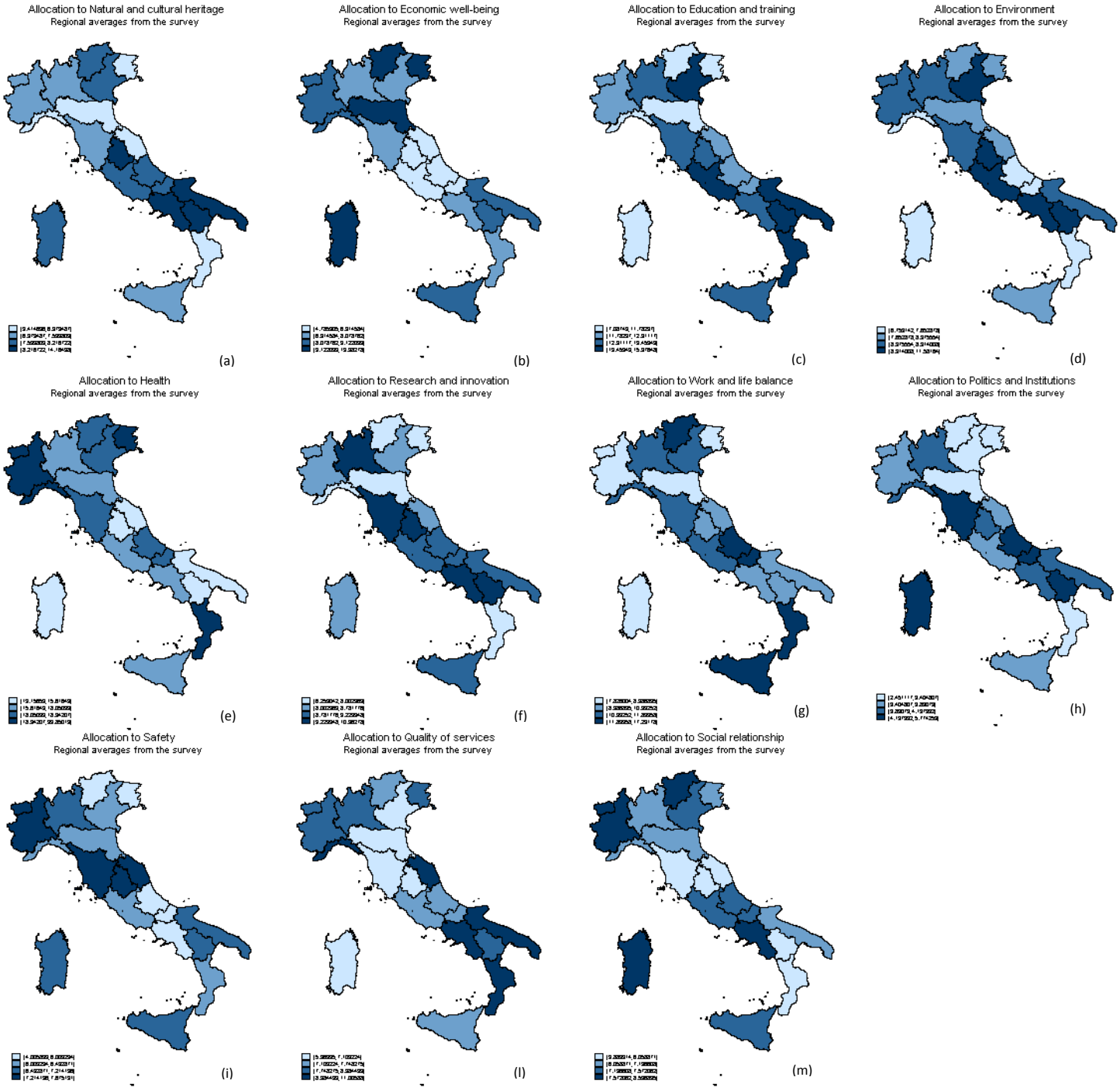


Figure 4. Regional (subjective) allocations to the BES domains (weighted)



Tables

Table 1 - BES Domains and BES Regional Indicators

BES Domains	Regional Indicators
Health	Life expectancy at birth, Healthy life expectancy at birth, Physical Component Summary (PCS), Mental Component Summary (MCS), Infant mortality rate, Traffic accidents (15-34 years old), Age-standardised cancer mortality rate (19-64 years old), Age-standardised mortality rate for dementia and related illnesses (people aged 65 and over), Life expectancy without activity limitations at 65 years of age, Age-standardized overweight or obesity - percentage of people aged 18 years and over who are overweight or obese,Age standardized smoking - people aged 14 years and over declaring to smoke, Age-standardized alcohol consumption - people aged 14 years and over with at least one risk behaviour in alcohol consumption, Age – standardized sedentariness - people aged 14 years and over who do not practice any physical activity, Age – standardized nutrition - people aged 3 years and over who consume at least 4 portions of fruit and vegetables a day
Economic well-being	Per capita adjusted disposable income, Disposable income inequality, People at risk of relative poverty, Severely materially deprived people, People suffering poor housing conditions, People living in jobless households.
Education and Training	Participation in early childhood education, Percentage of people aged 25-64 having completed at least upper secondary education, Percentage of people aged 30-34 having completed tertiary education (ISCED 5 o 6), Percentage of early leavers (aged 18-24) from education and training, Percentage of people aged 15-29 not in education, employment, or training (NEET), Percentage of people aged 25-64 participating in formal or non-formal education, Level of literacy: Scores obtained in the tests of functional literacy skills of students in the II classes of upper secondary education, Level of numeracy, Percentage of people aged 16 and over with high level of ICT competencies, Synthetic indicator of the level of cultural participation
Work and life balance	Employment rate of people 20-64 years old, Transition rate (12 months time-distance) from non-standard to standard employment, Share of employed persons with temporary jobs for at least 5 years, Share of employees with below 2/3 of median hourly earning, Share of over-qualified employed persons, Incidence rate of fatal occupational injuries or injuries leading to permanent disability, Share of employed persons not in regular occupation, Ratio of employment rate for women 25-49 years with children under compulsory school age to the employment rate of women 25-49 years without children, Share of population aged 15-64 years that work over 60 hours per week (including paid work and household work), Share of employed persons who feel satisfied with their work
Social relationships	Synthetic indicator of social participation, Generalized trust, Non-profit organizations per 10,000 inhabitants, Social co-operatives per 10,000 inhabitants, Volunteer work, Provided aids, Association funding, Satisfaction with family relationship, Satisfaction with friendship relationship, Percentage of people of 14 years and over which have relatives, friends or neighbours on which they can count, Percentage of children aged 3 to 10 years who play with their parents.
Politics and Institutions	Voter turnout, Civic and political participation, Trust in the parliament, Trust in judicial system, Trust in political parties, Trust in local institutions, Trust in other institutions, Women and political representation in Parliament, Women and political representation at regional level, Women in decision-making bodies.
Security	Homicide rate, Burglary rate, Pick-pocketing rate, Robbery rate, Physical violence rate, Sexual violence rate, Fear of crime rate, Worries of sexual crime rate, Concrete fear rate, Social decay (or incivilities) rate, Intimate partnership violence rate.
Natural and cultural heritage	Endowment of cultural heritage items, Current expenditure of Municipalities for the management of cultural heritage (museums, libraries and art galleries), per capita, Illegal building rate, Urbanisation rate of areas subject to building restrictions by virtue of the Italian laws on landscape protection, Erosion of farmland from urban sprawl, Erosion of farmland from abandonment, Presence of historic rural landscapes, Quality assessment of Regional programmes for rural development (PSRs), with regard to the landscape protection, Presence of Historic Parks/Gardens and other Urban Parks recognised of significant public interest, Conservation of historic urban fabric, People that are not satisfied with the quality of landscape of the place where they live, Concern about landscape deterioration
Environment	Drinkable water, Quality of marine coastal waters, Quality of urban air, Urban parks and gardens, Areas with hydrogeological risks, Contaminated sites, Terrestrial parks, Marine protected areas, Areas of special naturalistic interest, Concern for biodiversity loss, Energy from renewable sources, Emissions of CO2 and other greenhouse gasses.
Research and Innovation	Research intensity, Patent propensity, Percentage of knowledge workers on total employment, Innovation rate of the national productive system, Percentage of product innovators, Productive specialization in high-tech and knowledge intensive sectors, Internet use.
Quality of Services	Index of accessibility to hospitals with emergency room, Beds in residential health care facilities, Waiting lists, Percentage of population served by natural gas, Separate collection of municipal waste, Composite index of service accessibility, Index of accessibility to transport networks, Citizens who benefit from infancy services, Elders who benefit from home assistance, Prison density per 100 places, Irregularity in water supply, Landfill of waste, Irregularity in electric power distribution, Time devoted to mobility.

Table 2 - Sample versus Census Population

Variable	Paper sample	Census	Z-score[§]
Gender (%)			
Male	44.45	48.37	-3.98***
Female	55.55	51.63	3.98***
Age (%)			
Jan-17	0.12	16.84	-22.69***
18 - 24	3.8	7.13	-6.57***
25 - 34	22	11.87	15.89***
35 - 44	22.65	15.75	9.62***
45 - 54	24.61	15.01	13.65***
55 - 64	14.93	12.56	3.63***
Over 64	11.9	20.84	-11.17***
Education			
No titles	1.38	8.77	-13.26***
Primary school	0.31	20.10	-25.07***
Middle school	6.56	29.77	-25.77***
High school	34.05	30.57	3.84***
BA or higher	57.70	10.80	76.70***
Region			
Abruzzo e Molise	3.3	2.72	1.80*
Basilicata	0.74	0.97	-1.20
Calabria	3.61	3.28	0.93
Campania	1.44	9.69	-14.16***
Emilia Romagna	16.80	7.30	18.53***
Friuli Venezia Giulia	3.96	2.05	6.85***
Lazio	3.84	9.32	-9.57***
Liguria	2.48	2.65	-0.53
Lombardia	10.32	16.36	-8.30***
Marche	2.56	2.59	-0.09
Piemonte e Valle D'Aosta	6.01	7.54	-2.93
Puglia	4.89	6.80	-3.85
Sardegna	7.49	2.76	14.67***
Sicilia	10.20	8.40	3.29***
Toscana	12.88	6.17	14.15***
Trentino Alto Adige	0.58	1.73	-4.48***
Umbria	3.14	1.49	6.93***
Veneto	5.78	8.17	-4.43***

*§ * significant at 10% ** significant at 5% *** significant at 1% . Z-score =* $\frac{p-p_0}{\sqrt{\frac{p_0(1-p_0)}{N}}}$ *where p=sample proportion,* $p_0 = population\ proportion\ and\ N = sample\ size.$

Table 3 – Summary statistics (weighted)

Variable	Obs	Mean	Std. Dev.	Min	Max
BES DOMAINS					
Education	2578	13.59	6.89	0	100
Work and life balance	2578	10.60	7.70	0	100
Economic well-being	2578	7.84	8.21	0	100
Social relationship	2578	6.98	5.04	0	44
Politic and Insitutions	2578	3.88	3.97	0	100
Environment	2578	8.81	4.87	0	50
Health	2578	16.12	9.63	0	100
Safety	2578	6.60	4.93	0	100
Natural and cultural heritage	2578	8.01	4.60	0	50
Services quality	2578	8.15	5.19	0	100
Research and innovation	2578	9.15	5.25	0	50
COMMON CONTROLS					
Per capita GDP	2578	20.33	4.39	12.79	26.78
People with up to the middle school degree	2512	46.90	7.57	31.60	65.64
Voters for Senate election	2512	80.57	5.57	65.26	87.50
POLITICAL ORIENTATION					
Political orientation	2578	-2.70	4.66	-10	10
SECTOR Dummy					
Manufacturing	2578	0.13	0.34	0	1
Agriculture	2578	0.02	0.14	0	1
Tertiary	2578	0.49	0.50	0	1
Personal services	2578	0.30	0.46	0	1
doesn't know/answer	2578	0.06	0.23	0	1
CIVIL STATUS Dummy					
Married/cohabitant	2578	0.56	0.50	0	1
Single	2578	0.36	0.48	0	1
Separated	2578	0.04	0.19	0	1
Divorced	2578	0.02	0.15	0	1
Widower	2578	0.01	0.11	0	1
WORK STATUS Dummy					
Fixed term contract	2572	0.44	0.50	0	1
Open-ended and seasonal contract	2572	0.11	0.31	0	1
Independent contractor/freelancer	2572	0.16	0.37	0	1
Not working/unemployed/looking for a job	2572	0.12	0.32	0	1
Redundancy fund benefits	2572	0.00	0.07	0	1
Redundancy worker	2572	0.01	0.09	0	1
Housewife	2572	0.01	0.12	0	1
Student	2572	0.04	0.20	0	1
Retired	2572	0.10	0.30	0	1
FAMILY STATUS Dummy					
Living alone	2578	0.17	0.37	0	1
Living with my original family	2578	0.20	0.40	0	1
Living with my partner without children	2578	0.18	0.38	0	1
Living with my partner with children	2578	0.42	0.49	0	1
I am the only parent of child/children	2578	0.04	0.19	0	1
INCOME STATUS Dummy					
Income less than € 15.000 per year	2578	0.25	0.43	0	1
Income between € 15.000 and € 30.000 per year	2578	0.37	0.48	0	1
Income between € 30.000 and € 50.000 per year	2578	0.21	0.40	0	1
Income between € 50.000 and € 100.000 per year	2578	0.08	0.27	0	1
Income higher than € 100.000 per year	2578	0.01	0.10	0	1
doesn't know/answer	2578	0.08	0.27	0	1

Table 4 - The determinants of investment in BES domains - OLS single equation estimates (weighted)

	Education & training	Work & life balance	Economic wellbeing	Social relations	Politics & institutions	Environment	Health	Security	Quality of service	Natural & cult.Her.	Research & innov.
Gender	-1.16	-1.08	1.31	0.62	0.01	0.29	0.47	0.24	-0.37	-0.11	0.01
Education (middle)	-1.29*	0.36	1.11	0.62	-0.02	-0.63	2.28	-0.54	0.04	-0.73	-1.79***
Education (bachelor)	-0.10	-0.53	-0.12	1.52***	0.07	0.50	-1.33	-0.59	0.65	0.51	0.11
Pol. Orientation	-0.10*	-0.03	0.27**	-0.11*	-0.04	-0.14***	0.08	0.16***	0.01	-0.10**	-0.00
NorthEast	-1.97	-0.36	3.87	1.34	-0.74	-0.46	2.66	-0.96	0.69	-1.16	-1.46*
NorthWest	-1.03	-0.16	-0.02	0.41	0.10	-0.69	3.46**	0.15	2.16**	-0.26	-0.88
South-Islands	-3.63	1.00	8.84*	1.60	-0.40	-0.51	-3.68	-0.30	0.37	-0.13	-1.88
Source - Avvenire	0.70	0.52	-1.12	-0.79	0.25	-0.16	-0.19	0.27	0.28	1.07**	-0.58
Source - Messaggero	5.70**	-2.57*	-2.09	-3.06**	-1.14	-0.34	2.15	-0.02	-1.55	3.48*	-0.02
Source - Unità	0.14	1.17	-1.04	-0.91	1.63**	0.67	-5.81**	0.65	0.49	0.97	1.75
AGE (Classes)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SECTOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CIVIL STATUS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WORK STATUS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FAMILY STATUS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
INCOME STATUS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Common controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Constant	18.91**	-22.23	-4.12	6.84	5.35	13.90*	33.58*	10.00**	3.56	7.17	14.03**
R-squared	0.14	0.10	0.20	0.12	0.09	0.10	0.13	0.13	0.10	0.11	0.12

* p<0.10 ** p<0.05 *** p<0.010

Table 5 - The determinants of investment in BES domains - Tobit system equation estimates (weighted)

	Education & training	Work & life balance	Economic wellbeing	Social relations	Politics & institutions	Environment	Health	Security	Quality of service	Natural & cultur. Herit.	Research & innovation
Gender	-1.22***	-1.24***	1.54***	0.81***	0.02	0.36	0.40	0.38	-0.36	-0.03	0.06
Education (middle)	-1.60***	0.08	1.00*	0.49	-0.28	-0.82***	2.08***	-0.81***	-0.34	-1.16***	-2.37***
Education (bachelor)	-0.05	-0.58	-0.04	1.81***	0.19	0.61*	-1.35*	-0.45	0.67*	0.62*	0.23
Pol. Orientation	-0.11***	-0.05	0.32***	-0.14***	-0.05**	-0.15***	0.07	0.18***	0.00	-0.11***	-0.01
NorthEast	-2.42***	-0.88	4.52***	1.49***	-1.01***	-0.61	2.43***	-1.30***	0.55	-1.58***	-1.82***
NorthWest	-1.10**	-0.26	0.92	0.47	0.16	-0.68*	3.98***	0.17	2.36***	-0.36	-0.88**
South-Islands	-4.14***	0.47	9.28***	1.37	-1.13	-0.93	-3.87**	-0.81	0.02	-0.30	-2.76***
Source - Avvenire	0.89**	0.73	-1.06	-0.80**	0.34	-0.09	-0.09	0.49	0.35	1.28***	-0.50
Source - Messaggero	6.01***	-2.30	-3.25*	-4.18***	-1.93**	-0.21	2.68	-0.38	-1.75*	3.81***	-0.12
Source - Unità	0.50	1.68	-0.81	-0.79	2.30***	0.87	-5.73***	1.09	0.75	1.37	1.77
AGE (Classes)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SECTOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CIVIL STATUS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WORK STATUS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FAMILY STATUS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
INCOME STATUS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Common controls											
Per capita GDP	0.30***	0.21*	-0.03	-0.15	-0.07	0.01	-0.67***	0.08	-0.12*	-0.23***	-0.10
Ppl w\up to mid school deg.	0.09***	0.05	-0.08*	-0.08***	0.00	-0.02	-0.09*	0.04*	-0.03	0.04**	0.10***
Voters for Senate election	-0.18***	0.32***	0.21**	0.04	-0.02	-0.07	0.02	-0.09*	0.06	0.01	-0.11**
Education - Index	-1.93**										
Work & life bal. - Index		-4.82***									
Economic wellb. - Index			-2.09***								
Social relations - Index				0.15							
Politics and instit. - Index					-0.36						
Environment - Index						-1.00**					
Health - Index							2.37**				
Safety - Index								-0.29			
Quality of services - Index									-1.27**		
Natural & cult. herit. - Index										3.04***	
Research & innov. - Index											0.80*
Constant	20.07***	-22.36***	-7.50	8.33*	5.86*	14.47***	34.62***	11.09***	4.68	7.38*	16.68***
σ_e	7.19***	9.62***	10.95***	6.11***	4.61***	5.45***	11.71***	5.10***	5.67***	5.26***	6.23***

* p<0.10 ** p<0.05 *** p<0.010

Table 6 - Priority items according to left/right political orientation. Multinomial Logit Estimates (weighted)

	Left (%)	Right (%)
Health		
Cancer mortality	16.17	
Sedentariness	3.65	
Smoking		2.50
Traffic accidents		1.65
Education		
Level of literacy		13.87
Work and life balance		
Underpaid workers		9.12
Economic well-being		
Per capita net wealth		1.93
Social relations		
Association funding	17.37	
Voluntary activity		14.68
Free help provided		6.25
Politics and Institutions		
Women in decision-making bodies	6.32	
Women on boards of directors	0.12	
Research and Innovation		
Productive specialization		35.06
Quality of services		
Composite index of service accessibility		26.26
Prison density	16.24	

Table legend: in the left (right) column we report the predicted probability of being ranked as first item among those within a given domain for indicators where left(right) political orientation significantly affects that probability.

Appendix A – The complete set of Indicators for each dimension of the BES composition (Not for publication)

Environment

1 Drinkable water: Volume of drinkable 1 water supplied every day per capita
2 Quality of marine coastal waters: Percentage of bathing marine coastal waters on total coasts
3 Quality of urban air: Number of exceeding the daily limit of PM10
4 Urban parks and gardens: Square meters of urban parks and gardens per inhabitants
5 Areas with hydrogeological risks: Percentage of areas subject to landslide on total surface
6 Contaminated sites: Number and size of contaminated sites
7 Terrestrial parks: Share of the size of terrestrial parks on total surface
8 Marine protected areas: Share of the size of marine protected areas on total coastal area
9 Areas of special naturalistic interest: Share of areas of special naturalistic interest of total surface
10 Concern for biodiversity loss: Percentage of people aged 14 and over who believe that biodiversity loss is among the five most important environmental problems
11 Material flows: Quantity of materials, transformed in emissions, waste or new stocks, limited to internal material consumption
12 Energy from renewable sources: Share of energy consumptions provided by renewable sources on total internal consumptions
13 Emissions of CO2 and other greenhouse gasses: Tons of CO2 equivalent per capita

Health

1 Life expectancy at birth: Life expectancy expresses the average number of years that a child born in a given calendar year can expect to live if exposed during his whole life to the risks of death observed in the same year at different ages.
2 Healthy life expectancy at birth: It expresses the average number of years that a child born in a given calendar year can expect to live in good health on the assumption that the risks of death and perceived health conditions remain constant. It is built using the prevalence of individuals who respond positively ("well" or "very well") to the question on perceived health.
3 Physical Component Summary (PCS): Summary of the scores of each individual answering the 12 questions on the questionnaire SF12 on physical state (Physical Component Summary).
4 Mental Component Summary (MCS): Summary of the scores of each individual answering the 12 questions on the questionnaire SF12 on psychological state (Mental Component Summary).
5 Infant mortality rate: Deaths during the first year of life per 10.000 born alive.
6 Traffic accidents (15-34 years old): Mortality rate for traffic accidents (initial cause) by five year age groups for people aged 15-34 years, standardized by the Italian 2001 Census population of the same age groups.
7 Age-standardised cancer mortality rate (19-64 years old): Mortality rate for cancer (initial cause) by five year age groups for people aged 19-64 years, standardized by the Italian 2001 Census population of the same age groups.
8 Age-standardised mortality rate for dementia and related illnesses (people aged 65 and over): Mortality rate for nervous system diseases and psychical and behavioral disorders (initial cause) by five year age groups for people aged 65 years and over, standardized by the Italian 2001 Census population of the same age groups.
9 Life expectancy without activity limitations at 65 years of age: It expresses the average number of years that a person aged 65 can expect to live without suffering limitations in daily activities due to health problems, assuming that the risks of death and disability remain constant over time and equal to those observed in a specific calendar year. It is based on the prevalence of individuals who answer to be limited, for at least the past 6 months, because of a health problem in activities people usually do.
10 Overweight or obesity - Standardized percentage of people aged 18 years and over who are overweight or obese: The indicator refers to the Body Mass Index (BMI), which classifies people as overweight (25 <= BMI<30) or obese (BMI> 30) as classified by the World Health Organization (WHO). The indicator is standardized using the Italian 2001 Census population as standard population.
11 Smoking - Standardized percentage of people aged 14 years and over declaring to smoke: Proportion of people aged 14 and over who report current smoking. The indicator is standardized using the Italian 2001 Census population as standard population.
12 Alcohol consumption - Standardized percentage of people aged 14 years and over with at least one risk behaviour in alcohol consumption: Taking into account the definitions adopted by the WHO and the recommendations from INRAN, in agreement with the National Institute of Health, are identified as "at-risk consumers" all those individuals who have at least one risk behavior, exceeding the daily consumption of alcohol (according to specific thresholds for sex and age)
or concentrating on a single occasion of consumption the intake of 6 or more units of any alcoholic drink (bing drinking).
13 Sedentariness - Standardized percentage of people aged 14 years and over who do not practice any physical activity: Proportion of people aged 14 and over referring not to play sports neither continuously nor intermittently during their spare time, and people aged 14 and over referring not to perform any physical activity, such as walking at least 2 km, cycling, swimming, etc.
14 Nutrition - Standardized percentage of people aged 3 years and over who consume at least 4 portions of fruit and vegetables a day: Percentage of people aged 3 years and over who say they take every day at least 4 portions of fruit and vegetables. According to the guidelines for a healthy diet published by INRAN the recommended daily servings would be at least 5, but since the definition of portion remains a difficult concept to be standardized for the Italian eating habits, although there are objective criteria of measurement, such as the weight of the food considered, it was considered appropriate to refer to the declared consumption of

at least 4 portions. Very often, for example, a portion of vegetables taken as side dish is greater in quantity compared to the amount in grams recommended. The indicator is standardized using the Italian 2001 Census population as standard population.

Economic wellbeing

1 Per capita adjusted disposable income: Ratio of adjusted household disposable income (inclusive of the value of inkind services provided by public and non-profit institutions) to the total number of residents.
2 Disposable income inequality: Ratio of total equivalised income received by the 20% of the population with the highest income to that received by the 20% of the population with the lowest income.
3 People at risk of relative poverty: Percentage of persons at risk of poverty, with an equivalised income less than or equal to 60% of the median equivalised income.
4 Per capita net wealth: Ratio of total net wealth of households to the 4 total number of residents.
People living in financially vulnerable households: Percentage of people in households with debt service greater than 30% of disposable income.
5 People living in absolute poverty: Proportion of individuals belonging to households with an overall consumption expenditure below the threshold of absolute poverty.
6 Severely materially deprived people: Proportion of people living in households with at least 4 over 9 of the problems considered
7 People suffering poor housing conditions: Proportion of people experiencing overcrowding in houses without some services and with structural problems.
8 Index of subjective evaluation of economic distress: It is a combination of three indicators: (a) share of individuals in households choosing the first answer category to the question "Considering all the available income, how does your household manage to get to the end of the month?" (With great difficulty, with difficulty, with some difficulty, with some ease, with ease, very easily); (b) proportion of individuals living in households which are unable to cope with its own resources with unexpected expenses of approximately XXX euros (the value is calculated according to the median
of the distribution of the equivalised income of the previous year); (c) share of individuals who do not consider it possible to be able to make savings in the next 12 months.
9 People living in jobless households: Proportion of individuals living in households with at least one component aged 18-59 years (with the exception of households where all members are full time students under 25 years) where nobody works or receives an occupational pension.

Education and training

1 Participation in early childhood education: Children aged 4-5 years participating in pre-primary education / children aged 4-5 years
2 Percentage of people aged 25-64 having completed at least upper secondary education: Persons aged 25-64 years having completed at least upper secondary education (ISCED level not below 3a, 3b or 3c) / persons aged 25-64 years *100
3 Percentage of people aged 30-34 having completed tertiary education (ISCED 5 o 6): Persons aged 30-34 years having completed tertiary education (ISCED 5 o 6) / Persons aged 30-34 years * 100
4 Percentage of early leavers (aged 18-24) from education and training: Persons aged 18-24 years who have achieved only lower secondary (ISCED 2) and are not included in a training program / Persons aged 18-24 years * 100
5 Percentage of people aged 15-29 not in education, employment, or training (NEET): Persons aged 15-29 years that are not in education, employment, or training / Persons aged 15-29 years * 100
6 Percentage of people aged 25-64 participating in formal or non-formal education: Persons aged 25-64 years participating in formal or non-formal education / Persons aged 25-64 years * 100
7 Level of literacy: Scores obtained in the tests of functional literacy skills of students in the II classes of upper secondary education
8 Level of numeracy: Scores obtained in the tests of numeracy skills of students in the II classes of upper secondary education
9 Percentage of people aged 16 and over with high level of ICT competencies: Persons aged 16 years and over who can perform at least 5 over the 6 listed operations on the computer / persons aged 16 years and over * 100
10 Synthetic indicator of the level of cultural participation: Based on the aggregation of the following indicators: percentage of people aged 6 and over that, in the 12 months preceding the interview, have gone at least once to: cinema, theatre, exhibitions and museums, archaeological sites, monuments, concerts of classical music, opera, concerts of other kind of music; percentage of people aged 6 and over who read the newspaper at least once a week, who read at least one book in the 12 months preceding the interview, who usually read some magazines (weekly or periodic), who watches DVDs at home.

Work and life balance

1 Employment rate of people 20-64 years old: Employed persons 1 aged 20-64 / persons aged 20-64 *100 Non-participation rate: Unemployed persons aged 15-74 + part of the potential labour force aged 15-74 (persons who are inactive not having looked for a job in the past 4 weeks but willing to work) / Labour force aged 15-74 + part of the potential labour force aged 15-74 (persons who are inactive not having looked for a job in the past 4 weeks but willing to work)
2 Transition rate (12 months time-distance) from non-standard to standard employment: Persons employed in nonstandard jobs at the time t1 (employees with temporary jobs + term-contract workers + project worker + occasional hired workers + single customer self-employed without employees) which have a standard job (permanent employees + self-employed with employees + no single customer self-employed without employees) a year later / Employed in non-standard jobs at the time t1 * 100

3 Share of employed persons with temporary jobs for at least 5 years: Temporary employees and term-contract workers who began their current job at least 5 years prior to interview / Total Temporary employees and term-contract workers * 100
4 Share of employees with below 2/3 of median hourly earning: Employees with an hourly wage of less than 2/3 of the median / Total number of employees * 100
5 Share of over-qualified employed persons: Employees with a higher qualification than that mostly held to exercise a certain profession / Total employed population * 100
6 Incidence rate of fatal occupational injuries or injuries leading to permanent disability: Number of fatal occupational injuries or injuries leading to permanent disability/ Total employed population (excluding the armed forces)*1,000
7 Share of employed persons not in regular occupation: Employees who do not comply with work, fiscal and pension laws / total employees
8 Ratio of employment rate for women 25-49 years with children under compulsory school age to the employment rate of women 25-49 years without children: Employment rate of women aged 25-49 with at least one children under compulsory school age / Employment rate of women aged 25-49 without children
9 Share of household work time carried out by women in a couple on the total of the household work time: Household work time carried out by women / household work time carried out by both partner * 100
10 Share of population aged 15-64 years that work over 60 hours per week (including paid work and household work): Population aged 15-64 years that work over 60 hours per week of paid work and household work / population aged 15-64 years
11 Share of employees covered by collective bargaining at company or district level: Employees covered by collective bargaining at company or district level / total employees in companies with more than 10 employees
12 Share of employees that work in companies where there is trade union: Employees that work in companies where there is trade union / total employees * 100
13 Share of employed persons who feel their work unsecure: Employed persons who, in the following 6 months, consider it is likely they lose their job and it is not at all or a little likely that they find another similar job / Total employed persons * 100
14 Share of employed persons who feel satisfied with their work: The indicator is built as the average level of satisfaction (eg, using a scale from 0 to 10) in more than one dimension: the type of work, earnings, prospects of career, relations with others, working conditions and environment, reconciliation with lifetimes.

Social relationships

1 Synthetic indicator of social participation: Based on the aggregation of the following indicators: People aged 14 and over who during the past 12 months have participated in meetings of associations (cultural/recreational, ecological, civil rights, for peace); People aged 14 and over who in the past 12 months have participated in meetings of trade unions and of professional associations; People aged 14 and over who during the past 12 months have attended meetings of political parties and/or have worked free for a party; People aged 14 and over who pay monthly or periodical dues for a club/sports club; People aged 14 and over who during the past 12 months have participated in
meetings or activities (cultural, sporting, recreational, spiritual), organized or promoted from parishes, religious or spiritual organizations/groups.
2 Generalized trust: Share of population (aged 14 and over) who believes that most 2 of the people are trustworthy.
3 Non-profit organizations per 10,000 inhabitants: Number of non-profit organizations per 10,000 inhabitants
4 Social co-operatives per 10,000 inhabitants: Number of social co-operatives per 10,000 inhabitants
5 Volunteer work: Percentage of population aged 14 and over who in the past 12 months performed non-paid volunteer work for associations or volunteer groups.
6 Provided aids: Share of population aged 14 and over who in past 12 months have given unpaid aid to non-cohabiting relatives and non-relatives.
7 Association funding: Share of population aged 14 and over who in the past 12 months have funded associations.
8 Satisfaction with family relationship: Share of population aged 14 and over who have declared to be very satisfied with his/her family relationships.
9 Satisfaction with friendship relationship: Share of population aged 14 and over who have declared to be very satisfied with the relationship with his/her friends.
10 Percentage of people of 14 years and over which have relatives, friends or neighbours on which they can count: Based on the aggregation of the following indicators: Share of people aged 14 and over who have relatives they can count on; Share of people aged 14 and over who have friends or neighbours they can count on.
11 Percentage of children aged 3 to 10 years who play with their parents: Based on the aggregation of the following indicators: Children aged 3-10 years who every day spend some time playing with his/her father; Children aged 3-10 years who every day spend some time playing with his/her mother.

Security
1 Homicide rate: Number of homicide / population * 100.000
2 Burglary rate: Number of burglaries / households * 100
3 Pick-pocketing rate: Number of pick-pocketing / population * 100
4 Robbery rate: Number of robberies / population * 100
Physical violence rate: Percentage of people aged 16 and over who were victim of physical violence / people aged 16 and over
5 Sexual violence rate: Percentage of people aged 16 and over who were victim of sexual violence / people aged 16 and over
6 Fear of crime rate: Percentage of people aged 14 years and over feeling unsafe when walking alone in the dark in the area where they live

7 Worries of sexual crime rate: Percentage of people aged 14 years and over who are very or quite worried of suffering a sexual violence
8 Concrete fear rate: Percentage of people aged 14 years and over who are afraid of becoming concretely a victim of crime
9 Social decay (or incivilities) rate: Percentage of people aged 14 years and over who often see elements of social and environmental decay (vandalism acts, people selling drugs, drugs users, prostitute looking for clients) in the area where they live
10 Intimate partnership violence rate: Number of women who were victim of physical or sexual violence by the partner /women who have or had a partner * 100

Subjective wellbeing

1 Percentage of people aged 14 and over with a level of life satisfaction from 8 to 10: Persons aged 14 and over with a level of life satisfaction from 8 to 10 / Persons aged 14 and over * 100
2 Percentage of people aged 14 and over very satisfied of their leisure time: Persons aged 14 and over who are very satisfied with their leisure time / Persons aged 14 and over * 100
3 Percentage of people aged 14 and over which believe their personal situation will improve in the next 5 years: Persons aged 14 and over which believe their personal situation will improve in the next 5 years / Persons aged 14 and over* 100

Landscape and cultural heritage

1 Endowment of cultural heritage items: The number of archaeological sites, monuments and museums surveyed by the "Risk Map of Cultural Heritage" (an information system held by the Italian Ministry of Culture), per sq.km
2 Current expenditure of Municipalities for the management of cultural heritage (museums, libraries and art galleries) , per capita
3 Illegal building rate: Ratio of the number of unauthorised buildings to the number of building permits issued by the Municipalities
4 Urbanisation rate of areas subject to building restrictions by virtue of the Italian laws on landscape protection: Number of buildings realised after 1981 in areas subject to building restrictions by the "Galasso Law" (no. 431/1985, as integrated by the Cultural Heritage and Landscape Code – Legislative Decrees no. 42/2004, no. 157/2006 and no. 63/2008), per sq.km
4 Erosion of farmland from urban sprawl: Percentage ratio of rural areas affected by urban sprawl to the total of rural areas ("rural areas affected by urban sprawl": rural areas with increasing population and decreasing agricultural land)
5 Erosion of farmland from abandonment: Percentage ratio of abandoned rural areas to the total of rural areas ("abandoned rural areas": rural areas with decreasing population and decreasing agricultural land)
6 Presence of historic rural landscapes: Percentage ratio of areas classified as such by the National Inventory of Historic Rural Landscapes to the total area of the Region
7 Quality assessment of Regional programmes for rural development (PSRs), with regard to the landscape protection: Score assigned to the PSRs based on the adoption of measures of a potentially positive impact on the rural landscape, among those envisaged by the National Strategic Plan for Rural Development 2007-2013.
8 Presence of Historic Parks/Gardens and other Urban Parks recognised of significant public interest: Percentage ratio of the area of parks and gardens classified as "historic" and/or "of a significant public interest" by the Legislative Decree no. 42/2004 to the total area of the provincial capital Municipalities
9 Conservation of historic urban fabric: Share of inhabited buildings realised before 1919 and in excellent or good state on the total number of building realised before 1919
10 People that are not satisfied with the quality of landscape of the place where they live: Proportion of regional population reporting that the landscape of the place where they live is affected by evident deterioration
11 Concern about landscape deterioration: Proportion of population reporting, among the environmental problems for which they express more concern, the decay of landscape due to overbuilding

Research and innovation

1 Research intensity: Percentage of R&D expenditure on GDP
2 Patent propensity: Patent applications to the EPO per million of inhabitants (complementary, per million of euros of GDP).
3 Percentage of knowledge workers on total employment: Percentage of employees with tertiary education (ISCED 5-6) in S&T occupations (ISCO 2-3) on total employees.
4 Innovation rate of the national productive system: Percentage of enterprises with (process, product, organizational or marketing) innovation on total enterprises with 10 or more employees.
5 Percentage of product innovators: Percentage of enterprises with product innovation on total enterprises with 10 or more employees.
6 Productive specialization in high-tech and knowledge intensive sectors: Percentage of employees in high-tech and knowledge intensive services on total employees.
7 Internet use: Percentage of individuals aged 16-74 who used Internet at least once a week in the last 12 months.

Quality of services

1 Index of accessibility to hospitals with emergency room: Percentage of population living more than X minutes from an hospital with emergency room (threshold to be defined).
2 Beds in residential health care facilities: Beds in residential health care facilities per 1,000 inhabitants
3 Waiting lists: Individuals who renounced to see a specialist or to undertake a therapeutic treatment (non dental) because of the length of the waiting list.

4 Percentage of population served by natural gas: Percentage of individuals living in municipalities supplied with methane gas.
5 Separate collection of municipal waste: Percentage of municipal waste object of separate collection on total municipal waste.
6 Composite index of service accessibility: Percentage of individuals who find very difficult to reach some basic services (pharmacies, emergency, post office, police, carabinieri, municipal offices, crèches, nursery, primary and secondary school, markets and supermarkets).
7 Density of urban public transport networks: Km of urban public transport networks in provincial capitals per 100 Km2 of municipal surface.
8 Index of accessibility to transport networks: Percentage of population living more than X minutes away from a major train station (threshold to be defined).
9 Citizens who benefit from infancy services: Percentage of children aged 0-2 who benefited from infancy services (crèches, micro-crèches or supplementary and innovative services).
10 Elders who benefit from home assistance: Percentage of elders aged 65 and over who benefited from integrated home assistance services (ADI).
11 Prison density per 100 places: Percentage of prisoners in penal institutions on the 11 total capacity of penal institutions.
12 Irregularity in water supply: Percentage of families reporting irregularities in water supply.
13 Landfill of waste: Percentage of municipal waste going to landfill on total municipal waste collected.
14 Irregularity in electric power distribution: Frequency of accidental long lasting electric power cuts (cuts without notice longer than 3 minutes) (average number per consumer).
15 Time devoted to mobility: Minutes devoted to mobility on an average weekday.

Policy and institutions

1 Voter turnout: Percentage of eligible voter who cast a ballot in the last election for the European Parliament.
2 Civic and political participation: Based on the aggregation of the following indicators: Share of people aged 14 and over who talks about politics at least once a week; Share of people aged 14 and over who seek information about Italian politics at least once a week; Share of people aged 14 and over who in the past three months have taken part to online consultations or polls on civic/political issues (e.g. urban planning, signing a petition); Share of people aged 14 and over who in the past three months have read and posted on the web opinions on social/political issues.
3 Trust in the parliament: Percentage of people aged 14 and over who declared to trust the Italian Parliament.
4 Trust in judicial system: Percentage of people aged 14 and over who declared to trust the judicial system.
5 Trust in political parties: Percentage of people aged 14 and over who declared to trust political parties.
Trust in local institutions: Composite indicator based on the aggregation of the percentage of people aged 14 and over who declared to trust regional government, provincial government and municipal government.
6 Trust in other institutions: Composite indicator based on the aggregation of the percentage of people aged 14 and over who declared to trust the police and the fire brigade.

7 Women and political representation in Parliament: Share of women elected in Parliament.
8 Women and political representation at regional level: Share of women elected in regional councils.
9 Women in decision-making bodies: Share of women in position of high responsibility within the following bodies: Constitutional court, Magistrates' Governing Council, Regulatory authorities (competition, communication, privacy, securities market), Embassies.
10 Women in the boards of companies listed in stock exchange: Share of women in the boards of companies listed in stock exchange.
11 Median age of members of Parliament: Median age of members of Parliament
12 Length of civil proceedings of ordinary cognisance of first and second degree: Average time elapsed between entry and closing of proceedings.

Appendix B – What our well-being depends on? (Not for publication)

We aim to contribute with this questionnaire to the definition of what really matters in our life to improve our well-being. We, then, kindly ask you to answer to a few easy questions about the research issue stated before.

The collected data will be managed in compliance with the laws ruling the personal data protection (d. lgs. 196/2003 - Code of ethics and conduct for the processing of personal data) and they will be used only for statistical and research purposes.

The questionnaire is divided into two sections: section 1 is about personal data while section 2 is about well-being. Let's start asking you some pieces of information about you.

Section 1: personal data

1. Gender: M F

2. Age: Year of birth: |__||__||__||__|

3. Citizenship

Italian	☐	1
Not Italian	☐	2 Country _____

(if 2 in the previous question)
How many years have you spent in Italy up to now?

Less than 1	☐	1
From 1 to 3 years	☐	2
From 3 to 5 years	☐	3
More than 5 years	☐	4

4. Residence

City of residence _____ ZIP code |__||__||__||__||__| Province |__||__|

5. Education

No titles	☐	1
Primary school	☐	2
Middle school	☐	3
Technical vocational high schools (3 years)	☐	4
Upper secondary high school	☐	5
Bachelor degree	☐	6
Master of arts	☐	7
Master	☐	8
PhD	☐	9

6. Civil status

Married/cohabitant	☐	1
Single	☐	2
Separate	☐	3
Divorced	☐	4
Widowed	☐	5

7. Job status

Open-ended contract	☐	1
Fixed term contract	☐	2
Seasonal contract	☐	3
Independent contractor/freelancer	☐	4
Not working/unemployed/looking for a job	☐	5
Redundancy fund benefits	☐	6
Redundancy worker	☐	7
Housewife	☐	8
Student	☐	9
Retired	☐	10

8. Working sector

Manufacturing	☐	1
Agriculture	☐	2
Tertiary	☐	3
Personal services	☐	4

9. Family status

Living alone	☐	1
Living with my original family	☐	2
Living with my partner without children	☐	3
Living with my partner with children	☐	4
I am the only parent of child/children	☐	5

10. Income class

Less than € 15.000 per year	☐	1
Between € 15.000 and € 30.000 per year	☐	2
Between € 30.000 and € 50.000 per year	☐	3
Between € 50.000 and € 100.000 per year	☐	4
More than € 100.000 per year	☐	5

11. Political positioning

How would you locate yourself in terms of political position between left and right wing on the following scale?

left wing right wing

10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10

12. How did you hear about this research?

Newspapers/magazines	☐	1
Online newspapers	☐	2
Social networks/blogs	☐	3
Institutions/public entities	☐	4
Acquaintances/friends	☐	5
Social network/third sector/Associationism and cooperation	☐	6
Third sector manager training program	☐	7
Other (please specify) _____	☐	8

Section 2: Well-being

13. Thinking about your overall current conditions how much do you feel happy?

Completely unhappy — Completely happy

1 2 3 4 5 6 7 8 9 10

14. In particular, all in all, how much do you feel satisfied with regard to your:

	Completely unsatisfied									Completely satisfied
Economic condition	1	2	3	4	5	6	7	8	9	10
Health	1	2	3	4	5	6	7	8	9	10
Family members relationship	1	2	3	4	5	6	7	8	9	10
Friends relationships	1	2	3	4	5	6	7	8	9	10
Spare time	1	2	3	4	5	6	7	8	9	10
Overall life	1	2	3	4	5	6	7	8	9	10

15. Wellbeing dimensions

Below we offer 11 "dimensions of well-being," i. e. aspects of our everyday lives that have a positive or negative impact on the quality of life.

Imagine you have the responsibility of government and you have an amount equal to 100 units (eg 100 million euro) to spend and you can decide how to distribute these resources among the various items making sure, however, the total sum destined is equal to one hundred.

We realize that the "dimensions" of well-being reported are all very important, but we ask you to think carefully, to put the dimensions in relation to each other and to think about the relative importance of each of them from your point of view in order to use these resources in best way according to your point of view.

1. Health
2. Education and training
3. Work and life balance
4. Economic well-being
5. Social relations
6. Politics and institutions
7. Safety
8. Landscape and cultural heritage
9. Environment
10. Research and innovation
11. Quality of service

16. The aspects of well-being

Below we offer a range of indicators affecting the well-being of each dimension given above. On which one among these aspects within each of the 11 categories you believe that the government has to spend more energy and resources in order to determine their improvement?

Choose the five most important items in order of priority

A. Health

On which of these aspects within the category HEALTH do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[1]

1. Increasing life expectancy at birth.
2. Increasing healthy life expectancy at birth.
3. Improving individual physical state.
4. Improving individual psychological state.
5. Reducing infant mortality rate.
6. Reducing mortality rate for traffic accidents (initial cause).
7. Reducing cancer mortality rate (19-64 years old).
8. Reducing mortality rate for dementia and related illnesses (people aged 65 and over).
9. Increasing life expectancy without activity limitations at 65 years of age.
10. Reducing overweight or percentage of people aged 18 years and over who are overweight or obese.
11. Reducing the percentage of people aged 14 years and over declaring to smoke.
12. Reducing the percentage of people aged 14 years and over with at least one risk behavior in alcohol consumption.
13. Reducing the percentage of people aged 14 years and over who do not practice any physical activity.
14. Increasing the percentage of people aged 3 years and over who consume at least 4 portions of fruit and vegetables a day.

B. Education and training

On which of these aspects within the category EDUCATION AND TRAINING do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[2]

1. Increasing participation in early childhood education.
2. Increasing the number of people with at least upper secondary education.
3. Increasing the number of people with tertiary education.
4. Reducing the number of early leavers from education and training.

[1] For further details on each indicator see Appendix A.

[2] For further details on each indicator see Appendix A.

5. Reducing the number of young not in education, employment, or training (NEET).
6. Increasing participation in long-life learning.
7. Increasing the level of literacy.
8. Increasing the level of numeracy.
9. Increasing the number of people with high level of ICT competencies

C. Work and life balance

On which of these aspects within the category WORK AND LIFE BALANCE do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[3]

1. Increasing employment rate.
2. Decreasing the Non-participation rate.
3. Increasing the transition rate.
4. Decreasing the share of employed persons with temporary jobs for at least 5 years.
5. Decreasing share of employees with below 2/3 of median hourly earnings.
6. Decreasing the share of over-qualified employed persons.
7. Reducing the incidence rate of fatal occupational injuries or injuries leading to permanent disability.
8. Decreasing the share of employed persons not in regular occupation.
9. Increasing the ratio of employment rate for women 25-49 years with children under compulsory school age to the employment rate of women 25-49 years without children Easing work-life balance for women with young children.
10. Decreasing the share of population aged 15-64 years that work over 60 hours per week.
11. Decrease the share of household work time carried out by women in a couple on the total of the household work time.

D. Economic well-being

On which of these aspects within the category ECONOMIC WELL-BEING do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[4]

1. Increasing per capita adjusted disposable income
2. Increasing disposable income inequality
3. Reducing the number of people at risk of relative poverty
4. Increasing per capita net wealth
5. Reducing the number of people living in financially vulnerable households
6. Reducing the number of people living in absolute poverty
7. Reducing the number of severely materially deprived people
8. Reducing the number of people suffering poor housing conditions
9. Reducing subjective evaluation of economic distress
10. Reducing the number of people living in jobless households

E. Social Relations

On which of these aspects within the category SOCIAL RELATIONS do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[5]

1. Increasing satisfaction with family relationship.
2. Satisfaction with friendship relationship.
3. Percentage of people of 14 years and over which have relatives, friends or neighbors on which they can count.
4. Percentage of children aged 3 to 10 years who play with their parents.
5. Provided aids: share of population aged 14 and over who in past 12 months have given unpaid aid to non-cohabiting relatives and non-relatives.
6. Synthetic indicator of social participation: Based on the aggregation of the following indicators: People aged 14 and over who during the past 12 months have participated in meetings of associations (cultural/recreational, ecological, civil rights, for peace); People aged 14 and over who in the past 12 months have participated in meetings of trade unions and of professional associations; People aged 14 and over who during the past 12 months have attended meetings of political parties and/or have worked free for a party; People aged 14 and over who pay monthly or periodical dues for a club/sports club; People aged 14 and over who during the past 12

[3] For further details on each indicator see Appendix A.
[4] For further details on each indicator see Appendix A.
[5] For further details on each indicator see Appendix A.

months have participated in meetings or activities (cultural, sporting, recreational, spiritual), organized or promoted from parishes, religious or spiritual organizations/groups.
7. Volunteer work: Percentage of population aged 14 and over who in the past 12 months performed non- paid volunteer work for associations or volunteer groups.
8. Association funding: Share of population aged 14 and over who in the past 12 months have funded associations.
9. Non-profit organizations per 10,000 inhabitants.
10. Social cooperatives per 10,000 inhabitants.
11. Generalized trust: Share of population (aged 14 and over) who believes that most 2 of the people are trustworthy.

F. Politics and Institutions

On which of these aspects within the category POLITICS AND INSTITUTIONS do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[6]

1. Increasing electoral participation.
2. Increasing civic and political participation.
3. Increasing confidence in the Italian Parliament.
4. Increasing confidence in the judicial system.
5. Increasing trust in political parties.
6. Increasing trust in local institutions.
7. Increasing trust in other types of institutions.
8. Increasing the percentage of women and political representation in Parliament.
9. Increasing the percentage of women and political representation at the local level.
10. Increasing the percentage of women in decision-making bodies.
11. Increasing the percentage of women on boards of directors of companies listed in the Italian stock exchange.
12. Reducing the average age of the Italian Parliament.
13. Reducing the length of civil proceedings.

G. Safety

On which of these aspects within the category SAFETY do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[7]

1. Reducing homicide rate.
2. Reducing burglary rate.
3. Reducing pick-pocketing rate.
4. Reducing robbery rate.
5. Reducing physical violence rate.
6. Reducing sexual violence rate.
7. Reducing intimate partnership violence rate.
8. Reducing worries of being victim of a sexual offence.
9. Reducing Fear of crime rate.
10. Reducing concrete fear rate.
11. Reducing social decay (or incivilities) rate.

H. Landscape and cultural heritage

On which of these aspects within the category LANDSCAPE AND CULTURAL HERITAGE do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[8]

1. Increasing the endowment of cultural heritage items.
2. Increasing current expenditure of Municipalities for the management of cultural heritage (museums, libraries and art galleries), per capita.
3. Reducing Illegal building rate.
4. Reducing urbanization rate of areas subject to building restrictions by virtue of the Italian laws on landscape protection.
5. Reducing the erosion of farmland from urban sprawl.
6. Reducing the erosion of farmland from abandonment.

[6] For further details on each indicator see Appendix A.
[7] For further details on each indicator see Appendix A.
[8] For further details on each indicator see Appendix A.

7. Increasing the presence of historic rural landscapes.
8. Enhancing quality assessment of Regional programmers for rural development (PSRs), with regard to the landscape protection.
9. Increasing the presence of Historic Parks/Gardens and other Urban Parks recognized of significant public interest
10. Promoting conservation of historic urban fabric.
11. Reducing the number of people that are not satisfied with the quality of landscape of the place where they live.
12. Reducing concern about landscape deterioration.

I. Environment

On which of these aspects within the category ENVIRONMENT do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[9]

1. Increasing access to drinkable water.
2. Increasing quality of marine coastal waters.
3. Increasing quality of urban air.
4. Increasing urban green.
5. Reducing areas with hydrogeological risks.
6. Reducing contaminated sites.
7. Increasing surfaces of terrestrial parks.
8. Increasing surfaces of marine protected areas.
9. Increasing surfaces of areas of special naturalistic interest.
10. Reducing concern for biodiversity loss.
11. Reducing material flows (*Quantity of materials, transformed in emissions, waste or new stocks, limited to internal material consumption).*
12. Increasing use of energy from renewable sources.
13. Reducing emissions of CO2 and other greenhouse gasses.

J. Research and development

On which of these aspects within the category RESEARCH AND DEVELOPMENT do you believe that the government has to spend more energy and resources in order to determine an improvement of well-being?[10]

1. Intensity of research.
2. Propensity: to patent.
3. Impact of knowledge workers on employment.
4. Innovation rate of the productive system.
5. Innovation rate of product/service of the national productive system.
6. Productive specialization in knowledge-intensive sectors.
7. Intensity of Internet use.

[9] For further details on each indicator see Appendix A.
[10] For further details on each indicator see Appendix A.