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December 2017

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[this version December 2017]

Abstract

We empirically characterise Millennials' policy preferences with respect welfare provision across nine EU member states. Our main findings indicate two different tendencies driving a split in young people's policy preferences over different policy objectives. The first tendency depends on the local economic context, calling for more redistributive policies and a more supportive role of the state when job opportunities are limited. The second tendency, which is unrelated to economic factors, drives Millennials' positive attitudes towards the future and calls for policies that relate more to the idea of better risk-sharing and equal opportunities within the society.

JEL: D60, D70, H41, H50, I30

Keywords: Millennials; redistribution; risk-sharing; welfare policies.

Acknowledgement: We would like to thank Ernst Stetter, Ania Skrzypek, Leandro Elia, Nicoleta Ciurila, Lisa Kastner, Vassilis Ntousas, Rosanna Bennett, and Anna Kiel for comments and support. The usual disclaimer applies, and all remaining errors are solely those of the authors.

1. Introduction

Popular media usually identifies those born between 1980 and 2000 simply as Millennials – a generation many consider as the most tech-savvy generation today. Millennials can connect to an online community worldwide and access a wide range of information with a simple click or swipe on a screen. They care a lot about social media, and are open to new ways of civic participation and engagement (Schlozman et al., 2010; Oser et al., 2013; Sloam, 2016). However, many Millennials are disengaged from policy and polical debates (Bruter and Harrison, 2009; Cammaerts et al., 2014) due to an inadequate political offer that fails to address their concerns. In this paper we try to close this gap by offering insights into what shapes their policy preferences. Our study is relevant as their generation is posed to become the most important one in the coming decades.

In fact, Millennials are already changing the economy and society, forcing contemporary politics to engage them in different ways and, in this respect, altering the design of socioeconomic policies proposed. With hard budget constraints on most public resources, policy tradeoffs arise naturally.[1] Would Millennials want their governments to invest more in education and healthcare, or to provide income support for the unemployed, especially where and when job prospects are scarce? In broader terms: Are Millennials leaning more towards policies that allow for better risk-sharing within the society, or are they asking for more redistribution and government support? The paper represents an extensive empirical exercise where we try to offer some possible answers to these legitimate questions.

The economic context in many parts of Europe today is not favorable for young people. Despite their excellent skills, Millennials made their debut in the labour market at the

[1] One of the root problems is that the costs of public services have been rising much faster compared to other goods and services, exposing thus an affordability problem over the long-term, i.e. the Baumol cost disease; see Hartwig (2011) for health-care costs, Baumol (2012), Wolff et al. (2014), Dragomirescu-Gaina (2015) for education costs.

worst possible time; most young people today still need to deal with the legacies of the economic crisis, complicating their transition into the labour market. The situation is worse for those living in countries, like the Europe's periphery, where the protracted negative socioeconomic context might expose them to all sort of radical political messages. The obvious risks are that such influences affect their long-term expectations with respect to policy effectiveness, leading to even more political disengagement and worsening available policy tradeoffs.

Our first main contribution is to expose the link between the economic context and Millennials' policy preferences with respect to welfare. To reflect the economic context we use unemployment (and other close proxies such as employment and NEETs rates – where the latter is the share of people under 25 years old *not in employment, education or training* – a highly relevant policy indicator). We base our insights on a unique dataset collected under the *Millennial Dialogue project*, which was run by the Foundation for European Progressive Studies (FEPS) in collaboration with various national partners. In particular, we have data available from nine European Union (EU) countries, namely Germany, Italy, Poland, Austria, Ireland, Hungary, Belgium, France and the U.K. Such a rich data source provides detailed information on Millennials' preferences, attitudes and opinions on a wide range of topics ranging from economic and social developments, to politics and technology.

Millennials' attitude towards technology is an important element to consider when discussing whether they prefer a bigger role for the government or not. In expectations, technology is increasingly seen by as a means to climb the social ladder (Sjøberg and Schreiner, 2010). While some believe in individual effort and learning, which complement (rather than substitute) technology, others believe that luck and familly ties play the biggest role in having a successful life and career. In the economics literature, higher expectations

with respect to social mobility lead to lower support for redistribution, and vice-versa (Alesina and La Ferrara, 2005; Bossi and Gumus, 2013). But social mobility strongly depends on risk-sharing policies that equalize opportunities across different socio-economic groups. Would Millennials prefer more redistribution or rather more risk-sharing? Redistributive policies normally employ instruments like social transfers and benefits (though here we extend coverage to include policies targeting poverty and income support, housing and job creation). Instead, policies like health insurance would enable better risk-sharing and more equal opportunities within the society to create a safety net for all citizens (we also include policies on education, technology and business support, which tend to increase youth employment opportunities across the board, with no regard to socioeconomic status). Our second main contribution is to separate between these two specific policy domains and identify some factors driving Millnnials policy preferences for each of them.

According to our main findings, there is a clear negative link between Millennials' policy preferences for redistribution and (regional) unemployment. This is in line with a plenty of recent empirical evidence showing that unfavorable economic circumstances shift preferences towards more redistributive policies (Alesina and La Ferrara, 2005; Brunner et al., 2011; Giuliano and Spilimbergo, 2014; De Haas et al. 2016). However, when it comes to policies promoting risk-sharing and equal opportunities within the society, we are not able to find a similar link regardeless of the proxy used to characterise (local) economic context. Moreover, we find that young people's attitudes towards future are more strongly correlated with their preferences for risk-sharing rather than redistribution, thus reinforcing the split between these two policy cathegories.

Analysing the link between policy preferences and the existing economic context is not always straightforward, however. On the one hand, individuals continuously evaluate

their chances for upward social mobility, while taking as given the economic context and the government policies in place. On the other hand, policy-makers take actions based not only on the socioeconomic context, but also on voters' preferences, therefore making policy choices essentially endogenous (Alesina et al., 1997; Drazen, 2000; Persson and Tabellini, 2002). Obviously, the determinantion of preferences is simultaneous to the existing economic context, raising challenges to identifying potential causality links and providing relevant insights to policy-makers.

To address the challenges dicussed above, we propose an instrumental variable (IV) approach, with a particular selection of the instrument. We provide strong evidence for our choices and believe that our approach overcomes the potential simultaneity (i.e. endogeneity) problem that arises between how authorities react to (local) economic conditions, and what people demand in terms of policy interventions. We use indicators on Internet access and broadband availability[2] to instrument for local unemployment – which is our main explanatory variable. Our instruments reflect the availability and quality of the regional digital infrastructure, which affect economic competitiveness and employment opportunities (Bai, 2017). However, all young people share a positive attitude towards technology, regardless of their socioeconomic background, existing economic context or digital infrastructure availability.

The paper is organised as follows. Section 2 describes the Millennial Dialogue project, section 3 includes an extensive empirical analysis, together with a discussion of the main results, and finnaly section 4 concludes.

[2] Despite important recent improvements, the latest available data suggest that the frequency of Internet access on a daily basis remains below 70% on average across EU; broadband coverage also remains low at 80%, despite constant technological upgrades.

2. Millennial Dialogue Survey

The Millennial Dialogue Project was launched in December 2014 as a transatlantic initiative between FEPS, a European think-tank, and the Center for American Progress (CAP).[3] It was intended to better understand the values, aspirations and preferences of the Millennial generation, and more importantly, what shapes them and how these preferences affect Millennials' interaction with politics, policy-makers and government policies.

The initial efforts focused on designing a survey questionnaire alongside with the appropriate data collection methods. The Millennial Dialogue Project, intended mainly as a survey on the political attitudes of Millennials, was framed as a general exploration of their interest and worldview so as not to skew the results. As of today, the Millennial Dialogue survey has been conducted in more than 23 countries on 5 continents.

The survey was conducted online with the assistance of AudienceNet, a London-based research agency that sent out the questionnaire in two phases. At first, in each of the countries, AudienceNet administered the questionnaire to a nationally representative sample of around 1000 Millennials. Quotas based on census data for each country and region were set to ensure that respondents were demographically and statistically representative of all 15-35 year olds in terms of age, geographical spread, household income and educational attainment levels. In addition to this, in order to maximise data quality and the Millennials' engagement, the survey was administered online via a multi-media platform.

In the second phase, in each of the countries surveyed, an online community was created to get deeper insights into the respondents. Each online community held several online discussions via a combination of connected devices such as smart phones, tables,

[3] See more information about the project and some preliminary statistics at https://www.millennialdialogue.com.

laptops, PCs, etc. These discussions provided more insights and served to formulate concrete policy recommendations when preliminary results were discussed in various policy arenas.

This paper and its empirical analysis rely on data collected in the first phase of the survey, employing quantitative and statistical methods to derive the main findings.

3. Empirical Analysis, Results and Discussion

3.1 The Dataset

At the individual level, the following information is available from the Millennials Dialogue surveys: age, gender, education attainment, family composition, EU region of residence (available at NUTS2 or NUTS 3 dissaggregation levels, according to European classification standards), household income levels (four clusters identified based on the national income distribution), voting behaviour (in past recent or forthcoming elections), expectations with respect to economic, social and political developments etc.

We set up our dataset in three steps. In a first step, we retain all relevant variables pertaining to personal characteristics such as age, gender, family composition, household income and residence. Our main interest refers to questions detailing respondents' preferences for public services that fall under government responsibility and are a characteristic of a typical European welfare state. More exactly, respondents were asked to rank, on a scale from 1-low to 5-high, how high a priority they would place on the following items: *education, healthcare, business* support*,* science & *technology, income* support*, job* creation*, poverty* alleviation and *housing* provision (variables are denoted as *priority_** in Table 1). In addition, we include their *attitude towards the future* (i.e. whether they are optimists and positive about their future) to capture the expectation component. For young individuals, impatience (a standard measure of time discounting preferences) is strongly and

negatively correlated with lifelong earnings and other measures of human capital (Cadena and Keys, 2015; Golsteyn et al., 2015).

In a second step, we include regional macroeconomic indicators describing the general economic context, specifically labour market outcomes. Central to many studies on welfare is the assumption that individuals' preferences regarding redistribution derive from the economic utility they expect to obtain from such policies (Jacoby, 1994). From an economic standpoint, Millennials are mostly concerned with their economic wellbeing, and from this perspective, they care most about available labour market opportunities. Several studies show that employment opportunities are essential for young people's decision-making when it comes to education (Grubb and Lazerson, 1982; Petrongolo and Segundo, 2002; Dragomirescu-Gaina and Weber, 2013), fertility and family choices (Galor and Weil, 1993; Jensen, 2012). Most Millennials are in their early career stages, though some might be in schools, while few others might be well-established professionals; accordingly, there should be little doubt that unemployment proxies are the most noticeable and pertinent indicators to consider when characterising Millennials' policy preferences for intervention.

Similar recent studies explain individual political choices and voting behaviour using regional economic proxies. Colantone and Stanig (2016) focus on globalization and trade shocks, while Autor et al. (2016) concentrate on shifts in the regional employment structure as the main driver of electoral outcomes. A thourough review of the earlier literature on how economic conditions affect electoral outcomes is provided in Anderson (2007).

Following the discussion above, we decided to use unemployment rates (in %), for the adult population, age 15 and over. Alternatively, employment and NEET rates were employed, with similar results, not reported here to save space. For comparability purposes, we also

included 4-year average growth rates in regional GDP per capita – the broadest macroeconomic indicator available.

We need to specify that, since the nine surveys were not collected at exactly the same time, there is a need for adjustment in the timming of the macroeconomic indicators. Since regional data are available at an annual frequency, we have interpolated annual figures in order to roughly obtain a measure that refers to the previous 12 months in relation to when the survey was conducted. For example, for a survey conducted in June 2015, we would use both values for 2014 and 2015 and assign a 0.5 weight to each one of them.

As a third and final step, we add regional indicators that pertain to households' frequency of Internet access (weekly or daily), and availability of broadband coverage.[4] These indicators are important for our econometric analysis because they represent the instruments used in the IV approach. A data summary is provided in Table 1.

[Table 1 here]

3.2. Baseline Estimates : OLS Results

We prefer OLS estimates to more complex nonlinear estimation methods (e.g. multinomial models like probit or logit), because we are only interested in the statistical significance of the estimated coefficients rather than in quantifying the exact impact of independent variables on the dependent one (i.e. the marginal effects). In fact, the recent literature remains divided on the potential benefits of estimating more complex nonlinear

[4] Data used in the second and third steps come from Eurostat, and was downloaded during August - November 2016.

specifications against OLS, despite its potential lack of unbiasness (Horrace and Oaxaca, 2006; Angrist and Pischke, 2008).

The dependent variable of our model reflects the score assigned by each respondent to the folowing question: *Imagine you were in government. How much priority would you place on each of the following areas? Select from: education, healthcare, business support, science & technology, income support, job creation, poverty alleviation and housing provision.*

As independent variables, we use some standard controls pertaining to individual characteristics: age (including age squared), gender, family composition (number of siblings, number of living parents, and if they have children). The main explanatory variable in the model is the economic context proxied by unemployment (or its proxies described in section 3.1). Information on the residence of respondents is used to match answers with the regional macroeconomic data[5] (at either NUTS1 or NUTS2 dissaggregation level, depending on data availability – see Appendix).

Table 2 summarises the baseline OLS estimates, where each stated policy preference is estimated separately on the same set of regressors. Standard errors are clustered at NUTS regional level, as we have multiple respondents within each area, allowing correlation across errors for respondents within a given region. All estimates were performed in STATA 14.

[Table 2 here]

[5] We include country dummies to control for common effects arising due to same institutional arrangements in all regions belonging to a single country.

In general, we find that unemployment coefficients are statistically significant[6] only in models explaining preferences for policies related to *income support, job creation, housing provision* and *poverty alleviation* (last four columns in Table 2). This first group of policy preferences belongs to what we can call the *redistributive policies* category. Although we cannot claim causality here, these results are in line with similar findings in other studies, where declines in economic opportunity can shift individuals' preferences towards more redistribution (see Alesina and La Ferrara, 2005; Bruner et al. 2011; Giuliano and Spilimbergo, 2014; De Haas et al. 2016).

However, Table 3 also shows that there is no statistical significant link between unemployment and policy preferences related to *education, healthcare, business support,* and *technology.* Such preferences would call for policies belonging to the risk-sharing or social reinsurance category – policies seen as benefiting all groups in a society, regardless of their socioeconomic background. This is a robust finding, not affected by our choice of instrument or labour market proxy.

Age (age squared) is always negatively (positively) associated with preferences for policy intervention (the coefficients are statistically significant in six cases out of eight). It suggests that *older* Millennials (who probably have already left school) are more likely to realise that governments' abilities are rather limited, and so expect less support and state intervention. The statistical relevance of age (age squared) as an explanatory factor should remove all age-related heterogeneity, providing us some confort in treating Millennials as a homogenous group, at least in this particular empirical settings. As expected, family composition is another important factor; having (or living with) both parents is negatively

[6] The unemployment coefficient in the model explaining policy preferences in support for *job creation* is only marginally significant, which might be concerning since we would have expected a stronger link with unemployment; this highlights the weakness of the OLS estimates and would be dealt with in the next section.

asociated with Millennials' preferences for redistributive policies, but positively associated with risk-sharing policies. It highlights therefore a sort of *imperfect* substitution between state- and family-support (community- or religious-based support is not accounted for here, though it might be important in some regions and countries).

3.3 Alternative Estimates: Two-Stage Regression Analysis

As stated in the introduction, one of the challenges posed by our empirical exercise is the potential endogeneity that could arises between Millennials' preferences and the labour market opportunities available to them. This could bias the results and might lead to wrong policy implications. On the one hand, higher regional unemployment will obviously affect Millennials' preferences, since they are in their early career stage when any unfavourable economic circumstance would have long-term consequences on their life-time earnings. On the other hand, based on a standard political-economy argument, one can argue that economic outcomes are affected by voters' policy preferences; to some extent, this causality works through the endogenous policy response of public authorities and politicians to voters' requests for intervention. There is a long and very rich literature on electoral and economic cycles exposing the double causality links betwen voters' policy preferences and economic factors (Persson and Tabellini, 2002; Colantone and Stanig, 2016; Autor et al. 2016; De Haas et al. 2016; and the literature reviews in Drazen 2000; Franzese, 2002; Anderson, 2007).

To solve this potential endogeneity problem, we rely on regional indicators on households' Internet access frequency and broadband availability as instruments in a two-stage regression (2SLS) analysis. The idea is that Millennials are the most tech-savvy generation today, a generation whose aspirations are not altered by the quality or frequency of access to digital infrastructure; this is especially true when the available measures are

averages collected at regional level. In fact, we see from our data that young people share a positive attitude towards technology, regardless of the socioeconomic background, economic context or digital infrastructure availability. As we will see in this section, Millennials requests for government intervention are shaped by factors that balance their high aspirations with the socioeconomic reality they are facing. Biagi and Loi (2013), for example, find no evidence supporting the hypothesis that the *use of ICT* reinforces or alleviates socio-economic differences in their empirical analysis of OECD's PISA survey datasets. OECD (2010) concludes that the digital divide in education goes beyond the issues of *access to technology*, highlighting instead the importance of factors linked to the economic, cultural and social capital of the student. Moreover, findings in surveys that place more emphasis on affective (rather than cognitive) dimensions of education (e.g. attitudes towards science and technology) bring even more support to our rationale for instrument choice; survey data from the ROSE project[7] at University of Oslo show that it is precisely students from poor countries that have the highest interest in technology (see Sjøberg and Schreiner, 2010).

As Figure 1 shows, computed averages at the regional level for Millennials' interests in new technologies (a qualitative question in the Millennial Dialogue survey with answers given on a 1 to 5 scale) display no significant[8] correlation with regional unemployment; while this could sound rather counterintuitive at first, it goes in line with our rationale above and strenghtens our instrument choice.[9] Same idea transpires when looking at what priority they assign to public investment in technology. To completly refute our rationale, one would have to demonstrate that young people living in poorer regions, with pervasive and high

[7] See the project page for information, data and findings at http://www.roseproject.no/index.html.
[8] In fact, it is slightly positive, with or without considering the outliers.
[9] The same rationale used to support our instrument choice holds even when disaggregating by age groups (e.g. below and above 25) or evaluating Millennials' interest and priority assigned to technology against other macroeconomic indicators. We find no significant correlation with regional unemployment either when we look at Millennials' interest for religion or politics.

unemployment, show less interest in technology or that they place less importance on investing in technology compared to their peers in more developed regions; obviously, this is not the case as our data together with a wealth of existing evidence suggest (see Schlozman et al., 2010; OECD, 2010; Sjøberg and Schreiner, 2010; Sloam, 2014; Biagi and Loi, 2013).

[Figure 1 here]

Figure 2 displays the negative correlation expected between regional unemployment and our chosen instruments capturing access to technology. The statistical relevance of this relation is reconfirmed by the high F-stat from the first-stage regression we report in all tables below.

[Figure 2 here]

Based on the first stage regressions, we find that broadband connection is a better instrument than the frequency of Internet access (most probably because it reflect the supply as the quality of the digital infrastructure available at regional level, rather than the demand side).[10] Besides satisfying the exclusion criterion, we believe our instruments pass the relevance criterion as well, so we are entitled to claim that causality runs from local economic context to policy preferences for redistribution. Of course, one can never be sure about the validity of most instruments, and some readers might think ours are weak for the problem at hand; with this potential caveat in mind, we proceed and discuss the results of our empirical

[10] The value of the F-stat in the first stage regression lies conveniently above 10 as suggested by Staiger and Stock (1997) in all the estimations using broadband as an instrument and in most regressions where we used frequency of Internet use. The F-stats are reported at the bottom line of each table.

analysis below and we will come back to this issue before concluding. Results obtained from a two-stage regression analysis are displayed in Table 3 below, with unemployment as a main explanatory variable (results using employment and NEET rates[11] are qualitatively very similar and are available upon request from the authors).

[Table 3 here]

There are two standard controls[12] not included in this model specification that might require a more detailed discussion: (i) *individual income* and (ii) *individual educational attainment*. On the one hand, *income* is only available in our dataset at household level (except for U.K. where it is not available at all). Therefore, it would not exactly capture *Millennials' individual income* because many of them still live with their parents[13]; moreover, household income is an error-ridden proxy because it excludes assets (e.g. housing, mortages) and wealth in general, which is a more important determinant of policy preferences. Nevertheless, we decided to include household income but only as a robustness check, keeping in mind the obvious caveats that: such indicator (as measured in the survey) is not a perfect proxy for individual income, and the need to drop U.K. from the sample because of data availability issues. On the other hand, *education attainment* is not included because many of the young Millennials (i.e. the majority of those under 25 and an important share of those above 25) are still enrolled in the education system; this means that *education* – as measured here in the survey – will not be capturing their innate ability (i.e. the most relevant

[11] Using GDP growth per capita provides less convincing results; the only significant estimates of the specification displayed in Table 3 are obtained in the case of preferences for policies targeting *income support* and *job creation*.
[12] We removed gender from the regression to check whether results are sensitive to our included controls for unobserved individual heterogeneity. Results were very similar to the ones reported and available upon request.
[13] According to Eurostat EU-SILC data for 2015, referring to 18-34 year olds, the share of young individuals living with their parents ranges from 67% in Italy to 34% in U.K.

factor to explain their potential income and, therefore, policy preferences). Table 4 below presents a specification including *household income*, not individual educational attainment. The results confirm our previous findings, this time with the additional evidence that income is positively affecting policies targeting *technology* and *business support,* but negatively affecting *income support* policies.

[Table 4 here]

As a second robustness check, we estimate the specification from Table 3 this time over the 16-25 year old cohort; we obtain similar results, though weaker coefficients for unemployment affecting preferences with respect to redistributive policies (e.g. *income*, *jobs, poverty* and *housing*). As a third robustness check, in order to account for the important (and possibly non-linear) impact of age on preferences, we add the cube of age as an additional control; the empirical results are very similar and reconfirm our previous findings, with the additional hindsight that higher powers of age bring no significant improvements in the explanatory power of the model.

As a forth robustness check, we include both instruments in the estimation, so that the model now becomes overidentifyied (rather than just-identified). We noticed earlier that broadband is a better instrument (due to higher F-stats) than the frequency of Internet access, so one would expect adding a weaker instrument to increase the bias found for the 2SLS estimates over the OLS ones (see discussion in Angriest and Pischke, 2009). We find instead that this bias increases only in the case of education and healthcare, while for the other policy domains, the differences in coefficients are almost neglijible.

3.4 Accounting for Millennialls' Expectations

To better understand the factors shaping the interaction between Millennials' policy preferences and their expectations, we add Millennials' *attitude towards the future* – a qualitative variable recorded on a scale from 1 to 5 (similar to variables capturing policy preferences). This time around, *attitude* is an exogenous factor that is orthogonal to their beliefs with respect to current (expected or desired) policy choices of their governments[14], i.e. the main source of endogeneity in the model. The most striking result this time is that Millennials' attitude is more relevant and more strongly related (i.e. through higher coefficients) to their policy preferences for risk-sharing rather than for redistribution. The statistical significance of the unemployment proxy remains unaltered.

[Table 5 here]

All results above reinforce the initial findings from sections 3.2. and 3.3. Moreover, we find a clear split between two different tendencies that explain Millennials' socioeconomic preferences. The first tendency is highly dependent on the economic context, calling for more redistributive policies when job opportunities are limited. The second, and rather opposite trend, is a much more fundamental one that drives Millennials' positive attitude towards the future and calls for policies that are more in tune with the idea of better risk-sharing within the society.

[14] This is an easy to defend assumption using a range of different arguments, e.g. young people are expected to outlive current governments; can freely move and work abroad in other, at least European, countries; young people feel disengaged from current policy and polical debates (Bruter and Harrison, 2009; Cammaerts et al., 2014) due to an inadequate political offer etc.

4. Concluding Remarks

This paper analyses the socioeconomic policy preferences of Millennials – those who are going to be the major driving social, economic and political force over the next decades. We present an insightful empirical analysis of nine surveys conducted under the Millennial Dialogue project in several EU member states from 2014 to 2016. These surveys provide a rich data source on Millennials preferences and opinions on a wide range of topics ranging from economic and social developments, to religion, politics and technology.

There is wide agreement in both academic and policy circles that there is a sort of urgency in addressing the high levels of youth unemployment existing in many European countries today. We find that (local) economic context is an important driver of Millennials' preferences, especially when it comes to policies concerning *income support, job creation, housing provision* and *poverty alleviation*. However, Millennials' optimistism and positive attitudes towards the future is a more important driver of their preferences for policies targeting *education, healthcare*, *science & technology* and *business support*. Such clear split in two broad categories highlights a possible division line between policies falling under the redistribution category and policies falling under the risk-sharing category. This shift towards redistributive policies due to unfavorable economic conditions is in line with similar findings in the recent academic literature (see Alesina and La Ferrara, 2005; Brunner et al., 2011; Giuliano and Spilimbergo, 2014; De Haas et al. 2016).

During the past decade, many governments struggled to alleviate the symptoms rather than dealing with the root causes. Some redistributive policies aiming at income support, affordable housing and poverty would not neccessarily solve the problem as long as unemployment rates, especially for youth, remain high. The main warning here is that this

could create a vicious circle between what voters demand and what policy-makers deliver, worsening the available policy tradeoffs.

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Appendix

This Appendix provides the complete list of NUTS1 or NUTS2 regions used in the econometric analysis. Regions will less than 10 observations were excluded; number of observations is provided in paranthesis.

Belgium: BE10 - Région de Bruxelles-Capitale (194); BE21 - Prov. Antwerpen (155); BE22 - Prov. Limburg BE (71); BE23 - Prov. Oost-Vlaanderen (81); BE24 - Prov. Vlaams-Brabant (114); BE25 - Prov. West-Vlaanderen (87); BE31 - Prov. Brabant Wallon (103); BE32 - Prov. Hainaut (25); BE33 - Prov. Liège (43); BE34 - Prov. Luxembourg BE (24); BE35 - Prov. Namur (111).

Germany: DE1 - Baden-Württemberg (135); DE2 – Bayern (155); DE3 – Berlin (41); (DE4 – Brandenburg was excluded due to small sample size); DE5 – Bremen (35); DE6 – Hamburg (20); DE7 – Hessen (61); DE8 - Mecklenburg-Vorpommern (25); DE9 – Niedersachsen (119); DEA - Nordrhein-Westfalen (253); DEB - Rheinland-Pfalz (60); DEC – Saarland (16); DED – Sachsen (65); DEE - Sachsen-Anhalt (29); DEF - Schleswig-Holstein (38); DEG – Thüringen (37).

Ireland: IE01 - Border, Midland and Western (458); IE02 - Southern and Eastern (481).

France: FR1 - Île de France (190); FR3 - Nord - Pas-de-Calais (279); FR4 – Est (237); FR5 – Ouest (126); FR6 - Sud-Ouest (243).

Italy: ITC - Nord-Ovest (297); ITH - Nord-Est (191); ITI – Centro (195); ITF – Sud (265); ITG – Isole (138).

Hungary: HU10 - Közép-Magyarország (119); HU21 - Közép-Dunántúl (107); HU22 - Nyugat-Dunántúl (275); HU23 - Dél-Dunántúl (208); HU31 - Észak-Magyarország together with HU32-Észak-Alföld (148); HU33 - Dél-Alföld (170).

Austria: AT11 – Burgenland (30); AT12 – Niederösterreich (62); AT13 – Wien (223); AT21 – Kärnten (163); AT22 – Steiermark (62); AT31 – Oberösterreich (161); AT32 – Salzburg (66); AT33 – Tirol (38); AT34 – Vorarlberg (300).

Poland: PL1 - Region Centralny (227); PL2 - Region Poludniowy (237); PL3 - Region Wschodni (169); PL4 - Region Pólnocno-Zachodni (158); PL5 - Region Poludniowo-Zachodni (114); PL6 - Region Pólnocny (152).

United Kingdom: UKC - North East (57); UKD - North West (120); UKE - Yorkshire and The Humber (85); UKF - East Midlands (77); UKG - West Midlands (91); UKH - East of England (59); UKI – London (173); UKJ - South East (145); UKK - South West (78); UKL – Wales (58); UKM – Scotland (78).

Table 1: Summary statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
priority_education	9407	4.4183	0.8398	1	5
priority_healthcare	9407	4.4660	0.8071	1	5
priority_business	9407	3.8283	0.9477	1	5
priority_technology	9407	3.9018	0.9545	1	5
priority_income	9407	3.9575	0.9826	1	5
priority_jobs	9407	4.4170	0.8521	1	5
priority_poverty	9407	4.2013	0.9231	1	5
priority_housing	9407	4.0149	0,9378	1	5
age (rescaled, 0-20)	9407	11.5801	5.2703	1	21
gender (male=1)	9407	0.3973	0.4894	0	1
siblings (yes=1)	9407	0.8459	0.3611	0	1
Children (yes=1)	9407	0.2397	0.4269	0	1
both_parents (yes=1)	9407	0.8304	0.3753	0	1
attitude_future	9407	3.8741	0.8724	1	5
household_income	8386	1.3849	0.8309	0	3
unemployment	72	8.6611	3.9090	2.9	21.2
employment	72	64.6358	7.5523	41.4	77.7
NEET	72	12.5145	5.1955	3.9	32
GDP_growth (in PPS)	72	9.7542	5.5543	-0.68	21.50
Internet_weekly	72	76.0742	10.1491	50	94
Internet_daily	72	66.4695	9.8984	45	88
broadband	72	78.3833	6.9901	65	92

Source: Millennial Dialogue Survey; Eurostat; authors' calculations.

Table 2: OLS estimates

Dependant (columns), explanatory (rows) variables	**Priority assigned to:**							
	Education	**Healthcare**	**Business**	**Technology**	**Income**	**Jobs**	**Poverty**	**Housing**
unemployment	**0.0010**	**0.0025**	**0.0030**	**0.0024**	**0.0092*** **	**0.0084*** *	**0.0078*** **	**0.0111*** **
	(0.0039)	**(0.0024)**	**(0.0029)**	**(0.0027)**	**(0.0034)**	**(0.0051)**	**(0.0031)**	**(0.0032)**
gender	-0.1485***	-0.2009***	0.1258***	0.2266***	-0.2115***	-0.1543	-0.2346***	-0.1478***
	(0.0223)	(0.0193)	(0.0165)	(0.026)	(0.0236)	(0.0219)	(0.0198)	(0.0207)
age	-0.0312***	-0.0223***	-0.0039	-0.0191*	-0.0302***	-0.0175	-0.0352***	-0.023***
	(0.0058)	(0.0072)	(0.0098)	(0.0098)	(0.0073)	(0.0064)	(0.0091)	(0.0077)
age squared	0.1018***	0.0928***	0.01	0.0531	0.0857***	0.0823	0.1186***	0.0683**
	(0.0253)	(0.0301)	(0.0409)	(0.0379)	(0.032)	(0.0292)	(0.0394)	(0.034)
siblings	0.0538*	0.0237	0.0411	0.0074	0.0858***	0.0307	0.1372***	0.0801***
	(0.0271)	(0.0236	(0.0268)	(0.0284)	(0.0323)	(0.0245)	(0.03)	(0.0301)
children	-0.017	-0.0409	-0.04	-0.0633**	0.1214***	-0.0551	0.0268	0.0561**
	(0.0284)	(0.0272)	(0.0277)	(0.0311)	(0.0319)	(0.0306)	(0.027)	(0.0261)
both_parents	0.0452*	0.0094	0.0119	0.0569**	-0.1172***	0.0036	-0.082***	-0.0522*
	(0.0246)	(0.0234)	(0.025)	(0.0267)	(0.03)	(0.0236)	(0.0258)	(0.0266)
constant	4.7255***	4.6513***	3.7071***	3.9882***	4.4418***	4.4847***	4.4044***	3.971***
	(0.052)	(0.0547)	(0.0662)	(0.0764)	(0.0797)	(0.0622)	(0.0717)	(0.0679)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9407	9407	9407	9407	9407	9407	9407	9407
R-squared	0.0391	0.0486	0.0573	0.0609	0.0455	0.0605	0.0378	0.0487

Note: Robust standard errors are provided in parenthesis and adjusted for 72 regional clusters (see Appendix). By ***, ** and * we denote statistical significance at 1%, 5% and 10% levels.

Table 3: Instrumental variable estimation (two-stage least squares)

Dependant (columns), explanatory (rows) variables	**Priority assigned to:**							
	Education	**Healthcare**	**Business**	**Technology**	**Income**	**Jobs**	**Poverty**	**Housing**
unemployment	**0.0018**	**0.0044**	**0.0082**	**-0.0005**	**0.0140****	**0.0157****	**0.0125****	**0.0120****
	(0.0059)	**(0.0047)**	**(0.0055)**	**(0.0061)**	**(0.0065)**	**(0.0064)**	**(0.0055)**	**(0.0056)**
gender	-0.1484***	-0.2007***	0.1264***	0.2263***	-0.2110***	-0.1475***	-0.2341***	-0.1477***
	(0.0221)	(0.0191)	(0.0163)	(0.0257)	(0.0234)	(0.0211)	(0.0195)	(0.0206)
age	-0.0313***	-0.0224***	-0.0041	-0.0190*	-0.0305***	-0.0169***	-0.0354***	-0.0231***
	(0.0057)	(0.0071)	(0.0096)	(0.0098)	(0.0072)	(0.0062)	(0.0089)	(0.0076)
age squared	0.1019***	0.0932***	0.0111	0.0525	0.0867***	0.0791***	0.1196***	0.0684**
	(0.0250)	(0.0297)	(0.0404)	(0.0377)	(0.0314)	(0.0282)	(0.0388)	(0.0338)
siblings	0.0534**	0.0227	0.0384	0.0088	0.0833***	0.0232	0.1348***	0.0796***
	(0.0273)	(0.0240)	(0.0272)	(0.0286)	(0.0323)	(0.0251)	(0.0300)	(0.0302)
children	-0.0171	-0.0411	-0.0404	-0.0631**	0.1211***	-0.0571*	0.0264	0.0560**
	(0.0282)	(0.0270)	(0.0275)	(0.0309)	(0.0317)	(0.0293)	(0.0268)	(0.0258)
both_parents	0.0453*	0.0097	0.0126	0.0565**	-0.1165***	0.0109	-0.0814***	-0.0521**
	(0.0244)	(0.0233)	(0.0249)	(0.0266)	(0.0303)	(0.0245)	(0.0259)	(0.0265)
constant	4.7214***	4.6402***	3.6777***	4.0043***	4.4152***	4.4335***	4.3781***	3.9658***
	(0.0630)	(0.0606)	(0.0777)	(0.0798)	(0.0967)	(0.0853)	(0.0799)	(0.0692)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9407	9407	9407	9407	9407	9407	9407	9407
R-squared	0.0391	0.0486	0.0571	0.0608	0.0453	0.0569	0.0376	0.0487
First stage regression, F-stat	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)
	18.1331	18.1331	18.1331	18.1331	18.1331	18.1331	18.1331	18.1331
Instrument:	Broadband (percentage of households with Internet connection type broadband)							

Note: Robust standard errors are provided in parenthesis and adjusted for 72 regional clusters (see Appendix). By ***, ** and * we denote statistical significance at 1%, 5% and 10% levels. Using *Internet access - weekly (daily) frequency* as instrument provides similar results (available upon request from the authors); in this case the F-stat in the first-stage estimation becomes 10.1307 (7.7703).

Table 4: Instrumental variable estimation (two-stage least squares)

Dependant (columns), explanatory (rows) variables	**Priority assigned to:**							
	Education	**Healthcare**	**Business**	**Technology**	**Income**	**Jobs**	**Poverty**	**Housing**
unemployment	**-0.0005**	**0.0037**	**0.0080**	**0.0024**	**0.0148****	**0.0132****	**0.0107****	**0.0124****
	(0.0057)	**(0.0046)**	**(0.0053)**	**(0.0057)**	**(0.0064)**	**(0.0061)**	**(0.0054)**	**(0.0055)**
household_income	**0.0003**	**0.0014**	**0.0235****	**0.0290*****	**-0.0390*****	**0.0005**	**-0.0079**	**-0.0018**
	(0.0088)	**(0.0090)**	**(0.0117)**	**(0.0108)**	**(0.0146)**	**(0.0094)**	**(0.0118)**	**(0.0126)**
gender	-0.1445***	-0.2054***	0.1186***	0.2081***	-0.2168***	-0.1675***	-0.2433***	-0.1570***
	(0.0246)	(0.0209)	(0.0175)	(0.0281)	(0.0255)	(0.0225)	(0.0207)	(0.0214)
age	-0.0267***	-0.0210***	-0.0048	-0.0172	-0.0319***	-0.0174***	-0.0337***	-0.0285***
	(0.0053)	(0.0070)	(0.0104)	(0.0106)	(0.0071)	(0.0069)	(0.0096)	(0.0080)
age squared	0.0938***	0.0963***	0.0229	0.0508	0.0989***	0.0945***	0.1200***	0.0966***
	(0.0234)	(0.0292)	(0.0432)	(0.0410)	(0.0309)	(0.0308)	(0.0415)	(0.0346)
siblings	0.0431	0.0159	0.0300	-0.0044	0.0879***	0.0210	0.1229***	0.0810**
	(0.0275)	(0.0243	(0.0293)	(0.0305)	(0.0340)	(0.0264)	(0.0307)	(0.0328)
children	-0.0388	-0.0469	-0.0740***	-0.0958***	0.1093***	-0.0871***	0.0160	0.0414
	(0.0291)	(0.0293)	(0.0282)	(0.0283)	(0.0327)	(0.0299)	(0.0288)	(0.0278)
both_parents	0.0523**	0.0211	0.0294	0.0782***	-0.0892***	0.0288	-0.0628**	-0.0479*
	(0.0262)	(0.0252)	(0.0262)	(0.0278)	(0.0314)	(0.0257)	(0.0267)	(0.0285)
constant	4.7005***	4.6204***	3.6411***	3.9401***	4.4307***	4.4313***	4.3781***	3.9846***
	(0.0584)	(0.0625)	(0.0793)	(0.0848)	(0.1082)	(0.0863)	(0.0864)	(0.0742)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8386	8386	8386	8386	8386	8386	8386	8386
R-squared	0.0301	0.0526	0.0608	0.0548	0.0416	0.0588	0.0361	0.0534
First stage regression, F-stat	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)
	17.6125	17.6125	17.6125	17.6125	17.6125	17.6125	17.6125	17.6125
Instrument:	Broadband (percentage of households with Internet connection type broadband)							

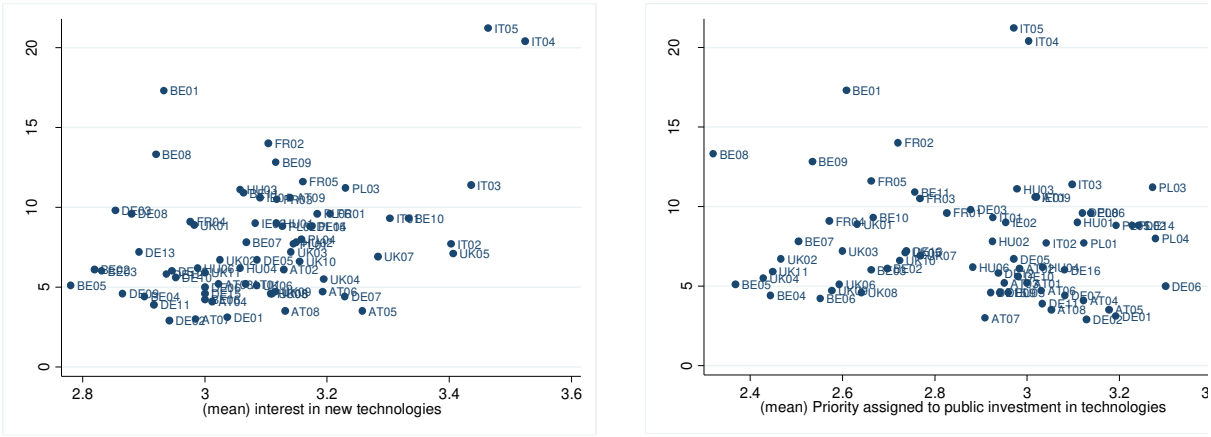
Note: Robust standard errors are provided in parenthesis and adjusted for 61 regional clusters (all regions listed in Appendix except for the U.K.). By ***, ** and * we denote statistical significance at 1%, 5% and 10% levels. Using *Internet access - weekly (daily) frequency* as instrument provides similar results (available upon request from the authors); in this case the F-stat in the first-stage estimation becomes 10.2464 (7.4977).

Table 5: Instrumental variable estimation (two-stage least squares)

Dependant (columns), explanatory (rows) variables	**Priority assigned to:**							
	Education	**Healthcare**	**Business**	**Technology**	**Income**	**Jobs**	**Poverty**	**Housing**
unemployment	**0.0021**	**0.0046**	**0.0088**	**0.0000**	**0.0140****	**0.0159****	**0.0126****	**0.0121****
	(0.0058)	**(0.0046)**	**(0.0054)**	**(0.0060)**	**(0.0065)**	**(0.0064)**	**(0.0055)**	**(0.0056)**
attitude_future	**0.0679*****	**0.0259*****	**0.1140*****	**0.1043*****	**0.0076**	**0.0332*****	**0.0091**	**0.0265****
	(0.0105)	**(0.0094)**	**(0.0112)**	**(0.0103)**	**(0.0119)**	**(0.0101)**	**(0.0123)**	**(0.0108)**
gender	-0.1506***	-0.2015***	0.1226***	0.2228***	-0.2113***	-0.1486***	-0.2344***	-0.1486***
	(0.0221)	(0.0191)	(0.0165)	(0.0257)	(0.0234)	(0.0210)	(0.0195)	(0.0207)
age	-0.0306***	-0.0222***	-0.0031	-0.0180*	-0.0304***	-0.0165***	-0.0354***	-0.0228***
	(0.0056)	(0.0071)	(0.0095)	(0.0095)	(0.0072)	(0.0062)	(0.0089)	(0.0076)
age squared	0.1041***	0.0940***	0.0148	0.0559	0.0869***	0.0801***	0.1199***	0.0693**
	(0.0243)	(0.0295)	(0.0398)	(0.0366)	(0.0313)	(0.0281)	(0.0388)	(0.0336)
siblings	0.0518*	0.0221	0.0357	0.0064	0.0832***	0.0224	0.1346***	0.0790***
	(0.0273)	(0.0238)	(0.0266)	(0.0288)	(0.0322)	(0.0250)	(0.0300)	(0.0301)
children	-0.0283	-0.0454*	-0.0593**	-0.0804***	0.1198***	-0.0626**	0.0249	0.0516**
	(0.0281)	(0.0275)	(0.0266)	(0.0295)	(0.0316)	(0.0289)	(0.0268)	(0.0258)
both_parents	0.0451*	0.0096	0.0122	0.0562**	-0.1166***	0.0108	-0.0814***	-0.0521**
	(0.0245)	(0.0234)	(0.0252)	(0.0266)	(0.0303)	(0.0247)	(0.0260)	(0.0266)
constant	4.5110***	4.5600***	3.3243***	3.6809***	4.3917***	4.3305***	4.3500***	3.8837***
	(0.0733)	(0.0632)	(0.0827)	(0.0814)	(0.0995)	(0.0875)	(0.0869)	(0.0691)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9407	9407	9407	9407	9407	9407	9407	9407
R-squared	0.0439	0.0494	0.0677	0.0697	0.0454	0.0579	0.0377	0.0493
First stage regression, F-stat	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)	F(1,71)
	18.1269	18.1269	18.1269	18.1269	18.1269	18.1269	18.1269	18.1269
Instrument:	Broadband (percentage of households with Internet connection type broadband)							

Note: Robust standard errors are provided in parenthesis and adjusted for 72 regional clusters (see Appendix). By ***, ** and * we denote statistical significance at 1%, 5% and 10% levels. Using *Internet access - weekly (daily) frequency* as instrument provides similar results (available upon request from the authors); in this case the F-stat in the first-stage estimation becomes 10.1263 (7.7679).

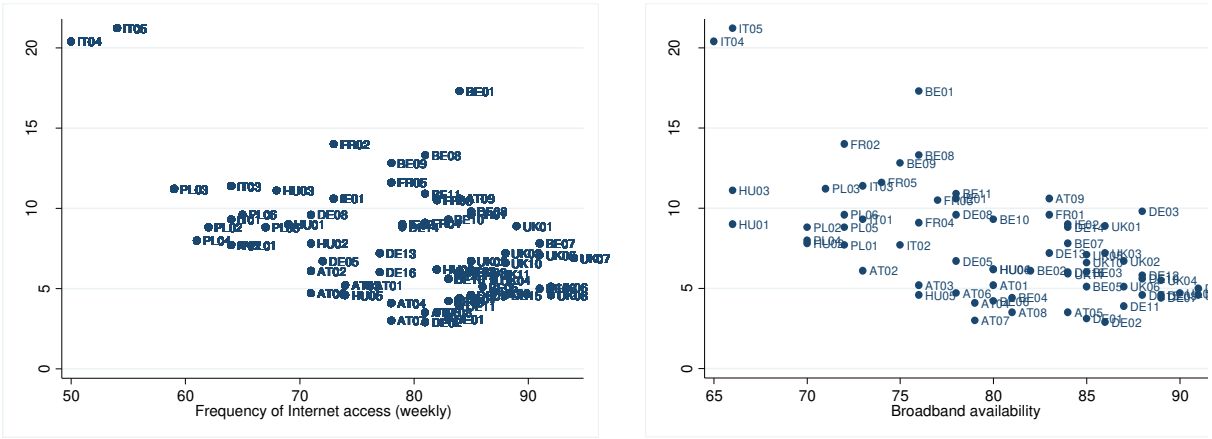
Figure 1: Correlations between the regional unemployment rate and the computed mean based on surveys' assigned scores for *interest in technology* and how Millennials rank the *importance of public investing in technology*



(a) (b)

Source: Eurostat and Millennials Project survey data; authors calculation. For the (a) panel, the pair-wise correlation is 0.39 and statistically significant; it becomes 0.18 and statistically insignificant when the two outliers (IT04 and IT05) are excluded. For the (b) panel, the pair-wise correlation is -0.05 or -0.13 when outliers are excluded, statistically insignificant in both cases.

Figure 2: Correlation between the regional unemployment rate (adult population), the frequency of Internet usage and broadband availability, confirming the relevance of the instruments.



(a) (b)

Source: Eurostat data.