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Unemployment, well-being, and the moderating role of education policies: A multilevel study

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Abstract

This article aims to investigate if education policies moderate the association between unemployment and well-being among young adults. Based on the capability approach, we argue that education policies mitigate the negative effects of unemployment by providing opportunities for education and thus ways to exit unemployment. Education policies can strengthen capabilities, enhance the control that individuals have over their situation, and thereby reduce the stress associated with unemployment. We estimated cross-level interactions between education policies and unemployment status using multilevel methods and data from the European Social Survey. Results showed that policies that increase educational opportunities—such as generous second chance opportunities—were associated with smaller negative effects of unemployment on well-being and that this moderating impact was stronger for young adults with low education. Further analyses show that education policies are also associated with perceived capabilities among unemployed, supporting the proposed mechanism.

Keywords

Capabilities, education policies, spillover effects, unemployment, well-being, young adults

Introduction

Economic and social policies are increasingly evaluated according to immaterial and “soft” outcomes, such as quality of life or well-being. The traditionally dominant focus on outcomes such as gross domestic product (GDP) growth or unemployment rates is seen as too one-dimensional by

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many, and as unable to capture the full range of consequences of policies (e.g. Nussbaum and Sen, 1993; Organisation for Economic Co-operation and Development (OECD), 2017). It is not surprising, then, that there is a growing body of literature investigating not only how unemployment itself can be reduced but also how the negative effects of unemployment on well-being can be mitigated by social policies. Most of the studies available on this topic investigated the effects of either labor market policies (LMPs) or structural factors (e.g. Voßemer et al., 2018). Surprisingly, no studies have, as of yet, considered education policies, despite their importance for shaping the life chances and employment opportunities of, especially, young adults (Müller, 2005).

On the basis of the capability approach (Sen, 1999) and agency restriction theory (Fryer, 1986), we argue that education policies, through spillover effects, can influence the well-being also of those who are not currently enrolled in education. More specifically, we argue that well-being among unemployed is influenced by their perceived level of agency, scope for the future, and sense of life-course control (Strandh, 2000), and that these factors are, in turn, influenced by how education policies shape their educational opportunities, or capabilities. Capabilities, as conceptualized by Sen, take as point of departure what individuals are effectively able to do, their real freedom to choose and act. In other words, the opportunities facing individuals has importance over and above the actual decisions that individuals end up making. Enlarged educational opportunities strengthen capabilities, in particular for vulnerable groups such as unemployed young adults. In this sense, education policies have spillover effects, and their impact is not limited to enrolled students.

This study complements the comparative literature on education systems by investigating the role of education policies for non-academic outcomes, such as well-being (Montt and Borgonovi, 2018). It complements the literature on the role of social policies for health/well-being in general, and for the well-being of the unemployed in particular, by widening the scope of policies to education policies. Previous studies mainly looked at the role of social transfers, while less attention was paid to the “social investment dimension” of the welfare state, including education policies (Bergqvist et al., 2013). However, social investment policies are of great importance for the life chances of, especially, unemployed young adults. We also add to emergent research on spillover effects of social policies (Sjöberg, 2010), as well as the growing body of empirical studies on capabilities (Lorgelly et al., 2015).

Previous research

Individual-level associations between unemployment and well-being

The negative relationship between unemployment and well-being is usually understood based on the function of employment. Both the lack of latent psychosocial functions, for instance, regular activity, and lack of the manifest function of employment, income, are stressors that explain the negative effects of unemployment (Strandh, 2000). Neither of these two individual-level mechanisms is directly susceptible to modification by the education system.

There is, however, a third mechanism that focuses on the role of control, agency, and life-course predictability in the unemployment situation (agency restriction theory; Fryer, 1986). Unemployment is here taken to imply lowered capacity to plan for or control the future. The life circumstances arising from unemployment restrict individual's agency and their ability to actively pursue desired life goals. Decreases in both life-course control and agency among the unemployed act as stressors, which partly explain the negative effects of unemployment on well-being (Fryer, 1986; Strandh, 2000). Support for this theory is also reported by studies documenting the importance of factors such as sense of personal control (Hannan et al., 1997) and self-mastery (Vinokur and Schul, 1997) for the well-being of the unemployed. A reduced sense of control simultaneously functions as a

moderator of the unemployment–well-being association; that is, it is relatively less harmful to be unemployed if one experience a greater sense of control (Vinokur and Schul, 1997).

This third mechanism—restriction of agency and life-course control—is related to capabilities, as conceptualized by Amartya Sen (1999). Sen (1999) defines capabilities as “the freedom to achieve various lifestyles” (p. 75), a definition that is close to how agency is typically understood. What people are able to do *should they want to* is as important as what they actually do; the *potential* to act is central and has an intrinsic value. A wider choice set gives more opportunities to act, increases the ability to plan one’s life in accordance with the life goals that one finds valuable, and thereby increases the sense of control that an individual has over her life situation (Sen, 1999). Unemployment, from this perspective, implies reduced capabilities.

Capabilities are related to potentials, not actual outcomes, and this makes them difficult to measure directly. However, recent methodological developments enable researchers to capture capabilities (Anand and Van Hees, 2006; Lorgelly et al., 2015), and empirical studies demonstrate a positive association between capabilities and well-being (e.g. Graham and Nikolova, 2015; Veenhoven, 2010; Verme, 2009). Moreover, the capability perspective, taking potential states as point of departure, is indirectly supported by research showing that beliefs about future states, and one’s opportunities to reach those states, affect one’s present well-being (MacLeod and Conway, 2005; Seligman et al., 2013; Senik, 2008). Of special importance in this context is the finding that subjective employability, the assessment that one can get a job if needed, is associated with higher well-being, especially for unemployed people (Green, 2011).

Spillover effects and the moderating role of policies

Having established the mechanisms linking unemployment to well-being at the individual level—restricted agency and capabilities, in addition to the lack of income and psychosocial benefits of work—this section will delineate pathways through which policies can be expected to moderate the unemployment–well-being association. Roughly, there are two ways through which policies can address the reduced well-being associated with unemployment: (1) addressing the *present* needs of the unemployed in terms of income and psychosocial functions and (2) addressing the restricted agency caused by unemployment by providing *opportunities* that give the unemployed more control over their future. The first of these (addressing the present needs) is obviously connected to, for instance, unemployment benefits, and actual reception of these, while the second (corresponding to the capability mechanism) rather relate to the *potential* benefits that policies can have.

Spillover effects of policies mean that a policy has consequences for individuals who do not directly or currently utilize, but are *potential* beneficiaries of, the policy. These kinds of spillover effects have been demonstrated in several research fields. Randomized controlled trials show that social or health insurance increase subjective well-being and reduce clinical depression and stress, also for individuals who do not utilize it (Baicker et al., 2013; Haushofer et al., 2017; Tafere et al., 2017). Cross-country comparative research reaches similar conclusions. For instance, the generosity of unemployment benefits positively affects well-being of employees, likely due to the increased sense of security and predictability that the system provides, even though it is not currently used (Sjöberg, 2010). As stated by Haushofer et al. (2017): “[t]he most plausible mechanism for the effect of insurance on stress and cortisol levels is a ‘peace of mind’ effect that results from merely having coverage, and that is not produced by receiving a cash transfer of equal magnitude” (p. 4). Central to the idea of both spillover effects and capabilities is, thus, that people are future-oriented, and that their beliefs about potential future states have a bearing on their assessment of the present (cf. Seligman et al., 2013).

Spillover effects are also present in other areas beside insurance, especially active labor market policies (ALMPs). Carr and Chung (2014) showed that the relationship between perceived employment insecurity and well-being was weaker in European countries with high investment in ALMPs. Other studies show that workers experience less insecurity when ALMPs and lifelong learning policies are more generous, likely because they feel that these policies are available and effective (Anderson and Pontusson, 2007; Van Oorschot and Chung, 2015). It should be stressed, though, that it is difficult to empirically disentangle the role of ALMPs from economic conditions (Van Oorschot and Chung, 2015). Neither ALMPs nor education policies are insurance policies; however, they are linked to capabilities, as both relate to unrealized but potential future states. In fact, both ALMPs and education policies can be seen as a form of “human capital insurance,” which insure employability rather than income.

Spillover effects of education policies have not been investigated previously, but given the similarities of education policies with ALMPs, and given that educational credentials play a central role for employment possibilities (Müller, 2005), we argue that the education system can influence the perceived agency and thus well-being among, especially, unemployed young adults. From the perspective of the capability approach, educational opportunities can be seen as *potentials* that need not be realized in order to increase well-being. The mere opportunity to access education offers prospective students peace of mind because it provides the knowledge that they can get a second chance if necessary (due to, for example, unemployment). Since individuals are future-oriented (Seligman et al., 2013), their current state of well-being is influenced by how they view their future prospects; in other words, well-being is based on a person's assessments of how their life will be and whether they feel that they can decide this themselves (MacLeod and Conway, 2005; Senik, 2008). If future expectations influence the assessment of the present, then the knowledge that further education is a realistic option can provide well-being benefits also to prospective students, who are currently not enrolled but regard further education as an alternative. Previous research shows that education is a common exit route from unemployment in many European countries, although how common it is depends on the institutional context, not least the structure of education systems (Brzinsky-Fay, 2007; Högberg, 2019).

Hypotheses

The key to understanding how education policies can shape the access opportunities (capabilities) of individuals is to recognize that the sequential progress through the education system is characterized by *path dependence*, that is, opportunities to access a certain level of education is dependent on the pathway by which students arrived at this point of choice (Breen and Jonsson, 2000; Shavit and Müller, 2000; Shavit et al., 2007). Path dependence is an especially salient feature in education systems with different but parallel educational paths, such as vocational and academic tracks, as is common in many European countries (Shavit and Müller, 2000). In these systems, “whether certain later options are within pupils' choice sets will depend on their earlier choices” (Breen and Jonsson, 2000: 759).

As regards higher education, the admission process therefore involves two phases: a pre-entry phase, in which individuals acquire the qualifications required to enter higher education, and the actual entry phase, where prospective students apply and educational institutions select among applicants. The admission process consequently involves two major institutions: the secondary and the higher education systems. Secondary education determines how many from each cohort will be eligible for higher education in the first place (the pool of potential participants), while the higher education system determines the supply of education (the number of positions), as well as the specific criteria according to which these positions can be accessed (Shavit et al.,

2007). Even if higher education admission policies are formally open, this will not enhance access opportunities for secondary school graduates (or non-graduates) who have not acquired the qualifications necessary for eligibility. The temporal complexity of the sequential process implies that prospective access opportunities are determined by secondary school policies as well as by the higher education system itself.

The relevant institutions to consider in relation to prospective access opportunities are thus: (1) secondary school institutions that determine the pool of eligible prospective students and (2) higher education institutions that determine the selectiveness of admissions with regard to available positions, *given* the existing pool of eligible students from secondary school (Shavit et al., 2007). We argue that inclusive educational institutions that either increase the number of eligible prospective students, or decrease the selectiveness of admission, have spillover effects on prospective students by increasing the number of young unemployed adults who have a realistic opportunity to enter education should they want to.

This article covers four dimensions of inclusiveness, two related to lower and upper secondary education, and two related to the supply of positions and alternative access routes in higher education. First, with regard to lower secondary education, tracked education systems, in which students are placed in hierarchically ordered tracks with different curricula from an early age, raise barriers to further education. Only some tracks prepare students for higher education, while lower tracks are essentially dead ends in terms of further educational advancement, and movement between tracks later in secondary school is difficult and rare (Shavit and Müller, 2000; Van Elk et al., 2011). It is crucial to stress the temporal dimension of the admission process here: even though tracking in secondary school takes place *before* the event of unemployment and before a potential entry into higher education, the lack of eligibility associated with having earlier been placed in a non-academic track will constrain the *future* educational opportunities of this individual (Breen and Jonsson, 2000). Tracking generates junctures that “institutionalize the boundaries of one’s choices and opportunities” and “directly affect the availability of future options” (Inbar, 1995: 29).

When many pupils are placed in dead-end tracks, the pool of eligible prospective students, to which the spillover effects of higher education policies applies, is smaller. While most education systems do practice some form of grouping of pupils (Blossfeld et al., 2016), it is formal between-school tracking that is of particular relevance for eligibility, since it creates *formal* barriers regarding movement to higher levels of education (Orr et al., 2017; Shavit et al., 2007). Since the unemployed are most in need of further education, restricted access will hit them relatively harder. In line with this, Högberg (2019) found that, among unemployed young adults in Europe, transitions to education were more common in countries with less tracking.

Hypothesis 1. The effect of employment status on well-being is moderated by the degree of tracking of education systems so that the negative effect of unemployment is weaker in less tracked education systems.

Regarding upper secondary education, we can hypothesize that general, as compared to more vocationally oriented, education systems are more conducive to enabling access to education for the unemployed. Vocational education (in upper secondary school) typically provides occupation-specific skills, which enable smooth transitions into the labor market, but are less transferable and flexible when it comes to further education (Shavit and Müller, 2000). For instance, in many European countries vocational upper secondary education does not qualify pupils for higher education, in which case fewer pupils are eligible for further education, and educational opportunities are more restricted (Bäckman et al., 2011; Shavit and Müller, 2000).

The argument is thus consistent with that regarding tracking: when the pool of eligible prospective students is smaller, the spillover effects of education policies will apply to fewer and therefore be weaker. Both tracking and vocational orientation can create formal barriers for progression through the education system, and pupils who are placed in a lower track in lower secondary school often enroll in vocational programs in upper secondary school. However, while tracking is primarily relevant from the perspective of eligibility and formal barriers, vocational education in addition concerns the concrete educational content. Analogous to theories of path dependent education systems, theories of human capital formation stress that education (“skill formation”) is a multistage process, in which attained skills at one stage facilitate the formation of skills at a later stage (Cunha and Heckman, 2007). While specific vocational skills can certainly facilitate the formation of similar vocational skills at later stages, they provide a poorer foundation on which to build new and different kinds of skills. Compared to vocational education, the kinds of skills acquired through a general education are more flexible and more conducive for acquiring higher education. Thus, formal barriers aside, general education is more transferable, and provides more choices in terms of later education (Hanushek et al., 2017).

Hypothesis 2. The effect of employment status on well-being is moderated by the vocational orientation of secondary education so that the negative effect of unemployment is weaker when vocational orientation is lower.

Regarding admission policies to higher education, the number of positions available in the education system is an important dimension for access opportunities. Virtually all European education systems practice some form of rationing of positions in higher education (OECD, 2017; Shavit et al., 2007). When demand for education exceeds supply, the result is increased competition over existing positions, and secondary school grades or examinations are typically used as sorting instruments (OECD, 2017). An increased supply of education (more positions) will drive down the “cost” (in terms of, for example, grades) of education, thereby making it more available (OECD, 2017; Shavit et al., 2007; see also Högberg, 2019, who found that more positions in higher education were associated with more transitions from unemployment to education). It should be stressed that, based on capability theory, this is not merely expected to benefit those that do enroll in these positions at a given time point, but to all *prospective* students (e.g. the unemployed), regardless of whether they at present choose to enroll or not. It is the increased access opportunities that are essential. Hence, when places at higher education institutions are more abundant, unemployed young adults and other socially vulnerable groups will likely feel that they have a more realistic opportunity to enroll.

Hypothesis 3. The effect of employment status on well-being is moderated by the enrollment rate in higher education so that the negative effect of unemployment is weaker when enrollment is higher.

Access regulations in higher education, such as regulations regarding enrollment of individuals with poor secondary education qualifications, are also relevant from an inclusiveness perspective. Restricting students with poor secondary qualifications from access to higher education is functionally equivalent to introducing a selection mechanism at age 18 or 19. Since unemployed young adults are over-represented among students with insufficient qualifications, inclusive access routes to second chance education will disproportionally increase their capabilities (for empirical evidence regarding actual transitions, see again Högberg,

2019). A similar situation exists with regard to age: unemployed young adults typically start working after secondary school and are thus more likely to enter higher education at older ages (Statens offentliga utredningar, 2003). Older students tend to be more dependent on education systems that facilitate access based on work experience and informal learning rather than regular, formal qualifications (Orr et al., 2017).

Hypothesis 4. The effect of employment status on well-being is moderated by access regulations so that the negative effect of unemployment is weaker when opportunities for second chance education are more generous.

Following the recommendations by King et al. (1994), we will further evaluate the underlying theory through testing some of its observable implications. By listing the observable implications of a theory, and then examining these against the data, we subject the theory to more tests through which it can be found to be incorrect. If the theory is not falsified by these further tests, that is, if additional observable implications are found to be in line with what is implied by the theory, the veracity of the theory is strengthened (King et al. 1994).

One observable implication of the theory is that we would expect the moderating effects of policies to be stronger for those with low or intermediate levels of education than for those with high levels of education (that is, a moderated moderation). Unemployed young adults with lower levels of education have a greater need to strengthen their human capital, but simultaneously a lower ability to do so (due to barriers in the educational system), than their peers with higher levels of education, and should therefore benefit relatively more from inclusive policies (Högberg, 2019). This argument corresponds with research on the moderating role of LMPs and perceived employability, which shows that the moderating impact of LMPs on well-being is strongest for those in the most vulnerable labor market positions (Carr and Chung, 2014), and the mitigating effect of perceived employability on well-being is stronger for less educated workers (Green, 2011). Since education strengthens employability, we expect similar patterns concerning opportunities for education. Also, the loss in perceived control due to unemployment is greater with lower education (Infurna et al., 2016), and the effect of low control on well-being is stronger in lower social classes (Hannan et al., 1997).

Hypothesis 5. The moderating effects of inclusive education policies on the effect of unemployment on well-being are stronger for young adults with low levels of education than for young adults with high levels of education.

Another observable implication of the theory concerns the proposed mechanism, capabilities, underlying hypotheses 1–4. We argued that the moderating impact of education policies arises because inclusive education policies, by offering unemployed young adults more opportunities, increase their capabilities. If this reasoning is correct, we would also expect that education policies moderate the negative effect of unemployment on capabilities in the first place. A moderating impact of education policies on capabilities is, thus, a logical implication of the corresponding moderating impact on well-being.

Hypothesis 6. The effect of employment status on capabilities is moderated by education policies so that the negative effect of unemployment is weaker when education policies are more inclusive.

It is beyond the scope of this study to provide a comprehensive theoretical framework regarding potential effects of the policies on young adults who are in employment or education (i.e. not unemployed). The capabilities of all young adults should be affected by increased access opportunities, regardless of employment status, but we expect that effects will be stronger for the unemployed due to their greater needs.

Data and methods

Data and participants

The individual-level data used in this study come from the European Social Survey (ESS), a highly standardized cross-country survey, which is well-suited for comparative research. ESS is known for its high-quality data (Kohler, 2008) and is used in many of the previous studies that investigated the moderating impact of social policies on the well-being of the unemployed (e.g. Voßemer et al., 2018). The target response rate is 70 percent, although actual response rates are sometimes lower. Since the analysis focuses on the rather small subgroup of young adults, four survey rounds (rounds 3–6, from 2006 to 2012) were pooled in order to ensure adequate statistical power. Only countries with sufficient data on most policy indicators were included in this study, which restricted the analysis to 26 European countries, which is sufficient for reliable estimates of country-level effects in linear multilevel models (Bryan and Jenkins, 2015). The sample size of the population aged 18–29 (with sick, disabled, homemakers and those in military service excluded) was 24,108 individuals.

Dependent variable

Well-being. Life satisfaction was used as an indicator of well-being. It is a global measure of well-being and is empirically validated by its ability to predict suicide and to reflect differences in objective living conditions (Diener et al., 2013). In the ESS, it is measured by the question “All things considered, how satisfied are you with your life as a whole nowadays?” Answers are measured on an 11-point scale ranging from 0 to 10, with higher scores indicating higher well-being. Although the indicator refers to present well-being, our theory predicts that present well-being is affected by beliefs about the future (Seligman et al., 2013), and present well-being tends to be strongly correlated with expected future well-being (MacLeod and Conway, 2005).

ESS contains one question describing capabilities, which is used when testing hypothesis 6: “I feel I am free to decide for myself how to live my life,” with answers ranging from 1 “disagree strongly” to 5 “agree strongly.” This is a validated item explicitly designed to measure capabilities in survey research (Lorgelly et al., 2015), thus providing an adequate test of a key observable implication of the theory. The indicator was dichotomized into high and low capabilities, with “agree” and “agree strongly” indicating high capabilities. It is only available in survey rounds 3 and 6, meaning that hypothesis 6 is tested on a reduced sample.

All individual and country-level variables are described in detail in Tables S1 and S3, and information on the sample structure is provided in Table S2 in the Supplemental Appendix.

Independent variables at the individual level

Unemployment was measured as self-defined employment status, distinguishing between persons who report being in paid work or education and persons who report being unemployed. Employees

and students are included in the same reference category to reduce the number of cross-level interaction terms given the limited number of countries, since higher complexity of multilevel models can be problematic with few countries. With the two categories separated, using employees as reference, the interaction effects were similar in magnitude and remained statistically significant (see Table S7 in the Supplemental Appendix). We used age, sex, migration background, unemployment experience, education level, and limiting long-standing illness to address confounding from variables that are assumed to affect both the risks of unemployment and well-being. As we are interested in the total effect of unemployment, we refrained from controlling for mediating variables such as income or self-rated health. However, self-rated health and subjective income were included in sensitivity analyses. The cross-level interaction effects were slightly weaker but remained significant (Table S8 in the Supplemental Appendix).

Independent variables at the country level

Tracking. The degree to which tracking restricts prospective educational opportunities is a function of the timing of the tracking, the number of tracks, and whether each specific track provides eligibility to further education or not. The earlier tracking takes place, the stronger the path dependence, and the stronger the effects on prospective educational opportunities (Breen and Jonsson, 2000; Shavit and Müller, 2000). This aspect is typically measured by the age of first selection into different tracks during secondary school (OECD, 2013). Due to space limitations, we only analyze the age of first selection in the main tables, so as to be consistent with previous comparative education research in which this is the most commonly used indicator (Bol and Van de Werfhorst, 2013). However, results using the two other indicators were substantially similar (see Table S6 in the Supplemental Appendix). Higher values indicate later tracking age, or more inclusive policies. Examples of countries with early selection into separate tracks are the German-speaking countries (Germany, Austria, Switzerland) as well as the Netherlands, Hungary, Slovakia, and the Czech Republic.

Vocational orientation. Vocational orientation is typically measured either by the share of upper secondary students in vocational education (vocational prevalence), or by the share of upper secondary students in apprenticeship style dual education (vocational specificity) (Müller, 2005; cf. Shavit and Müller, 2000). Since the two capture partly distinct dimensions, both are included in the main analyses (Bol and Van de Werfhorst, 2013). Data on vocational prevalence are from United Nations Educational, Scientific and Cultural Organization (UNESCO, 2006) and refer to the year 2006, and data on vocational specificity are from OECD (2007) and refer to the year 2005. Vocational specificity is only available for 22 out of 26 countries (missing for Bulgaria, Cyprus, Lithuania, and Portugal), meaning that models using this variable are performed on a reduced sample. For reasons of consistency, the indicators were reversed so that higher values indicate lower levels of vocational orientation, or more inclusive policies. The German-speaking countries, Slovakia, and the Czech Republic are again examples of vocationally orientated countries, in this case also joined by, for instance, Denmark.

Enrollment rate. Enrollment in higher education is operationalized as the share, ranging from 0 to 1, of the population aged 20–29 years that is enrolled in tertiary education. This share is the mean value calculated based on Eurostat data from 2006 to 2012. Enrollment is a good proxy for the “supply side” of higher education, that is, the number of available positions in the education system (Shavit et al., 2007). The highest observed enrollment rates are found in Finland, Greece, and Lithuania.

Second chance opportunities. Second chance education is defined by Eurydice (2013)—an European Union (EU) network providing information regarding the organization of European education systems—as “access to higher education based on the recognition of prior non-formal and/or informal learning” (p. 3). The target groups are those who either followed a program that did not provide access to higher education, or who abandoned education before the completion of upper secondary education. Both groups, in particular the latter (Müller, 2005), but in the long-term also workers with vocational education (Hanushek et al., 2017; Korpi et al., 2003), are known to have a higher risk of unemployment and are thus in greater need of further education. Second chance education is measured using data from Eurydice (2014), but only available for 24 countries (missing for the Netherlands and Switzerland). Eurydice distinguish between generous second chance opportunities, where alternative access routes exist for all higher education institutions or programs, intermediate second chance opportunities, where alternative access routes exist for some institutions or programs, and no second chance opportunities (the reference category). Examples of countries with generous second chance opportunities are the Nordic countries and Portugal.

Previous research identified unemployment benefits and ALMPs as important moderator variables for the relationship between unemployment and well-being (Voßemer et al., 2018). We therefore use expenditure on LMPs (LMP expenditure) as a percentage of GDP, divided by the country unemployment rate and averaged over the years 2006–2012, as a covariate and moderator variable in all models. We explore the role of additional moderator variables in sensitivity analyses. Country covariates are from Eurostat.

With cross-sectional data, it is difficult to establish causal relationships, and to rule out confounding by omitted variables. The above set of moderator variables goes some way in addressing confounding of the moderating role of education policies, but readers should bear in mind that causal interpretations are to be made with caution.

Strategy of analysis

The analysis use pooled data from multiple countries and survey rounds, and, for this reason, the data have a nested structure, with individuals (level 1) nested in country-years (level 2) nested in countries (level 3). Nested data implies that individual observations are not independent of each other, and this makes ordinary least squares regression techniques inadvisable. Instead, we use multilevel techniques, which take into account the nested structure of the data by estimating separate intercepts for each higher level (country-years and countries; Bryan and Jenkins, 2015). Multilevel models also enable the analysis of cross-level interaction effects, that is, if and how the association between an individual-level (level 1) independent variable and dependent variable is conditional on the value of a country-level (level 3) variable. In the context of this study, cross-level interactions mean that the effect of unemployment on well-being varies depending on the value of the education policy variables. We analyze three-way interactions to test whether the moderating impact of the policies differs depending on the education level of an individual (hypothesis 5). Specifically, we distinguish between respondents with and without tertiary education (level 5 or more in the International Standard Classification of Education (ISCED) classification scheme), and refer to these as high and low education, respectively.

To make the interpretation of the interaction effects more comparable, all continuous policy variables were rescaled so that the lowest observed value was set equal to 0 and the highest observed value was set equal to 1. Thus, the cross-level interaction terms show the difference in the effect of unemployment on well-being when the policies are at their highest observed value, compared to when they are at their lowest. Note that this is not a dichotomization, as the continuous

variables remain continuous on a scale ranging from 0 to 1, but is done in order to facilitate interpretation of the graphical presentations.

Hypothesis 6, regarding capabilities as an observable implication of the theory, is tested using the same procedure as for hypotheses 1–4, but with capabilities instead of well-being as outcome. In other words, capabilities are regressed on unemployment, the respective education policy variable, as well as the interaction between these two, together with the covariates. Since the indicator of capabilities is dichotomized, we use linear probability models.

We consistently estimate linear multilevel models with three levels: individuals (level 1) nested in county-years (level 2) nested in countries (level 3). Due to non-existent or very limited year-to-year (level 2) variation in education policies given the available data, we could only estimate the moderating effects at the country level (level 3).

Results

Table 1 shows the results from seven models. Model 1 is an empty model without covariates, model 2 estimates the average difference in well-being between the unemployed and employed/students, net of covariates. Models 3–7 test hypotheses 1–4 by including the respective policy variables and their interactions with unemployment, on a one-by-one basis in separate models (one for each policy variable), along with the covariates (cf. Sjöberg, 2010). The results for hypothesis 5 are presented in Figures 1 to 5. These figures are calculated from analyses of the three-way interaction effects, but depicted graphically to facilitate interpretations of the three-way interactions (coefficients in Table S5 in the Supplemental Appendix). Hypothesis 6, with capabilities as outcome, is tested in Table 2.

Table 1 shows the association between unemployment and well-being, and how education policies moderate this association. The intraclass correlation (model 1) shows that most of the variation (close to 90%) in well-being is between individuals (level 1), around 10 percent is between countries (level 3), but almost none (0.8%) across years within countries (level 2). As expected, unemployed individuals have considerably lower levels of well-being (0.821) than employed/students (model 2), net of covariates. Similar well-being gaps of around one point on a 0–10 scale are reported in other studies on unemployment (Clark et al., 2010; Voßemer et al., 2018; Wulfgramm, 2014).

Models 3–7 provide evidence that support the first four hypotheses, and indicate highly significant interaction terms between unemployment and all policy variables. This means that unemployed individuals are relatively (compared to employed/students) better off in countries with a high tracking age, low degree of vocational orientation (note that the indicator is reversed, such that higher values indicate less vocational orientation), high enrollment rate, and generous second chance opportunities. For example, the predicted difference in well-being between the unemployed and employed/students is 1.121 in the country with the lowest tracking age (age 10, in which case the rescaled variable equals 0), but only 0.646 ($-1.121 + 0.475$) in the country with the highest (age 16, in which case the rescaled variable equals 1), net of the covariates (model 3). Moving from the highest to the lowest vocational orientation (prevalence and specificity; higher values on the indicators imply less vocational orientation), and from the least to the most generous second chance opportunities, is associated with similar reductions in the difference in well-being between the unemployed and employed/students (around 0.5 scale points) (models 4–7).

When interpreting the sizes of the coefficients, it should be stressed that the coefficients for the continuous variables (models 3–6) reflect extreme comparisons: they compare the predicted difference in the effect of unemployment when the policies are at their lowest versus highest observed

Table 1. Multilevel linear models with well-being as outcome.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Unemployed		-0.821***	-1.121***	-1.075***	-1.275***	-0.972***	-0.818***
Tracking age			0.408				
× Unemployed			0.475***				
Vocational prevalence (reversed)				-0.433			
× Unemployed				0.491**			
Vocational specificity (reversed)					-0.064		
× Unemployed					0.549***		
Enrollment rate						0.342	
× Unemployed						0.443**	
SCO: Generous							0.307
× Unemployed							0.474***
SCO: Intermediate							144
× Unemployed							0.144
LMP expenditure				1.419***	1.275***	1.544***	1.349***
× Unemployed				0.012	-0.063	-0.098	-0.585*
Constant	7.220***	7.987***	7.179***	7.700***	7.522***	7.311***	7.425***
Intraclass correlation (country-year level)	0.8%	0.7%	0.6%	0.6%	0.5%	0.6%	0.6%
Intraclass correlation (country level)	9.8%	9.5%	4.4%	4.8%	4.4%	4.8%	4.6%
Akaike information criterion	100,930	97,904	97,873	97,883	84,718	97,882	91,481
N individual-level	24,108	24,108	24,108	24,108	21,136	24,108	22,365
N country-year level	90	90	90	90	76	90	82
N country level	26	26	26	26	22	26	24

Source: Individual-level data from ESS. Enrollment and LMP expenditure from Eurostat, tracking age, and vocational specificity from OECD, vocational prevalence from UNESCO, second chance opportunities from Eurydice (2014).
 SCO: second chance opportunities; LMP: labor market policy; ESS: European Social Survey; OECD: Organisation for Economic Co-operation and Development; UNESCO: United Nations Educational, Scientific and Cultural Organization.
 Controlled for survey round, age, gender, migration background, unemployment experience, education level, and limiting long-standing illness (models 2–7). No covariates in model 1. All policy variables are rescaled so as to range from 0 to 1.
 * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

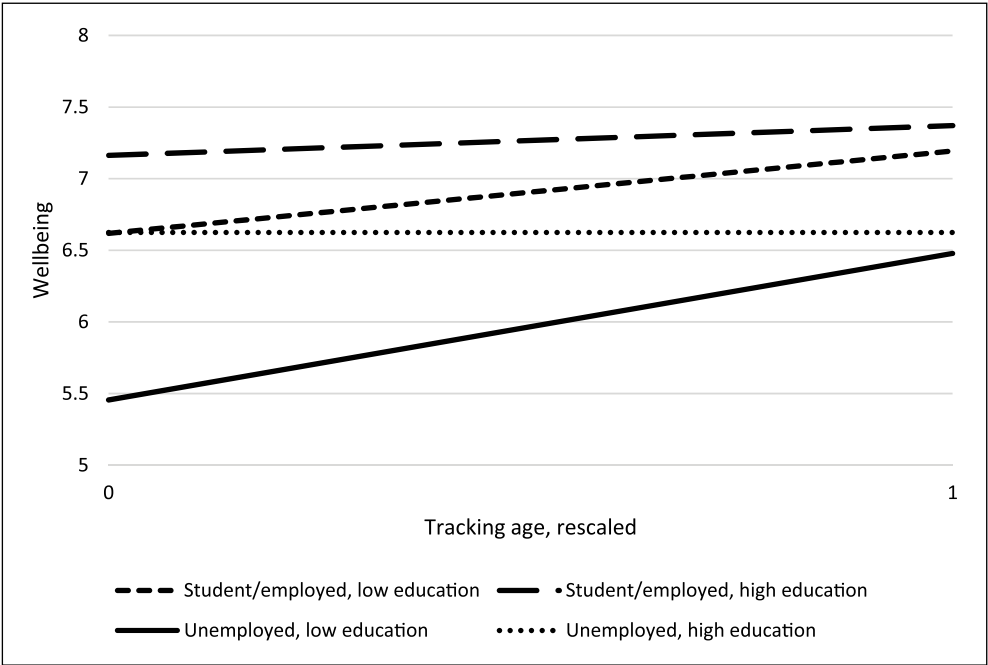


Figure 1. Three-way interactions between employment status, education level, and tracking age. High education = $\geq$ ISCED 5. Low education = $<$ ISCED 5. Calculated from model 1 in Supplemental Table S5. Three-way interaction term significant at the 10 percent level.

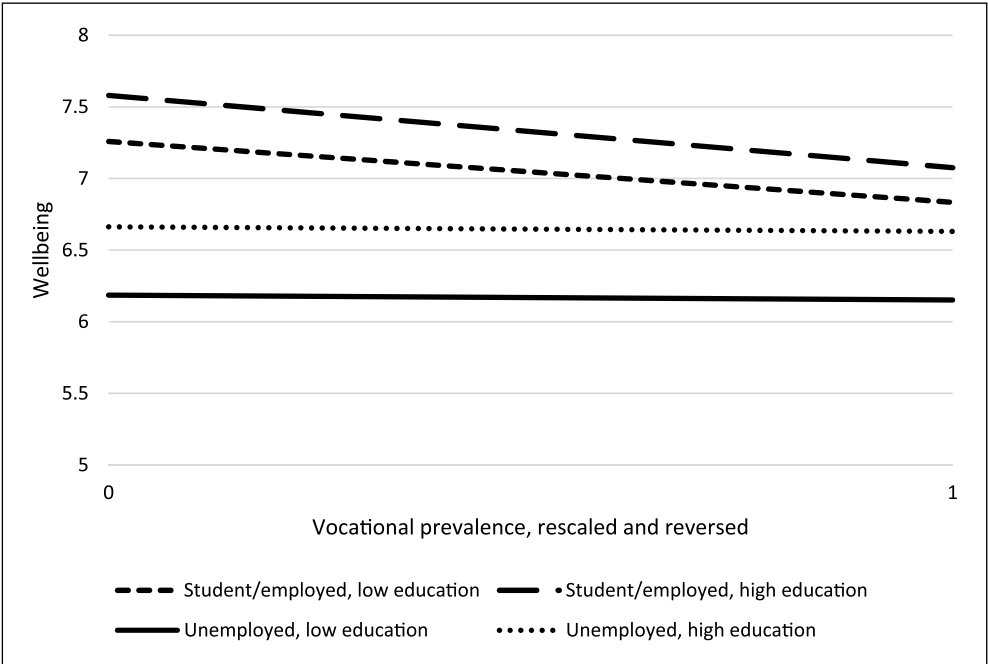


Figure 2. Three-way interactions between employment status, education level, and vocational prevalence. High education = $\geq$ ISCED 5. Low education = $<$ ISCED 5. Calculated from model 2 in Supplemental Table S5. Three-way interaction term not significant.

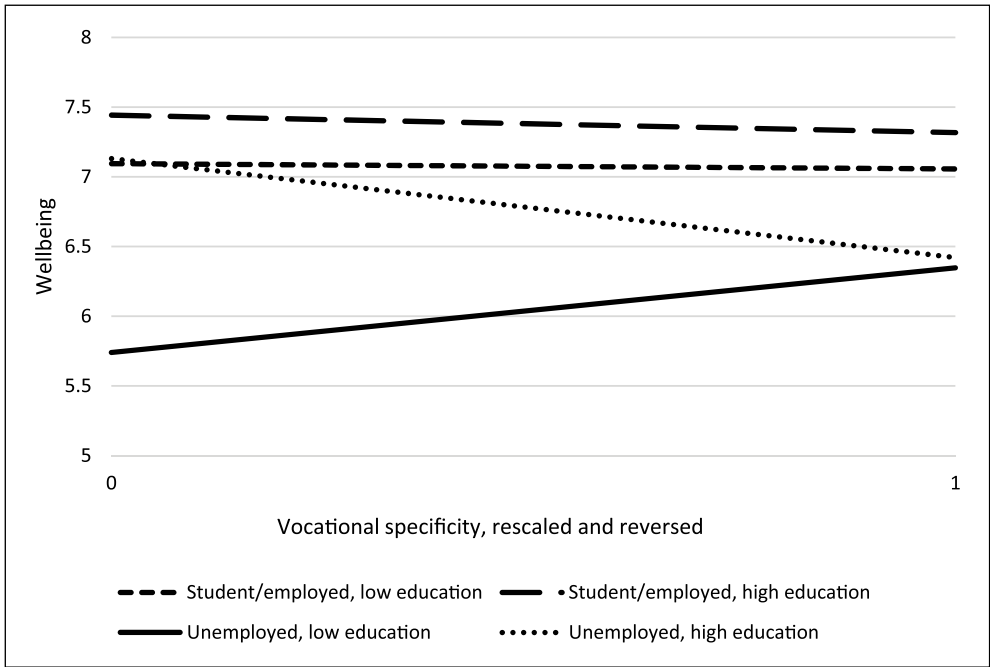


Figure 3. Three-way interactions between employment status, education level, and vocational specificity. High education = $\geq$ ISCED 5. Low education = $<$ ISCED 5. Calculated from model 3 in Supplemental Table S5. Three-way interaction term significant at the 5 percent level.

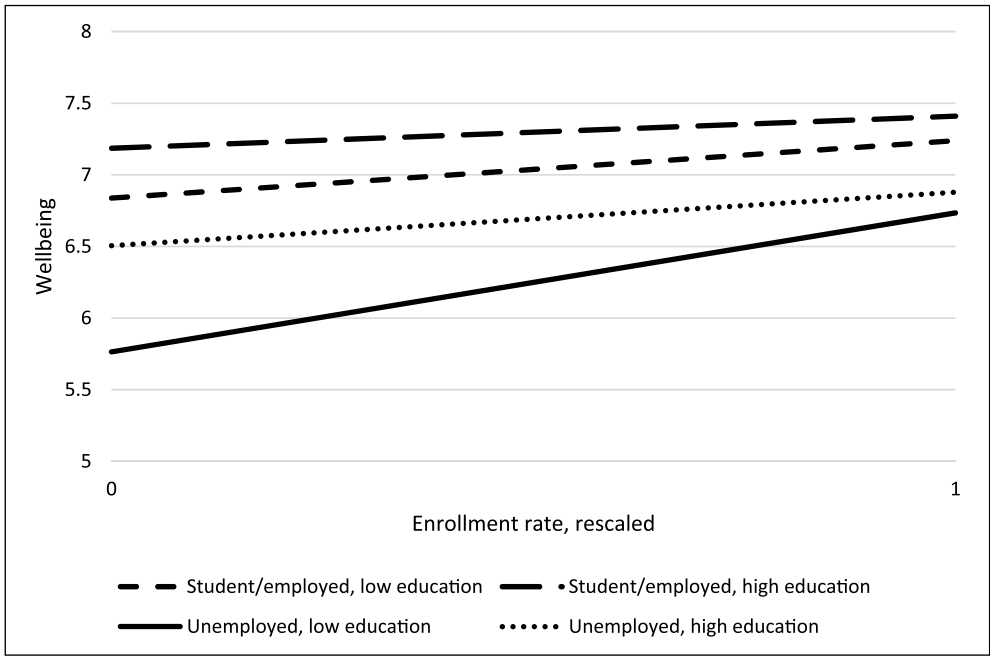


Figure 4. Three-way interactions between employment status, education level, and enrollment rate. High education = $\geq$ ISCED 5. Low education = $<$ ISCED 5. Calculated from model 4 in Supplemental Table S5. Three-way interaction term not significant.

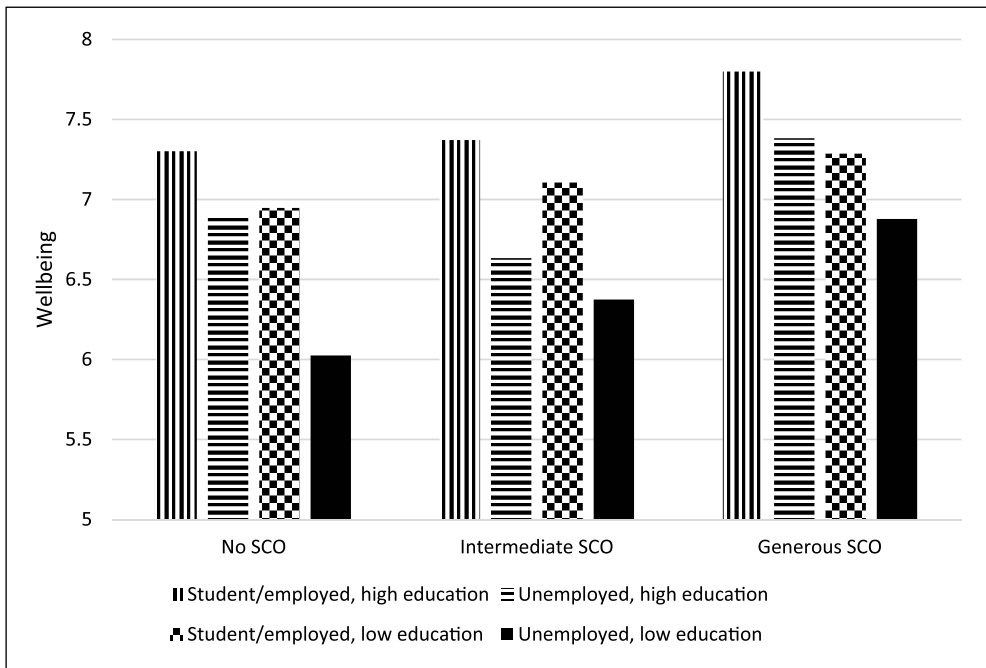


Figure 5. Three-way interactions between employment status, education level, and second chance opportunities.

High education = $\geq$ ISCED 5. Low education = $<$ ISCED 5. Calculated from model 5 in Supplemental Table S5. Both three-way interaction terms significant at the 5 percent level.

values. Whether the magnitudes of the moderated effects are large is a matter of interpretation. To facilitate comparison with previous research, we have re-estimated models 3–6 in Table 1, but with the continuous macro-level variables scaled to unit variance (i.e. mean=0 and standard deviation=1). The corresponding interaction terms are then 0.168 (tracking age), 0.118 (vocational prevalence), 0.166 (vocational specificity), and 0.114 (enrollment rate). Compared to previous research on the moderating role of country-level factors, these effect sizes appear to be neither particularly large nor small. For instance, both Wulfgramm (2014) and Voßemer et al. (2018) estimated analogous cross-level interactions between employment status and active and passive LMPs, respectively, with well-being as the outcome. The standardized effects in Voßemer et al. (2018) were then around 0.20, while the corresponding coefficients for Wulfgramm (2014) ranged from 0.04 to 0.27 (depending on model specification, based on own calculations).

The results of the second stage of the analysis, three-way interactions, are presented graphically to illustrate the moderating effect of the policies on the effect of unemployment for low educated (less than tertiary education; $<$ ISCED 5) compared to the effect of unemployment for high educated (tertiary education; $\geq$ ISCED 5) (hypothesis 5). The figures display the predicted levels of well-being for the unemployed and employed/students with and without tertiary education (i.e. four different possible combinations), and how these levels vary depending on the education policies. The vertical axis of the figures reflects the predicted level of well-being, and the slopes (for Figures 1 to 4 with continuous variables) therefore represent changes in the well-being of unemployed individuals (with high or low levels of education) and employed/students (with high or low levels of education) associated with moving from the lowest to the highest observed value of the

Table 2. Multilevel linear models with capabilities as outcome.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Unemployed		-0.055**	-0.173***	-0.165***	-0.257***	-0.068	-0.110***
Tracking age			0.048				
× Unemployed			0.134***				
Vocational prevalence (reversed)				-0.031			
× Unemployed				0.152**			
Vocational specificity (reversed)					-0.013		
× Unemployed					0.225***		
Enrollment rate						0.008	
× Unemployed						-0.031	
SCO: Generous							0.039
× Unemployed							0.079*
SCO: Intermediate							0.027
× Unemployed							0.135***
LMP expenditure				0.102*	0.098*	0.111*	0.077
× Unemployed				0.119*	0.102*	0.081	-0.032
Constant	0.831***	0.733***	0.660***	0.711***	0.769***	0.690***	0.691***
Intraclass correlation (country-year level)	0.7%	0.7%	0.6%	0.6%	0.7%	0.6%	0.7%
Intraclass correlation (country level)	2.1%	2.1%	1.8%	1.5%	1.7%	1.5%	1.1%
Akaike information criterion	10,118	9703	9682	9692	8091	9702	9259
N individual level	11,768	11,768	11,768	11,768	10,330	11,768	10,919
N country-year level	45	45	45	45	38	45	41
N country level	25	25	25	25	21	25	23

Source: Individual-level data from ESS. Enrollment and LMP expenditure from Eurostat, tracking age and vocational specificity from OECD, vocational prevalence from UNESCO, second chance opportunities from Eurydice (2014).

SCO: second chance opportunities; LMP: labor market policy; ESS: European Social Survey; OECD: Organisation for Economic Co-operation and Development; UNESCO: United Nations Educational, Scientific and Cultural Organization.

Controlled for survey round, age, gender, migration background, unemployment experience, education level and limiting long-standing illness (models 2–7). No covariates in model 1. All policy variables are rescaled so as to range from 0 to 1.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

respective rescaled policy variable. Second chance opportunities is a categorical variable and therefore illustrated using bars (Figure 5).

If the gap between low-educated unemployed (solid line in Figures 1 to 4; solid bar in Figure 5) and low-educated employed/students (short dashes; checkered bar) is larger than the corresponding gap between high-educated unemployed (dotted line; bar with horizontal lines) and high-educated employed/students (long dashes; bar with vertical lines), we have an interaction effect between unemployment and education, such that the negative effect of unemployment on well-being is larger for the low educated. The moderating impact of the policies is then illustrated by how the size of the gaps between these respective lines or bars differ depending on the value of the policy variable. If the gap between low-educated unemployed and employed/students becomes relatively smaller, compared to the equivalent gap among the high educated, as we move to the right in the graphs, this indicates that the negative effect of unemployment depends less on education in countries with more inclusive policies.

Tracking can be taken as an example again. In countries with the lowest tracking age (Figure 1, left-hand side), the predicted gap in well-being between low-educated unemployed and low-educated employed/students is clearly larger than the corresponding gap among high educated (1.164 vs 0.538 scale points). In countries with the highest tracking age (Figure 1, right-hand side), the two gaps are, however, approximately equal (0.716 vs 0.746 scale points). We might say that in countries with tracking at age 10, a person with low education who becomes unemployed (on average) will see her well-being drop by more than one scale point, while a highly educated person in the same country will only see her well-being drop by around half a scale point. If these two persons instead lived in countries with tracking at age 16, both the low- and the high-educated person (on average) would see their well-being drop by roughly 0.7 scale points. So while it is relatively more harmful to be unemployed as low educated in more tracked countries, this is not the case in less tracked countries. The same pattern of more equally sized gaps between the respective lines or bars on the right-hand sides of the figures is evident in all figures except Figure 2 (vocational prevalence).

With the exception of vocational prevalence, the three-way interaction terms range from around half a scale point (tracking age, enrollment rate, and second chance opportunities) to more than one scale point (vocational specificity). Out of the six three-way interaction terms, three are significant at the 5 percent level (vocational specificity and both dummies for second chance opportunities), and one (tracking age) at the 10 percent level (all results, including tests of significance, are presented in Table S5 in the Supplemental Appendix). However, it should be stressed that the interactions, when broken down into subpopulations by country, age group, employment status and education, are sometimes based on small samples (17 out of 26 countries had fewer than 20 unemployed with tertiary education). Thus, even though the values for the interaction coefficients are quite large, the associated standard errors are large as well.

The test of hypothesis 6 is presented in Table 2, which displays results for how the education policy variables moderate the effect of unemployment on capabilities. Since capabilities is a binary variable, the multilevel linear probability models in Table 2 show the change in the probability of having high capabilities associated with a one-unit increase in the independent variables. Note also that this analysis was only performed on rounds 3 and 6.

Model 2, in which no country-level predictors are included, shows that unemployment is associated with significantly lower probability of having high capabilities, net of covariates, which is in line with the theory stating that unemployment restricts agency and reduces capabilities (Fryer, 1986). However, models 3–7, which display results for the cross-level interactions between unemployment and the respective education policy variables, show that this is conditional on education policies, and that the unemployed perceive relatively higher capabilities when education policies

are more inclusive. All interaction terms, except for that with enrollment rate (model 6), are significant at the 5 percent level. Tracking can again be used as an example. When tracking occurs at age 10, the predicted negative effect of unemployment on the probability of having high capabilities is around 17 percentage points (-0.173 , in model 3). However, when tracking occurs at age 16, this same predicted negative effect is only around 4 percentage points ($-0.173 + 0.134 = -0.039$, also in model 3), holding all covariates constant.

Sensitivity analyses

In addition to the sensitivity tests previously mentioned, we excluded each country from the sample on a one-by-one basis, after which all the models in Table 1 were estimated without this country (available on request). With the exception of vocational prevalence with Slovakia excluded, enrollment rate with Greece excluded, and second chance opportunities with Portugal excluded, the interaction effects remained statistically significant over the course of this procedure.

As for sensitivity to inclusion of additional macro-level covariates, we re-estimated the models in Table 1 but with country youth unemployment rate (to account for differential compositions of the unemployed population) and country GDP per capita (to account for wealth differences) (Van Oorschot and Chung, 2015) as moderator variables (see Tables S9 to S10 in the Supplemental Appendix). Moreover, we disaggregated labor market expenditure into passive (e.g. unemployment benefits) and active (e.g. job search assistance) LMPs (Table S11 in the Supplemental Appendix) (Voßemer et al., 2018). Throughout these additional models, the interaction effects for the education policy variables were similar in magnitude and remained statistically significant. Concerning the results of the additional moderator variables, GDP was associated with higher well-being for employed/students, but did not moderate the association between unemployment and well-being. Unemployment was associated with higher well-being for employed/students, and was in some models associated with a slightly weaker effect of individual unemployment. The latter is in line with Clark et al. (2010), and possibly due to less stigma and self-blame associated with unemployment, or due to weaker health selection effects, in context of high unemployment rates. The moderating effect of passive LMPs was, depending on model specification, either non-significant or slightly positive (in line with Wulframm, 2014), while the effect of ALMPs was either non-significant or negative. The latter finding might seem surprising in light of the capability-argument, but it is in line with Voßemer et al. (2018), and might be explained by the “paternalistic” and disciplinary elements inherent in some activation policies. It is, however, beyond the scope of this study to explore the results of these covariates in detail.

Furthermore, since country data are missing for different policies, restricting the sample to countries with complete country data throughout the analyses would reduce the number of country observations to levels lower than recommended for multilevel models (Bryan and Jenkins, 2015). However, we re-estimated the models in Table 1 using only countries with complete country data. Also, with few countries, complex multilevel models with many country-level parameters can lead to unreliable results. For this reason, we preferred a more parsimonious random intercept model in Table 1, but added random slopes for unemployment in sensitivity analyses. Through both these procedures, the interaction effects were mostly similar, though slightly weaker, in magnitude but vocational prevalence and second chance opportunities were no longer significant with the reduced sample, and enrollment rate and second chance opportunities were no longer significant in the random slope model (Tables S12 and S13 in the Supplemental Appendix).

Conclusion

On the basis of the capability approach and research on spillover effects of policies, the aim of this study was to investigate if education policies moderate the association between unemployment and well-being. This aim was approached by analyzing cross-level interaction effects between individual-level employment status and a range of country-level education policies, with well-being as the outcome. The study also aimed to test two observable implications of the capability approach by examining whether the moderating effects differ depending on individual education (hypothesis 5), and whether the same education policies also moderate the association between unemployment and capabilities, in the sense of subjective control and agency (hypothesis 6).

Hypotheses 1–4 (corresponding, respectively, to tracking, vocational orientation, enrollment and second chance opportunities) received considerable support, as all policy variables significantly moderated the association between unemployment and well-being (though some variables were in one or two cases non-significant in sensitivity analyses). However, the unemployment–well-being association was only smaller in countries with generous, not intermediate, second chance opportunities (hypothesis 4). One interpretation of this is that only when second chance opportunities are implemented throughout the higher education system do prospective students perceive them as increasing access opportunities. Hypothesis 5 gained some support, though not as unequivocal: as is apparent from Figures 1 to 5, there is a pattern of stronger moderating effects of policies for the effect of unemployment on well-being for young adults with low levels of education. The support for hypothesis 6 was rather strong, as all but one of the policy indicators significantly and rather substantially moderated the unemployment–capabilities association. This lends support to the proposed mechanism linking inclusive education policies to higher well-being among unemployed young adults.

The results across the different policies were fairly consistent, which raises the question of whether countries form distinct clusters in terms of educational opportunities provided, and the possibility that the empirical results are driven by one underlying policy model that correlates strongly with well-being. However, a comparison of the country scores on the different policies, as well as the bivariate correlations between these (see Tables S3 and S4 in the Supplemental Appendix) indicates that this is not really the case. With the exception of vocational orientation and tracking age, the highest correlations are around 0.4, and the lowest are virtually 0. Nor are the education policies, with the exception of generous second chance opportunities, strongly correlated with spending on LMPs. Moreover, there are notable differences within geographical regions. For instance, Greece has a clearly higher enrollment rate than other southern European countries, as has Slovenia compared to other central and eastern Europe countries, while Denmark is noticeably more vocationally specific than other Nordic countries. However, due to a low number of countries, all policies could not be analyzed simultaneously, which prevents us from estimating the net effect of each policy.

The study makes a number of contributions to existing research literatures. Empirically, it contributes both to comparative education systems research and to the comparative literature on welfare states and health. In recent publications, OECD (2017) highlights the importance of taking well-being into account when evaluating education systems, and stresses the need for more research on this topic. Similar calls for a broader agenda for education policy, in which well-being is put on an equal footing with academic or employment outcomes, have been made by academics (Montt and Borgonovi, 2018), and recent studies looked at various “soft” outcomes of education policies, including mental illness (Bracke et al., 2013) and sense of belonging (Montt and Borgonovi, 2018). This study suggests that the role of education policies for non-academic outcomes, through spillover effects, might extend beyond actual students.

With regard to the comparative literature on social policy and health, the lion's share of this research is limited to analyzing the role of social protection and transfers, such as pensions or unemployment benefits, or to welfare regimes constructed from these. Less attention is paid to the role of services (with a partial exception for ALMPs), such as education, despite the centrality of these domains for the life chances of individuals. Hence, and against the background of a shift toward a social investment paradigm in European social policy, a recent review of comparative social policy and health research called for a greater attention to the "productive dimension" of the welfare state, including education (Bergqvist et al., 2013: 17). This study addresses the lack of comparative studies investigating the role of social investment policies for well-being. Likewise, most comparative research on unemployment and well-being focus on LMPs, especially unemployment benefits. However, for young adults in particular, education can be an equally central policy domain, not least in the context of large number of NEETs—not in employment, education, or training—across Europe. Consequently, access to education is put at center stage in the EU "EU Youth Employment Initiative" launched in 2013, and directed toward European NEETs below 30 years (European Commission, 2016). The results of this study are in line with research showing positive relationships between ALMPs and well-being, especially for vulnerable labor market segments (Carr and Chung, 2014).

The study also makes some theoretical contributions. It builds on the emergent literature suggesting that policies can have spillover effects on well-being, and offers a theoretical framework through which these effects can be understood. By relating spillover effects to the capability approach, and to a framework where human agency and well-being is viewed as future-oriented (cf. Seligman et al., 2013), it suggests a novel mechanism through which spillover effects can arise. Previous research on spillover effects focused on the insurance mechanism and argued that the spillovers arise through reduced stress when individuals are protected against sharp drops in incomes due to risks such as unemployment (a "peace of mind" effect; Haushofer et al., 2017). While the availability of education policies can be seen as a form of human capital insurance, this study also suggests that agency and capabilities can be an equally important dimension.

The study has important limitations. The micro-level data from the ESS used in this study, while of high quality, cannot capture all of the potential well-being benefits of education policies. This is because part of the effect of the education policies analyzed can be expected to operate by enabling *transitions* from unemployment to employment or to studies. However, since the ESS data are cross-sectional, and measure both employment status and well-being at the same time, these effects cannot be fully captured with this type of data. Another drawback of this cross-sectional data is that it is difficult to take compositional and selection effects into account, and if the unemployed population across the included countries is heterogeneous in ways related to both well-being and education policies, this could introduce bias. Moreover, it is important to stress that, with cross-sectional data, causal interpretations should be made with caution. For instance, multilevel models assume that the country-level random effects are uncorrelated with the country-level covariates. If this is not satisfied, for example, due to omitted variables, the estimated effects of the education policies might be biased.

Future research should focus on further investigating this issue with individual-level longitudinal data in a cross-country comparative framework. Although this study attempted to capture different dimensions of education policy inclusiveness, the analysis is nevertheless not exhaustive, and future studies should investigate if the results hold for other types of policies. Moreover, the analysis should be extended to other vulnerable groups with high unemployment risks, who therefore also experience a need to strengthen their human capital through education or training, such as migrants or older workers.

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Supplemental material

Supplemental material for this article is available online.

References

- Anand P and Van Hees M (2006) Capabilities and achievements: An empirical study. *The Journal of Socio-Economics* 35(2): 268–284.
- Anderson CJ and Pontusson J (2007) Workers, worries and welfare states: Social protection and job insecurity in 15 OECD countries. *European Journal of Political Research* 46: 211–235.
- Bäckman O, Jakobsen V, Lorentzen T, et al. (2011) *Dropping out in Scandinavia social exclusion and labour market attachment among upper secondary school dropouts in Denmark, Finland, Norway and Sweden*. Working Paper No. 2011:8, Institute for Futures Studies. Available at: https://ideas.repec.org/p/hhs/ifswps/2011_008.html
- Baicker K, Taubman SL, Allen HL, et al. (2013) The Oregon experiment—Effects of Medicaid on clinical outcomes. *The New England Journal of Medicine* 368: 1713–1722.
- Bergqvist K, Yngwe MÅ and Lundberg O (2013) Understanding the role of welfare state characteristics for health and inequalities—An analytical review. *BMC Public Health* 27(13): 1234.
- Blossfeld HP, Buchholz S, Skopek J, et al. (2016) *Models of Secondary Education and Social Inequality: An International Comparison*. Cheltenham: Edward Elgar.
- Bol T and Van de Werfhorst HG (2013) *The measurement of tracking, vocational orientation, and standardization of educational systems: A comparative approach*. AIAS, GINI Discussion Paper No. 81. Available at: <http://www.gini-research.org/system/uploads/532/original/81.pdf?380554366>
- Bracke P, Pattyn E and von dem Knesebeck O (2013) Overeducation and depressive symptoms: Diminishing mental health returns to education. *Sociology of Health & Illness* 35(8): 1242–1259.
- Breen R and Jonsson JO (2000) Analyzing educational careers: A multinomial transition model. *American Sociological Review* 65(5): 754–772.
- Bryan ML and Jenkins SP (2015) Multilevel modelling of country effects: A cautionary tale. *European Sociological Review* 32(1): 1–20.
- Brzinsky-Fay C (2007) Lost in transition? Labour market entry sequences of school leavers in Europe. *European Sociological Review* 23(4): 409–422.
- Carr E and Chung H (2014) Employment insecurity and life satisfaction: The moderating influence of labour market policies across Europe. *Journal of European Social Policy* 24(4): 383–399.
- Clark A, Knabe A and Rätzl S (2010) Boon or bane? Others' unemployment, well-being and job insecurity. *Labour Economics* 17(1): 52–61.
- Cunha F and Heckman JJ (2007) The technology of skill formation. *American Economic Review* 97(2): 31–47.
- Diener E, Inglehart R and Tay L (2013) Theory and validity of Life Satisfaction Scales. *Social Indicators Research* 112(3): 497–527.
- European Commission (2016) *The EU Youth Employment Initiative—Investing in Young People*. Luxembourg: Publications Office of the European Union.
- Eurydice (2013) *Recognition of Prior Non-Formal and Informal Learning in Higher Education*. Luxembourg: Publications Office of the European Union.
- Eurydice (2014) *Modernization of Higher Education in Europe: Access, Retention and Employability*. Luxembourg: Publications Office of the European Union.
- Fryer D (1986) Employment deprivation and personal agency during unemployment: A critical discussion of Jahoda's explanation of the psychological effects of unemployment. *Social Behaviour* 1: 3–23.

- Graham C and Nikolova M (2015) Bentham or Aristotle in the development process? An empirical investigation of capabilities and subjective well-being. *World Development* 68: 163–179.
- Green F (2011) Unpacking the misery multiplier: How employability modifies the impacts of unemployment and job insecurity on life satisfaction and mental health. *Journal of Health Economics* 30(2): 265–276.
- Hannan DF, ORIain S and Whelan CT (1997) Youth unemployment and psychological distress in the Republic of Ireland. *Journal of Adolescence* 20(3): 307–320.
- Hanushek EA, Schwerdt G, Woessmann L, et al. (2017) General education, vocational education, and labor-market outcomes over the life-cycle. *The Journal of Human Resources* 52(1): 48–88.
- Haushofer J, Chemin M, Jang C, et al. (2017) Peace of mind: Health insurance reduces stress and cortisol levels—Evidence from a randomized experiment in Kenya. Working paper, February. Available at: <https://pdfs.semanticscholar.org/2b87/91d83e91a8dca06c5d0becdcb054f31d7d43.pdf>
- Högberg B (2019) Transitions from unemployment to education in Europe: The role of educational policies. *Journal of Social Policy*. Epub ahead of print 7 March 2019. DOI: 10.1017/S0047279418000788.
- Inbar DE (1995) Second chance in education: Principles and rituals. *The Journal of General Education* 44(1): 26–44.
- Infurna FJ, Gerstorf D, Ram N, et al. (2016) Maintaining perceived control with unemployment facilitates future adjustment. *Journal of Vocational Behavior* 93: 103–119.
- King G, Keohane RO and Verba S (1994) *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton, NJ: Princeton University Press.
- Kohler U (2008) Quality assessment of European surveys. Towards an open method of coordination for survey data. In: Alber J, Fahey T and Saraceno C (eds) *Handbook of Quality of Life in the Enlarged European Union*. London: Routledge, pp. 405–424.
- Korpi T, de Graaf P, Hendrick J, et al. (2003) Vocational training and career employment precariousness in Great Britain, the Netherlands and Sweden. *Acta Sociologica* 46(1): 17–30.
- Lorgelly PK, Lorimer K, Fenwick EA, et al. (2015) Operationalising the capability approach as an outcome measure in public health: The development of the OCAP-18. *Social Science & Medicine* 142: 68–81.
- MacLeod AK and Conway C (2005) Well-being and the anticipation of future positive experiences: The role of income, social networks, and planning ability. *Cognition & Emotion* 19(3): 357–374.
- Montt G and Borgonovi F (2018) Combining achievement and well-being in the assessment of education systems. *Social Indicators Research* 138(4): 1–26.
- Müller W (2005) Education and youth integration into European labour markets. *International Journal of Comparative Sociology* 46(5): 461–485.
- Nussbaum M and Sen A (eds) (1993) *The Quality of Life*. Oxford: Clarendon Press.
- Organisation for Economic Co-operation and Development (OECD) (2007) *Education at a Glance 2007: OECD Indicators*. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD) (2013) *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD) (2017) *How's Life? Measuring Well-Being*. Paris: OECD Publishing.
- Orr D, Usher A, Haj C, et al. (2017) *Study on the impact of admission systems on higher education outcomes*. Directorate-General for Education and Culture, EAC-2015-0470. Luxembourg: Publications Office of the European Union.
- Seligman M, Railton P, Baumeister RF, et al. (2013) Navigating into the future or driven by the past. *Perspectives on Psychological Science* 8(2): 119–141.
- Sen A (1999) *Development as Freedom*. Oxford: Oxford University Press.
- Senik C (2008) Is man doomed to progress? *Journal of Economic Behavior & Organization* 68(1): 140–152.
- Shavit Y and Müller W (2000) Vocational secondary education: Where diversion and where safety net? *European Societies* 2(1): 29–50.
- Shavit Y, Arum R and Gamoran A (2007) *Stratification in Higher Education: A Comparative Study*. Stanford: Stanford University Press.
- Sjöberg O (2010) Social insurance as a collective resource: Unemployment benefits, job insecurity and subjective well-being in a comparative perspective. *Social Forces* 88: 1281–1304.

- Statens offentliga utredningar (2003) *Utbildningens fördelning—en fråga om klass?: bilaga 10 till Långtidsutredningen 2003* [Official Reports of the Swedish Government. The Distribution of Education—A Matter of Class?]. Stockholm: Statens offentliga utredningar.
- Strandh M (2000) Different exit routes from unemployment and their impact on mental well-being: The role of the economic situation and the predictability of the life course. *Work, Employment and Society* 14: 459–479.
- Tafere K, Barrett CB, Lentz E, et al. (2017) *Insuring well-being? Buyer's remorse and peace of mind effects from insurance*. Policy Research, Working Paper No. WPS 8256. Washington, DC: The World Bank.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2006) UNESCO online database. Available at: <http://data.uis.unesco.org>
- Van Elk R, van der Steeg M and Webbink D (2011) Does the timing of tracking affect higher education completion? *Economics of Education Review* 30(5): 1009–1021.
- Van Oorschot W and Chung H (2015) Feelings of dual-insecurity among European workers: A multi-level analysis. *European Journal of Industrial Relations* 21(1): 23–37.
- Veenhoven R (2010) Capability and happiness: Conceptual difference and reality links. *The Journal of Socio-Economics* 39(3): 344–350.
- Verme P (2009) Happiness, freedom and control. *Journal of Economic Behavior & Organization* 71(2): 146–161.
- Vinokur AD and Schul Y (1997) Mastery and inoculation against setbacks as active ingredients in the JOBS intervention for the unemployed. *Journal of Consulting and Clinical Psychology* 65(5): 867–877.
- Voßemer J, Gebel M, Täht K, et al. (2018) The effects of unemployment and insecure jobs on well-being and health: The moderating role of labor market policies. *Social Indicators Research* 138: 1229–1257.
- Wulfgramm M (2014) Life satisfaction effects of unemployment in Europe: The moderating influence of labour market policy. *Journal of European Social Policy* 24(3): 258–272.