5

Participation of Vulnerable Young Labour Market Groups in Job-Related Training: The Effect of Macro-structural and Institutional Characteristics

Ellu Saar, Eve-Liis Roosmaa, and Liisa Martma

Introduction

Global economic changes have altered labour market demand in favour of high-skilled workers. The number of jobs requiring low levels of skill has significantly declined, which has led to poorer labour market opportunities for people with low-skill levels (OECD, 2013). These changes have also created a vicious circle in that increasing the skill-set required in low-skilled jobs has meant that not only do workers in those positions lose their jobs but also they cannot meet the skill-sets required for other low-skilled jobs (Maxwell, 2006). Increased competition—stemming from the changing balance of supply and demand in the market—is likely to mostly affect the least competitive individuals. Education and

E. Saar • E.-L. Roosmaa (✉) • L. Martma
Tallinn University, Tallinn, Estonia
e-mail: roosmaa@tlu.ee

J. Holford et al. (eds.), *Lifelong Learning, Young Adults and the Challenges of Disadvantage in Europe*, Palgrave Studies in Adult Education and Lifelong Learning,
https://doi.org/10.1007/978-3-031-14109-6_5

training policies, meanwhile, are often directed at increasing labour productivity rather than integrating vulnerable groups into the labour market (Acemoglu & Pischke, 2000).

The transition to knowledge-based economies requires ever more effort to provide continuous skill updating in order to maintain economic growth and competitiveness as well as social cohesion and equal opportunities in life chances. Young people comprise a group that is listed as at risk of social exclusion in European and national official documents. The analysis presented in Chap. 3 above indicates that the terms *low-skilled* or *low-qualified* are those most commonly used to characterise vulnerable young people in European official literature on lifelong learning. However, this characterisation of vulnerable young people focuses on individual factors in lifelong learning policies. Cort et al. (2018) argue the primary emphasis on the attainment of skills makes the individual responsible for acquiring the 'right skills'. Research has shown a strong positive relationship between participation in adult education and skills proficiency (the so-called Matthew effect) (OECD, 2013). Yet recent research has challenged the individualised interpretation of inequalities in participation by showing that participation in training is even more strongly determined by characteristics of workplaces and occupations and less by individual resources[1] (Schindler et al., 2011; Mohr et al., 2015; Saar & Räis, 2017). This demand side has so far attracted little research or discussion. At the same time, employees working in occupations for which only elementary skills are required are on the margins of the labour market. They face a high threat of unemployment and have restricted possibilities for personal and professional development. The current chapter concentrates on job-related non-formal education and training (NFE) participation of two vulnerable groups of young people: the low-skilled and those working in low-skilled occupations. We consider as low-skilled those whose highest qualification is at lower secondary level. These two groups overlap because people

[1] There is a very clear distinction between people with low skill or educational levels and employees working in elementary occupations. If the levels of skills and education account for the supply side, occupation and labour market status are variables accounting for the demand side of the labour market. The demand side seems to have an even stronger association with participation in adult training (see Desjardins, 2014).

with low education are often working in low-skilled occupations (i.e. face an accumulation of disadvantages). However, because there is a considerable percentage of over-educated workers in Europe (McGuiness, 2006; McGuiness et al., 2017), some people with medium-level skills work in low-skilled occupations or are unemployed.

To better understand policy influence on inequality in the training participation of young people, we explore whether the influence of education and occupational position on job-related NFE participation differs systematically across countries. Research shows there are systematic differences between countries in respect of both the level and the inequality of training (Saar et al., 2013; Bills & van de Werfhorst, 2018). Less attention has been paid to the impact of economic recession on training (Felstead et al., 2012). In order to implement an equal opportunity strategy, it is necessary to understand how economic context, international and national policies and institutional structures at the macro-level create learning opportunities for young people across Europe, and to what degree these processes are country-specific. In addition, institutional structures, such as the education system, the labour market and the welfare state, tend to mitigate the effect of individual (i.e. micro-level) factors (e.g. Roosmaa & Saar, 2010). This raises the issue of whether there are policy measures that lead to more equality in training participation between young adult groups. Thus, in the current study, we relate the participation of low-skilled young people and those working in low-skilled occupations to the institutional and macro-structural features that are most likely to influence their participation: the unemployment rate, occupational and educational structure, industrial relations and active labour market policies. However, due to sample size restrictions, we are unable to focus merely on young adults working in elementary occupations (i.e. occupations with the lowest skill requirements), and we therefore analyse a wider occupational group including those working in medium-skilled occupations. In addition, because we are interested in whether patterns of job-related NFE participation have changed for the groups mentioned—and if so, how—we analyse the EU Adult Education Survey 2011 and 2016 data, which enable us to estimate the possible effect of the economic recession that started in 2008.

Data and Methods

The analysis is based on data from the EU Adult Education Surveys 2011 (AES 2011) and 2016 (AES 2016), co-ordinated by Eurostat, the statistical office of the European Union. The AES data analysed cover 28 European countries: 26 EU Member States[2] plus Norway and Switzerland. The survey is representative of the working age population (aged 25–64 years) living in private households; we concentrated on young adults (25–34 years). The focus is on job-related non-formal adult education and training (NFE), which is mostly employer-sponsored and constitutes the majority of total non-formal learning activities (Cedefop, 2015a). Participation in job-related NFE refers to participation in the 12 months prior to the questionnaire-based interview. The AES collects a list of up to ten NFE learning activities followed by a random selection of up to three activities[3] for which respondents are asked to provide more detailed information, including whether the purpose was mainly job-related or mainly not job-related.

More precisely, we concentrate on the participation of two vulnerable groups of young adults: those with low educational attainment (ISCED 0–2)[4] and those working in low- or medium-skilled occupations (ISCO 5–9).[5] We were unable to restrict the analysis to elementary occupations—the least skill-intensive—alone, because of small sample sizes

[2] Croatia did not participate in AES 2011 and Croatian AES 2016 data is not included in the analysis due to the lack of comparable data. Ireland is not included in the analysis because in 2011, detailed information on training and on job-related purpose of training was collected only by considering one training activity among those mentioned by the respondent (instead of at least two activities as instructed by Eurostat). This can influence respective results and comparisons (for more detail see Cedefop, 2015a, p. 20). Moreover, in AES 2016, the Irish sample excluded people in continuous full-time education. The UK was a member state at these times.

[3] The Eurostat regulation asked for at least two NFE activities.

[4] According to the International Standard Classification of Education, ISCED 2011, the respective educational groups are pre-primary, primary and basic education. The AES does not measure specific skill levels of the respondents.

[5] According to the International Standard Classification of Occupations, ISCO-08, the respective occupational groups are service and sales workers, skilled agricultural, forestry and fishery workers, craft and related trades workers, plant and machine operators, and assemblers and elementary occupations. According to the ISCO-08 description, ISCO 9 occupations correspond to skill level 1 (respectively primary education) and ISCO 4–8 occupations correspond to skill level 2 (up to post-secondary non-tertiary education) (ILO, 2012, p. 14).

among the age group of 25–34 years. The ISCO 4 group (clerical support workers) is not included amongst the low- and medium-skilled occupations here, because their educational background is significantly higher (more have obtained tertiary level education compared to ISCO 5–9), and they have considerably higher NFE participation rates. In the analysis, the reference groups are young people with upper secondary education or higher (ISCED 3–5)[6] and people working in high-skilled occupations (ISCO 1–3).[7]

Although our main interest is the impact of institutional characteristics on the probability of participation, the logistic regression models control for some individual level characteristics. Thus, all include gender as a control variable. In the case of the subgroup of young people with low educational level, the models control for labour market position (employed, unemployed, inactive). For the subgroup of young people working in medium- or low-skilled occupations, the models control for the economic sector of activity (four sectors, based on a slightly modified version of the Singelmann scheme (1978, pp. 1227–1234)). The analysis of the macro-structural context and institutional settings of the countries includes various indicators from the Eurostat dissemination dataset (the percentages of low-educated population and elementary occupations; investment in active labour market measures) and the OECD database (employment protection legislation (EPL) index) (see Table 5.1).

The first step in the analysis was to calculate at country level the participation rates in job-related NFE for the two vulnerable groups of young adults. For the pooled analysis (which includes 26 country cases in 2011[8] and 28 country cases in 2016), we start with a comparison between economic sectors (including interaction effects). The second step involved a multi-level, mixed-effect logistic regression in order to test the impact

[6] The respective educational groups are upper secondary, post-secondary non-tertiary and tertiary education.

[7] These ISCO codes correspond to managers, professionals and technicians and associate professionals.

[8] In Belgium, AES 2011 was integrated into the Labour Force Survey (LFS). As LFS has its own specificities this aspect has been assessed as a factor likely to influence cross-country comparability by under reporting of participation (for more detail see Cedefop, 2015a, p. 20). In addition, in the 2011 regression models, the UK is not included because there is no information on the economic sector in AES 2011.

Table 5.1 The description of macro-level variables, 2011 AES dataset

Country	EPL (2011)	ALMP active labour market policies expenditure, % of GDP (2011)	Unemployment % (2011)	Low educated (ISCED 0–2) % (2011)	Elementary occupation (ISCO 9) % (2011)
AT	2.37	0.55	4.60	23.10	8.55
BG	NA	0.12	11.30	24.00	9.65
CH	1.60	NA	NA	21.40	4.46
CY	NA	0.30	7.90	28.30	17.68
CZ	3.05	0.17	6.70	13.90	5.41
DE	2.68	0.43	5.80	18.10	8.40
DK	2.20	1.42	7.60	30.70	10.62
EE	1.81	0.14	12.30	17.70	9.04
EL	2.17	0.22[a]	17.90	37.10	7.26
ES	2.21	0.69	21.40	47.00	13.03
FI	2.17	0.82	7.80	22.90	6.24
FR	2.38	0.68	9.20	31.20	10.05
HU	2.00	0.35	11.00	24.30	8.81
IT	2.76	0.31	8.40	45.50	10.09
LT	NA	0.18	15.40	15.90	7.79
LU	2.25	0.46	4.80	29.10	7.43
LV	2.69[b]	0.33	16.20	19.50	14.28
MT	NA	0.08	6.40	58.90	10.02
NL	2.82	0.68	5.00	31.80	7.92
NO	2.33	NA	3.40	25.40	4.19
PL	2.23	0.33	9.70	17.50	6.97
PT	4.13	0.45	12.90	64.20	11.86
RO	NA	0.03	7.20	30.00	10.56
SE	2.61	0.91	7.80	24.40	5.14
SI	2.60	0.25	8.20	19.70	8.33
SK	2.22	0.22	13.70	16.30	8.81
UK	1.26	0.08[a]	8.10	23.80	8.84

Source: Eurostat dissemination database; ICTWSS (Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts)

Notes: *NA* not available; *AT* Austria; *BG* Bulgaria; *CH* Switzerland; *CY* Cyprus; *CZ* Czech Republic; *DE* Germany; *DK* Denmark; *EE* Estonia; *EL* Greece; *ES* Spain; *FI* Finland; *FR* France; *HU* Hungary; *IT* Italy; *LT* Lithuania; *LU* Luxembourg; *LV* Latvia; *MT* Malta; *NL* The Netherlands; *NO* Norway; *PL* Poland; *PT* Portugal; *RO* Romania; *SE* Sweden; *SI* Slovenia; *SK* Slovakia; *UK* United Kingdom

[a]Data from 2010

[b]Data from 2012

of various macro-level contextual factors on the individual probability of being in job-related NFE among the subgroups of low-skilled people and those working in medium or low-skilled occupations. The third step used a stepwise inclusion of variables measuring various macro-economic and institutional features to test the impact of macro-level predictors. The latter is important in order to avoid the problem of multicollinearity as various institutional features may be correlated. Moreover, logistic regression models control for interaction effects between two groups of young people and respective macro-economic and institutional variables.

Inequality in Participation

Young Adults with Low Educational Levels

Figure 5.1 illustrates participation in job-related NFE in 2011 and 2016 among young people who have up to a lower secondary qualification as their highest completed education. On average in the countries observed, about one-fifth of the 25–34-year-old age group with low skills participated in job-related training in both 2011 and 2016. However, it appears that by 2016, in 10 of the 28 countries the job-related NFE rate of low-skilled youth had considerably increased[9] (especially in Latvia and the UK),[10] while in four countries the respective rate has decreased (most drastically in Luxembourg).[11] We might therefore assume that after the economic recession, NFE participation opportunities improved. Overall, there are large country differences in the participation rates of low-skilled young adults. Thus, in 2016 in Norway, Switzerland, Hungary, Portugal

[9] The difference between 2011 and 2016 low-skilled job-related NFE participation rates is more than 5 percentage points.

[10] The AES 2011 and AES 2016 are based on respondents from England only and therefore did not include respondents in Wales, Scotland and Northern Ireland. Further, the UK AES Quality Report explains that there are a number of key differences between the two survey waves and therefore comparisons should be made with a certain degree of caution.

[11] In Luxembourg, AES 2011 was carried out as an online survey with a pre-existing web panel. The 2016 survey was based on a randomly drawn sample from the national population register. This fundamental methodological change might have had a serious impact on the results and therefore comparisons between 2011 and 2016 should be made with caution.

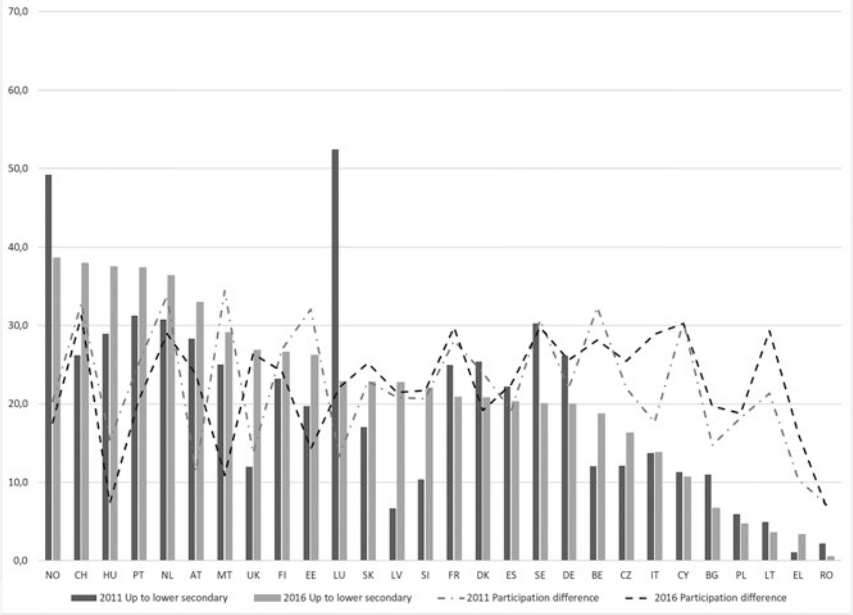

Fig. 5.1 Participation in job-related non-formal education and training (%) among low-skilled young adults (25–34) in 28 selected European countries for 2011 and 2016. (Source: AES 2011, AES 2016; Authors' own calculation. Notes: Countries are ranked by 2016 participation rates from highest to lowest. The difference in job-related NFE rates = upper secondary or higher education (ISCED 3–5)—up to lower secondary education (ISCED 0–2))

and the Netherlands about 40% of low-skilled youth took part in job-related training, whereas in Poland, Lithuania, Greece and Romania fewer than 5% participated. It appears that low-skilled people have better training opportunities in countries with high overall lifelong learning participation rates but also in countries where the adult education system is specifically orientated towards the low-skilled (e.g. Portugal, see UNESCO, 2016).

Comparison with those who have attained upper secondary education or higher is indicated in Fig. 5.1 by the difference in participation calculated by subtracting job-related NFE participation rates of those who have up to lower secondary education from those with upper secondary or higher education. Hence, the difference is expressed in percentage

points. As expected, in all countries young adults with upper secondary or higher education participate more often in job-related training, yet country differences between high- and low-skilled participation rates are considerable. High-skilled youth participate in training twice as much as low-skilled youth. In 2016, the smallest difference (about 7 percentage points) is observable in Hungary and Romania, countries lying at two extremes of the figure—the former with one of the highest and the latter with the lowest training participation rate among young adults who have up to lower secondary education. The widest participation gaps (about 30 percentage points) appear in Switzerland and the Netherlands, countries with high low-skilled job-related NFE participation rates, but mostly wider differences are present in countries with either medium participation rates (France, Sweden[12] and Belgium) or low ones (Italy, Cyprus and Lithuania) for those with low educational attainment. In both years, the number of countries with wide participation gaps between low- and high-skilled young people has remained the same (8 out of 28), and the countries themselves are largely the same.

A comparison of the job-related NFE participation differences between low- and high-skilled people in 2011 and 2016 reveals that these changes occurred for various reasons. On the one hand, by 2016, the difference between the two educational groups had notably *increased*[13] in Austria and the UK, because job-related NFE has increased for both groups but especially for those with higher educational attainment. In Greece, Italy and Lithuania, the participation difference had increased due to higher NFE participation rates among high-skilled young people while remaining about the same for low-skilled people. On the other hand, in Hungary, the participation difference *decreased* because participation had increased among low-skilled people and remained the same for the high-skilled, whereas Estonia and Malta also witnessed a participation increase for the low-skilled, but simultaneously a considerable decrease among the

[12] According to the Swedish AES Quality Report, the data collection mode between 2011 and 2016 changes from CAPI/CATI to just CATI; therefore, there are data comparability issues. Moreover, it is emphasised that there is no reason to assume that participation in NFE has decreased from 2011 to 2016.

[13] Here we consider 6 percentage points and larger changes between 2011 and 2016 job-related NFE participation differences.

high-skilled. In Luxembourg, both educational groups had lower job-related NFE participation rates in 2016, but the decrease is larger for the low-skilled.[14] The differences in tendencies between countries may be explained by variations in the demand for skills in the labour market (structure of occupations, percentage of innovation-driven enterprises, etc.) (see also Desjardins, 2014), or by variances in enterprise training culture (Markowitsch & Hefler, 2007). In addition, participation in job-related NFE could reflect a difference in the impact of the economic crisis that started in 2008 (EAEA, 2014).

Young Adults Working in Low- and Medium-Skilled Occupations

Figure 5.2 shows participation in job-related NFE in 2011 and 2016 among young people working in low- or medium-skilled occupations. The results indicate that on average more than one third of this group participated in job-related training. Participation rates by occupational position are higher than those for educational attainment because, in the context of occupations, a relatively wide group due to sample size restrictions is observed (ISCO 5–9).

For low- or medium-skilled occupations, job-related NFE rates considerably increased[15] from 2011 to 2016 in 11 out of the 28 countries (particularly in Latvia, the UK and Slovakia) but decreased in five countries (by the greatest proportion in Luxembourg). As with low-skilled young adults, there are also notable country differences for young people in low- or medium-skilled occupations. The highest participation rates in 2016 appear in Slovakia, Norway, the Netherlands, Switzerland and Austria, where more than half of the respective group attended job-related NFE. At the other extreme are Poland with a participation rate of 18%, Greece with 12% and Romania with 5%. Thus, the pattern is rather similar to that (shown in Fig. 5.1) for low-skilled young adults.

[14] As mentioned earlier, in Luxembourg's case, comparability between AES 2011 and AES 2016 is highly problematic.

[15] The difference between 2011 and 2016 low or medium occupation job-related NFE participation rates is more than 5 percentage points.

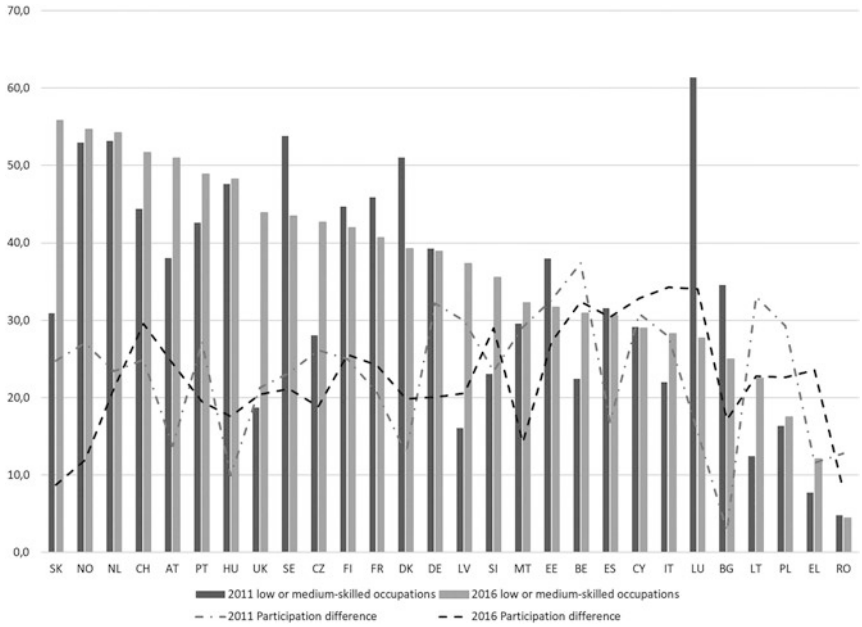

Fig. 5.2 Participation in job-related non-formal education and training (%) among young adults (25–34) in low- or medium-skilled occupations in 28 selected European countries for 2011 and 2016. (Source: AES 2011, AES 2016; Authors' own calculation. Notes: Countries are ordered by 2016 participation rates from highest to lowest. Difference in job-related NFE rates = high-skilled occupations (ISCO 1–3)—low- or medium-skilled occupations (ISCO 5–9))

In all countries, 25–34-year-olds working in low- or medium-skilled occupations participate less often in the job-related NFE than their counterparts in high-skilled occupations. However, because those working in medium-skilled occupations are included, participation differences are narrower than those observed between the two educational groups. In 2016, the smallest participation rate differences (on average 10 percentage points) between occupational groups appeared again at the two extremes: first, in Slovakia and Norway, countries with the highest job-related NFE rates among the low- or medium-skilled; and second, in Romania, which had the lowest rate. Participation rate difference for the two occupational groups is mostly widest (about 30 percentage points) in countries characterised by a lower than average NFE

participation rate among young adults: Belgium, Spain, Cyprus, Italy and Luxembourg. Still, the participation gap is wide also in Slovenia and Switzerland, where young people working in low- or medium-skilled occupations have average or high job-related training participation. In 2011 and 2016, the number of countries with a wide participation gap between low- or medium- and high-skilled occupations has remained about the same (respectively 8 and 7 out of 28) but countries vary more between the two years than in the case of educational groups.

Comparing the job-related NFE participation differences of low- or medium-skilled with high-skilled occupational groups in 2011 and 2016 shows that the differences between these groups *increased* markedly[16] in Austria because of the higher participation rates for both occupational groups, but more so for the high-skilled. In Greece and Spain, the participation difference widened due to higher NFE participation among the high-skilled, while for the low- or medium-skilled the participation rate remained about the same. In Bulgaria, the occupational group difference increased because of an increase among the high-skilled and a decrease among the low- or medium-skilled. In Slovakia and Latvia, the job-related NFE participation difference *decreased* significantly: the training incidence in 2016 was higher for both occupational groups, but particularly for the low- or medium-skilled. In Lithuania, training participation has increased for the less advantaged occupational group, yet the participation rate remained about the same for the high-skilled. Finally, the job-related NFE participation difference decreased in Germany, Norway and Malta, as a result of stable participation rates for the low- or medium-skilled occupations and decreased rates for high-skilled occupations.

The Impact of Economic Sector

The impact of the economic sector on training incidence is well documented (OECD, 2003; Cedefop, 2015a, b). Firms operating in training-intensive or innovation-driven sectors (e.g. professional, scientific and technological activities, finance, insurance and real estate, information

[16] Here we consider 9 percentage point and larger changes between 2011 and 2016 job-related NFE participation differences.

and communication) and areas of the public sector with a higher proportion of high-skilled employees (e.g. education, health and public administration) are more likely to provide job-related training. Moreover, parts of the public sector may be obliged to train by national legislation (Cedefop, 2015a).

Our results largely confirm previous findings. Young adults working in manufacturing industry, construction or transport, and in wholesale, retail, accommodation or food service sectors, have a lower probability of participating in job-related NFE compared to those working in professional, scientific, technical, administrative or support services, public administration, education, health and social work sector. This holds for both years of observation (see Table 5.2). However, we find no significant differences in the probabilities of participating in job-related training for those working in agriculture, forestry and fishing compared to those in training-intensive sectors (probably because of the small sample size for the former group).

Additionally, in 2011 (i.e. towards the end of the post-2008 economic recession), interaction effects show that working in industry, or in the construction or transport sectors, decreased the probability of NFE participation for low- and medium-skilled occupations even more than for high-skilled occupations. Analysis for 2016 does not show economic sector differences by occupational group.

The Impact of Macro Context

The impact of economic downturns and levels of unemployment on participation in job-related training is ambiguous (Dieckhoff, 2014). On the one hand, training costs are lower during a recession because there is less demand. Cost-benefit calculations during a recession might lead employers to invest more in the training of low-skilled workers and those in elementary occupations. In addition, the state may influence the supply of training programmes by providing various subsidy schemes for wages and training (Bosch, 2010). On the other hand, businesses experience financial constraints, which make them reluctant to invest in training and especially in training low-skilled workers. In a deep and prolonged

Table 5.2 The description of macro-level variables, 2016 AES dataset

Country	EPL (2013)	ALMP (active labour market policies) expenditure, % of GDP (2015)	Unemployment % (2016)	Low educated (ISCED 0–2) % (2016)	Elementary occupation (ISCO 9) % (2016)
AT	2.37	0.58	6.00	19.60	8.14
BE	1.89	0.53	7.80	28.20	10.64
BG	NA	0.14	7.60	21.90	10.33
CH	1.60	NA	NA	18.20	4.04
CY	NA	0.12	13.00	24.00	14.78
CZ	2.92	0.31	4.00	12.40	5.45
DE	2.68	0.27	4.10	19.80	7.76
DK	2.20	1.46	6.00	27.00	11.36
EE	1.81	0.10[a]	6.80	16.70	7.59
EL	2.12	0.24	23.60	30.00	7.02
ES	2.05	0.45[a]	19.60	42.60	13.03
FI	2.17	0.86	8.80	18.60	6.11
FR	2.38	0.76	10.10	25.50	10.11
HU	1.59	0.81	5.10	21.80	10.69
IT	2.68	0.42	11.70	41.60	11.36
LT	NA	0.25	7.90	12.40	9.14
LU	2.25	0.51	6.30	28.20	8.29
LV	2.69	0.10	9.60	14.90	12.32
MT	NA	0.10[a]	4.70	47.90	8.65
NL	2.82	0.53	6.00	27.90	8.69
NO	2.33	NA	4.80	24.90	3.80
PL	2.23	0.40	6.20	14.60	6.43
PT	3.18	0.48	11.20	52.90	10.80
RO	NA	0.02	5.90	28.00	9.43
SE	2.61	1.02	6.90	21.10	4.85
SI	2.60	0.16	8.00	17.20	6.57
SK	1.84	0.16	9.70	14.30	8.73
UK	1.10	0.08[b]	4.80	20.40	8.57

Source: Eurostat dissemination database; ICTWSS (Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts)

Notes: *NA* not available, *AT* Austria; *BE* Belgium; *BG* Bulgaria; *CH* Switzerland; *CY* Cyprus; *CZ* Czech Republic; *DE* Germany; *DK* Denmark; *EE* Estonia; *EL* Greece; *ES* Spain; *FI* Finland; *FR* France; *HU* Hungary; *IT* Italy; *LT* Lithuania; *LU* Luxembourg; *LV* Latvia; *MT* Malta; *NL* The Netherlands; *NO* Norway; *PL* Poland; *PT* Portugal; *RO* Romania; *SE* Sweden; *SI* Slovenia; *SK* Slovakia; *UK* United Kingdom

[a]Data from 2014

[b]Data from 2010

downturn, the costs of training may increasingly outweigh the benefits, especially for low-skilled workers (Felstead et al., 2012). Although theoretical explanations differ, 'there is a broad perception that the provision of training is negatively affected by recession' (Brunello, 2009, p. 10).

Our analysis based on AES 2011 data indicates that Brunello's proposition is valid: a higher unemployment rate decreased the probability of participating in job-related NFE for young adults—but only during the crisis (see Tables 5.3 and 5.4). In 2016, this effect was not significant. Thus, during the crisis the increased unemployment rate worsened the opportunities for participation in training. The effect is not differentiated by educational groups. This means that in countries where the unemployment rate is higher, the degree of inequality in participation by different educational groups is on the same level as in countries where the unemployment rate is lower.

Table 5.3 Effect of economic sector on participation in job-related non-formal training among young adults according to occupational position, regression coefficients

	2011	2016
Low- and medium-skilled occupation (*ref high-skilled occupation*)	-0.842***	-0.933***
Sector (*ref professional, scientific, technical, administrative and support service, public administration, education, health, social work*)		
Agriculture, forestry and fishing	-0.187	-0.226
Industry, construction, transport	-0.105**	-0.160***
Wholesale, retail, accommodation, food service	-0.397***	-0.314***
Low- and medium-skilled occupation × agriculture, forestry and fishing	-0.387	-0.204
Low- and medium-skilled occupation × industry, construction, transport	-0.187**	0.041
Low- and medium-skilled occupation × wholesale, retail, accommodation, food service	0.037	0.033
N of observations	22,944	21,899
N of groups	26	28
Log-likelihood	-13,750	-13,319

Source: AES 2011, AES 2016; Authors' own calculation

Notes: Dependent variable: participating in job-related training during last 12 months. Method: multilevel mixed effects logistic regression

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$

Table 5.4 Effect of institutional characteristics on participation in job-related non-formal training among young adults according to educational level, regression coefficients

2011	Model 1	Model 2	Model 3	Model 4	Model 5
Low-skilled (*ref. high-skilled*)	–0.914***	–0.831***	–0.875***	–0.688***	–938***
Unemployment rate	–0.074*				
Unemployment rate × low educated	0.001				
Population with low level of education, %		0.008			
Population with low level of education, % × low educated		–0.002			
Population in elementary occupations, %			–0.057		
Population in elementary occupations, % × low educated			–0.004		
EPL index				0.198	
EPL index × low educated				–0.082	
ALMP					1.389***
ALMP × low educated					0.071
N of observations	36,452	38,396	38,396	33,208	35,911
N of groups	26	27	27	22	25
Log-likelihood	–20,179	–21,426	–21,426	–19,193	–19,844
2016					
Low-skilled (*ref. high-skilled*)	–0.812***	–0.941***	–0.927***	–0.725***	–0.963***
Unemployment rate	–0.027				
Unemployment rate × low educated	–0.008				
Population with low level of education, %		0.004			
Population with low level of education, % × low educated		0.001			

(*continued*)

Table 5.4 (continued)

2011	Model 1	Model 2	Model 3	Model 4	Model 5
Population in elementary occupations, %			–0.037		
Population in elementary occupations, % × low educated			0.002		
EPL index				0.079	
EPL index × low educated				–0.071	
ALMP					0.773*
ALMP × low educated					0.133
N of observations	34,596	36,180	36,180	31,460	33,969
N of groups	27	28	28	23	26
Log-likelihood	–20,152	–21,112	–21,108	–19,269	–19,745

Source: AES2011, AES2016; Authors' own calculation

Notes: Dependent variable: participating in job-related training during last 12 months. Method: multilevel mixed effects logistic regression

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$

However, there are some differences in this impact by occupational groups (see Fig. 5.3). Overall, for both years in those countries where the unemployment rate is higher, young adults working in low- or medium-skilled occupations are more disadvantaged in terms of having significantly lower participation rates in job-related NFE. Nevertheless, for that mixed occupational group, a higher unemployment rate reduces the probability of participation for both years to a similar degree. An interesting finding is that the recession had a stronger negative effect on training probabilities for individuals working in high-skilled positions. The provision of training subsidy schemes during the crisis did not lead to a decrease in inequality in participation between different occupational and educational groups. Rather it appears that during the recession, employers invested less in the training of workers in high-skilled occupations, which reduced the differences of participation between the two occupational groups.

It can be argued that there is less demand at lower occupational positions for skill upgrading, and NFE participation is therefore lower.

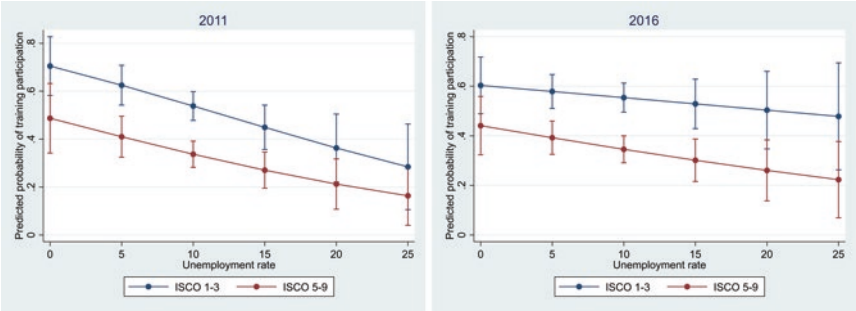

Fig. 5.3 Predicted probabilities of training participation at different levels of unemployment and two broad occupational groups. (Source: AES 2011, AES 2016; Authors' own calculation)

Employers are more interested in training workers holding high occupational positions: thus participation in training should be lower and the training gap higher in countries with a high proportion of adults working in low occupational positions. An opposite argument stems from economic literature, which has found evidence that stigmatisation by employers is inversely related to the size of a certain at-risk or disadvantaged group (Omori, 1997; Biewen & Steffes, 2010). Previous studies have shown that NFE participation among low-skilled employees rises with an increase in the percentage of total jobs at the firm level held by low-skilled employees (Mohr et al., 2015).

Our analysis does not support these arguments. Neither the percentage of the population working in elementary occupations nor the percentage of low educated in the population has any impact on participation of young adults in job-related NFE (see Tables 5.4 and 5.5).

Institutional Influences

Researchers have indicated that high employment protection makes it difficult to dismiss workers, providing an incentive for employers to invest in workers' specific skills and distribute training opportunities more equitably (Dieckhoff et al., 2007). Acemoglu and Pischke (2000)

Table 5.5 Effect of institutional characteristics on participation in job-related non-formal training among young adults according to occupational position, regression coefficients

2011	Model 1	Model 2	Model 3	Model 4	Model 5
Medium- and low-skilled occupation (*ref high-skilled*)	–1.012***	–1.005***	–1.051***	–0.520***	–1.107***
Unemployment rate	–0.079**				
Unemployment rate × medium and low-skilled occupation	0.010				
Population with low level of education, %		–0.002			
Population with low level of education, % × medium- and low-skilled occupation		0.003			
Population in elementary occupations, %			–0.063		
Population in elementary occupations, % × medium- and low-skilled occupation			0.015		
EPL index				0.120	
EPL index × medium- and low-skilled occupation				–0.169***	
ALMP					1.067**
ALMP × medium- and low-skilled occupation					0.448***
N of observations	21,704	22,944	22,944	19,627	21,301
N of groups	25	26	26	21	24
Log-likelihood	–12,957	–13,754	–13,754	–12,116	–12,707

(*continued*)

Table 5.5 (continued)

2011	Model 1	Model 2	Model 3	Model 4	Model 5
2016					
Medium- and low-skilled occupation (*ref high-skilled*)	–0.717***	–0.840***	–0.810***	–1.309***	–0.934***
Unemployment rate	–0.022				
Unemployment rate × medium- and low-skilled occupation	–0.022***				
Population with low level of education, %		–0.003			
Population with low level of education, % × medium- and low-skilled occupation		–0.003			
Population in elementary occupations, %			–0.033		
Population in elementary occupations, % × medium- and low-skilled occupation			–0.011		
EPL index				–0.084	
EPL index × medium- and low-skilled occupation				0.168*	
ALMP					0.671
ALMP × medium- and low-skilled occupation					0.054
N of observations	20,901	21,899	21,899	18,694	20,506
N of groups	27	28	28	23	26
Log-likelihood	–12,763	–13,319	–13,319	–11,899	–12,505

Source: AES2011, AES2016; Authors' own calculation

Notes: Dependent variable: participating in job-related training during last 12 months. Method: multi-level mixed effects logistic regression

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$

also argue that a reduction in dismissal costs, combined with greater employment flexibility, may reduce the incentives to train everyone, and especially low-skilled workers. However, deregulation may increase job mobility, which is associated with individual skills, implying that individuals may be willing to pay for their own training. Hence, high participation rates can be expected, but as high-skilled employees find investment in training more affordable, inequalities in adult learning could rise. High employment protection may lead to polarisation in labour market opportunities between 'core' workers and those in 'peripheral' jobs, as well as between insiders and outsiders in the labour market (DiPrete et al., 2001). Moreover, access to training in countries with polarisation could be expected to be highly stratified. The effect of employment protection on training is therefore mixed.

Our analysis shows that the employment protection legislation (EPL) index does not have any impact on the participation of young adults in NFE. This effect is not differentiated by educational group (see Table 5.4). However, during the crisis, employment protection legislation had a negative effect on participation by lower occupational groups, although in 2016, the effect was in the opposite direction (see Fig. 5.4). Thus, in 2011, employment protection legislation increased the inequality in training participation between high-skilled and lower skilled occupational groups, but in 2016, it reduced this inequality. It is an interesting result suggesting that, in a tightening labour market, stronger employment protection legislation may disadvantage young adults working in low- and medium-skilled occupations. This supports Acemoglu and Pischke's (2000) argument about the negative impact of lower dismissal costs on participation in training for disadvantaged groups. Our analyses suggest that employers invested less in the training of low- and medium-skilled workers during the crisis when employment protection legislation was strong; but the effect became positive when labour market conditions improved.

Welfare state measures, such as investment in active labour market policies, may also influence inequality in training leading to increased—and more equal—participation in non-formal learning by both low- and high-skilled workers. Governments may also focus on training low-skilled workers to reduce inequality in participation.

Results indicate that in 2011, higher investments in active labour market policies did indeed increase job-related NFE participation for young adults. However, in 2016—after the crisis—active labour market policies showed a weaker effect (see Tables 5.4 and 5.5). Regarding educational groups, we find a comparable effect for both low- and high-skilled young people. However, in 2011, the effect of the active labour market policies was differentiated, as higher investments increased job-related NFE participation more for low- and medium-skilled occupations than for high-skilled occupations (see Fig. 5.5 and Table 5.5). In 2016, this effect was practically the same for both occupational groups.

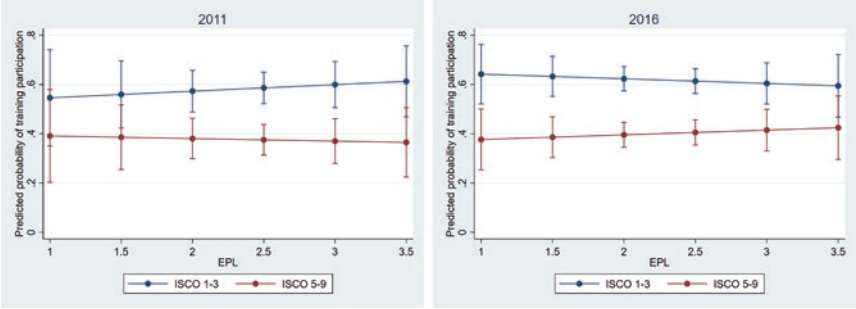

Fig. 5.4 Predicted probabilities of training participation at different levels of unemployment and two broad occupational groups. (Source: AES 2011, AES 2016; Authors' own calculation)

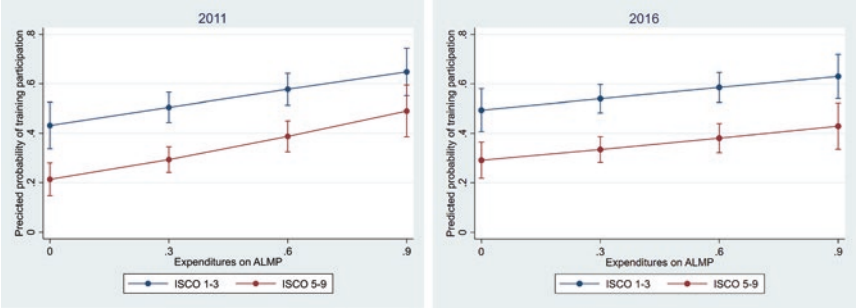

Fig. 5.5 Predicted probabilities of training participation at different levels of investments in active labour market policies and two broad occupational groups. (Source: AES 2011, AES 2016; Authors' own calculation)

Conclusions

We have presented in this chapter cross-country comparative evidence about the chances of participating in job-related non-formal education and training for two disadvantaged groups of young adults—the low-skilled, and those working in low- or medium-skilled occupations. Previous research on participation in NFE has paid attention to the low-skilled, but hardly looked at people working in low-skilled occupations—although both are typically characterised by low participation rates in job-related training. Our study also confirmed low participation rates. Another contribution is our focus—in addition to the usual individual level characteristics—on the effect institutional- and macro-level factors have on participation in adult learning by groups of young adults who are disadvantaged in terms of their opportunities in the labour market.

In general, based on AES 2011 and AES 2016, about one-fifth of the 25–34-year-old age group with low educational attainment participate in job-related NFE within the previous 12 months. Yet there are large country variations, ranging in 2016 from about 40% participation in Norway, Switzerland, Hungary, Portugal and the Netherlands to less than 5% in Poland, Lithuania, Greece and Romania. As expected, low-skilled young adults take part in training less than their high-skilled counterparts—whose participation rates are about twofold greater. Mostly, the difference in training participation between low- and high-skilled is widest in countries characterised by low or medium rates of job-related NFE participation among low-skilled young adults. Thus, the low-skilled receive more training in countries with a high overall lifelong learning participation rate (such as Norway, Switzerland, the Netherlands) and in countries specifically focusing on the training of this group (such as Portugal).

Among young people working in low- or medium-skilled occupations, roughly one third participated in job-related NFE in both observation periods. Again, there are notable country differences. In 2016 in Slovakia, Norway, the Netherlands, Switzerland and Austria more than half of low- or medium-skilled young people attended job-related training, while in Greece and Romania the respective rates were 12% and 5%. The differences in their training participation—as compared to young people in

high-skilled occupations—are higher mainly in countries with below average incidence of job-related training. Yet, on average, gaps in participation between the two occupational groups are smaller than between the two educational groups.

There is some evidence that, in 2016 (i.e. after the depths of the recession), opportunities to participate in job-related training had somewhat improved for both less-advantaged groups of young adults: there were more countries in which the participation rates increased than decreased. However, country comparisons should be treated with caution: as mentioned above, in several countries there are methodological differences between AES 2011 and AES 2016.

Results regarding the effect of economic sector confirm previous findings. Thus young adults working in manufacturing industry, construction or transport, or in the wholesale, retail, accommodation or food service sectors, are less likely to participate in job-related training than those working in more training-intensive sectors (such as professional, scientific, technical, administrative or support services, public administration, education, health and social work).

The cross-national analyses reveal that not only do individual characteristics shape young adults' participation in job-related training, but so too does the economic and institutional context of the country. However, the context differentiates inequalities in participation for occupational groups but not for educational groups. The higher the unemployment in a country, the lower the participation rate of young people working in low- or medium-skilled occupations. A higher unemployment rate seems to increase inequality in participation between occupational groups.

Further analysis showed that the training gap could be efficiently reduced by institutional measures such as labour market policies. As job-related NFE often forms the main part of activation policies for disadvantaged groups in the labour market, we expected policies encouraging higher investment in active labour market policies to result in higher participation levels among young adults in low- and medium-skilled occupations, even when the country's macro-economic context (such as a high unemployment rate) discourages their participation. Higher investments in active labour market policies decreased inequalities during the crisis, although this effect was no longer significant afterwards.

Research has provided little discussion or demonstration of the significant negative effect of employment protection legislation in countries with lower participation rates in training for medium- and low-skilled occupational groups. Literature has presented two contradictory hypotheses about the impact of this legislation. Our results seem to support both arguments: during tightening labour market conditions, strong employment protection increases the polarisation of labour market opportunities, but in more favourable conditions it decreases inequalities. It is possible that strong employment protection legislation may generate stronger labour market inequalities in times of rapid technological change.

Job content seems to be the core mechanism which keeps young adults in an occupational group away from training. However, institutional context may modify the impact of the occupational group on participation. The results suggest that high employment protection and higher investments in active labour market policies slightly reduced inequalities in participation in job-related NFE for young adults working in low- and medium-skilled occupations during the economic crisis. Nevertheless, the probability that these two vulnerable groups of young people will be involved in training remains lower even under the most favourable conditions. Thus, the more disadvantaged labour market groups of young adults—those in general most affected by technological change—still have less access to lifelong learning.

Most policy documents, however, continue to characterise groups of young people as vulnerable based on their individual characteristics, and especially on their low skill levels. For example, *A New Skills Agenda for Europe* highlights 'the role of skills as a pathway to employability and prosperity' (EC, 2016, p. 3): a human capital approach, and an individualising rather than an inclusive discourse. Low-skilled young people are represented as a problem, whereas the demand side—the labour market and employers—is established as an exogenous force with needs that must be fulfilled (see also Cort et al., 2018).

References

Acemoglu, D., & Pischke, J. (2000). Certification of Training and Training Outcomes. *European Economics, 22*, 159–202.

Biewen, M., & Steffes, S. (2010). Unemployment Persistence: Is There Evidence for Stigma Effects? *Economics Letters, 106*, 188–190.

Bills, D. B., & van de Werfhorst, H. (2018). Workplace Training from the Sociological Perspective. In K. G. Brown (Ed.), *The Cambridge Handbook of Workplace Training and Employee Development* (pp. 626–644). Cambridge University Press.

Bosch, G. (2010). Dismissing Hours Not Workers: Work-Sharing in the Economic Crisis. In J. Heyes & L. Rychly (Eds.), *Labour Administration and the Economic Crisis: Challenges, Responses and Opportunities*. ILO.

Brunello, G. (2009). *The Effect of Economic Downturns on Apprenticeships and Initial Workplace Training: A Review of the Evidence*. Paper prepared for the Education and Training Policy Division. OECD.

Cedefop. (2015a). *Unequal Access to Job-Related Learning: Evidence from the Adult Education Survey*. Publications Office of the European Union.

Cedefop. (2015b). *Job-Related Adult Learning and Continuing Vocational Training in Europe. A Statistical Picture*. Publications Office of the European Union.

Cort, P., Mariager-Anderson, K., & Thomsen, R. (2018). Busting the Myth of Low-Skilled Workers – Destabilizing EU LLL Policies Through the Life Stories of Danes in Low-Skilled Jobs. *International Journal of Lifelong Education, 37*(2), 199–215.

Desjardins, R. (2014). *Rewards to Skill Supply, Skill Demand and Skill-Mismatch. Studies Using the Adult Literacy and Lifeskills Survey* (Lund Economic Studies No. 176). Lund University.

Dieckhoff, M. (2014). Continuing Training in Times of Economic Crisis. In D. Gallie (Ed.), *Economic Crisis, Quality of Work, & Social Integration: The European Experience* (pp. 88–114). Oxford University Press.

Dieckhoff, M., Jungblut, J.-M., & O'Connell, P. J. (2007). Job-Related Training in Europe: Do Institutions Matter? In D. Gallie (Ed.), *Employment Regimes and the Quality of Work* (pp. 77–104). Oxford University Press.

DiPrete, T., Goux, D., Maurin, E., & Tåhlin, M. (2001). Institutional Determinants of Employment Chances: The Structure of Unemployment in France and Sweden. *European Sociological Review, 17*, 233–254.

EAEA. (2014). *Adult Education in Times of Crisis – European Perspectives 2014*. European Association for the Education of Adults.

EC. (2016). *A New Skills Agenda for Europe*. Commission of the European Communities.

Felstead, A., Green, F., & Jewson, N. (2012). An Analysis of the Impact of the 2008-9 Recession on the Provision of Training in the UK. *Work, Employment and Society, 26*, 968–986.

ILO. (2012). *International Standard Classification of Occupations 2008 (ISCO-08): Structure, Group Definitions and Correspondence Tables* (Vol. I). International Labour Organization.

Markowitsch, J., & Hefler, G. (2007). *To Train or Not to Train – Explaining Differences in Average Enterprise Training Performance in Europe – A Framework Approach*. 3s Research Laboratory.

Maxwell, N. L. (2006). *The Working Life: The Labor Market for Workers in Low-Skilled Jobs*. W.E. Upjohn Institute for Employment Research.

McGuiness, S. (2006). Overeducation in the Labour Market. *Journal of Economic Surveys, 20*, 387–418.

McGuiness, S., Bergin, A., & Whelan, A. (2017). *Overeducation in Europe: Trends, Convergence and Drivers* (Discussion Paper No. 10678). Institute of Labor Economics.

Mohr, S., Troltsch, K., & Gerhards, C. (2015). Job Tasks and the Participation of Low-Skilled Employees in Employer-Provided Continuing Training in Germany. *Journal of Education and Work, 29*, 262–283.

OECD. (2003). *Beyond Rhetoric: Adult Learning Policies and Practices*. OECD publishing.

OECD. (2013). *Skills Outlook 2013. First Results from the Survey of Adult Skills*. OECD publishing.

Omori, Y. (1997). Stigma Effects of Nonemployment. *Economic Inquiry, 35*, 394–416.

Roosmaa, E.-L., & Saar, E. (2010). Participating in Non-Formal Learning: Patterns of Inequality in EU-15 and the New EU-8 Member Countries. *Journal of Education and Work, 23*, 179–206.

Saar, E., & Räis, M. L. (2017). Participation in Job-Related Training in European Countries: The Impact of Skill Supply and Demand Characteristics. *Journal of Education and Work, 30*, 531–551.

Saar, E., Ure, O. B., & Desjardins, R. (2013). The Role of Diverse Institutions in Framing Adult Learning Systems. *European Journal of Education, 48*, 213–232.

Schindler, S., Weiss, F., & Hubert, T. (2011). Explaining the Class Gap in Training: The Role of Employment Relations and Job Characteristics. *International Journal of Lifelong Education, 30*(2), 213–232.

Singelmann, J. (1978). The Sectoral Transformation of the Labor Force in Seven Industrialized Countries, 1920-1970. *American Journal of Sociology, 83*, 1224–1234.

UNESCO. (2016). *Education for People and Planet: Creating Sustainable Futures for All. Global Education Monitoring Report*. UNESCO.