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From Social Protection to Social Investment

European Responses to Globalization, Technological Change, Labour Market Flexibilization, and Migration[1]

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Abstract

Globalization, technological change, and migration form three major challenges for European welfare states in the 21st century. These challenges are regarded as important sources of inequality on the labour market. Whereas the existing literature has mainly been focused on the sectors and occupations affected by globalization and technological change, the authors of this chapter argue that, via job polarization, these phenomena also affect the type of contract that workers have. They hypothesize that increased competition for low-paying jobs is associated with labour market flexibilization. Another major trend that they analyse is the free movement of labour. New data illustrate that labour migration from Central and Eastern European countries to Western European countries has grown slowly but substantially following recent enlargements of the Union. It has been considered a challenge for welfare states as it might contribute to feelings of economic insecurity and might erode solidarity, which forms the basis for the provision of social policy. Subsequently, the authors analyse how European welfare states have evolved over the past decades. They show that in spite of budgetary pressure stemming from globalization and migration, most countries have increased social expenditure. Furthermore, they analyse to what extent the focus has shifted from classical social protection to social investment policies to enable workers to adapt themselves to new labour market transformations. They contribute to the existing literature by covering years after the financial crisis for all EU member states and by demonstrating a novel way of correcting social expenditures for the number of recipients.

Keywords: globalization, technological change, job polarization, flexibilization, migration, social investment

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1. Introduction

Welfare states play an important role in the daily life of European citizens. Traditionally, welfare states provided protection against income loss as a result of unemployment, disability, and old age. Recently, the enabling function of the welfare state has become more important. As a result of developments such as globalization and technological change, economies have become more dynamic and labour markets have become more flexible. Jobs in some sectors disappear whereas new jobs in other sectors are born. Hence, one of the main challenges for workers in the 21st century is how to smooth labour market transitions in order to adapt to increasing flexibility.

Welfare state programmes can play an important role in the transitions between jobs and sectors which workers are making increasingly more frequently during their careers. This enabling function requires a new type of welfare state, one that is focused on training and keeping human capital updated throughout the working life. Such an approach requires so-called social investments which have been at the core of the European Union (EU) social policy agenda over the past decade. Yet, welfare states have continuously been under budgetary pressure over the past decades as a result of globalization affecting labour markets and because of increased expenditures on pensions and healthcare due to ageing populations. An important question related to such a transformation of the welfare state is how its redistributive function is affected and hence what the implications are for income inequality and poverty.

The aim of this chapter is to describe and analyse the challenges that European welfare states are confronted with in the first decades of the 21st century. First, we focus on the labour market effects of globalization and technological change. To date, the existing literature has been mainly focused on the question of what types of work will (dis)appear, for what types of workers and in which sectors. Although this is an extremely relevant question, in this chapter, we propose to add another dimension to this debate. We expect that globalization and technological change also affect the type of contract that workers have. The share of nonstandard employment has grown over the past years and we hypothesise that globalization and technological change have contributed to this trend. Furthermore, the results of this trend, job polarization and labour market flexibilization, will increase inequality between different groups on the labour market.

Another major trend that we discuss is the role of labour migration. Intra-EU immigration has grown slowly since Central and Eastern European (CEE) countries have joined the Union, but it is becoming an increasingly important feature of European labour markets and in the context of European welfare states. Subsequently, we discuss the implications of these

trends and developments for European welfare states. Based on an empirical analysis, we show how European welfare states have evolved over time, and we examine to what extent social investment has become more important for them. Here, we update the existing literature with data for the years during and after the financial crisis, and we extend existing studies by including all 28 EU member states. Furthermore, we demonstrate a novel way of correcting social expenditure data for the number of recipients in order to compare the generosity of new social programmes across countries and over time.

2. Globalization and Technological Change

The economic literature considers globalization and technological change as two pivotal phenomena transforming European labour markets. However, given the comparable labour market effects of both forces, there has been a lively debate regarding the question of whether globalization or technological change is paramount in determining labour market outcomes (Iversen and Cusack, 2000). This debate is rooted in the methodological challenges associated with empirically disentangling these two effects from each other since both developments have taken place in the same period – namely about the past 30 years – and because they yield similar effects.

Only recently it has been acknowledged that it is not either globalization or technological change that matters, but that both developments have had an impact on the labour market. In several studies, David Autor and his co-authors have compared the labour market effects of Chinese imports with the labour market effects of technological change (Autor et al., 2013, 2015; Acemoglu et al., 2016). Based on data for the United States, they show that in sectors exposed to Chinese imports, employment declined because complete production lines disappeared as a result of these imports. In contrast, technological change lead mainly to polarization: the production line remained, but routine-intense work was replaced by machines. A growing number of studies that examined the employment effects of globalization and technological change across Europe find comparable results (Michaels et al., 2014; Balsvik et al., 2015; Thewissen and Van Vliet, 2019). In the next couple of paragraphs we elaborate on both phenomena and show how they have eventually resulted in the polarization of Europe's labour market.

3. The Initial Prominence of Skills in the Transforming Labour Market

3.1 Globalization

Globalization can be understood as the process of economic, social, and political international integration. The economic, social, and political dimensions of globalization are closely related to each other, but, for the analysis of the impact of globalization on European labour markets, the economic dimension is the most relevant. This dimension entails the reduction or removal of international barriers as a result of which trade, capital, and migration flows between countries can increase. As a result, goods and services will be produced in those places in the world where they can be produced in the most efficient way. This leads to lower prices for consumers, which will increase welfare for a society as a whole (Fajgelbaum and Khandelwal, 2016).

At the same time, globalization will yield distributive effects within society. Based on a *Ricardo-Viner framework*, it can be expected that workers who work in sectors in which exports increase as a result of the reduction of trade barriers will benefit. In contrast, workers who work in sectors with increased imports will lose as the imports in fact replace their work (Samuelson, 1971; Sirgy et al., 2007; Walter, 2010). Based on another framework, the *Stolper-Samuelson model* (1941), it can be expected that the production factors that are relatively abundant will gain. Hence, when European countries engage in international trade, this generally means that products which are produced in labour-intensive manufacturing industries are imported from low-wage countries, which results in a lower domestic demand for low-skilled workers. At the same time, exports of knowledge-intensive products increase, which triggers firms to focus on increasing their productivity and hence on innovation. This results in a higher demand for high-skilled workers (Bloom et al., 2016). Over the past few decades, the process of globalization has accelerated rapidly across member countries of the Organisation for Economic Cooperation and Development (OECD) and across European countries in particular.

3.2 Technological Change

The literature initially assumed that technological change, like globalization, increased the relative demand for high-skilled workers. Inspired by the work of Tinbergen (1974, 1975), research explaining the rise in the relative wages of high-skilled workers vis-à-vis low-skilled workers throughout the 20th century argued that technological change is *skill biased* (Goldin and Katz, 2009). This bias is rooted in the assumption that technological improvements particularly augment the productivity of high-skilled workers resulting in a relative increase in the demand for high-skilled workers.

The wages of high-skilled workers are subsequently determined by the race between education and technological change (Katz and Murphy, 1992; Katz and Autor, 1999; Goldin and Katz, 2009; Acemoglu and Autor, 2010). If the growth of the relative supply of high-skilled workers stagnates, the upsurge in demand caused by technological change results in increased premiums[2] for high-skilled workers and thus wage inequality. In contrast, an equal increase in the supply and demand of high-skilled workers relative to low-skilled workers will result in skill-upgrading in terms of employment but does not affect the skill premium. While research showed that skill premiums particularly increased in the United Kingdom, this logic holds to a lesser extent for the other European countries, resulting in a more dispersed wage distribution (Davis, 1992; Berman et al., 1998; Fitzenbergen and Kohn, 2006; Atkinson, 2007).

4. Explaining Job Polarization: Shifting the Focus from Skill to Routine

While the focus on skills just described has been quite successful in explaining labour market consequences for a long time, it is not able to offer an appropriate explanation for a rather recent labour market trend in advanced economies: job polarization (Goos et al., 2014; Gregory et al., 2016). This process entails an increase in the share of both high-skilled and low-skilled jobs and a simultaneous decrease in the share of middle-skilled jobs (Acemoglu and Autor, 2010). While the resulting U-shaped labour market was initially documented using data for the United States (Acemoglu, 1999), this pattern has also been reported for European countries (Goos et al., 2009, 2014; Michaels et al., 2014; Gregory et al., 2019).

To explain this trend, Autor et al. (2003) introduced the so-called *routine-biased technological change hypothesis*. In contrast to the *skill-biased technological change hypothesis*' emphasis on labour productivity, this hypothesis focusses on the nature of tasks.[3] More specifically, it assumes that digital capital (artificial intelligence, computers, and robots) is especially suited to perform routine-intense tasks characterized as procedural and rule-based (Acemoglu and Autor, 2010). Subsequently, it can be expected that jobs involving these types of tasks will be automated and might eventually become extinct. Research has shown that middle-skilled jobs in particular involve routine-intense tasks (Autor et al., 2006; Autor and Dorn, 2013; Goos and Manning, 2007; Goos et al., 2014). Examples in this regard are book-keepers, office clerks, and machine operators. The comparative advantage of digital capital in

[2] The wage of high-skilled workers relative to the wage of low-skilled workers.

[3] In this regard, a task is defined as a unit of work activity that produces output, both goods and services. Moreover, workers should be considered as individuals allocating their skills to different tasks depending on their comparative advantage and labour market prices (Roy 1951; Acemoglu and Autor 2010).

performing routine-intense tasks results in a lower demand for labour in these types of jobs, as a result of which the demand for middle-skilled workers decreases.

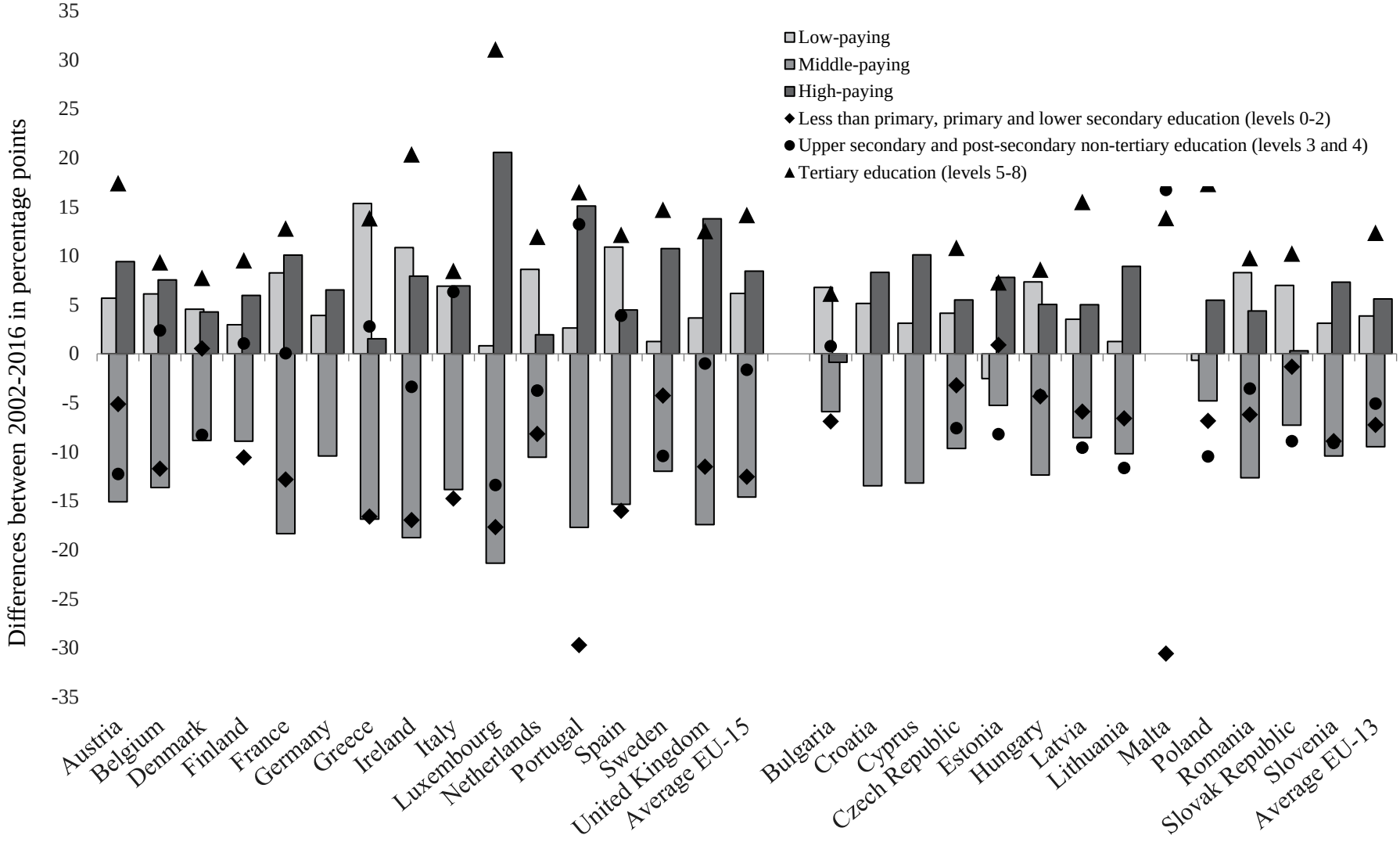
Figure 1 shows that the European labour market has indeed polarized: the shares of high- and low-paying jobs have relatively increased, while the share of middle-paying jobs decreased. We have grouped the jobs based on Goos et al. (2014), who use two-digit International Standard Classification of Occupations (ISCO) codes to rank occupations by their mean wage rank based on the European Statistics on Income and Living Conditions (EU-SILC).[4] For this figure we use aggregated country-level data. In this regard, we rely on data underlying the European Commission's Employment and Social Developments Review provided by the DG Employment, Social Affairs & Inclusion.

The clear trend of job polarization illustrated in Figure 1 notwithstanding, the intensity of the process varies substantially per country. The share of middle-paying jobs decreased quite dramatically in Luxembourg (21%), Ireland (19%), France (18%), Portugal (18%), and the United Kingdom (17%), whereas Poland experienced a decrease of only 5% in the share of middle-paying jobs. Moreover, this decrease in Poland was accompanied with a decrease in the share of low-paying jobs. Note that this variation is in line with the broader critique presented by some studies in relation to the importance of (labour market) institutions and culture in explaining labour market transformations (Oesch and Rodríguez Menés, 2011; Fernández-Macías and Hurley, 2017). The higher wages stemming from legal minimum wages and collective bargaining might for instance result in a higher share of high-quality and thus high-paying jobs (Grimshaw et al., 2014). Consequently, job polarization might be less pronounced. Institutions like employment protection or generous welfare state benefits could potentially have similar effects.

Another possible explanation for the polarization of the European labour markets is a shift in Europe's labour supply. This perspective assumes that employers take the characteristics of the supply of workers into account when deciding on production techniques that, in the end, determine the type of available jobs (Murphy and Oesch, 2018). Thus, the availability of a low number of low-skilled workers might decrease the demand for low-paying

[4] As a result, high-paying occupations include corporate managers; physical, mathematical, and engineering professionals; life science and health professionals; other professionals; managers of small enterprises; physical, mathematical, and engineering associate professionals; other associate professionals; and life science and health associate professionals. Middle-paying occupations include stationary plant and related, stationary plant and related operators; metal, machinery, and related trade work; drivers and mobile plant operators; office clerks; precision, handicraft, craft printing, and related trade workers; extraction and building trades workers; customer service clerks; machine operators and assemblers; and other craft and related trade workers. Finally, low-paying occupations include labourers in mining, construction, manufacturing, and transport; personal and protective service workers; models, sales persons, and demonstrators; and sales and service elementary occupations.

Figure 1 Job polarization and employment by educational attainment in Europe, 2002-2016



Notes: Educational attainment is coded according to ISCED 1997 for 2002 and ISCED 2011 for 2016. Data years for Romania are 2005 and 2016.
Source: Eurostat Labour Market Database, European Commission DG Employment, Social Affairs & Inclusion (2018) and authors' calculations.

jobs as this incentivises employers to adapt their production process to the availability of a highly qualified supply of labour. The changes in employment by educational attainment presented in Figure 1 do not, however, support this argument. Although the number of high-skilled workers indeed increased, the supply of low-skilled workers increased in Denmark and Hungary only. While it should be noted that this does not mean that labour supply effects cannot account for the polarization of European labour markets, there are a least no clear trends that directly explain job polarization. Moreover, recent literature analysing the disappearance of middle-skilled jobs supports this finding (Green 2019).

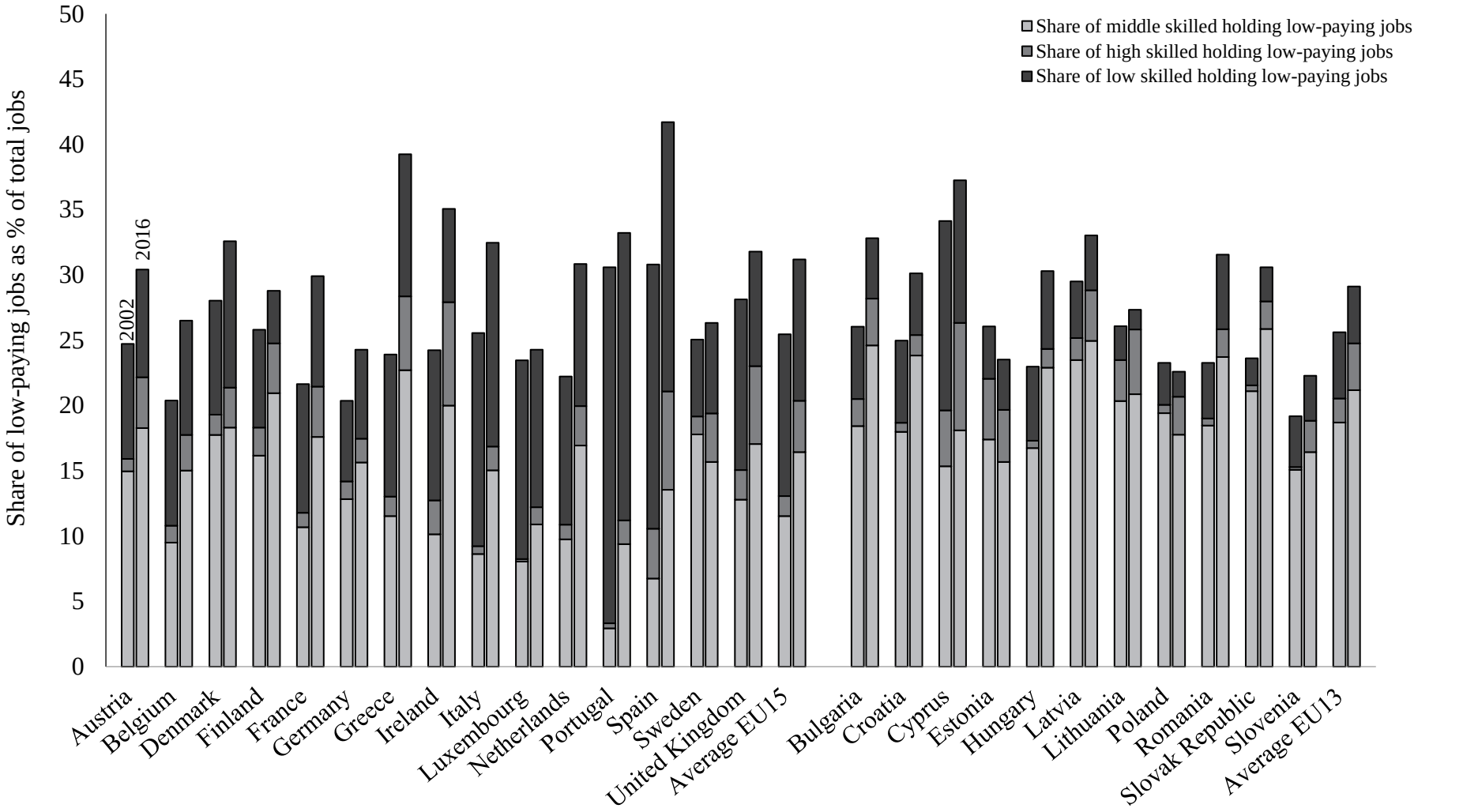
5. Increased Competition at the Lower End of the Labour Market

In the previous paragraphs, we focussed on the effects of globalization and technological change, the ways in which both forces have shaped the demand for labour, and how this eventually resulted in job polarization in Europe. Next, we relate the process of job polarization to the increasing competition for low-skilled jobs. Middle-skilled workers faced with a lower demand for routine-intense tasks are forced to supply their labour to jobs involving either less or more complex tasks (Cortes, 2016; Goos, 2018). We argue that without additional education or training it can be expected that the abilities of middle-skilled workers are better suited to less complex tasks. Consequently, job polarization will result in increased competition at the lower end of the labour market.

The employment shares of low-paying jobs for 2002 and 2016 presented in Figure 2 provide tentative support for this expectation.[5] In this figure, we combine the data used for Figure 1 with individual-level data from the European Union Labour Force Survey (EU-LFS). This allows us to analyse changes in the share of each education group in low-paying jobs. Between 2002 and 2016 the share of middle-skilled workers employed in low-paying jobs increased across Europe. Note, that although a growing number of middle-skilled workers are on average employed in low-paying jobs (their share increased by 7%), there is a large variation between the countries. On the one hand, in countries like Portugal (194%), Spain (48%), and Italy (46%), the share of middle-skilled workers in low-paying jobs increased substantially. Denmark (−11%) and Sweden (−16%), on the other hand, experienced a decline in the share of middle-skilled workers in low-paying jobs.

[5] Note, however, that this figure presents purely descriptive data. Consequently, these findings should be interpreted with some caution.

Figure 2 Increased competition for low-paying jobs, 2002 and 2016



Notes: Jobs are ranked based on Goos et al. (2014), who use two-digit ISCO codes to rank occupations by their mean wage rank based on EU-SILC. Educational attainment is coded according to ISCED 1997 for 2002 and ISCED 2011 for 2016. Data years for Romania are 2005 and 2016.

Source: European Commission DG Employment, Social Affairs & Inclusion (2018), and EU-LFS.

6. Flexibilization of the Labour Market

Up to now, research has mainly analysed the impact of job polarization in relation to the income distribution (Autor and Dorn, 2013; Goos et al., 2014; Cortes, 2016; Kurer and Gallego, 2019). The explicit link between job polarization and the type of employment contracts has not been analysed yet.[6] This is noteworthy given the shift towards flexible employment on most European labour markets. Moreover, this transition has sparked widely shared concerns regarding employment protection, social rights, training opportunities, and income inequality (ILO, 2016, 2019). The European Union also acknowledged the importance of these issues and addresses them in its Pillar of Social Rights.

We argue that the increasing flexibilization of European labour markets is partly the result of job polarization and in particular the increased competition for low-skilled jobs. Note that the number of middle-skilled workers employed in low-paying jobs increased in 16 out of 22 European countries between 2002 and 2016. Moreover, the share of middle-skilled workers holding low-paying jobs increased on average by 30% in these countries. Although purely descriptive, this provides empirical support for our argument that middle-skilled workers have shifted their labour supply to jobs characterized by less complex tasks, thereby increasing competition for low-skilled jobs.

As is shown in Figure 3, the share of nonstandard employment (NSE) slightly increased in EU15 countries. In particular, the Netherlands and Luxembourg stand out with an increase of respectively 10 and 9 percentage points. Both countries are amongst the countries with a relatively high increase in the share of middle-skilled workers holding low-paying jobs. This might indicate that the increased competition at the lower end of the labour market not only resulted in a stagnation of wage growth, but also resulted in competition amongst workers by type of contract. In contrast, in Denmark and Sweden, which did not experience an increase in the share of middle-skilled workers in low-paying jobs, the share of NSE remained relatively stable.

Figure 4, however, shows a slightly different story. Whilst the EU13 countries are generally characterized by a relatively stable share of middle-skilled workers in low-paying jobs, the share of NSE increased substantially in 9 out of 13 countries, with Hungary, Latvia, Lithuania, and Romania as the exceptions. For instance, Poland experienced an increase in NSE of almost 20 percentage points. Yet the share of middle-skilled workers holding low-skilled

[6] A notable exception in this regard is Peugny (2019), who showed that precarious employment (measured as the proportion of involuntary part-time jobs) mainly affected the lower skilled jobs in the service sector. Nevertheless, she does not explicitly analyse the link between job polarization and flexibilization.

Figure 3 Labour market flexibilization in the EU15, 1995-2015

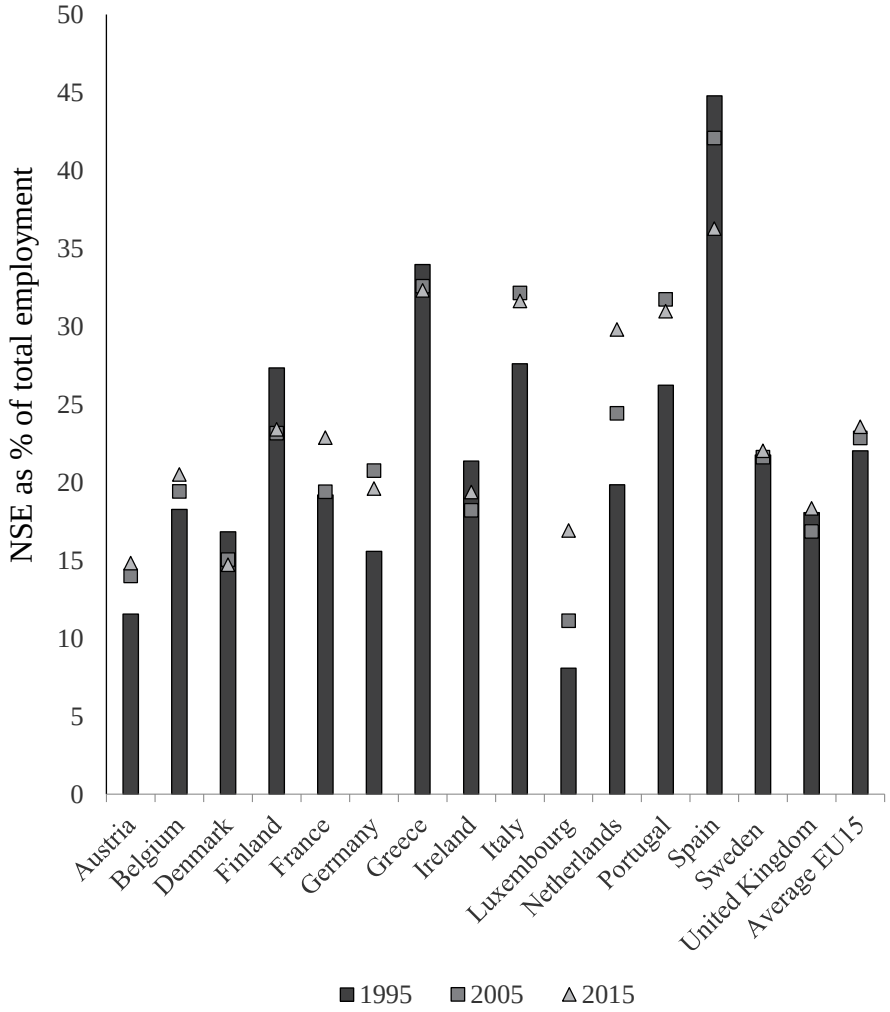
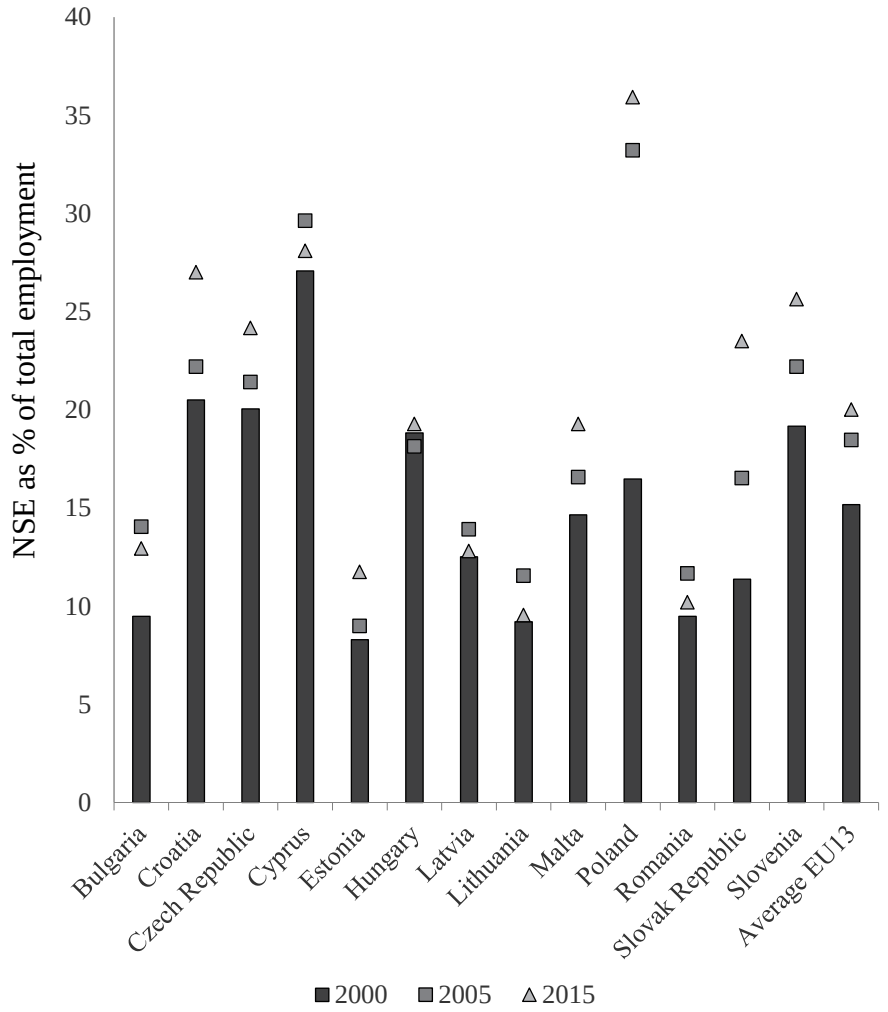


Figure 4 Labour market flexibilization in the EU13, 1995-2015



Notes: In most studies NSE includes temporary employment, part-time and on-call work, temporary agency work and other multiparty employment relationships as well as disguised employment and dependent self-employment (Eurofound 2019). Due to data limitations we have only included part-time work and self-employment.

Source: Eurostat Labour Market Database and authors' calculations.

jobs dropped in Poland with 6% in the same period. Although this finding seems to challenge our expectations, this result might also be caused by differences in the share of middle-skilled workers between EU13 and EU15 countries. In EU13 countries the average share of middle-skilled workers in low-paying jobs is 72% compared to 49% in EU15 countries. This difference might account for a different dynamic at the lower end of the labour market.

Moreover, it is important to emphasise the importance of labour market regulations and welfare state institutions. For instance, higher minimum wages might result in a higher demand for high-skilled workers (Grimshaw et al., 2014), strict employment protection and tax and transfer policies might provide incentives for employers to resort to NSE, education and training might enable middle-skilled workers to compete for high-skilled jobs, and unions might protect workers with a standard contract, affecting the incidence of NSE (Keune and Pedaci, 2019). Our research agenda for the future is to analyse the link between job polarization and labour market flexiblization as well as the mediating function of these institutions.

7. Labour Migration

7.1 Migration Trends

Over the past few decades, the impact of immigration on European labour markets and welfare states has become a central topic in both the academic and public debate. In the first place, this concerns third-country migration, which is to some extent related to geopolitical and economic developments all over the world. Recently, the war in Syria has resulted in large refugee flows into Europe. Another major development is the growth in the number of African immigrants who aim to reach Europe via the Mediterranean Sea. In the European welfare state literature, it is mainly the effects of labour mobility that have received a lot of attention. Free movement of labour is an important pillar in the process of European integration as it can reduce labour market imbalances. That is, workers can move from areas with high unemployment rates to areas with labour shortages. This is even more relevant for the European Union as diverging economic situations across countries can be problematic for monetary policymaking. Furthermore, free movement of labour may lead to a better allocation of labour as there can be better matches between demand and supply of certain skills. Workers can move to those areas where they can reach the highest productivity levels.

Traditionally, the mobility of labour across European countries has been relatively low. Because of differences in language, culture, and welfare state institutions among EU countries, mobility has been lower than in, for instance, the United States. The rounds of enlargement of the EU in 2004, 2007, and 2013 with predominantly CEE countries have increased the flows of

intra-EU labour migration. Given the differences in labour market conditions between Western and CEE countries, mainly with regard to employment and wages, it is predominantly mobility from east to west (Rojas-Romagosa and Bollen, 2018). Despite the attention paid to labour migration in both the public and academic debate, the coverage of labour migration in systematic empirical research has remained rather limited. An important reason for this is the lack of readily available data. In fact, most studies which are theoretically interested in European labour migration have used data on overall migration due to a lack of better data.

Recently, Fenwick and Van Vliet (2019) constructed an indicator for labour migration based on the EU Labour Force Survey (EU-LFS) microdata. These data are originally being used to generate insights into labour market trends such as unemployment rates, but they also contain information that can be used to construct trends in labour migration. We use these data in our analysis here. Fenwick and Van Vliet (2019) use information on country of birth and labour force status to identify labour migrants from CEE countries. They construct the indictor as a percentage of the labour force. Table 1 shows the volume of labour migration from CEE countries to Western European countries. Switzerland is included because it is a member of the Schengen Area, has a comparable economy and welfare state to the EU15, and is traditionally considered a country of notable immigration.

As shown in Table 1, labour migration from CEE countries to Western European countries has increased substantially since the enlargements of the European Union. Between 2004 and 2016, the average stock of labour migration has increased from 1% to 3.2% of the labour force. At the same time, it should be noted that this level is still far below the level of labour migration from Western European countries to other Western European countries; namely, on average 7.5% in 2016. Although the stock of CEE labour migration increased in all Western European countries, there is considerable variation. In Ireland, the stock of CEE migration has risen the sharpest. In 2016, more than 9% of the Irish labour force consisted of CEE immigrants. A likely explanation for this development is that Ireland was one of only three EU countries that did not impose labour market restrictions on immigrants from those countries that became EU Member States in 2004. Other countries with relatively large proportions of CEE immigrants are Austria and the United Kingdom. In contrast, in Portugal and France, only 0.3% and 0.7%, respectively, of the labour force consisted of CEE immigrants in 2016.

Table 1 Labour migration from Central and Eastern to Western European countries, 2004-2016

	2004	2007	2010	2013	2016	Change 2004-2016
Austria	3.4	4.0	4.3	4.8	6.1	2.8
Belgium	0.5	0.7	1.7	2.2	2.6	2.2
Denmark	0.4	0.6	1.1	1.9	2.5	2.2
Finland	0.6	0.4	0.6	0.9	1.4	0.8
France	0.3	0.4	0.6	0.5	0.7	0.4
Germany	0.9	1.0	1.3	1.8	2.9	2.0
Greece	1.2	1.4	1.9	1.8	1.4	0.3
Ireland	3.3	9.7	9.2	9.4	9.4	6.1
Italy	1.2	1.8	3.4	3.9	4.3	3.0
Luxembourg	0.8	2.0	2.5	3.7	4.9	4.1
Netherlands	0.4	0.5	0.8	1.0	1.3	0.9
Portugal	0.2	0.3	0.4	0.4	0.3	0.1
Spain	1.8	3.0	3.6	3.3	3.5	1.8
Sweden	1.3	1.6	2.0	2.6	2.6	1.3
Switzerland	1.5	1.5	1.9	2.2	2.6	1.0
United Kingdom	0.6	2.3	3.3	3.7	5.4	4.8
Mean	1.0	1.9	2.4	2.7	3.2	2.3

Notes: CEE countries: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia; immigration is expressed as a percentage of the labour force; for some countries data years are around 2005 (Ireland, 2004; Italy, 2004).

Source: Fenwick and Van Vliet (2019).

7.2 Policy Debate at the EU Level

To foster the mobility of labour, the European Union has adopted a number of policy initiatives aimed at removing institutional barriers (Eurofound, 2014). For instance, the limited portability of social rights is a relevant factor for the mobility of workers. In April 2014, the Directive (2014/50/EU) on minimum requirements for enhancing worker mobility between Member States by improving the acquisition and preservation of supplementary pension rights was adopted. In December 2016, the Directive (2016/2341/EU) on the activities and supervision of institutions for occupational retirement provision was adopted. As a broader policy agenda, the then President of the European Commission, Jean-Claude Juncker, presented the European Pillar of Social Rights in 2017. Part of this policy agenda deals with the coordination of social security systems within the European Union, which is aimed at protecting the social rights of workers when they move across the borders of EU Member States. As a concrete measure, the European Commission presented a proposal that extends the portability of unemployment benefits between Member States from 3 to 6 months. Early in 2019, it became clear that a

majority of EU Member States would be in favour of this proposal but that the final decision-making would be left to the new European Parliament and European Commission, which were installed later that year.

A more direct type of measure to foster the mobility of labour migration is lifting labour migration restrictions. In the enlargement rounds since 2004, Western European countries had the possibility to impose temporary labour migration restrictions. For instance, workers from those countries which joined the Union in 2004 had direct access to the Irish, Swedish, and British labour markets, but could work in Austria, Germany, and Switzerland only since 2011 (Fenwick and Van Vliet, 2019). The rationale of these labour migration restrictions is that Western European countries could temporarily protect their domestic labour market. Given the differences in wages, Western European countries expected large inflows of workers from CEE countries and therefore substantial displacement on the labour market, which would harm native workers.

8. Implications for Welfare States

Globalization, technological change, and migration yield not only employment effects. These developments may also affect welfare states in a more direct way. In the political economy literature, the debate on the relationship between economic openness and welfare state generosity has been centred around the supply and demand side of social protection (Van Vliet and Wang, 2019). With regard to the supply side of social protection, the *efficiency hypothesis* states that policymakers are inclined to cut tax burdens in order to facilitate attractive conditions for firms due to increasing competitiveness pressures in international markets. The budgetary pressure resulting from the lower tax revenues contributes to the reduction of the generosity of welfare state programmes (Garrett and Mitchell, 2001). In contrast, on the demand side, the *compensation hypothesis* states that economic globalization may lead to an increased demand from voters for social policy in order to compensate the increased labour market risks (Rodrik, 1998). Interestingly, a growing body of literature provides empirical support for the microlevel mechanisms of the compensation hypothesis (Scheve and Slaughter, 2004; Walter, 2017). Technological change can be expected to affect welfare state generosity via the compensation mechanism, too. The automation of jobs contributes to feelings of economic insecurity and hence to a higher demand for social protection (Iversen and Cusack, 2000).

The theoretical effects of migration on the provision of social welfare can also be classified along the lines of supply and demand. The possible displacement effects could lead to insecurity with regard to work and income among native workers, and this could result in a

higher demand for social protection (Burgoon et al., 2012; Brady and Finnigan, 2014). At the same time, immigration may also affect the supply side of social policy. Solidarity among people is lower when they have fewer common linkages such as origin, language, and culture. Therefore, domestic workers would be less willing to pay taxes and social security contributions when immigrants are also entitled to social benefits (Alesina et al., 2001; Luttmer, 2001; Alesina and Glaeser, 2004; Eger, 2010).

Whether the demand-side effect or the supply-side effect dominates is hard to assess on purely theoretical grounds, and it is therefore more of an empirical question. A large body of literature with empirical studies on the relationship between globalization and social protection levels produces rather mixed results. Some studies reported negative effects on social protection levels (e.g., Busemeyer, 2009a), whereas other studies found evidence for positive associations (e.g., Hicks and Zorn, 2005) or even mixed effects (e.g., Brady et al., 2005). The mixed results in the literature partly reflect the variation in the selected countries and years and in the methodological approaches. A more substantive interpretation of the mixed results is that globalization affects welfare states via both the supply and demand sides. The resulting combination of budgetary pressure and an increased demand for social protection yields a dilemma for policymakers, one that has been called the *globalization dilemma* (Hays, 2009).

The empirical literature on the effects of immigration on social protection levels is younger. In an analysis of 18 OECD countries, Soroka et al. (2006) find evidence that suggests that the negative supply-side effect dominates. However, the results of the empirical study by Gaston and Rajaguru (2013) are not in line with this negative effect, and their results tend to suggest a positive association between immigrant and social expenditure. A recent study by Fenwick (2019) supports these results. Based on data for 16 European countries, she finds a positive association between immigration and welfare state effort, which is in line with the explanation that immigration contributes to a higher demand for social protection.

It can be expected that the effects of immigration vary across different welfare state programmes. The decrease in solidarity as a result of immigration will be smaller in the case of social insurance programmes, for which immigrants pay social contributions, than in the case of social security programmes, such as means-tested social assistance benefits, which are funded from general tax revenues (Boeri, 2010). In their empirical analysis of the cross-country variation in social expenditure on several welfare state programmes, Soroka et al. (2016) find that immigration is mainly negatively associated with unemployment benefits and active labour market policy. Fenwick and Van Vliet (2019) show that the effects of immigration not only vary across welfare state programmes, but that the effects are also dependent on the type of

immigration. They find positive associations between labour migration from CEE countries and the generosity of several welfare state programmes in Western European countries. These results are in line with the argument that immigrants may pose labour market risks for native workers, which increases the demand for social protection. Interestingly, refugees are negatively associated with the generosity of unemployment benefits and positively associated with the generosity of social assistance benefits. An explanation for this finding might be that refugees are considered as 'less-deserving' of unemployment benefits but 'deserving' of social assistance benefits.

9. Welfare State Developments

To analyse the development of welfare states across Europe, we use data on public social expenditures.[7] The main public social policy areas considered are: old age; survivors; incapacity-related benefits; health; family; active labour market programmes; unemployment; housing; and 'other' social policy areas. Data are taken from the most recent version of the OECD (2019a) Social Expenditure Database (SOCX) and OECD (2019b) Labour Market Statistics. To guarantee consistency over time, increase the cross-country comparability of the data, and maximise the number of observations, some adjustments have been made. First, we have complemented the data with data from the OECD (2019c) Education Statistics for spending on pre-primary education, which have been included in SOCX since the introduction of ISCED 1997 (generally around 1998) only.[8] Second, some of the CEE member states of the EU are not members of the OECD (Bulgaria, Cyprus, Croatia, Malta, and Romania) or have been a member for a relatively short amount of time (Estonia, Latvia, Lithuania, Slovenia); as a result, statistics for these countries are not available from the OECD or for a relatively short

[7] We do not focus on mandatory and voluntary private expenditures. Data on private social spending are deemed to be of lesser quality than public spending data (Adema and Fron, 2019). In addition, private social expenditures are almost exclusively confined to old-age, sickness, and health programmes (such as sickness benefits paid by employers to employees as mandated by law, mandatory pension contributions to private pension funds, and employment-related health plans), whereas the focus here is predominantly on new types of social policies. Moreover, voluntary private expenditures cannot be disaggregated to the same level of detail as public expenditures.

[8] Expenditures on pre-primary education are included under SOCX category 5-2-1: in-kind spending for families on early childhood education and care. For years for which public expenditures on pre-primary education were not available from the same OECD database, data were estimated. This mainly refers to years before 1997. For the estimation, we used backward extrapolation based on the developments of public educational expenditure data from the UNESCO Institute for Statistics (UIS) or expenditures on educational institutions available from another OECD database. For almost all countries theses series are very strongly correlated to the public educational expenditure data available from the OECD (generally, $r \geq 0.99$). Furthermore, the corrections for differences in the compulsory age of entry into primary school implemented in SOCX (outlined in Annex I.1.4 of the SOCX 2019 Manual, see Adema and Fron, 2019) have been excluded because we are interested in total spending.

time span only. In these cases, we have complemented the data with similar data from Eurostat.[9] An obvious limitation of social expenditure data is that developments do not only reflect deliberate policy changes, but that expenditures are also driven by cyclical and demographic trends such as unemployment and ageing of populations (Van Vliet, 2010; Jensen, 2011). Yet expenditure data offer a bird's-eye perspective which provides insight into long-term trends for a large number of countries. Furthermore, we also provide a descriptive analysis in which expenditures are corrected for the number of beneficiaries.

Table 2 shows developments in public social expenditure across 15 Western European countries, 13 CEE countries, and 4 non-EU countries for the period 1985–2015. On average, EU15 countries spent 25% of their gross domestic product (GDP) on welfare state programmes in 2015. This proportion is substantially lower in EU13 countries, where on average 18% of GDP was spent on social policies in 2015. The highest level of social expenditures can be observed in France, where in 2015 almost one-third of GDP was spent on welfare state programmes. With 14.6% of GDP, Romania was the country with the lowest social expenditures in 2015. In the United States, the proportion of GDP spent on social policy is comparable to the social expenditure level in the EU13.[10]

Against the background of globalization, technological change, and ageing of populations, the developments in social expenditure over time are particularly interesting. In the EU15, the EU13, and in the group of non-EU countries, the share of GDP devoted to social policy has on average increased over the past few decades. In the last couple of years, the high expenditures are probably partly caused by the high unemployment rates during the financial crisis. Yet also before 2010, the levels of social expenditures had been increased on average. Interestingly, there is substantial variation in the developments across countries. Over time, social expenditures have been increased in most of the countries. Within the EU15, only in

[9] For European countries, SOCX data since around 1990 are based on data from the European System of integrated Social Protection Statistics (ESSPROS) provided by Eurostat. The definitions of social expenditures used by SOCX and ESSPROS are similar, but there are differences in coverage and categorization. ESSPROS data were converted to the SOCX format using Annex I.1.1 of the SOCX, 2019 Manual (Adema and Fron, 2019), which describes how to regroup ESSPROS items into SOCX using the example of Sweden in 2015. The latest edition of the ESSPROS manual (Eurostat, 2016) was used to identify schemes that classify as mandatory private or voluntary private for Bulgaria, Cyprus, Malta, and Romania. Data from the Croatian Bureau of Statistics (2019) was used for Croatia. As with SOCX data, OECD data on labour market programmes for European countries are also based on data from Eurostat. The only category for which substantial differences may exist concerns the first, 'public employment services (PES) and administration' (termed 'labour market services' by Eurostat) (OECD, 2018a). Statistics on education are usually obtained through the joint collection of education data by the UIS, the OECD, and Eurostat, referred to as UOE data. SOCX data on health expenditures are based on the OECD Health Statistics. For the five European countries not covered by SOCX, health expenditures are taken from ESSPROS.

[10] This can partly be explained by the fact that private social expenditures, which account for roughly 40% of overall social expenditure – one of the highest among OECD countries – are not included.

Table 2 Public social expenditure (% GDP), 1985-2015

	1985	1990	1995	2000	2005	2010	2015	Change 1985-2015
Austria	23.2	23.2	26.4	25.9	26.1	27.7	27.7	4.4
Belgium	26.2	24.7	24.9	23.7	25.4	28.4	28.7	2.6
Denmark	19.9	22.3	25.3	24.0	25.4	28.9	28.9	9.0
Finland	21.7	23.3	28.9	22.6	23.9	27.2	30.1	8.4
France	25.9	24.9	29.1	27.7	28.8	31.1	31.9	6.0
Germany	20.0	19.1	25.3	25.5	26.4	26.1	25.0	5.1
Greece	15.4	15.7	16.6	17.8	19.9	24.9	25.3	9.9
Ireland	20.9	17.2	17.9	13.0	15.6	24.2	15.2	-5.7
Italy		21.0	21.4	22.6	24.1	27.0	28.4	
Luxembourg	18.9	18.3	19.9	18.7	22.8	23.1	22.1	3.2
Netherlands	23.8	24.0	22.4	18.7	20.1	17.6	17.6	-6.2
Portugal	10.5	12.3	16.1	18.5	22.3	24.5	24.1	13.6
Spain	17.3	19.4	21.0	19.4	20.6	25.1	24.7	7.3
Sweden	26.8	27.1	30.4	26.8	27.4	26.1	26.2	-0.6
United Kingdom	18.1	14.9	16.7	15.9	18.0	21.8	21.0	2.9
Mean EU15	20.6	20.5	22.8	21.4	23.1	25.6	25.1	4.5
Standard deviation	4.5	4.2	4.8	4.3	3.7	3.2	4.6	0.1
Coefficient of variation	0.22	0.21	0.21	0.20	0.16	0.13	0.18	-0.04
Bulgaria					14.8	16.8	17.6	
Croatia						20.3	20.7	
Cyprus					15.3	18.6	19.6	
Czech Republic			16.6	18.0	18.1	19.8	19.5	
Estonia				13.0	13.0	18.2	15.8	
Hungary				20.2	22.0	23.1	20.8	
Latvia				13.6	12.9	19.7	15.9	
Lithuania				15.0	13.7	19.4	15.9	
Malta					15.7	17.6	15.5	
Poland		21.1	22.2	20.5	21.0	20.7	20.3	
Romania				13.5	13.7	17.7	14.6	
Slovak Republic			18.7	17.6	15.8	17.9	17.7	
Slovenia				21.9	21.5	23.4	22.7	
Mean EU13				17.0	16.5	19.5	18.2	
Standard deviation				3.4	3.4	2.0	2.6	
Coefficient of variation				0.20	0.20	0.10	0.14	
Non-EU								
Iceland		13.3	14.8	14.5	15.8	16.4	15.1	
Norway	17.2	21.6	22.5	20.4	20.7	22.0	24.8	7.6
Switzerland	13.5	12.2	14.2	14.0	15.7	15.3	16.1	2.6
United States	13.1	13.5	15.4	14.3	15.7	19.3	18.8	5.7

Notes: Total expenditures in current prices (millions of national currency) have been divided by GDP in current prices (millions of national currency) to obtain spending as a percentage of GDP; for some countries, data years are around 1985 (Denmark, 1986; Portugal, 1986), 1990 (Poland, 1991), 1995 (Belgium, 1994), 2000 (Estonia, 2003; Latvia, 2003; Lithuania, 2003; Romania, 2003; Slovenia,

2003), 2005 (Bulgaria, 2008; Cyprus, 2006; Malta, 2006), 2010 (Croatia, 2012) or 2015 (Croatia, 2014; Poland, 2014).

Source: OECD Social Expenditure Database; Eurostat ESSPROS Database, OECD Labour Database; European Commission DG Employment, Social Affairs & Inclusion Labour Market Policy Database; OECD Education and Training Database; Eurostat Education and Training Database; UIS Education Database; OECD National Accounts Database; authors' calculations.

Ireland, the Netherlands, and Sweden were social expenditures lower in 2015 than in 1985, with the sharpest decline in the Netherlands. The largest increase can be observed in Portugal where social expenditures have been increased from 10.5% of GDP in 1985 to 24.1% in 2015. Also within the EU13, social expenditures increased in most of the countries. Only in Malta, Poland, and the Slovak Republic have social expenditures declined as a percentage of GDP over time. In all four non-EU countries, social expenditures were increased.

Taken together, these trends indicate that in spite of budgetary pressure stemming from globalization and migration, social expenditures have not been decreased. In fact, most countries have increased the share of GDP spent on social policy. In the context of the debate about the impact of globalization, migration, and technological change, these findings lend support for the argument that economic insecurity stemming from structural labour market transformations has been compensated with higher public spending on welfare state programmes (Rodrik, 1998; Iversen and Cusack, 2000; Burgoon et al., 2012). Moreover, the development that countries have spent larger shares of their GDP on social policy is probably related to the increase in prosperity over the past decades (Meltzer and Richard, 1983), a catch-up effect. Interestingly, this increase in prosperity can be partly attributed to the same structural transformations.

Another notable pattern demonstrated by Table 2 is the trend of convergence. Between 1985 and 2010, the dispersion in social expenditures declined, indicated by the declines in the standard deviation and coefficient of variation. This indicates that, within the EU15, social expenditure levels converged. In earlier studies, in which this trend of convergence has been documented as well, it has been shown that this trend of convergence is stronger within the EU15 than in a broader group of OECD countries (Starke et al., 2008; Caminada et al., 2010; Van Vliet, 2010). For this reason, it has been argued in these studies that this EU-specific trend can be attributed, on the one hand, to European economic integration, which has progressed further than international economic integration in general. On the other hand, this EU-specific trend has been attributed to EU social policy initiatives, such as the European Employment Strategy and the Lisbon Strategy. Interestingly, an opposite trend can be observed from 2010

onwards. This trend of divergence seems to be related to the incidence of the financial crisis. The economic consequences of the crisis, for instance, in terms of unemployment and fiscal balance, varied across countries. For this reason, but also because of different political constellations, (social) policy responses to the crisis varied as well across countries (Starke et al., 2014; Raess and Pontusson, 2015). This has resulted in diverging social expenditures. A similar pattern can be observed in the EU13, where the dispersion in social expenditures has also increased since 2010. Moreover, the gap between the mean of the EU15 and the EU13 has not been narrowed over time. Earlier studies have shown that Western and Eastern European countries had not converged in terms of welfare state spending (Draxler and Van Vliet, 2010). Our data suggest that approximately a decade after the EU enlargements of 2004 and 2007, such a trend of convergence has still not occurred.

10. Social Investment

In response to the various challenges and developments just described, an academic discourse on the sustainability of the welfare state and future of social policy has developed since the 1990s. Several of these studies describe the rise of a so-called *new welfare state*, which 'puts the emphasis less on income replacement and more on the promotion of labour market participation through activation and investment in human capital' (Bonoli and Natali, 2012: 9). In comparison to the traditional, post-war welfare state, this entails a reorientation of social policies towards programmes aimed at activation and human capital development. The main objective thereof is increasing the carrying capacity of the welfare state by fostering labour market participation and preparing individuals for the new social risks of the service-based (knowledge) economy (Esping-Andersen, 2002; Armingeon and Bonoli, 2006; Bonoli, 2013; Hemerijck, 2013). Increased participation among women plays a central role within this. While this increases the carrying capacity it simultaneously entails new social risks with regard to combining work and family. Instead of a safety net, the new welfare state provides a trampoline (Jenson and Saint-Martin, 2003) that involves policies aimed at preparing individuals, families, and societies to respond to such new social risks (Morel et al., 2012).

New social risks can be defined as 'the risks that people now face in the course of their lives as a result of the economic and social changes associated with the transition to a post-industrial society' (Taylor-Gooby, 2004: 2). These new risks include reconciling work and family life, single parenthood, having a frail relative, possessing low or obsolete skills, and insufficient social insurance coverage (Bonoli, 2006). In contrast, old social risks include unemployment, old age, ill health, sickness and disability, and the financial burden of raising

children (Vandenbroucke and Vlemincx, 2011). From the perspective of the new welfare state, new social risks should be addressed by new welfare state programmes such as (child)care, family-friendly working-time arrangements, and education.

A second dimension of the new welfare state concerns an investment dimension, which is reflected in most of the new welfare state programmes (Vandenbroucke and Vlemincx, 2011). Whilst old social policies predominantly concern compensating benefits that protect individuals against old social risks associated with the loss of income, new social policies concern capacitating benefits that are aimed at preventing such risks from materializing as well as addressing new social risks (Häusermann, 2012; Hemerijck, 2013). Instead of passive benefits, the new welfare state allocates public resources to investments in human capital. Most of the new social policies are provided through services, which constitutes the third dimension (Vandenbroucke and Vlemincx, 2011). In line with this dimension, welfare states should become more service-oriented by prioritizing spending on in-kind benefits over spending on cash transfers.

A specific type of new welfare state that reflects these dimensions is the *social investment state*. This term was first coined by Antony Giddens (1998), who advocated a 'Third Way' that synthesises 'neoliberalism' and the post-war welfare state through a shift from protecting people against labour market risks to integrating them into the labour market and creating a society of 'responsible risk takers'. In order to achieve this, welfare expenditures ought to be concentrated on investments in *human capital*, and governments should emphasise life-long education: 'the guideline is investment in human capital wherever possible, rather than in the direct provision of economic maintenance. In place of the welfare state we should put the *social investment state'* (Giddens, 1998: 177, emphasis added).

Current and future challenges caused by globalization, technological change, the growth of the services sector, and demographic changes, such as job polarization, flexibilization, and the emergence of new social risks, and the implications for social policy associated with these challenges have also been acknowledged and documented in EU policies (European Commission, 2017). This has, for instance, resulted in the adoption of the European Pillar of Social Rights in 2017 and social investment explicitly being put on the European policy agenda. The Europe 2020 Strategy for smart, sustainable, and inclusive growth intends to lift at least 20 million people out of poverty and increase employment of the population aged 20–64 to 75% (European Commission, 2010). To help attain this target, the European Commission launched the Social Investment Package in 2013. In an era of economic crises and austerity, this package constituted a series of policy measures designed to address the growing risk of poverty and

social exclusion. It provides a policy framework for redirecting national policies 'towards social investment throughout life, with a view to ensuring the adequacy and sustainability of budgets for social policies' by 'investing in social policies, services and cash benefits which both activate and enable' (European Commission, 2013: 4, 10).

Despite the positive effects ascribed to social investment in both the academic literature and EU policy documents, it has received substantial criticism. Realizing social inclusion through work may, for instance, not be feasible for vulnerable groups in society (Cantillon and Van Lancker, 2013). Given disappointing developments in poverty rates in relation to the Europe 2020 target, some scholars have questioned whether this focus on activation and employment has been at the expense of policies aimed at mitigating poverty and inequality (Cantillon, 2011; Vandenbroucke and Vlemincx, 2011; Van Kersbergen and Hemerijck, 2012). Empirical studies find limited support for such claims. Although shifts in expenditures from old to new welfare state programmes might be related to stagnating or increasing poverty rates in some European countries (Van Vliet and Wang, 2015), expansion of these new policies has not been at the expense of minimum income protection benefits (Noël, 2018). This phenomenon could potentially be explained by *Matthew effects*, whereby social benefits and services accrue to the middle and high-income classes.

Such Matthew effects have been identified for public childcare subsidies for children under 3 in Flanders (Ghysels and Van Lancker, 2011) and, to a somewhat lesser extent, for children under 6 in other European countries (Van Lancker and Ghysels, 2014).[11] They can predominantly be explained by supply-side issues such as limited availability and affordability, which means that a higher degree of government involvement and more spending could address their incidence (Van Lancker and Ghysels, 2016; Pavolini and Van Lancker, 2018). Bonoli and Liechti (2018) have also identified Matthew effects in relation to some active labour market policies (ALMPs). While these programmes generally focus on disadvantaged groups such as the low-skilled and migrants, they sometimes suffer from negative access bias by requiring preexisting skills.

11. Operationalising Social Investment

Given the new perspective on social policy and its relation to the economy that social investment entails, it has to a large extent been formulated in terms of the reallocation of expenditures on passive, compensating transfers to expenditures on activating and capacitating

[11] Van Lancker and Ghysels (2014) do not find support for the assumption that expenditures on new policies (childcare and parental leave) crowd out spending on traditional policies (child benefits).

policies. While studies contrasting new capacitating social policies to old compensating social policies are abundant (Vandenbroucke and Vlemincx, 2011; Häusermann, 2012; Nikolai, 2012; Hemerijck, 2013; Kuitto, 2013; Ronchi, 2018), a univocal conceptualization of the policies that comprise social investment is absent in the literature. Nevertheless, broader definitions have been provided by some scholars. Social investment has, for example, been summarized as a future-oriented approach that aims to prepare, support, and equip individuals in a way that increases their chances to participate in the knowledge-based economy and reduces their future risks of income loss and poverty by creating, mobilizing, and preserving skills and human capital (Garritzmann et al., 2017: 36–39). Likewise, Hemerijck (2017) identifies three complementary functions of social investments over the life course: easing the 'flow' of labour market and life-course transitions, raising the quality of the 'stock' of human capital, and operating as stabilization 'buffer' by offering a safety net. These functions can, in turn, be linked to a broad range of policies that reflect these functions to different extents (De Deken, 2017).

Policies that have figured centrally in studies on social investment, both descriptive and empirical, are ALMPs and early childhood education and care (ECEC; henceforth childcare). While descriptive studies have linked a broad range of activating and capacitating welfare state programmes to different stages of the life course (Kvist, 2013; Kuitto, 2016), empirical studies have tended to concentrate on ALMPs and childcare only (Bonoli, 2013; Hemerijck et al., 2016; Noël, 2018). Others scholars have focused on aggregated groups of social policies. Some have, for example, distinguished traditional social protection from social investment by distinguishing between cash benefits and in-kind benefits (Ahn and Kim, 2015; Ronchi, 2018), whereas others have distinguished between groups of old and new social policies (Vandenbroucke and Vlemincx, 2011; Van Vliet and Wang, 2015). Nevertheless, some empirical studies based on a disaggregated spending approach have considered additional new social policies, such as education, maternity and parental leave, and residential care and home-help services (Nelson and Stephens, 2012; Taylor-Gooby et al., 2015; Bakker and Van Vliet, 2019; Kim and Ahn, 2019).

We closely follow Bakker and Van Vliet (2019) in classifying welfare programmes as social investments. Public expenditures on the following categories constitute total spending on new social policies: residential care and home-help services for the elderly; residential care, home-help services, and rehabilitation services for the sick, disabled, and incapacitated; maternity and parental leave; early childhood education and care; home help and accommodation services for families with children; active labour market policies; and primary to tertiary education.

It has been debated whether spending on maternity and parental leave can be classified as investment-oriented given that this programme also reflects a compensatory function and is provided through cash benefits (Bonoli, 2013; De Deken, 2017). For that reason, Kuitto (2016), for example, groups this programme under compensating rather than social investment spending. The availability of maternity and parental leave increases the chance that people utilise the leave period and return to their pre-childbirth job once it ends (Klerman and Leibowitz, 1997), thereby stimulating continued labour market participation.[12] Moreover, it has been found that maternal care throughout children's first year of life can have a positive impact on their development (Berger et al., 2005; Baker and Milligan, 2010). Despite being provided as a cash benefit, these programmes do therefore reflect aspects of activation and human capital enhancement. Moreover, they address the new social risk of combining work and care, which has led several scholars to consider them as social investments or new social policies (Vandenbroucke and Vlemincx, 2011; Hemerijck, 2013; Taylor-Gooby et al., 2015).

Based on the aforementioned studies, we group traditional welfare state programmes that address traditional social risks by protecting against the loss of income, such as pensions, sickness benefits, unemployment benefits, and minimum income benefits, under old social policies.[13] This covers all cash pension benefits for people of old age, all cash benefits for survivors, all cash incapacity-related benefits, cash family allowances, all cash unemployment benefits, and all other cash benefits aimed at income maintenance.

11.1 Spending on Social Investment

Table 3 shows the development of public social expenditure on social investment-oriented new social policies and old social policies across all EU Member States and four non-EU countries for the period 1995–2015. In addition, it shows the ratio of spending on new social policies as a share of total spending on both old and new policies. We have chosen to display data since 1995 because social investment has arisen throughout the 1990s and data for some of the spending categories are only available since then. In contrast to Table 2 the sum of new and old

[12] Several studies lend support for this claim and find positive employment effects associated with the provision of leave arrangements (Ruhm [1998] for European countries, Berger and Waldfogel [2004] for the United States, Baker and Milligan [2008] for Canada). Nevertheless, Lalive and Zweimüller (2009) found that a generous extension of parental leave from 1 to 2 years in Austria resulted in lower and delayed returns to work. If leave arrangements are too generous or long they might thus result in lower employment as a result of decreasing labour market attachment (see Akgunduz and Plantenga [2013] for a meta-analysis).

[13] While unemployment benefits are generally considered compensatory by providing an income transfer to smooth consumption in case job loss occurs, they could also be seen as a job search allowance or tool to preserve or invest in skills that increase the prospects of finding a job. This latter view has mainly been reflected in the Varieties of Capitalism literature (e.g., Estevez-Abe et al., 2001).

social policies excludes the categories ‘other benefits in kind’, funeral expenses for survivors, all housing benefits, and in-kind social assistance benefits, but additionally includes public expenditures on primary, secondary, and tertiary education.

On average, EU15 countries spent nearly 8% of GDP on new social policies in 2015, whereas they spent 21% of GDP on old social policies. Spending on new social policies hence comprises slightly more than 25% of total spending on old and new social policies. While social spending on both new and old social policies has on average increased between 2005 and 2015, the ratio of spending on new social policies to the sum of spending on new and old social policies has slightly decreased since 2005. EU13 countries spend considerably less on both new and old social policies. In 2015, they spent nearly 6% of GDP on new social policies and 16% of GDP on old social policies. While the average share of spending on new social policies in 2015 is comparable to 2005, spending on old social policies has increased relative to GDP. As a result, the ratio of spending on new social policies to spending on the sum of new and old social policies has fallen from approximately 29% to 27% of GDP. Although EU13 countries allocate less resources to social policies, the share of spending on new social policies is rather comparable to that of EU15 countries in 2015.

Nordic welfare states stand out as most generous spenders on new social policies relative to total spending on new and old social policies. This is to a large extent due to their strong orientation to the provision of social policy through services. In these countries, as well as in the Netherlands and Switzerland, spending on new social policies comprise 30% or more of total spending on new and old social policies. It is worth noting that the Baltic States and Malta realize nearly similar levels of relative spending on new social policies. In addition, the variability of relative spending levels on new social policies is much smaller in the new EU Member States than in the EU15, indicated by the lower standard deviations and coefficients of variation. In addition to the high levels of spending on new social policies in some of the countries just mentioned, this relatively high variability amongst EU15 countries is also attributable to the fact that the Mediterranean welfare states concentrate a substantially lower amount (less than 20%) of their social expenditures on new social policies. Moreover, these ratios have fallen in all of the Mediterranean welfare states over time. A potential explanation for this could be that these countries were hit relatively hard by the economic crises since 2008. On the one hand, this might have increased expenditures on old social policies, such as unemployment benefits. On the other hand, austerity measures might have involved cuts in expenditures on new social policies.

Table 3 Spending on new and old social policies, 1995-2015

	New social policies (% GDP)			Old social policies (% GDP)			New / (New + Old) social expenditure ratio			
	1995	2005	2015	1995	2005	2015	1995	2005	2015	Change 1995-2015
Austria	7.4	6.7	7.3	23.9	23.6	24.7	24.0	22.1	22.9	-1.1
Belgium	6.5	7.2	8.1	22.7	22.8	25.5	22.8	24.0	24.1	1.3
Denmark	13.9	14.2	14.6	16.8	17.2	19.8	45.2	45.2	42.5	-2.6
Finland	11.1	9.3	11.3	22.9	18.8	22.8	32.7	33.1	33.1	0.3
France	8.9	7.5	7.8	24.3	24.7	27.7	26.8	23.4	21.9	-4.8
Germany	6.4	6.4	6.4	22.0	22.9	21.4	22.6	21.8	23.0	0.4
Greece	3.1	4.2	3.9	15.2	19.3	24.5	16.8	18.0	13.9	-3.0
Ireland	6.8	5.7	4.9	14.1	13.2	12.9	32.7	30.3	27.4	-5.3
Italy	4.9	5.1	5.0	20.4	22.5	26.0	19.5	18.6	16.0	-3.5
Luxembourg	5.0	6.2	6.2	18.4	19.5	18.4	21.5	24.0	25.3	3.8
Netherlands	7.0	8.0	8.1	19.4	16.5	13.9	26.5	32.7	37.0	10.5
Portugal	5.1	5.8	5.6	15.1	20.8	22.6	25.2	22.0	19.9	-5.3
Spain	5.2	5.7	5.6	19.4	17.9	22.4	21.1	24.1	19.9	-1.2
Sweden	14.0	13.0	13.7	20.7	19.0	16.5	41.6	40.7	45.2	3.6
United Kingdom	4.2	6.1	6.4	13.0	14.4	17.4	25.7	29.8	27.0	1.3
Mean EU15	7.3	7.4	7.7	19.2	19.5	21.1	27.0	27.3	26.6	-0.4
Standard deviation	3.3	2.8	3.2	3.7	3.4	4.5	8.0	7.9	9.2	1.2
Coefficient of variation	0.45	0.38	0.41	0.19	0.17	0.21	0.29	0.29	0.34	0.05
Bulgaria		5.3	5.0		12.6	15.2		29.5	24.9	
Croatia			5.8		16.4	18.1			23.7	
Cyprus		6.5	6.5	10.9	13.4	18.0		32.2	26.5	
Czech Republic	5.4	5.1	5.2	14.3	15.7	17.1	27.4	24.4	23.1	-4.3
Estonia		5.8	6.5	13.7	11.4	14.6		33.8	32.6	
Hungary	5.8	6.7	6.5	17.4	18.3	16.6	25.1	26.8	28.1	3.0
Latvia		5.8	6.8	13.1	10.9	13.0		34.8	34.2	
Lithuania		5.8	5.5	11.8	11.6	13.3		33.4	29.3	
Malta		6.5	6.0	12.1	13.9	13.4		31.6	31.1	
Poland	5.8	6.4	6.2	20.3	19.2	18.2	22.5	24.9	25.5	3.0
Romania		4.6	3.5	11.4	11.7	13.3		28.4	20.9	
Slovak Republic	5.9	5.1	5.9	16.5	13.9	15.7	26.2	26.7	27.3	1.1
Slovenia		6.7	5.9	20.3	19.7	20.6		25.4	22.4	
Mean EU13		5.9	5.8	14.7	14.5	15.9		29.3	26.9	
Standard deviation		0.7	0.9	3.4	3.1	2.4		3.7	4.1	
Coefficient of variation		0.12	0.15	0.23	0.21	0.15		0.13	0.15	
Non-EU										
Iceland	8.3	10.5	9.0	11.4	10.4	10.4	44.4	50.1	46.5	2.1
Norway	13.3	11.0	11.4	15.5	15.0	18.0	46.1	42.4	38.8	-7.3
Switzerland	6.3	7.0	6.8	12.3	13.2	13.3	33.8	34.5	33.7	-0.1
United States	4.7	5.1	4.9	13.9	14.4	17.3	25.5	26.6	22.2	-3.3

Notes Total expenditures in current prices (millions of national currency) have been divided by GDP in current prices (millions of national currency) to obtain spending as a percentage of GDP; expenditures on new social policies exclude tertiary education in Luxembourg in 1995 and 2005; for some countries, data years for new social spending are around 1995 (Austria, 1997; Belgium, 1998; Sweden, 1997; United Kingdom, 1997; Hungary, 1999; Poland, 1997; Iceland, 1998), 2005 (Bulgaria, 2008; Cyprus, 2006; Malta, 2006), or 2015 (Denmark, 2014; Croatia, 2014; Estonia, 2013; Poland, 2014); for some countries, data years for old social spending are around 1995 (Cyprus, 2000; Estonia, 1999; Hungary, 1999; Latvia, 1997; Lithuania, 1996; Romania, 2000; Slovenia, 1996), 2005 (Bulgaria, 2008; Croatia, 2008) or 2015 (Poland, 2014).

Source: OECD Social Expenditure Database; Eurostat ESSPROS Database; OECD Labour Database; European Commission DG Employment, Social Affairs & Inclusion Labour Market Policy Database; OECD Education and Training Database; Eurostat Education and Training Database; UIS Education Database; OECD National Accounts Database; authors' calculations.

12. A Disaggregated Spending Approach to Social Investment

Although overall expenditure data provide insights into long-term trends, they do not enable one to identify the spending priorities of welfare states in terms of specific welfare state programmes. We therefore also use disaggregated expenditure data to examine long-term trends in specific programmes. We concentrate on the programmes that have figured most centrally in the literature on social investment and that are likely to offer the strongest responses to the challenges outlined earlier: social investment-oriented ALMPs, childcare, and education.

Table 4 presents public expenditures on ALMPs as a percentage of GDP for the same 32 countries over the period 1985–2015. The table shows that EU15 countries spend a substantially higher percentage of GDP on ALMPs than EU13 countries do. In 2015, EU15 countries on average spent 0.76% of GDP on ALMPs, whereas the average for the EU13 was 0.3%. Despite a somewhat volatile trend over time, with sharp increases in the second half of the 1990s and following the economic crisis, average spending levels have slightly increased in the EU15 over time. At the same time the variation in spending has decreased, which is mainly the result of substantial decreases among some of the more generous spenders such as Belgium, the Netherlands, and Sweden. Spending on ALMPs has hence converged to a higher level over time.

Even though expenditures on ALMPs constitute a substantially lower per cent of GDP in EU13 countries, spending has slightly increased over time in the majority of countries. The variation has, however, increased. This suggest that while some countries are modestly increasing their spending (e.g., the Czech Republic and Hungary), others have experienced substantial decreases, particularly in recent years (e.g., Latvia, Poland, and Slovenia). These statistics should, however, be interpreted with some caution, because expenditure-based

Table 4 Public expenditure on active labour market policies (ALMPs) (% GDP), 1985-2015

	1985	1990	1995	2000	2005	2010	2015	Change 1985-2015
Austria	0.28	0.31	0.37	0.50	0.60	0.81	0.73	0.46
Belgium	1.16	0.80	0.92	0.83	0.65	0.72	0.71	-0.45
Denmark	1.02	1.05	1.70	1.84	1.53	2.02	2.04	1.02
Finland	0.72	0.83	1.38	0.86	0.87	1.00	0.99	0.28
France	0.59	0.71	1.17	1.17	0.90	1.13	1.00	0.41
Germany	0.56	0.77	1.16	1.25	1.12	0.90	0.63	0.07
Greece	0.15	0.18	0.38	0.23	0.07	0.23	0.22	0.07
Ireland	1.02	1.03	1.30	0.78	0.61	0.90	0.56	-0.46
Italy		0.22	0.26	0.55	0.53	0.42	0.50	
Luxembourg	0.39	0.19	0.13	0.19	0.50	0.55	0.66	0.27
Netherlands	1.16	1.12	1.20	1.31	1.17	1.10	0.76	-0.41
Portugal	0.16	0.46	0.48	0.61	0.65	0.67	0.55	0.39
Spain	0.32	0.76	0.42	0.77	0.76	0.92	0.59	0.28
Sweden	1.95	1.54	2.08	1.63	1.10	1.10	1.25	-0.70
United Kingdom	0.44	0.38	0.26	0.21	0.38	0.38	0.19	-0.26
Mean EU15	0.71	0.69	0.88	0.85	0.76	0.86	0.76	0.05
Standard deviation	0.50	0.40	0.60	0.50	0.36	0.43	0.45	-0.05
Coefficient of variation	0.71	0.58	0.68	0.59	0.48	0.50	0.59	-0.12
Bulgaria					0.46	0.11	0.15	
Croatia						0.21	0.42	
Cyprus					0.08	0.28	0.15	
Czech Republic		0.16	0.12	0.18	0.23	0.32	0.43	
Estonia				0.07	0.07	0.22	0.21	
Hungary		0.58	0.40	0.38	0.32	0.63	0.88	
Latvia				0.12	0.21	0.56	0.14	
Lithuania				0.19	0.22	0.30	0.31	
Malta					0.14	0.17	0.25	
Poland			0.37	0.25	0.42	0.68	0.46	
Romania					0.15	0.11	0.12	
Slovak Republic		0.22	0.73	0.31	0.33	0.32	0.19	
Slovenia				0.26	0.29	0.50	0.24	
Mean EU13					0.24	0.34	0.30	
Standard deviation					0.13	0.19	0.21	
Coefficient of variation					0.51	0.57	0.68	
Non-EU								
Iceland		0.03	0.09	0.06	0.08	0.06	0.05	
Norway	0.58	0.88	1.22	0.60	0.72	0.62	0.52	-0.06
Switzerland	0.17	0.20	0.43	0.51	0.67	0.60	0.58	0.41
United States	0.27	0.21	0.17	0.15	0.12	0.13	0.09	-0.17

Notes: Total expenditures in current prices (millions of national currency) have been divided by GDP in current prices (millions of national currency) to obtain spending as a percentage of GDP; for some

countries, data years are around 1985 (Denmark, 1986; Portugal, 1986), 1990 (Czech Republic, 1991; Hungary, 1992; Slovak Republic, 1991), 2000 (Estonia, 2003; Latvia, 2003; Lithuania, 2003; Slovenia, 2003), 2005 (Cyprus, 2006; Malta, 2006; Romania, 2006) or 2010 (Croatia, 2012).

Source: OECD Labour Database; European Commission DG Employment, Social Affairs & Inclusion Labour Market Policy Database; OECD Social Expenditure Database; OECD National Accounts Database; authors' calculations.

indicators are fraught with limitations. They are, for example, unable to capture institutional characteristics of welfare programmes. In addition, variation in expenditures across or within countries may not only reflect policy preferences, but may also stem from different demographic compositions and economic trends such as ageing populations and unemployment (Jensen, 2011). If the main analytical interest actually lies in policy changes, expenditures have to be corrected for such trends. For that reason we also present 'effort' on specific programmes, which constitutes expenditures corrected for the number of recipients relative to GDP per capita in order to allow for comparison across countries and over time (cf. Vandenbroucke and Vlemincx, 2011; Ronchi, 2016; Bakker and Van Vliet, 2019).

Most of the existing studies have used the unemployment rate or number of unemployed as proxies to correct spending on ALMPs for the number of recipients (e.g., Van Vliet and Koster, 2011; Kuitto, 2016). The use of unemployment rates is, however, problematic as they are expressed as a share of the labour force. Labour force participation rates differ greatly across countries, to a large extent due to different rates of female participation. Moreover, since unemployment, inactivity, and employment together constitute the entire labour force, changes in other social policies such as early retirement, higher education or part-time work might affect the unemployment rate and thereby generate artificial changes in effort on ALMPs. Besides, not all ALMPs are designed to facilitate labour market participation by the unemployed. Programmes focused on sheltered employment or the provision of wage subsidies often provide alternatives to work for people who would otherwise not participate on the labour market, for instance due to reduced work capacity (Clasen et al., 2016). To provide a more accurate image of the generosity of ALMPs across countries, we correct spending on specific programmes for the number of participants in the respective programmes. These data are available from the 'Labour Market Programmes: Expenditure and Participants' dataset from the OECD Employment Database and the Labour Market Policy Database of the European Commission's DG for Employment, Social Affairs, & Inclusion. Even though data on participant stocks are

available since 1998 for most European countries, they have rarely been used in scholarly work.[14]

In Table 5 we present the development of public expenditure on two groups of ALMPs (cf. Bengtsson et al., 2017). Not all ALMPs similarly reflect social investment aspects. Bonoli (2010, 2012) distinguishes four groups of ALMPs based on the extent to which they reflect human capital investment and a 'pro-market employment orientation'. Two of them, *upskilling* and *employment assistance*, are considered social investment-oriented ALMPs. Upskilling entails human capital investment and 'facilitates labour market re-entry on the one hand, and impacts positively on productivity on the other' (Bonoli, 2012: 184). Employment assistance is aimed at removing obstacles to labour market participation and thereby constitutes 'a source of savings for the public purse, but it also reduces the duration of unemployment and hence its scarring effect on the beneficiary' (Bonoli, 2012: 183).

The former can be operationalized through expenditures on programmes included under the category 'training' in internationally comparative labour market programmes data. The latter category comprises the spending categories public employment services (PES) and administration, employment incentives (including job rotation schemes), sheltered and supported employment and rehabilitation, and start-up incentives. There are no participant data for PES and administration, however, because the expenditures included in this category relate to participants in all the other programmes. Spending on this category is therefore not included in expenditures on employment assistance in Table 5.

Table 5 provides a much more nuanced picture than Table 4. While expenditures on ALMPs have risen in general, they have, on average, fallen per participant in training and employment assistance in EU15 countries. More interestingly, expenditures per participant in EU13 countries have increased to such an extent that these countries on average spent more relative to GDP per capita in 2015 than EU15 countries did. Within both country groups there are, however, substantial differences between countries. While combining expenditure data with participant stocks might lead to better insights (Clasen et al., 2016), the data show a surprisingly volatile pattern for some countries. This raises some questions that require further investigation in order to determine whether this concerns an issue of data quality or whether countries have really altered the generosity of their programmes to such extents. In addition, it should be stressed that changes in this indicator can be caused by multiple sources, including the level of expenditures, the number of participants, and the overall state of the economy.

[14] Cronert (2019) constitutes the sole exception.

Table 5 Public expenditures on social investment-oriented active labour market policies (ALMPs) per participant (% GDP per capita), 2000-2015

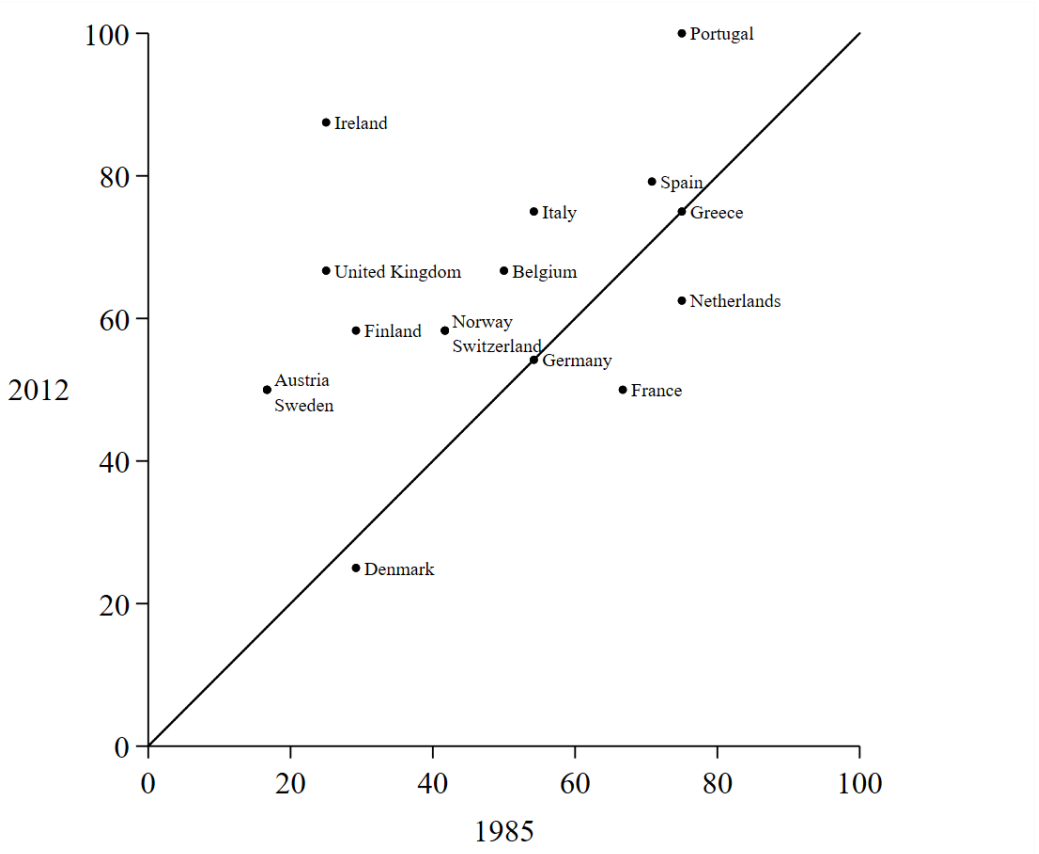
	Training				Employment assistance			
	2000	**2007**	**2015**	**Change 2000-2015**	**2000**	**2007**	**2015**	**Change 2000-2015**
Austria	26.7	30.5	35.5	8.9	13.7	13.5	17.7	4.0
Belgium	24.4	17.3	12.6	-11.8	16.1	22.3	18.5	2.4
Denmark	71.0	37.1	59.2	-11.9	49.1	42.7	43.8	-5.3
Finland	37.9	41.4	37.7	-0.3	36.3	32.8	42.0	5.7
France	44.0	33.3	45.9	1.9	18.7	16.9	11.5	-7.2
Germany	54.5	27.8	16.8	-37.7	56.1	31.1	32.7	-23.5
Greece	13.1	41.0	15.3	2.2	8.9	39.5	22.4	13.5
Ireland	33.4	35.2	26.6	-6.7	16.6	14.8	12.7	-3.9
Italy	16.3	10.0	13.2	-3.1	14.8	16.1	19.2	4.4
Luxembourg	27.2	23.5	22.6	-4.6	8.7	11.5	11.4	2.7
Netherlands	13.4	12.9	8.6	-4.7	39.1	48.6	32.5	-6.6
Portugal	62.8	42.7	21.6	-41.2		18.1	13.5	
Spain	26.4	19.1	17.1	-9.4	8.4	4.8	8.1	-0.4
Sweden	76.2	67.7	41.8	-34.4	42.4	40.3	35.0	-7.3
United Kingdom	32.4	41.1			30.6	32.3		
Mean EU15	37.3	32.0	26.7	-10.6	25.7	25.7	22.9	-2.7
Standard deviation	20.3	14.6	15.0	-5.3	16.2	13.3	12.0	-4.2
Coefficient of variation	0.54	0.46	0.56	0.02	0.63	0.52	0.52	-0.11
Bulgaria		32.9	35.6		22.1	15.6	45.5	23.3
Croatia			55.4				37.0	
Cyprus		23.6	7.1			22.4	22.4	
Czech Republic	23.1	9.9	23.8	0.7	16.3	20.7	38.6	22.2
Estonia		34.7	39.6			6.1	19.2	
Hungary	30.6	42.7	42.9	12.4		15.2	24.0	
Latvia	42.8	42.0	46.3	3.5		39.2	18.5	
Lithuania	37.6	35.6	49.9	12.3		34.5	27.3	
Malta		7.2	12.5			29.6	17.3	
Poland		37.8	75.9			25.1	22.6	
Romania	39.0	14.2	2.0	-37.0	18.0	18.4	12.3	-5.8
Slovak Republic		40.4	25.0			13.3	17.7	
Slovenia	8.6	14.8	33.6	25.0		21.3	17.1	
Mean EU13		28.0	34.6			21.8	24.6	
Standard deviation		13.3	20.7			9.3	9.9	
Coefficient of variation		0.47	0.60			0.43	0.40	
Non-EU								
Norway	47.4	32.8	35.3	-12.1	40.0	39.1	38.3	-1.6
Switzerland	57.6	46.5	43.9	-13.7	58.6	46.2	29.2	-29.3

Notes: Total expenditures in current prices (national currency) have been divided by the number of participants and this number was subsequently divided by GDP per capita (national currency) to obtain spending per participant relative to GDP per capita; participant stock data are not available for Iceland and the Unites States; for some countries, data years on training are around 2000 (Ireland,

1999; Luxembourg, 2001; Spain, 2003; Sweden, 2003; Czech Republic, 2002; Hungary, 2003; Latvia, 2003; Lithuania, 2003; Romania, 2003; Slovenia, 2003) or 2015 (Italy, 2014);for some countries, data years on employment assistance are around 2000 (Ireland, 1999; Spain, 2003; Czech Republic, 2003; Romania, 2003), 2007 (Malta, 2006) or 2015 (Italy, 2014; Slovenia, 2014).

Source: OECD Employment Database; European Commission DG Employment, Social Affairs & Inclusion Labour Market Policy Database; OECD National Accounts Database; authors' calculations.

Figure 5 Strictness of sanction rules, 1985-2012



Notes: Original values have been multiplied by 100 to facilitate interpretation; data for the Netherlands are available since 1997 only; data are not available for Luxembourg, Central and Eastern European welfare states, Iceland and the United States.

Source: Knotz and Nelson (2019) and authors' calculations.

Given the strong focus of the European social investment agenda on getting people out of poverty by moving them into work, Vandenbroucke and Vleminckx (2011) argue that the 'active welfare state' might actually be a more accurate term than 'social investment state'. While the social investment state has gradually been developing since the 1990s, a more abrupt activation turn also occurred in the 1990s (Clasen, 2000; Raffass, 2017). Data on activation strategies in terms of benefit conditionality have only recently become available (Knotz and

Nelson, 2019). Figure 5 presents the strictness of sanction rules for 14 European and 2 non-European countries in 1985 and 2012. It shows that sanction rules have gotten substantially tougher since 1985. According to Knotz (2018, 2019) this trend towards greater coercion in labour market policies can be explained through the adaption of rules and provisions in response to the emergence of new social risks, on the one hand, and the increased need for social protection in combination with limited resources during economic crises (such as those around 2000 and 2008), on the other. The only countries in which sanctions rules have been slightly relaxed over time are Denmark, France, and the Netherlands.

13. Education

Together with ALMPs, policies focused on early childhood have figured most prominently in the literature on social investment. These policies cannot only be expected to increase labour market participation by enabling parents to reconcile work and family (see Akgunduz and Plantenga [2018] for a meta-analysis), but to stimulate cognitive development of children as well (Burger, 2010). In addition to education during early childhood, initial education and post-initial education during working life can both be expected to have a positive effect on the quality of a county's labour force. The modernization of education systems and expansion of lifelong learning programmes has been identified by the European Commission (2017) as one of the most important mechanisms to address the challenges that go hand in hand with globalization, technological change, and the growth of the services sector. The right to 'quality and inclusive education, training and life-long learning in order to maintain and acquire skills that enable [one] to participate fully in society and manage successfully transitions in the labour market' is even mentioned as very first in the European Pillar of Social Rights. Participation in education at a later age has become particularly relevant given that some jobs will become obsolete and the (routine-based) skills that go with them outdated. Workers are therefore confronted with the need to continuously adapt their skills or acquire new ones.

In Table 6 we show the development of public expenditure on education since 1995.[15] Educational expenditures can be distinguished into expenditures on core and peripheral educational goods and services, on the one hand, and expenditures on educational institutions and outside educational institutions, on the other. Public expenditures on education cover all of

[15] Internationally comparative data on education spending by level are usually only available since the introduction of ISCED 1997. For that reason, the data we present with regard to education do not extend as far back in the past as data on social expenditure.

these categories (OECD, 2018b).[16] Data until 2011 are according to ISCED 1997, whereas data for 2012–2016 are according to ISCED 2011.[17] To guarantee comparability over time, spending data after 2011 exclude expenditures on ISCED 2011 level 01 (early childhood educational development). This constitutes a new category of early childhood education related to educational content for children in the age range of 0–2. This category did not exist under ISCED 1997, which only covered pre-primary education (designed for children from the age of 3 to the start of primary education; ISCED 1997 level 0; ISCED 2011 level 02).[18]

On average, expenditures on education as a per cent of GDP have increased in EU15 countries over time, although a drop can be observed after 2010 as a result of which the overall increase is rather small. As with social expenditures a trend of convergence can be observed until 2010, whereas a trend of divergence can be observed throughout more recent years. Again, Mediterranean countries are the lowest spenders on education among the EU15 whilst the Nordic countries stand out as the most generous spenders by allocating approximately 7% of their GDP to education. When excluding these countries, EU13 and the other EU15 countries display similar levels of education expenditure around 5% of GDP.

Despite moderate increases throughout the first decade of the 21st century, spending levels in EU13 countries in 2015 are comparable to those in 2000. Nevertheless, both the standard deviation and coefficient of variation have decreased over time. This convergence is mainly the result of the catch-up among some of the rather low spenders like Bulgaria, Croatia, the Czech Republic, and the Slovak Republic. With 3.1% of GDP, Romania was also the country with the lowest educational expenditures in 2015.

As with expenditure on ALMPs, we also provide spending figures per recipient. Instead of focusing on total education expenditure, we concentrate on expenditures for and of educational institutions (e.g., Busemeyer, 2009b). Specifically, we use expenditure on educational institutions per full-time equivalent (FTE) pupil or student as a share to GDP per capita, which provides an assessment of the investments made in each student, taking into

[16] In addition to spending on teaching staff, school buildings, schoolbooks, and teaching materials this also includes, for example, spending on research and development; school meals; transport to schools; housing on campus; and public-to-private transfers such as loans for tuition and student living costs and subsidies for student living costs, reduced transport fares, private spending on school materials, and private tutoring.

[17] The presented figures for Latvia (1995–2015) and Lithuania (2000–2015) are also according to ISCED 2011. Data according to this classification were provided retrospectively by the OECD, whereas data according to ISCED 1997 are not available from the OECD database used for the other OECD countries.

[18] Currently, ISCED 01 programmes are in place in approximately half of the countries considered: Austria, Belgium (Flanders), Denmark, Finland, Germany, Greece, Italy, Spain, Sweden, the United Kingdom, Croatia, Cyprus, Estonia, Hungary, Latvia, Lithuania, Romania, Slovenia, Iceland, and Norway. For a country-by-country overview, see European Commission, Education, Audiovisual and Culture Executive Agency (EACEA) and Eurydice (2019).

Table 6 Public expenditure on education (% GDP), 1995-2015

	1995	2000	2005	2010	2015	Change 1995-2015
Austria	6.1	5.6	5.2	5.7(b)	5.4	-0.7
Belgium		5.0	5.8	6.4	6.5	
Denmark	7.7	8.1	8.1	8.6(b)	8.8	1.0
Finland	6.5	5.7	6.0	6.5(b)	6.7	0.2
France	5.8	5.5	5.5	5.7	5.5	-0.3
Germany	4.5	4.3	4.4	4.9	4.6	0.1
Greece	2.9	3.3	4.0	3.6	3.6	0.7
Ireland	4.7	4.1	4.5	6.0	3.8	-0.9
Italy	4.3	4.4	4.2	4.3	4.1	-0.3
Luxembourg	3.6			4.3	3.9	0.3
Netherlands	4.8	4.6	4.8	5.5	5.3	0.6
Portugal	4.9	5.2	5.1	5.4	4.9	0.0
Spain	4.4	4.2	4.1	4.9(b)	4.2	-0.2
Sweden	7.1	6.8	6.5	6.5(b)	6.9	-0.1
United Kingdom	3.9	3.8	4.6	5.5	5.4	1.4
Mean EU15	5.1	5.0	5.2	5.6	5.3	0.2
Standard deviation	1.4	1.3	1.1	1.2	1.4	0.1
Coefficient of variation	0.27	0.25	0.22	0.21	0.27	0.00
Bulgaria	3.4	3.9	4.3	4.1	3.9	0.5
Croatia		3.7	4.0	4.3	4.4	
Cyprus	4.6	5.4	7.0	7.9	6.2	1.5
Czech Republic	4.0	3.7	3.9	4.1	5.8	1.7
Estonia	5.8	5.5	4.8	5.5	4.8	-1.0
Hungary	4.5	4.9	5.3	4.8	4.5	0.0
Latvia	6.0	6.2	4.8	5.1	5.3	-0.7
Lithuania	5.1	5.6	4.9	5.3	4.2	-0.9
Malta		4.5	6.6	6.7	5.1	
Poland	5.3	4.8	5.4	5.1	4.8	-0.5
Romania		2.9	3.5	3.5	3.1	
Slovak Republic		3.9	3.7	3.9	4.6	
Slovenia		5.8	5.7	5.5	4.6	
Mean EU13		4.7	4.9	5.1	4.7	
Standard deviation		1.0	1.1	1.2	0.8	
Coefficient of variation		0.22	0.22	0.24	0.17	
Non-EU						
Iceland		6.4	7.4	7.0	6.9	
Norway	7.4	6.5	6.9	6.7(b)	6.9	-0.4
Switzerland	5.0	4.8	5.2	4.9	5.1	0.1
United States	5.1	4.7	4.9	5.3	4.8	5.0

Notes: Total expenditures in current prices (millions of national currency) have been divided by GDP in current prices (millions of national currency) to obtain spending as a percentage of GDP for most countries; for Bulgaria, Croatia, Cyprus, Malta and Romania percentages were directly copied from Eurostat; the presented figures for Estonia (1995, 2000), Lithuania (1995) and Slovenia (2001) are

estimates based on the development of percentages directly available from Eurostat.
To guarantee comparability over time spending on ISCED 2011 level 01 is excluded, because this category was not included in ISCED 1997; for Denmark and Lithuania, expenditures on ISCED 2011 level 01 cannot be distinguished from expenditures on level 02 and are hence included; the presented figure for Croatia (2015) concerns expenditures on public educational institutions, because public expenditures on education are not available after 2011.
For some countries there is a break in the time series between 2011 and 2012 following the introduction of ISCED 2011 as a result of which spending on pre-primary education before and after 2011 cannot be compared (Austria, Denmark, Finland, Spain, Sweden, and Norway).
For most countries data according to ISCED 1997 are available since 1997 only (Austria, Denmark, Finland, France, Greece, Ireland, Italy, Luxembourg, Portugal, Spain, Sweden, and the United Kingdom); for some countries, data years are around 2000 (Croatia, 2002; Slovenia, 2001), 2010 (Greece, 2012; Luxembourg, 2012) or 2015 (Denmark, 2014; Croatia, 2014; Estonia, 2013; Slovak Republic, 2014).

Source: OECD Education Database; Eurostat Education and Training Database; OECD National Accounts Database; authors' calculations.

account the relative wealth of countries (OECD, 2019d). As is customary in the literature, we distinguish between spending on pre-primary, primary, secondary (comprising lower secondary, upper secondary and post-secondary non-tertiary education), and tertiary education (e.g., Garritzmann and Seng, 2016).[19]

For OECD countries these percentages are generally directly available for 2012–2016 for pre-primary education and 2005–2015 for primary and secondary education as well as tertiary education. Eurostat provides similar percentages for: primary and lower secondary; upper secondary, and post-secondary non-tertiary education; and tertiary education. Coverage for some countries extents back into the 1990s.[20] The OECD data were preferred over Eurostat data. The latter were only used for country-years not covered by the OECD data. For some country years, notably spending per FTE pupil enrolled in pre-primary education in 1995 and 2005, figures were calculated. This was done by dividing total expenditure on educational institutions at the respective level by the corresponding FTE enrolment. Next, expenditure per pupil or student was divided by GDP per capita.[21]

[19] Note that spending on pre-primary education is not exactly the same as spending on childcare. In the SOCX data, childcare (ECEC) additionally includes spending on child (day)care and other pre-school services. Spending on pre-primary education, however, constitutes the lion's share of total spending on ECEC.

[20] To obtain expenditures per FTE student in primary and secondary education, the two percentages were weighted by the relative shares of students enrolled in the two groups.

[21] Note that expenditure and enrolment data often do not refer to the same period. The former usually refer to the calendar year (except for the United Kingdom and United States), whereas the latter generally refer to the calendar (pre-primary education only) or school year (usually September $year_{t-1}$ to August $year_t$). The OECD implements several adjustments on a country-by-country basis to ensure that student numbers coincide with the financial year (OECD, 2018b). Enrolment rates adjusted to the financial year are, however, only available since 2002 from the OECD and 2012 from Eurostat. These adjustment have therefore not been implemented in the calculations for the 1995 figures (and 2005 for Bulgaria, Croatia, Cyprus, Latvia, Lithuania, and Romania). Any biases associated with this are likely to be small as these calculations predominantly pertain to expenditure on pre-primary education,

Table 7 shows that, on average, expenditures per pupil on pre-primary and primary and secondary educational institutions have increased in EU15 countries, whereas expenditures on tertiary educational institutions per student have somewhat decreased. In EU13 countries, expenditures per primary and secondary pupil have increased as well, but expenditures for pupils in pre-primary educational institutions and students in tertiary educational institutions decreased. Furthermore, it is worth noting that EU15 and EU13 countries on average invest rather similar shares of GDP per capita in their pupils and students. Nonetheless, spending on pupils in pre-primary education has traditionally been somewhat higher in the new EU Member States. There is, however, a lot of variation within these two groups of countries as well as within countries over time.

14. Conclusion

In this chapter, we presented the trends of globalization, technological change, and migration as three key challenges for European labour markets and welfare states in the 21st century. In particular globalization and technological change have been regarded as important sources of inequality between different groups in the labour market as these developments have been mainly beneficial for the employment opportunities and incomes of highly skilled workers. The more recent literature mainly considers the automation of routine-intense tasks as an important explanation for current labour market developments and in particular for the trend of job polarization. Whereas the existing literature has been mainly focused on the question of what types of work will (dis)appear, for what types of workers, and in which sectors, we argue that globalization and technological change, via job polarization, also affect the type of contract under which workers operate. The figures presented here show that the share of middle-skilled workers in low-paying jobs has increased in many European countries. At the same time, in many of these countries, the share of nonstandard employment has increased over time. Hence, we hypothesise that the increased competition for low-paying jobs is associated with the rise of nonstandard employment or, in other words, with labour market flexibilization. Interestingly, this hypothesis seems to have implications for both the policy agenda and the research agenda of the coming decade. For academic research, the implication would be that there is an additional outcome variable in the analyses of globalization and technological change. In addition, job polarization and the rise of nonstandard employment may also have implications for market income distribution, which would be an interesting direction for future research. Moreover, the public policy debate regarding the consequences of globalization and

which generally uses headcounts instead of FTEs (OECD, 2018d).

Table 7 Expenditures on educational institutions per full-time equivalent (FTE) pupil or student by level (% GDP per capita)

	Pre-primary education				Primary and secondary education				Tertiary education			
	1995	2005	2015	Change 1995-2015	1995	2005	2015	Change 1995-2015	1995	2005	2015	Change 1995-2015
Austria	*19.0*	*18.7*[b]	18.8	-0.1	31.0	27.2	27.8	-3.3	40.5	44.4	35.0	-5.5
Belgium	*11.1*	14.1	17.4	6.3	*21.8*	22.7	26.1	4.3	*36.5*	36.7	37.9	1.5
Denmark	*22.1*	*15.3*[b]	23.9	1.8	*27.2*	26.1	26.7	-0.5	*44.5*	43.5	32.5	-12.0
Finland	*33.5*	*13.9*[b]	25.2	-8.2	25.3	20.7	23.8	-1.5	53.0	38.5	41.7	-11.3
France	*15.1*	16.2	19.2	4.1	*24.4*	23.9	24.3	-0.1	31.6	36.6	39.7	8.1
Germany	*17.1*	*17.9*	20.4	3.3	25.1	22.1	22.5	-2.6	41.6	40.9	35.4	-6.2
Greece	–	–	19.6		*11.9*	*20.9*	23.1	11.2	*20.0*	24.7	15.3	-4.7
Ireland	*12.4*	*13.3*	12.7	0.4	*15.0*	15.8	12.6	-2.4	25.5	25.9	19.2	-6.3
Italy	*11.7*	*16.3*	17.1	5.4	*22.3*	23.6	24.6	2.3	*23.4*	24.2	30.8	7.4
Luxembourg	–	*15.8*	17.1		*15.3*	20.6	19.9	4.6			47.6	
Netherlands	*13.3*	15.8	16.7	3.4	18.6	20.6	21.9	3.2	50.2	40.9	38.5	-11.7
Portugal	*6.0*	*15.2*	24.1	18.1	*18.8*	24.7	28.9	10.1	*40.6*	42.3	39.9	-0.7
Spain	*17.0*	*18.4*[b]	18.9	2.0	21.8	22.7	23.5	1.7	32.8	35.5	36.2	3.4
Sweden	*13.7*	*13.9*[b]	29.5	15.8	*25.2*	22.5	22.9	-2.3	*63.3*	45.6	50.7	-12.6
United Kingdom	*24.3*	*18.0*	21.8	-2.5	*16.2*	24.6	26.9	10.7	*36.3*	44.1	64.1	27.8
Mean EU15	16.6	15.9	20.2	3.5	21.3	22.6	23.7	2.4	38.6	37.4	37.6	-0.9
Standard deviation	7.0	1.8	4.2	-2.8	5.3	2.7	3.9	-1.4	11.9	7.5	11.7	-0.2
Coefficient of variation	0.42	0.11	0.21	-0.21	0.25	0.12	0.16	-0.08	0.31	0.20	0.31	0.00
Bulgaria	*27.6*	*25.6*	25.0	-2.6	17.5	19.1	17.8	0.3	48.3	43.3	37.2	-11.1
Croatia		*26.4*	30.1			20.1	21.3			38.8	21.3	
Cyprus	*11.0*	*15.8*	16.9	5.9	25.8	31.8	39.6	13.9	59.9	41.6	41.1	-18.8
Czech Republic	*17.2*	*15.1*	14.8	-2.4	*19.6*	18.4	21.1	1.5	*36.0*	29.9	32.5	-3.5
Estonia		*10.8*	22.4			22.5	22.9			23.3	44.2	
Hungary	*19.9*	*24.7*	26.1	6.3	*20.8*	23.1	22.7	1.9	*56.6*	32.4	33.5	-23.1
Latvia	*34.5*	*22.3*	19.0	-15.5	*24.6*	24.1	22.4	-2.2	*39.5*	27.0	29.7	-9.8
Lithuania	*37.6*	*22.6*	19.1	-18.4	*20.8*	17.0	18.5	-2.3	*49.1*	31.3	33.7	-15.4
Malta		*15.2*	21.3			26.5	26.0		42.0	50.5	51.5	9.5

Poland	*17.6*	*27.9*	23.4	5.8	17.5	22.4	25.3	7.8	35.3	41.1	36.4	1.1
Romania		*19.2*	12.4			15.5	13.8			30.2	30.7	
Slovak Republic	*15.8*	*17.3*	19.6	3.8	13.1	16.7	22.8	9.7	42.2	35.2	53.6	11.4
Slovenia		*47.1*	24.9			29.5	26.7			35.8	32.4	
Mean EU13		22.3	21.1			22.1	23.2			35.4	36.8	
Standard deviation		9.1	4.9			5.0	6.1			7.5	8.9	
Coefficient of variation		0.41	0.23			0.23	0.26			0.21	0.24	
Non-EU												
Iceland	*16.1*	*18.4*	25.2	9.1	20.3	23.8	22.9	2.5	30.6	25.7	25.9	-4.7
Norway		*10.9*[(b)]	27.7			26.8	27.5		38.6	32.4	40.2	1.6
Switzerland	*8.2*	*8.8*	9.7	1.4	*21.0*	*21.1*	29.0	8.0	*49.6*	*40.7*	42.7	-6.9
United States	*21.4*	19.4	19.4	-2.0	*21.3*	22.7	22.5	1.2	*56.2*	54.8	53.6	-2.6

Notes: Expenditure concerns expenditure of and for public and private educational institutions from public, private and international sources; pre-primary education refers to ISCED 2011 level 01 (ISCED 1997 level 0) exclusively; primary and secondary education includes post-secondary non-tertiary education.
In Greece (until 2012) and Luxembourg (until 2008) expenditures on pre-primary education are included under primary education; underlined figures include expenditures on and pupils enrolled in pre-primary education.
Figures in italics were calculated by dividing expenditures in current prices (national currency) by the number of students enrolled in the respective level and subsequently relating this number to GDP per capita; the presented figures for Malta (2005) and Romania (2005) seem to overestimate expenditures, because they may include educational expenditures not allocated to a specific level.
For most countries expenditures on pre-primary educational institutions are not available for 1995 so that data for 1994 has been used instead (Austria, Belgium, Denmark, Finland, France, Ireland, Italy, Portugal, Spain, Sweden, United Kingdom, Czech Republic); for some countries, data years for expenditure on pre-primary education are around 1995 (Bulgaria, 1999; Cyprus, 1999; Hungary, 1997; Latvia, 1998; Lithuania, 1998; Poland, 1999; Slovak Republic, 1999; Iceland, 1998; Switzerland, 1999), 2005 (Luxembourg, 2008; Croatia, 2007; Malta, 2008; Switzerland, 2008) or 2015 (Denmark, 2014; Ireland, 2014; Croatia, 2014; Switzerland 2012).
For some countries, data years for expenditure on primary and secondary education are around 1995 (Luxembourg, 1996; Bulgaria, 1999; Cyprus, 1999; Hungary, 1996; Latvia, 1998; Lithuania, 1998; Poland, 1999; Slovak Republic, 1998; Iceland, 1998; Switzerland, 1999), 2005 (Luxembourg, 2008; Croatia, 2007; Switzerland, 2008) or 2015 (Denmark, 2014; Croatia, 2014; Switzerland 2012).
For some countries, data years for expenditure on tertiary education are around 1995 (Ireland, 1999; Italy, 1997; Bulgaria, 1999; Czech Republic, 1997; Hungary, 1997; Latvia, 1996; Poland, 1999; Slovak Republic, 1998; Iceland, 1998; Norway, 1999; Switzerland, 1999), 2005 (Croatia, 2007; Switzerland, 2008) or 2015 (Denmark, 2014; Croatia, 2014; Switzerland 2012).
For some countries there is a break in the time series between 2011 and 2012 following the introduction of ISCED 2011 as a result of which spending on pre-primary education before and after 2011 cannot be compared (Austria, Denmark, Finland, Spain, Sweden, and Norway).

Source: OECD Education Database; Eurostat Education and Training Database; OECD National Accounts Database; authors' calculations.

technological change should not only be focused on the growth of certain sectors and the decline of other sectors, but it should also be focused on the trends in nonstandard employment and hence on the type of contract.

With regard to migration, the free movement of labour has been considered an important issue for European labour markets and welfare states. We have shown that, since 2004, the intra-EU labour migration from CEE countries to Western European countries has increased substantially. Free movement of labour is economically important for the European Union as it can reduce labour market imbalances, which is especially important for the functioning of the Eurozone. At the same time, it has been considered a challenge for welfare states as it might contribute to feelings of economic insecurity and erode solidarity, which forms the basis for the provision of social policy.

Subsequently, we have analysed developments in the provision of welfare state programmes across European countries. Interestingly, it turns out that, despite the budgetary pressure stemming from various sources, social spending has been increased in most European countries. However, in the 21st century, the main question will not be whether governments have increased or decreased their welfare state expenditures. Instead, the question will be whether and how the focus has been shifted from classical social protection to social investment in order to enable workers to adapt themselves to new labour market transformations. In the past decade, such welfare state reforms have been at the core of the EU agenda on social policy. Yet this policy agenda is not uncontroversial, as some fear that a shift of resources from social protection to social investment would reduce the redistributing capacity of welfare states and hence contribute to an increase of income inequality and poverty.

To analyse the developments in welfare state effort, we present a new way of correcting social expenditures for the actual number of benefit recipients. So far, our data show that in many countries the shift from old to new social policies has been rather limited at best. Here, it might play a role that a substantial number of our data years overlap with the financial crisis. Breunig and Busemeyer (2012) have for instance argued that investment spending is harder hit by austerity measures than spending on traditional insurance-based programmes due to different institutional and political constraints. If policymakers are confronted by budgetary constraints, postponing or cutting public investments involves lower political costs than adjusting spending on traditional programmes. This is also reflected in public survey data, which shows that support for social investment policies drops when expenditures on it come into conflict with fiscal or budgetary trade-offs (Busemeyer and Garritzman, 2017; Busemeyer and Neimanns, 2017). This brings us to the more general question of how, given political and economic

constraints, a transformation from traditional social policy to social investment policies could be realized. On the one hand, increasing numbers of policymakers and academics seem to be convinced that investments in human capital, training, and active labour market policy would be (part of) an adequate response to the labour market challenges of globalization, technological change, and flexibilization. On the other hand, it seems to be challenging, at least in the short run, to get support from voters and hence from political parties to shift resources from traditional income protection programmes to new social investment programmes.

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