

Ratio Working Paper No. 356:  
*Employment Protection  
and Productivity*

Eva Uddén Sonnegård

## **EMPLOYMENT PROTECTION AND PRODUCTIVITY**

Eva Uddén Sonnegård\*  
Ratio Institute  
Stockholm, Sweden  
E-mail: [eva.udden.sonnegard@ratio.se](mailto:eva.udden.sonnegard@ratio.se)  
Mobile phone: +46 70 352 73 51

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## **EMPLOYMENT PROTECTION AND PRODUCTIVITY**

### **Abstract**

The design of Employment Protection Legislation (EPL) is a key factor in determining the functioning and flexibility of the labour market. In the wake of the pandemic and the rapid transformation of economies due to i.e., digitalisation, it will be more important than ever to remove impediments on labour and product markets. Multifactor productivity growth (such as work organisation, technical achievements etc.) has slowed down markedly in many countries after the financial crisis. International studies show that the design of EPL is important for productivity growth.

**Keywords:** Employment protection, fixed-term employment, open-ended contracts, collective agreements, digitalisation, multifactor productivity, labour productivity, digital-productivity paradox, automation, robotisation.

**JEL codes:** J59, K31, O43

## **1. Introduction**

International studies show that the design of Employment Protection Law (EPL) is important for productivity growth (OECD 2013). The regulatory framework for employment protection differs in EU countries, and EPL is but one element for improving the functioning of labour markets. Policymakers must find a balance between the dynamics of the market economy and the people's need for security, so firms can adjust to the new technology and enhance productivity growth. EU Member States could learn from each other while at the same time respecting their differences.

Nordic countries have found it beneficial to let social partners negotiate employment regulation in collective agreements governing various forms of fixed-term employment as well as conditions for termination of employment on open-ended contracts. In many other countries, employment protection is regulated by law without the possibility of deviation through collective agreements. In some countries, legislation is based on agreements between social partners, and in some countries through negotiations between social partners and governments. These different conditions make it difficult to compare employment protection between Member States.

## **2. Fairly strict employment protection of regular workers**

Regardless of the difficulties the OECD has, since the mid-1980s, constructed indicators of employment protection not only for their member countries, but also for other

potential members.<sup>1</sup> An updated and improved version was done in 2019 (OECD 2020). It should be noted that the OECD indicator is an average of four broad categories which quantify employers' dismissal and hiring costs and does not *per se* measure the degree of protection for workers.<sup>2</sup> A high value indicates stricter regulations than a low value. The indicator measures statutory law but also account for actual practices, by considering court rulings and collective bargaining.

Most of the EU-countries have a fairly strict employment protection for regular workers.<sup>3</sup> Austria, Denmark and Estonia are the EU countries with the most lenient regulation of open-ended contracts, as seen in Figure 1. Other EU countries (Czech Republic, the Netherlands, Portugal, Italy, Belgium and France) belong to the countries with the strictest employment protection. One of the biggest changes in the 2019 version compared to the 2013 version concerns Germany, which was previously among the countries that were classified as having the strictest employment protection of regular workers (Uddén Sonnegård 2019). Now Germany lies roughly in the middle.<sup>4</sup> Of the Nordic countries, Sweden is the strictest, while English-speaking countries enjoy the lowest degree of strictness. Sweden also stands out as the country with the second-highest compensation paid if a dismissal is ruled to be unfair (by the Labour Court) and

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<sup>1</sup> OECD stands for the Organisation for Economic Co-operation and Development and has 38 member countries.

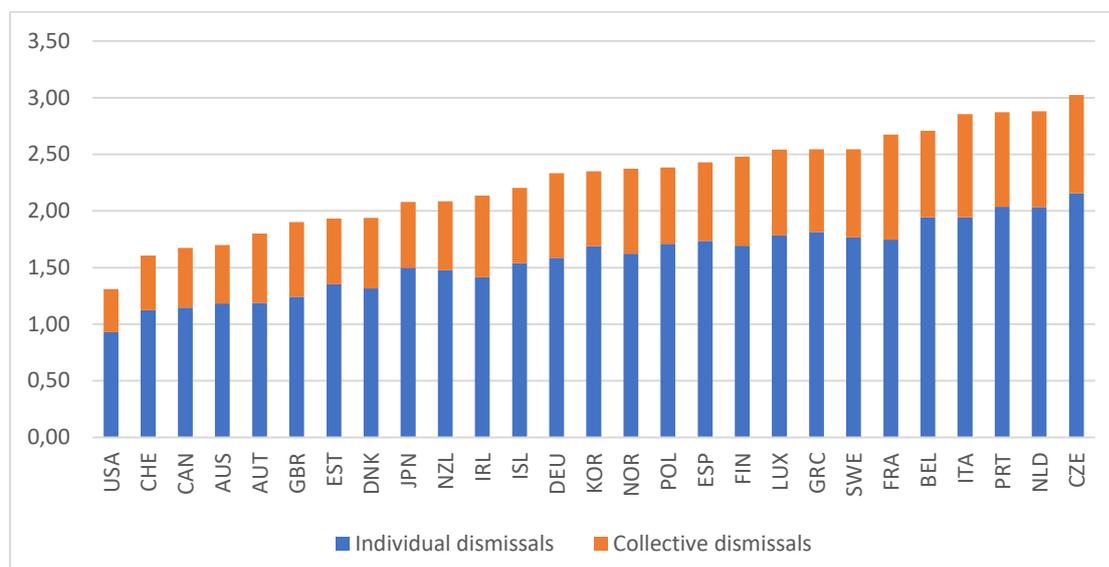
<sup>2</sup> The OECD indicators measure job dismissal regulations (for medium-sized and large firms in the private sector) along four dimensions: 1) procedural requirements before notice is given; 2) notice period and severance pay; 3) the regulatory framework for unfair dismissal; and 4) enforcement of unfair-dismissal regulation. The first two categories are defined by two lower-level elements, the last two by four elements. They are measured by a score between 0 and 6. They focus on the private, not public, sector and evaluate regulation applying to medium-sized or large firms and their employees. The OECD indicator is then an average of the scores of the four broad categories. (See Annex 3.A. in OECD (2020) for more details).

<sup>3</sup>The average for OECD-countries is 2,32 in the version used in Figure 1.

<sup>4</sup> In Germany the indicator of procedural requirements for individual dismissals as well as the indicator of the notice period and severance pay have much lower values than in previous versions.

the employer chooses not to reinstate the person to work: 32 months' compensation after 20 years of employment. In Italy, a maximum of 36 months' compensation, and in Portugal a 20 months' maximum compensation may be paid. The average for OECD countries is considerably lower; around six months. Hence there is room for adjustments in this respect to make employment conditions more flexible.<sup>5</sup>

Figure 1: Employment protection of regular employment



Note: The value of the indicators varies between 0 and 6 and where a high value indicates stricter regulations than a low value. A list of country abbreviations can be found in the Supplement.  
Source: OECD Employment Protection Database, version 2019.

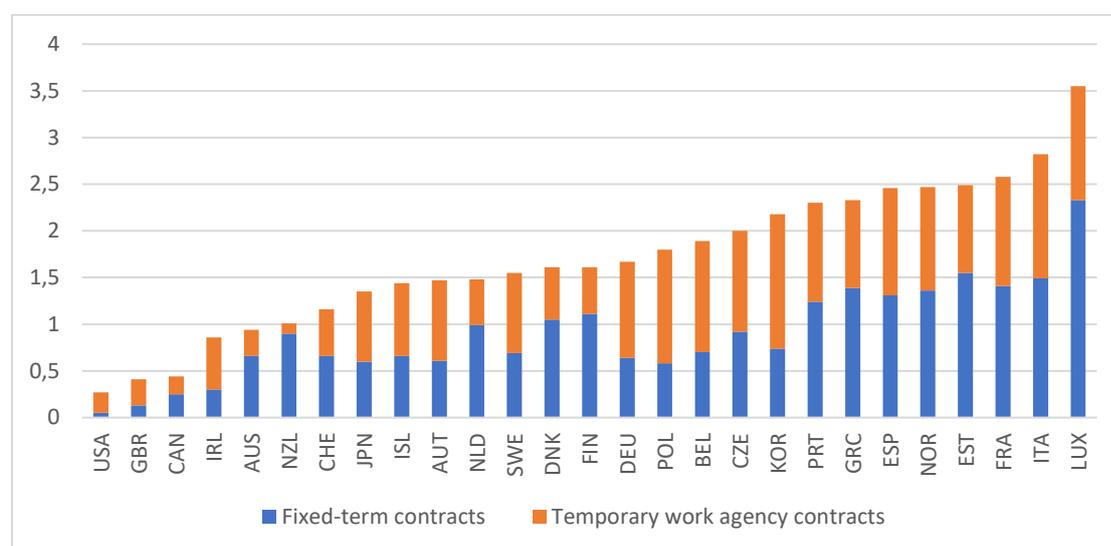
### 3. Some variation in employment protection of temporary workers

Most countries with strict employment protection for regular workers also have strict regulations for temporary workers. This holds e.g., for EU countries Luxemburg, Italy, and France, which have the strictest regulations of the countries as seen in Figure 2.

<sup>5</sup> In the new employment protection law, which is under its way in Sweden, changes of the conditions concerning unfair dismissals are considered as well as many other changes to improve flexible labour market conditions (Stern et al 2020).

But there is some variation in employment protection of temporary workers. Here the Netherlands and Sweden show a different pattern. While the Netherlands have the second-strictest regulation of regular workers, it belongs to the countries with the most lenient regulation of temporary workers. And Sweden, apart from Iceland, has the lowest score of the Nordic countries for temporary workers, in contrast to the Swedish employment protection for regular workers.<sup>6</sup> English-speaking countries like USA, United Kingdom, Canada, Ireland, Australia and New Zealand have the most lenient regulation. It is noteworthy that both Austria and Denmark lie somewhere in the middle when it comes to fixed-term contracts, while regulation is quite lenient for workers on open-ended contracts.

Figure 2: Employment protection of fixed-term contracts and temporary work agency contracts



Note: The value of the indicators varies between 0 and 6 and where a high value indicates stricter regulations than a low value. A list of country abbreviations can be found in the Supplement.  
Source: OECD Employment Protection Database, version 4 November 25, 2021.

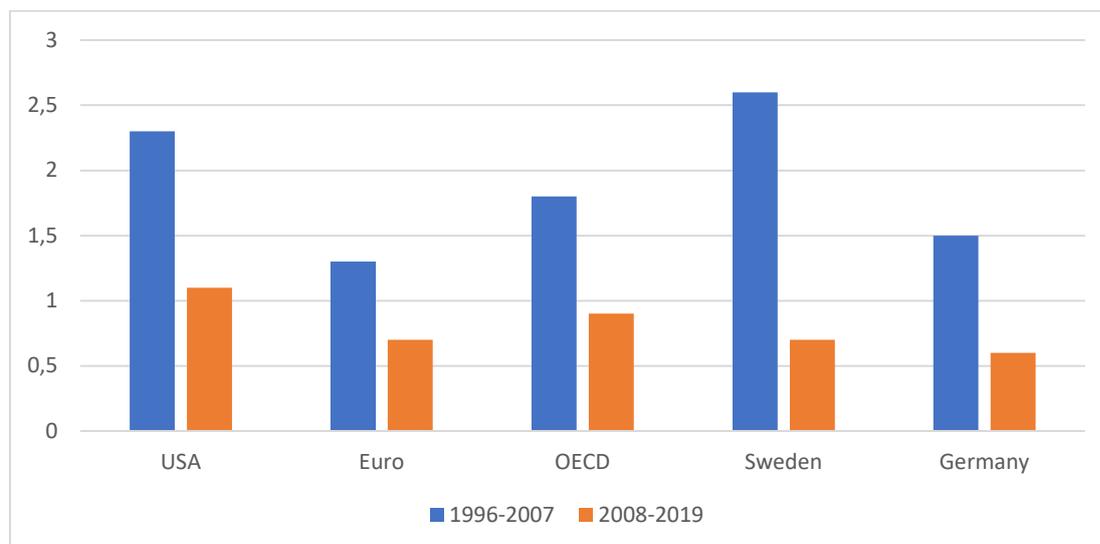
<sup>6</sup> This applies in particular to the standard contracts in Sweden, which are as flexible as in EU countries Germany, Belgium, and Austria (op.cit).

Even though it is difficult to compare EPL of Member States and criticism can be raised of the OECD scope and methodology, the indicators, on the whole, lend support for both research and policymaking. Also, in countries where social partners take an active part in negotiations of employment protection and conclude collective agreements, statutory law is important; as a threat point in the bargaining process and for employees in firms not covered by collective agreements. Not the least, the OECD's review of employment protection enables Member States to learn from each other and contribute to improving the functioning of the labour markets in EU and OECD countries.

#### **4. Weak productivity growth and the digital-productivity paradox**

Productivity growth has been weak since the beginning of the 2000s in many OECD and EU countries, but the fall in productivity has been particularly large during the years after the financial crises. In the euro zone and OECD countries, productivity growth rates halved on average in 2008-19, compared to the 10 years preceding the financial crisis. The same goes for the USA, but productivity developments were even worse in EU countries like Sweden and Germany (see Figure 3). The fall in productivity growth rates in Sweden was significant; from 2.6% to 0.7%, while the fall was smaller in Germany; from 1.5% to 0.6%. However, changes in productivity do not have to mean major structural changes in the economy. Lower labour productivity can, for example, also be an expression of firms choosing to keep workers in spite of a downturn in the economy, especially if it is perceived as temporary (so-called labour hoarding).

Figure 3: Labour productivity growth (production per hour worked), percent, 1996-2007 and 2008-19.



Note: OECD-average for the years 2001-07.

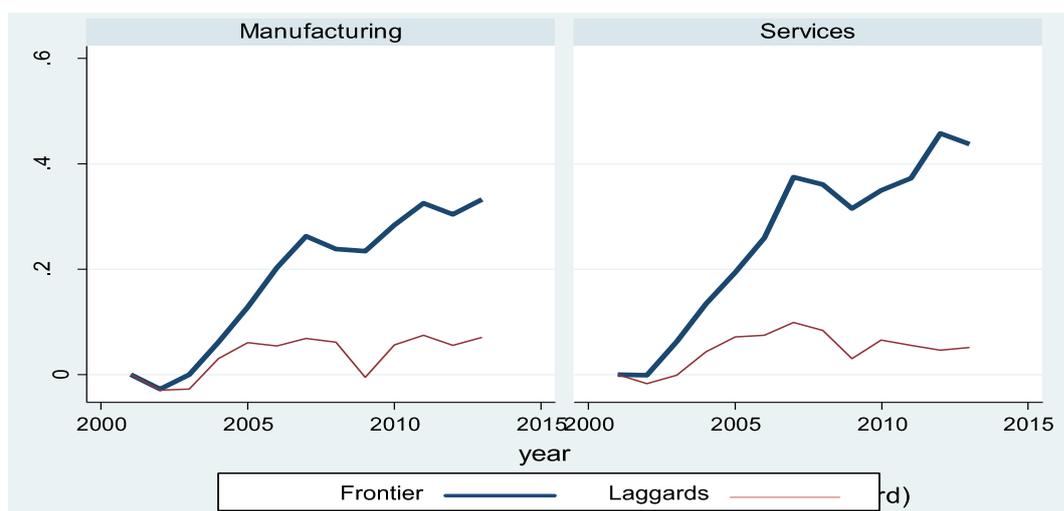
Source: OECD Productivity Statistics Database.

The weak productivity developments may seem surprising given the expected impact of digitalisation on economies. The fact that productivity is weak, though digitalisation has been going on for quite some time, is called the *digital-productivity paradox*. Some argue that globalisation and automation already have had a major impact on growth, and future gains would, therefore, be much smaller. Robotisation has, for example, been going on since the early 1990s in the manufacturing industry, with higher productivity growth as a result. In 1993, Germany was number one in investing in robots (out of 14 countries), while Sweden was second. Germany continued to invest the most in robots by the end of the studied period (2007), while Denmark and Italy were second and third. Sweden was by then lagging behind (Graetz and Michaels 2018).

Others argue that the economies are in a phase of transformation and that firms lagging behind may catch up in the long run. This means that average productivity is low, since the vast majority of companies have low productivity (OECD 2019a). By using

microdata from 24 OECD countries, Andrews et al (2016) show that the difference in productivity growth is large between companies that are on the technological frontier and other lagging companies (see Figure 4). The productivity gap is significantly larger in the service sector than in the manufacturing industry. Hence the digitalisation potential is greater in the service sector. And the low productivity growth on average is explained by the fact that only a few companies (5%) seem to use efficient production methods, while the remaining companies have low productivity growth.

Figure 4: Labour productivity, (value added per employee), 2001-2013



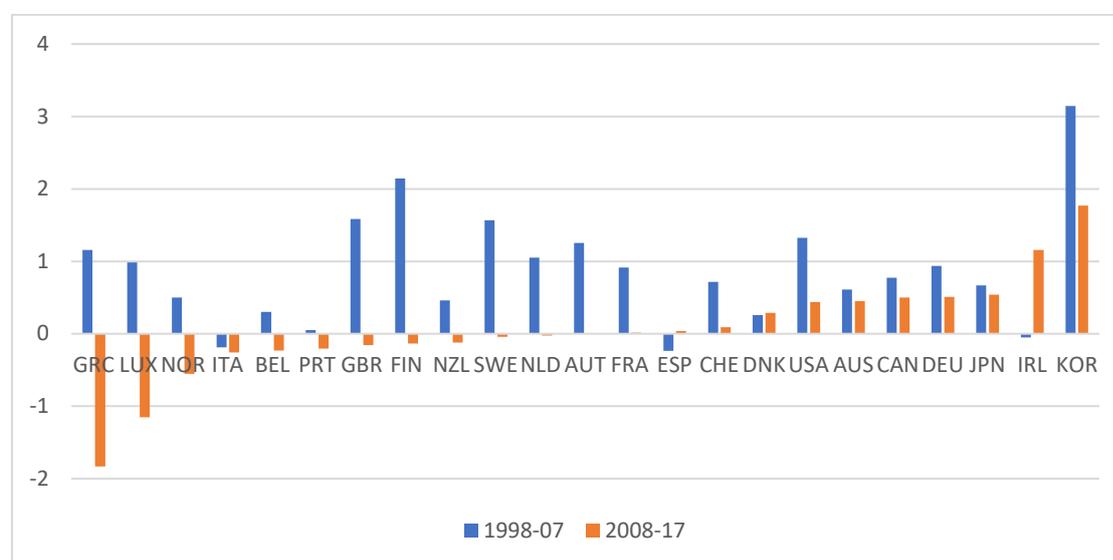
Note: The global frontier is measured by the average of log labour productivity for the top 5% of companies with the highest productivity levels within each 2-digit industry. Laggards capture the average log productivity of all other firms. Unweighted averages across 2-digit industries are shown for manufacturing and services, normalized to 0 in the starting year. Services refer to non-financial business services.

Source: Figure 1 from Andrews et al (2016) p. 15.

A deeper analysis of productivity shows that it is the differences in multifactor productivity (MFP) that explain the productivity gaps. The biggest difference is found in the service sector, while capital deepening also plays a role in the manufacturing industry (op.cit). It is particularly worrisome that the development of multifactor productivity has been so weak during the past decade in most countries. In Greece,

Luxemburg, Finland, Sweden, and Austria, multifactor productivity growth decreased the most out of 15 EU countries the years after the financial crisis 2008-17 compared with the period 1998-2007 (see Figure 5). Multifactor productivity<sup>7</sup> summarises all factors, except labour and capital, that affect productivity such as work organisation, technological achievements etc. Hence, firms' capacity to adjust to new technology is crucial to productivity growth and increased welfare.

Figure 5: Multifactor productivity growth, percent, 1998-2007 and 2008-17



Note: Multifactor productivity growth is measured as a residual when estimating a Cobb-Douglas production function.

Source: OECD Productivity Statistics Database, OECD (2019b).

## 5. Strict EPL decreases multifactor productivity growth

International studies show that the design of EPL may help to support productivity growth (OECD 2013). Weak development is a sign that labour markets need to be more flexible. There are several reasons why productivity can be affected by employment protection. One reason is the *transformation process*, which is necessary to implement

<sup>7</sup> Multifactor productivity (MFP) may also be called total factor productivity (TFP).

digital technologies. It will be more difficult for companies to adjust the production to changes in technology when employment protection is strict. Another reason is the *risk level* in companies. If employment protection is strict, companies' willingness to take risks decreases. This means that companies are less inclined to go into uncharted territory, invest in new products or services and are not willing to employ workers with unknown productivity.

Another reason is the employees' *work efforts*. As the risk of losing your job decreases with strict employment protection, employees do not have to work as hard, which means that productivity decreases. *Sick leave* also tends to increase as employment is perceived as more secure (Arai & Skogman Thoursie 2000, Ichino & Riphahn 2005). This is likely to lead to reduced productivity. On the other hand, strict employment protection can increase employees' incentives to improve their company-specific skills, which increases productivity. However, should a major shock hit the economy, the effect could be negative because the workforce's skills are then more company-specific than general.<sup>8</sup>

In several countries, studies show that companies that are on the technological frontier and need to be able to quickly adapt their workforce can be hindered by regulation in the labour market (Bassanini et al 2009; Scarpetta 2014). Several studies also conclude that multifactor productivity growth is reduced by strict employment protection (Uddén Sonnegård 2017). Autor et al (2007) used a quasi-experiment to examine the effects of employment protection on the US labour market. Their results showed that

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<sup>8</sup> See Bassanini et al (2009) pp. 358-361, for references.

companies' opportunities to take advantage of technology developments were limited due to stricter employment regulations, i.e., multifactor productivity decreased.<sup>9</sup>

However, the results are ambiguous when it comes to labour productivity; it can either increase or decrease with stricter employment protection. In the Autor-study labour productivity rose substantially which the authors explained by firms investing in the latest techniques and employing skilled workers so as to compensate for the stricter EPL. Other studies show that labour productivity is affected negatively. Bassanini et al (2009) stress that firms do not invest in the latest technology so that labour productivity growth is low when employment regulations are stricter. More efficient matching of skill competences would strengthen productivity growth (Karlson et al 2017, Adalet Mc Gowan & Andrews 2015).

In a Swedish study, Bjuggren (2018) examines whether the introduction of the so-called two exceptions in the Swedish legislation 2001, affected productivity growth.<sup>10</sup> The results show that labour productivity increased by 2-3% after the exemption was introduced. Productivity increased even more in the companies that were shedding labour during the period studied. Then labour productivity increased by 6%. Bjuggren (op.cit.) concluded that the two exceptions made it easier for companies to retain the workforce that could best contribute to production.

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<sup>9</sup> Autor et al (2007) used the DID-method to analyse effects on the labour market in different US states when the Employment-at-will doctrine was restricted. The restrictions were implemented at different times in the different states during the period 1970-1999. Many different estimates and different sets of data also showed that the variations in employment decreased and that fewer new companies were established when stricter employment protection was introduced. DID stands for the method of difference-in-differences. See Uddén Sonnegård (2017) fn 41 for further reference.

<sup>10</sup> In firms with ten employees at the most employers could exempt two workers valuable for the production from the priority list of redundancies.

## **6. No productivity effect from a change in employment protection of temporary workers**

Bassanini et al (2008, 2009) examine whether the regulation of fixed-term employment affects productivity. In countries where employment protection is strict, companies can use temporary employment when they need to quickly switch to new technology or changes in demand. The effect on productivity growth can then go in opposite directions. Temporary workers can work harder than regular workers to solve their work tasks, which means that productivity growth would be higher. On the other hand, temporary workers do not participate in company-specific training to the same extent as regular workers and hence productivity growth would be lower. The studies show no effect on multifactor productivity growth from employment protection of temporary workers. This means that a change in employment protection for fixed-term employment without doing something about the regulation of open-ended employment at the same time does not have any effect at all on multifactor productivity. The authors conclude that a reform of employment protection that facilitates temporary employees "does not seem to be the most promising way to increase productivity" (Bassanini et al 2008:42). Many countries did change the regulation of temporary workers after the financial crisis, which would then have had no effect on productivity nor employment, for that matter. Companies then just use temporary workers instead of regular workers and there is no improvement in net employment (Scarpetta 2014).

## **7. Productivity effects from EPL depends on wage bargaining system**

Scarpetta et al (2002) show a negative effect on multifactor productivity growth from more extensive product-market regulation. However, the effects from employment protection regulation were dependent on the wage bargaining system in the different

countries studied (19 OECD countries during 1984 to 1998). A negative effect on MFP growth from strict employment protection was only significant in countries where wage negotiations took place at the industry level. In countries with central or local negotiations, no significant negative effect could be demonstrated. The explanation is, according to the study, that technological development takes place gradually and requires that employees gradually improve their skills. In countries with central bargaining systems, investments in company-specific training are profitable because employees are expected to remain in the company. In countries with local bargaining systems, employees who have acquired higher skills on their own can be offered higher wages to stay in the company. In both cases productivity may increase. Hence it is important how the labour market is organised also in other aspects apart from EPL.

### **8. Policy considerations in a quickly changing world**

A more lenient EPL may thus help increasing productivity growth in the recent low growth period. It is, however, important to implement a complete package of reforms in order to have the desired effect on productivity. One conclusion that can be drawn from the study by Scarpetta et al (2002) is that less of product-market regulation is at least as important for productivity growth as a reduction in employment protection. A less strict employment protection then reinforces the positive effects on productivity growth from product-market reforms. Strict employment protection for regular workers also means that “insiders” bargaining position becomes stronger and that of “outsiders” may take most of the adjustment through employment on fixed-term contracts (Lindbeck & Snower 2001). What was intended to be a stepping-stone into the labour markets can instead become a lock-in, especially for young people, the low-skilled and migrants in EU Member states, which may result in *dual-labour markets* (Scarpetta 2014).

Another conclusion that can be drawn from the OECD studies is that a well-functioning labour market policy is essential when employment protection is reformed (Cournede et al 2016). In the short term, unemployment is likely to increase as companies discard employees with skills that are not demanded. Then labour-market policy is needed to facilitate adjustment. Retraining organisations, preferably run by the social partners, would encourage displaced workers to invest in skills demanded in the digitalised future world.

To sum up: Empirical studies show that growth in multifactor productivity is higher if employment protection is less strict. This is especially true in industries where the need for adjustments of the workforce is great, such as in the ICT sector. Also in the manufacturing industry, the positive effect of less strict employment protection is great since the sector is cyclically sensitive. Companies need to be able to quickly adjust their production to changing demand conditions and structural changes. Today's developments in an increasingly globalised world and the achievements of digitalisation in more and more areas mean that the need for change for companies is pronounced, perhaps even more so than during previous structural transformations. Also, the labour market is not homogeneous in the same way as before. Migrants with skills other than those that many EU countries traditionally demand mean that other types of companies need to emerge. Employment protection can have an inhibiting effect on the growth of new companies, but can also, if properly designed, contribute to more people getting jobs and that economic growth and thus prosperity increases. Finally, the Covid pandemic has also made it clear that the labour market situation can change extremely

rapidly, and it is now more important than ever for EU Member States to improve the functioning of their labour markets.

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*Supplement: Country Abbreviations*

AUS	Australia	ROU	Romania
AUT	Austria	SVK	Slovakia
BEL	Belgium	SVN	Slovenia
CAN	Canada	SWE	Sweden
CHE	Switzerland	TUR	Turkiet
CZE	Czech Republic	USA	USA
DEU	Germany		
DNK	Denmark		
ESP	Spain		
EST	Estonia		
FIN	Finland		
FRA	France		
GBR	United Kingdom		
GRC	Greece		
HRV	Croatia		
HUN	Hungary		
IRL	Ireland		
ISL	Iceland		
ITA	Italy		
JPN	Japan		
LTU	Lithuania		
LVA	Latvia		
KOR	South Korea		
NLD	Netherlands		
NOR	Norway		
NZL	New Zealand		
POL	Poland		
PRT	Portugal		