

A DEEPENED SINGLE MARKET FOR LABOUR AND DIGITAL INNOVATION PROPOSALS FOR A HIGHER FACTOR MOBILITY

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EXECUTIVE SUMMARY

The EU needs higher productivity growth. Higher factor mobility, especially of labour, but also of capital or knowledge and technology, would benefit European citizens as it enhances the efficient allocation of resources and thus boosts productivity and welfare in the Single Market. **A higher geographic labour mobility and a genuine European labour market** can become a major factor in putting the EU on a track of more economic and productivity growth and less cyclical unemployment.

” **PRODUCT MARKET REFORMS IN THE DIGITAL SECTOR CAN BOOST TFP-GROWTH** ”

Product market reforms in the digital sector can boost TFP-growth. The Digital Single Market (DSM) should become a cornerstone of future productivity growth. Several measures should be taken up to meet these objectives. The European Job Mobility Portal EURES could become a European employment agency in the long-term. National employment agencies should cooperate more and exchange information in a European database on vacancies. A better functioning job placement system has to be accompanied by discretionary measures designed to bring young people in training and jobs and address skill shortages. **One proposal for this is the Erasmus Pro: One Million**

European apprentices by 2020-initiative. Member states should simplify their recognition procedures and open up “closed professions” such as architects, accountants or engineers for European citizens.

National policy action has to accompany European regulation: Southern European countries need to introduce more elements of flexi-curity and life-long learning into their national policy mix. Countries like Germany should invest more in higher education as unfavourable demographics will otherwise lead to accelerating skill shortages.

The drive towards a European labour market should be accompanied by prioritised policy actions to manage the digital transformation. A functioning Digital Single Market accelerates the diffusion of new ideas, business models and technology, thus boosting TFP. Policy-makers should prioritise actions with a focus on productivity growth. **E-commerce is a rapidly growing segment** which should make better use of the Single Market. Mobile markets need more competition for companies and more coordination among MS for the assignment of spectrum licenses. This could lead to a faster adaption and diffusion of the coming 5-G technology, in turn supplying the EU with a competitive edge for the development of new services and products in the era of inter-connectivity and the **Internet of Things**.

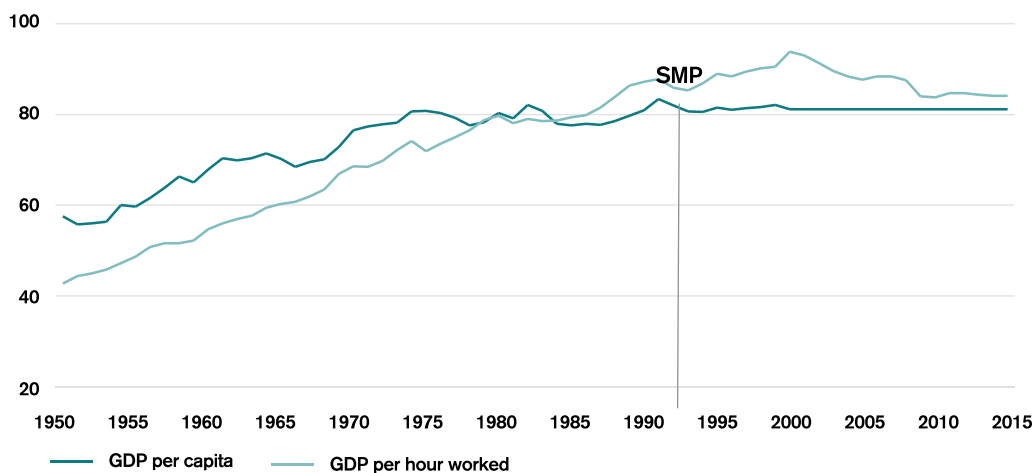
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1. Why the EU needs higher factor mobility and product market reforms: Slowing Down of Productivity Growth

Long-term economic prosperity is largely determined by productivity growth. In the EU, labour productivity growth, i.e. increases in output per hour worked, has been on a downward trend for many years. Lower productivity growth has been observed in many OECD-countries during the last decades¹, but the EU on average fared worse than the US and most other advanced economies. The EU-15 experienced a catching-up effect with the US in productivity levels until about 2000 when convergence in productivity stopped and even went into reverse.

FIGURE 1 ▶ Productivity Level and GDP per capita, EU 15 as % of US



Source: The Conference Board Total Economy Database, 2015

Source: Erixon, Fredrik and Georgieva, Rositsa, *What is wrong with the Single Market?* ECIPE Working Paper No 1 2016.

Concerning the adaptation and diffusion of technology the most important economic variable to measure long-term growth perspectives is Total Factor Productivity Growth (TFP). The residual not only indirectly captures the productivity of the factors of production labour and physical capital but also roughly measures technological progress and the development of intangible factors such as brand value or patents. European TFP growth has been slowing down for quite some time and remains low in comparison with the US, both in the Single Market and the monetary union, as Ameco-data reveals.² The graph below shows the evolution of TFP-growth in the US, the Single Market and the Euro Area. Since the values are indexed at 2010=100, the steeper the curve, the higher the TFP-growth during the last two decades. The US has a much higher TFP-growth than the Single Market and the Single Market in turn shows a much better performance than the euro area. Explanation attempts for the “productivity puzzle” and ensuing lower growth rates are manifold³, as are the policy advises to counter this seemingly secular trend. Most economists agree that in the EU the secular decline in productivity growth and lower economic growth can be at least cushioned by reforms and further integration of factor markets and reforms in product markets for goods and services.⁴ Further integration of the Single Market, especially in services, can additionally have a stabilizing effect on the euro area.⁵

1. Eichengreen, Barry, Park, Donghyun and Shin, Kwanho, *The Global Productivity Slump: Common and Country-Specific Factors* NBER Working Paper No. w21556, September 2015.

2. Ameco-Database 2016.

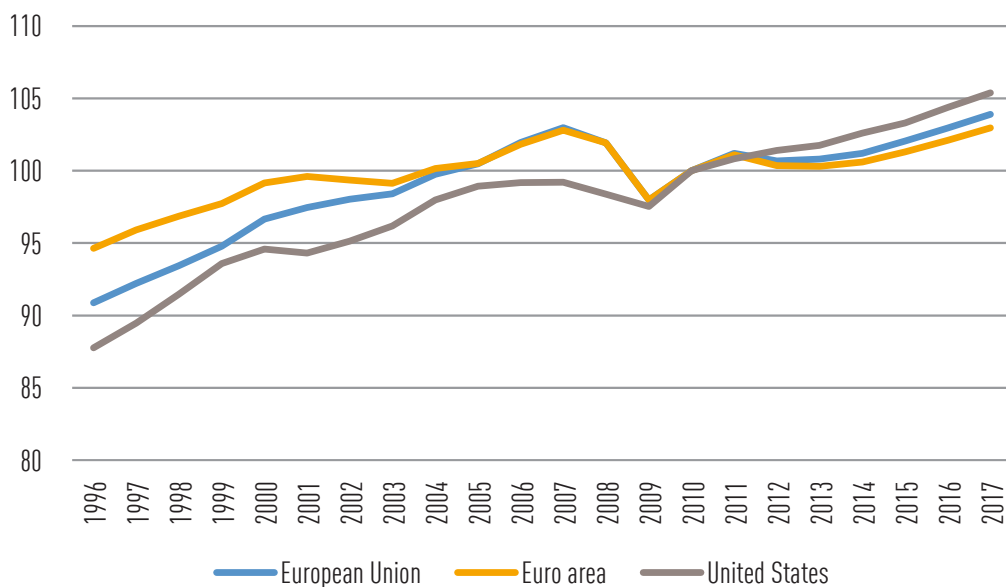
3. For example Gordon, Robert J., *The Demise of U.S. Economic Growth: Restatement, Rebuttal, and Reflections*, NBER Working Paper No. 19895, 2014.

See for an overview on the secular stagnation hypothesis: *Secular Stagnation: Facts, Causes, and Cures*, A VoxEU.org eBook, edited by Teulings, Coen, and Baldwin, Richard, London: Centre for Economic Policy Research (CEPR), 2014.

4. For example OECD, *Structural Reforms in Europe, Achievements and Homework*, Policy Note April 2015.

5. Auf dem Brinke, Anna et al., *Growth and Euro Area Stability: The Double Dividend of a Deepened European Single Market for Services*. Background Note, Jacques Delors Institut – Berlin, Bertelsmann-Stiftung, 2015.

FIGURE 2 ► TFP-Growth in the Single Market, Monetary Union and US, 2010=100



Source: Ameco-economic Database

Structural reforms and in particular reforms with relevance to the Single Market should thus be at the heart of any future EU-integration project. As of now and contrary to popular belief, the Single Market is incomplete or even non-existent in many areas.⁶ This integration should entail further liberalization and harmonization of markets for goods, services and factors of production (labour, physical capital including knowledge & technology).

Such steps would take up the logic of economic integration that accelerated from the mid-1980s: Under the auspices of then-Commission President Jacques Delors, common rules for a Single European Market for goods were gradually introduced. The rules enacted did not only end years of political stalemate, but also constituted a quantum leap forward for the economic and political integration of the European Union.

Following this success, the EU has pushed for services liberalization and the creation of the Economic and Monetary Union has contributed to a deeper integration of the markets for factors of production. However, this market integration is far from being completed. The slowing rates of productivity growth are only one indicator in this respect. Factor mobility, especially of labour, remains low compared to the US and other federal states, despite the highest unemployment differentials between EU-economies since the start of the integration project. Also, in the broad area of digitalization, the EU has been slow in pushing for deepened integration thus running the risk of forgoing potential of the digital transformation.⁷

This Policy Paper presents an agenda for reforms that would allow a further deepening of the markets for factors of production. It focuses on two key pillars: an integrated market for labour and a Digital Single Market. The paper will not focus on the integrated market for capital, as ambitious plans for a Capital Markets Union (CMU) are already underway, have been widely recognized⁸ and enjoy rather widespread support among policy makers. If successful, CMU will help make capital more readily available as a cross-country factor of production by increasing the possibilities for investments in physical capital goods around the EU. The Commission

6. Erixon, Fredrik and Georgieva, Rositsa, *What is wrong with the Single Market?*, Five Freedoms Project, European Centre for International Political Economy, Working Paper No. 1 2016.

7. See for more information section 3.1. in Enderlein, Henrik and Pisany-Ferry, Jean, *Reforms, Investment and Growth: an agenda for France, Germany and Europe*, Report to Sigmar Gabriel and Emmanuel Macron, 27.11.2014.

8. EU-Commission, *Capital Markets Union: an Action Plan to boost business funding and investment financing*, Press Release, 30.09.2015.

estimates that Small and Medium-Sized Enterprises (SMEs) will particularly benefit. The reform is also expected to make much-needed venture capital more easily accessible.

” THE EU NEEDS
POLICIES TOWARDS A
GENUINE EUROPEAN
LABOUR MARKET”

The proposals to facilitate a higher mobility of the factor labour and the integration of the digital markets, on the other hand have remained modest thus far. The Labour Mobility Package of the EU-Commission, scheduled for December 2015, has been partly postponed in the wake of the Brexit-referendum.⁹ It will include necessary improvements in the fields of social security fraud. On March 8th 2016, the Commission revealed a targeted revision of the Posted Workers Directive which is supposed to contain wage dumping practices of companies when posting workers abroad.¹⁰ However, if the EU wants to profit more from the “untapped resource”¹¹ labour mobility, it should aim higher and be more ambitious. The EU needs policies towards a genuine **European Labour Market**. A European Labour Market will probably never resemble national labour markets in scope and depth. But policy measures should be undertaken nonetheless to significantly harness the potential of higher labour mobility.

Concerning product market reforms, a lot has been written about the need of further harmonization and liberalization, mainly with regard to highly regulated professional services, but also with regard to services. The integration of the markets for digital goods and services hasn't received the same degree of political attention, even if there is a growing consensus that the further integration of digital services combined with more investment in the ICT sector are among the most urgent policy fields requiring action in the EU.¹² Reforms to promote the digital transformation within a **Digital Single Market** could become central in any attempt to boost productivity of services and manufacturing. Like electricity and the steam engine, the internet is a general purpose technology, which is why reforms to overcome fragmented markets in the digital sector will help many sectors of European economies to grow again.¹³ Investment in ICT and harmonized EU-regulation in the digital sector will have spill-over effects leading to productivity growth in manufacturing and services industries.

This Policy Paper outlines a reform agenda, with a focus on further integration in labour markets (towards a genuine European Labour Market) and product markets (towards a true Digital Single Market). Together with the plans for a Capital Markets Union, which are already well-advanced, a more mobile factor labour and much more integrated digital product markets can serve as the base for a stronger economic growth.

9. Palmeri, Tara, *Brussels presses the hold button on Brexit*, Politico, 25.02.2016.

10. European Commission, *Commission presents reform of the Posting of Workers Directive – towards a deeper and fairer European Labour market*, EU-Commission press release, 08.03.2016.

11. Barslund, Mikkel and Busse, Matthias, *Labour Mobility in Europe: An untapped resource?*, CEPS Policy Brief No. 327, March 2015.

12. For example Springford, John, *Offline? How Europe can catch up with US technology*, Centre on European Reform, Policy Brief, 26.07.2015.

13. ESCF Strategic Notes, *Integration of Products and Services, Taking the Single Market into the 21st century*, Issue 7 2015.

2. A European Labour Market?

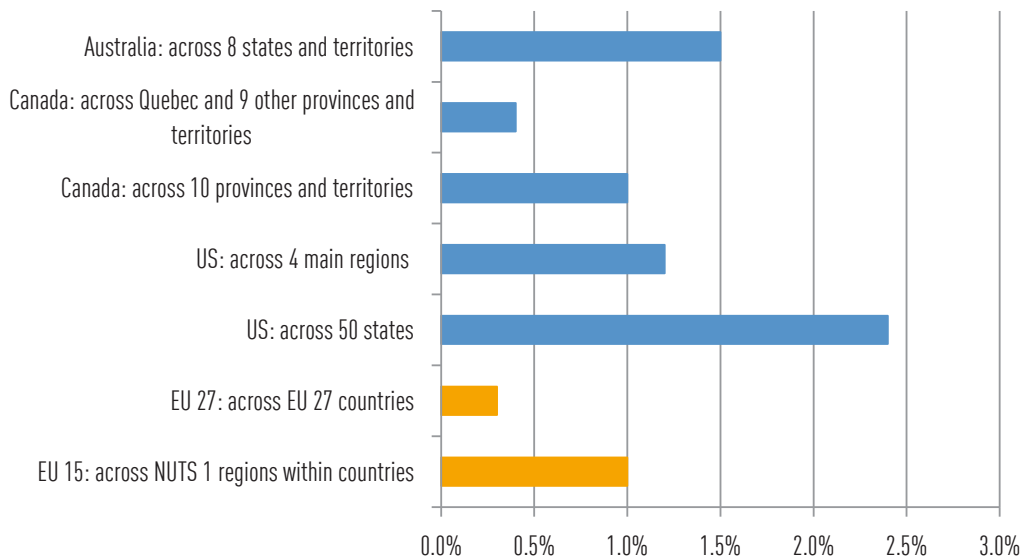
2.1. The Potential of a higher labour mobility within the Single Market

The *de jure* free movement of people is one of the “four freedoms” of the European Union and enshrined in the primary legislation of the union. The *de facto* mobility of European citizens remains limited. This limited mobility is a waste of resources: Many studies on the topic conclude that a higher mobility of the production factor labour is welfare-enhancing for the vast majority of EU-citizens.¹⁴ A higher labour mobility leads to a more efficient allocation of labour i.e. higher productivity, lower skills mismatches and higher investment into technology.¹⁵ But the arguments aren’t exclusively economic: Bonin et al. additionally find evidence that a higher labour mobility can lead to an increasing feeling of a shared European identity among mobile Europeans.¹⁶

There is also a direct link between labour mobility, technology and productivity growth: Pöschl and Foster find that the movement of skilled workers embodying human capital can transmit technology across industry thus improving labour productivity, at least in high and medium tech industries.¹⁷ Within the euro area, labour mobility constitutes an adjustment channel in the face of asymmetric macroeconomic shocks, especially in the absence of large fiscal transfers and individual monetary policy. The theory of Optimum Currency Areas (OCA) suggest that a monetary union can only be a successful in the long run with high factor mobility, in particular of labour, as an adjustment channel to balance asymmetric shocks.¹⁸ The financial crisis and ensuing euro crisis can be seen as a litmus test for this potential of labour mobility within the monetary union.

How did labour mobility evolve over the last ten years? The movements of workers across in the EU are traditionally low, especially compared to the USA, Australia or Canada (see graph on next page).¹⁹

FIGURE 3 ▶ Annual cross-border and within-region mobility as a percentage of total population, 2010



Source: Eurofound 2014, data from OECD 2012

14. Krause, Annabelle et al. *How Far Away is a Single European Labour Market?* IZA DP No.8383, 2014.

15. Krause, Annabelle et al. *How Far Away is a Single European Labour Market?* IZA DP No.8383, 2014.

16. Bonin, Holger et al. *Geographic Mobility in the European Union: Optimising its Economic and Social Benefits*. IZA Research Report No. 19, Institute for the Study of Labor (IZA), Bonn (2008).

17. Pöschl, Johannes and Foster, Neil, *Productivity Effects of Knowledge Transfers through Labour Mobility*, FIW Working Paper No. 117, April 2013.

18. Mundell, Robert, *Theory of an Optimal Currency Area*, *The American Economic Review*, Vol. 51, No. 4 (Sep., 1961), pp. 657-665.

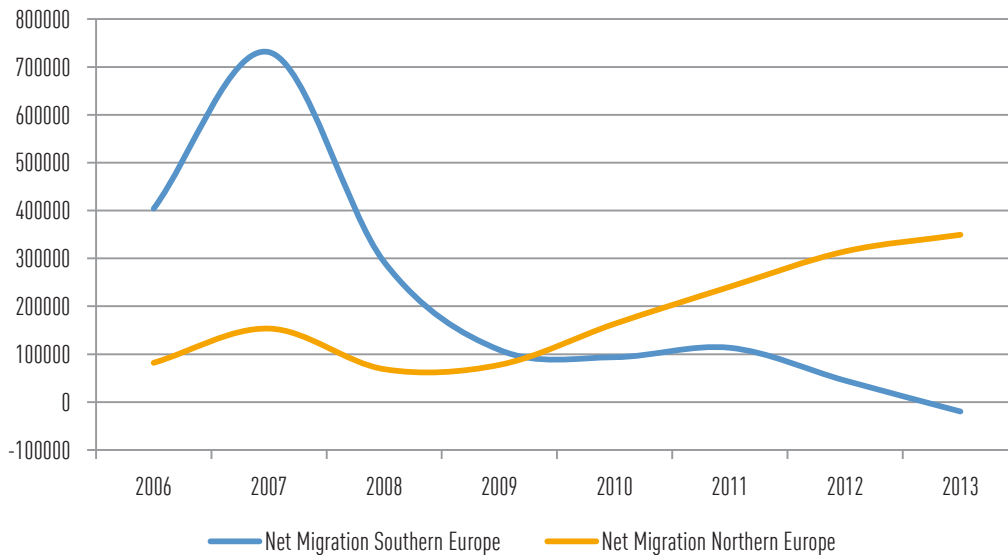
19. Eurofound, *Labour migration in the EU: Recent trends and policies*, Publications Office of the European Union: Luxembourg, 2014.

However, labour mobility growth increased considerably following the Eastern enlargement and the euro crisis. The number of EU-citizens working in another EU-country did increase by almost 60 percent from 2005 to 2015.²⁰ Most of this growth was due to the ongoing East-West movements of Eastern European workers to the “old” EU-15 states. The euro-crisis led to two additional patterns. A South-North movement emerged in addition to traditional East-West movements and this South-North movement consisted of EU-citizens with a very high formal degree of education. In parallel, the degree of education of mobile Eastern European workers also went up.

2.2. Still more East-West than South-North

The directions of intra-EU mobility have changed over the past decade. Until 2007, a large share of intra-EU mobility was from the North to the South. EU-citizens moved to the booming South of the monetary union where they mainly found work in labour-intensive sectors such as tourism, construction and personal care. After the economic collapse following the burst of the bubble, the stream of EU-workers into these countries dried up rapidly. Instead, the flow was now more to Germany, Austria and other EMU-countries in the North. This led to a reversal of migration flows.²¹ However, in absolute numbers this phenomenon remains limited. In most years, more people moved from Poland to the West, than from the entire South to the North. Considering the high unemployment rates in Southern countries, with youth unemployment still at almost 50 percent in Spain and Greece, this should be a sign of concern. The crisis did mark the beginning of a South-North movement but the numbers are still modest compared to e.g. the pre-crisis migration to Spain. Mobility contributed somewhat to the macro-economic shock absorption, mainly because of emigration of low-skilled workers from Eastern Europe and Latin America from Southern Europe.²²

FIGURE 4 ▶ Net Migration to Southern and Northern Europe²³, 2006-2013



Source: Eurostat, authors' calculation, Southern Europe= Spain, Italy, Greece, Portugal, Ireland Northern Europe= Germany, Netherlands, Belgium, Austria.

20. Eurostat, own calculations.

21. See also Holland, Dawn & Pachlukowski, Pawel, *Geographical labour mobility in the context of the crisis*, European Employment Observatory Ad-hoc Request, 2013.

22. A study by Deutsche Bank Research estimates that unemployment in Spain in 2011 would have been 1.7 percent higher without emigration. Bräuninger, Dieter and Majowski, Christine, *Arbeitskräftemobilität in der Eurozone*, EU Monitor European Integration (85): 1-12, 2011.

23. Eurostat, authors' calculation, Southern Europe= Spain, Italy, Greece, Portugal, Ireland Northern Europe= Germany, Netherlands, Belgium, Austria.

2.3. Did labour mobility help decrease skills mismatches?

” THE EURO-CRISIS LED
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Sectoral and geographic labour mobility can alleviate skills mismatches by allocating workers with adequate skills where they are most needed. This is even more important in times of fast technological change: Accelerating technological progress and globalization-related processes (e.g. Outsourcing, increased trade with emerging markets) make certain skills and qualifications of workers in EU-countries less relevant, especially at the lower end of the skills spectrum. Recent studies suggest that automation, artificial intelligence and robotics could accelerate skill obsolescence at a fast pace in the EU, demanding swift policy action.²⁴ In advanced countries there might be 30 to 35 million too many low-skilled workers already in the next decade.²⁵ Yet, skills mismatches exist both ways: An OECD meta-study found that in its member countries, between ten (Finland) and 35 percent (Sweden) of workers are overqualified for their jobs.²⁶ These structural developments are accompanied by cyclical movements. During a recession highly qualified people often have to take on jobs they are over-qualified for, thus amplifying the pressure on medium- and low-skilled workers. Several studies have found that over-qualification for job-entrants during recession can have long-lasting negative impacts on their future employability and income generation prospects.²⁷ The euro-crisis led to such cyclically induced over-qualification. A Briefing Note from the European Centre for the Development of Vocational Training concludes that the skills mismatches recorded in the EU during and after the crisis are not necessarily due to lacking skills on the part of the workers but on the decreasing demand for qualified labour during a downturn, which led many highly qualified workers to take up jobs they are actually over-qualified for.²⁸

However, there are signs pointing to a deeper structural problem. A common way to measure skills or qualification mismatches on the labour market is to examine the so-called Beveridge-curve (see graph on next page). On the left-hand scale (y-axis) it measures the Labour Shortage Indicator (LSI), which is usually tracked by asking employers around Europe about their difficulties in obtaining the relevant skilled employees they need to grow their business further. The x-axis tracks the unemployment in the EU since 2007. Normally, the Beveridge-curve should have a negative relationship between the two indicators, as can be seen for the Euro area and the EU 28 in the years from 2007-2009. In recessions, demand for skilled labour plummets and unemployment soars. During healthy recoveries the Beveridge-curve shows a counter-clock wise development as the demand for skilled labour increases in parallel with receding unemployment rates during an upswing. The situation for the EU and especially the Euro Area was rather different. Both experienced an increase in the LSI but no corresponding fall in unemployment until 2013. In fact, unemployment rose even higher until the end of 2012 (see graph on next page).

The “normal” Beveridge-cycle starts to appear from 2012 in the Single Market and 2013 in the EMU, rebounding much more pronounced in the Single Market than in the Euro area. This happened despite the fact that the South-North movement explored in the last section featured the highest qualified mobile citizens on record, with over 50 percent having a formal tertiary education. Mobile workers from Eastern Europe are increasingly highly qualified as well.²⁹ Yet, their high formal education did not contribute to a significant decrease in skills mismatches across the union. Labour mobility was not a mitigating factor in the face of increasing skills mismatches.

24. Schwab, Klaus, *The fourth industrial revolution*, World Economic Forum, 2016.

25. Dobbs, Richard et al., *The world at work: Jobs, pay, and skills for 3.5 billion people*, McKinsey Global Institute Report, 2012.

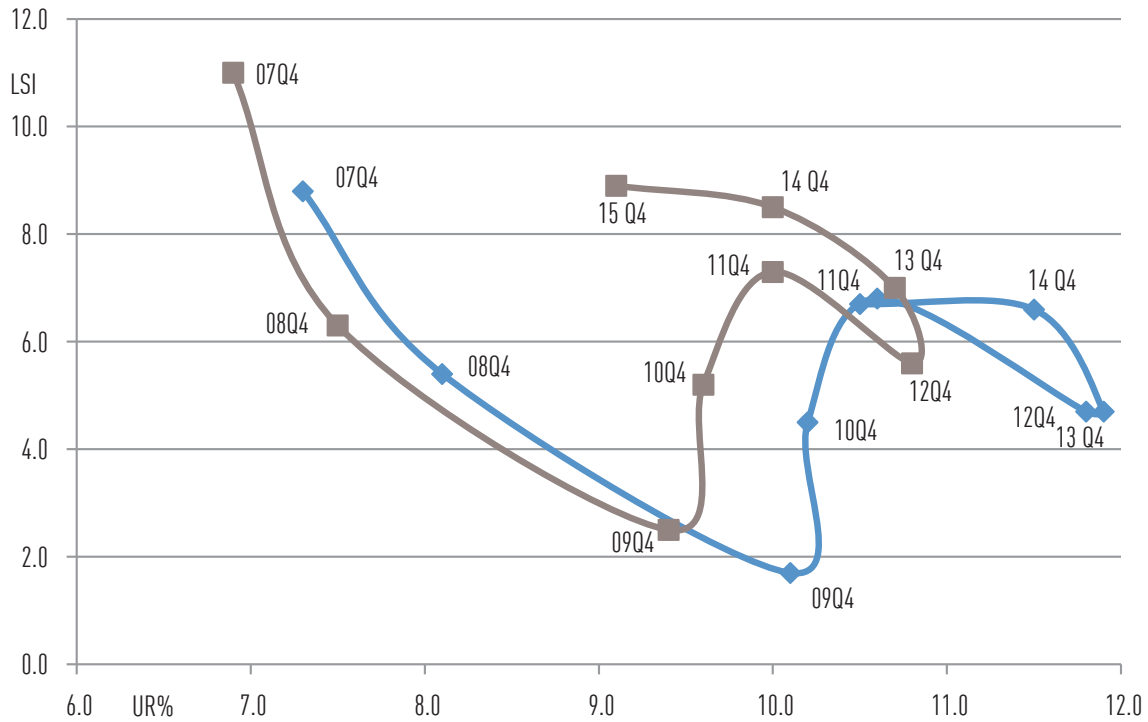
26. Quintini, Glenda, *Over-qualified or Under-skilled: A review of existing literature*, OECD Social, Employment and Migration Working Papers No. 121, OECD, 2011.

27. Oreopoulos et al., *The Short- and Long-Term Career Effects of Graduating in a Recession*, 2012; Liu et al. *Good Skills in Bad Times: Cyclical Skill Mismatch and the Long-Term Effects of Graduating in a Recession*, IZA DP No. 6820, 2012; Summerfield, F. E., & Theodossiou, I. *The Scarring Effects of Recessions: Over-education and Macroeconomic Conditions at Graduation*, 2015.

28. CEDEFOP, *Skill mismatches: more than meets the eye*, European Centre for the Development of Vocational Training, Briefing Note March 2014.

29. Hamburgisches Weltwirtschaftsinstitut, *Macht der Euro mobil? Arbeitskräftemobilität in Europa während der Krisenjahre*, 2014.

FIGURE 5 ► Beveridge-curve Q42007-Q42015 for the EU 28 (grey) and the EA 19 (blue)



Source: Eurostat, own visualization.

2.4. What should a European Labour Market aim at?

The analysis of the development of labour mobility since the euro crisis shows a few successes and several shortcomings:

1. While overall mobility increased significantly this was basically due to an ongoing East-West migration dynamic. The crisis-ridden Southern EU-countries did not experience a similar surge in geographical mobility (measured in absolute numbers).
2. Mobile workers increasingly have a high formal education. Yet, this high qualification did not result in decreasing skills mismatches. This results in higher structural unemployment and is a sign that labour mobility in the EU does not yet help in alleviating skills shortages and mismatches. It also points to structural problems of national labour markets, hinting at shortcomings in education and training.
3. While labour mobility did lead to some shock absorption in the monetary union, mainly due to a stop of immigration into the Southern crisis countries, it did not play a role as a significant macro-economic shock absorption in the Euro Area. Furthermore, studies suggest that the creation of the monetary union had no direct effect on geographical mobility.³⁰ If labour mobility is to make a stronger impact as adjustment channel in the future, more policy action geared to this goal will be needed. Higher labour mobility can potentially serve as a tool towards economic convergence in the EMU. Following the analysis, three main objectives emerge on which a genuine European Labour Market will have to focus on in order to contribute to a more efficient allocation of labour as a factor of production:
 - i. Increase total numbers of mobile workers
 - ii. Lower possible skills mismatches of mobile workers
 - iii. Make labour mobility a more effective shock absorption mechanism for the euro area

30. Hamburgisches Weltwirtschaftsinstitut, *Macht der Euro mobil? Arbeitskräftemobilität in Europa während der Krisenjahre*, 2014.

Which regulatory measures and specific policy actions are needed to build up a Single Market for workers? The next sections will flesh out policy proposals on an EU- and national level that would be needed to put the EU on track towards a European Labour Market, specifically (i) a European Employment Agency, (ii) Targeted Mobility Schemes on a European level, (iii) better portability of social rights and less entry barriers for the individual workers and (iv) national investments in education and training.

3. Features of a European Labour Market

3.1. The need for a genuine European Employment Agency

A genuine European Labour Market would have a European Employment Agency as its cornerstone. Such an agency should deliver the tasks of collecting job offers around Europe, displaying them in various European languages and, if possible, matching offers with possible applicants who deposited their profiles in an online mask. This will help increasing the total number of mobile citizens and decreasing the possibility of skill mismatches.

Such an agency would have to be built up on the existing structures of national employment agencies and EURES. The European Job Mobility Portal EURES needs to be upgraded to a real pan-European employment agency, connecting the national agencies. EURES is currently based on a network of around 1000 advisors in the EEA and relies on a relatively open cooperation of national employment agencies, employers and trade unions. That leaves the network with very limited capacity: the German employment agency alone has more than 100.000 employees. Turning EURES into a more strongly structured European agency would institutionalize that cooperation and would allow giving a “brand” to European employment. Today, even those who are willing to work abroad have often never even heard of the EURES network.³¹ National employment agencies would clearly remain the cornerstones of employment policy, but should build up common databases to more efficiently exchange information on vacancies and applicants among each other. In fact, a future “European Employment Agency” could exist entirely of national employment agencies effectively connected under a common European roof.

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The internet increases the scope and availability of job offers and eases the job search. At the moment it is still uncommon for many unemployed to look for jobs online, especially in Southern European countries.³² One possibility for a more European approach towards employment services could be an EU-cooperation with career platforms such as LinkedIn or Xing. They could be partnered in a collaborative initiative towards higher European labour mobility.

3.2. European mobility schemes for jobs and training

Building up a European Employment Agency could improve the possibilities for successful job searches abroad and thus potentially increase the overall number of people who turn for another European country in order to look for a job. However, building up such an agency without an additional active approach towards jobseekers would probably not be enough, especially given the high amount of young and untrained Europeans in crisis countries. Therefore, measures to actively support targeted mobility for training purposes and jobs are in need. One small, but promising examples for such a mobility scheme that already exists is the “Your first

31. European Commission, [Geographical and labour market mobility](#), Special Eurobarometer 337, June 2010.

32. European Digital Scoreboard, [Digital Agenda key indicators](#), Homepage, last accessed 15.03.2016.

EURES Job (YFEJ)³³ program. YFEJ does not only match potential jobseekers with prospective companies around the EU but also provides logistical help, facilitating interviews and supporting the move to another country. At the moment, YFEJ has a funding and an awareness problem. Much more financial and personal resources should be committed to extending the scope of YFEJ or an equivalent program, especially in the wake of a possible transformation of EURES into a genuine European employment agency.

The active matching of supply and demand should start even earlier: Instead of just helping European citizens move to other places to get work, targeted mobility schemes should expand to training and qualification. One initiative into this direction is the idea of Erasmus-Pro, a European-wide mobility program for apprentices.³⁴ The aim of this initiative is to bring up to one million young Europeans into vocational training in another EU-country until 2020. The program would include facilitating interviews and providing logistical assistance in the form of language courses and moving assistance.

”AN INVOLVEMENT OF TRADE UNIONS WILL BE IMPORTANT IN ANY FUTURE MOBILITY PROGRAM ON A EUROPEAN SCALE”

A targeted European mobility scheme could be the expansion of already existing bilateral programs for jobseekers, like the German-Spanish program for 5000 annual apprenticeships in Germany for young Spaniards³⁵ and the MobiPro EU program. The latter, which started in 2013, helped 2193 young EU-citizens to get an apprentice position in Germany.³⁶ This is a success, but in order to make a tangible impact on youth unemployment figures, mobility programs need to become much larger. The Europeanization of these programs could multiply their potential. At the same time, policy makers should be aware of possible abuse: Many Spanish care and health workers faced exploitative contracts in Germany, revealing the need for a strong supervision of working conditions. There is a danger of potential abuse of young, inexperienced workers.³⁷ An involvement of trade unions will thus be important in any future mobility program on a European scale. Unions have the experience and logistical means to protect the rights of mobile Europeans.³⁸

3.3. Portability of Social Security and Exercise of Professions in the Single Market

What does the EU look like from the perspective of an individual jobseeker? The recognition of individual qualification and the portability of one's social security entitlements are among the main institutional concerns. Many Europeans feel insecure about (temporarily) moving to another EU-country for work out of fear that they might not be able to take their earned social security entitlements and pension rights with them if they move. In a genuine European Labour Market these entitlements should be as portable as they are within national states right now.

Which social security entitlements can therefore be streamlined in the near future? The period of time during which EU-citizens are entitled to unemployment benefits from their home country while looking for work in another EU-country differs from country to country. They range from three to six months in most EU-countries. Three months is certainly not enough considering the many difficulties of finding a job abroad, getting accustomed to the local bureaucracy and learning the language. It should be streamlined at six months. Additionally, more resources should be designated to informing citizens about their rights of claiming unemployment benefits of their home country while looking for work in another. Eurobarometer surveys confirm that many EU-citizens are not yet aware of this possibility.³⁹

33. EURES, *Your First EURES Job (YFEJ)*, Project Homepage, last accessed 15.03.2016.

34. Delors, Jacques et al., *ERASMUS PRO: For a Million "Young European Apprentices" by 2020*, Tribune, Jacques Delors Institute, 12.05.2015.

35. Spiegelhauer, Reinhard, *Spanische Azubis für deutsche Betriebe*, tageschau.de, 21.05.2013.

36. Bayer, Thomas, *"Drei Jahre in Deutschland. Halten Sie das aus?"*, Welt.de, 05.03.2016.

37. Doncel, Luis, *Spanish Workers in Germany unite in defense of their labor rights*, El Pais, 30.06.2014.

38. A good example for a programs for mobile and posted workers is the German DGB's *Fair Mobility Campaign*.

39. European Commission, *Geographical and labour market mobility*, Special Eurobarometer 337, June 2010.

Pension rights are more complicated to be made fully portable, a fact which is reflected by the divers national retirement systems. Directive 2014/50/EU will ease the portability of supplementary pension rights.⁴⁰ Member states have to implement the directive by 2018. Still, there are huge differences for example concerning the effective retirement ages in many EU countries and the taxation of portable pensions remains a regulatory challenge. A European system of portable pensions will have to find formulas to take that into account, for example by calculating each year according to the country worked taking into account the effective retirement age in the respective country. To make such formulas and calculation transparent EU-citizens should be able to see their hypothetical pension entitlements online in a pension simulator for each country and profession.

The freedom of movements for employees and the right to establish a business in another EU-country for self-employed are formally enshrined in EU primary legislation. However, actual exercise of many professions in the EU is still hampered by lacking or cumbersome recognition of qualifications and the regulation of closed professions, especially in the professional services sector. Many of these regulations reflect both historically grown traditions and strong national interest groups. The EU-Commission runs a database of regulated professions and regularly calls upon member states to open up their professional services markets more swiftly.⁴¹

A liberalization of professions such as accountants, lawyers and consultants but also architects and engineers increases choice for consumers and possibilities for skilled Europeans.

BOX 1. The political discussion about social security rights

If a European citizen decides to take up or look for work in another EU-country, he should be treated by the social security systems of the other country as if he were a native – that is at least the idea behind the principle of non-discrimination on which the coordination of the systems of social security is built.⁴² This general principle has come under fire in recent years, especially after the Eastern enlargement of the European Union. In 2014 and 2015 the ECJ took several decisions to restrict EU-citizens' access to certain benefits, particularly unemployment benefits for EU-citizens who had never or only for a short period of time taken up work in another member state.⁴³ The British demands for the terms of re-negotiating the British membership in the EU took aim at in-work benefits and child allowances. This will amount to a direct discrimination of EU-employees in the low-wage sector of the UK. Child allowances will be indexed to the standards of living of the home country of the children do not live in the UK.

The discourse on benefits for EU-citizens in the UK stands exemplary for many debates on welfare benefits for European citizens, as it heavily lacks or distorts facts on migratory employment: Several reports have shown that EU-migrants in the UK are more likely to be employed than the local population and contributed more to national welfare systems than they took out in the form of benefits.⁴⁴ It is important to keep these numbers in the discourse about the benefits of EU mobility and migration. The discourse on EU-migrants runs the danger of getting entangled with populist debates on refugees and terrorism. A genuine European Labour Market needs a positive narrative of mutually beneficial European collaboration.⁴⁵

**”MORE DEGREES SHOULD
BECOME AUTOMATICALLY
RECOGNIZED AND THE
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SIMPLIFIED”**

Of more than 700 regulated professions in the EU which require a certificate or qualification to be allowed to work, only seven are automatically recognized, all of them for health-related professions.⁴⁶ More degrees should become automatically recognized and the national procedures of recognition have to be simplified. The German government for example has revamped its system of qualification recognition with the “Anerkennung in Deutschland” initiative⁴⁷ but the system of recognition which is based on a web of state or regional chambers of commerce remains complicated.

40. European Commission, Acquisition and preservation of supplementary pension rights, *Directive 2014/50/EU*.

41. EU-Commission, *Regulated Professions Database*, last accessed 15.03.2016.

42. EU-Commission, *Regulation (EC) No 883/2004* – on the coordination of social security systems, last accessed 15.03.2016

43. European Court of Justice, Judgement of the Court (Grand Chamber), *C-67/14 - Alimanovic*, 15. September 2015.

44. Nardelli, Alberto, *EU migrants on benefits: separating the statistics from the spin*, *The Guardian*, 10.11.2015.

45. See on the need for a new narrative also Rinaldi, David, *A new Start for Social Europe*, Foreword by Jacques Delors, Preface by Nicolas Schmit, Contribution by Marianne Thyssen, Jacques Delors Institute *Studies and Reports No. 108*, February 2016.

46. EU-Commission *Regulated Professions Database*, last accessed 03.03.2016.

47. Homepage *Anerkennung in Deutschland*, last accessed 03.03.2016.

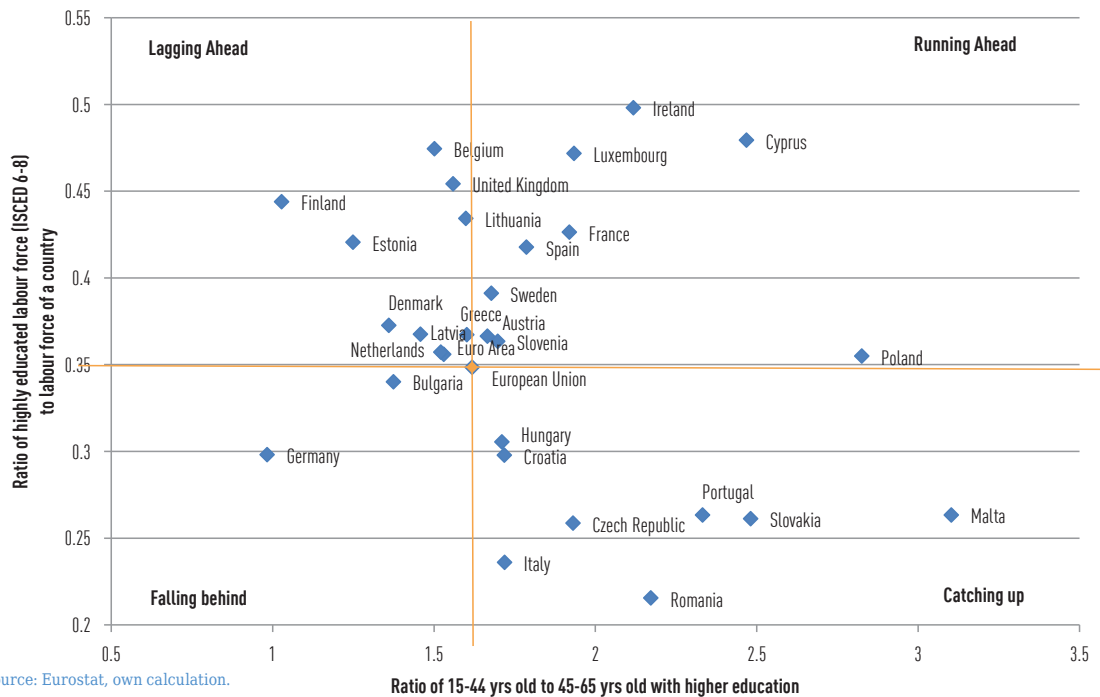
An elegant way to combine recognition of qualifications and closed professions would be to enact the principle of mutual recognition for professional services. Mutual recognition for goods is one of the success stories of Internal Market regulation for goods. There will be a revision of the principle by 2017 and the EU-Commission has set out a plan to raise awareness of the Principle of Mutual Recognition already in 2016.⁴⁸

3.4. National reforms for a European Labour Market

What should national governments do to support a European labour Market and a higher labour mobility? Apart from addressing national labour markets rigidities, public investments in training, qualification and higher education infrastructure appear to be the best solution. Institutional convergence of national labour markets should be a goal in the long run.

In 1974 Dutch economist Jan Tinbergen coined the expression of a “race between education and technology”.⁴⁹ The latest predictions of accelerating labour-saving growth engineered by automation and increased digitalization of production processes seem to vindicate this expression once more.⁵⁰ Skills or qualification mismatches and shortages will increase in the future. This challenge of technology for labour has to be met by a policy response concerning qualification and training.⁵¹ Education levels have an impact on potential geographic mobility: studies from the US show that higher qualified workers are more likely to move long-distance for work.⁵² In the framework of the Europe2020-strategy of the EU-Commission all member states committed themselves to increasing the level of 30-35 year olds with a tertiary degree. In order to keep up or increase economic output with high value-added products and services it is very important to increase the absolute amount of highly educated workers in a country. Which EU-countries will have more highly educated workers in absolute numbers in twenty years?

FIGURE 6 ▶ Ratio of highly educated labour force (ISCED 6-8) to total labour force of a country to ratio of 15-44 years old to 45-65 years old with higher education



Source: Eurostat, own calculation.

48. EU-Commission, *Upgrading the Single Market: More Opportunities for People and Business*, 2015.

49. Tinbergen, Jan *Substitution of Graduate by Other Labour*. *Kylos*, 27(2), 1971.

50. For example Brynjolfsson, Erik and McAfee, Andrew *The Second Machine Age, Work, Progress and Prosperity in a Time of brilliant Technologies*, New York: W.W. Norton & Company, Inc. 2015.

51. Manyika, James et al. *Help Wanted: The future of work in advanced countries*, McKinsey Global Institute Discussion Paper, 2012.

52. For example Malamud, Ofer and Wozniak, Abigail K., *The Impact of College Education on Migration: Evidence from the Vietnam Generation*, *Journal of Human Resources*, Vol. 47, No. 4: 913-950, 2012.

Assuming that the average retirement age in most EU-countries is around 65 and the number of new graduates will be at least constant, in most EU-countries there will be significantly more university-educated citizens by 2036. This will in turn gradually increase the ratio of highly educated workers to the total labour force. Germany is the only country where 45-65 year old citizens with a tertiary degree outnumber 15-44 year olds academics at the moment (1:0.98). Without a much more mobile European and global workforce Germany will likely face an accelerating amount of skills shortage in the future. A higher tertiary level of education cannot be the only answer to the challenges ahead, especially of digitalization. Policy makers should focus on the contents of the qualification acquired.

” INVESTMENT IN EDUCATION AND TRAINING HAS TO BE COMBINED WITH MORE ACTIVE LABOUR MARKET PARTICIPATION POLICIES”

Investment in education and training in all European countries has to be combined with more active labour market participation policies, the introduction of flexicurity-schemes and lifelong learning programs, particularly in Southern Europe. Initial funding for these labour market programs can be provided by the European Social Fund (ESF), especially in countries with a tight national budget. Public investment in training and education could be exempted from the Fiscal Pact, since it constitutes productive investment and not consumptive spending.

Krause et al. stress the fact that there needs to be a high degree of institutional convergence of national labour markets in order to create a European Labour Market.⁵³ The German system of vocational training for example is a role model, which other countries strive to copy. This contributes to a convergence of European vocational training schemes. The introduction of a federal minimum wage on the other hand is an example for institutional convergence where Germany was a late-adopter. Policy makers should have possible European convergence in mind for any future national labour market reforms. Alignment of the different labour market systems will render an individual mobility decision more likely, since more converged systems mean less adoption costs for an individual weighing the costs of a migration decision. The gradual convergence of labour market institutions in the EU could also be brought about by front-running cooperation between countries, for example between France and Germany. The up-coming need for integration of self-employed and free-lancers in the internet economy could be a field for such an enhanced cooperation. France and Germany could coordinate rules concerning for example the integration of freelancers into national social security systems and cooperate on joint taxation rules for internet platforms.

BOX 2. A note on the current refugee crisis

Policy action towards higher geographic mobility of European workers and a European Labour Market currently need to be assessed against the backdrop of the current refugee crisis, which overshadows the debate on further European integration, especially with regard to labour markets. At the same time, the discussion on how to integrate refugees and how to allocate them across the European Union could pave the way for an arguably difficult political discussion on different labour market and demographic dynamics in Europe.

Currently, national employment agencies are obliged to favour European workers over non-EU citizens and refugees. This principle could require to be put into the context of the refugee crisis. A European Labour market and targeted mobility schemes could be constructive elements in the discussion on how to allocate refugees, especially for training and qualification measures.

53. Krause et al., *How Far Away is a Single European Labour Market?*, IZA DP No. 8383, 2014.

4. The Digital Single Market: Fostering diffusion and mobility of technological innovation and knowledge in the EU

4.1. The potential of the Digital Single Market

The Digital Single Market could be the second big driver of productivity increases through common European approaches. The Capital Markets Union can potentially unleash untapped financial resources. A European Labour Market offers opportunities for European jobseekers around the continent and can address skills shortages. Both should be accompanied by a serious reform drive towards product market reforms in the digital sector. The European Commission is pushing its Digital Agenda of which the Digital Single Market (DSM) is a cornerstone: The DSM consists of a regulatory overhaul to make European economies adapt to the digital transformation of many production processes and services. This transformation has much potential for higher productivity growth in the EU. Exponential growth of sensors and transmission devices in the Internet of Things (IoT) is projected to lead to a strong surge in productivity growth.⁵⁴

The internet is a general purpose technology like the steam engine or electricity.⁵⁵ This means that its economic potential reaches far beyond ICT-technology. By enabling new business models, production processes and products, it permeates into every sector of modern economies. Yet, at a current state, the spread of new business models, technological spill-over and the proliferation of ideas and knowledge across Europe is slow, at least compared to the growth rates in the United States between states. Game-changing “disruptive” business models such as Uber spread fast from state to state in the US, exploiting the opportunities of a huge market without fragmenting regulatory barriers. It took the French start-up BlablaCar, one of the biggest European “unicorns”, several years to expand from its French home-market to other big European markets.⁵⁶ This slower growth of European start-ups is not only due to cultural and language barriers, but perhaps more importantly to differing regulation, variation in national tax regimes and a less efficient financing structure, especially less access to venture capital.

”PRODUCTIVITY GAINS LIKE THE ONES SEEN IN THE US FROM 1995 TO 2005 ARE LARGELY ATTRIBUTED TO ICT-INVESTMENTS AND THE ENSUING PRODUCTIVITY SURGES”

Productivity gains like the ones seen in the US from 1995 to 2005 are largely attributed to ICT-investments and the ensuing productivity surges. Fiercer competition on American markets continually forced American enterprises to invest in productivity-enhancing ICT-technology.⁵⁷ Another feature of a functioning DSM has to be the acceleration of diffusion and adaptation to new technology, products and services, thus the mobility of the factor knowledge and technology. Since the European market is bigger than the American one in absolute numbers, the EU could potentially have internet companies of the size of Google or Amazon if the benefits of the biggest internal market and ensuing economies of scale were reaped earlier. The Capital Markets Union will help to channel more early stage risk-funding to small and medium-sized companies and start-ups but the regulatory challenges of fragmented markets for many digital services remain. The EU-Commission projects that a fully-fledged DSM could add 415 billion per year to the EU-economy and create hundreds of thousands of new jobs.⁵⁸ The DSM is thereby only one part of the Digital Agenda of the EU until 2020. The digital economy is borderless almost by definition; hence, its regulation should not only be streamlined on a European level, it should lead to a fully integrated regulatory space with a single rulebook and a single regulator.⁵⁹ A promising example for harmonization on an EU-level is the EU’s drive towards a Data-Protection-Union. With the General Data Protection Regulation due to be implemented in all member states by 2018, common rules could give enterprises more

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54. Knickrehm, Mark et al., *Digital Disruption, The Growth Multiplier*, Accenture 2015.

55. ESCF Strategic Notes, *Integration of Products and Services, Taking the Single Market into the 21st century*, Issue 7 2015.

56. Scott, Mark, *BlablaCar, a Ride-Sharing Start-Up in Europe, looks to expand its map*, New York Times, 02.07.2014.

57. Springford, John, *Offline? How Europe can catch up with US technology*, Centre on European Reform, Policy Brief, 26.07.2015.

58. European Commission, *Digital Single Market, Bringing down barriers to unlock online opportunities*, EU-Commission webpage, last accessed 14.03.2016.

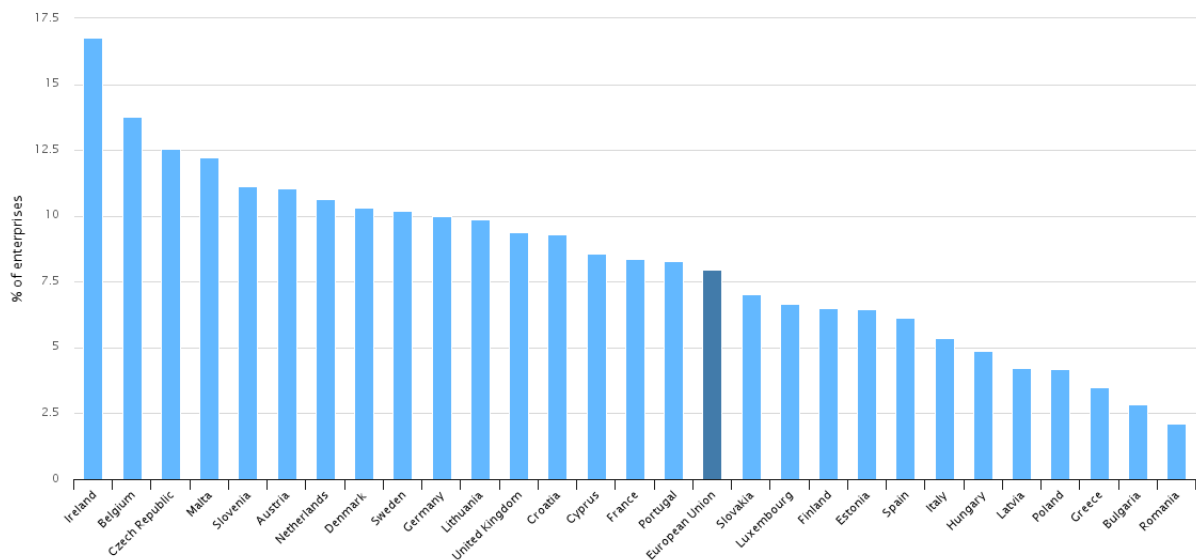
59. Enderlein, Henrik and Pisany-Ferry, Jean, *Reforms, Investment and Growth: an agenda for France, Germany and Europe*, Report to Sigmar Gabriel and Emmanuel Macron, 27.11.2014.

legal certainty, yet the legislation would still differ. Adopting identical texts under a single rule-book should still be the objective. Numerous reform proposals are on the agenda for the DSM, ranging from the reform of online content distribution over data security to the regulation of platforms.⁶⁰ Which areas promise to yield the highest economic results for product market reforms? This Policy Paper identifies two areas, E-Commerce and the mobile telecom and broadband markets, which should be made key priorities for swift product reforms in 2016/17. E-Commerce has an immense growth potential and the network markets of telecom services need more competition and investment. Harmonised regulation in both areas will yield considerable benefits for consumers.

4.2. E-Commerce

E-Commerce has had staggering growth rates across the world in the last decade. More and more customers in the EU turn to online retailers or service providers instead of buying products and services at physical shops, malls or offices. This de-localized form of shopping offers a huge opportunity for the Single Market, as customers can compare offers from 28 member states with relative ease. Especially SMEs profit from the internet, as they are able to reach out to 500 million customers via online platforms at very low costs of advertising and marketing. These advantages are still under-used: The EU is currently far away from a Single Market for goods and services bought online. Both enterprises and customers have not yet fully embraced the opportunities of the Digital Single Market.

FIGURE 7 ▶ Entreprises having done electronic sales to other EU countries in the last calendar year (year 2015)



Source: EU-Commission, Digital Scoreboard, Data for 2015, % of all enterprises

60. See Fleishman Hilliard's *Digital Single Market: Coming your way in the next year* for a comprehensive overview of upcoming reforms in the Digital Single Market.

Only around eight percent of all enterprises have sold online to another country in the EU in 2015. This compares to 19 percent of enterprises in the EU which sold online in general.⁶¹ Consumer-shopping online in other EU-countries did pick up in the last years, but the countries with the highest rate of online shopping abroad are small or share a language with a bigger country (e.g. Luxembourg, Austria).⁶² Reasons for this still low cross-border shopping are manifold: apart from the obvious language barrier, which heavily applies for online-shopping, high costs and lacking inter-operability of parcel delivery across the EU, differing VAT-systems and consumer protection regulation have long been identified as main barriers to more cross-border e-commerce.⁶³ The case of postal services is illuminative: For example, it is 80 percent more expensive to send a package from Italy to Austria than vice versa.⁶⁴ Customers and enterprises stand to gain if member states and the EU can agree on as much harmonization as possible in the above mentioned fields. Reducing legal uncertainty for online service providers by streamlining national regulation should be the key priority.

4.3. Telecoms and broadband competition

Mobile telecommunications markets are vital to the Digital Single Market strategy. The diffusion of mobile telecommunications services has been directly linked to TFP-growth in a range of countries between 1995 and 2004, especially those with a high degree of competition.⁶⁵ The slow roll-out of mobile 4G-technology in many countries reveals the need for more competition and productivity-enhancing investment in this area. The next generation of mobile technology, 5G is currently being researched and the EU could be a frontrunner in the adaptation of this ultra-fast transmission standard and the ensuing business opportunities associated with the Internet of Things (IoT).⁶⁶ In order for this roll-out to be successful, more coordination between member states and more competition between mobile telecommunications companies is needed.

Member states will have to agree on more coordination for the assignment of spectrum licenses for the 5G-roll out. Concerning auctions for new spectrum licenses member states could consider transferring the right to auction to the European level.⁶⁷ Companies on the other hand should face more competition, which is still imperfect in the mobile telecommunications sector. Mobile communication markets are fragmented along national borders and a Single Telecoms Market remains a far-distant goal. One recent success was the end of roaming charges, which will have to gradually fade out in the EU until 2017. In the absence of a Single Market for telecommunication services, the EU has to ensure a high level of competition in domestic markets.

” WHILE THE BIGGEST MOBILE COMPANIES OPERATE IN MANY EUROPEAN MARKETS, CONSUMERS ARE STUCK IN THEIR NATIONAL MARKETS ”

Many telecoms companies claim that they will only be able to make necessary investments in digital infrastructure, for example in ultra-fast connections like the 5G-technology in the near future, if they have reached a certain size through mergers. The increased merging activity of European telecom providers in the last years shows that there is a considerable consolidation of the sector underway. This consolidation poses challenges for the regulatory oversight. The EU-Commission is wary that there won't be enough national providers to guarantee low prices for consumers through competition in the future and stepped in on several occasions. While the biggest mobile companies operate in many European markets, consumers are stuck in their national markets.⁶⁸ In the US there are both more player at the nation-wide level and more local and regional groups of mobile network operators. The EU has to find a similar balance and should keep up its role as a watchdog for telecom mergers. How is the situation for the roll-out of broadband connection? It is estimated that broadband networks contributed to as

61. Eurostat, *Nearly 1 in 5 enterprises sold online in 2014*, Eurostat newsrelease, 215/2015, 09.12.2015.

62. EU-Commission, *Digital Scoreboard, Indicators, Individuals ordering goods or services online, from sellers from other EU countries*, 2015.

63. Kuneva, Meglena, *Barriers to eCommerce in the EU*, Presentation of the new eCommerce report, European Parliament, 05.03.2009.

64. Brunsden, Jim, *Brussels to crack down on cross-border postal prices*, Financial Times, 21.12.2015.

65. Lam, Pun-Lee and Shiu, Alice, *Economic growth, telecommunications development and productivity growth of the telecommunications sector: Evidence around the world*, Telecommunications Policy 34 (4), pp. 185-199, 2010.

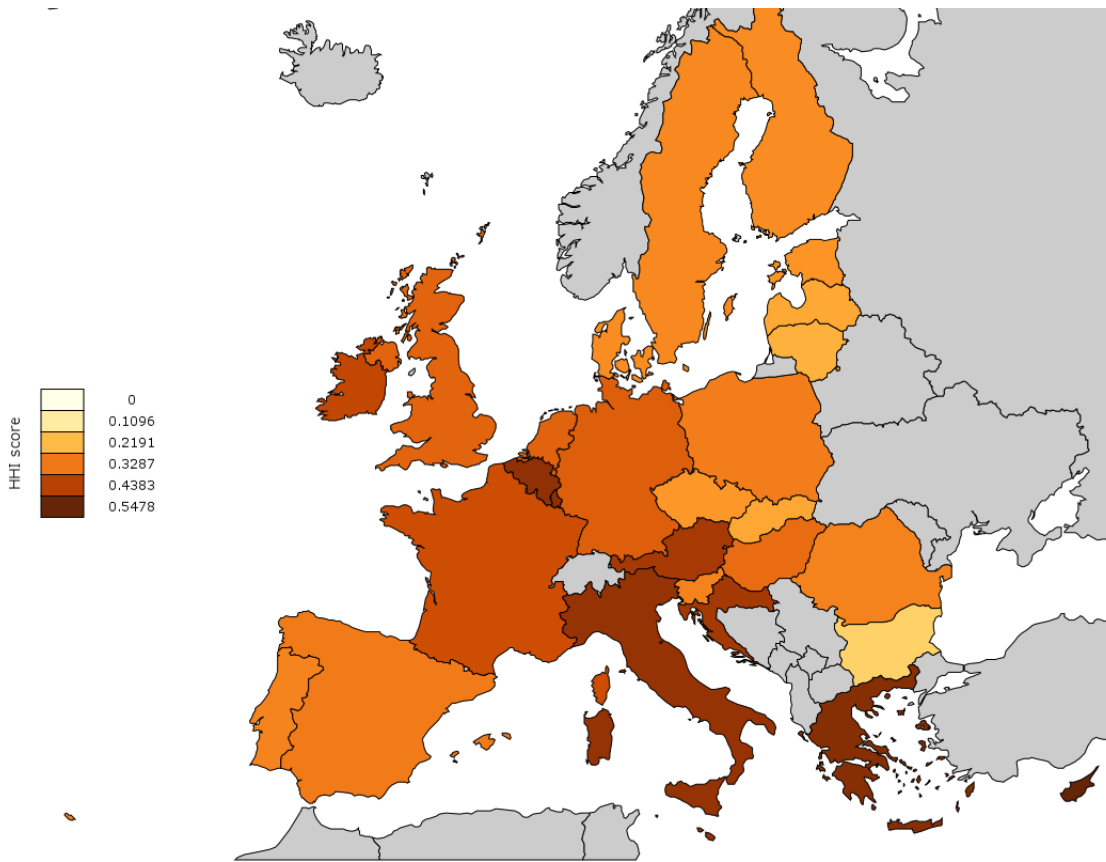
66. Davies, Ron, *5G Network Technology, Putting Europe at the leading edge*, European Parliamentary Research Service, January 2016.

67. See Mariniello, Mario and Salemi, Francesco, *Addressing Fragmentation in EU Mobile Telecoms Markets*, Bruegel Policy Contribution, July 2015 for a more detailed analysis of the potential of a European auctioneer.

68. Vestager, Margarete, *Speech at the 42nd Annual Conference on International Antitrust Law and Policy*, Fordham University, 02.10.2015.

much as 20% of total productivity growth in Europe and have the potential to add 0.5-1.5% to the GDP of the Union.⁶⁹ The Herfindahl index applied on broadband competition measures the level of competition for suppliers of broadband services within countries. It clearly shows that there is not enough competition for broadband providers, especially in Southern Europe. This makes their services unnecessarily expensive and hampers productivity growth, since the companies are not forced to make productivity-enhancing investments to keep or grow their market share. To that end it could be worthwhile to reconsider the European approach of service-based competition in favour of the American facility-based competition, which overall seems to yield better results in terms of prices and, more importantly, in the deployment of Next Generation Access networks (25 Mbps) among households.⁷⁰

FIGURE 8 ▶ Herfindahl Index on Broadband Competition



Source: European Commission, Digital Scoreboard, EU-2014-06, a higher index indicates a concentration of providers i.e. lower competition

69. EIB, Restoring EU Competitiveness 2016 updated version, Economics Department, European Investment Bank, 2016.

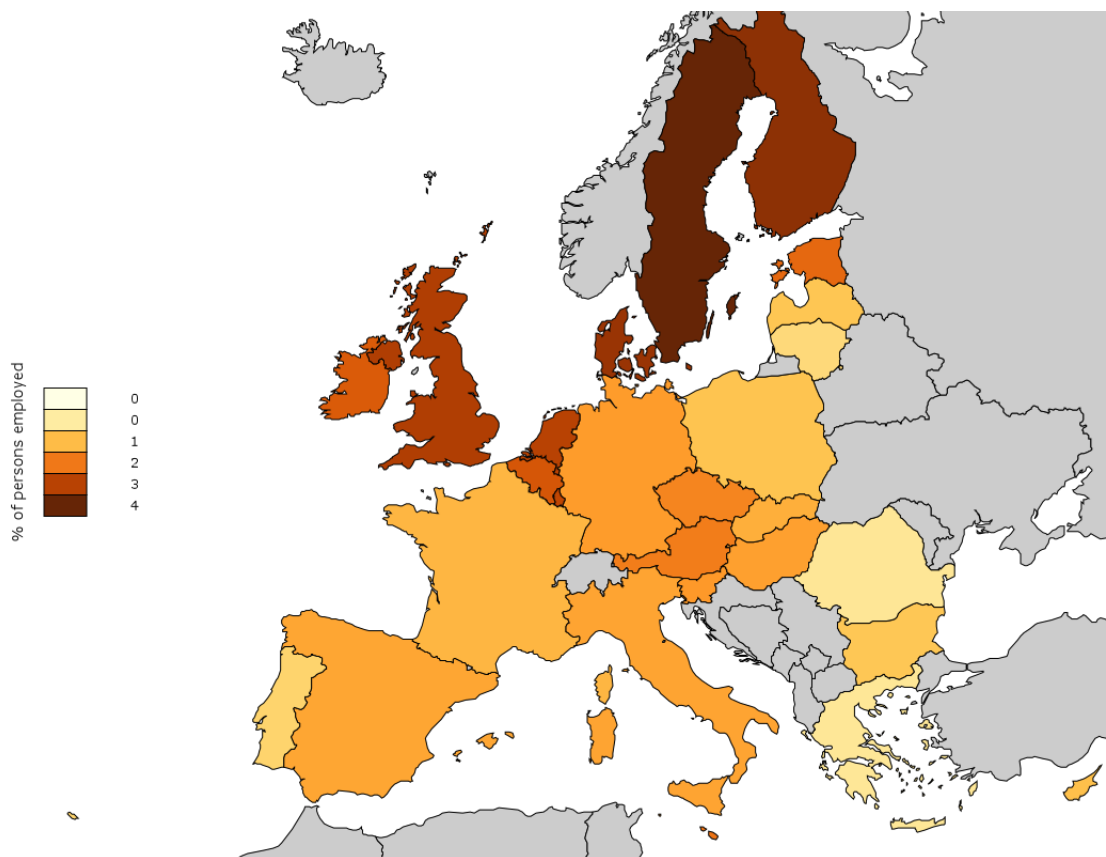
70. For more information on service- vs. facility-based competition see Yoo, Christopher, U.S. vs. European Broadband Deployment: What Do the Data Say?, U. of Penn, Inst for Law & Econ Research Paper No. 14-35., June 3, 2014.

4.4. National investment and qualification efforts to support a DSM

National governments should support the creation of the DSM in two main areas: investment and qualification. Investment in broadband connections is on the agenda of many European governments, for example the German government with the Digital Agenda.⁷¹ The Juncker Plan devotes a considerable amount of financial resources to investment in the digital infrastructure. These efforts have to be accompanied even more strongly by national governments. Many governments in the EU enjoy historically low borrowing conditions and public investment in digital infrastructure could partly be exempted from the rules of the Fiscal Pact. Especially Southern European countries run the risk of falling behind in broadband infrastructure investments.

Some member states have still less than one percent employees with ICT specialist skills. In Southern and Eastern Europe, governments should do more to qualify citizens in ICT-skills and to encourage the growth of Start-ups. Otherwise the economic gains of the digital transformation run the risk of getting unequally distributed among European member states.

FIGURE 9 ► Persons Employed with ICT Specialist Skills



Source: EU-Commission Digital Scoreboard, Persons Employed with ICT Specialist Skills, % of persons employed, 2014.

71. Die Bundesregierung, Digitale Agenda 2014-2017, 2013.

CONCLUSION

- **The EU needs higher productivity growth. Higher factor mobility**, especially of labour, but also of capital or knowledge, would benefit European citizens as it enhances the efficient allocation of resources and thus boosts productivity and welfare in the Single Market. While the **Capital Markets Union** will help allocate capital more efficiently, a **European Labour Market** could do the same for labour. A higher geographic labour mobility can become a major factor in putting the EU on a track of more economic and productivity growth and less cyclical unemployment. **Product market reforms in the digital sector can boost TFP-growth**. The Digital Single Market (DSM) should become a cornerstone of future productivity growth. By facilitating the fast spill-over of new technologies and services across the EU, the DSM leads to more competition. Higher competition in turn forces companies to invest in productivity-enhancing technologies.

European Labour Market

- **A European Labour Market should have three objectives**. In order to deliver a more efficient allocation of resources a European labour market should: 1.) Help more people become mobile (Especially with regard to South-North movements. Currently there are still much more European moving from the East to the West than from South to North) 2.) Contribute to lower skills mismatches and shortages 3.) Become a tool for macro-economic shock absorption for the euro area.
- **European Employment Agency**. A European Labour Market needs a better functioning job placement system. The European Job Mobility Portal EURES could become a European employment agency in the long-term. It needs **more European investment to increase scope, outreach and visibility of the EURES network**. National employment agencies should cooperate more and exchange information in a European database on vacancies. EURES only covers a fraction of all vacancies at the moment.
- **Targeted Mobility Schemes**. A better functioning job placement system has to be accompanied by discretionary measures designed to bring young people in training and jobs and address skill shortages. Schemes such as “Your First European Job” should be upgraded and combined with initiatives that promote vocational training in other European countries. **One proposal for this is the Erasmus Pro: One Million European apprentices by 2020-initiative**.
- **Portability of Social Security and Pension Rights and exercise of Profession in the Single Market**. Individual conditions to take up a job in another country have to be improved. To this end, the duration of unemployment benefits from the country of origin should be streamlined at six months. The directive on supplementary pension portability needs to be implemented swiftly in all member states. More qualifications in the EU should be automatically recognized. **Member states should simplify their recognition procedures and open up “closed professions”** such as architects, accountants or engineers for European citizens. To this end it might be worthwhile to introduce the principle of mutual recognition for certain professional services.
- **National Labour Markets Reform and Investment in Education**. National policy action has to accompany European regulation. Southern European countries need to introduce more elements of flexibility and life-long learning into their national policy mix. Countries like Germany should invest more in higher education as unfavourable demographics will otherwise lead to accelerating skill shortages.

Product Market Reforms for a Digital Single Market

- **Digital Transformation.** The DSM essentially enables the European economy to adapt to the digital transformation of products, production processes and services. **A connected DSM could contribute € 415 billion and hundreds of thousands of jobs to the European economy.** A functioning DSM accelerates the diffusion of new ideas, business models and technology, thus boosting TFP. At the current state, fragmented national markets severely hamper this development.
- **Prioritising Policy Actions.** The DSM-strategy of the EU-Commission consists of a wide array of policy areas to be reformed, from intellectual property rights to data protection. Policy-makers should prioritise actions with a focus on productivity growth. **E-commerce is a rapidly growing segment** which should make better use of the Single Market (currently only 8% of EU-companies sell cross-border). Mobile markets need more competition for companies and more coordination among MS for the assignment of spectrum licenses. This could lead to a faster adaption and diffusion of the coming 5-G technology, in turn supplying the EU with a competitive edge for the development of new services and products in the era of inter-connectivity and the **Internet of Things. The IoT alone could generate as much as € 330 billion in the EU by 2020**, when the roll-out of 5G is set to start. **It is estimated that broadband networks contributed to as much as 20% of total productivity growth in Europe and have the potential to add 0.5-1.5% to the GDP of the Union.** Yet, with regard to households connected to fast broadband the EU still lags behind the US. The financial means of the Juncker-Plan and national governments should be directed into broadband investments.

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