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Single Market Performance Report 2019

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Annual Sustainable Growth Strategy 2020

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EXECUTIVE SUMMARY

The Single Market ranks at the top among the greatest accomplishments of European integration. For over 25 years, it has been delivering growth, jobs, legal certainty to business, a wide choice of safe products to consumers and guaranteeing the free movement to EU citizens in the Member States. It is part of our daily life, interweaving the activities of businesses and consumers across borders. The Single Market and its benefits should not be taken for granted: without the Single Market, the EU GDP would be 8.5 percent lower than it is today.

The Single Market plays a central role in giving a response to the new challenges that the EU is confronting. Revitalising Europe's competitiveness, providing solutions to the environmental and climate change objectives, speeding up the adoption of new technologies, maintaining financial stability, ensuring the safety and rights of citizens in an environment of demographic change are all major challenges to which the Single Market is already responding. The Capital Market Union, the Digital Single Market and the Energy Union have joined Single Market policies in goods, services and public procurement markets operating for over 25 years to provide effective responses to these new challenges.

In these times of change, it is important to ensure that the Single Market performs at its best. We have to provide effective responses to these challenges. Given the importance of the issues at stake nowadays, the cost of a suboptimal performance of the Single Market is higher than ever before. The performance of the Single Market must be improved because it cannot fall short of citizens' and businesses' needs and expectations.

The Single Market has a very important international dimension. It provides a highly competitive environment to firms from all EU Member States to compete in world markets. It is the most highly integrated economic area in the world allowing firms to specialise in different segments of global value chain. In addition, it provides a stable and predictable environment for businesses that can provide a safe harbour to carry out operations internally and across the globe. The convergence towards common technical norms and market practices, the shared technological base and the free movement of capital, goods and services contributes to increase productivity by lowering input costs and fostering innovation. Last but not least, the size and importance of the Single Market give Europe a high profile and influence on global issues such as climate protection and the respect of the rule of law and human rights.

This report highlights the importance of structural reforms at a Member State level for a good performance of the Single Market. There is significant scope for improvement in the compliance with and application of Single Market legislation, not just in services but also in goods markets. However, even if markets are opened to cross-border trade and investment, consumers will not enjoy lower prices and businesses will not be able to benefit fully from new opportunities if markets remain closed to competition by market power, smothered by disproportionate regulations, isolated by insufficient energy or transport infrastructures, segmented by obstacles to the recognition of qualifications or hampered by insufficient investments in upskilling and reskilling. Thus, the delivery of benefits to citizens and businesses depends also on structural reforms by Member States.

The European Semester provides the right framework to foster those reforms. The joint consideration of the Single Market performance and structural reforms under the European Semester will be mutually beneficial. The two reinforce each other. On one side, improving the functioning of the Single Market fosters the EU's macroeconomic performance by generating trade, promoting productivity growth, thanks to better resource allocation and economic convergence. These changes help to boost internal demand in times of growing uncertainties in export markets. On the other, the

recommendations of structural reforms made in the context of the Semester contribute to the delivery of Single Market benefits by removing market imperfections due to inappropriate national regulations and anticompetitive behaviour and improving the business environment.

The findings of the report can be summarised as follows:

- **Goods markets present a high level of integration.** Intra-EU trade is still growing driven by the impulse provided by the integration of Central and Eastern European Member States. However, evidence shows that inadequate compliance with Single Market rules and insufficient market supervision limit the benefits of integration in terms of trade, competition, productivity growth and product safety.
- **Services markets present the highest potential for further integration.** The cross-border trade in services markets is lower than that of goods but it is growing. In fact, integration in services is greater than trade figures suggest because the value-added contents of services included in the intra-EU trade of manufactured products is increasing. In addition, integration is increasing thanks to the cross-border establishment of subsidiaries. However, the performance of the Single Market in services is hampered by weak competition and unjustified or disproportionate regulatory restrictions, particularly in some business services, retail and construction.
- **In some sectors, weak competition prevents consumers and businesses from reaping the full benefits of the Single Market.** Increasing market power and concentration are frustrating a part of the price reductions that integration should deliver to consumers and reducing businesses' incentives to invest and to innovate.
- **Significant progress has been achieved in the integration of energy markets, but cross-border energy trade and competition in energy markets must be improved** Entry barriers in electricity generation and different rules for electricity retail markets hinder cross-border energy trade. This situation entails important economic costs to energy users, as well as higher social costs from the foregone opportunities to reduce CO₂ emissions that the Energy Market Union strives to achieve.
- **Ensuring high standards of environmental protection and product safety is a major component of the performance of the Single Market spanning over a broad range of economic activities.** For example, Single Market legislation has been successful in reinforcing the safety of citizens exposed to chemical substances. Ecodesign and Ecolabeling contribute to steering process and product innovations towards increasing environmental protection and better informed consumer choices. Better cooperation with authorities in Member states should help ensure a more even environmental performance across all of the Single Market.
- **At the core of the Single Market, standardisation plays a key role to further the EU sustainable development agenda.** Standards are essential to steer business towards sustainable development goals as they act as bridges linking legal provisions with on-the-ground technical practice. The adoption of EU standards has helped to achieve energy consumption reduction goals in the eco-design and ecolabelling areas. Standards also have the potential to contribute further to enhance product sustainability and the greening of production processes.
- **The Single Market has gone a long way in integrating public procurement across Europe, but the performance in public procurement could still be improved.** Transparency has increased, especially since the introduction of e-procurement. However, improvements in transparency have not always been followed by more discernible competition as measured for

instance, by the number of tenderers per call. The EU has provided Member States with the necessary rules and guidance to make the best out of public procurement practices, not just to increase the quality of public spending but also to pursue other objectives such as green innovation and digitalisation.

- **The Single Market is contributing significantly to the digitalisation of Europe's economy but its lasting performance requires the reinforcement and further development of the current EU-wide digital ecosystem.** The development of an integrated EU-wide ecosystem is held back by an insufficient and uneven performance on key digitalization drivers, such as digital infrastructure, skills and funding for digital ventures. Member States have a crucial role to play in putting these elements into play.
- **EU financial services legislation helped resume integration of capital markets after the setback resulting from the financial crisis and provided better governance to guarantee the stability of financial markets.** Despite significant progress, cross-border competition and market penetration levels remain relatively low. The Capital Market Union offers the potential to reach deeper capital market integration across the EU.

The good performance of the Single Market is a shared responsibility at EU and Member State level. These findings make apparent the importance of reforms at the national level to optimise the performance of the Single Market. Many of the problems hindering the performance of the Single Market are of a general nature and their impact is not limited to cross-border transaction. Their impacts spill over across national borders. They require structural reforms at national level and that is the level at which the Semester can be most effective.

1. INTRODUCTION

The Single Market ranks at the top among the greatest accomplishments of European integration. For over 25 years, it has been delivering growth, jobs and free movement to EU citizens, legal certainty to business and safe products to consumers. It is part of our daily life, interweaving the activities of businesses and consumers across borders. The Single Market is the EU's real economy. But the pervasiveness of the Single Market and its benefits should not be taken for granted: deprived of a Single Market, the GDP of the EU would be 8.5 % percent¹ lower than it is today.

The Single Market has a very important international dimension. It provides a highly competitive environment to firms from all EU Member States to compete in world markets. It is the most highly integrated economic area in the world allowing firms to specialise in different segments of global value chain. The convergence towards common technical norms and market practices, the shared technological base and the free movement of capital, goods and services contributes to increase productivity by lowering input costs and fostering innovation. Last but not least, the size and importance of the Single Market give Europe a high profile and influence on global issues such as climate protection and the respect of the rule of law and human rights.

The Single Market is adapting to the new challenges that the EU is facing. Stagnant productivity growth, environmental and climate change challenges, demographic changes, uncertainties in international markets and the adoption of new technologies are just some of the issues requiring a response based on the instruments provided by the Single Market. The Union and the Member States must deliver the full potential of the Single Market because the cost of a suboptimal performance would much too high in terms of business confidence and citizens' trust in the European project.

This report assesses the market performance of the real economy in the Single Market². In the past, monitoring efforts focused mainly on the legal environment of the Single Market to ensure that it was properly enforced. This was particularly important in the early stages of the implementation of the Single Market and it remains a necessary element in the Commission's job of guardian of the Treaties. Nowadays, the assessment of performance also requires looking at impacts on the EU's productivity, competitiveness, sustainability and on the achievement of specific policy goals – besides legal compliance. The ability of the Single Market to deliver in this respect does not depend only on legal compliance but also on broader policy measures and businesses environment conditions, undertakings' conduct and private choices.

The European Semester can also benefit from the monitoring and assessment of the Single Market performance in various ways. By fostering trade and sustainable growth, the Single Market underpins internal demand in the EU and contributes to macroeconomic performance. Furthermore, the Single Market is a key tool for better allocation of resources and economic convergence among Member States. Thus a more integrated and diversified Single Market will also increase the resilience of the European economy. The consideration of cross-border activities in the Single Market will also help better understand the spill over effects of national policy measures and the impact of structural reforms not just at the domestic level but also for the Union as a whole.

¹ See for instance Jan in 't Veld (2019) "Quantifying the Economic Effects of the Single Market in a Structural Macro model", European Economy, Discussion Paper 094 February 2019.

² This report complements the Report on Obstacles to the Single Market (to be adopted in 2020) and the Single Market Scoreboard published every year by the Commission. The former focuses on the assessment of the remaining regulatory and non-regulatory barriers and opportunities to the Single Market". The Single Market Scoreboard gives an indicator-based an overview of the practical management of the Single Market (see https://ec.europa.eu/internal_market/scoreboard/).

[On 22 March 2019, the European Council (called for a closer monitoring of the Single Market and the publication of a report on the functioning of the Single Market (See at <https://data.consilium.europa.eu/doc/document/ST-1-2019-INIT/en/pdf>).

The European Semester offers the right framework to monitor and assess the Single Market.

There are important complementarities between the structural reforms fostered by the Semester and Single Market policies. In practice, the Semester has already paid increasing attention to market imperfections, impediments deterring or delaying investment and hindering the good functioning of markets and business dynamics in recent years³. The Semester also allows for a joint analysis of different policies and objectives at the national level relevant for the performance of the Single Market. In this context, structural reforms have been proposed and they are contributing to the better functioning of the Single Market. While the focus of the semester country reports and country-specific recommendations is on Member States, this report takes a broader EU level perspective and zooms on the Single Market's overall deliverables. This makes it a key document of the Annual Sustainable Growth Strategy. A separate report on the barriers to the Single Market, which mostly focuses on a qualitative analysis of what prevents the businesses from trading across the Member States, will specifically address the recent Council request to monitor the Single Market.

In a mature Single Market, monitoring must focus on results. The delivery of the Single Market's ultimate objectives requires going beyond compliance with legal requirements. Realising the effective free circulation of goods and services will contribute to lower market prices to consumers by fostering competition and increasing product market diversity. But the free circulation of goods and services will not result in lower prices if firms with strong market power fail to pass the benefits through to consumers.

This report is a first effort to monitor and assess Single Market performance in this comprehensive way. It takes into account (i) obstacles to the delivery of Single Market benefits smothering the delivery of Single Market benefits to citizens and businesses (e.g. not just those hindering integration); (ii) the ultimate objectives of the Single Market (e.g. not just more trade or cross-border activities but the underlying objectives, such as more choice, lower prices, higher productivity and high standards of consumer safety and environmental protection); and (iii) a broad range of activities relevant for the good performance of the Single Market including its environmental performance and digitalisation (e.g. not just cross-border trade or investment).

A full assessment along the lines described above would require new indicators and analytical approaches and some of them are not available today. Therefore, the report cannot cover some very important areas and dimensions of the Single Market performance. In addition, it does not go into the assessment of issues related to the free circulation of citizens⁴. Taxation issues are mentioned in some sections of the report but the actual assessment of the impact of taxation issues on the performance of the Single Market would require a dedicated report. The same applies to the monitoring of economic convergence in the Single Market. The Commission is working to develop new indicators that will allow for more complete monitoring of Single Market performance. In the meantime, different elements of evidence currently available are presented here as part of the Autumn Semester package.

³ See for instance "The Economic Impact of Selected Structural Reform Measures in Italy, France, Spain and Portugal" (Institutional Paper 023 | April 2016) that include the analysis of the functioning of goods and services markets which are key component of the Single Market..

⁴ In this regard the Annual Report on Intra-EU Mobility covers certain issues related to the free movement of citizens. <https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8174&furtherPubs=yes>

2. GOODS AND SERVICES MARKETS

a. GOODS MARKETS

The evolution of the Single Market for goods

The Single Market for goods has successfully achieved a high level of integration in the EU in comparison to other areas of the Single Market. Nevertheless, the recently adopted “Goods Package”⁵ highlighted deficiencies and shortcomings suggesting an underperformance of the Single Market for goods in certain areas requiring additional efforts, in particular calling for effective mutual recognition and enhanced market surveillance.

The integration of the Single Market is founded on a legal framework that is deeply rooted in national legislations. Since the first issue of the Single Market Scoreboard, the average transposition deficit decreased from 6.3 % to 0.7 % between the end of 1997 and 2018, while the average delay in transposing directives diminished by 50 %. Over the years, Member States have shown a strong political commitment to transpose legislation and meet European Councils targets.

A number of tools have contributed effectively to keeping at bay the development of new technical barriers that might have stifled the functioning of the Single Market, but they remain underexploited. A notification procedure for draft national technical regulations relating to products and information society services⁶ was introduced in the 1980s and finally codified by the Single Market Transparency Directive⁷. The procedure has proved to be a successful and efficient mechanism⁸ in key areas of the Single Market such as information society services, with almost 20 000 notifications.

Feedback from market surveillance activities points to weak enforcement of product rules. Member States are responsible for checking the conformity of products sold in the Single Market. However, with over 500 distinct market surveillance authorities across the EU, enforcement is too fragmented to policing the Single Market. Furthermore, enforcement is often hampered by shortcomings in terms of resources (staff, budget, testing and laboratory capacities), coordination, information exchange, and powers with regard to non-compliant products. Thus there is a risk of having too many unsafe and non-compliant products sold on the EU market, with negative consequences also on the competitiveness of compliant businesses⁹.

⁵ https://europa.eu/rapid/press-release_IP-17-5301_en.htm

⁶ The notification by a Member State triggers a three-month standstill period for the adoption of the national draft technical regulations. Should a concern in the light of EU rules be identified within that period, the Commission and/or the other Member States may issue a formal reaction (comments, detailed opinion and/or decision to request the postponement of adoption), which needs to be taken into account by the notifying Member State and which may have the effect of postponing the standstill period. Stakeholders are also invited to submit their views on the draft technical regulations that are notified, which are made publicly available via TRIS.

⁷ Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services. *OJ L 241*, 17.9.2015, p. 1.

⁸ European Commission, (2003) Evaluation of the application of directive 98/34/EC in the field of information society services, COM (2003) 69 final Report from the commission to the European Parliament and the Council.

⁹ "Non-compliant products destroy industrial jobs!", <http://www.industrial-europe.eu/Committees/IP/PolBrief/PB2016-08-MarketSurveillance-EN.pdf>

Table 2.1: Evolution of Single Market trade effects – summary of results

		Membership and accession effects				
		Positive and accelerating intra-EU15 effects/strong stimulus from EU15-Acc. bilateral trade effects	Diminishing intra-EU15 effects/strong stimulus from accession	Diminishing intra-EU15 effects/partially compensating effects from accession	Diminishing intra-EU15 effects/weak stimulus from accession	Decreasing intra-EU15 effects/no positive stimulus from accession
Overall pattern	Positive and accelerating effects	* Textiles, wearing apparel, leather products * Construction * Services * Furniture, other manufactured products.				
	Stable positive effects		* Food, beverages, tobacco * Pulp, paper, print., publishing * Computer, electronic. Electric. and optical products			
	Large positive beginning of period effects			* Chemicals and pharmaceuticals * Rubber and plastic products * Non-metallic mineral products * Basic and fabricated metals * Machinery		
	Negative/partly negative effects				* Wood, wood and cork products	
						* Coke, refined petroleum prod.

Source: WIFO (2019)

The establishment of the Single Market for goods has had very different impacts on trade creation and diversion on sectors and countries over time. A recent study¹⁰ showed that the impact of Single Market integration has been mainly driven by the accession of thirteen Member States since 2004. The study provides further details on the different impact on trade between the Member States that joined in or after 2004 and previous Member States for different sectors. These differences allow differentiating between accession and membership effects. The study confirms that trade in goods is currently growing mainly thanks to new trade flows involving the Member States that joined in or after 2004. In addition, the study also shows the time profile of trade creation across sectors. It shows that although integration had a positive impact on trade in almost all sectors,¹¹ this impact was short-lived in some cases, while in others the intensity is still holding or even increasing in recent years.

The trade impact of Single Market integration differs across sectors both in quantity and distribution over time. Table 2.1 provides a summary of the intensity and profile over time of integration. The impact has been positive for the textiles, furniture, transport equipment, food, paper, computer and electronics sectors. However, while the impact continues accelerating in the case of textiles and furniture, it has stabilised for the other sectors. In metal products, plastics, chemicals, non-metallic mineral products and machinery, the large initial impact has weakened in the EU15, but

¹⁰ Austrian Institute of Economic Research (WIFO) and The Economic and Social Research Institute (ESRI) (2019), *The performance of the Single Market for goods after 25 years*.

¹¹ The “Coke and petrol refining” sector is a special case due to its global dimension and the restructuring that it underwent in the past decades.

it remains positive thanks to the impulse provided by new trade flows involving the EU13 Member States. In the case of wood and cork products, the impact is no longer positive at present¹².

The cost of imperfect compliance in the Single Market: Impact on trade, competition and productivity

Full and real compliance with Single Market goods legislation could further boost intra-EU trade. As explained, different factors hamper the release of all the potential of the Single Market. This also applies to goods markets. The above-mentioned study has estimated the cost in terms of foregone trade flows resulting from imperfect compliance with Single Market rules by considering five different scenarios (see table 2.2):

- (1) Full transposition and elimination of transposition deficits of Single Market legislation;
- (2) Improvements in Member States' compliance that eliminate the need to open proceedings;
- (3) Improved administrative practices and better Single Market rules application bringing SOLVIT cases to zero;
- (4) Increased efficiency of national administrations in the solution of SOLVIT cases to the highest standards, and
- (5) Reduction in the number of cases to the point of making unnecessary the issuance of Commission comments and detailed opinions on national notifications in the Technical Regulations Information System (TRIS).

(i) Cost of imperfect compliance on trade

Non-compliance with Single Market rules has a very negative impact in terms of foregone trade flows. The reduction in the frequency of cases of non-compliance (Member States' infringements) would expand intra-EU15 trade by 7.45 % and trade between the EU15 and the EU13 Member States by 8.6 % (see table 2.2). Trade expansion could be particularly important in "Non-metallic mineral products" in this scenario where there is no reason to open proceedings. Transposition compliance and misapplications of Single Market rules identified in the SOLVIT context come next as potential sources of potential additional trade flows that could be gained from the improved functioning of the Single Market for goods and TRIS having a more limited positive impact.

There are large differences across Member States in the potential trade that could result from improved compliance. Among the countries offering more potential we find both EU15 Member States and post-2004 Member States. Although Poland presents the highest potential yield from improving compliance, three EU15 Member States (Italy, Spain, and Greece) display potential impact greater than in several new Member States. Other EU15 Member States also show high potential from better compliance (France, Belgium, and Germany). As expected, the potential gains from the reduction of transposition issues are significantly larger in Member States that entered the Single Market after 2004. Cyprus shows the highest potential from improving its transposition record closely followed by Poland.

¹² The study also presents individual graphs for each sector with the time profile of the impact of integration for the EU15 and EU13 groups.

Table 2.2: - Single Market intra-EU trade potential of counterfactual policy scenarios across industries (trade flows changes in % expected after a reduction in non-compliance as expressed by the following indicators)

	Transposition		Infringements		SOLVIT		SOLVIT		TRIS	
	indicator		indicator		misapplication		solution		indicator	
					indicator		indicator			
	EU15	Acc. count.	EU15	Acc. count.	EU15	Acc. count.	EU15	Acc. count.	EU15	Acc. count.
Text., wear. app., leath. prod.	2.47	4.65	5.75	4.34	1.82	1.47	0.49	-0.91	-2.79	-0.62
Food, beverages, tobacco	1.98	4.16	4.93	3.84	1.63	1.42	0.40	-0.67	-2.12	-0.20
Comp., electro., electric., opt. p.	2.25	4.56	5.37	4.63	1.74	1.50	0.54	-0.79	-2.66	-0.78
Machinery	2.55	4.51	5.18	4.06	2.18	2.12	0.99	0.50	-1.22	0.90
Chemicals, pharmaceuticals	3.45	6.43	6.72	6.48	2.98	3.56	1.59	1.29	-1.19	1.56
Rubber, plastic products	3.05	6.04	6.01	6.03	2.69	3.32	1.49	1.17	-1.25	1.60
Transport equipment	3.21	6.08	6.07	5.94	2.75	3.35	1.62	1.32	-1.16	1.58
Basic, fabricated metals	4.96	9.41	8.14	9.58	4.45	6.33	3.10	3.98	-0.01	4.25
Pulp, paper, print., publ.	4.90	9.06	7.67	9.07	4.44	6.42	3.31	4.32	0.96	4.75
Wood, prod. of wood, cork	6.19	12.11	8.61	12.34	5.49	9.22	4.64	6.99	1.68	7.23
Non-metallic min. prod.	7.43	14.48	10.24	15.00	6.66	11.12	5.64	8.75	2.39	8.86
Furniture, other manufacturing	7.16	13.15	9.93	13.39	6.63	10.44	5.49	8.26	2.88	8.64
Coke, refined petrol. prod.	10.63	19.16	14.33	20.22	9.98	15.90	8.43	13.10	5.19	13.09
Total	4.55	8.58	7.45	8.61	4.04	5.73	2.86	3.56	0.10	3.85

Source: WIFO (2019)

Note: Average general equilibrium import effects from EU trade with the EU15 and the accession countries in percent of the baseline scenario. See the definition of the scenarios in the previous page.

(ii) Cost of imperfect compliance on competition and productivity

Compliance costs in trade terms have knock-on effects on competition and productivity. As explained in the introduction of the report, the cost of trade losses carries over to competition in the form of higher concentration and markups and from there on to productivity. These costs are more visible to consumers and business than forgone trade. The economics of integration suggests that increasing imports leads to more competition and higher productivity growth. The key question is whether the Single Market has delivered these expected benefits.

Increasing trade intensity between Member States contributed to increase competition with a positive impact on labour productivity. The WIFO (2019) study estimates first the relationship between of trade and competition and then the relationship between increasing competition and productivity growth. The results confirm that the trade creation impact of the Single Market has been positively correlated with increments in competition and labour productivity. Table 2.3 summarises the impact of trade expansion as a result of the Single Market programme on competition and productivity. Higher market competition and labour productivity have been observed in sectors such as “Wood and wood products”, “Pulp, paper and publishing”, “Chemicals and pharmaceuticals”, “Non-metallic mineral product”, “Transport equipment” and “Furniture and other manufacturing”. There is no negative relationship between trade growth and competition in any sector. This means that higher intra-EU trade is associated with more competition and higher productivity in these sectors. For the machinery sector there is a clearly positive relation between trade and competition, but this positive link is not carried over to productivity increases.

Table 2.3: Patterns of industry-specific trade, competition and productivity links – summary of results

CR10		Competition => Productivity		
Intra-EU Trade		Positive	Negative	Insignificant
Trade ≥ Competition	Positive	Wood and products of wood and cork	Machinery	Rubber and plastic products
		Pulp, paper, printing, publishing		Computer, electronic, electrical and optical products
		Chemicals and pharma		
		Non-metallic mineral products		
		Transport equipment		
		Furniture, other manufacturing		
	Negative			
	Insignificant	Textiles, wearing apparel, leather products	Basic and fabricated metals	Food, beverages, tobacco

Source: WIFO (2019)

At Member State level the improvements in compliance with Single Market rules have a limited impact on competition but a slightly higher impact on productivity. All Member States would see a boost to productivity from compliance improvements (1.3 % on average). The estimated productivity gains are particularly important for Italy and Spain with 1.8 % and 1.7 % followed by France and Poland at 1.6 % and 1.5 %, respectively. However, an improvement of these indicators would not necessarily fully reflect the reality on the ground since an important number of deficiencies deriving from non-compliance at national level would not necessarily be captured in any of those categories (for example, national litigation has to be taken into account).

Cost of imperfect compliance on safety and other public interests

Imperfect compliance with EU rules on products is still an issue in the EU. Member States have the responsibility to carry out market surveillance to ensure compliance with Single Market rules on non-food products. Yet many goods sold on the EU market do not comply with these requirements. This means that their substantive characteristics are not in line with what is prescribed by EU rules and/or that mandatory markings, warnings, labels and other information are lacking, incomplete or incorrect. The exact share of non-compliant products cannot be quantified. However, the high shares of products found to be non-compliant during inspections carried out by market surveillance authorities as well as perception of businesses, consumers and workers' associations suggest the problem is rather widespread. For instance, in the period 2014-2016 non-compliance was found on average in 27 % of inspections conducted in the field of toys, 38 % in the field of construction products and 34 % in the field of electromagnetic and radio equipment, 45 % in the field of lifts, 47 % in the field of machinery, 48 % in the field of simple pressure vessels and pressure equipment and 61 % in the field of pyrotechnics. In 2016, 2017 and 2018 a total of 2 126, 2 201 and 2 257 notifications of dangerous products were submitted in the rapid alert system for dangerous non-food products 'RAPEX'¹³. In a public consultation organised by the Commission in the area of market

¹³ https://ec.europa.eu/consumers/consumers_safety/safety_products/rapex/alerts/repository/content/pages/rapex/index_en.htm

surveillance, 89 % of all respondents considered the products in their sector as affected to some extent by non-compliance across all sectors and Member States¹⁴.

Product non-compliance and subdued market surveillance reduces the Single Market's ability to protect citizens. In practice, non-compliance means that citizens are exposed to potentially dangerous products or that there is other relevant harm to society (e.g. injury to workers, unfair transactions, pollution, etc.) depending on the specific product at stake and the degree of the non-compliance by the product¹⁵. Thus while Single Market for goods legislation strives to achieve high standards of safety, security, protection of the environment and other public interests, the goal is only partly met due to inefficient market surveillance.

Conclusions

The Single Market for goods has so far delivered concrete benefits, yet there is still unexploited potential. Despite remaining shortcomings (e.g. in the area of mutual recognition), the important efforts to create a Single Market for goods in the last 25 years have delivered tangible results in terms of an increase in trade, competition and productivity in many of the sectors analysed. Further benefits could be attained if Member States improve compliance with existing rules and the application of available tools and procedures. In addition, a more efficient enforcement of market surveillance would eliminate the risk of distortion of competition from businesses marketing non-compliant products.

Competition remains key to improve the performance of the Single Market. Eliminating impediments to market access, although necessary, may not be sufficient to ensure that expected benefits such as price convergence materialise. Effective competition in goods and services markets is needed to ensure that increases in productivity triggered by market broadening and efficiency gains are passed on to consumers, instead of solely beefing up businesses' markups. It is clear that issues related to productivity and competitiveness are not necessarily the result of shortcomings in the functioning of the Single Market. They are often related to market behaviour and national regulatory interventions but they may effectively hinder the delivery of Single Market benefits. Precisely for this reason, there are complementarities between the reforms fostered by the Semester and the implementation of Single Market rules.

The Single Market performance as regards the protection of public health and other relevant public interests is affected by product non-compliance. The system of national enforcement against non-compliant products could be improved. More resources, better coordination and a more efficient institutional set-up are necessary to ensure product requirements are respected and the level playing field among businesses restored.

¹⁴ SWD/2017/0466 final - 2017/0353 (COD) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2017:0466:FIN>)

¹⁵ Non-compliance with substantive or technical product requirements (e.g. physical properties of a product) is often expected to bring about more serious consequences than non-compliance with requirements of formal nature (e.g. mandatory warnings, labels or documentation accompanying the products or to be provided upon request), however the latter may also have serious implications (e.g. buyers using the product improperly lacking instructions). Non-compliance with formal aspects or mandatory markings, that can be spotted more easily, may also signal the likelihood of technical non-compliance.

b. SERVICES MARKETS

Low productivity growth in services constrains economic growth in both services and manufacturing, given the share of the services sector in the economy and its spill over effects.

The importance of the services sector has continued to grow over the past decades and today services generate over 70 % of EU GDP. More than 70 % of EU workers are employed in services, 10 percentage points more than in the rest of the OECD¹⁶. The manufacturing sector also relies heavily on services: on average about 25 % of direct cost in manufacturing are services inputs. When adding indirect linkages, the average service content of goods manufactured in the EU is close to 40 % of the total value of final manufactured goods¹⁷. There is a growing trend of goods to be supplied with services attached, a phenomenon also known as “servitisation of manufacturing”.

For citizens, services performance means the possibility to enjoy cheap prices, product diversity and ease of retail purchases, including cross-border. The Single Market has on average reduced trade cost by 21 % for goods, but only by 7 % for services, according to a study by Copenhagen economics¹⁸.

Low cross-border services integration and weak competitive pressures are among the factors that are holding back the performance of the services markets. The two are, to a significant extent, a result of the regulatory and administrative policies of the EU Member States. Difficulties in understanding and recognising skills and qualifications across borders, as well as the need for investing more in upskilling and reskilling of the labour force, are further constraining the upscaling of services.

EU services exhibit low productivity

Productivity growth in the EU services sector lags behind that of the US. The period after the crisis reflects a lost decade, where the divergence of EU productivity in services vis-à-vis the US has fully eroded the catching-up achieved before the crisis¹⁹. The growing gap between EU and US productivity in services (see figure 2.1) is due to a number of factors: (i) drops in productivity levels across all EU services sectors in 2009, which did not happen to the same extent in the US, (ii) the significantly larger productivity increases in IT services in the US than in the EU, with much of these increases being driven by the large US tech giants, and (iii) the high productivity levels in professional services such as legal, accounting, architecture and engineering services in the US. “Behind most of these factors is a common denominator, namely the major difference in the size of the home market in the EU versus the US”²⁰. Firms in the EU have a smaller home market, particularly in the smaller Member States. Other factors explaining the growing gap between EU and US productivity in services include differences in taxation, pro-business attitudes, Information and Communication Technologies (ICT) diffusion, and rates of innovation. All are disproportionately correlated with the productivity of wholesale, retail and business services relative to the rest of the sectors in the economy²¹.

¹⁶ https://www.oecd-ilibrary.org/economics/can-productivity-still-grow-in-service-based-economies_4458ec7b-en

¹⁷ ECSIP Consortium “Study on the relation between industry and services in terms of productivity and value creation”, 2014

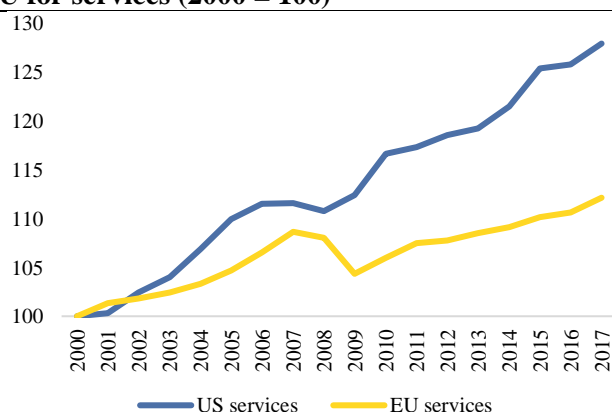
¹⁸ Copenhagen economics, Making EU trade in services work for all, November 2018.

¹⁹ Ibid

²⁰ Ibid

²¹ Cesare Buiatti, Joao B. Duarte, Luis Felipe Saenz, Cambridge-INET institute, Cambridge-INET working paper series n°2017/4

Figure 2.1: Labour productivity comparison in purchasing power parities between the US and the EU for services (2000 = 100)



Source: OECD statistics.

The weak productivity growth in services partly reflects intrinsic characteristics of the sector, but large productivity gaps between Member States suggest there is more to this.

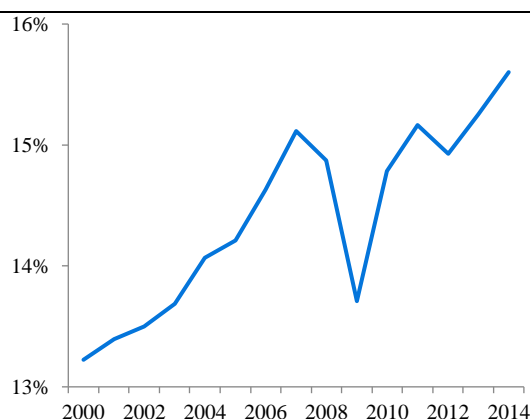
Indeed the share of EU countries that are well below the productivity frontier tends to be higher in services (both knowledge intensive and others) than in manufacturing²². These cross-country differences are likely to reflect many factors such as differences in skills, digital adoption rates or the mix of specific activities within industry. These are in turn influenced by interrelated factors: the level of market integration,

the level of competition and the type of regulatory policies. Limited mobility of ‘tech talents’ and researchers hampers knowledge circulation and innovation diffusion across Europe.

Services integration proceeds at a slow pace

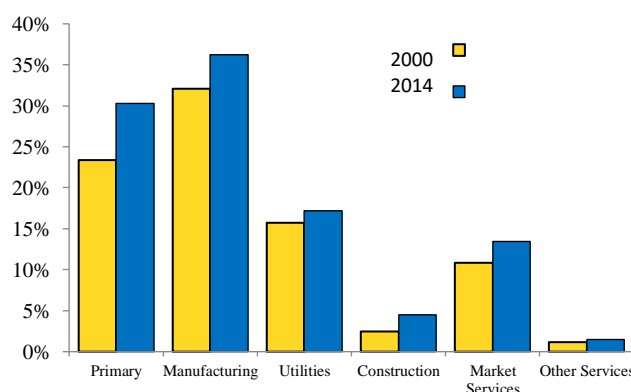
In the period 2010-2018, intra-EU trade in services has grown faster than EU GDP. But intra-EU trade in services, albeit at higher levels than extra-EU trade, grew just in line with the extra-EU trade growth, by about 6 % on average. At the same time, intra-EU trade in services remains relatively modest in absolute terms, still only representing one third of intra-EU trade in goods with no signs of catching up.

Figure 2.2: Evolution of integration in EU value chains (share of EU value added traded cross-border in total value added, overall economy, 2000-2014)



Source: WIOD database

Figure 2.3: Degree of integration in EU value chains per sector (share of EU value added traded cross-border in the total value added per sector in 2000 and 2014)



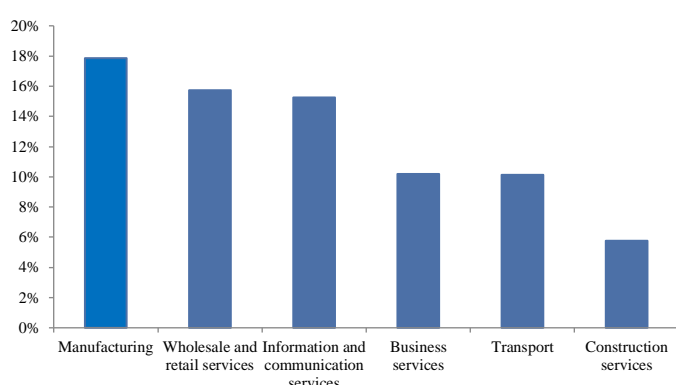
However the value added of services embodied in manufacturing trade is increasing faster. Trade measured as value added in the World Input Output database (WIOD) shows trade in services

²² Sorbe, S., P. Gal and V. Millot (2018), "Can productivity still grow in service-based economies?: Literature overview and preliminary evidence from OECD countries", OECD Economics Department Working Papers, No. 1531, OECD Publishing, Paris, <https://doi.org/10.1787/4458ec7b-en>.

farings somewhat better than when measured via conventional measures of international trade. EU integration of value chains during the period 2000-2014 measured as the share of cross-border value added over total value added, trended upwards and has been only briefly interrupted by the crisis (figure 2.2). EU cross-border value added has increased about twice as much (2.3 %) as total EU value added (1.2 %), putting its share in total EU value added at almost 16 %. About 2 percentage points of this increase is accounted for by market services and less than 0.5 percentage point by manufacturing. But while market services had a stronger contribution, the sector remains much less integrated than manufacturing (figure 2.3).

The Single Market in services also integrates through the cross-border establishment of companies. The Single Market in services does not consist solely of cross-border trade. Cross-border

Figure 2.4: Proportion of total value added generated by intra-EU foreign affiliates (2016)²³



Source: European Commission

lower than that in the manufacturing sector (figure 2.4).

Weak competitive pressures partly result from the regulatory policies of the EU Member States

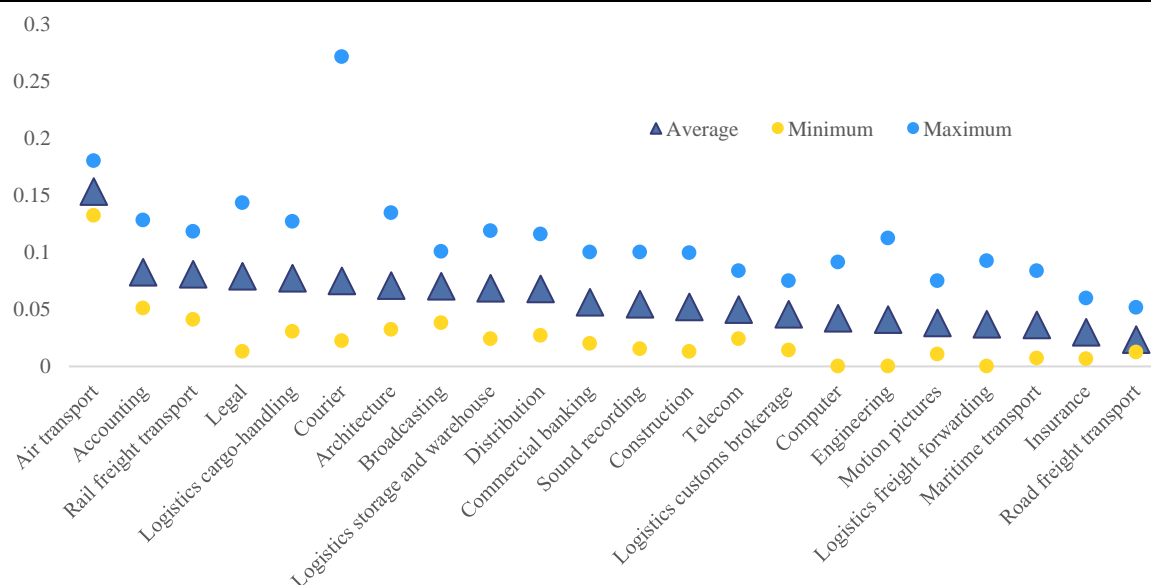
Although integration within the EU has led to considerable regulatory harmonisation among its members, remaining services trade restrictions affect market performance in many sectors and many Member States. Based on 25 member countries of the European Economic Area (EEA), the OECD Services Trade Restrictiveness Index (STRI) records restrictions to services trade within the Single Market of the EEA (see figure 2.5)²⁵. More important than heterogeneity across sectors, however, is heterogeneity across countries. The average difference between the most restrictive and the most liberal country in each sector is 0.09. In some sectors, such as courier services, this spread is even larger.

²³ This indicator is calculated by dividing the total value added that is generated by EU foreign affiliates in another EU Member State in a given sector over the total value added in this sector.

²⁴ Source: OECD Trade policy papers n°112, Multinational production and trade in services, 2018

²⁵ Benz, S. and F. Gonzales (2019), "Intra-EEA STRI Database: Methodology and Results", OECD Trade Policy Papers, No. 223, OECD Publishing, Paris.

Figure 2.5: Intra-EEA OECD Services Trade Restrictiveness Index (STRI) sector profiles

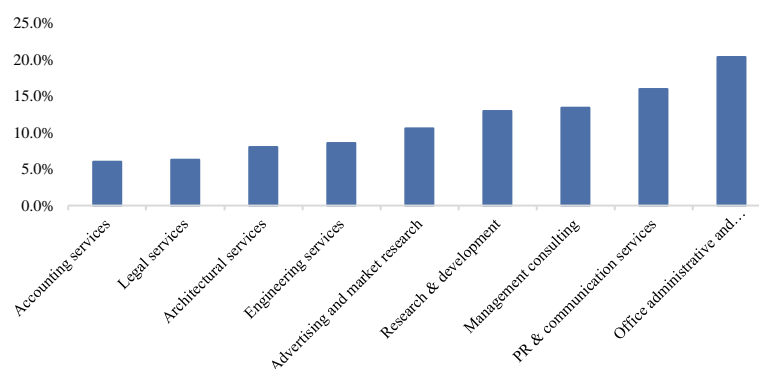


Source: OECD, 2018 –

Note: Y-axis STRI indices take the value from 0 (complete openness to trade) to 1 (completely closed).

While many regulatory restrictions are justified by the public interest, unnecessary restrictions hurt the proper functioning of the Single Market for services, according to some studies²⁶. Apart from the benefits for competition and (lower) prices and markups that a reduction of undue restrictiveness yields, such a reduction has been shown to strongly support ICT investment in services (where the EU lags behind the US), productivity of services and the competitiveness of EU industry²⁷.

Figure 2.6: Market entry rates (aggregated at EU level, 2016)²⁸



Source: European Commission

Competition in several services sectors is subdued on the back of low business dynamism. The intensity of competition varies significantly between different Member States and services sectors. For example, business services with a more restrictive regulatory environment, such as architectural, legal and accounting services, show significantly lower market entry rates (which is a proxy for business dynamics) than other services with less regulatory burden (see figure 2.6).

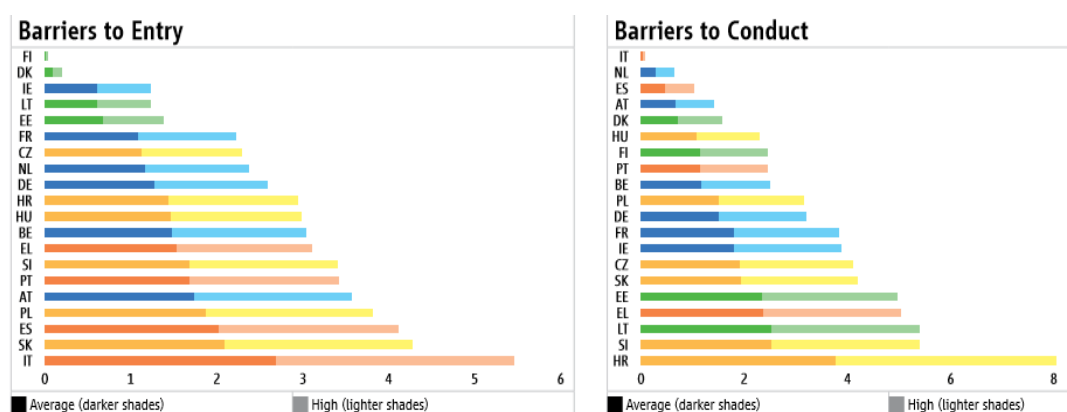
²⁶ E.g. Oliver Holtemöller (2019), How Can We Boost Competition in the Services Sector?, 2019; European Parliament, Contribution to Growth: The Single Market for Services,

²⁷ For instance, in European Commission, 2016 European Semester: Country Report – Austria, it is estimated that a liberalisation of professional services in Austria, where these services face strong regulation, would raise GDP by 0.9% in the long run.

²⁸ Number of enterprise births in the reference period (t) divided by the number of enterprises active in t - percentage

Structural reforms to open up services markets would likely increase competition in the sector concerned, lower excessive rents and deliver benefits to consumers²⁹. If Member States were more ambitious in implementing reforms in the services sectors to reach the average of the five least restrictive Member States, the additional growth potential would be 1.8 % of EU GDP³⁰. Limiting service sector restrictions to the level of the three least regulated EU Member States (the UK, Denmark and Sweden) would probably increase the productivity of services and manufacturing by 5.3 % within two years of implementation³¹.

Figure 2.7: Increases in firm-level productivity due to reductions in barriers to conduct and entry, 2016



Source: OECD and World Bank Group, (2016), *EU regular economic report 3, Growth, jobs and integration: Services to the rescue* (<http://pubdocs.worldbank.org/en/930531475587494592/EU-RER-3-Services-to-the-Rescue.pdf>)

Note: The chart shows the percent increase of firm-level total factor productivity (TFP) from reducing barriers to the average of the three least restrictive countries. Luxembourg is excluded as it is an outlier. Average refers to the average coefficient of four different TFP measures while high refers to the highest coefficient of the four different TFP measures.

Business and professional services

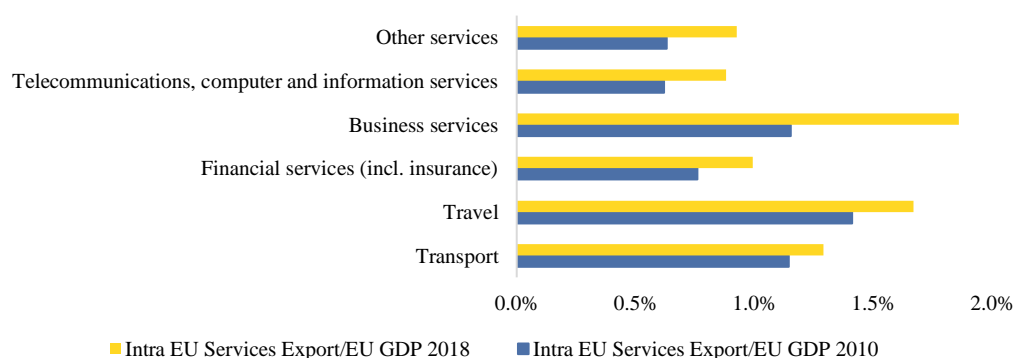
Business services account for a significant share of value added and cross-border trade has been on the increase. Intra-EU trade in services is mainly concentrated in five sectors: business services, travel services, transport, financial services (including insurance) as well as telecommunications, computer and information services. All have seen positive growth rates in recent years, with intra-EU trade in business services almost having doubled over the period 2010-2018 (see figure 2.8). Most cross-border trade in business services is generated by services such as management consulting, research and development as well as advertising and market research. At the same time, trade in highly regulated business services (e.g. engineering, accounting, legal and architectural services) still stands at very low levels.

²⁹ See for example European Commission, “The Economic Impact of Professional Services Liberalisation”, 2014; European Commission “Identifying Priority Service Sectors for Reforms in France”, 2018

³⁰ Monteagudo J., A. Rutkowski and D. Lorenzani “The economic impact of the Services Directive: A first assessment following implementation”, European Commission Economic Paper 456, 2012.

³¹ World Bank “Growth, jobs and integration: Services to the rescue”, World Bank EU Regular Economic Report, 2016.

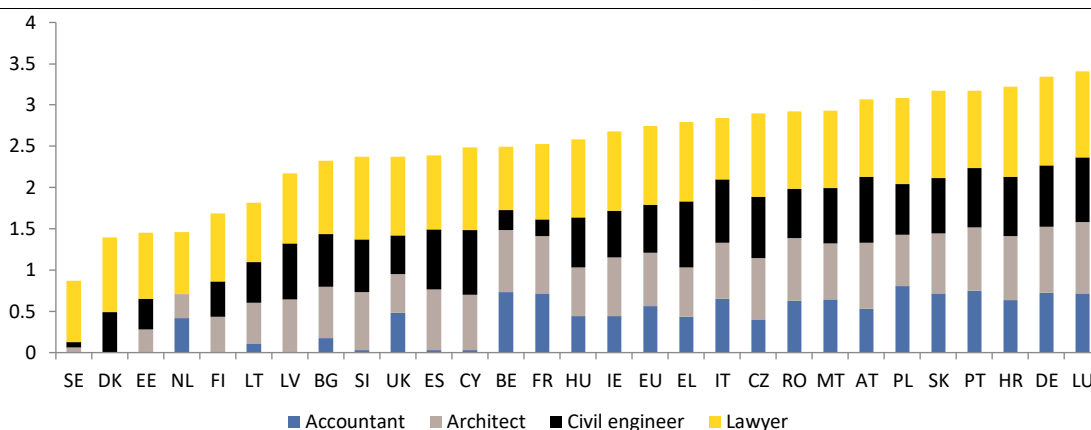
Figure 2.8: Intra-EU trade in services (intra-EU exports/GDP) in 2010 and 2018



Source: European Commission

Despite growing trade in the provision of professional services in the Single Market, market performance remains hampered by national regulations. Regulated professions account for 22 % of the European labour force³². Around 80 % of outputs from legal, accounting, engineering and architectural services are used as intermediate inputs for other sectors in the EU both domestically and cross-border, including important manufacturing activities³³. Restrictiveness of national requirements for some economically important professions (as measured by the Commission's restrictiveness indicator for professional services, see figure 2.9) shows a significant dispersion across Member States. Asymmetries in the mobility of high-skilled professionals and researchers stifle the diffusion of innovations and the impact of research and innovation investment on the economy. National reforms aiming to improve and streamline the regulatory framework for professional services have only achieved limited progress so far.

Figure 2.9: Restrictiveness of national regulation for business professions, 2016



Source: European Commission

Note: Restrictiveness indicator measuring the overall intensity of restrictions in national regulation as regards access to and exercise of certain regulated professions, quantified on a scale from 0 to 6.

Evidence shows that stricter entry and conduct requirements are not necessarily associated with higher service quality. Heavy and restrictive entry conditions, for example in the form of licensing or multiple administrative requirements, are often presented as being justified on grounds of consumer protection and ensuring the high quality of services to be provided. However, evidence shows that less

³² Koumenta M. and M. Pagliero (2016), "Measuring Prevalence and Labour Market Impacts of Occupational Regulation in the EU". See: <http://ec.europa.eu/DocsRoom/documents/20362>.

³³ Source: WIOD (2016) input-output table for 2014 (<http://www.wiod.org/release16>), Commission services' calculations of intermediate inputs shares.

restrictive access conditions are not necessarily associated with lower quality standards of the services delivered, as measured for example by surveys of consumer satisfaction and other indicators of well-being. On the contrary, several case studies find a positive correlation between higher levels of service availability and competition and some aspects of quality³⁴.

Excess restrictions in professional services stifle competition and limit market entry. Regulation, while instrumental in certain professional services, can often be associated with significant economic costs through limiting market entry and competition, which manifests for instance in lower growth in the number of enterprises and higher incumbents' rents (see figures 2.10, 2.11)³⁵.

Higher restrictions also impact cross-border mobility by imposing significant costs on non-national workers. Depending on the profession and under certain assumptions on labour demand structure, there could be between 3 and 9 % more people working in a given profession in the EU if access requirements were less stringent³⁶.

Figure 2.10: Regression analysis between the level of restrictiveness and the growth in number of enterprises

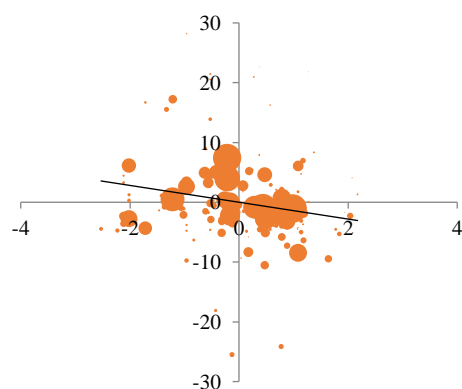
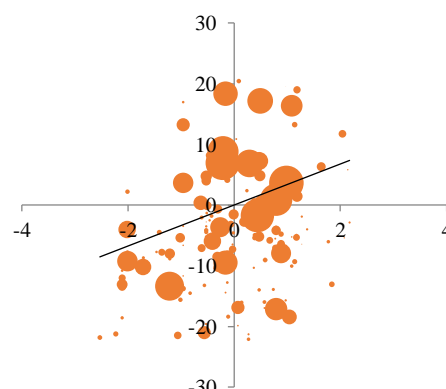


Figure 2.11: Regression analysis between the level of restrictiveness and profit rates



Source: European Commission.

Note: Horizontal axis represents the restrictiveness indicator and vertical axis represents the growth in the number of enterprises.

Both are “de-meaned”, i.e. the value plotted represents the value of the variable less the weighted mean of all observations. Bubble sizes represent the respective weight of the sectors considered.

Note: Horizontal axis represents the restrictiveness indicator and vertical axis represents profitability.

The elimination of obstacles in highly regulated services would have a positive impact on the sector’s value added and employment, but also, through lower prices of input, on a number of other sectors both domestically and in other countries. A modelling exercise done with RHOMOLO (Box 1) illustrates the potential impact of reducing obstacles to entry in four important business services markets, namely legal, accounting, architectural and engineering services,³⁷ by simulating a 'closing the gap' exercise, i.e. a scenario in which one or more EU Member States reduce their level of restrictiveness to the average of the 3 top performers. In addition, results from FIDELIO³⁸ suggest that of the total benefits realized after 10 years, around 7 % are found in the price-

³⁴ Study by the European Commission of six profession and country specific case studies that assess the effect of regulation on a number of quality indicators: Koumenta et al, 2019: <https://publications.europa.eu/en/publication-detail/-/publication/bfd2b0e8-1943-11e9-8d04-01aa75ed71a1/language-en>

³⁵ European Commission SWD(2016) 436 “Communication on reform recommendations for regulation in professional services”

³⁶ Koumenta, M. and M. Pagliero (2016), “Measuring Prevalence and Labour Market Impacts of Occupational Regulation in the EU”. See: <http://ec.europa.eu/DocsRoom/documents/20362>

³⁷ Corresponding to M69 and M71 in the NACE2 sector classification system.

³⁸ Rocchi et al. (2019) FIDELIO 3 manual: Equations and Data sources, JRC Technical Report JRC115308, EUR 29620 EN, Publications Office of the European Union, Luxembourg.

dropping sector itself, 77 % in other sectors of the country itself, and the remaining 16 % in other EU countries.

Obstacles in the recognition of skills and qualifications across borders and the need for upskilling and reskilling the labour force also impact the upscaling of business. It is important for employers to correctly interpret and value qualifications so that they can better understand their relevance and assess how people skills match business needs. In addition, while the need for high-level skills is growing, there is an oversupply of low-skilled labour across Member States. On average 20% of workers have low basic skills and many more lack transversal skills necessary to adapt quickly to the changing work environment.

Box 1: A 100 % 'closing the gap' exercise for regulatory restrictiveness in legal, accounting, architectural and engineering services, using the RHOMOLO* modelⁱ

The RHOMOLO simulation estimates the potential impact of reducing obstacles to entry in four important business services markets. The model predicts after ten years a positive gain of EU-wide gross domestic product (GDP) and employment of up to EUR 41 billion and slightly less than 500,000 persons employed with respect to the baseline scenario, respectively, if this occurred in all EU Member States. The effects would be lower if the change occurred in one country only (see figure 2.12). The impact on GDP and employment varies across Member States. In the short run, the change in GDP can be as high as EUR 2.4 billion in Germany or EUR 1.3 billion in Italy. After 10 years, however, all Member States experience an increase in GDP, the highest being recorded for Germany EUR 11.4 billion) and the lowest for Estonia (EUR 5 million). As for the change in employment, after 10 years it ranges from about +100 persons employed in Estonia to about +118,000 in Germany.

In most Member States, the professional services sector experiences a decline in value added and employment, resulting from the relatively low substitution elasticities in intermediate inputs and consumption used in RHOMOLO. Thus, this sector experiences only a very modest rise in demand for its goods. The positive overall value added effects of reducing obstacles to entry in the four considered business services comes from the positive spill overs to the other sectors of the economy. In the short run, the largest contribution to the rise in EU value added can be traced to the sectors of manufacturing (EUR 3.5 billion) and public administration, education and health (EUR 2.7 billion). After 10 years, the largest contributing sectors are manufacturing (EUR 16 billion) and financial services (EUR 8 billion). As for employment, after 10 years the largest increases are recorded in the manufacturing sector (more than 200,000 persons employed) and in the public administration, education and health sector (more than 100,000 persons employed).

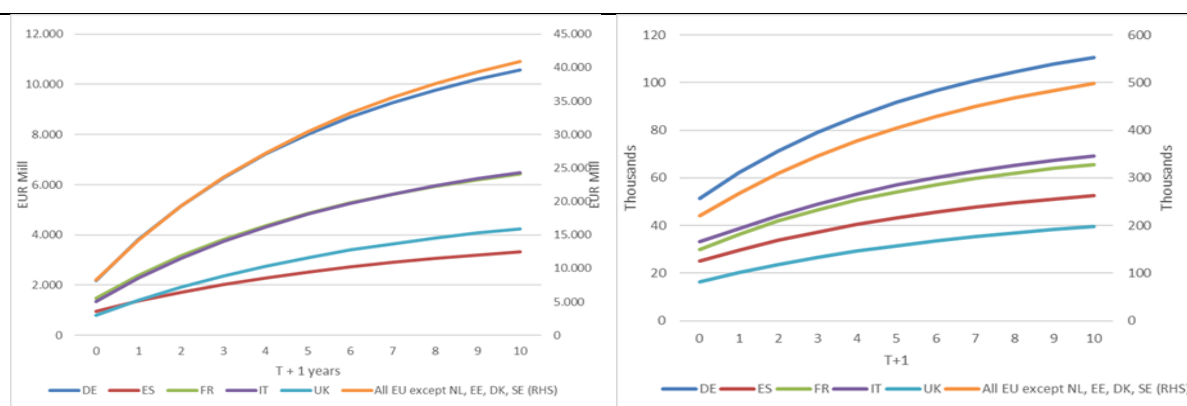
*RHOMOLO (Regional holistic model) is a spatial computable general equilibrium model developed by the European Commission's Joint Research Centre (JRC). It is used for policy impact assessment and provides sector-, region- and time-specific simulations to support the EU policy on investments as well as reforms covering a wide array of objectives. All monetary transactions in the economy are included in the model as a result of agents making optimising decision. Goods and services are consumed by households, governments and firms, and are produced in markets that can be either perfectly or imperfectly competitive. Spatial interactions between regions are captured through costly trade matrices of goods and services and factor mobility through migration and investments. For further information see Lecca et al. (2018), RHOMOLO V3: A Spatial Modelling Framework, EUR29229 EN, Publications Office of the European Union, Luxembourg, JRC111861.

For other estimations of benefits in professional services, see European Commission (2014), 'The economic impact of professional services liberalisation', Economic Papers, No 533. Specific results were reported for AT and DE in the 2016 Country Reports. Broader studies of the benefits of the Single Market in Services include Pelkmans J. (2019) Contribution to Growth: The Single Market for Services - Delivering economic benefits for citizens and businesses, study for the IMCO committee of the European Parliament, February 2020.

Construction services

Restrictive national regulation applicable to construction services results in little cross-border activity. Construction works undertaken by builders and developers account for 6.1 % of EU GDP and 7.3 % of EU employment. The construction sector was particularly impacted by the economic crisis and its recovery is proving slow in view of relatively low average productivity and persistent legal market access impairments.

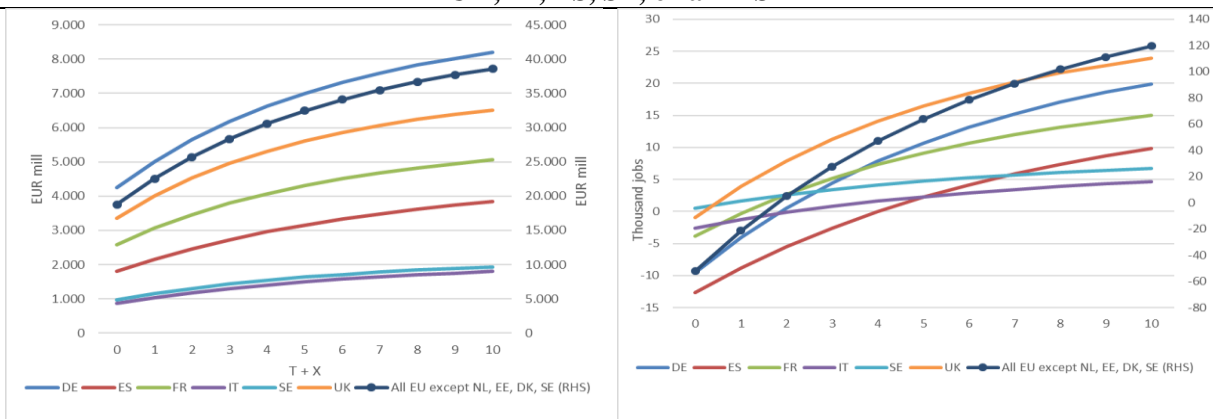
Figure: 2.12 **Value added impact** **Employment impact**
for the total EU from a 'closing the gap' reduction of restrictiveness in accounting/legal/architectural/engineering services in DE, FR, UK, IT, ES, or all MS



Source: European Commission.

Figure: 2.13 **Value added impact** **Employment impact**

for the total EU from a 5 % increase in labour productivity in the construction sector in DE, FR, UK, IT, ES, SE, or all MS



Source: European Commission

Lower prices for construction would generate similar benefits in terms of value added and employment. Using the RHOMOLO model to simulate the effect of a 5 % increase in labour productivity in the construction sector illustrates the potential gains in the construction sector, with up to EUR 39 billion in terms of EU-wide value added and 119 thousand jobs in terms of employment after ten years in the scenario in which all EU Member States experience the price drop (see figures 2.13). Again, FIDELIO results show that on average only 5 % of the benefits are realized in the construction sector itself, while 79 % accrue to other sectors of the same country and 16 % to other

countries. Importantly, if only one country makes progress in the construction sector, benefits are lower than when more or all do it³⁹.

Retail

The retail sector has contributed to delivering the Single Market directly to consumers but still holds potential. Retail is important to the Single Market not only due to its size (4.5 % of value added and 8.6 % of employment), but also because of its linkages with other sectors of the economy (e.g. wholesale, manufacturing, farming, business services sectors). Brick-and-mortar retail is characterised by a dynamic cross-border expansion of large and medium-sized companies establishing in other Member States. The starting point for their development is the domestic market, however it is the cross-border expansion that is the condition to actually build scale. This can happen via establishing shops abroad (all ten biggest retail companies in the EU are multinational) or by cross-border online sales. Cross-border online sales are growing, but there is potential for further development. In 2017, 22 % of EU retailers were selling through e-commerce and yet only 10 % sell to consumers located in other EU countries⁴⁰. The most important obstacles to develop cross-border online sales are the risk of fraud and non-payment, differences in contract laws, as well as differences in national consumer protection rules. The extra need for IT skills is also an obstacle to the development of online sales, according to almost 42 % of retailers⁴¹.

Compared to other services sectors, retail shows relatively low profitability and a high rate of companies' births and deaths. This is mostly due to the constant need of retail businesses to adapt to market conditions in order to remain competitive and survive. However, both profitability and market dynamism vary significantly among Member States, indicating that there is a margin of improvement of less well performing countries. Concentration in the retail sector differs largely across Member States. For the grocery market, the share of top five retailers ranges from below 40 % (e.g. in IT and BG) to over 80 % (e.g. in FI and AT)⁴². This might impact competition. However, in the case of retail, competition is particularly important at the local level – how many and what types of shops consumers can choose from in their catchment area.

Establishing adequate and proportionate regulatory conditions helps retailers to remain competitive and grow. A Commission analysis of the links between the Retail Restrictiveness Indicator⁴³ (mainly its retail establishment-related parts) and retail performance concluded that in the retail sector, higher restrictions were linked with lower retail market dynamics (as measured by churn rates), higher retail market concentration and higher level of consumer prices, in particular of food (see figures 2.14). Also restrictions to retail measured by the OECD indicator on Product Market Regulations have a negative impact on labour productivity growth in the sector, possibly due to the reduction in competition that results from fewer entries and less firm fluctuation⁴⁴. They also seem to be negatively correlated with investment in information and communication technology.

³⁹ More details on the RHOMOLO and FIDELIO modelling simulations can be found in: Christensen, M., Barbero, J., Rocchi, P., Conte, A., Marschinski, R., and Salotti S. (2019). Economic modelling for the Single Market performance report 2019. Territorial Development Insights Series, JRC118689, European Commission

⁴⁰ Eurostat isoc_ec_eseln2.

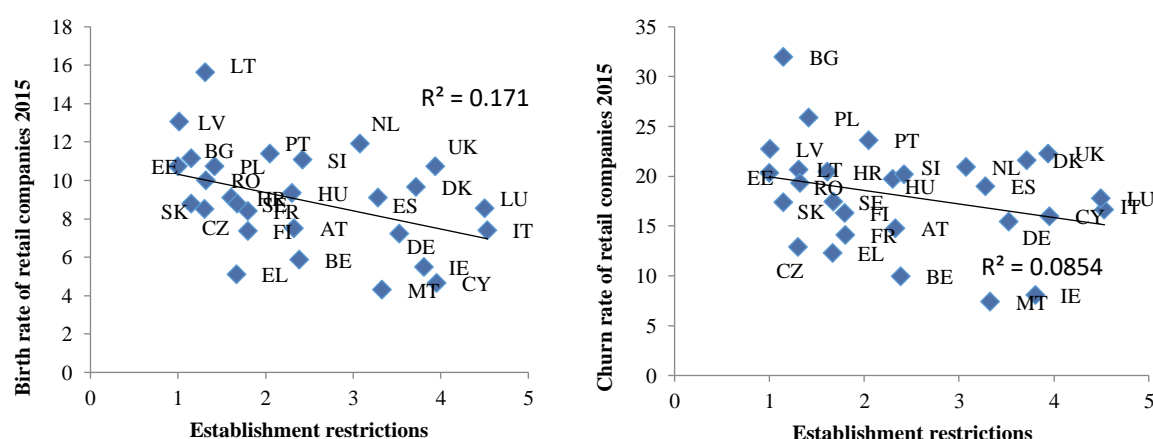
⁴¹ Consumer Conditions Scoreboard 2017

⁴² Jungmittag, Andre (2018) “The Direct and Indirect Effects of Product Market Regulations in the Retail Trade Sector”, JRC Technical Reports.

⁴³ This is made of 14 types of restrictions, two sub-pillars, two pillars and one overall index across the 28 EU Member States.

⁴⁴ JRC technical report (2018) The Direct and Indirect Effects of Product Market Regulations in the Retail Trade Sector

Figures 2.14: Correlation between the level of restrictiveness of retail establishment and the churn rates of retail companies (a). Correlation between requirements linked to specific size thresholds and the level of consumer prices (b).



Source: European Commission own analysis based on information from the retail establishment study, the Member States authorities, and Eurostat; Staff Working Document accompanying the Communication “A European retail sector fit for the 21st century”, SWD(2018) 236.

Restrictions may stem not only from regulations, but also from business operators. An example of such restrictions are the territorial supply constraints. These are practices by which suppliers may limit retailers' possibilities to purchase products from whom and from where they want across borders⁴⁵. Another important example is contractual geo-blocking when manufacturers or copyright holders agree with retailers to prevent online shoppers from purchasing goods based on the shopper's location or country of residence. The Commission's sector inquiry into e-commerce in 2017 showed that 38 % of the responding retailers selling consumer goods, such as clothes, shoes, sports articles and consumer electronics online, use geo-blocking. 12 % of those retailers report contractual restrictions on cross-border sales for at least one product category they offer. Almost 60 % of digital content providers who participated in the inquiry had contractually agreed with right holders to geo-block.

Although there may be good reasons for certain economic operators not selling cross-border (differences in consumer laws, bottlenecks in cross-border delivery channels etc.), a significant number of operator-level restrictions may be unjustified. The Geo-blocking Regulation which came into force on 3 December 2018 should put an end to such unjustified practices in a large number of sectors which fall under the scope of the Regulation. In addition, the Commission has adopted a number of competition law decisions condemning geo-blocking practices by companies. Geo-blocking is sometimes also combined with resale price maintenance (RPM) practices which in particular target online retailers that sell products online at lower prices than those desired by manufacturers for a particular Member State. The Commission has fined a number of companies for such anti-competitive agreements. In those cases, RPM led to higher prices for consumers for a wide range of consumer electronic products⁴⁶.

⁴⁵ The Commission launched a study to look into the prevalence, the nature, possible reasons and the impact of territorial supply constraints. Results of the study (possibly available by June 2020) will guide whether and what kind of further action could be needed. The benefits and costs of such an action will need to be assessed carefully.

⁴⁶ Other measures adopted by the Commission which aim at smoothening cross-border trade within the EU in particular for small retailers include increased harmonisation of consumer protection, transparency for cross-border parcel delivery conditions, and easier value added tax (VAT) compliance for intra EU transactions.

Conclusions

Member States can improve the economic performance of the Single Market for services by ensuring that regulatory restrictions are adequate and proportionate. Insufficient integration may result from perfectly legitimate policy choices in many cases. This is why Member States should ensure that services providers and regulations do not create unjustified or disproportionate obstacles hindering the performance of the Single Market. The good functioning of the Single Market for services will strengthen competition and allow customers to access a wider choice and a better quality of services, including the more innovative ones. It should also contribute to lowering markups and prices. This will foster the competitiveness of the EU services industry, but also of the EU manufacturing industry, a large customer of services. Member States could complement this policy by designing actions to help services providers, in particular SMEs, to use new technologies and digitalisation efficiently and to encourage the development of digital skills. A good business environment is also key to foster the growth of firms providing services.

c. EFFECTIVE COMPETITION

Without effective competition, firms and consumers will not fully benefit from Single Market integration. Since its inception, the Single Market has boosted trade flows within the EU through the elimination of trade tariffs and the reduction in non-tariff barriers, raising output and domestic demand. In parallel, it has increased market competition, reduced markups and lowered prices by opening-up domestic economies⁴⁷. Many sectors however continue to experience a lack of effective competition. This does not necessarily mean that companies in these sectors break EU competition rules. It however means that these markets perform below their potential. Competition, especially in services and network industries, remains one of the areas where Member States have made the least progress in implementing Country Specific Recommendations. Furthermore, technological development and the resulting changes in the structures of the European economy and of the economies of its key trading partners have resulted in increased pressure on competition. Competition rules are only as successful as their implementation and thus need to be implemented effectively in all sectors⁴⁸.

Competition rules prevent Single Market partitioning by private operators and improve the functioning of markets in a wider sense. Competition policy can address anti-competitive conduct that restricts cross-border trade between firms in different Member States. Such restrictions can occur through anticompetitive agreements or abuses of a dominant position. In a recent case, the Commission fined the world's largest beer company for hindering cheaper imports from one Member State into a neighbouring one. Market partitioning is however not the only source of insufficient competition as even integrated markets often show a weak degree of actual competition. The contribution of EU competition policy to the functioning of the Single Market thus goes beyond merely preventing market partitioning.

Signs of weakened competition

Following a period of relative stability, indicators of competition have deteriorated after the crisis. These trends are less pronounced in Europe than in US but still clearly detectable (see figure 2.15). The observed patterns include industry-level concentration which according to OECD data

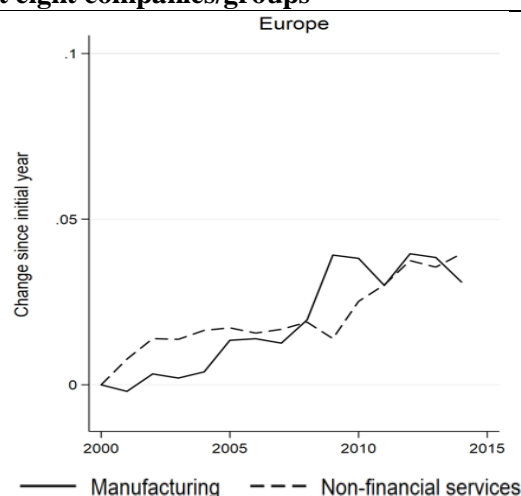
⁴⁷ According to one recent study the combined impact of the lowering of trade barriers and increased competition two channels raised EU GDP by 8-9 % on average in the long run (see DG ECFIN paper on "Quantifying the Economic Effects of the Single Market in a Structural Macromodel" by Jan in 't Veld, 8 February 2019"). This simulated impact is somewhat larger than the ex-ante estimates reported in the Cecchini report, but of a comparable magnitude to estimates found in Mayer et al. (2018) and Felbermayr et al. (2018), considering that these studies only look at the effect of higher trade barriers and do not include effects from mark-ups. The competition channel has added an additional 2 % to the GDP effects from lower trade barriers."

⁴⁸ See the President-elect's Mission letter to the Executive Vice-President-designate for a Europe fit for the Digital Age of 10.09.2019.

climbed over the past 20 year in both the US and Europe. Possible explanations include structural changes in the economy, in particular the rise of new technologies with more efficient production methods, as well as a weakening of competition.

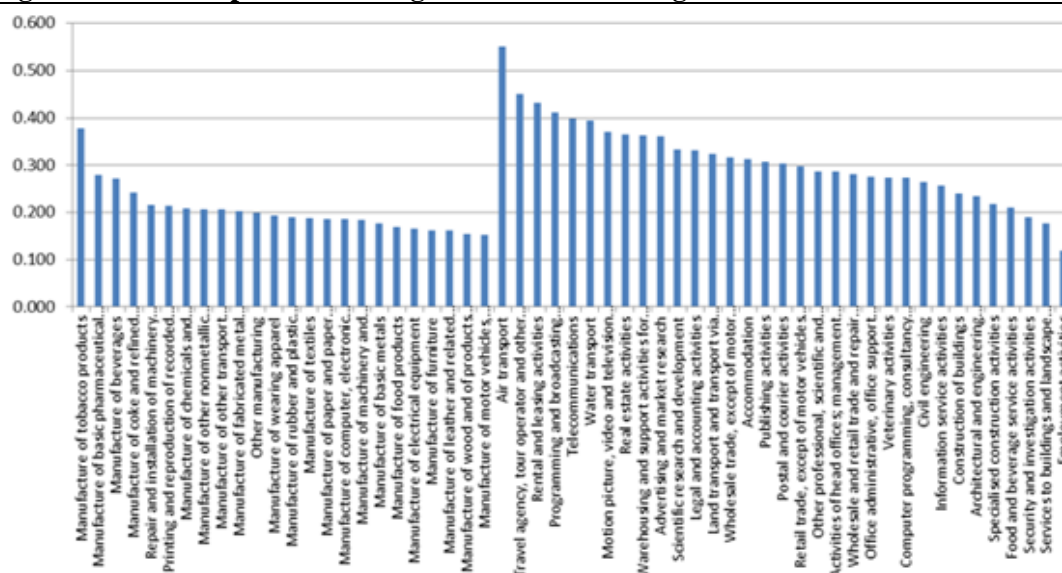
The trend involving higher concentration ratios and markups is also reflected in increased market power, especially among larger firms. Possible explanations include changes in business dynamics and structure of markets. This concerns winner-takes-most outcomes, also referred to as the “superstar firm” hypothesis, where the more productive firms increasingly reap the benefits of network effects and scale economies. The digitalisation of the economy increases the importance of knowledge assets. A few firms, especially in digital-intensive sectors, benefit from high and increasing markups and gain large market shares due to the intensive use of intangible assets, such as data analytics, and the difficult replication of successful business models, together with declining IT capital prices. Such outcomes are possibly also going beyond the digital economy⁴⁹. Firm markups have also increased, especially among the most successful firms. More generally, price cost margins (as a further markup indicator) remain comparatively higher in services than in manufacturing (figure 2.16).

Figure 2.15: Change in the market share of the largest eight companies/groups



Source: Bajgar et al., (2019) “Industry Concentration in Europe and North America”

Figure 2.16: Mean price cost margins in manufacturing and services



Source: Gradzewicz, M., & Muck, J. (2019). Globalization and the fall of mark-ups. Notes: 2014 data with fixed capital stock; averages over 18 EU countries.

Market power can be effectively used by firms to partition the Single Market. New evidence⁵⁰ has provided very precise measurements of price dispersion for products sold by firms with market

⁴⁹ See, for example, Autor et al 2017 and Van Reenen 2018.

⁵⁰ Francois Fontaine, Julien Martin and Isabelle Mejean (2019) “Price Discrimination within and across EMU Markets: Evidence from French Exporters”, NBER working Paper 26246 at <http://www.nber.org/papers/w26246>

power. On average, prices for a sample of goods vary 30 % around the average price across buyers. Although other factors contribute to explain this dispersion, it is estimated that one third of this variation is due to price discrimination by the seller across different buyers. It is interesting to note that this dispersion is lower within the Euro area suggesting that there is an effective impact of tighter integration on the ability of firms to price discriminate. However, this new evidence also indicates that price discrimination has increased with respect to the levels of 2000, i.e. a period of deepening in the integration process.

Sectors suffering from competition problems

Some sectors and markets seem to suffer particularly from competition problems. Especially in services and network industries, competition remains one of the areas where the Member States have been reporting limited progress in the implementation of Country Specific Recommendations. This finding corresponds to the results of a recent Eurobarometer survey⁵¹ on citizens' perceptions of competition problems in EU Member States⁵². The survey found that – across the EU – citizens thought that competition problems existed, in particular in telecoms (26 % up by 8 % since 2014), internet access (26 %), energy (23 % up by 5 % since 2014), transport services, and pharmaceutical products (both 20 %). Manufacturing sectors, such as the automotive industry, have also suffered from competition problems.⁵³

Access to essential infrastructure remains a concern in the gas, electricity and rail sectors. Effective competition in these markets relies on competitors having access to the infrastructure, which is often owned and operated by the incumbent. Competition enforcement can play a role in this context, for example by intervening against curtailment by dominant operators of interconnection capacity between neighbouring Member States. The Commission furthermore intervened against a Member State for giving the state-owned electricity incumbent privileged access rights to lignite. The decision imposed divestitures of a significant share of lignite capacity to competitors. In a rail case, an incumbent in one Member States dismantled a section of a track connecting that Member State with a neighbouring Member State, thereby preventing an oil refinery from using the services of a competitor. The Commission considered the conduct abusive and imposed a fine on the incumbent operator.

Market functioning in sectors dominated by State Owned Enterprises (SOE) can be impacted by the quality of their governance. In several Member States, such enterprises dominate economic sectors such as transport and energy. SOEs often suffer from weak corporate governance⁵⁴. The IMF's analysis shows that SOEs “*systematically underperform relative to private sector counterparts in nearly all countries*” and that “*poor governance is at the root of the problem*”⁵⁵. On SOE governance, the IMF concludes that the “*scope for improvements is large..., be it more independent and professional boards in the companies, stricter financial reporting and auditing, or greater clarity on the fiscal links to SOEs*”.

Specific competition issues can arise in markets where patents play a key role or where profit generation shifts to aftermarkets. Standardisation is a crucial enabler of Single Market integration. In some areas, standards include patented technologies, such as in telecommunication. Special

⁵¹ See Flash Eurobarometer 476 survey, carried out by Kantar Public Brussels. Some 26 570 respondents from different social and demographic groups were interviewed via telephone (landline and mobile phone) in their mother tongue.

⁵² The survey was carried out between 21 and 25 January 2019.

⁵³ Since 2013 the Commission has adopted eleven cartel decisions which covered over 30 different car parts and resulted in fines of EUR 2.15 billion.

⁵⁴ See OECD Recommendation of the Council on Guidelines on Anti-Corruption and Integrity in State-owned Enterprises at: <http://www.oecd.org/corporate/OECD-Guidelines-Anti-Corruption-Integrity-State-Owned-Enterprises.htm>

⁵⁵ For the full report see “Reassessing the Role of State-Owned Enterprises in Central, Eastern and Southeastern Europe”, IMF Departmental Paper No.19/11, published on 19 June 2019.

guidance exists to prevent competition problems to arise in this situation⁵⁶. In addition, a holistic policy has been developed to support innovation and standardization while improving access to standardised technology⁵⁷. Attempts to impede market entry by generic or biosimilar products on expiry of patent protection have been identified in the pharmaceutical and biotech sectors. In manufacturing, increasing revenue streams generated in aftermarkets affect the competition landscape. In mature manufacturing sectors, producers are under pressure to generate more value from aftermarkets and from activities, such as financing. Together, these trends lead them to focus on bundling the main product with finance and repair and maintenance options, all payable on a periodic basis. Those trends can generate competition issues, mainly relating to customer lock-in and the foreclosure of competing aftermarket providers.

Enforcing competition rules at Member States' level

Member States and the European Commission share responsibility for promoting competition. Since the 2004 reform of EU antitrust rules,⁵⁸ national competition authorities (NCAs) and national courts have the power to apply the EU competition rules to anti-competitive agreements and abuses of dominance affecting trade between Member States. Since then the NCAs have become essential enforcement partners of the Commission, accounting for more than 90 % of all decisions tackling conduct and agreements that infringe EU competition rules. From 1 May 2004 until 31 December 2018, NCAs adopted around 1 100 decisions under Articles 101 and 102 TFEU. These decisions protected competition by ordering termination of infringements, imposing fines or accepting commitments⁵⁹.

National competition agencies have focused on manufacturing, network industries and digital markets. The NCAs have been particularly active enforcers in the manufacturing sector. This largely reflects the focus on fighting cartels, as they often concern intermediate and input goods in the manufacturing sector. It also includes active enforcement in the pharmaceutical sector. This sector remains a matter of priority and NCAs have vigorously investigated and sanctioned restrictive practices that lead to higher prices for pharmaceuticals⁶⁰. The NCAs also concentrated on network industries, such as telecoms, media, energy and transport supporting the liberalisation process or ensuring a more competitive environment in the post-liberalisation era. These sectors are often characterised by high market concentration and the presence of dominant operators and previous incumbents. Digital markets were a key enforcement area for NCAs. Alongside the Commission, the NCAs have become active enforcers in digital (or digitalised) markets and play an important role in tackling Single Market obstacles in the new economy. Considering the ever-increasing digitalisation of the economy, it is expected that competition in digital markets will remain in the focus of the enforcement activity of NCAs. Recent NCA's enforcement activity by sector broadly corresponds to the restrictions of competition identified in the European Semester process as well as in the Eurobarometer survey mentioned above.

National competition enforcement is expected to intensify and to expand its range. The NCAs' powers and independence have been reinforced through the adoption of the so-called ECN+ Directive in 2019, a development that can be expected to result in increased competition enforcement in the

⁵⁶ See "Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements" 2011/C 11/01 of 14 January 2011.

⁵⁷ See "Setting out the EU approach to Standard Essential Patents," COM(2017)712 of 29 November 2017.

⁵⁸ Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, OJ L 1, 4.1.2003, p. 1–25.

⁵⁹ See: <http://ec.europa.eu/competition/ecn/statistics.html>

⁶⁰ See also the Commission Report on Competition enforcement in the pharmaceutical sector (2009-2017), available at: <https://ec.europa.eu/competition/publications/reports/kd0718081enn.pdf>

Single Market⁶¹. For example, once implemented, the ECN+ Directive provides NCAs with an effective enforcement toolbox and powers to operate in a digital environment, where wrongdoing is increasingly implemented through a range of technologies (e.g. chats, cloud services, algorithms and AI). The Commission has encouraged the NCAs to develop their investigative capabilities further, using data analysis solutions in view of the continued digitalisation of the European economy. Finally, the NCAs also drive market reforms through advocacy activities. The NCAs carry out market research and studies and issue advocacy reports to the respective Member State governments supporting progress to a more competitive environment. Such studies and advocacy initiatives are also informative of the state of competition in individual Member States⁶².

Conclusions

Weak competition in some sectors and markets forestalls consumers and businesses from reaping the benefits of the Single Market. Effective competition prevents market partitioning and improves market functioning and thus guarantees that firms and consumers fully benefit from Single Market integration. Competition problems remain in some markets, such as those relying on essential infrastructure, dominated by (State-owned) incumbents or characterised by winner-take-it-all economics. More generally, increasing market power and markups indicate that technological progress and structural economic changes do not automatically entail stronger competition. This in turn points to the existence of impediments to the diffusion of technology and knowledge. Up-to-date competition rules and their effective enforcement on EU- and national level thus remain vital instruments to safeguard market functioning across the Single Market.

3. SPECIFIC MARKET ISSUES

a. ENERGY, INFRASTRUCTURE AND ENVIRONMENT

The Single Market provides a unique opportunity for achieving environmental objectives. By creating a space where products and services are accessible freely across borders of EU Member States, the Single Market offers many opportunities to pool resources and knowledge, and to benefit from economies of scale to advance on major environmental challenges. Single Market instruments offer a large variety of benefits both to businesses and consumers with regard to efficiency and effectiveness in reaching environmental goals while providing for improved competitiveness and creating more jobs. These institutions offer a horizontal and joined action that could be more effective than fragmented approaches, even if some Member States chose to advance further than others. Single Market harmonization mechanisms can provide benefits in particular to the following concerns: safety of chemicals, energy efficiency and environmental performance of goods, uptake of secondary raw materials, as well as availability and affordability of environmental goods and services.

⁶¹ Directive (EU) 2019/1 of the European Parliament and of the Council of 11 December 2018 to empower the competition authorities of the Member States to be more effective enforcers and to ensure the proper functioning of the internal market, OJ L 11, 14.1.2019, p. 3–33. The Member States are required to transpose the ECN+ Directive into national law by 4 February 2021.

⁶² The opinion issued by the French NCA concerning regulated legal professions is an example of successful competition advocacy action. See the 2019 country report for France under the European Semester: “For example, in January 2015, the Authority published an opinion on regulated legal professions (such as notaries and bailiffs) finding to be imperative that those professions were modernised and opened up to competition. The Authority then issued 80 recommendations to reform the legal professions (such as lifting restrictions on qualified legal professionals to set up shop freely and introducing more cost-based and flexible pricing), most of which were reflected in the final Macron law of 2015”.

In the internal electricity markets significant progress with cross-border electricity trade has been made. Electricity can be traded via a central EU system ('market coupling') which already covers more than 80 % of EU electricity volumes. New electricity interconnectors have increased exchanges in regions previously not much connected (e.g. Baltic region, Spain). However, despite their physical contiguity, some regions remain less connected (e.g. Czechia, Hungary, Romania or Slovakia).

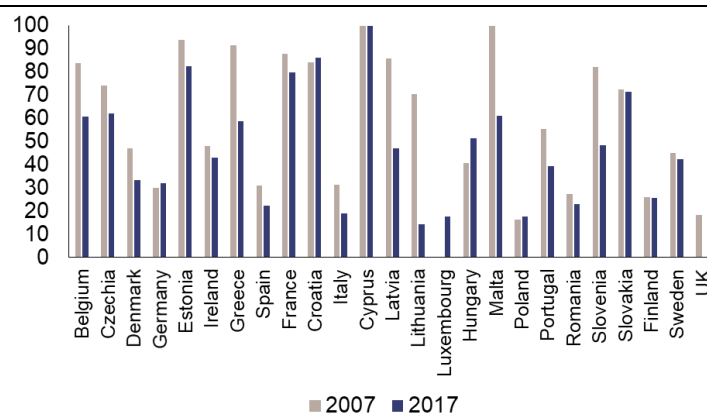
Figure 3.1: Electricity market coupling



Source: Agency for the Coordination of European Energy Regulators (ACER)

However, problems with opening electricity markets persist. Market concentration remains very high in many Member States, making entry of new competitors difficult. State interventions such as capacity mechanisms (i.e. subsidies to generators for backup capacity) which are not open to cross-border participation or state-regulated prices hamper electricity trade between Member States. Furthermore, large parts of cross-border infrastructure still cannot be used due to national practices to block cross-border exchanges, and competition between operators from different Member States remains underdeveloped. Some countries still apply export restrictions, and according to the Agency for the Coordination of European Energy Regulators (ACER), more than 50 % of cross-border electricity lines are not made accessible by national grid operators for cross-border trade of electricity.

Figure 3.2: Market share of the largest generator in the electricity market

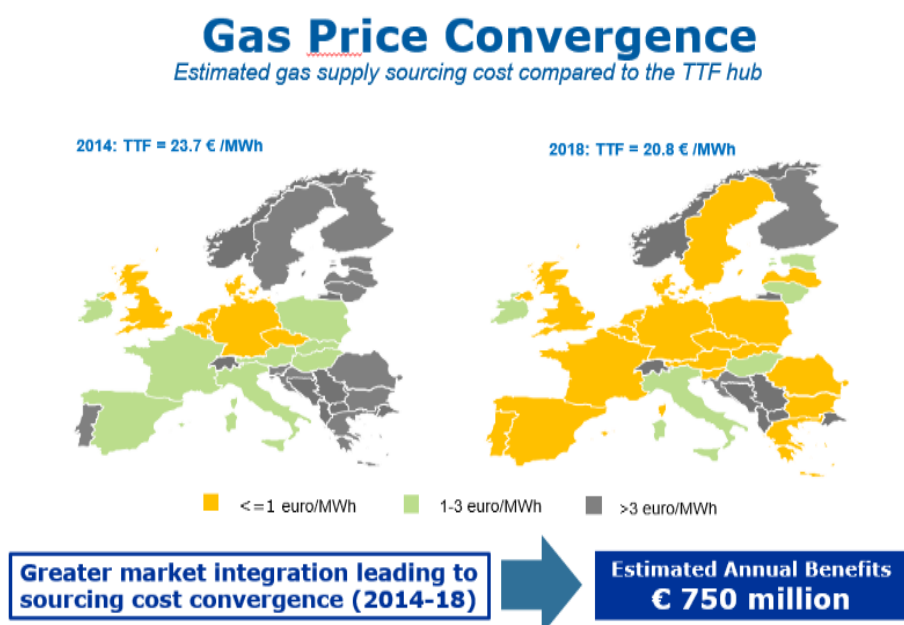


Data not available for Austria, Bulgaria and Netherlands

Source: European Commission

Wholesale gas markets continued their positive development in terms of price convergence between markets, hub-based pricing and increased traded gas volumes. Concentration and traded volumes improved on almost all established and advanced gas hubs, i.e. mainly located in North-West Europe. However, liquidity is still heavily concentrated at some gas trading places, notably the “NBP” (UK) and “TTF” (Netherlands) hubs. This shows that not all Member States benefit from the internal gas market. Shortcomings in the functioning of competition remain, especially in South-East Europe which shows still more oil-linked supply contracts, little traded volumes, low but improving levels of interconnection and delayed or insufficient implementation of the implementing legislation that has been adopted to remove trading obstacles (so-called “Network Codes”). Some countries still apply price regulation elements to gas producers, which should be phased out to allow competition to flourish. Obligations for dominant companies to give access to gas (so-called “Gas release programmes”) could be a way to kick-start wholesale competition in less developed markets.

Figure 3.3: Gas price convergence



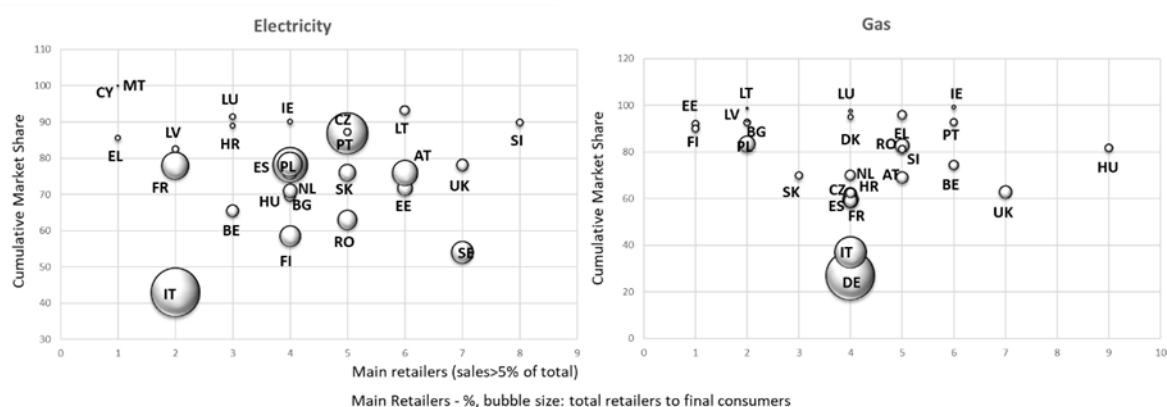
Source: Agency for the Coordination of European Energy Regulators ACER

Competition in energy retail markets remains limited. Competitive retail markets for electricity and gas play an important role in ensuring that consumers benefit from low prices, high standards of service, and a wide selection of offers. They are especially important for the emergence of new energy services that will help the energy system become more flexible and better adapted to renewable energy sources. Despite this, high levels of market concentration, growing gaps between retail and wholesale prices, and low levels of innovation are leading to persistently low levels of consumer satisfaction in the energy sector.

New entrants to the retail markets for electricity and gas face a broad range of hurdles in establishing themselves and operating in the EU. For instance, energy suppliers and service companies in many Member States need to obtain a license from national authorities before beginning operations. They need to contract with transmission or distribution system operators to serve customers connected to the grid and get access to metering data. They may face sector specific billing or customer switching requirements. And access to the energy wholesale and short-term (“balancing”) markets requires some prior agreement with the market operator. Whilst these procedures are presumably intended to ensure that the system functions properly and customers benefit from high

standards of service, they are sometimes excessively complex and time consuming to carry out, requiring payments or financial guarantees. They are also likely to bind the supplier or service company to operating according to certain conditions, some of which may unduly increase costs or make it harder to do business. Moreover, the procedures and processes around operating in the retail market can differ significantly from one Member State to another, impeding cross-border entry even for established energy suppliers and service companies within the Single Market. The cumulative weight of these and other problems in energy retail markets can have a significant negative impact on competition and, by extension, consumer welfare, and innovation. A major study into these issues will be published in 2020, which could pave the way for action to address them.

Figure 3.4: Market share of three largest suppliers (CR3) and the number of main suppliers and number of nationwide suppliers in retail markets for households (2017)



Source: European Commission

While potential cost- and CO₂-savings are significant, the connection of the EU's energy markets across-borders is still hampered by national practices to prevent cross-border exchanges of electricity and gas. In terms of value, gas and electricity are the most important goods traded within the Single Market. The potential for cost savings and emission reductions is significant, notably when Europe is decarbonizing its energy production and the need for backup generation is increasing. Renewable electricity requires backup generation available in times of no wind or sun. Without inter-connected markets, each Member State will need to invest in its own costly backup generation (mostly fossil fuel plants). Connecting electricity markets is the best way to cope with the challenges to switch to renewables generation. Connecting markets can therefore avoid unnecessary investments into backup generation, thereby avoiding emissions and costs.

Well-designed capacity mechanisms are needed to safeguard electricity baseload while promoting electricity market integration. In 2015 and 2016 the Commission carried out a first-ever sector inquiry in the State aid area. This inquiry looked into capacity mechanisms that aim at ensuring security of electricity supplies and may be necessary when the market alone does not provide sufficient incentives to invest in the capacity needed to meet peak demand. Subsequent State aid enforcement in this area has resulted in further integration of the Single Market. Member States are required to take into account foreign capacity in their mechanisms. This has an important impact in reducing the competition and trade distortions of the schemes. Member States are also required to commit to make their schemes responsive to demand, which increases competition and reduces the cost of the measures. Overall, between 2014 and 2019, the Commission has approved capacity mechanisms in eight Member States with the majority of those decisions requiring direct participation of foreign capacity. At the same time, the Commission's decisions prepared the ground for the

adoption of the 2019 EU Electricity Regulation that now defines common rules regarding foreign participation in capacity mechanisms to be developed, building on the Commission's State aid practice in this area.

Inefficiencies in energy taxation hinder the achievement of EU objectives. The EU harmonized framework for energy taxation contributes to avoiding double taxation or any distortion of trade and competition between energy sources, energy consumers and suppliers. However, a recent evaluation of the Energy Taxation Directive (ETD)⁶³ identified overlaps, gaps and inconsistencies in the energy taxation framework that significantly hamper the achievements of EU objectives in the field of energy, environment, climate change and transport. The low level of minimum rates as well as optional tax exemptions granted by Member States in the framework of the ETD might contradict other policy instruments and hamper the good functioning of the Single Market. The mandatory tax exemption concerning international aviation and maritime transport conflicts with EU climate objectives.

Transport infrastructure

Transport is a key enabler for the EU's Single Market. In 2018, transport services had a share of 5 % in the EU Gross Value Added. The sector represents 5.3 % of total workforce, about 11.7 million persons (2017). More than 50 % of the employment is in land transport, 15 % in courier services, 4 % in air and 3 % in water transport⁶⁴. Transport enables the free circulation of goods, passengers, services and workers. It ensures economic, social and territorial cohesion, and improves accessibility across the EU. For the competitiveness of a highly interconnected European industry, a well-functioning Single European Transport Area is crucial.

The Trans-European Transport Network (TEN-T) in particular aims at ensuring cross-border infrastructure links, which are an essential precondition to complete the Single European Transport Area and to support the free circulation within the Single Market⁶⁵.

EU and national transport infrastructure investment is and remains important to improve accessibility across Europe's regions and their capacity to benefit from the Single Market. In a forthcoming paper,⁶⁶ the OECD finds that building new transport infrastructure unlocks trade opportunities. It should lead to more competition which is good for the consumer. The OECD paper states that transport infrastructure traversing a region improves its accessibility, which in turn tends to lead to an increase in the region's stock of firms, productivity growth, more jobs and higher wages. At the same time, economic activity from less well connected neighbouring regions might be displaced and drawn into the better connected region. The OECD estimates that a 1 %-improvement in accessibility increases GDP by 0.2 %, employment by 0.7 % and regional population by 0.6 %.

The economic performance of the Single European Transport Area also depends on competition and market opening for transport service providers across the Single Market. The implementation of the Single Market in transport has achieved different levels of success in different modes. Aviation has been a success story. Air travel has substantially increased since the creation of the EU's Single Aviation Market 27 years ago. The number of daily flights has increased from less than 10 000 in 1992 to around 23 000 in 2016. In addition, passengers now have access to more destinations. In 2017 there were around 7 400 routes compared to less than 2 700 in 1992. The EU

⁶³ Directive 2003/96/EC

⁶⁴ European Commission (2019): EU transport in figures, Statistical Pocketbook.

⁶⁵ European Commission (2017), Delivering TEN-T – facts and figures: http://www.connectingeu.eu/documents/Delivering_TEN_T.pdf.

⁶⁶ OECD (forthcoming), Leveraging transport infrastructure for regional, urban and rural development (working title), OECD Publishing, Paris.

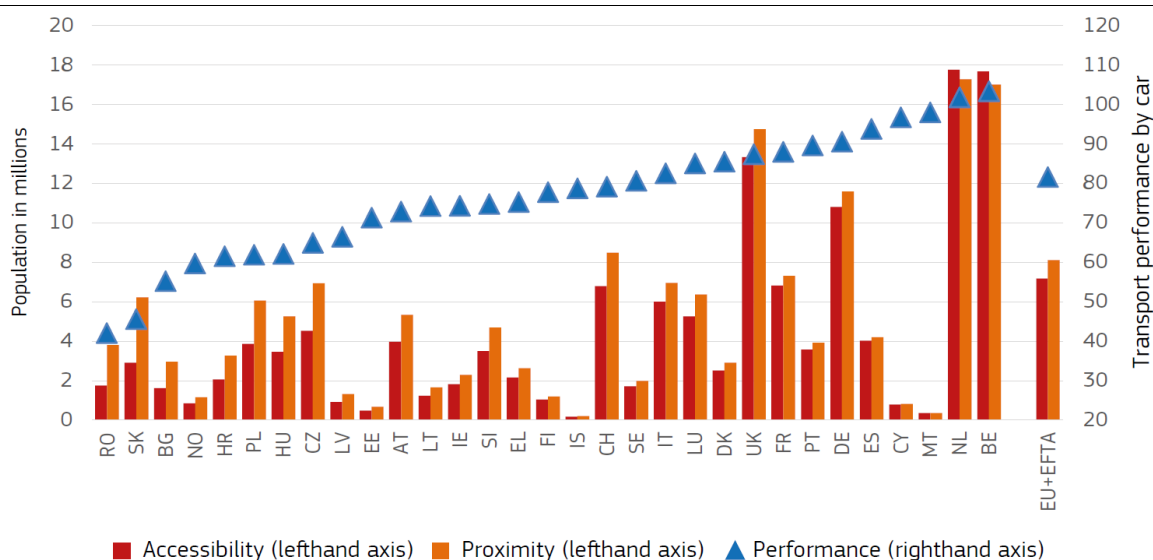
also managed to create a strongly competitive market in international road haulage, and there are promising signs in long-distance coach services.

The integration of the rail market has for a long time been hampered by fragmented national rules and technical incompatibilities, delaying the transition to this less carbon-intensive public transportation mode. The measures introduced through the 4th Railway Package⁶⁷ help the rail sector to complete market opening and improve the interoperability and safety of national networks. For instance, the measures facilitate cross-border rail services by saving firms from having to file costly multiple applications in the case of operations beyond one single Member State. They also ensure that European Rail Traffic Management System (ERTMS) equipment is interoperable and reduce the large number of remaining national rules. Finally, they increase transparency and reduce risks of discrimination against new operators and across transport modes, hindering the migration of users to more sustainable transport options.

Digitalisation and the deployment of new technologies in transport contribute to making transport services faster, safer and more efficient. New technologies also mean new skill and regulatory requirements, and changing job profiles facing the workforce in the transport sector.

Transport infrastructure still varies considerably across Member States. Road transport performance can be measured as a function of accessibility (number of destinations that can be accessed in a fixed time) over proximity (number of destinations within a fixed geographical radius)⁶⁸. The following graph, summarising the findings of a recent European Commission working paper, shows that the transport performance is significantly higher in the Western and Southern EU countries, than in Central and Eastern Europe.

Figure 3.5: Accessibility, proximity and transport performance by road per country, 2016



Source: European Commission

Overall, the performance of the European transport sector in global comparison is very good.⁶⁹ Several EU countries are among the top performers worldwide (e.g. Germany and the Netherlands).

⁶⁷ Regulation (EU) 2016/796, Directive (EU) 2016/797, Directive (EU) 2016/798, Regulation (EU) 2016/2338, Directive 2016/2370/EU, Regulation (EU) 2016/2337.

⁶⁸ https://ec.europa.eu/regional_policy/sources/docgener/work/2019_02_road_transport.pdf.

⁶⁹ The perception of EU businesses regarding the quality of the transport services is presented in the World Bank's Logistics Performance Indicator and the World Economic Forum's indicator for infrastructure quality.

Yet, the situation in the EU is heterogeneous and potentially jeopardises transport connectivity in the Single Market. In particular, countries that have joined the EU since 2004 still need to catch up with the performance level of older Member States. At the same time, the weak performers tend to have the highest public investments in transport infrastructure as a share of their GDP. Returns on investments in transport infrastructure often become visible only in the long term. High quality infrastructures are essential to build a modern integrated system that can transport people and goods efficiently, safely and sustainably and strengthens the EU's global competitiveness. Multimodality remains key for a more sustainable, low-emission, less congested and hence more competitive EU transport system.

The environmental impact of the Single Market

There are increasing concerns about sustainability of growth and challenges of climate change. Growth has been resource intensive in the past. The demand for land, water, bio-diversity, mineral and bio-based raw materials stemming from economic activities has tripled since the 70s and is still growing. According to recent estimates, extraction and processing of natural resources account for around 90 % of biodiversity loss and 50 % of greenhouse gasses (GHG) emissions. Increased use of secondary raw materials can significantly contribute to easing this pressure. As a result, the Single Market must be adapted to new realities.

The transition towards climate-neutrality, decarbonisation and more circular business models represents an unprecedented challenge for society and for industry. Energy intensive industries operate in a complex environment, often with interlinked value chains, and are exposed to increasing international competition. The recent evaluation⁷⁰ of the Energy Taxation Directive concluded that initially the directive made a positive contribution towards achieving its main objectives of ensuring the proper functioning of the Single Market, avoiding double taxation or any distortion of trade and competition between energy sources, energy consumers and suppliers. However, the evolution of technological change, national tax rates and energy markets over the past 15 years has rendered the directive in its present form insufficient to tackle new challenges, including the environmental ones. Therefore, a successful transition to a sustainable growth environment requires that the Energy Tax Directive is revised to take into account the climate challenge.

The Circular Economy has opened up new markets, new business opportunities, and given rise to new business models, both domestically and outside the EU. In 2016, circular activities such as repair, reuse or recycling generated almost EUR 147 billion of value added while standing for around EUR 17.5 billion of investments⁷¹. The systemic transition towards a Circular Economy is expected to promote and support the creation of new circular business models, which can potentially apply to many areas and sectors of the Single Market. However, recycled and remanufactured goods often struggle with recognition and equal treatment with regard to requirements imposed on products placed on the market for the first time. This applies to a wide range of products, from simple reused printer cartridges to advanced and complex articles such as industrial machinery or medical equipment.

The Commission has adopted an ambitious Circular Economy Action Plan in 2015 to increase the efficiency of the resource use in the EU. The EU waste legislation has been updated⁷² to support more recycling with higher recycling targets for Member States. This aims at substantially increasing the amount of recovered materials placed on the market. However, at present only less than 12 % of overall material use comes from secondary raw materials. In addition, without a harmonized framework for end-of-waste materials, these will not be able to circulate freely on the internal Single Market as easily as the virgin materials which they are intended to substitute.

⁷⁰ SWD (2019) 329 Evaluation of the Council Directive 2003/96/EC

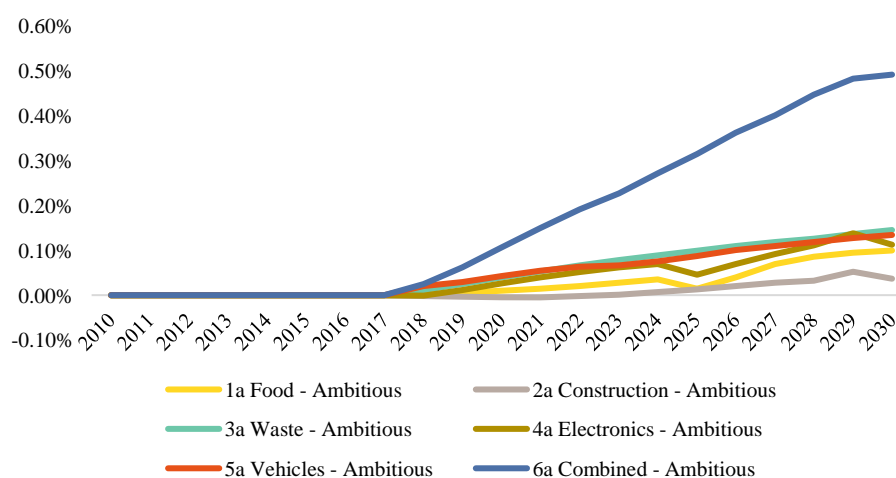
⁷¹ https://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=cei_cie010&language=en

⁷² https://ec.europa.eu/environment/waste/target_review.htm

The need for a fully-fledged, well-functioning and harmonised Single Market for secondary raw materials and circular products has been recognized by the Council⁷³. Currently, harmonized EU criteria for recovered materials have been adopted only for iron, steel, aluminium, glass cullet and copper scrap. As a result, 55 % of steel manufactured in the EU comes from scrap materials⁷⁴. At the same time, many important waste streams, such as paper, plastic or wood do not benefit from the harmonized approach and their uptake by product manufacturers is severely limited. For instance, the signatories of the Circular Plastics Alliance were able to commit to incorporate only 10 million tons of recycled plastics into products, while 322 million tons of plastic waste is generated annually⁷⁵ in the EU.

Reaching the objectives of the European Green Deal, including the Circular Economy Action Plan and the Zero Pollution Strategy, as well as other environmental targets, would improve the Single Market performance. Environmental policy matters for the smooth functioning of the Single Market and industrial performance as it can be supportive of structural reforms and sustainable investments. Sector-specific aspects that affect the provision of basic public services indispensable for sustainability and the good functioning of communities and households require special attention. For instance, the functioning of industry value chains and the performance of sectors, such as repair, remanufacturing, recycling or innovative materials, require a better circulation of secondary inputs and products considered as waste in some Member States. However, national conditions, such as waste infrastructure, are often too diverse to allow for the smooth integration of these economic activities in the EU.

Figure 3.6: EU GDP impacts in the circular economy scenarios (% from baseline)



Source: European Commission

The EU Monitoring Framework for the Circular Economy shows that the transition has helped put the EU back on a path of job creation. In 2016, sectors relevant to the Circular Economy employed more than four million workers, a 6 % increase compared to 2012. Additional jobs are bound to be created in the coming years in order to meet the expected demand generated by fully functioning markets for secondary raw materials⁷⁶. In particular, by moving towards a more circular

⁷³ Council conclusions on Renewed Industrial Policy Strategy, 2030 -

⁷⁴ Bureau of International Recycling, World Steel Recycling in Figures 2013– 2017, page 13

⁷⁵ https://ec.europa.eu/Eurostat/statistics-explained/index.php/waste_statistics

⁷⁶ European Commission (2018), Impacts of circular economy policies on the labour market. <https://op.europa.eu/en/publication-detail/-/publication/fc373862-704d-11e8-9483-01aa75ed71a1>

economy, GDP in the EU is expected to increase by almost 0.5 % by 2030 (see figure 3.6) and jobs by approximately 700 000. This happens mostly through additional labour demand from recycling plants, repair services and rebounds in consumer demand from savings generated through collaborative actions.

The role of standards: improving environmental performance and consumer protection

Societal demand for sustainable development is an opportunity for companies to promote Circular Economy processes and new products responding to consumers' interest in sustainable consumption. However, some harmonisation of the various green labels would be beneficial. Three out of ten citizens come across misleading environmental claims⁷⁷. There are more than 465 environmental labels worldwide, out of which more than 100 are active in Europe, however not all of them are equally reliable. A proliferation of rules, methods, initiatives, and labels can lead to fragmentation. This results in mistrust and confusion regarding the environmental performance of products which hampers a wider uptake of environmentally better products.

At the core of the Single Market, standardisation plays a key role to further the EU sustainable development agenda. Standards are voluntary technical specifications. They are essential to steer businesses towards sustainable development goals as they act as bridges linking legal provisions with down-to-earth technical practice. As a second dividend, standards also contribute to competitiveness by reducing production costs and increasing market size. For these reasons, standardisation can help developing innovative products and production process that are based on recent technological progress and contribute to energy efficiency, enhanced recycling, and sustainable production. The clearest examples of the role of standards in promoting the sustainable development agenda are “Ecodesign” and the Energy Labelling policy framework. Priority areas highlighted in recent work programmes concern standards on the environmental impact in transport and energy use (e.g. hydrogen as alternative fuel, batteries sustainability, and tyre performance testing), green shipping, steel production, reduction of plastics waste and chemicals (fertilisers) testing.

Ensuring a good energy and environmental performance of products and processes is already possible thanks to the Single Market, including harmonised standards. The EU Eco-Design and Energy Labelling Directives provide a harmonised methodology to measure and promote best performing products, as well as to phase out from the market the worst performers. The labels and standards bring annual energy savings of around 150 Mtoe (million tonnes of oil equivalent), roughly equivalent to the annual primary energy consumption of Italy. For consumers, this means an average saving of up to EUR 285 per year on their household energy bills. This is supplemented by the EU legislation on ecodesign which sets mandatory minimum requirements for energy efficiency and circular economy for a wide array of consumer and industrial products. This eliminates the least performing products from the market, further contributing to the EU's energy efficiency objective. Over the years, most of the existing 40 product-specific and horizontal ecodesign and energy labelling regulations have been complemented with one or more corresponding measurement standards. Most of these standards have become harmonised. Since 2009, ecodesign regulations and standards are delivering substantial energy savings and are thus avoiding the associated CO₂ emissions. In addition, they are increasing material efficiency savings. The October 2019 package, that includes ten ecodesign and six energy labelling measures, will bring about annual energy savings by 2030 equivalent to the annual electricity consumption of Denmark.

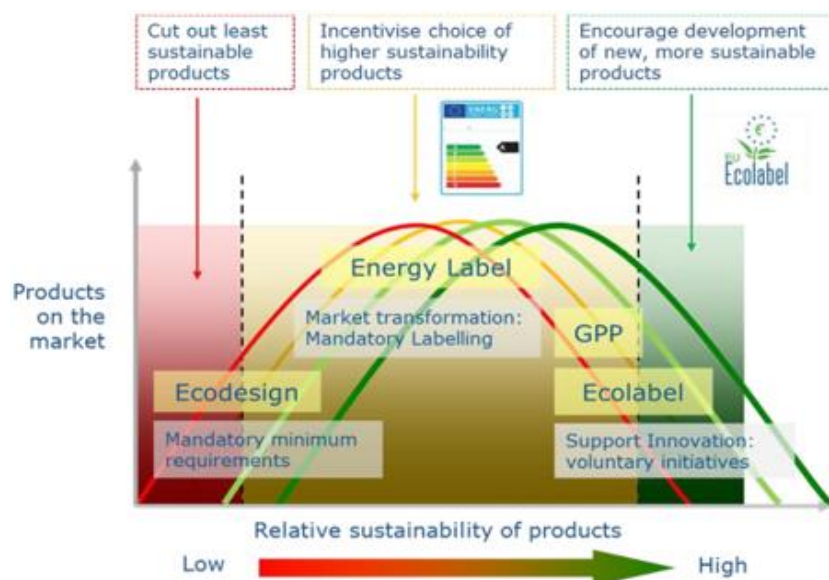
⁷⁷ European Commission (2014), Consumer market study on environmental claims for non-food products

In the construction sector, the EU has introduced legislative measures to increase energy performance of buildings as well as labelling requirements on construction products. So far, EDD⁷⁸ secondary regulations have been approved for five construction products. In addition, the EED, EPBD and RESD⁷⁹ were all enacted in the context of the EU commitment to become a highly energy-efficient and low carbon economy. As buildings enshrine a large energy saving potential, all the three Directives aim – to a greater or lesser degree – at tapping into this potential. In the context of the Construction 2020 Strategy and specifically its thematic objective on resource efficiency, multi-stakeholder cooperation has resulted in awareness raising regarding the treatment of construction and demolition waste and the use of the built environment as a material bank. Circular economy in construction and the built environment offers opportunities not only in the material scale but also in the reuse of equipment, buildings and infrastructures through refurbishment and adaptive reuse. Emerging models with multiple environmental and socio-economic benefits, such as green roofs, are opening opportunities for the built environment to generate resources other than energy.

Green public procurement

Consistent green purchasing criteria across Member States would increase the uptake by the public sector as well as improve the Single Market for environmentally sound goods and services. The Commission has developed EU Green Public Procurement (GPP) criteria for 19 goods and service groups. Green public procurement allows public authorities to achieve environmental targets and to stimulate upcoming markets related to the circular economy transition, as well as with regards to specific sectors' transitions such as transport, energy and food. The criteria used by contracting authorities should be similar to avoid a distortion of the Single Market and a reduction of EU wide competition.

Figure 3.7: Illustration of policy instruments aimed at sustainable products



Source: European Commission

⁷⁸ Eco-Design Directive

⁷⁹ Energy Efficiency Directive, Energy Performance of Buildings Directive, and Renewable Energy Sources Directive

Safety of chemicals

Chemical Safety remains a major success story of taking a Single Market approach towards environmental challenges. Reflecting the increasing role that chemicals play in our society and economy and illustrating the continuous commitment to ensuring a high level of protection of human health and the environment, as well as ensuring the free movement of chemicals on the Single Market, the EU chemicals legislation has evolved and expanded significantly since the adoption of the first chemicals related directive in the late 1960s. It now regulates both the chemical sector as well as related downstream industries that use chemicals. It covers the full lifecycle of products manufactured in or imported into Europe and the protection of the environment and human health, including workers' health and safety protection, from chemical hazards and risks. The framework is composed of more than 40 pieces of legislation, including such well recognised pieces as REACH⁸⁰, CLP⁸¹, OSH⁸² and RoHS⁸³ among others. The recent two evaluations concluded that the EU chemicals legislation overall meets its objectives in terms of risk and hazard assessment and management of hazardous chemicals in a coherent and efficient way⁸⁴.

The EU chemicals legislation has been instrumental in ensuring free circulation of substances, mixtures and articles through harmonisation of standards and requirements. To a large degree, there is a level playing field in Europe, and chemicals legislation has strengthened the Single Market and enhanced the competitiveness of EU industry as reflected in the growth in intra-EU trade⁸⁵.

Conclusions

While significant progress has been achieved in respect to the integration of energy markets, more efforts are needed to further enhance cross-border energy trade and competition. The potential for cost- and CO₂-savings from integrating the EU's energy markets is significant. Yet, high market concentration and regulatory hurdles in many Member States are still making it difficult for new competitors to enter the electricity and gas markets. Moreover, differences in procedures and processes for operating in the retail market among Member State impede cross-border entry also for established suppliers. Member States could still do more to enhance cross-border energy trade including by better using existing infrastructure.

Investments in high quality infrastructures are essential to build a modern integrated transport system that can transport people and goods efficiently, safely and sustainably and strengthens the EU's global competitiveness. The Trans-European Transport Network (TEN-T) in particular aims at ensuring cross-border infrastructure links, which are an essential precondition to complete the Single European Transport Area and to support the free circulation within the Single Market. Digitalisation and the deployment of new technologies in transport may contribute to making transport services faster, safer and more efficient.

The Single Market provides a unique opportunity for achieving environmental objectives. Europe must lead the transition towards climate-neutrality, decarbonisation and a more circular

⁸⁰ Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the, Evaluation, Authorisation and Restriction of Chemicals (REACH).

⁸¹ Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation).

⁸² In particular the Framework Directive 89/391/EEC, the Chemical Agents Directive 98/24/EC and the Carcinogens and Mutagens Directive 2004/37/EC.

⁸³ The Restriction of Hazardous Substances Directive 2002/95/EC and subsequent amendments.

⁸⁴ In 2018 and 2019 the Commission concluded on two ambitious REFIT exercises which together covered all the EU chemicals safety legislation. [SWD(2019) 199final and SWD(2018) 58 final.

⁸⁵ The intra-EU sales of chemicals increased from EUR 219 billion in 2006 to EUR 280 billion in 2016 (+28 %). Domestic sales (sales in the home country) dropped from EUR 184 billion in 2006 to EUR 81 billion in 2016 (-56 %). Extra-EU exports increased from EUR 102 billion in 2006 to EUR 146.2 billion in 2016 (+43 %). Source: CEFIC Facts and Figures Report, 2017

business economy and the Single Market plays an important role in achieving these objectives. The Single Market offers many opportunities to pool resources, knowledge and benefit from economies of scale to advance on major environmental challenges. The Commission has proposed a “European Green Deal” that together with the circular economy action plan of 2015, the zero pollution strategy and new environmental targets will require further improvements the performance of the Single Market. In some sectors, public purchasers constitute a significant share of the market and public procurement can therefore make an important contribution to achieving environmental targets by promoting sustainable products and services. Chemical safety remains a major success story of taking a Single Market approach towards environmental challenges.

b. PUBLIC PROCUREMENT

Every year Member States publish more than 200 000 calls for tenders for more than EUR 500 billion at EU level. The buying of works, goods or services by public bodies accounts for approximately 14 % of EU GDP⁸⁶. In some sectors of the economy such as health, education, infrastructure, or waste management, public buyers are major investors and the principal buyers. In the defence field, the value of public procurement using the EU defence and security procurement rules has increased from EUR 22 million in 2011 to EUR 14 billion in 2018.

The Single Market for public procurement has been developing gradually over the last decades. The Union’s public procurement rules were significantly modernised with the adoption of the new generation of the revised Directives in 2014⁸⁷. Thanks to this new framework, public authorities have greater flexibility to tailor their tenders to specific needs and expectations from citizens while ensuring fair competition. Public buyers have been empowered to effectively contribute to sustainability and social inclusion, as well as to stimulate innovative dynamics through demand side innovation across different sectors. This allows for a more strategic role of public procurement in delivering wider policy objectives. Moreover, the new rules boosted the transition to electronic procurement, thus fostering the use of digital technologies and improving the transparency of public purchases.

The monitoring and assessment of the public procurement market has to take into account the diversity of its objectives. Openness, transparency and equal treatment are preconditions for more competition, better outcomes and value for money of public spending. Digital procurement furthers transparency, reduces costs and increases competition. The inclusion of strategic procurement allows public buyers to cater for a diversity of specific social, economic and environmental needs. Ultimately, the good performance of the public procurement activities relies on the professionalisation of the public procurement practice and close cooperation of policy makers and public buyers to deliver best outcomes.

Openness and transparency in public procurement

The overall transparency of public purchases is increasing in most Member States. There has been a significant rise in the number of calls for tenders published on Tenders Electronic Daily (TED), the dedicated EU platform, between 2016 and 2018. Although the overall trend for the EU shows an improvement in the publication rate,⁸⁸ the level varies greatly across Member States. The value of procurement published in TED increased most notably in Hungary, Poland, France, and

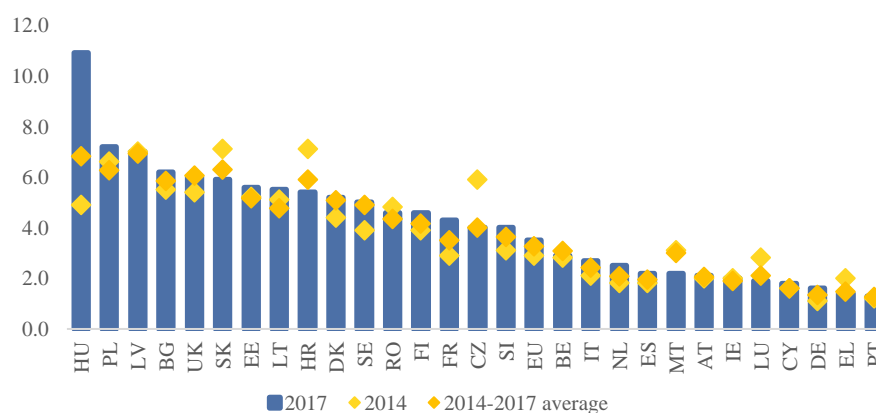
⁸⁶ More than 2 trillion euro in 2017.

⁸⁷ https://ec.europa.eu/growth/single-market/public-procurement_en

⁸⁸ Estimated value of tenders published in TED as percentage of GDP. It reflects the value of national public procurement advertised to businesses, i.e. the access and openness of public procurement markets.

Lithuania⁸⁹. Strong deterioration however is observed in Malta, Croatia, Slovakia and Luxembourg. In some Member States, like Germany and Spain, the publication level continues to be lower than the estimated sizes of their public procurement markets.

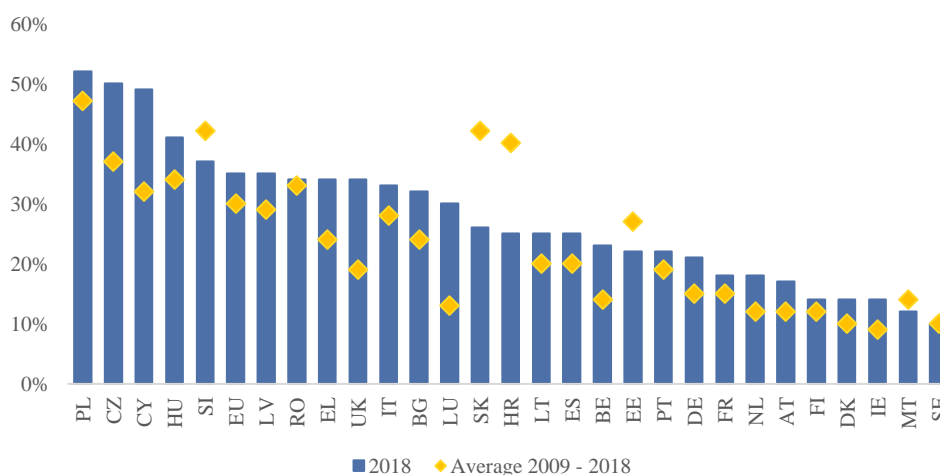
Figure 3.8: Publication rate (value of procurement published in TED as a share of the GDP)



Source: European Commission

Wide discrepancies in the single bidder ratio point to uneven functioning of procurement, not only across countries but also across regions within countries. Despite the positive trend in transparency and openness, competition in procurement is decreasing. The larger number of competitors is a key driver for achieving better value for money and more suitable offers. Figure 3.9 shows that overall there is an increasing proportion of tenders with a single bid at EU28 level between 2009 – 2018, climbing-up to 35 % in 2018. This indicates that the magnitude of lost opportunities in terms of value for money is growing over time. The root causes cannot be limited to publication rates and used procedures. The number of submitted bids, however, reveals a mixed image on the level of competition across Member States. In 2018 the percentage of procedures with only one bid varies from 10 % in Sweden, to more than 40 % in Poland, Cyprus, Czechia, and Hungary.

Figure 3.9. Percentage of awards of contract per country for which there was a single bid (excluding frameworks and contracts in frameworks)



Source: European Commission

Note: The latest available data for Slovenia is from 2016

⁸⁹ 2017 vs. average 2014 - 2017

Member States overuse non-competitive procurement procedures. Procurement rules provide flexibility to public buyers for the type of procedure to be applied. While the open procedures following a publication in TED provide for most transparency and competition, the negotiated-procedure-without-prior-publication (NOC) is very restrictive and can be used only in specific situations. In 2018, around 5 % of the EU tenders were made under the NOC procedure and the trend is relatively stable over the last ten years. However, in Cyprus, Bulgaria, Slovenia, and Romania the share of these restrictive procedures is above 20 %.

However, the cross-border involvement in public procurement markets within the EU is increasing. Cross-border contracts (direct or indirect i.e. through a subsidiary) represented approximately a quarter of the number of awarded contracts in the EU and of the total value of the contracts between 2009 and 2015.

On average, SMEs win 55 % of the contracts published in TED, however this does not reflect their share in the EU economy. The available data shows significant discrepancies between Member States. In Malta, Latvia, Cyprus, and Estonia at least 80 % of the tenders are won by SMEs, while in Spain, Italy, Greece, Belgium, and Romania this share is below 40 %.

Digital procurement market

E-procurement is a key element of the EU's Digital Single Market strategy. With the adoption of the 2014 Directives, procurement documents must be accessible electronically and a link included in the TED notices is mandatory. Since October 2018, economic operators must submit tenders electronically. In line with the eInvoicing Directive,⁹⁰ contracting authorities are obliged to accept electronic invoices compliant with the EU standard since April 2019⁹¹.

The move towards mandatory eSubmission has greatly helped to make procurement more transparent. In all Member States the electronic submission of bids is available by now except for Bulgaria. In some countries eSubmission is mandatory also for tenders below the EU thresholds, like Portugal or Italy. In others, like the Netherlands or Finland, it is mandatory only above the thresholds. In practice, public buyers make use of eSubmission below the EU thresholds in those countries as well. Moving towards mandatory eSubmission contributed to better transparency as the number of call for tenders from EEA buyers on TED have increased by 26 % from 2016 to 2018 (from 173 029 to 218 569).

Digitalisation of public procurement considerably increased the efficiency of the system. The new rules, including a new electronic self-declaration for bidders (ESPD), pave the way for the digitalisation of public procurement, which will considerably increase the efficiency of the public procurement system. From 2016 to 2019, more than 45 ESPD services have been implemented in around 28 countries in the European Economic Area (EEA). Some of the Member States, like Finland or France, took the chance to connect their ESPD service to national databases to achieve the Once-Only Principle (OOP) and many others have plans to do so. The Ministry of Finance in Finland estimated that the elimination of the obligation to provide evidence would save EUR 6.8 million for suppliers and that the savings on the buyers' side are even more significant.

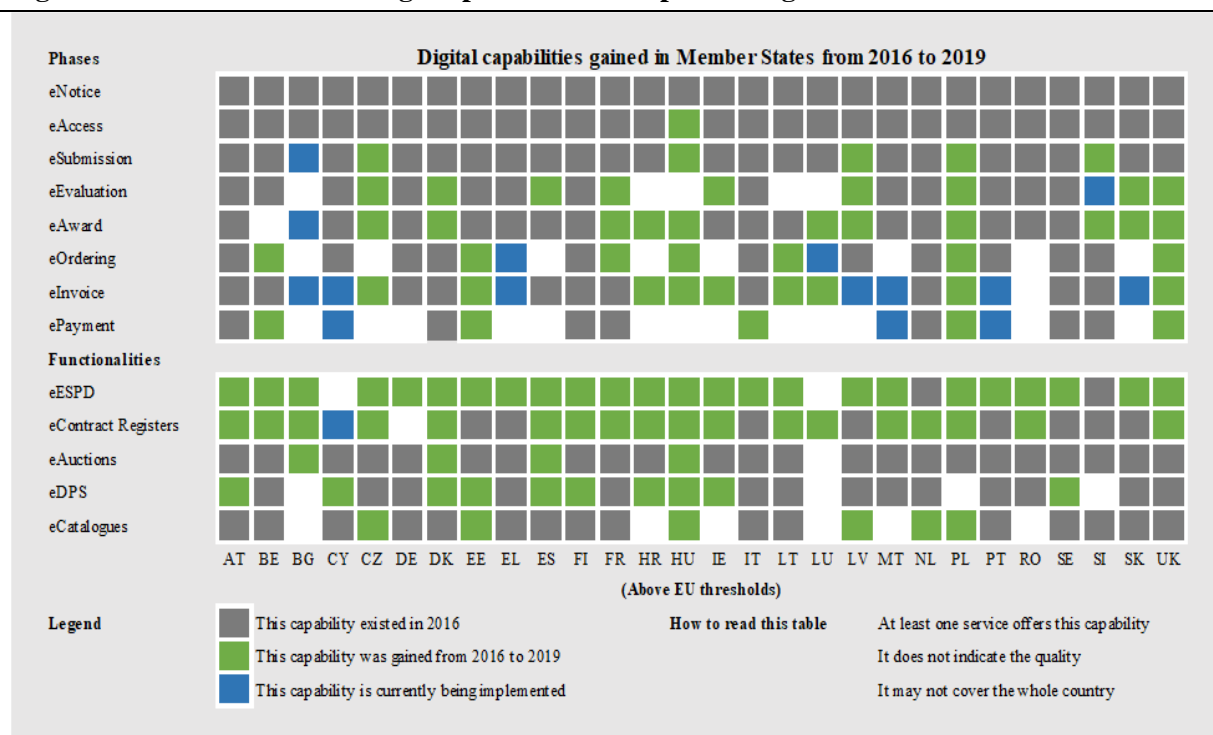
Significant annual benefits are expected through the use of eInvoices. eInvoices are easier to process, they reach the customer faster and can be stored centrally at very low cost. Some Member States apply the eInvoicing Directive also for tenders below the EU thresholds. Ten Member States

⁹⁰ Directive 2014/55/EU of the European Parliament and of the Council of 16 April 2014 on electronic invoicing in public procurement: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0055>

⁹¹ If the prolongation was not used for sub-central level until April 2020.

(among them Austria, France or Portugal) went further. They not only accept electronic invoices but also make the sending of electronic invoices mandatory.

Figure 3.10: Overview of the digital procurement capabilities gained in Member States



Source: European Commission

The new technologies brought new opportunities but also challenges that cannot be ignored. Emerging technologies have already a huge impact on the public procurement system. Artificial Intelligence will naturally be a priority in terms of its significant transforming potential. However, the digital transformation comes hand by hand with cybersecurity concerns and requires management of complex digital infrastructure. In addition, the joint work on eForms and on eProcurement Ontology shows that improving the quality of the data remains a constant and relevant challenge for informed decision making.

The European Commission has put in place several tools to facilitate the integration of the Single Market for public procurement. To this purpose, a very important contribution is played by widely used information portals (TED and eCertis⁹²), as well as technical specifications aiming at ensuring interoperability between systems used by Member States (the eInvoicing standard, the eForms, the ESDP data model, and the validation tool for beneficiaries of EU funding). The Commission has also set up an expert group to facilitate exchanges between Member States to foster the development of common approaches to the challenges of digital procurement.

Strategic procurement

Public buyers in Member States do not use sufficiently public procurement to pursue strategic objectives, although support measures for green, social or innovative public procurement are growing. Implementing strategic public procurement requires contracting authorities to include qualitative and functional criteria along with lifecycle methodologies in their tender documents. These

⁹² <https://ec.europa.eu/tools/ecertis/#/search>. TED has over 4000 unique visitors each day; a specialised online tool as eCertis has 10 000 unique visitors each month.

can involve technical specifications, selection criteria, award criteria, contract performance clauses as well as transparency requirements for the sub-contracting chain. A variety of procedures allow for different approaches for buying innovative solutions, from simple uptake to pre-commercial procurement, thus facilitating the diffusion of these solutions on the market.

To facilitate the uptake of strategic procurement, the European Commission has developed a number of support tools including guidance on strategic procurement. Some Member States have developed online repositories of verified strategic criteria that contracting authorities can use. Sweden, Austria and Denmark are positive examples in this respect. However, about half of the EU procurement procedures apply lowest price as the only criterion for awarding public contracts⁹³. This share largely varies from 12 % in France to more than 90 % in Lithuania, Greece and Malta. However, the major gap resides in the degree of professionalisation across different levels of public authorities.

Professionalisation

Developing and retaining public procurement practitioners remains a key challenge. In order to ensure the most efficient use of public funds, public buyers need to be in a position to procure according to the highest standards of professionalism. Enhancing and supporting professionalism among public procurement practitioners can foster the impact of public procurement in the whole economy⁹⁴. The issue of retaining professional procurement practitioners in the public sector is a recurrent challenge for many contracting authorities, but relying on a clearly identifiable career path could contribute to tackling this problem.

Efforts for improving the professionalism of contracting authorities are ongoing. The European Commission encourages Member States to work in this direction⁹⁵ and provides them with support⁹⁶. Several Member States have adopted professionalisation strategies and targeted initiatives. For example, Lithuania has notified the adoption of a plan to strengthen the professionalism of public procurement, which includes an attestation system. Slovenia has adopted an action plan including raising competences of civil servants for better procurement, assistance to contracting authorities and tenderers for increased legal certainty, quality and cost-effectiveness of public procurement, promotion of strategic procurement, joint procurement and development of smart tools to support public procurement processes. Many other Member States are also actively pursuing professionalisation initiatives and action plans. France or Malta have developed clearly identified job and career structures and procurement specific competency frameworks, with corresponding training programmes.

Central purchasing bodies proved to be a powerful tool for improving professionalisation. Inter alia⁹⁷ France, Finland, Ireland, Denmark, Italy, Austria or Portugal, ensure professional purchasing through centralised purchasing bodies (CPBs) staffed with highly specialised experts. Beyond fulfilling their main mission (aggregation of public procurement and generate savings), CPBs themselves act as centres of expertise and training for other contracting authorities within the country

⁹³ According to 2018 SMS data.

⁹⁴ The Staff Working Document (SWD(2015) 202) accompanying the single market strategy estimated the potential economic gains from solving problems due to professionalisation to more than EUR 80 billion.

⁹⁵ In October 2017, the European Commission adopted Recommendation (EU) 2017/1805 on the professionalisation of public procurement.

⁹⁶ The European Commission is providing support for professionalisation through: central information portal (e-competence centre) with guidance and tools for practitioners in all EU languages, facilitating the exchange of good practices and innovative approaches; European Competency Framework for public buyers, as a common view of the skills and knowledge required by procurement professionals; targeted training schemes and peer to peer exchanges with special focus on Central Purchasing Bodies; technical assistance and financial support for administrative capacity building and structural reforms.

⁹⁷ There are many CPBs operating at national level in the EU in several other Member States. In addition, several CPBs operate in specific sectors (e.g. health sector). Those may be organised at national level or at regional level.

and across Europe or even for economic operators as in the case of Consip⁹⁸ in Italy, Hansel in Finland⁹⁹ or the Federal Procurement Agency (BBG) in Austria¹⁰⁰. Croatia has established a certification scheme, which ensures that every procedure is vetted by a certified buyer.

Enforcement and remedies

Despite significant delays, the overall transposition of the new EU public procurement rules is almost complete with compliance checks on the way. The efficient implementation of the EU Public Procurement Directives is indispensable for a fully functioning and well performing Single Market. The transposition process was delayed on average by two years and compliance checks are still ongoing¹⁰¹.

Every year, public contracts of an approximate total value of EUR 80 billion are challenged in front of national review bodies. A well-functioning remedy system at national level is one of the key factors for the effectiveness of EU public procurement law across the Single Market. The Remedies Directives¹⁰² do not harmonize the remedies systems across Member States but set the minimum conditions for national review procedures. There are differences, for instance, in the length and costs of review.

The Commission seeks greater convergence of remedies systems in the Single Market, while respecting Member States' procedural autonomy and legal traditions. The effectiveness of national remedies systems is the responsibility of Member States. However, the European Commission facilitates this task by encouraging further exchanges and collaboration among national review bodies in the framework of the Network of First Instance Review Bodies¹⁰³. Network meetings cover various work areas, including exchanges of information about national systems and good practice, identification of needs and challenges, development of common solutions, and improvement of governance through the better use of data and digitalisation.

Conclusions

Despite progress in different areas, the performance of public procurement remains mixed. Transparency has been increased, especially since the introduction of e-procurement. However, competition has not kept pace with this progress and remains a challenge. The introduction of strategic procurement has allowed tailoring procurement practice to meet specific national needs. Significant effort to professionalise public procurement practice will be needed in order to improve performance at national and regional levels.

The significance of well-functioning public procurement systems is recognized in the European Semester. By ensuring better value for public money as well as driving at maximum effectiveness and impact of each euro spent, it shows clearly its relevance for sustainable public finances. Public procurement is gaining further prominence with the growing importance of investment in the European Semester, in particular in the context of the European Green Deal. This growing importance

⁹⁸ Consip, a publicly owned stock company, acts as the central purchasing body on behalf of the state.

⁹⁹ Hansel Oy is a publicly owned non-profit company which operates as a central purchasing body for central and local governments in Finland.

¹⁰⁰ The Federal Procurement Agency (BBG). Although public procurement is carried out at all different levels of government, an important share of purchases is centralised by the Federal Procurement Agency (BBG), which plays a central role in the efficiency and harmonisation of public procurement procedures as well as in the capacity building of public practitioners at federal, state, and local levels.

¹⁰¹ Spain is the only Member State that has not completed the transposition process.

¹⁰² Ref Directive.

¹⁰³ Since its creation in 2017, the Network of First Instance Review Bodies on Public Procurement has strengthened cooperation between national review bodies in the EU. The network has already met six times, in Brussels, Malta, Sofia, Zagreb and Bucharest. EU countries have used these meetings to engage in productive discussions on public procurement. They have also worked together in the organisation of meetings and the promotion of the network. The European Commission in cooperation with the Network gathers data and develops indicators regarding the functioning of national remedy systems.

resides on public tenders being a powerful instrument to deliver on wider policy objectives, including sustainable development goals, while contributing to competitiveness in many sectors. However, there is plenty of potential to exploit further digitalisation and integration of new technologies (i.e. blockchain) into public procurement practice.

c. DIGITAL MARKETS

Digitalisation is contributing to improving the performance of the Single Market. The Digital Single Market initiative is Europe's long-term strategy for digital transformation. So far, the EU has agreed on 28 out of 30 legislative proposals, creating 35 new digital rights and freedoms. The effective implementation will boost connectivity, the data economy and digital public services, as well as help Member States to equip citizens with digital skills adapted to the modern labour market. This directly improves the performance of Single Market integration, for example by bringing customers and suppliers in different Member States together or by making cross-border delivery of goods and services cheaper and faster. It also boosts productivity of firms and efficiency of value chains.

The full benefits of the Single Market will however not be felt without an integrated EU-wide digital ecosystem. In recent years, the mobile internet, online platforms and many other digital inventions radically changed our lives. Yet, we have already entered the next major phase of digital transformation, which is expected to lead to a stronger integration of the 'digital' and 'traditional' economy thanks to the Internet of Things and disruptive technologies like Artificial Intelligence or blockchain. The Single Market in the digital age therefore needs to be underpinned by a robust, sustainable, and convergent EU-wide digital ecosystem, i.e. a set of interlinked conditions including digital infrastructure, skills and policies. Only such an integrated ecosystem will allow for a competitive supply and an effective uptake of digital technologies across the EU. It will allow firms and citizens to capitalise on the Single Market. It is also necessary to ensure Europe's technological leadership and strategic autonomy in the digital age in key areas, such as cybersecurity, artificial intelligence and 5G.

Europe's need for a digital eco-system to underpin the Single Market

The digital economy is characterised by global value chains and different competitive strengths of Europe, the US and Asia. Competition in digital products and services from other regions of the world, in particular the US and East Asia, is fierce. US companies at this point have leadership in software (and especially in the business-to-consumer space) and Asian companies in consumer electronics and enterprise computing hardware. Examples of specific areas where EU firms are competitive include cybersecurity, photonics and industrial robotics.

The ongoing wave of digital transformation occurs in sectors where Europe is traditionally strong, like manufacturing, mobility, energy, health, and finance. Established European companies in traditional industries have significantly increased their acquisitions of tech companies over the past years (tech acquisitions by the top 50 'corporate cohort' in Europe grew from a single acquisition in 2011 to 23 acquisitions in 2015)¹⁰⁴. By way of example, one of the largest acquisitions in artificial intelligence in 2018, was the acquisition of US-based cancer start-up Flatiron Health, by Swiss-based pharmaceutical company, Roche¹⁰⁵. The full impact of disruptive technologies, like artificial intelligence or blockchain is impossible to predict, but the transformation of traditional industries is expected to go well beyond increased operational efficiency. These technologies are expected to lead to entirely new business models, revenue streams and value propositions, for example in personalised medicine or, connected and automated driving.

¹⁰⁴ The State of European tech 2016 edition, by Atomico and Slush

¹⁰⁵ The Race For AI: Here Are The Tech Giants Rushing To Snap Up Artificial Intelligence Start-ups, CBINSIGHTS.

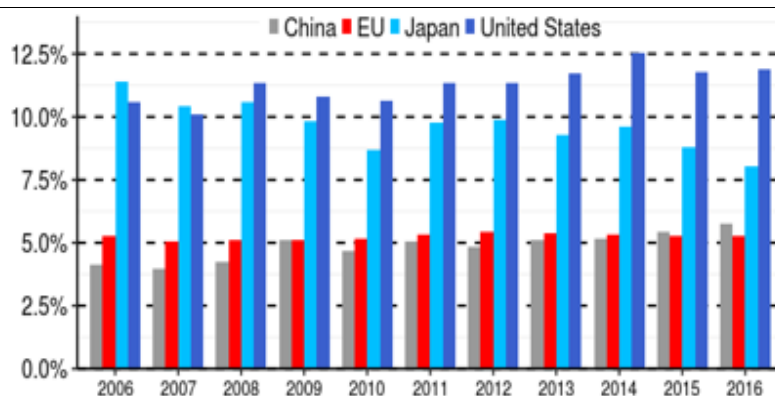
Europe will also see an increased convergence between 'digital' and 'traditional' products and services, notably with the deployment of 5G and the Internet of Things. The Internet of Things (IoT) is mostly developing around value chains (especially automotive and utilities) and is driven primarily by industrial applications and, for the medium term at least, in-house use¹⁰⁶. These dynamics will trigger the development of new types of digital business-to-business services. Europe has an opportunity to take a leadership role, inter alia due to its strong position on the demand side, namely the 'traditional' industries concerned. The data generated by interconnected IoT devices will be the new fuel of the economy across the EU, with a myriad of potential uses from AI to personalised services, which should be supported by an improved framework for data sharing.

Rapid growth is particularly important for providers of digital products and services.

Digital markets are often characterised by strong economies of scale and network effects. Digital products and services typically involve a high proportion of fixed costs (especially R&D) and relatively low marginal costs. Digital companies are therefore often able to scale up rapidly in a short time with few staff and physical assets¹⁰⁷.

The ICT sector has therefore one of the highest R&D intensity. The R&D intensity of EU firms (5 %) in the ICT sector, however, is currently lagging behind their counterparts in the US and Japan (US, 12 %; Japan, 8 %). Chinese firms also outperform EU firms since 2015 in this regard (see figure 3.11)¹⁰⁸.

Figure 3.11: ICT sector R&D Intensity



Source: JRC Predict. R&D intensity is defined as ICT BERD divided by ICT value added.

The Single Market can provide European companies with the necessary scale to compete internationally. US and Chinese companies benefit from large homogeneous markets and (for different reasons) access to large amounts of data and targeted state policies and investments. Given the right conditions, an innovative digital company anywhere in the EU could also achieve scale thanks to the size of the Single Market. However, none of the ten biggest tech companies is based in the EU. The US also has four times more scale-ups than Europe. Scale-ups in Europe are predominantly small (76 % are below USD 10 million with only 5 % above USD 50 million). There is also a strong geographic divergence when it comes to scaling up: In 2017 almost 70 % of the 1 220 new scale-ups were located in only four EU countries, namely UK, France, Germany and Sweden (a similar picture emerges when looking at the past decade)¹⁰⁹. These facts raise the question if tech companies across the EU can sufficiently capitalise on the scale and opportunities offered by the Single Market the same way as their US and Asian counterparts capitalised on their home markets before expanding across the globe.

¹⁰⁶ Digiworld Yearbook 2017, Idate

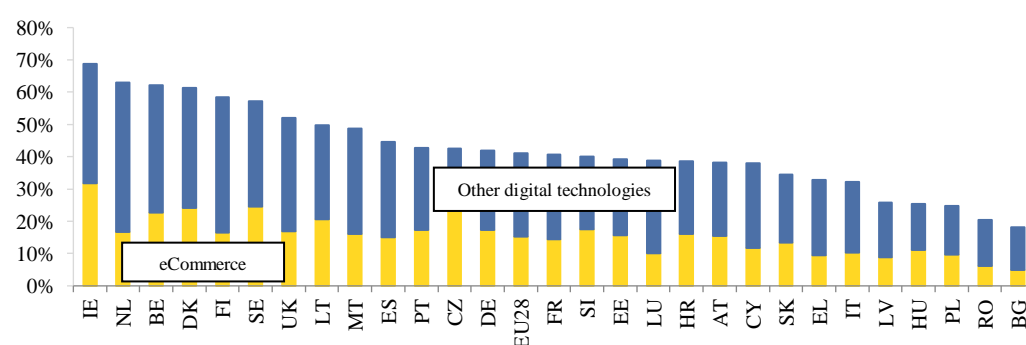
¹⁰⁷ For example, a long-established telecom company, Deutsche Telekom, serves close to 200 million customers worldwide with over 200 000 employees. Instagram on the other hand was serving 30 million subscribers with only 13 employees less than two years after it was launched.

¹⁰⁸ Joint Research Centre, 2019 "Prospective Insights in ICT R&D" at <https://ec.europa.eu/jrc/en/predict/editions/2017>.

¹⁰⁹ Tech Scaleup Europe 2018, Mind the Bridge for the Start-up Europe Partnership

Significant divergence among Member States impedes Europe from achieving market scale comparable to the US or even China. Member States and regions differ significantly in their progress towards digitalising their economies. The economically more advanced regions of the EU have benefited most from the Single Market. Overall GDP inequality levels between European regions have declined by about 25 % in the last twenty years. The integration of digital technologies by companies or the development of 'digital' human capital has shown limited signs of convergence in the period 2014-2019 (despite some convergence in areas subject to EU regulation like connectivity infrastructure and digital public services). Front runners are Ireland, Netherlands, Belgium and Denmark based on a sample of important digital technologies (see figure 3.12). Taking a wider group of digital technologies together, less than a fifth of companies in the EU can be considered *highly digitalised*, but the situation across countries is varied, ranging from 50 % of companies in Finland and Denmark to only 10 % in Bulgaria, Greece and Latvia.

Figure 3.12: Digitalisation of businesses (e-commerce and other digital technologies)



Source: European Commission; DESI 2019

The broader effects of the Single Market helps removing obstacles to (digital) innovation diffusion between firms across Europe. This would contribute to raising productivity levels of Europe's "less-productive" firms (or laggard firms) and generating increases in the returns of those firms when they access a larger market for their products and/or services. Laggard firms are finding it hard to adopt the advanced technologies and business processes of the frontier firms. Knowledge and innovation therefore do not spread rapidly enough across the EU. Europe's ability to scale up innovations is thus hindered by an incomplete internal market.

The framework conditions of the EU-wide digital eco-system

The development of the digital eco-system is hampered by a low performance in many Member States on key framework conditions. There are a number of conditions that determine the robustness and sustainability of the digital ecosystem. These include digital skills and infrastructure, funding for innovation, the availability of data, cybersecurity and public services fit for the digital age. Furthermore, these conditions are interrelated: for example highly skilled labour will migrate to areas where there are a lot of tech companies, which in turn will be to a large extent determined by the availability of venture capital and/or digital infrastructure and skilled workforce¹¹⁰. Member States have a significant role to play in improving these conditions. Targeted investment and policies can have a significant impact on the performance of individual countries and improve the overall EU performance in the Digital Single Market.

¹¹⁰ The start-up hubs receiving most venture capital in Europe are also the biggest destination for migratory tech talent.

Differences between national corporate tax systems can also lead to high compliance cost for businesses that conduct their R&D cross-border or engage in transnational cooperation on R&D projects, for example through joint ventures¹¹¹. Adoption of the Common Consolidated Corporate Tax Base proposals,¹¹² which were relaunched by the Commission in 2016 would help to reduce these costs for businesses in the Single Market, but progress in Council on these proposals has been slow. The Commission is also actively engaging in discussions on the reform of the international corporate tax system to make it fit for the digital age in order to ensure a level playing field and provide certainty for businesses.

Funding needs of digital ventures

The revenues of digital companies do not necessarily correlate with their scale. Digital business models often focus on the longer term development of markets rather than shorter-term profit considerations. For example, when Facebook bought WhatsApp for USD 19 billion, WhatsApp already had a billion users and yet no revenue. The returns are particularly uncertain on investments into nascent, fundamental and disruptive technologies, especially when there is a significant time lag between investment and wide scale deployment. This is reflected in the amount of equity investment available. In 2018 global start-up funding for quantum computing was very low even compared to other emerging technologies, like blockchain (430 times more funding) and Artificial Intelligence (over 100 times more funding)¹¹³. However, investments into these technologies are critical for the long-term health of the EU's digital economy and society. Neither the private sector, the EU, nor individual Member States can create on their own the ecosystem necessary to trigger these investments.

The start-up funding gap with the US remains significant and there is a large divergence among Member States. The US has four times more scale-ups than Europe with 8 times more capital raised¹¹⁴. Europe's underperformance is exacerbated by a large divergence among Member States. The United Kingdom, Germany and France together account for 61 % of the total amount of start-up funding. There is a substantial difference across countries when looking at funding per capita: the top three Member States (Sweden, Estonia, UK) are above EUR 200/capita each while the bottom half of Member States are all below EUR 10/capita¹¹⁵. This leads to a fragmented Single Market where venture capital flows are uneven, which can further amplify imbalances in other areas (e.g. skills). An efficient Single Market needs an efficient funding ecosystem for digitalisation, combining both private and public resources, as well as EU and national funding¹¹⁶.

Europe's ambition in high performance and quantum computing

The EuroHPC Joint Undertaking, set up in September 2018, has the ambition to turn Europe into one of the top three supercomputing powers in the world. Uses of high performance computing include AI, Quantum, 5G, IoT, blockchain. All Member States (except UK and Malta) plus three associated countries (Norway, Switzerland and Turkey) and private partners are currently members. As regards quantum technologies, 10 Member States have so far joined the European Quantum

¹¹¹ SWD(2016) 341 final

¹¹² COM(2016) 685 final and COM(2016) 683 final

¹¹³ Source: Statista, For quantum computing: <https://www.statista.com/statistics/950790/quantum-computing-equity-funding-worldwide/>
For blockchain: <https://www.statista.com/statistics/621207/worldwide-blockchain-startup-financing-history/> For AI: <https://www.statista.com/statistics/943151/ai-funding-worldwide-by-quarter/>

¹¹⁴ Tech Scaleup Europe 2018 "Mind the bridge"

¹¹⁵ Next Station Europe: How Europe's tech startup ecosystems are evolving

¹¹⁶ Historically, the development of the tech industry in the US for example greatly benefited from crucial public investments (by DARPA) into the development of emerging technologies and high-end computer systems

Communication Infrastructure Declaration of June 2019 proposed by the European Commission (Belgium, Germany, Italy, Luxembourg, Malta, the Netherlands, Spain, Hungary, Portugal, Poland, Croatia, Cyprus, Greece, France, Lithuania, Slovakia, Slovenia, Sweden, and Finland). The inclusion of quantum cryptography into critical communication systems is, for example, key to provide ultrafast and precise sensing for medical applications or for navigation, and to deploy services such as protection of financial services and clock synchronisation.

Telecommunication markets and digital infrastructure

Competitive telecommunication markets provide crucial services to European citizens and firms. These markets were historically characterised by state-owned monopolies and underwent a liberalisation process. Under current EU telecoms rules, operators with significant market power are subject to regulatory obligations, such as obligations to provide wholesale access services to alternative operators. Competition rules complement regulation where necessary, to tackle ex-post actual anticompetitive practices from telecom operators. These range from abusive practices such as margin squeezes or predatory pricing to anti-competitive agreements that prevent market integration or reduce operators' incentives to invest in their networks and to improve their services. Competition rules have proved successful in fostering competitive markets, encouraging investment and increasing consumer choice. However, there may be areas where there is no incentive for commercial operators to provide sufficient broadband coverage (market failure). In such cases, EU State aid rules allow for public investments where it brings a significant improvement (the so-called step change). They thus contribute to a more effective use of public resources and preserve incentives for private investments by offering appropriate levels of protection from public intervention.

Despite substantial progress, gaps in the coverage and take-up of digital infrastructure persist. Gaps are particularly prevalent for very high capacity broadband networks, notably networks based on fibre. While fixed and mobile broadband coverage is converging across EU Member States, ultrafast broadband coverage (i.e. with at least 100 Mbps download speed) is still uneven. In 2018, 60 % of households have access to at least one of the ultrafast technologies, up from 57 % a year ago¹¹⁷. In Malta, the Netherlands, Belgium, Denmark and Luxembourg at least 90 % of households have access, while in Greece it is less than 1 %. In contrast, rural coverage of ultrafast technologies stands at 16 % of households. In terms of uptake, 20 % of European households currently subscribe to ultrafast broadband, a strong improvement from 2 % 6 years ago. Penetration is highest in Sweden, Portugal, Romania and Hungary, with over 40 % of households subscribing to at least 100 Mbps. In Greece, Cyprus and Croatia take-up is very low.

Mutually consistent spectrum management approaches by Member States are essential to support 5G investment. The deployment of 5G will provide citizens and industry with wireless broadband services at gigabit speeds and will support new types of applications and business models. Only twelve Member States have assigned spectrum ready for 5G use by the end of 2020 within the so called 5G pioneer bands identified in Europe, resulting in an EU-average of only 14.2 % (Figure 3.13)¹¹⁸. So far, ten Member States¹¹⁹ have published national 5G roadmaps: Austria, Estonia,

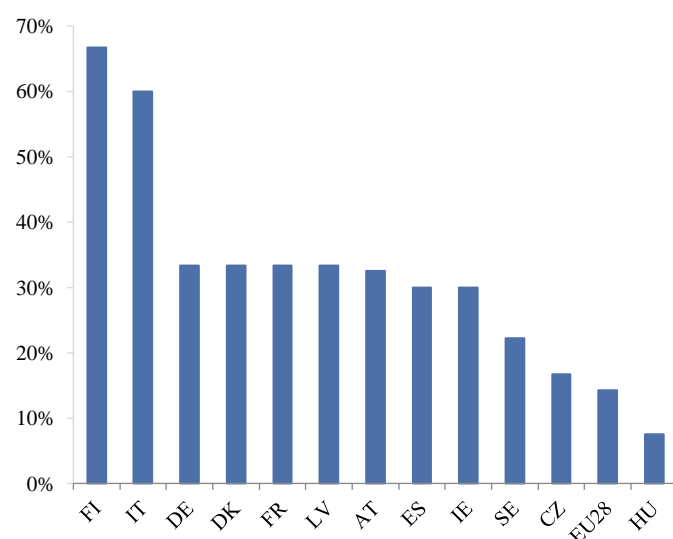
¹¹⁷ Digital Economy and Society Index 2019.

¹¹⁸ Idem.

¹¹⁹ Situation as of April 2019.

Finland, France, Germany, Luxembourg, Netherlands, Spain, Sweden and UK. EU regulation and policy action related to connectivity has helped to reduce divergences across Member States¹²⁰.

Figure 3.13: 5G readiness of Member States



Source: European Commission

Note: Assigned spectrum as a % of total harmonised 5G spectrum. Member states not mentioned are at 0 %. Figures as of April 2019 published in DESI 2019

Europe's industrial strength requires the development of 5G-based ecosystems. Industries such as energy, transport, health, manufacturing and finance, where Europe has traditionally been a leader, are key to develop new convergent solutions. These solutions, such as connected and automated driving systems, will imply, de facto, a convergence of products and services with a large share of digital components. Key technologies based on data processing and 5G networks will spread across all sectors of the EU economy.

Digital skills as a bottleneck

Europe has a systemic digital skills gap, with some Member States particularly lagging behind. Around 90 % of today's jobs require at least basic digital skills. Yet, 43 % of the citizens and 35 % of the labour force lack these

essential skills. There is also an increasing demand across the economy for staff with advanced digital skills. Although employment of ICT specialists grew by two million over the last 5 years, 53 % of companies have difficulties in recruiting ICT specialists. Vacancies for ICT specialists in the EU exceed one million¹²¹. Furthermore, there is not enough capacity available to train experts in newly expanding areas like artificial intelligence, cybersecurity, and high-performance computing. Differences between Member States as regards the digital skills of their workforce are substantial¹²². While Finland, Sweden, Luxembourg and Estonia are the leaders in this area, large economies such as France, Spain, Poland and Italy are below the EU average and are not improving at the pace technological change requires. In fact, the shortage of digital skills hinders the diffusion of innovations.

¹²⁰ Assessment of the 5-year evolution of DESI 2014-2019 showed a decrease in the delta between the frontrunner and the laggard Member States.

¹²¹ Estimation based on European Commission's VICTORY project, 2019

¹²² Digital Economy and Society Index, 2019

Case study: Artificial intelligence

Artificial intelligence is an economic game changer with consequences across Member States. AI could add up to EUR 13.3 trillion to global GDP by 2030¹²³. If Europe were to catch up with the US AI frontier, a total of EUR 3.6 trillion could be added to collective GDP in this period¹²⁴. Frontrunners in AI adoption (whether countries or companies) will derive substantially more economic benefit than those falling behind¹²⁵.

The Single Market offers Europe a chance to be world leading in artificial intelligence. The EU is home to around a third of top 100 ranked research organisations,¹²⁶ similar to the US and well ahead of the next ranked country, China. Europe is in a world-leading position in robotics, and has a strong business-to-business sector, strong industrial and services sectors, and significant industrial data. Private investments in AI however still lag well behind the rest of the world. Some EUR 2.4-3.2 billion was invested in AI in Europe in 2016, compared to EUR 12.1-18.6 billion in North America and EUR 6.5-9.7 billion in Asia¹²⁷.

Gaps among Member States as regards the enablers of AI risk holding back the EU as a whole. Connectivity, skills, funding, the availability of adequate data and the general capacity of companies to absorb digital technologies are important enablers for AI. Only 12 % of European companies employing more than 10 people used big data analytics in their activities and only 18 % used cloud computing. As regards government preparedness for AI, 9 EU Member States are in the global top 20¹²⁸. High-skilled technical experts in areas such as AI, data analytics and cybersecurity are among the most in-demand workers. Job vacancies for these profiles however often go unfilled – there are already over 1 million vacancies for ICT specialists in the EU¹²⁹. Tertiary courses in AI are lacking in most Member States. The majority of such courses are offered in the UK (45 %), distantly followed by Germany (7 %), the Netherlands (7 %), France (6 %) and Spain (5 %). Skills shortages in artificial intelligence are also said to be at least partly the rationale for the many acquisitions of AI start-ups by large tech companies¹³⁰.

Member States have thus a critical role to play to provide the conditions necessary for a vibrant AI ecosystem. Capitalising on the Single Market will require EU-level actions specific to AI such as adopting ethical and liability rules. Member States however also have a critical role to play, as recognised by the EU and Member States in the jointly prepared coordinated plan on AI of December 2018¹³¹. In fact, one of the most promising areas of AI adoption will be healthcare, which has a strong national dimension, including as regards the relevant data. Secure access to large-scale, high quality, standardised health data is crucial for the development of new and innovative healthcare solutions, for example using AI or high-performance computing to develop virtual models or more tailored treatments.

¹²³ Notes from the AI Frontier, McKinsey Global Institute, September 2018.

<https://assets.mckinsey.com/featured-insights/artificial-intelligence/notes-from-the-ai-frontier-modeling-the-impact-of-ai-on-the-world-economy>

¹²⁴ Tackling Europe's Gap in Digital and AI, McKinsey Global Institute, February 2019

¹²⁵ McKinsey: Notes from the AI Frontier: Tackling Europe's Gap in Digital and AI, September 2018.

¹²⁶ The State of European Tech 2017, Slush/Atomico:

¹²⁷ Communication Artificial Intelligence Europe, 2018

¹²⁸ <https://www.oxfordinsights.com/ai-readiness2019>

¹²⁹ Estimation based on European Commission's VICTORY project, 2019

¹³⁰ While the EU produces roughly 25 % of AI startups (McKinsey: Notes from the AI Frontier: Tackling Europe's Gap in Digital and AI, September 2018), these are typically acquired (as are AI startups in other parts of the world). Some analysts report over 600 AI acquisitions between 2010 and 2019 (The Race For AI: Here Are The Tech Giants Rushing To Snap Up Artificial Intelligence Startups, CBINSIGHTS).

¹³¹ Communication Coordinated Plan on Artificial Intelligence (COM(2018) 795 final)

Data as an unexploited resource

The value of the EU 'data market' could grow from EUR 71 billion in 2018 to over EUR 141 billion by 2025. The data market is the marketplace where digital data is exchanged in the form of innovative products or services. At Member State level the size of the data market shows a tight correlation with the national spending on ICT as well as the overall economic strength of the specific Member State. In 2018, six Member States (UK, France, Germany, Italy, Spain, and the Netherlands) accounted for approximately three quarters of the whole EU data market, indicating a relatively high concentration among Member States¹³².

So far, European firms are not exploiting the full potential of data. The efficient use of data is critical for both the supply and uptake of digital technologies. Having access to sufficient and good quality data is, for example, essential for training AI applications, as demonstrated by online platforms. While 70 % of companies re-using data consider that accessing data from other companies is very important to their business, 60 % of all EU companies currently do not share data with other companies and 58 % of companies are not re-using data from other companies¹³³. This limited willingness to share data among firms, combined with unevenly spread digital skills across industries, holds back a broader data usage. Only 12 % of EU companies currently make use of big data. Comparison between Member States also shows a difference of roughly 20 percentage points, with 24 % of Maltese companies using big data compared to only 5 % of Cypriot companies. Although the use of big data has improved and the difference between leaders and laggards has slightly shrunk, there is still significant room for improvement.

Ensuring that data is sufficiently available and mobile within the Single Market, while protecting security and privacy, is a complex and specific challenge. Private-sector data is a key driver of innovation and competitiveness in Europe and the re-use of private sector data constitutes a further cornerstone of a common European data space. For example, data is often created in an automated way by machines or processes based on digital technologies, such as the Internet of Things. To extract maximum value from these and other types of private sector data, market players may need to be able to access and use such data, also across borders¹³⁴. On the other hand, to unlock the potential value from the wider use of data, high privacy, security, safety and ethical standards need to be maintained. The risk of some large companies restraining market entry and/or foreclosing competitors is also a concern, which is inter alia linked to the massive data accumulation from which these firms benefit. Questions on further data sharing arise notably in sectors such as transport (e.g. access to car data), financial services, health care and energy. With the General Data Protection Regulation, the EU has already created a solid framework for digital trust, a precondition for the access and use of data. Finally, cybersecurity is typically an area where any weak link in the chain can be exploited with potentially devastating consequences for the entire chain. Building up resilience across the entire EU is thus essential to prevent security breaches having spill over effects across national borders.

The role of national administrations

Modernisation and digitalisation of public services can lead to efficiency gains for the public administration, citizens and businesses alike. Interoperable digital administrative systems can greatly contribute to a borderless Single Market, speeding up procedures and lowering cost, e.g. for

¹³² European Data Market Monitoring Tool, SMART 2016/0063, IDC 2019, www.datalandscape.eu.

¹³³ Study on data sharing between companies in Europe, European Commission, 2018

¹³⁴ Communication "Towards a common European data space" 25.4.2018 COM(2018) 232 final

service providers to fulfil their legal obligations when providing services cross-border. Last year, 64 % of the EU citizens who needed to submit forms to a public authority did so online. However, the situation differs between Member States. Denmark is the top performer, followed by Estonia, Finland and the Netherlands. Big EU economies such as Germany and Italy lag behind with only 40 % of their citizens using e-services. In those digital public services where EU regulation is in place, there is a convergence trend among Member States for the period 2014-2019. Finland has the highest score, followed by Estonia, the Netherlands and Spain. Romania, Greece and Hungary have the lowest scores. The demand side of digital public services is progressing and 24 countries performed better in 2018 than in 2017, with Portugal and Czechia making the biggest improvement.

Member States also hold lots of data that could be useful for companies and for research, and that can be made available in open data format. Open access to public data is an effective instrument to promote the data economy. There are substantial differences in the degree to which Member States make their data accessible. While Ireland is the leader in Open Data in Europe with 88 points (out of a maximum score 100), Malta is only awarded 18 points. The EU average is 64 points¹³⁵.

Conclusions

Digitalisation is progressing in the Single Market but efforts are needed to develop further the integrated EU-wide digital ecosystem that should allow to release in full all the benefits for firms and citizens. The Digital Single Market allowed significant progress in digitalising Europe's economy. Ensuring Europe's technological leadership and strategic autonomy now requires that we create a robust, sustainable and convergent EU-wide digital ecosystem, on par with our North American and Asian trading partners. The development of this ecosystem is currently held back by an insufficient and uneven performance on key digitalisation drivers, such as digital infrastructure, skills and funding for digital ventures. The framework for the data economy and reinforced cyber-security are further pillars. Member States have a crucial role to play in putting these elements into place and the European Semester allows for a more coordinated approach to national efforts. Furthermore, policies addressing skill mismatches and an increased supply of appropriate skills could alleviate obstacles to broader diffusion of digital technologies.

d. CAPITAL MARKETS

A well-functioning Single Market requires integrated and developed capital markets. They channel savings to investments and allow us to price and manage risks. Integrated capital markets are a driver of economic success that contribute to growth, encourage innovation and increase prosperity. They expand the financing options for firms and broaden investment opportunities for savers. The Single Market for capital also helps households and firms diversify risks and allocate resources efficiently. It underpins convergence, strengthens economic resilience and supports the Union's financial sovereignty. More integrated capital markets can also promote the transformation towards a digital and sustainable economy by re-orienting flows towards those activities that drive these societal changes.

Restoring financial stability and integration

EU financial services legislation has made major contributions to spur integration over time. Financial integration increased steadily until 2007 (see figure 3.14). The financial crisis set back the

¹³⁵ [DESI Report 2019, "Trends in European Digital Public Services in the EU 2019"](#).

integration process. The measures taken to strengthen the Economic and Monetary Union and the post-crisis reform package that set in motion the process of forming a Banking Union (BU)¹³⁶ and Capital Market Union (CMU)¹³⁷ as response to the crisis have paid off. Integration picked up again in the post-crisis period but more strongly with respect to prices than with respect to quantities (see figure 3.14)¹³⁸.

These reforms have resulted in a more stable financial system and helped restoring market confidence. EU banks are now more resilient thanks to continued deleveraging, de-risking and significant reductions of non-performing loans. The ongoing CMU reforms on the other hand would facilitate private risk sharing and further contribute to economic recovery. It would also enhance the capacity to support investment when credit channels via banks are under stress.

Figure 3.14: Euro-area price-based and quantity-based financial integration



Source: ECB financial integration indicators. Quarterly data

Note: The price-based composite indicator aggregates ten indicators while the quantity-based composite indicator aggregates five indicators. These indicators are each between zero (full fragmentation) and one (full integration). Therefore, increases in the indicators signal greater financial integration. they include components such as cross-border transactions or country diversification of asset portfolios or interest rate dispersion.. For details see ECB (2006) “Indicators of Financial Integration in the Euro Area,” September.

Although the financial system is now more stable and resilient, continued efforts are required in order to promote further integration and to face remaining pockets of risks and challenges. For instance, capital markets are still less integrated than before the crisis. In addition, home bias in EU equity and debt portfolio holdings remain high, with domestic holdings representing 68 % of total holdings in 2017 (see figure 3.15). The downward trend in home bias before the financial crisis can be attributed to an increasing share of intra-EU portfolio investment in the years that followed the start of monetary union. In recent years, however, the share of portfolio investment in extra-EU countries has grown while intra-EU holdings have stagnated (nevertheless intra-EU holdings remain a much higher share)¹³⁹. Low cross-border capital market integration also implies that similar firms within the EU cannot fund themselves on the same terms. More generally, access-to-finance problems can hinder

¹³⁶ See European Commission, ‘Third progress report on the reduction of non-performing loans (NPLs) and further risk reduction in the Banking Union’, 28 November 2018 and https://ec.europa.eu/info/business-economy-euro/banking-and-finance/banking-union_en.

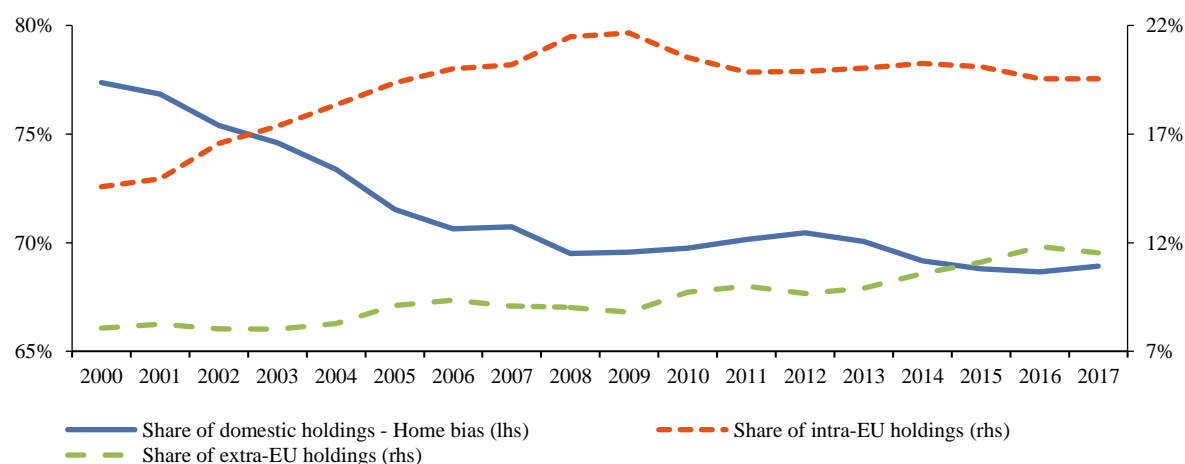
¹³⁷ See European Commission, ‘Capital Markets Union: progress on building a Single Market for capital for a strong Economic and Monetary Union’, 15 March 2019 and https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union_en.

¹³⁸ See Hoffmann, P., Kremer, M. and Zaharia, S., ‘Financial Integration in Europe Through the Lens of Composite Indicators’, April 2, 2019. The drop in integration and subsequent recovery was most pronounced for aggregate price-based integration.

¹³⁹ For further details, see, European Commission, ‘European Financial Stability and Integration Report (EFSIR)’, 2019.

firm growth, by limiting investments, productivity improvements and export opportunities, especially for young and innovative firms^{140 141}.

Figure 3.15: Home bias in equity and debt portfolios



Source: European Commission

Deepening the CMU is crucial to advance the Single Market for capital. Delivering the key building blocks of the CMU promptly is important, for instance in view of the UK's decision to withdraw from the EU. The CMU nevertheless remains mainly a structural reform that requires a progressive approach. This way, the CMU will help channelling capital resources into their most productive use.

Improving access to finance and efficiency in the allocation of capital

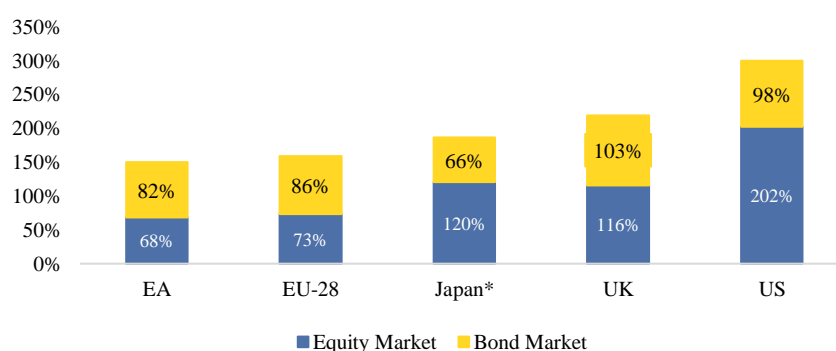
Fragmented capital markets lead to higher execution costs and decreased market depth in the EU compared to other global financial markets, like the United States and Japan. Fragmentation also reduces the scope for economies of scale and raises the cost for market participants. While the EU accounts for roughly 21 %¹⁴² of global capital market activity, ranking second after the United States, the depth of its capital markets is only half of that in the United States and below that of Asia Pacific. This situation reduces the ability of capital markets to contribute to the sustainable growth, stability and equity objectives. Figure 3.16 shows that public equity and debt markets in the EU remain smaller relative to GDP compared to other regions such as Japan, the UK and the US.

¹⁴⁰ Wilson K.E., 'Policy Lesson from Financing Innovative Firms', 2015, OECD.

¹⁴¹ The Commission's CCCTB proposal includes a proposal for an Allowance for Growth and Investment (AGI), which would help to reduce the cost of capital and address the debt-equity bias in corporate taxation.

¹⁴² Measured as % of share of activity in capital markets on a sample of 60 economies. See William Wright, Panagiotis Asimakopoulos & Eivind Friis Hamre, 'The New Financial global capital markets growth index', New Financial, January 2019

Figure 3.16 Size of capital markets in selected regions (amounts outstanding at Q3-2018 as % GDP)



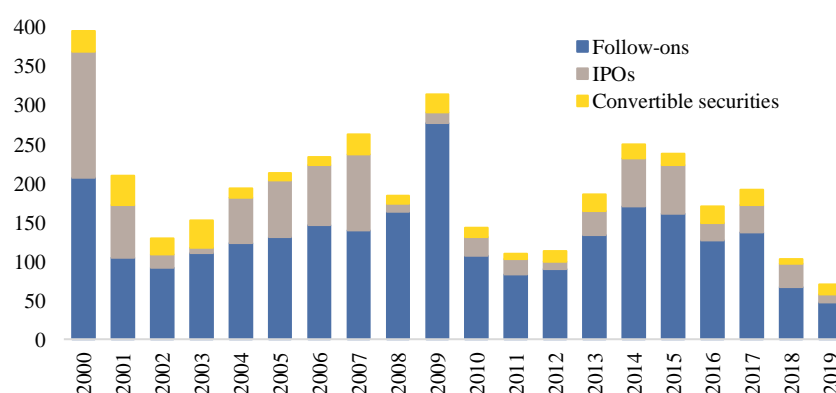
Source: ECMI, ECB, Federal Reserve and European Commission own calculations

Note: Stock market capitalisation and bonds issued by financial and non-financial corporations.

*As of end of 2017

The number of initial public offerings (IPOs) in the EU remains suboptimal due to persistent market fragmentation, limited liquidity of primary and secondary markets and associated costs of issuance. As shown in figure 3.17, although IPOs picked up somewhat in 2012-2017, they then declined considerably in 2018. The access of small and medium sized enterprises (SMEs) to public equity markets remains even more constrained due to the SMEs size, their sensitivity to costs, lack of ratings and accessible research.

Figure 3.17: Equity issuance on European exchanges (2000-2019; EUR bn)



Source: Dealogic

Note: Issuance by entities domiciled in the EU-28, all sectors included. The date of reference is the filing date. Figures for 2019 up to September

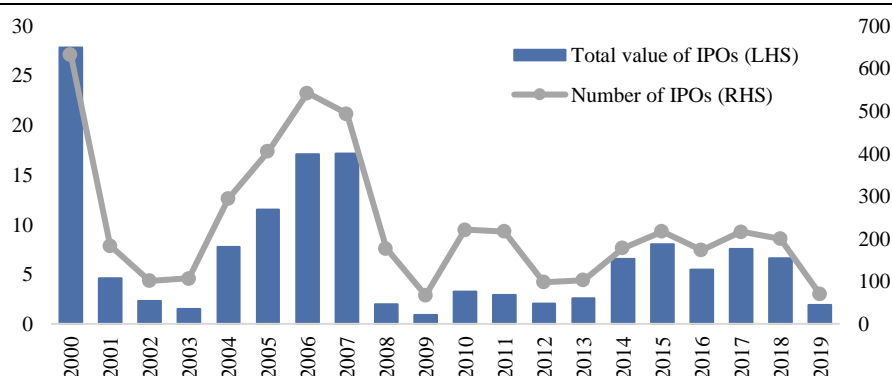
Easier access to market-based funding would help companies to complement existing sources of bank financing, resulting in a more efficient allocation of resources. Especially innovative and high-growth SMEs need to have easy access to adequate funding at all their stages of development given their contribution to economic growth and job creation. As it often relies on intangible investments with unpredictable cash flows, it can be difficult for a company to rely solely on bank lending to fund its research and other projects. This is especially true for SMEs, which often lack collateral. In most Member States, EU non-financial corporations, and especially SMEs, make less use of market funding (see figure 3.17). In particular, the Central, Eastern, and South-Eastern European (CESEE) Member States¹⁴³ are lagging behind¹⁴⁴. In contrast, Nordic and Baltic countries

¹⁴³ Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Romania, Lithuania, Poland, Slovakia and Slovenia.

like Denmark, Finland, Lithuania, Latvia, and Sweden score high on rankings assessing the availability of market funding to SMEs. Alternative sources of finance, including crowdfunding, venture capital, private equity and public equity, should therefore be available to complement bank financing and help companies diversify their funding.

SMEs prefer to list on SME growth markets¹⁴⁵ because regulatory compliance costs on these markets are lower than on large stock exchanges. However, even on these platforms the number of listings declined considerably post-crisis, only slightly picking up in 2017. SME IPOs also became smaller. While SMEs raised about EUR 13.8 billion in 2006-2007 (annual average), they raised only EUR 3.9 billion in 2018.

Figure 3.18: Total value and number of IPOs on European junior markets (EUR bn) and number of IPOs



Source: Dealogic

Note: Issuance by entities domiciled in the EU-28, all sectors included. The date of reference is the filing date. Figures for 2019 up to September

Listing costs remain one of the main factors that prevent companies from going public. For a small cap, this cost can vary between 6 % and 15 % of the total issuance (for a EUR 100 million offering), while it can amount to approximately 3 % for a large cap¹⁴⁶. In addition, a low level of available SME research, low secondary market activity (low liquidity of SME shares) and low institutional investor participation contribute to a declining trend in SME IPOs. Currently, the main investors in SME equity are retail investors, while the main institutional investors – such as insurance companies and pension funds – are largely underinvesting in SMEs (see Figure 3.20). For instance, institutional investors account for 10 %, 11 %, 19 %, 25 % and 30 % of investors on the French, Spanish, Swedish, Polish and Belgian SME-dedicated Multilateral Trading Facilities respectively¹⁴⁷. Such figures should be compared with institutional investors' average participations on the corresponding regulated markets, which vary between 55 % and 90 %.

Notwithstanding the efforts made since the publication of the CMU Action Plan in 2015,¹⁴⁸ SMEs face other difficulties to access to public markets. These include the difficulty to attract enough (institutional) investors, insufficient data on SMEs, visibility and comparability of SMEs for

¹⁴⁴ For further details, see European Commission, 'European Stability and Financial Integration Review', 2018, pp. 44-61.

¹⁴⁵ SME growth markets are a type of multilateral trading facility or MTF

¹⁴⁶ Company with a market cap of EUR 1 billion or above.

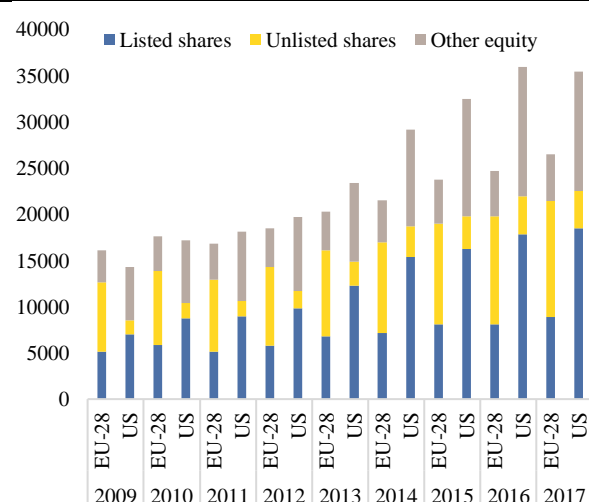
¹⁴⁷ Own calculations based on data received from securities exchanges; Ecorys Study 2013.

¹⁴⁸ Since the publication of the CMU Action Plan in 2015, some targeted actions have been taken to develop adequate sources of funding for SMEs through all stages of development. For example, the Commission has promoted a comprehensive package of measures to scale up Venture Capital (VC) financing in Europe, including the creation of a VC fund-of-funds supported by the EU Budget and the review of the Regulation on European Venture Capital and European Social Entrepreneurship funds. Most recently, the Commission proposed new rules to reduce the administrative burden and compliance costs for SMEs seeking a listing on SME growth markets.

institutional investors, low secondary market liquidity in SME equity, SMEs' limited knowledge about equity finance and high costs of issuing equity.

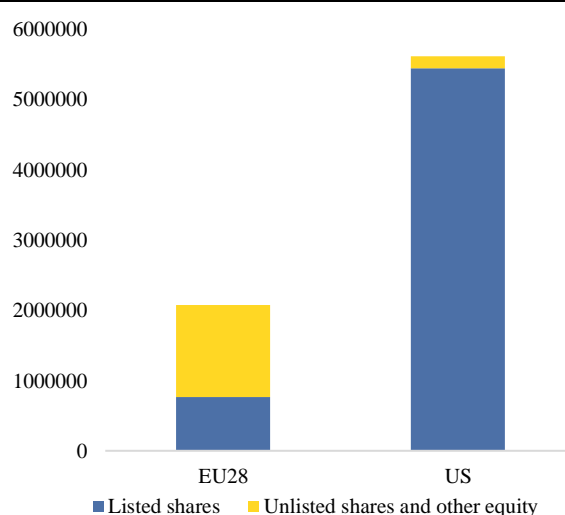
New technologies can facilitate access to capital markets and are bound to increase the overall efficiency of the European financial system. In particular, new platforms are leading a trend towards increased disintermediation and offer or open up new financing channels for companies. In the area of SME financing, this applies in particular to crowdfunding and invoice and debt factoring platforms which will help start-ups and young companies to expand their business more rapidly. Likewise, new entrant FinTech companies have gained a considerable market presence in the area of payment services, with new offerings improving on both quality and cost. Competition enforcement will have to ensure that incumbents, digital platforms and entrants compete on the merits. Other technologies, in particular the application of distributed ledger technologies (DLT), artificial intelligence and big data analytics, hold further potential to transform major components of the classical financial services markets. Many of these technologies are still at a relatively early stage of development. Existing pilot projects however have demonstrated that they can enable efficiency and quality gains once they mature to a market-ready state.

Figure 3.19: Equity liabilities of non-financial corporations in the EU-28 and the US, breakdown by type of equity (EUR bn)



Source: European Commission

Figure 3.20 Investments in equity of insurance and pension funds (end 2016; EUR m)



Source: European Commission

Conclusions

EU financial services legislation sought to facilitate the integration of capital markets over the past 25 years, despite a substantial setback resulting from the financial crisis. Supported by the principles of free movement of capital and payments and the freedom of establishment and provision of services, EU financial legislation has progressed from communality of rules to a single Rulebook approach in an increased number of areas. This has fostered cross-border competition benefitting end-users, notably consumers and firms, and increasing the overall efficiency of allocation of capital in the economy.

Despite significant progress, cross-border competition and market penetration levels still remain relatively low. The CMU offers the potential to reach deeper capital market integration across the EU. Delivering the key building blocks of CMU promptly is critically important also in light of the fact that the largest financial centre is about to leave the Single Market. Beyond this

immediate priority, the EU needs to equip its economy with a deep and integrated capital market that strengthens the Economic and Monetary Union (EMU) and the international role of the Euro as a global currency. The EU Semester would support the implementation of the CMU key building blocks at Member State level.

CONCLUSIONS

The good performance of the Single Market is a shared responsibility at EU and Member State level. These findings make apparent the importance of reforms at national level to enhance and optimise the performance of the Single Market. The flow of benefits from the Single Market to businesses and citizens is limited by competition conditions, regulatory restrictions and market behaviour. Structural reforms discussed and recommended in the European Semester have an impact on those factors hindering the performance of the Single Market.

This report has made apparent the need to identify elements affecting competition conditions, business environment and other structural and behavioural factors hindering the performance of the Single Market and requiring attention in the context of the Semester. While new and better indicators are needed to better assess the importance and the suitable reforms required, the main conclusions of the report are the following:

- **Goods markets present a high level of integration.** Intra-EU trade is still growing driven by the impulse provided by the integration of Central and Eastern European Member States. However, evidence shows that inadequate compliance with Single Market rules and insufficient market supervision limit the benefits of integration in terms of trade, competition, productivity growth and product safety.
- **Services markets present the highest potential for further integration.** The cross-border trade in services markets is lower than that of goods but it is growing. In fact, integration in services is greater than trade figures suggest because the value-added contents of services included in the intra-EU trade of manufactured products is increasing. In addition, integration is increasing thanks to the cross-border establishment of subsidiaries. However, the performance of the Single Market in services is hampered by weak competition and unjustified or disproportionate regulatory restrictions, particularly in some business services, retail and construction.
- **In some sectors, weak competition prevents consumers and businesses from reaping the full benefits of the Single Market.** Increasing market power and concentration are frustrating a part of the price reductions that integration should deliver to consumers and reducing businesses' incentives to invest and to innovate.
- **Significant progress has been achieved in the integration of energy markets, but cross-border energy trade and competition in energy markets must be improved** Entry barriers in electricity generation and different rules for electricity retail markets hinder cross-border energy trade. This situation entails important economic costs to energy users, as well as higher social costs from the foregone opportunities to reduce CO₂ emissions that the Energy Market Union strives to achieve.
- **Ensuring high standards of environmental protection and product safety is a major component of the performance of the Single Market spanning over a broad range of economic activities.** For example, Single Market legislation has been successful in reinforcing the safety of citizens exposed to chemical substances. Ecodesign and Ecolabeling contribute to

steering process and product innovations towards increasing environmental protection and better informed consumer choices. Better cooperation with authorities in Member states should help ensure a more even environmental performance across all of the Single Market.

- **At the core of the Single Market, standardisation plays a key role to further the EU sustainable development agenda.** Standards are essential to steer business towards sustainable development goals as they act as bridges linking legal provisions with on-the-ground technical practice. The adoption of EU standards has helped to achieve energy consumption reduction goals in the eco-design and ecolabelling areas. Standards also have the potential to contribute further to enhance product sustainability and the greening of production processes.
 - **The Single Market has gone a long way in integrating public procurement across Europe, but the performance in public procurement could still be improved.** Transparency has increased, especially since the introduction of e-procurement. However, improvements in transparency have not always been followed by more discernible competition as measured for instance, by the number of tenderers per call. The EU has provided Member States with the necessary rules and guidance to make the best out of public procurement practices, not just to increase the quality of public spending but also to pursue other objectives such as green innovation and digitalisation.
 - **The Single Market is contributing significantly to the digitalisation of Europe's economy but its lasting performance requires the reinforcement and further development of the current EU-wide digital ecosystem.** The development of an integrated EU-wide ecosystem is held back by an insufficient and uneven performance on key digitalization drivers, such as digital infrastructure, skills and funding for digital ventures. Member States have a crucial role to play in putting these elements into play.
 - **EU financial services legislation helped resume integration of capital markets after the setback resulting from the financial crisis and provided better governance to guarantee the stability of financial markets.** Despite significant progress, cross-border competition and market penetration levels remain relatively low. The Capital Market Union offers the potential to reach deeper capital market integration across the EU.
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