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# 30 years of Single Market – Taking Stock and Looking Ahead

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# **30 years of Single Market – taking stock and looking ahead**

Single Market Economics Papers

*Frank Vandermeeren*

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# **30 years of Single Market – taking stock and looking ahead**

## **Abstract**

This note analyses the state of the Single Market 30 years after its establishment and explains the role of the Single Market as driver of EU resilience.

Trade in goods and services have enabled increasing integration over the last decades, both within the Single Market as well as with the rest of the world. The Single Market continues to be the main source of trade for EU businesses, also in the EU-27. Taking into account the role of cross-border establishment, the difference in overall Single Market integration between services and goods (assessed in this note as around 16% and 37%) is lower than traditionally understood. The EU services landscape presents a wide variety of individual sectors with different levels of integration (highly integrated sectors being 4 to 5 times more integrated than services with lower levels of integration). Several elements may explain this, including intrinsic factors of specific services (e.g. some still requiring physical proximity between provider and customer) as well as different degrees of regulatory and administrative complexity.

The Single Market is a dynamic and ongoing process. It has come a long way in stimulating growth and making the life of EU businesses and consumers easier. Opportunities remain notably in the area of services, where persisting challenges are often related to a large variety of rules and general bureaucracy at the level of Member States (including at regional and local levels). This highlights the primary role of Member States to manage the Single Market through reforms and administrative simplification as well as increase cross-border cooperation between national authorities.

The Single Market is the EU's driver of resilience, both in the short-term (crisis management) as well as in the long-term to address strategic dependencies and develop capacities. Based on case studies for wind and solar technologies, this note highlights the importance of Single Market flows both for areas of EU capacities as well as EU dependencies. Further improving the functioning of the Single Market – addressing challenges across inputs, production, services, infrastructure and internal demand – has the potential to increase the effectiveness and efficiency of policy actions to strengthen EU strategic autonomy and ensure the availability of critical goods and services.

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# 1. Introduction

The Single European Act (1986) represented a first comprehensive effort to making the EU Single Market a reality. It meant a widespread push<sup>1</sup> to adopt common EU rules (instead of twelve different ones) in many areas, introducing hundreds of new pieces of legislation. In other areas, the principle of mutual recognition was introduced with Member States agreeing to give each other's laws and technical standards the same validity as their own. The scale and ambition of the endeavour were unprecedented. Despite the Single European Act calling for completion of the Single Market by 1993, in practice it was only the beginning, rather than the end, of an ongoing process. The 30th anniversary of the Single Market in 2023 provides an opportunity to reflect on a potential new perspective and vision for the Single Market in the coming decade.

Today, the achieved gains of the Single Market are widely recognised and documented (e.g. a recent estimate of the economic benefits of the Single Market highlights between 8% and 9% higher GDP on average for the EU<sup>2</sup>). Still, a common message<sup>3</sup> has emerged from EU industry over the last years: there is a need for a new momentum and a stronger ambition on the Single Market. The COVID-19 crisis and the Russian invasion of Ukraine have shown the fragility and risks to the integrity of the Single Market. At the same time, they have evidenced also the power of the Single Market and brought to light an additional role of the Single Market as Europe's driver for resilience and transformation.

The purpose of this paper is not to provide a comprehensive assessment of the Single Market and remaining obstacles<sup>4</sup>, but rather an analytical contribution on the state of the Single Market 30 years after its establishment and the role of the Single Market as driver of EU resilience. Chapter 2 assesses developments in goods and services integration, examining both trade and cross-border establishment. In addition, progress in removing Single Market barriers is analysed, with a focus specifically on services. Chapter 3 explains the role of the Single Market as driver of EU resilience, based on case studies assessing the functioning of the Single Market in the areas of wind and solar technologies.

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<sup>1</sup> See also A. Young (2015)

<sup>2</sup> J. in't Veld (2019). See also e.g. G. Mion, D. Ponattu (2019); G. Felbermayr, J. Gröschl, I. Heiland (2022); EPRS (2022)

<sup>3</sup> See for example the joint Industry Statement (by BusinessEurope, DigitalEurope, ERT, Eurochambres and Eurocommerce) on the Single Market of June 2022

<sup>4</sup> This was done by the Commission in SWD(2020)54

## 2. Single Market integration: state of play and lessons learnt

Over the last 30 years, discussions on the Single Market have often centred around the question how the Single Market can better use its potential to drive growth, jobs, innovation and convergence by removing outdated and excessively burdensome regulations that stifle businesses and consumers across product and services markets. These objectives are still at the core of the Single Market project and deserve continued attention, in addition to the potentially new role the Single Market is taking on since the COVID-19 crisis (chapter 3 further explores the latter).

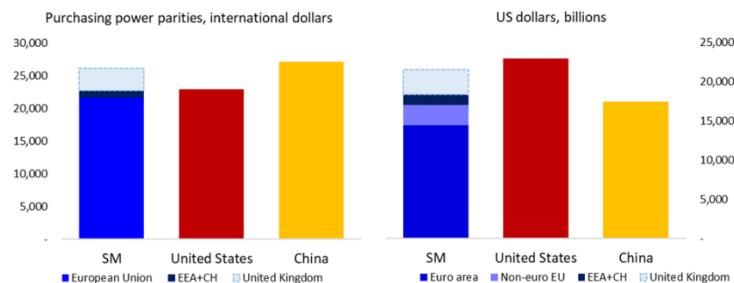
This chapter looks at two main questions: (1) Single Market integration: where does the EU stand?; (2) what has been the progress in removing barriers in services?

### 2.1. Single Market integration: where does the EU stand?

**The Single Market is one of the EU's greatest achievements.** It has spurred economic growth and made the life of European businesses and consumers easier. In addition to the EU's 27 Member States, the Single Market extends to Iceland, Liechtenstein and Norway through the European Economic Area Agreement. Switzerland has also partial access to the Single Market.<sup>5</sup>

**The Single Market is among the world's largest trading blocs.** The Single Market (EU-27) consists of almost 450 million EU consumers. Measured in purchasing power parities, the EU represents 15% of world GDP (US: 16%, China: 19%). Measured in current US dollars, the EU represents 18% of world GDP (US: 24%, China: 18%). After the withdrawal of the UK from the EU and from the Single Market, the size of the Single Market shrank by 15%. EU trade (intra and extra) represents 31% of world trade.<sup>6</sup> Generally, EU Member States trade more within the EU (18% of world trade) than with the rest of the world (13% of world trade).

**Figure 1 – Size of the Single Market vs US, China (2021, GDP)**



Source: Chief Economist Team (DG Internal Market, Industry, Entrepreneurship and SMEs) based on IMF data

<sup>5</sup> Switzerland's economic and trade relations with the EU are mainly governed by a series of bilateral agreements where Switzerland has agreed to take over certain aspects of EU legislation in exchange for accessing part of the EU's single market

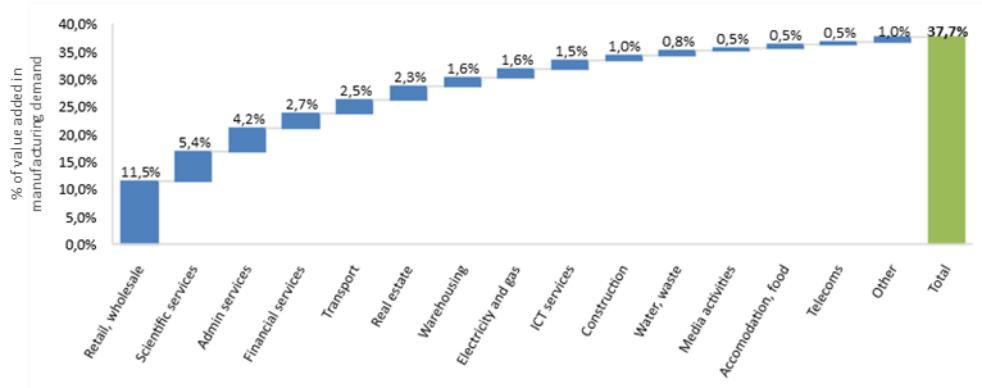
<sup>6</sup> These figures consider the average of imports and exports

**The level of “Single Market integration” is often used as a reference point to assessing the success and remaining potential of the Single Market project in the area of goods and services.** Beyond the sheer size of the Single Market (expressed e.g. in GDP or number of consumers), it is important to consider whether the Single Market is enabling a continuously stronger level of interaction (e.g. trade, investments, mobility) across national borders. While assessing integration has limitations (for example, it is not clear what the ‘ideal level of integration’ is that we should be aiming for), it has the benefit of being relevant, clear and measurable.

**Trade and cross-border establishment are two complementary channels to Single Market integration in both goods and services markets.** Often they are used sequentially by businesses as they expand across the Single Market: first they trade across borders (with lower investment risks), then they establish a permanent presence in the host Member State(s) involving more resources.<sup>7</sup> In many cases, both channels are also used together as businesses internationalise having a permanent presence in several Member States while at the same time also trading cross-border to others. While a range of different indicators and perspectives may be used to assess integration<sup>8</sup>, this chapter investigates Single Market integration by considering trade and establishment.

**The Single Market in services and goods are today strongly intertwined.** Statistical data on trade and establishment are most often gathered and presented separately for goods and services. At the same time, it is important to keep in mind that both are strongly linked with services being a fundamental input for manufacturing. Overall, almost 38% of the overall value added embedded in the demand of manufacturing industries in the EU is generated by services. Looking at specific manufacturing sectors, services value added ranges between 22% (mining and quarrying, non-energy producing products) and 44% (food products, beverages and tobacco). Services providing the highest share of value added in the overall manufacturing sector are wholesale and retail followed by professional, scientific and technical activities and administrative and support services.

**Figure 2 – Share of services value added in final demand total EU manufacturing**



Source: Chief Economist Team (DG Internal Market, Industry, Entrepreneurship and SMEs) based on TiVA 2021 data (underlying data collected in 2018). Note: “scientific services” includes professional, scientific and technical activities, “admin services” includes administrative and support services.

<sup>7</sup> See e.g. also P. Conconi, A. Sapir, M. Zanardi (2016)

<sup>8</sup> See for example LE Europe (2017) and Marinello, Sapir, Terz (2015)

### 2.1.1. Single Market integration through cross-border trade

Different perspectives can be taken to assess integration of the Single Market through cross-border trade. This section assesses trade integration in the Single Market by looking at two dimensions: (I) total trade and (II) trade in value added. For both, integration is assessed for the Single Market (intra-EU) as well as for the EU with the rest of the world.

#### (I) Total trade

**Increased intra-EU trade in goods has enabled an increasingly integrated Single Market.** Tracing back trade in goods among the 28 countries that composed the EU until 2020, trade flows have increased not only in absolute terms but also in relation to the size of the economy (as a share of GDP - Figure 3).

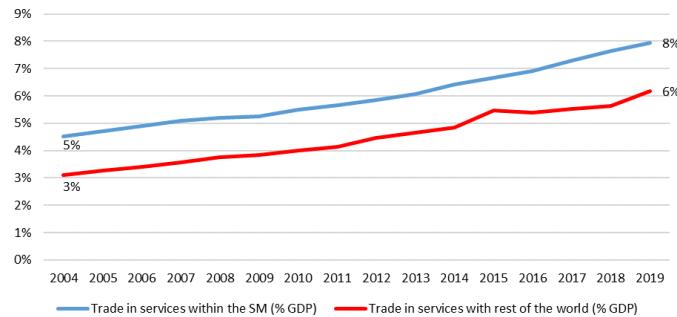
**Figure 3 – Trade in goods within and outside the Single Market (1980-2020, EU-28)**



Source: Chief Economist Team (DG Internal Market, Industry, Entrepreneurship and SMEs) based on IMF data. Note: the lines show trade flows among the 28 EU Member States (blue) and between each EU Member State and the rest of the world (red) as a share of EU-28 GDP

This indicates increasing integration within the Single Market. At the same time, the global financial crisis and the COVID-19 pandemic triggered two visible shocks to trade, which declined more than the decrease in GDP leading to (temporary) drops in integration levels. Overall, the pace of Single Market trade integration in goods has followed that of EU integration with the rest of the world.

**Figure 4 – Trade in services within and outside the Single Market (2004-2019, EU-28)**

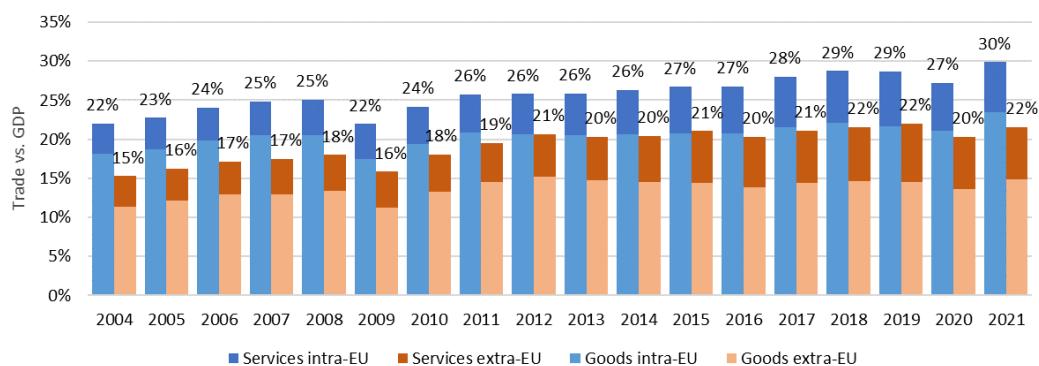


Source: Authors' calculations based on Eurostat. Note: The lines show trade flows among the 28 EU Member States (blue) and between each EU Member State and the rest of the world (red) as a share of EU28 GDP. Data until 2009 does not include Croatia. Trade in services covers manufacturing services on physical inputs owned by others; maintenance and repair services; transport; travel; construction; insurance and pension services; financial services; charges for the use of intellectual property; telecommunications, computer and information services; other business services; personal, cultural and recreational services; and government goods and services.

**Services show a similar picture of increasing integration.** Quality and availability of data on trade in services is generally lower than for goods. Nevertheless, available statistics show a relatively similar picture in terms of overall trends. Over the last 15 years, trade integration in services for the EU-28 increased both within the Single Market as well as with the rest of the world (Figure 4).

**Overall, the Single Market continues to be the main source of total trade for the EU economy even following the withdrawal of the UK.** While Figure 3 and Figure 4 assessed long-term integration trends for EU-28, Figure 5 considers integration for EU-27. Intra-EU trade integration continues to exceed extra-EU trade integration.

**Figure 5 – Trade integration intra-EU and extra-EU (trade vs GDP, 2010-2021, EU-27)**



Source: Authors' calculations based on Eurostat

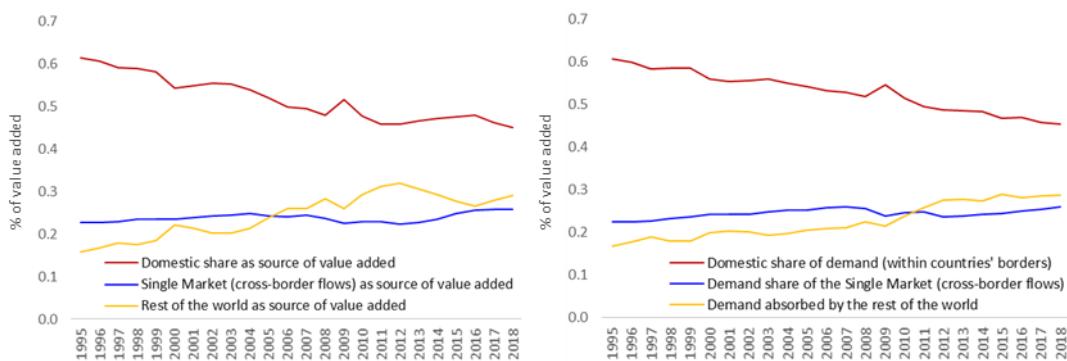
This is mainly driven by intra-EU trade in goods, which remains at significantly higher levels than extra-EU trade in goods. At the same time, intra-EU trade in services has been overtaken by extra-EU trade in services driven in particular by the withdrawal of the UK from the Single Market (and the relative importance of EU-UK trade in services such as financial services and IT services).

**Intra-EU trade integration in services continues to be below integration in the area of goods.** Despite the much larger size of the EU services market, intra-EU trade in goods is significantly higher than intra-EU trade in services. While the services Single Market is slowly integrating further, there is no clear catching up with goods. Policymakers, researchers and stakeholders have made this argument (lower trade integration for services) repeatedly to advocate for the need to step up efforts towards further advancing the Single Market for services. While this conclusion is not necessarily wrong, the indicators based on trade used may present only a partial picture of the services Single Market given that they disregard the role of cross-border establishment. Section 2.1.2 explores this further, as well as different possible reasons for this trend.

## (II) Trade in value added

Trade in value added provides a complementary way to look at trade integration within the Single Market. It takes into account the value of intermediate goods that contributes to creating the total value added produced and sold by a country trading a given product.<sup>9</sup> This is an interesting way of accounting for each step in international value chains through which value is produced. It provides a more accurate picture of where value is created and where the ultimate source of income eventually consumed is located.<sup>10</sup>

**Figure 6 – Relative shares of the Single Market as a Source of Value Added (left) and of Final Demand (right) (goods, 1995-2018)**



Source: Chief Economist Team (DG Internal Market, Industry, Entrepreneurship and SMEs) based on OECD TiVA data. Note: data available only until 2018.

**The importance of the Single Market has increased as a source of value added (supply and demand) in the area of goods.** On the supply side (Figure 6, left), the contribution of domestic flows (i.e. within a single Member State) as source of value added in EU production has been constantly decreasing. At the same time, the relative importance of cross-border trade flows of industrial goods within the Single Market has slightly increased. Today, Single Market flows account for more than 25% of the total value added of EU production. A similar picture can be seen on the demand side (Figure 6, right). The relative contribution of domestic flows in terms of final demand to absorb and pay for the total value added produced in the EU has been decreasing, while the importance of the Single Market has increased.

**What has increased the most, nevertheless, is the relative importance of trade flows in goods with the rest of the world.** While such flows accounted for less than 16% of total value added produced in 1995, they increased to around 29% in 2018. Also on the demand side, trade flows with the rest of the world were at the end of the period more relevant than internal trade within the Single Market, absorbing 29% of total EU production.

**The increasing integration of international value chains over the last decades plays a key role explaining this trend.** The difference between total trade (more integrated inside

<sup>9</sup> Traditional measures of trade measure total flows of goods and services crossing a border, including the cost of inputs and the value added by each country. As a result, this leads to double counting. Trade in value added provides an alternative, measuring only the value added (e.g., compensation of labour, profits) by each country across the value chain.

<sup>10</sup> The OECD publishes the "Trade in Value Added" database, which provides such data calculated with input-output tables and covers all EU economies plus the most relevant trade partners, for a period of twenty-four years between 1995 and 2018. Data on the bilateral trade flows of industrial goods between pairs of countries is used, in particular looking at the share of value added produced by one country in the total final demand for industrial goods of its partner country.

than outside the Single Market) and trade in value added (pointing to an inverse relative importance) shows that, while final products tend to be traded more freely within the Single Market, the source of value added embedded in those final products increasingly originates from third countries. This does not necessarily imply a failure of the Single Market. It is rather linked to the decomposition of production in different countries along integrated international value chains, in the context of decades of institutional and technological changes leading to globalization<sup>11</sup> and an increasingly interdependent world.

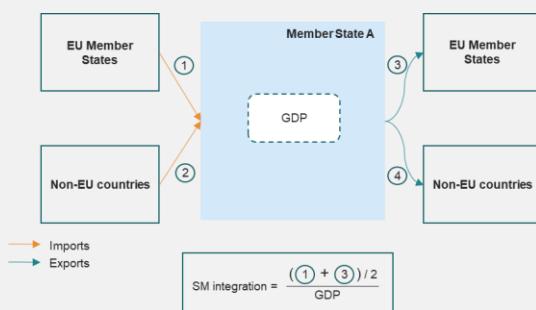
### 2.1.2. Single Market integration through establishment

**Cross-border establishment<sup>12</sup>** is another important channel of integration, particularly in the area of services. Traditional indicators of Single Market integration consider the evolution of cross-border trade contrasted with the evolution of the economy's overall economic size (expressed e.g. in GDP). This approach is straightforward, with data available on a timely basis. Still, beyond trade, it is important to consider also the perspective of cross-border establishment (see box 1). This is particularly relevant for those activities (notably services) where cross-border expansion is (more) likely to take place through establishment rather than cross-border trade.

#### **Box 1 – Assessing integration taking into account both trade and establishment**

Traditional indicators of integration comparing trade to value added (Figure 7) present some weaknesses. For example, they disregard the role of cross-border establishment as a key channel of Single Market integration, particularly important in the area of services. This is notably the case for a number of services for which proximity to the market is still an essential feature (e.g. construction, parts of retail). In addition, the indicators to some extent compare "apples" (trade measured in turnover or gross output) and "oranges" (value added, GDP). As increasingly complex EU supply chains likely lead to an increase of intra-EU trade in intermediate products and "re-exports", the ratio of trade to value added is not stable. This may provide a distorted picture of the evolution of trade integration over time.

**Figure 7 – Traditional indicator of Single Market integration**



Source: Authors' elaboration

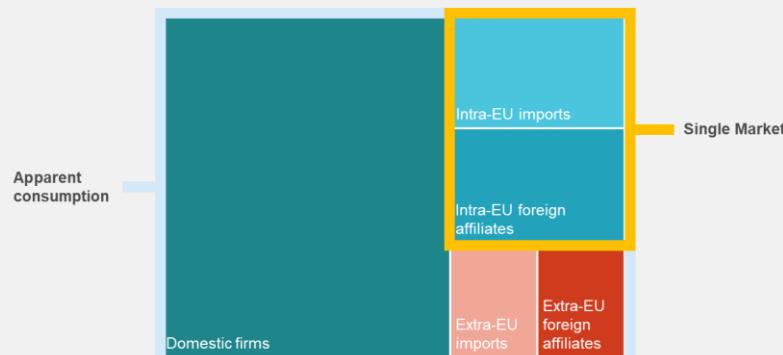
An alternative approach to measuring Single Market integration taking into account trade and establishment has been presented in Smith (2015<sup>13</sup> and recently updated<sup>14</sup>).

<sup>11</sup> G. Sachs (2020). For the specific technological and organizational changes spurring globalization, see D. Bernhofen, Z. El-Sahlili and R. Kneller (2016).

<sup>12</sup> Setting up a presence in the host Member State such as a branch, office or subsidiary

<sup>13</sup> Peter M. Smith (2015)

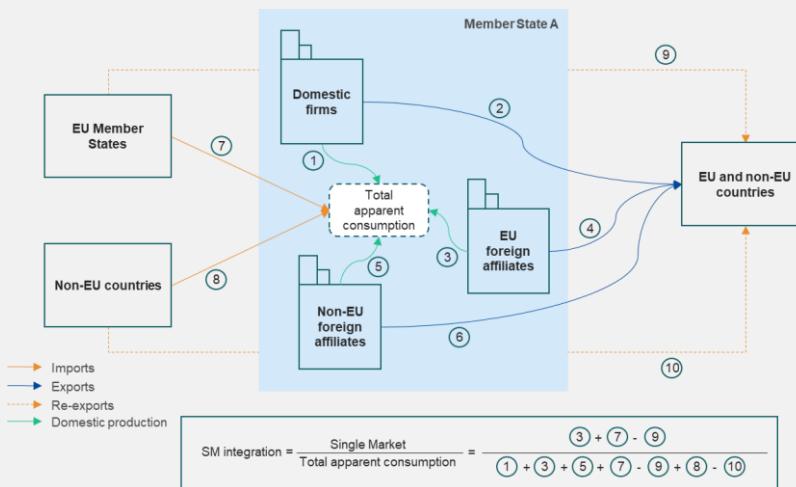
**Figure 8 – Single Market integration through intra-EU trade and establishment**



Source: Authors' elaboration based on Smith (2015)

The main idea behind this measurement of integration is to capture how much of the Single Market is provided by intra-EU establishment and intra-EU trade compared to the share provided by domestic firms (Figure 8). Such measurement of integration requires taking into account different national, intra-EU and extra-EU flows (see Figure 9) in order to estimate (1) 'apparent' consumption and (2) intra-EU imports and sales of EU foreign affiliates that are directed to this apparent consumption.

**Figure 9 – More refined approach to measuring Single Market integration**



Source: Authors' elaboration based on Smith (2015)

Trade is captured by data on imports and exports in goods and services, while establishment can be captured through data on activities of foreign affiliates.<sup>15</sup> Together, this allows estimating market integration as defined by Smith (2015) as follows:

$$Single \text{ Market} \text{ integration} = \frac{Intra \text{ EU} \text{ imports} (- re \text{ exports}) + Domestic \text{ sales} \text{ intra EU} \text{ affiliates}}{Apparent \text{ consumption}}$$

This method of assessing integration nevertheless comes at a cost. Part of the data required to carry out this assessment is incomplete, insufficiently granular and outdated (notably as

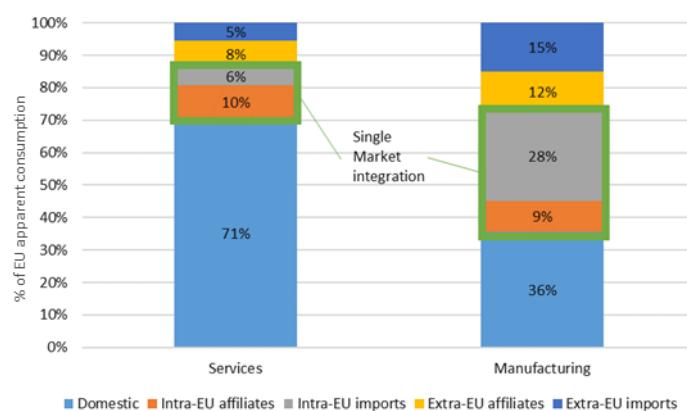
<sup>14</sup> Peter M. Smith (2022)

<sup>15</sup> See Smith (2015, 2022) for further details on methodology

regards data on activities by foreign affiliates). There is a need for more comprehensive macro and micro data on the functioning of the Single Market, notably in the area of services. This is a long-standing request from the research community despite ongoing improvements<sup>16</sup>.

**Differences in integration between services and goods are less striking when taking into account establishment in addition to cross-border trade.** Section 2.1.1 highlighted the strong differences in integration between goods and services when considering cross-border trade. However, using the approach of measuring integration described in box 1 gives a somewhat different picture (Figure 10).<sup>17</sup> While integration in goods is still significantly stronger than in services, the difference is less striking: intra-EU trade and intra-EU establishment together represent 16% and 37% of apparent consumption for services and goods respectively. The relative importance of intra-EU cross-border establishment appears similar for services and manufacturing. The difference in Single Market integration is almost exclusively driven by cross-border trade, which is much more intense for goods than for services. In addition, a single indicator on integration in services hides also a large variety among different individual services sectors.

**Figure 10 – Single Market integration services vs. goods taking into account trade and establishment**



Source: Authors' calculations based on Eurostat data and approach by P. Smith (2015) with some adaptations. Note: 2018 data used (latest available with relatively complete data) for EU-27. Integration levels appear nevertheless fairly stable over time. Integration for services is estimated based on available data.

**Indeed, there is a wide variety of Single Market integration levels across different services.**<sup>18</sup> Figure 11 shows integration levels seen across a selection of specific services sectors. Highly integrated sectors are 4 to 5 times more integrated than services with lower levels of integration. This allows identifying broadly four categories:

- Services markets with low Single Market integration, still strongly dominated by domestic providers. This includes, for example, construction and a number of highly

<sup>16</sup> Such as the ongoing project on statistics on Services Trade by Enterprise Characteristics (<https://ec.europa.eu/eurostat/web/experimental-statistics/stec>)

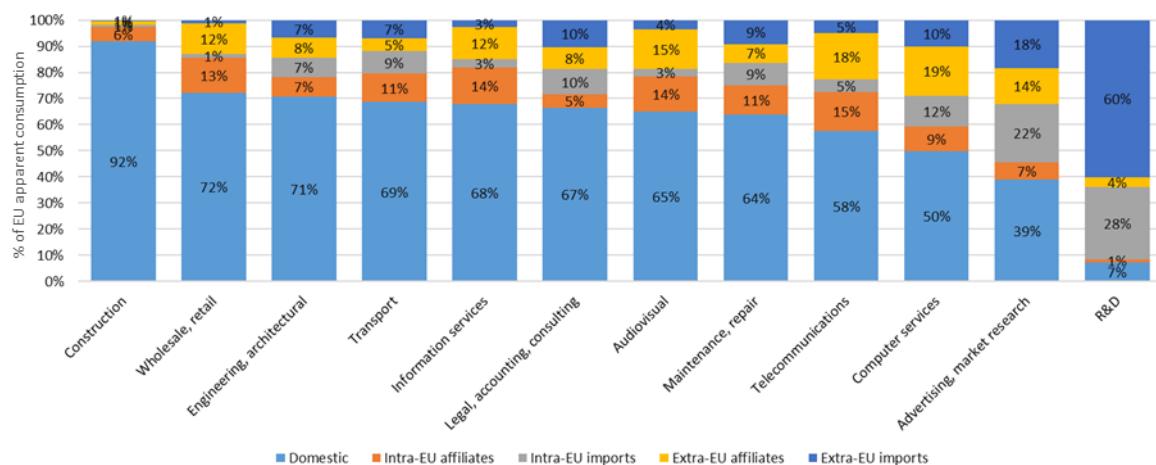
<sup>17</sup> The results presented in this section are based on the general approach presented by Smith, with a number of adaptations (e.g. use of more recent data, data used for EU-27, use of a different correspondence table developed by Eurostat linking statistics on trade in services with statistics on foreign affiliates)

<sup>18</sup> See e.g. also E. Rytter Sunesen, M. Hvidt Thelle (2018)

regulated business services. Both cross-border services and establishment play a relatively minor role in overall EU consumption for these services;

- Services markets mainly integrating through establishment. This is the case for several services. While for some this could be expected given the continuing requirement for proximity between supplier and user (e.g. retail, wholesale despite growing e-commerce), for others it is more unexpected (e.g. information services and audio-visual services);
- Services markets mainly integrating through cross-border trade. This is the case, for example, for R&D services;
- Services markets integrating through both trade and establishment. This is the case for a number of more integrated services such as advertising and market research services as well as computer services.

**Figure 11 – Single Market integration services**



Source: Authors' calculations based on Eurostat data and approach by P. Smith. Note: 2018 data used for EU-27 (EU-28 data is used for R&D). Integration levels appear nevertheless fairly stable over time.

**Whereas some services are true European (and international) markets, others are still to a large extent segmented across national borders.** This picture shows us that the Single Market in services is in fact a wide variety of sectors with very different degrees of integration. The potential for integration likely differs depending on the specific nature of the service concerned. For example, IT services are more easily traded than construction services as the latter requires physical proximity to the client. In addition, language differences and/or the importance of having a deep understanding of national regulatory systems and practices have a stronger impact for certain services than for others. Finally, it is clear that not all services providers, particularly micro and small companies, have the ability or ambition to be active across more than one Member State.<sup>19</sup> In other words, the achievable level of integration likely has certain limits and lies well below 100%.

**Still, there seems to be unexploited potential.** The inherent characteristics of certain services possibly limiting the potential of cross-border activities may not fully explain the large differences in integration currently seen across different services. For example, in some sectors where physical proximity is still relevant more integration through cross-border

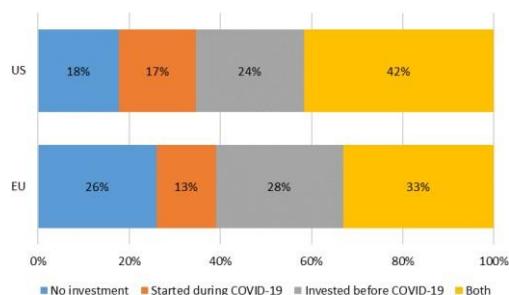
<sup>19</sup> For example, more than 90% of EU businesses active in construction or professional services are micro firms

establishment could have been expected. In addition, high regulatory and administrative complexity is often seen in those services with limited integration such as construction, retail and professional services (this is explored further in chapter 2.2). Finally, it appears that the potential of increasingly available digital tools and platforms is underexploited when it comes to deepening the services Single Market.

**Digitisation (or a lack thereof) of EU businesses may indeed be an important driver explaining the low level of integration in a number of services.** Digitisation has reduced the cost of doing business across borders, allowing providers to use digital technologies to interact more easily with customers and suppliers, adopt new and more flexible business models and achieve productivity gains. Altogether, whereas services are traditionally considered less easily traded cross-border than goods digitisation is closing down this gap.<sup>20</sup>

**At the same time, EU firms lag behind digitisation compared to US ones.** Generally, the share of firms using advanced digital technologies is higher in the US than in the EU. In addition, EU firms lost further ground during COVID-19 with 46% of EU firms having taken action to digitalise during the COVID-19 crisis, in comparison with 59% of US firms. More than one out of four EU businesses are still not significantly investing in digitalisation.

**Figure 12 – Adoption of digital technologies**



Source: Authors' elaborations based on EIB: "Digitalisation in Europe 2021-2022". Note: Blue stands for no investment being made in the use of digital technologies. Orange stands for firms having started investments as a response to COVID-19. Grey stands for firms having invested prior to COVID-19. Yellow stands for firms having invested before and during COVID-19.

**This EU-US digitisation gap is particularly important for smaller companies and specific services sectors such as construction.** The differences are particularly important for micro and small firms (46% of EU micro firms have not adopted digital technologies, compared to 33% in the US).<sup>21</sup> Also in important services such as construction, the EU appears to be far behind the US in terms of digitisation (43% of EU construction firms have not adopted digital technologies, compared to 17% in the US). Challenges that prevent the EU construction ecosystem from reaching widespread implementation of the digital technologies across its value chain have already been identified, in particular for SMEs.<sup>22</sup>

<sup>20</sup> Firms that adopt new digital technologies have also a higher probability of being internationalised, as established for example in M. Teruel Carrizosa et al. (2021)

<sup>21</sup> EIB (2021)

<sup>22</sup> European Construction Sector Observatory (2021)

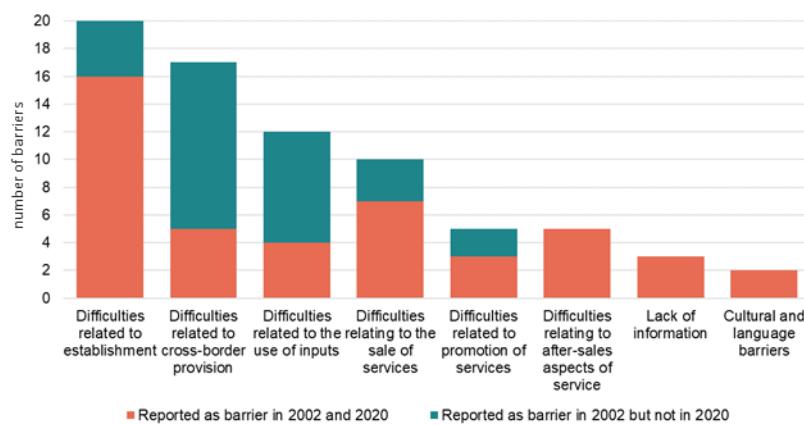
## 2.2. Progress in removing services barriers

This chapter focuses specifically on progress in removing barriers for the services Single Market.<sup>23</sup> The focus on services as the area with most untapped potential seems justified given the economic importance of services; the relatively low levels of integration seen in a number of important services markets; feedback from stakeholders highlighting the existence of many persisting obstacles in services; the impact of the UK's withdrawal on the EU services market; and the increased integration and hence importance of services into manufacturing output<sup>24</sup>. The purpose of this chapter is to (1) provide a simplified snapshot of progress achieved in removing barriers in services over the last 20 years as well as (2) highlight a number of possible lessons learnt as regards success formulas of EU policies as well as approaches that have been possibly less effective.

### ***Progress in removing services barriers (from 2002 to 2020)***

Two Commission reports on Single Market barriers provide a good basis for comparison allowing to assess progress achieved over 20 years. In 2002<sup>25</sup> and 2020<sup>26</sup> the Commission published reports on Single Market barriers that, despite being 20 years apart, took a very similar approach. Both provided a comprehensive inventory of barriers preventing the proper functioning of the Single Market and holding back the EU economy. In addition, the reports both took a business perspective assessing barriers across the "business journey" (from acquiring information on applicable rules to providing after-sales services). Furthermore, they are based on qualitative feedback by businesses on remaining obstacles and their impact. Altogether, a comparison between these two reports allows for at least an indicative assessment of the main trends regarding barriers removed and barriers persisting.

**Figure 13 – Progress in removing identified services barriers**



Source: Authors' elaborations based on COM(2002)441 and SWD(2020)54. Note: graphs shows the number of barriers identified in the 2002 report and progress achieved in comparison with the 2020 report.

Figure 13 shows progress achieved in removing barriers between the two reports. The 2002 report assessed the existence of barriers in services across eight stages of the business journey. In total, the report identified around 75 types of different barriers that were

<sup>23</sup> This does not imply an absence of Single Market obstacles in the area of goods (as discussed e.g. in SWD(2020)54)

<sup>24</sup> See also e.g. Technopolis, Dialogic, University of Cambridge, Cambridge Services Alliance (2018)

<sup>25</sup> COM(2002)441

<sup>26</sup> SWD(2020)54

highlighted by stakeholders as important and impactful. Figure 13 analyses to what extent these barriers have again been raised by stakeholders in the context of the 2020 report (details on this analysis and the comparison between the 2002 and 2020 reports can be found in annex 1). This “simple” comparison needs to be interpreted with caution as it faces a number of limitations. First, while certain barriers may have been reported by stakeholders as important in 2002 and again in 2020 this does not necessarily imply a complete lack of progress in reducing these obstacles or simplifying them.<sup>27</sup> In addition, although both reports have a similar approach, there are methodological differences notably in collecting input from stakeholders on remaining barriers. Furthermore, the reports are mainly based on perceptions and qualitative statements provided by businesses. This may result in overstating the importance of certain obstacles and overlooking others. For example, businesses in Member States that joined the EU after 2002 may potentially perceive a larger or different set of barriers. Finally, the comparison does not consider new obstacles that may have been introduced since 2002. Despite these important caveats, the comparison between both reports still allows drawing attention to a number of interesting issues.

**The overall result shows that progress has been made, but many services barriers appear to be persisting.** Around 60% of barriers reported in 2002 are again reported by service providers as important obstacles in 2020. For the large majority of these obstacles some improvements have likely been achieved over 20 years (although falling short of completely eliminating the obstacle), for example following the adoption and implementation of the Services Directive and the Professional Qualifications Directive. Therefore, overall progress is likely underestimated using this approach. At the same time, one could have expected (or hoped) that a larger number of barriers would have been completely removed or no longer presenting an important burden for businesses. The common perception of lacking progress in removing barriers in services appears therefore accurate. A number of other recent assessments have confirmed this general lack of progress in removing barriers in the area of services (annex 2 provides further details on this). Together, this explains the repeated requests by stakeholders to go further in improving the Single Market in services.<sup>28</sup>

**This also highlights the complexity of “completing” the Single Market in services.** The types of obstacles commonly reported by service providers in both reports are often related to a large quantity and variety of national rules, administrative procedures and generally business environment including at a multitude of regional and local levels. Addressing these obstacles is a significant task and there are likely limits to what can be achieved at EU level only. While the EU may facilitate, Member States have a primary role in addressing these remaining barriers.

***Examples of “success formulas” in EU policies and potentially less successful approaches or difficulties in removing obstacles in services***

**The comparison between the 2002 and 2020 reports allows also drawing a number of possible lessons learnt.** It gives indications to identify a number of examples of potential “success formulas” that have resulted in effectively removing obstacles to the services Single Market as well as approaches that have been possibly less effective.

**First, a number of examples of successful approaches can be identified.** These include:

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<sup>27</sup> This is the case, for example, for barriers related to professional qualifications. While raised by service providers in both reports, significant progress has been made notably in the context of implementing the Professional Qualifications Directive.

<sup>28</sup> See for example the joint Industry Statement on the Single Market of June 2022

*Example 1: Clear harmonised rules banning (“black listing”) certain obstacles*

EU rules banning certain obstacles is the most obvious way of addressing Single Market barriers. Such rules have allowed removing a number of important Single Market barriers. This has been the case, for example, for national rules requiring service providers to have a certain nationality or local residence in the host Member State. Following the introduction of EU rules banning such requirements<sup>29</sup>, they have to a very large extent been removed by Member States and were no longer reported by service providers as pressing problems in 2020.

At the same time, the degree of harmonisation in the area of services remains limited. This in stark contrast with goods, where a large part of the Single Market has already been harmonised (products subject to harmonisation represent broadly 80% of intra-EU trade in goods) – a key factor in developing a proper Single Market for goods with an unhindered flow of goods across national borders. In addition, most of the instruments that have introduced common EU rules in services follow an approach of minimum harmonisation allowing Member States to go beyond these rules (leaving room e.g. for gold-plating at national level).

*Example 2: Strict provisions leaving limited room for interpretation by national authorities*

The introduction of such provisions explains, for example, the significant progress made in reducing barriers for temporary cross-border providers. While these were still highlighted by service providers early-2000 as very important, they appear to be less pressing 20 years later. This is likely resulting from the introduction of EU rules currently leaving limited margin of manoeuvre for Member States to impose their domestic rules on such temporary cross-border providers.<sup>30</sup>

*Example 3: Prevention of obstacles*

The comparison between both reports (2002 and 2020) does not explicitly assess the extent to which additional services barriers were introduced by Member States. While several analyses<sup>31</sup> do highlight this (i.e. the introduction of new rules or tightening of existing ones) as being an important issue, it is also clear that different instruments aiming to prevent such new obstacles from emerging have had a positive impact.

The Single Market Transparency Directive<sup>32</sup> aims to prevent regulatory barriers arising for products and information society services. National authorities notify their draft rules in those fields, enabling the Commission and Member States to react to potential barriers to the free movement of products and the provision of information society services. The Directive is implemented intensively<sup>33</sup> and has enabled information exchange, dialogue and cooperation hereby successfully preventing the creation of barriers to the Single Market. A more recent example is the Proportionality Test Directive<sup>34</sup>, which aims to prevent new barriers in the area of professional services by requiring new national professional regulations to be subject to a thorough assessment and proof of proportionality. Finally, the notification procedure under the Services Directive aims to prevent the creation of discriminatory, unjustified or

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<sup>29</sup> Services Directive (art 14)

<sup>30</sup> See for example Services Directive (art 16) and Professional Qualifications Directive (art 5-9)

<sup>31</sup> See e.g. COM(2021)385

<sup>32</sup> Directive (EU) 2015/1535

<sup>33</sup> For example, thousands of draft notifications have been submitted since its start and all notifications together have generated several millions of views

<sup>34</sup> Directive (EU) 2018/958

disproportionate barriers to the services Single Market. Despite the benefits of this notification mechanism, it nevertheless has also a number of deficiencies<sup>35</sup> and the Commission in 2020 withdrew its proposal for a revised (and improved) procedure.

*Example 4: Targeted enforcement of existing rules*

The Commission recently highlighted that remaining barriers within the Single Market are in many cases due to the incorrect or incomplete application of EU Treaties and legislation.<sup>36</sup> While infringement procedures have limitations (e.g. they take time and can only focus on a few more isolated cases), they can be effective in solving specific barriers with strong negative impact on the Single Market. For example, the 2022 Annual Single Market report<sup>37</sup> highlighted infringements launched under the Professional Qualification Directive to address restrictive regulation of professions and issues related to recognition procedures covering services such as accountants, tax advisers, architects, lawyers, doctors, veterinarians and pharmacists. Another recent example includes the infringement package launched under the Services Directive as regards Member States' points of single contract (PSC), which have allowed advancements towards better functioning PSCs.

*Example 5: Policies facilitating and supporting national authorities to play their part as "managers" of the Single Market*

As shown above, many of the remaining barriers are related to a large variety of national rules and procedures (including at regional and local levels). This highlights that Member States' authorities play a central role when it comes to ensuring a functioning Single Market.<sup>38</sup> Different EU policies already today support Member States in their role of managers of the Single Market, including through more intensive interaction and collaboration across national authorities.

On the one hand, ad-hoc discussions between Member States on identifying and removing priority Single Market obstacles (such as the Single Market Enforcement Task Force - SMET) have shown to work. Launched in 2020, SMET allows for discussions and coordinating efforts among Member States and the Commission to find solutions for the most pressing Single Market obstacles. It initially played an active role in addressing COVID-19-related obstacles hindering smooth functioning of the Single Market. Currently, SMET is addressing systemic barriers to the Single Market<sup>39</sup>, with concrete progress already achieved in reducing barriers (e.g. in the area of professional qualifications).

In addition, different tools support more active collaboration between national authorities in the day-to-day management of the Single Market. This benefits cross-border service providers (e.g. better application of the mutual recognition principle in services) but also national authorities themselves (e.g. more sharing of information allowing for more effective supervision of service providers). An important example is the Internal Market Information

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<sup>35</sup> See SWD(2016)0434

<sup>36</sup> COM(2022)518

<sup>37</sup> SWD(2022)40

<sup>38</sup> This is highlighted also e.g. in J. Pelkmans (2019)

<sup>39</sup> Such as cross-border restrictions for professionals (prior checks of qualifications for temporary and occasional service provision and excessive document requirements); measures with potential protectionist effects in the agri-food sector; national certification schemes in construction services sector and restrictions related to non-harmonised construction products; excessive administrative burdens associated with the posting of workers; and availability of insurance for temporary and occasional services providers

system, supporting intensive cross-country collaboration including in the area of professional qualifications.<sup>40</sup>

**Second, lack of progress in removing certain obstacles also allows identifying a number of potentially less successful approaches and possible drivers behind a lack of progress.** These include, for example:

*Example 1: EU law leaving a large degree of interpretation to Member States (“grey zones”)*

This is for example the case for rules requiring Member States to assess the necessity and proportionality of national requirements. In practice, such rules have led to very divergent interpretations across Member States, with some removing obstacles and others leaving the same obstacles in place. This applies to a large range of obstacles reported by businesses as important and persisting obstacles in both reports (e.g. quantitative restrictions, tariffs, restrictions on multidisciplinary activities, etc.).<sup>41</sup>

Further harmonisation of rules may in theory offer a potentially large impact in terms of removing obstacles and facilitating cross-border provision in the area of services. However, there may be limitations to this. For example, the EU may have only limited competences to regulate on certain issues (e.g. social security rules). In other areas, the Treaty requires unanimity (e.g. taxation). In addition, there appear to be political limitations to what can be achieved (or agreed to among Member States) in practice.<sup>42</sup>

*Example 2: Reform guidance provided to Member States*

Linked to the previous point, the Commission has tried to address this lack of clarity in EU law by providing Member States with reform guidance. Such guidance has been targeted to a wide number of service areas, including for example as regards national rules on regulated professions, national legislation on retail establishment and operations as well as more generally the country specific recommendations on services markets made in the context of the European Semester. While this has led to some progress in specific areas, overall success of such reform recommendations has been limited despite large efforts on the side of the Commission.<sup>43</sup>

*Example 3: Rules based on general high-level principles*

For example, the persisting complexity faced by service providers when posting workers across the Single Market could be linked to the generic nature of EU rules<sup>44</sup> on national procedures and formalities for posting of workers. Obstacles in the area of posted workers as well as their underlying drivers and impact are further developed in annex 3.

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<sup>40</sup> See e.g. [https://europa.eu/youreurope/citizens/work/professional-qualifications/european-professional-card/index\\_en.htm](https://europa.eu/youreurope/citizens/work/professional-qualifications/european-professional-card/index_en.htm)

<sup>41</sup> For example, Article 15 of the Services Directive requires Member States to assess the necessity, proportionality and non-discriminatory nature of requirements such as tariffs, legal form, shareholding restrictions, etc.

<sup>42</sup> For example, the latest substantial package of legislative initiatives by the Commission on the services Single Market in 2017 was partially unsuccessful despite their fairly limited level of ambition (e.g. they did not involve any significant harmonisation efforts)

<sup>43</sup> Other analyses (such as M. Egan (2020)) have highlighted such piecemeal reforms by Member States (including due to domestic political resistance) as an important problem for the Single Market

<sup>44</sup> See Enforcement Directive (Article 9(4): “Member States shall ensure that the procedures and formalities relating to the posting of workers pursuant to this Article can be completed in a user-friendly way by undertakings, at a distance and by electronic means as far as possible”)

#### Example 4: Areas requiring substantial investments

The EU budget is providing support in specific areas to close gaps, remove bottlenecks and technical barriers, as well as to strengthen social, economic and territorial cohesion in the EU.<sup>45</sup> At the same time, service providers continue to raise as important obstacles issues such as insufficient access to information, heavy administrative procedures, lack of digital procedures and slow legal procedures. These types of barriers can typically not be addressed by “simply” removing or changing national rules. Instead, they often require substantial and sustained investments at the level of Member States to improve the overall national business environment for service providers including cross-border ones.

#### Example 5: Areas requiring substantial human resources and competences including at regional and local level

For example, Member States’ authorities are required to work together and exchange information on various areas of the Single Market (from mutual recognition to market surveillance). This is essential for the Single Market to function smoothly. It nevertheless requires human resources and competences not only at national level but also at the level of regional and local authorities. While this works well in certain areas, generally service providers raise a lack of cooperation across national authorities as a persisting and important problem.

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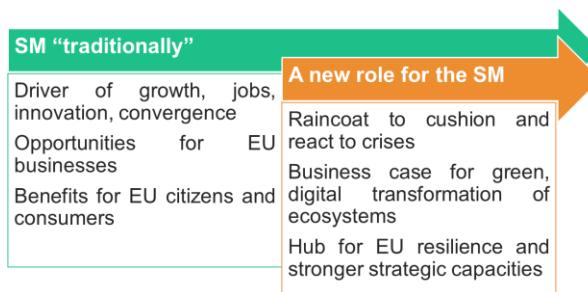
<sup>45</sup> A few examples include the EU’s Common Agricultural Policy (EUR 387 billion over 2021-2027) to support and stabilise the EU’s agricultural Single Market; the Connecting Europe Facility (EUR 30 billion over 2021-2027) to support investments in developing the transport Single Market; the Single Market programme (EUR 4 billion over 2021-2027) to support and strengthen the governance of the Single Market; Horizon Europe (EUR 96 billion over 2021-2027) to enable collaboration and strengthen the impact of research and innovation across the Single Market; and generally EU cohesion policy instruments (EUR 392 billion over 2021-2027) to accompany Single Market integration by correcting imbalances between countries and regions.

### 3. Role of the Single Market as driver of EU resilience

#### 3.1. Single Market and resilience: from emergencies to long-term capacities

The COVID-19 crisis and the Russian invasion of Ukraine have brought to light a new role for the Single Market as driver of EU resilience. This has shown that the Single Market can go beyond its more “traditional objectives” of creating growth, jobs and benefits for citizens and consumers. It is clear today that the Single Market is also the EU’s main driver of resilience, both in the short- and in the long-term.

**Figure 14 – Evolving role of the EU Single Market economy**



Source: Authors' elaborations

In the short-term, the Single Market acts as the EU’s raincoat in case of a crisis causing major shocks to demand or supply, affecting EU industries and fragmenting the Single Market. The pandemic showed the fragility of the Single Market (e.g. unilateral export restrictions imposed by Member States). At the same time, it also highlighted the power of the Single Market (e.g. handling the supply crisis of personal protective equipment or scaling up COVID-19 vaccine production). The Commission proposal for a Single Market Emergency Instrument<sup>46</sup> aims to leverage this power of the Single Market to anticipate and react to the next crisis, establishing a crisis management framework to pre-empt and limit the impact of a potential crisis on the EU’s industry and economy.

In the long-term, the Single Market provides the platform to addressing strategic dependencies and extending capacities for the green and digital transformation of the EU’s industrial ecosystems. Since the start of the COVID-19 pandemic, the Commission, Member States and stakeholders have stepped up efforts to map out the EU’s strategic dependencies, assess related risks and take relevant measures to address them. For example, the Commission presented two comprehensive reviews in the context of the updated Industrial Strategy.<sup>47</sup> This has allowed identifying strengths (“capacities”) and weaknesses (“dependencies”) of the EU vis-à-vis the rest of the world across industrial ecosystems.

Responding to these identified strategic dependencies and the risks they entail, the EU has been rolling out a range of different policy actions. In areas such as batteries, semiconductors, raw materials and solar panels, EU policy to address strategic

<sup>46</sup> COM(2022)459, COM(2022)461, COM(2022)462

<sup>47</sup> SWD(2021)352, SWD(2022) 41

dependencies builds on a number of key pillars such as: (1) creating partnerships (among industry, research, public authorities and global partners where appropriate); (2) identifying project pipelines to build EU capacities; (3) mobilising private and public funding; (4) and addressing regulatory challenges.

**Figure 15 – EU policy to address strategic dependencies and strengthen capacities**



*Source: Authors' elaborations*

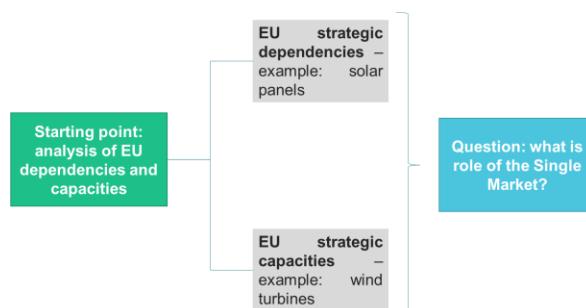
**The Single Market provides the platform and scale for these policy actions to be successful.** Although not always explicitly acknowledged, the success of these EU policies addressing dependencies and building capacities relies on a functioning Single Market, allowing for a free flow of relevant goods and services. The following chapters develop this role of the Single Market as driver of EU resilience further:

- Chapter 3.2 describes how the Single Market operates today in areas of dependencies and capacities. It does so on the basis of a case study for wind and solar technologies, highlighting also what role the Single Market may play in the future for these areas;
- Chapter 3.3 highlights how and in what areas the Single Market can further strengthen its role of resilience driver.

### 3.2. The Single Market and strategic dependencies / capacities: the example of wind and solar

**The aim of this chapter is to shed further light on how the Single Market operates in relation to EU strategic capacities and dependencies.** It describes the role of the Single Market for areas of dependency and capacity, focusing on two examples of critical technologies for the EU's energy transition: wind energy (where the EU has strong "capacities") and solar PV (where the EU faces strong "dependencies").

**Figure 16 – Role of Single Market in relation to dependencies and capacities**



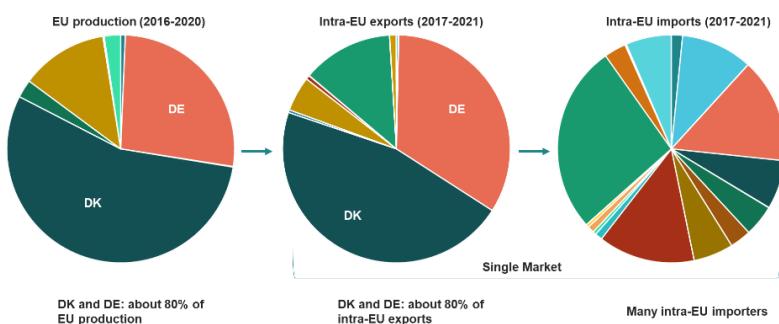
*Source: Authors' elaborations*

## **The Single Market plays a key role today both for situations of dependency and capacity**

Different analyses have pointed to the relatively stronger and more dependent position of the EU in the area of wind and solar PV, respectively.<sup>48</sup> Whereas the EU has a more robust position (i.e. strategic capacity) when it comes to wind turbines, it is highly import reliant (from China) for the supply of solar panels and relevant components (i.e. strategic dependency).<sup>49</sup> Annex 4 provides further details.

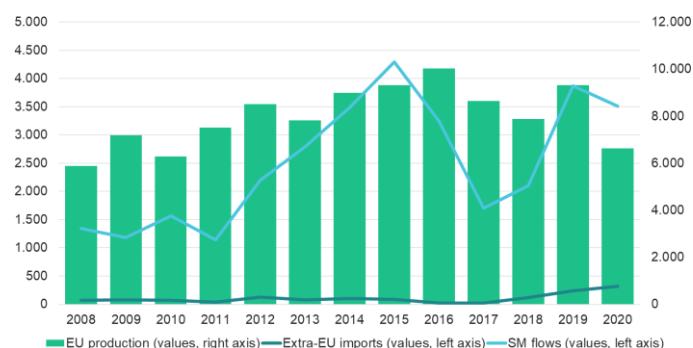
**The Single Market plays a key role today in the area of wind turbines.** EU production of wind turbines is fairly concentrated in a limited number of Member States (most notably DK and DE, see Figure 17). The Single Market plays a key role in offering these EU producers sufficient scale and ensuring the diffusion of wind energy products and technologies across the EU. This also explains that as EU production increases (decreases), intra-EU imports and exports also increase (decrease). Figure 18 highlights this correlation between EU production and Single Market flows, while extra-EU imports are at very low levels and appear not significantly linked to the evolution of intra-EU flows.

**Figure 17 – Wind: concentration in EU production explains high intra-EU trade**



Source: Authors' calculations based on estimates using available data in Eurostat (Prodcom, Comext). PRODCOM data for 28112400, trade data for HS 850231.

**Figure 18 – Wind: Single Market flows are linked to EU production**



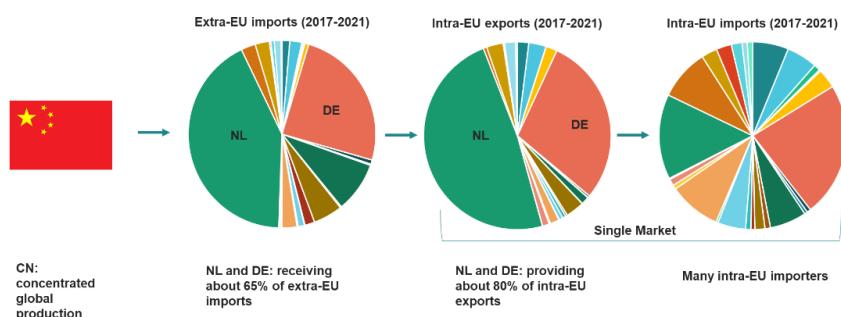
Source: Authors' elaborations based on Eurostat (Prodcom, Comext). Note: Correlation coefficient between SM flows and EU production is +0.62 (2008-2020). Values in million EUR.

<sup>48</sup> See for example SWD(2022)41

<sup>49</sup> It should nevertheless be noted that the EU is furthermore dependent on different raw and processed materials that are used for the manufacturing of solar panels (e.g. silicon) but also wind turbines (e.g. rare earths, permanent magnets). This may give rise to possible supply chain disruptions as well (see A. Amaral et al. (2022)).

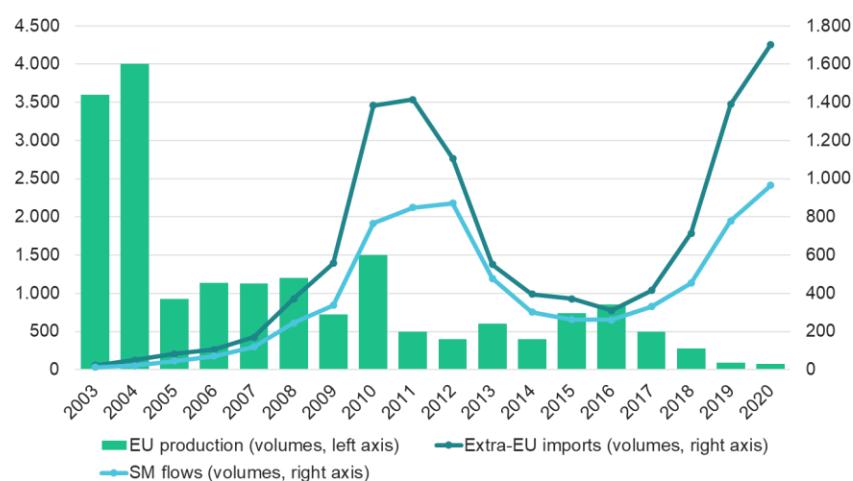
**The Single Market plays a key role today also in the area of solar PV, despite it being a strategic dependency for the EU.** Solar PV shows a significantly different picture. In the absence of sizeable EU manufacturing capacities, demand is predominantly met through extra-EU imports (see annex 4). These extra-EU imports are concentrated in a few Member States (such as the Netherlands and Germany). These Member States then ensure the distribution of these dependent products across the EU through intra-EU exports and imports (see Figure 19). As a consequence and very different from the case of wind turbines, Single Market flows for solar PV are mainly driven by the evolution of extra-EU imports instead of EU production. In fact, Figure 20 highlights clearly this strong correlation between Single Market flows and extra-EU imports (with a correlation coefficient of +0.98).

**Figure 19 – Solar PV: concentration in extra-EU importers explains high intra-EU trade**



Source: Authors' calculations based on estimates using available data in Eurostat (Prodcom, Comext)

**Figure 20 – Solar PV: Single Market flows are linked to extra-EU imports**



Source: Authors' calculations based on Eurostat (Prodcom, Comext). PRODCOM data for 26112240, trade data for HS 854140. Production is expressed in million p/st, trade in million kg. Note: Correlation coefficient between SM flows and EU production is +0.98 (2003-2020). Volumes are used to remove the (strong) effect of decreasing prices.

**Altogether, these two examples show that the Single Market currently plays a key – albeit significantly different role – both for situations of EU capacities and dependencies.** In the case of wind turbines, the Single Market provides a large home market for EU producers to grow and ensure competitive leadership internationally. In addition, it ensures the free flow of wind energy products across Member States enabling the green transition. In the case of solar PV, despite of the EU's currently high dependency on

China, a well-functioning Single Market is necessary to ensure distribution of these imported products across the EU.

### ***Role of the Single Market in addressing dependencies and maintaining capacities***

**Intra- and extra EU trade balances highlight a situation of strategic EU capacity in the area of wind.** Figure 21 and Figure 22 provide a snapshot of the EU's position of strategic capacities (or absence of it) for wind and solar PV. In the case of wind, several Member States (but most notably DE and DK) are both net exporters within the Single Market as well as net exporters to the rest of the world. This highlights a position of strategic capacity, with intra- and extra-EU net exporters acting as a "hub" for EU production and distribution of wind energy products.

**Figure 21 – Wind: DK and DE are currently acting as EU hub for wind production**

		Intra-EU net exporter	Intra-EU net importer
		« Strategic capacity » DE, DK, EE, ES, PT	BE, HU, IE, LT, LV, NL, RO
Extra-EU net exporter	Intra-EU net exporter	CZ, SI, SK	AT, BG, CY, FI, FR, EL, HR, IT, LU, MT, PL, SE
	Extra-EU net importer		

Source: Authors' calculations based on Eurostat (Comext)

**Figure 22 – Solar PV: no Member States currently acting as EU hub for PV panels production**

		Intra-EU net exporter	Intra-EU net importer
		« Strategic capacity » None	HR, IE, IT
Extra-EU net exporter	Intra-EU net exporter	DE, NL, FR, LU, PT, SI	AT, BG, CY, CZ, DK, EE, ES, FI, EL, HU, LT, LV, MT, PL, RO, SE, SK
	Extra-EU net importer		

Source: Authors' calculations based on Eurostat (Comext)

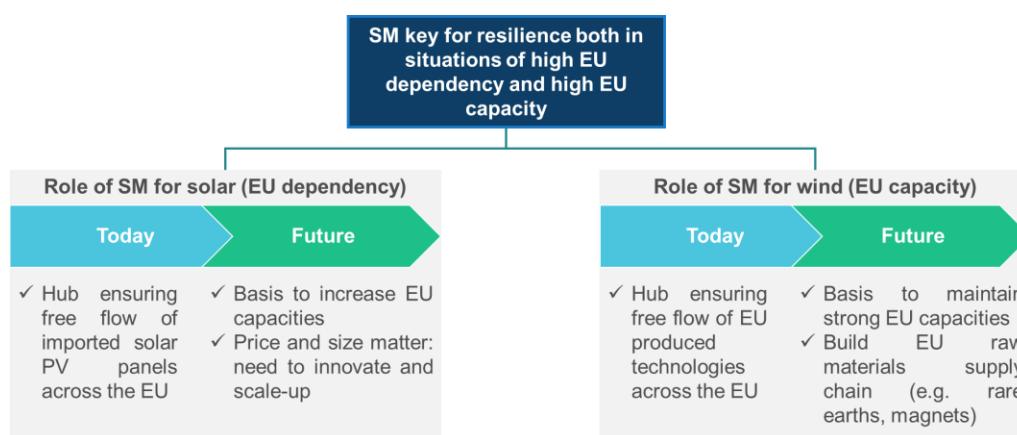
**Intra- and extra EU trade balances highlight a situation of strategic EU dependency in the area of solar PV.** In the case of solar PV, the large majority of Member States are both net importers both from within the EU and from third countries. A few Member States (notably DE and NL) act as a "distribution centre" for imported products from outside the EU, as described above. At the same time, no Member States are both intra- and extra-EU exporters, indicating a position of dependency and lack of strategic capacities in the EU. Achieving the EU's ambitions for more developed strategic capacities in the solar PV sector

– as expressed recently in the Solar Strategy<sup>50</sup> – would logically entail an increased number of Member States entering into the quadrant of “strategic capacity” highlighted in Figure 22.

**A key question now is what role the Single Market can play in the future in situations where the EU has strategic capacities and where it has dependencies.** This should allow to (1) maintain and further develop EU capacities in areas where there are capacities such as wind and (2) ensure a stronger EU position in areas where strategic capacities need to be built such as solar PV. This requires looking at a number of drivers that may explain the EU’s relative position in both areas. Annex 4 highlights that these key drivers may include (1) price (very sharp drop in prices for PV panels over the last decade, while prices for wind turbines have remained broadly stable); (2) innovation (where the EU is a leader in wind and can build on some strengths also in solar PV); and (3) size (large companies dominate the global markets for both PV panels and wind turbines).

**This highlights the important role of the Single Market in relation to strategic dependencies and capacities, today and in the future.** In the case of dependencies such as solar PV, the Single Market today mainly acts as a distributor of dependent imported products across the EU. In the future, the Single Market can be the basis for implementing the ambitions of the Solar Strategy. This means supporting innovation and allowing the scale up of new PV technologies made in Europe to a sufficient size, ensuring they can compete on a global scale (including with cheaper products made elsewhere) and allowing more EU demand to be met from domestic sources. In the case of EU capacities such as wind, the Single Market today is offering a large home market for EU businesses to be competitive internationally. In the future, it can play an important role to maintain this level of competitiveness, including in view of increasing competition notably from China. In addition, the Single Market can also be the driving force behind building up EU raw material value chains that are able to (partially) address EU dependencies for inputs to wind technology production (such as rare earths and permanent magnets) for which EU and global demand is expected to sharply increase.

**Figure 23 – Single Market is key for resilience both for dependencies and capacities**



Source: Authors' elaborations

**Regulatory or administrative obstacles to the free movement of goods and services may hamper the ability of the Single Market to play its role as the driver of EU**

<sup>50</sup> COM(2022)221

**resilience.** Chapter 3.3 develops this further, describing the main axes along which Single Market reforms or actions can contribute to facilitating open strategic autonomy in critical areas. It looks into how to operationalise the link between Single Market reforms and EU priorities in the area of strategic dependencies/capacities through a framework for a more mission-oriented Single Market.

### 3.3. A mission-oriented Single Market for a more resilient EU

Chapter 2 highlighted that while important steps have been taken to address Single Market obstacles, overall reform progress may be considered below potential, notably in the area of services. At the same time, chapter 3.2 highlighted how important the Single Market is for achieving the EU's current main political priorities: boosting resilience, addressing strategic dependencies and extending capacities.

**Remaining obstacles to the Single Market may limit the effectiveness and efficiency of policy actions to strengthen EU strategic autonomy.** For example, public and private funding channelled towards innovation and increased production in the EU of critical green and digital technologies will only achieve their full potential impact in case they can rely on the full scale of the Single Market without unnecessary obstacles. In other words, progress in removing Single Market barriers enables also progress towards a more resilient EU.

**In this context, certain Single Market obstacles that have a more direct impact on the EU's strategic autonomy objectives could be considered and addressed as a priority.** Such a “mission-oriented Single Market” would focus on how to best use the potential of the Single Market to achieve goals of reducing unwarranted dependencies and increasing strategic capacities.

**Figure 24 – Possible framework for a mission oriented Single Market**



Source: Authors' elaborations, designed by PresentationGO

In such a framework, at least the following five axes may be relevant:

- 1) Inputs – how the Single Market can facilitate access to the relevant inputs (e.g. raw materials);
- 2) Production, technologies – how the Single Market can enable the emergence and scale-up of relevant manufacturing capacities in the EU;

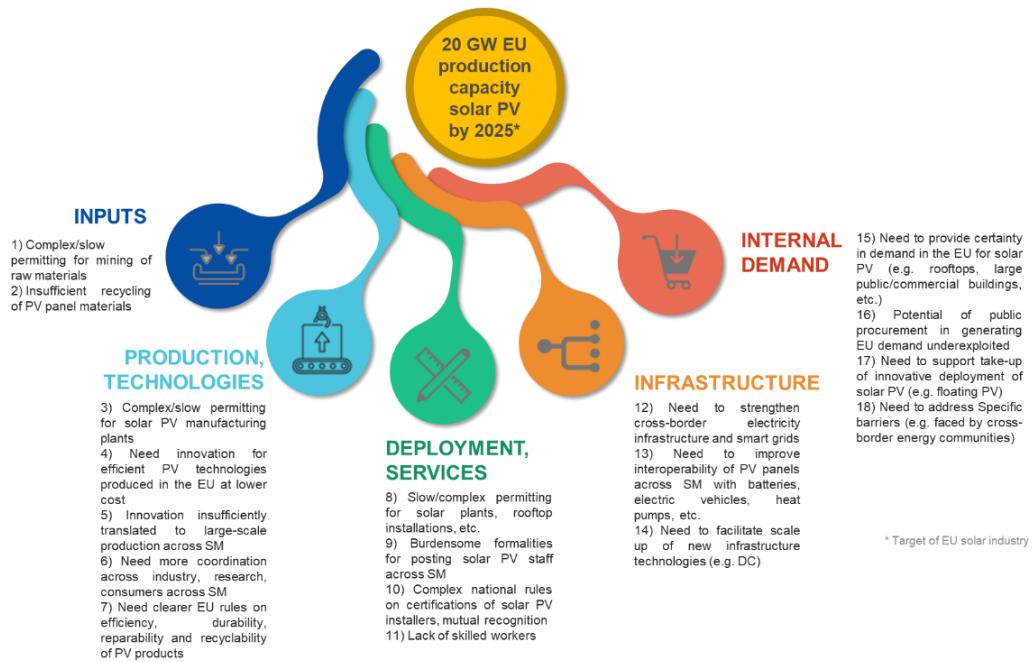
- 3) Deployment, services – how to ensure a deployment and supply of critical products and technologies across the Single Market without unnecessary or disproportionate barriers;
- 4) Infrastructure – how to ensure the Single Market offers strong interconnections and interoperability to allow for fluid cross-border flows;
- 5) Internal demand – how to ensure a growing and stable demand from EU downstream users across the Single Market.

By way of example, the following applies this framework to the case of solar PV panels.

**Example: a mission-oriented Single Market to achieve the goals of the EU Solar Strategy**

The framework allows identifying how Single Market tools can contribute concretely to achieving the EU's policy goals in critical areas, identifying where there are barriers and prioritising areas for action. By way of example, Figure 25 provides an (non-exhaustive) overview of 18 Single Market obstacles and issues in the area of solar PV across these five dimensions.

**Figure 25 – A mission oriented Single Market economy to boost EU capacities in solar**



Source: Authors' elaborations based also on COM(2022)221

**Policy actions to address these obstacles would provide a direct contribution to achieving the goals set out in the Solar Strategy.** For example, it is clear that relevant barriers exist not only in relation to scaling up production of solar PV. Equally important are barriers in the area of services and infrastructure that will be needed to ensure deployment across the Single Market. Further details on these (non-exhaustive) Single Market obstacles and issues in the area of solar PV are provided in annex 5.

## 4. Conclusion

The Single Market is one of the EU's greatest accomplishments. Its benefits are widely recognised and documented: the Single Market has stimulated economic growth and made the everyday life of European businesses and consumers easier. While recent crises have shown the fragility of the Single Market, they also provide evidence of the potential and strength of collective and coordinated EU action. Increasing geopolitical tensions, global competition and risks related to strategic dependencies pose threats that were unknown or much less pressing thirty years ago. The Single Market is today the EU's platform and driver of resilience, both in the short-term (crisis management) as well as in the long-term to address dependencies and develop capacities.

The Single Market has continued to integrate over the last decade and it is the main source of trade for EU businesses. It is a dynamic and ongoing process, with remaining challenges and opportunities notably in services. Member States play a key role in managing the Single Market through reforms and administrative simplification as well as increased cross-border cooperation. Further improving the functioning of the Single Market has the potential of increasing the effectiveness and efficiency of policy actions to strengthen EU strategic autonomy and ensure the availability of critical goods and services.

# Annexes

## Annex 1 – Comparison 2002 & 2020 assessments of remaining barriers in services

Step in business journey	Barrier (heading)	2002 Report		2020 Report	
		Barrier (sub-heading)	Still reported as barrier?	Ref	
Difficulties relating to the establishment of service providers	Monopolies and other quantitative restrictions on access to activities	Monopolies	Reported as barrier	12	
		Quantitative restrictions	Reported as barrier	58	
		Territorial restrictions	Reported as barrier	32; 34; 55; 56; 58	
	Nationality or residence requirements	Nationality requirements	Not reported	N/A	
		Residence requirements	Not reported	N/A	
		Single establishment requirement	Not reported	N/A	
	Authorisation and registration procedures	Failure to take into account requirements already met by service provider	Reported as barrier	23	
		The number of authorisations	Reported as barrier	23	
		Procedures and conditions associated with such regulations	Reported as barrier	1; 23; 25	
		Registration requirements	Reported as barrier	23	
		Bureaucratic nature of authorisation and registration procedures	Reported as barrier	1; 23	
	Restrictions on multi-disciplinary activities	Requirements concerning the structure or management of service enterprises	Reported as barrier	32; 34; 55; 56	
		Restrictions on the exercise of multi-disciplinary activities	Reported as barrier	32; 34; 55; 56	
	Legal form and internal structure of economic operators	Requirements regarding legal form	Reported as barrier	32; 34; 55; 56	
		The capital of service enterprises	Reported as barrier	28; 32; 34; 55; 56	
		Minimum number of employees	Not reported	N/A	
	Professional qualifications	Differences between Member States regarding activities considered to be "regulated professions"	Reported as barrier	25	
		Aptitude tests	Reported as barrier	25	
		Differences regarding the fields of activity covered by a particular professional qualification	Reported as barrier	25	
	Conditions governing the exercise of service activities	Different company tax regimes	Reported as barrier	15	
Difficulties relating to the use of inputs necessary for the provision of services	Posting of workers	Requirement to make a prior declaration	Reported as barrier	11; 40; 65	
		Burden and complexity of administrative formalities	Reported as barrier	11; 40; 65	
		Application to posted workers of the host country's labour-law provisions	Not reported	N/A	
		Procedures and conditions applying to the posting of third-country nationals	Not reported	N/A	
		Restrictive effects are exacerbated by the existence of severe sanctions	Not reported	N/A	
	Use of employment agencies or temporary workers from other Member States	Prior-authorisation rules and establishment requirements applying to employment agencies	Not reported	N/A	
		Prohibitions imposed on certain sectors and restrictions on the use of temporary staff	Not reported	N/A	
	Other difficulties relating to the cross-border deployment of workers	Disparities between national regulations governing remuneration, taxation and social protection	Reported as barrier	26	
		The complexity of social security regulations	Reported as barrier	26	
	Cross-border use of business services	Diversities between pension schemes and obstacles to the transfer of supplementary pensions	Not reported	N/A	
Difficulties relating to the promotion of services	Authorisation, registration and declaration procedures	The use of cross-border business service	Not reported	N/A	
		Problems relating to the use of technical equipment in the cross-border provision of services	Not reported	N/A	
		Authorisation, registration and declaration procedures	Not reported	N/A	
		Bans on commercial communications	Reported as barrier	58	
		Content of commercial communications	Reported as barrier	8; 58	
Difficulties relating to the distribution of services	Monopolies and other quantitative restrictions on access to activities	Form of commercial communications	Reported as barrier	8; 58	
		Non-commercial communications	Not reported	N/A	
		Monopolies	Reported as barrier	12	
	Nationality or establishment requirement	Quantitative restrictions	Not reported (for cross-border provision)	N/A	
		Territorial restrictions	Not reported (for cross-border provision)	N/A	
		Nationality requirements	Not reported	N/A	
	Authorisation, registration and declaration procedures	Establishment requirement	Not reported	N/A	
		Obligation to have a local representative	Not reported	N/A	
		Prior authorisation	Not reported (for cross-border provision)	N/A	
	Requirements regarding the internal structure and legal form of the service provider	The failure to take into account requirements already met by a service provider	Reported as barrier	2	
		Entry (or enrolment or accreditation) in a register	Reported as barrier	2	
		A declaration is sometimes required	Reported as barrier	2	
	Requirements in respect of professional qualifications and experience	Providers of cross-border services have to meet a whole series of requirement	Reported as barrier	2	
		Specific legal form and specific internal structure	Not reported (for cross-border provision)	N/A	
		Rules stating that various activities are incompatible with one another	Not reported (for cross-border provision)	N/A	
	Imposition on service providers of conditions governing the exercise of an activity	Disparities between national requirements concerning professional qualifications and experience	Not reported (for cross-border provision)	N/A	
		Different professional titles are in some cases required for one and the same activity	Not reported (for cross-border provision)	N/A	
	Restrictions on the receipt of services	Territorial limits	Not reported (for cross-border provision)	N/A	
	Preferential treatment for residents of a particular Member State or of a particular part of its national territory	Not reported	N/A		

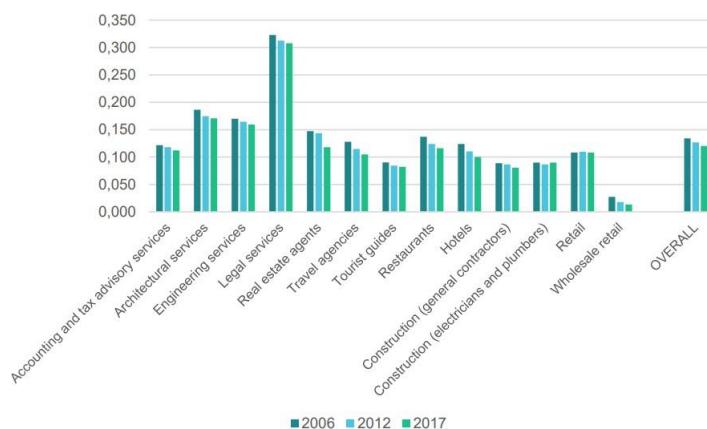
Difficulties relating to the sale of services	Formation and content of contracts	Different national regimes of contract law	Reported as barrier	5
	Price setting, payments, invoicing and accounting	Price regulations	Reported as barrier	13
		Rules and practices in relation to invoicing and payment	Not reported	N/A
		Accounting rules	Reported as barrier	33
	Taxation	The payment and reimbursement of VAT	Reported as barrier	15
	Reimbursement, subsidy or aid to the service recipient	Authorisation for the reimbursement of medical costs	Not reported	N/A
		More favourable tax treatment for services received from local providers	Not reported	N/A
		Restrictive national practices	Reported as barrier	6
	Public contracts and concessions	Procedures for the award of public contracts, the complexity and the lack of transparency	Reported as barrier	6
		Certain contractual clauses and conditions governing the performance of contracts	Reported as barrier	6
Difficulties relating to after-sales aspects of service	Liability and professional indemnity insurance of service provider	Professional liability insurance schemes vary markedly between Member States	Reported as barrier	7
	Debt collection	Difficulties encountered in the context of debt collection and payments	Reported as barrier	20
	Provision of after-sales services	Organisation of a cross-border after-sales service requiring personal intervention on the part of the service provider and/or the posting of his workers	Reported as barrier	11
	Legal redress	Disparities between rules on guarantees	Reported as barrier	18
Lack of information	Lack of regulatory information	Legal uncertainty, the costs and slowness of procedures	Reported as barrier	19
		Lack of information about applicable national rules and their interpretation	Reported as barrier	1
Cultural and language barriers	Lack of awareness of the principles of the Internal Market	Lack of knowledge of competent authorities, procedures and formalities	Reported as barrier	1
	Barriers related to different regulatory environments		Reported as barrier	31
	Barriers related to different market conditions		Reported as barrier	31
		Reported as barrier in 2002 and 2020	45	61%
		Reported as barrier in 2002 but not in 2020	29	39%
			74	

## **Annex 2 – Different perspectives showing limited progress in removing services barriers**

There are a range of different analyses as regards reform progress in the area of services, which broadly point to the same conclusion: progress over the last 10 years has been limited.

A first example is the 2021 Commission report on mapping and assessment of legal and administrative barriers in the services sector<sup>51</sup>.

**Figure 26 – Barriers evolution Services Directive**

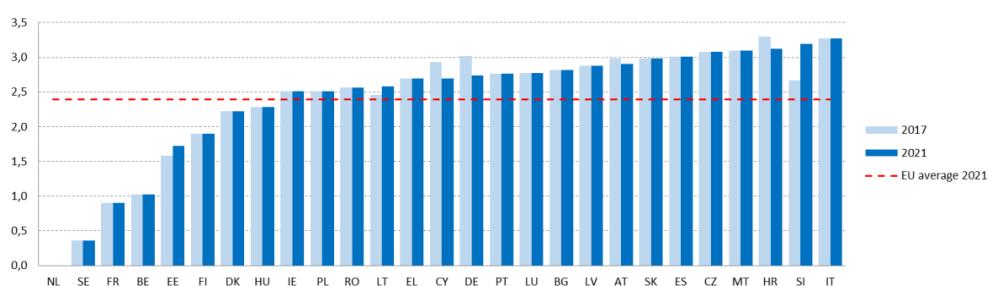


Source: Commission report on mapping and assessment of legal and administrative barriers in the services sector (2021)

It concluded that *the overall speed of barrier removal can however be characterised as slow. More reform efforts are therefore needed in order to achieve the overall objective of the Services Directive to remove regulatory and administrative barriers faced by service providers when operating in the Single Market.*

A second more narrow analysis concerns the 2021 analysis on progress as regards implementation of Commission recommendations in professional services<sup>52</sup>. It showed that despite *the specific guidance provided by the Commission in the 2017 reform recommendations, Member States have not made much progress in re-evaluating and removing unjustified or disproportionate professional regulation. [...] By contrast, a number of Member States have recently tightened their regulations of certain professions*. This lack of progress applies to different professional services, including for example civil engineering.

**Figure 27 – Restrictiveness indicator civil engineers**



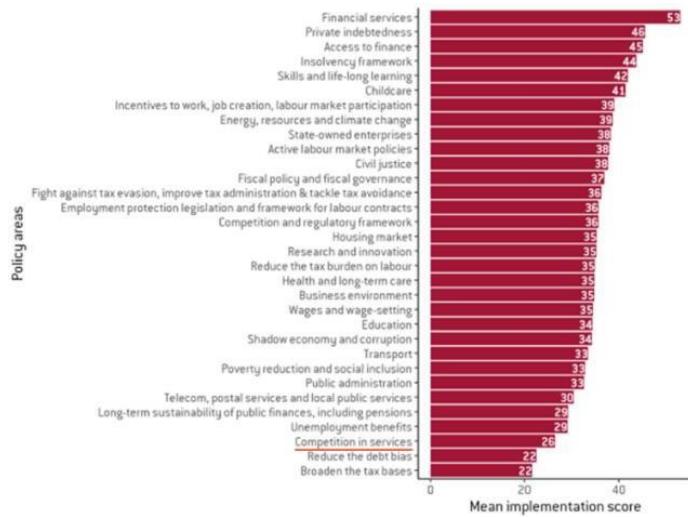
Source: COM(2021)385

<sup>51</sup> European Commission (2021): “Mapping and assessment of legal and administrative barriers in the services sector : summary report”

<sup>52</sup> COM(2021)385

Finally, a broader analysis<sup>53</sup> on implementation as regards country specific recommendations (CSRs) in the context of the European Semester highlights a similar conclusion. It shows that CSRs related to competition in services is among the policy areas with the lowest degree of implementation by Member States.

**Figure 28 – Implementation CSRs 2013-2018 by policy area**



Source: Bruegel

<sup>53</sup> K. Efstathiou, G. Wolff (2019)

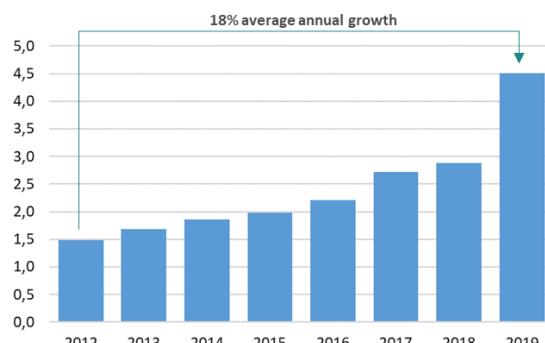
### **Annex 3 - Posting of workers as an example of persisting Single Market obstacles**

This annex focuses on national rules and formalities regarding posted workers, as an illustrative example of remaining barriers, their impact and drivers. Chapter 2.2 highlighted that there is still a wide variety of barriers to the Single Market, particularly in services. The purpose of this paper is not to present an overview of remaining barriers and possible policy actions.<sup>54</sup> Instead, this annex focuses by way of example on barriers related to national requirements in the area of posted workers. This provides an illustrative example of a remaining Single Market obstacle that is repeatedly raised by businesses as complex and burdensome.

#### ***Posting of workers: an increasingly important aspect of the Single Market***

**EU rules set the framework for national formalities on posted workers.** A posted worker is an employee who is sent by his employer to carry out a service in another EU Member State on a temporary basis.<sup>55</sup> EU law<sup>56</sup> sets a number of mandatory rules regarding the terms and conditions of employment to be applied to posted workers, stipulating that posted workers are entitled to a set of core rights applicable in the host Member State. To enforce these rules, EU rules also allow Member States to impose control measures. These include, for example, an obligation for the employer to declare the posting to national authorities in the host Member State and keep or make available relevant supporting documents.

**Figure 29 – Evolution number of posted workers based on issued A1 forms<sup>57</sup> (millions, EU-27)**



Source: Authors' calculations based on De Wispelaere, Pacolet, De Smedt (2020). Note: data is used until 2019, disregarding the temporary impact of COVID-19 on the number of posted workers. Data is based on total A1 documents issued by Member States. This therefore overstates the number of posted workers, given that self-employed persons are also included (although these represented only about 6% of the total in 2019).

**Posting of workers is increasingly important and going far beyond movement of workers sent from East to Western Europe.** Figure 29 highlights the quickly increasing number of EU posted workers. While part of this increase may be explained by an underreporting in the past, the upward trend is clear. Posting is today an important aspect of a well-functioning Single Market. Furthermore, Figure 30 highlights that posting is not only a

<sup>54</sup> This is addressed, for example, in the Commission's annual single market report

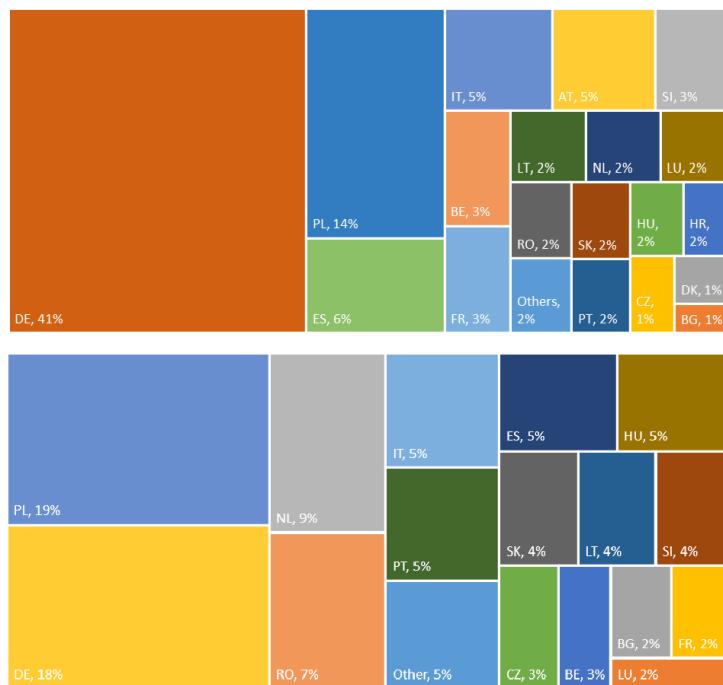
<sup>55</sup> In the context of a contract of services, an intra-group posting or a hiring out through a temporary agency

<sup>56</sup> Posting of Workers Directive and Enforcement Directive

<sup>57</sup> Under Basic Regulation (EC) No 883/2004. The notion of "posted worker" differs in scope from posted workers as covered by the Posting of Workers Directive (Directive 96/71/EC). For data on the latter, see De Wispelaere, Pacolet, De Smedt (2021).

matter of cross-border activities from East to West. It matters for many Member States and for both high and low skilled workers.

**Figure 30 – Origin of posted workers based on issued A1 forms (top, EU-27, 2019) and persons registered in the national declaration tools (bottom, EU-27, 2019)<sup>58</sup>**



Source: Authors' calculations based on De Wispelaere, Pacolet, De Smedt (2020 and 2021). Note: data in top graph is based on A1 forms issued by Member States for employed persons (Articles 12 and 13 of Regulation (EC) No 883/2004). Data in bottom graph is based on information included in national declaration tools under Directive 96/71/EC and Directive 2014/67/EU.

### **Posting of workers national rules and formalities: barriers faced by service providers**

**There is a wide variety of national approaches implementing the right to control posted workers.** EU rules allow each Member State to set up its own system for posting of workers formalities and controls, within certain boundaries. These national control systems significantly differ from each other including as regards the burden and administrative complexity they create for service providers posting workers.

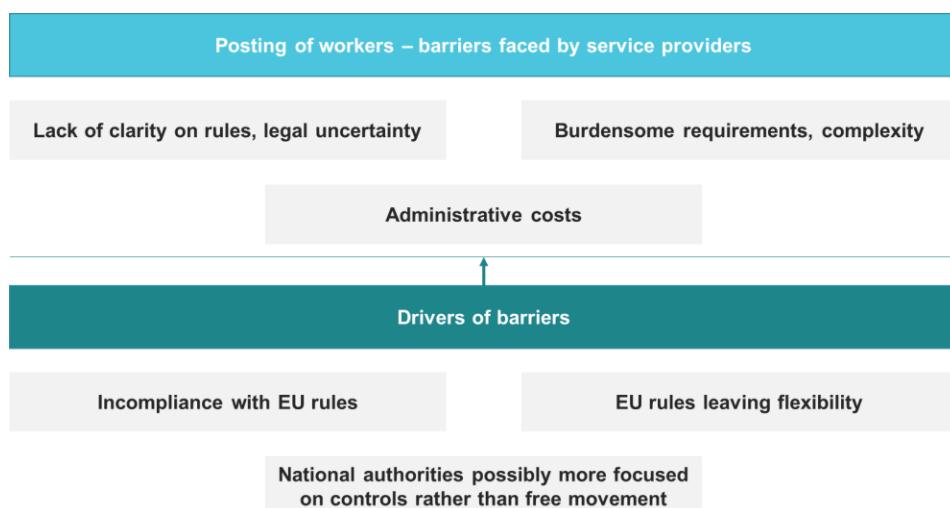
**Service providers consistently highlight that national rules and formalities related to posted workers are an important barrier to cross-border activities in the Single Market.** In fact, there are three types of broad issues that can be distinguished. First, national rules are often unclear leading to legal uncertainty for businesses posting workers. Such problems include national rules being very complex and available information being inconsistent or contradictory. In some cases, national rules are only available in the local language. Rules can also differ across regions of a given Member State. Given this complexity, service providers may be required to hire a local expert to clarify applicable rules for them. Second, national rules and formalities can be very burdensome for service providers. For example, some authorities require original and/or translated documents. In addition, in case of multiple

<sup>58</sup> For further explanations on the differences between issued A1 forms under Regulation (EC) No 883/2004 and declarations made under Directive 96/71/EC and Directive 2014/67/EU, see De Wispelaere, Pacolet, De Smedt (2021, chapter 3.8).

postings there is often a very high degree of duplication in the information to be provided. Other burdensome elements for service providers include Member States requiring the appointment of a local representative, the need to make the declaration one day before posting (creating difficulties e.g. in case of emergencies) and a lack of electronic procedures. Finally, these barriers lead to costs for service providers (time spent completing formalities, hiring of local experts, official translations, etc.). For an SME the costs of a single declaration may go up to hundreds or even thousands of EURs.

**There are a number of underlying drivers to these barriers.** First, in some cases Member States go beyond the limits of EU law in terms of what is allowed regarding posting of workers formalities. This has already been partially addressed by enforcement action by the Commission. Second, EU rules are rather open-ended leaving flexibility to Member States in terms of what they impose on service providers. In fact, while the EU regulatory framework is the same for all Member States it is clear that the level of complexity differs significantly across the Single Market. Finally, there is a balance to be found between protecting workers and avoiding social dumping on the one hand, while on the other hand guaranteeing the free movement of services. In general, it is not excluded that some Member States may put their primary focus on controls and supervision and potentially less on ensuring that barriers in relation to posted workers are necessary, proportionate and creating as limited administrative burden as possible.

**Figure 31 – Posting of workers rules and formalities: barriers and underlying drivers**

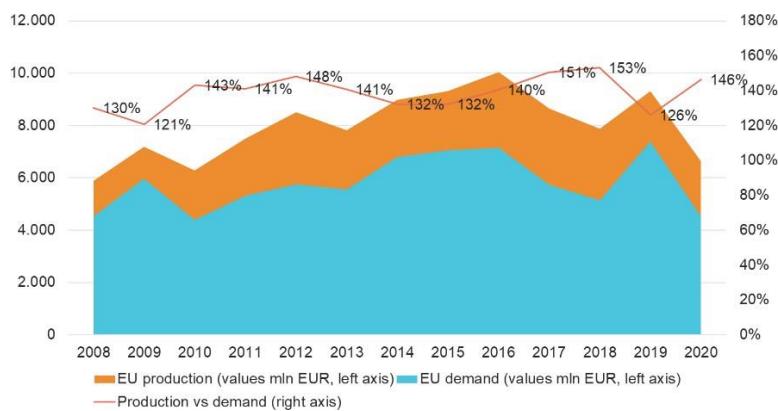


Source: Authors' elaborations

#### Annex 4 – Role of Single Market for solar PV and wind technologies

**Different analyses have pointed to the relatively stronger and more dependent position of the EU in the area of wind and solar PV, respectively.** This is confirmed when contrasting EU production with EU demand for both products. In the case of wind turbines, EU production has been consistently larger than EU demand (see Figure 32). Such robust production shares means that the EU is not only satisfying its internal demand, but also able to be a net exporter of wind products and technologies on the global stage.

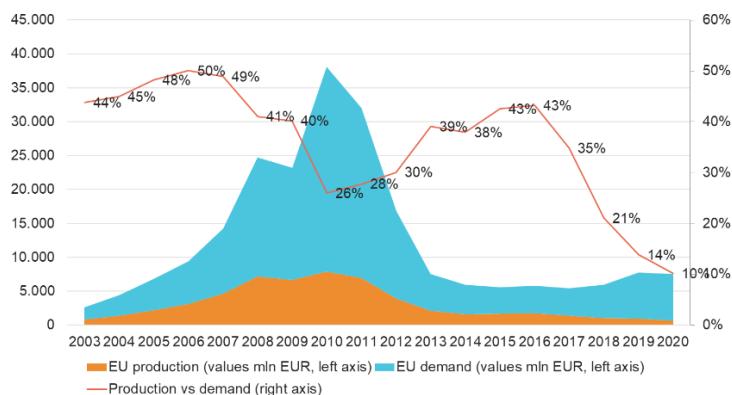
**Figure 32 – Wind turbines: EU production exceeding EU demand**



Source: Authors' calculations based on Eurostat (Prodcom, Comext). Note: EU demand is proxied by EU production minus the extra-EU trade balance.

**The situation for solar PV presents a starkly different picture.** EU production is significantly below EU demand, declining to about 10% in 2020 (see Figure 33). In other words, the role of EU production in meeting EU demand for solar PV has been progressively decreasing. In addition, extra-EU imports are strongly concentrated in a single country (China), creating an important strategic dependency for the EU.

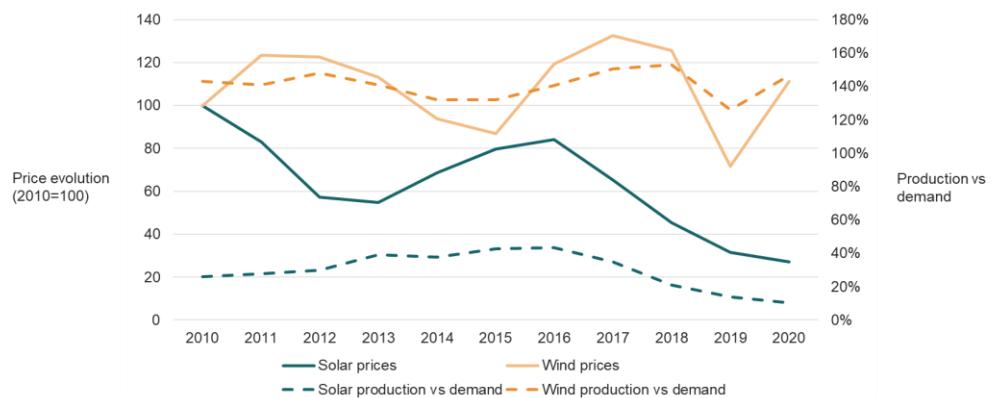
**Figure 33 – Solar PV: decreasing role of EU production in meeting EU demand**



Source: Authors' calculations based on Eurostat (Prodcom, Comext). Note: Demand is proxied by EU production minus the extra-EU trade balance. The decrease in demand (values) shown on the graph is largely driven by a decrease in prices, as demand in volumes has been sharply increasing over the last years of the period considered.

**Price evolution appears to be one key driver.** In the area of wind, price levels fluctuated around the same levels over the last 10 years. During the same period, EU production vs EU demand has also been stable and well above 100%. At the same time in the area of solar PV, increasing Chinese dominance over the manufacturing supply chain has been accompanied by a very sharp drop in prices (more than 50% over the last decade). This globally concentrated production at very large scale and with constantly lower cost is an important element that the EU needs to take into account in its efforts to boost domestic capacities in solar PV.

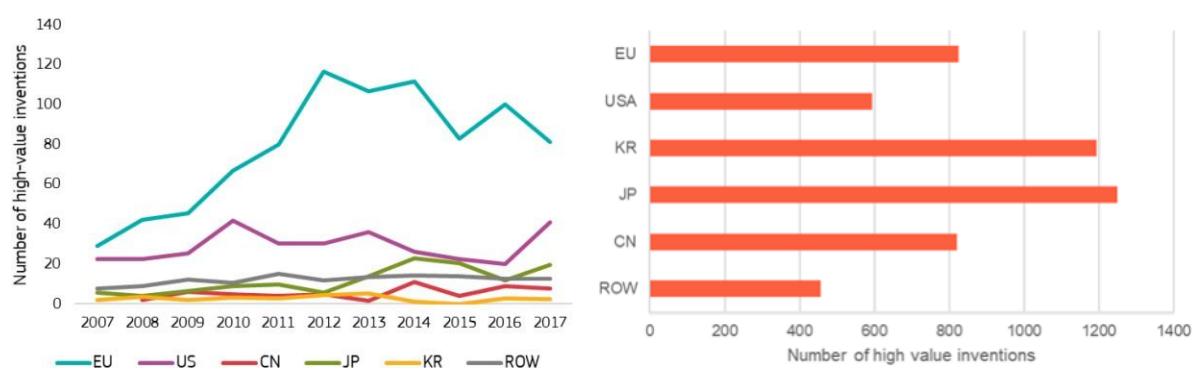
**Figure 34 – Price is a key driver**



Source: GROW A1 based on Eurostat (Prodcom, Comext). Note: Prices for solar PV refer to extra-EU imports (as the EU is strongly dependent on foreign imports) and prices for wind refer to extra-EU exports (with the EU being a strong net exporter)

**Second and linked to the previous point on prices, the ability to innovate also plays a key role.** Here, the EU can build on some strengths. In the area of wind, it is a clear innovation leader (Figure 35). And even in the case of solar PV, the EU is showing some important innovation activity. The latter may provide a basis to build on, as the Single Market will need to enable the emergence of more innovative and efficient PV technologies (to compete e.g. with large Chinese production at low prices).

**Figure 35 – High value inventions<sup>59</sup> in wind (left) and solar PV (right, 2015-2017)**

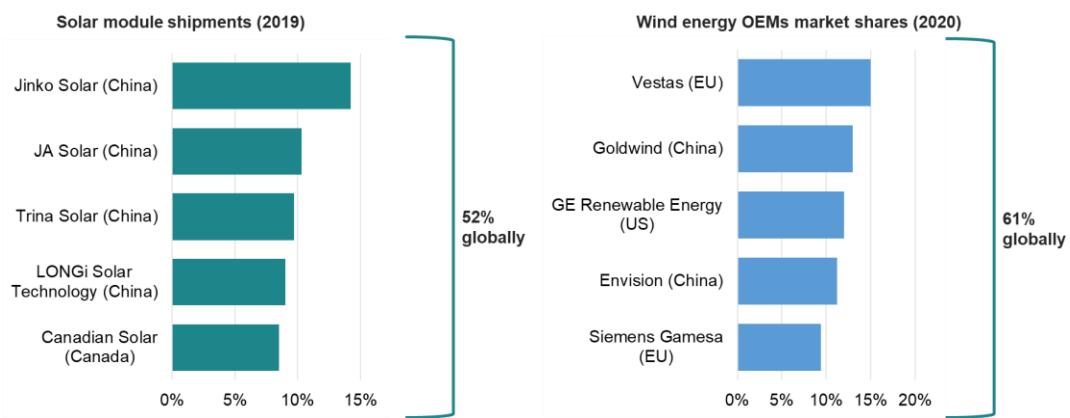


Source: JRC, SWD(2021)307

<sup>59</sup> Referring to patent applications made to two or more patent offices

**Third, size appears as another key element.** For both solar PV and wind, global production appears to be strongly concentrated at the level of individual firms. For example, the top-5 solar production firms (dominated by China) hold about 50% of global module shipments. Similarly for wind, the top-5 OEMs in wind energy (among which two European) cover about 60% of global market share. This implies that achieving a certain critical size is important when it comes to establishing or maintaining strategic capacities in these sectors. In other words, the Single Market should not only be the driving force behind the emergence of cutting-edge research, it should also enable companies to scale up to a critical size.

**Figure 36 – Size is another key driver**



Source: Statista (solar PV) and SWD(2021)307 (wind)

## ***Annex 5 – Single Market barriers and issues towards achieving the EU solar strategy ambitions (non-exhaustive overview, based also on EU Solar Strategy)***

SM barriers and issues in solar PV	Explanation
<b>INPUTS</b>	
1) Permitting for mining of relevant raw materials can be complex	Silicon demand is expected to increase fourfold by 2030. EU suppliers currently cover only a small share of demand for processed materials. Extra-EU imports are often highly concentrated. Increased domestic sourcing of silicon metal and polysilicon is part of the solution. Still, national permitting procedures are diverse and can be lengthy.
2) Lack of SM rules promoting recycling of PV raw materials	Need for EU rules promoting recycling of raw materials used in PV modules, inverters and systems (to be addressed through upcoming Ecodesign measures and Energy Labelling Regulation).
<b>PRODUCTION/TECHNOLOGIES</b>	
3) Permitting for solar PV manufacturing plants can be complex	Need efficient permitting for PV manufacturing plants to enable scale up of PV manufacturing in the EU.
4) Need more innovation for efficient PV technologies produced in the EU	Prices of solar PV are decreasing driven by large scale production outside of Europe. In addition, there is a global landscape of rapid innovation in solar PV led by Asian countries. The EU needs to be at the forefront including as regards emerging gaps for new products linked to innovative forms of deployment (e.g. product-integrated PV). This shows the need to support breakthrough innovation (e.g. through Important Project of Common European Interest).
5) Innovation insufficiently translated to large-scale production across SM	Global solar PV market is dominated by large Asian producers. Increasing EU capacities in the area will require innovative SMEs to scale up across the SM to a critical scale (showing the importance e.g. of access to finance).
6) Need more coordination between industry, research and consumers across SM	Scaling up EU solar PV activities will require a framework for coordinating actions across the Single Market aimed at the development and uptake of new, more efficient and sustainable technologies; coordination of investment opportunities and project pipelines; and facilitating the dialogue and match-making between producers and offtakers (link e.g. to solar PV Alliance)
7) Lack of common EU reference on efficiency, durability, reparability etc. of solar PV products	Such lack of common EU rules and references on key performance aspects of solar PV products fragments the Single Market (with negative impact on consumers and producers) and reduces incentives to lower the sustainability impact of such products (link to upcoming ecodesign and energy labelling Regulations).
<b>DEPLOYMENTS, SERVICES</b>	
8) Slow/complex permitting for solar plants, rooftop installations, etc.	Barriers to the deployment of solar projects not only hinder the EU's ability to achieve the green transition, they also present important obstacles for solar PV businesses wanting to scale up and expand across the Single Market.
9) Burdensome formalities for posting solar PV staff across SM	Currently, skilled workers in the area of solar PV appear to be highly concentrated in a number of Member States (e.g. DE, PL, ES, NL). Deployment of solar PV services across the EU will likely involve an important degree of posting of workers across the EU. Complex national rules and formalities on posting are an important barrier in this regard.
10) Complex national rules on certifications of solar PV installers, mutual recognition	Several Member States have mandatory (or voluntary) certification schemes in place to certify the quality and reliability of solar PV professionals and businesses. These may present obstacles to cross-border service providers, in particular in situations where mutual recognition between Member States is not working or too slow.
11) Lack of skilled workers	Generally, there is a lack of skilled workers across the SM in the area of solar PV. This gap is expected to grow quickly if left unaddressed.
<b>INFRASTRUCTURE</b>	
12) Need to strengthen cross-border electricity infrastructure and smart grids	The integration of decentralised solar installations will need significant adaptations in distribution networks. This includes investments in digitisation, such as smart grids.
13) Need to improve interoperability of PV panels across SM with batteries, electric vehicles, heat pumps, etc.	Integration of solar into the energy system is only possible if different devices can effectively communicate with each other and with solar energy systems. This interoperability can be facilitated through standardization.
14) Need to facilitate scale up of new infrastructure technologies (e.g. DC)	Increasing the use of DC technologies could help reduce energy losses. This may require introducing the necessary EU and international standards.
<b>INTERNAL DEMAND</b>	
15) Need to increase certainty for EU demand for solar PV (e.g. rooftops, large public/commercial buildings, etc.)	EU investment in the solar PV industry requires certainty on future demand for these products and services in the EU. Policies introducing requirements for installation of solar PV on rooftops and public/commercial buildings will help achieve the green transition while also delivering this certainty in demand for investments to happen.
16) Need to use potential of public procurement in generating EU demand	Public procurement can further promote solar energy deployment and investment in the solar PV sector. For example, aggregation of demand for solar energy from large public buyers can reduce investment risks and facilitate innovative business models in the solar energy sector.
17) Need to support take-up of innovative deployment of solar PV (e.g. floating PV)	Innovative forms of deployment are a potentially important source of future demand for solar PV in the Single Market. Barriers to such innovative deployment should be avoided.
18) Need to address specific barriers (e.g. faced by cross-border energy communities)	Other barriers to consumption of solar PV in the EU need to be addressed. For example, this includes cross-border energy communities that face challenges linked to legal, technical or administrative inconsistencies across borders.

By way of example, of few of these barriers/issues are developed in more detail below.

### Example 1: Permitting for mining of relevant raw materials can be complex

**Increased sourcing of relevant raw materials used in the production of PV panels from within the Single Market can help the EU to reduce its current supply risks.** In addition to import dependencies on PV panels and their components, the EU faces strategic dependencies when it comes to the (critical) raw materials that are inputs to the PV supply chain. Several of these raw materials (e.g. silicon, boron, molybdenum) have high supply

risks as they combine high import reliance, concentration of sources and low potential for substitution.

**Obtaining permits for exploration and extraction of raw materials can entail a high degree of complexity.** Previous assessments<sup>60</sup> show that these permitting procedures are complicated in many Member States, involving often several authorities and different types of licenses. While in some Member States it may be possible to obtain a permit in a matter of a couple of months, in others it may take years. Such long time delays are not in tune with the urgent need for the EU to reduce its supply chain risks in the area of raw materials. This Single Market obstacle is often raised by stakeholders as one of the key issues hindering an increased development of raw materials supply chains in the EU.<sup>61</sup>

**While policies related to the supply of raw materials fall under the competence of individual Member States, several pieces of EU law are of relevance to such national rules on permitting.** Areas such as mineral resource management, permitting and mining legislation are in full competence of the Member States. Still, national authorities need to respect principles laid down in EU law while exercising these competences. This includes for example (1) licensing requirements to be non-discriminatory, necessary and proportionate; (2) administrative procedures to be simple (e.g. removing unnecessary or excessively complex steps and ensuring reasonable decision periods); and (3) impartial and transparent selection procedures in case of a limited number of authorisations (which is typically the case for mining projects). Previous assessments already showed that certain national rules on mining of raw materials may not comply (fully) with some of these principles.<sup>62</sup>

**Reducing Single Market obstacles in the area of raw materials mining would directly contribute to the EU's ambitions for the green transition, including in the area of solar.** It would allow for more competition and a faster roll-out of mining projects, in full respect of Member State competences, for example on environmental and social protection.

*Example 2: Lack of common EU reference on efficiency, durability, reparability etc. of solar PV products*

**There are a number of obstacles hindering a smooth functioning of the Single Market in the area of photovoltaic products (modules, inverters and systems).** The use of photovoltaic modules and systems to improve energy efficiency will significantly increase over the next years. At the same time, there is currently a lack of comparability of these products across the Single Market (for both private and public buyers) between claims relating to module energy yield, module's performance long-term degradation and carbon footprint. Not all products on the market feature high quality and long-term energy performance. In addition, they are manufactured and designed in such a way that it is often difficult to repair and recycle them. Finally, there may be potential to increase the energy yield of photovoltaic systems and reduce their carbon footprint.<sup>63</sup>

**EU solutions may help to address these issues.** The Commission plans to propose in 2023 an Ecodesign Regulation and the Energy Labelling Regulation applying to solar PV modules, inverters and systems sold in the EU. They would concern the efficiency, durability,

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<sup>60</sup> E.g. MinPol (2017)

<sup>61</sup> <https://eitrawmaterials.eu/the-faster-the-world-decarbonises-the-higher-its-metal-demands/>

<sup>62</sup> MinPol (2017)

<sup>63</sup> Inception Impact Assessment "Environmental impact of photovoltaic modules, inverters and systems"

reparability and recyclability of products and systems as well as potentially the quality of the manufacturing process and the carbon footprint of PV modules.<sup>64</sup>

*Example 3: Slow/complex permitting for solar plants, rooftop installations, etc.*

**Single Market barriers related to permitting procedures of solar projects are a key issue when it comes to ensuring a fast uptake of PV energy in the EU.** National and regional permit granting rules and procedures vary widely across Member States in terms of the length and complexity. Important barriers raised by stakeholders include long deadlines for decision, high bureaucracy, lack of digitisation (e.g. at local authorities), lack of predictability and transparency and insufficient staffing and competences of permit-granting authorities. This has a serious impact on project developers and investors, which are deterred due to increased costs and risks. Yearlong procedures lead to project cancellations and suboptimal outcomes such as the installation of outdated technologies. Such obstacles may hinder efforts towards reaching the objectives of the Green Deal. Similar obstacles also apply in the area of wind energy.

**EU law provides an important framework to consider in view of obstacles related to these national permitting procedures.** Similarly to licensing procedures for mining projects, EU law requires national procedures to be non-discriminatory, necessary and proportionate. Administrative complexity needs to be kept to a minimum, including for example reasonable deadlines for decision and user-friendly administrative procedures.

**Accelerating the deployment of solar projects and removing administrative barriers is key to reach the objectives of the Solar Strategy.** Together with an amendment of the Renewable Energy Directive, the Commission has also adopted a Recommendation and Guidance to support Member States in reducing the complexity of permitting procedures. In addition, the issue is also part of the Single Market Enforcement Task Force work agenda, focusing for example on improving internal coordination; faster and shorter administrative authorisation procedures; clear and digitalized procedures; as well as sufficient human resources and skills.

*Example 4: Obstacles for cross-border service provision of PV installation services*

**Skilled professionals will play an important role in speeding up the rollout of PV installations across the Single Market.** At the same time, a number of issues need to be addressed. By 2030, the PV sector in Europe would be expected to employ more than 700,000 persons. However, there is a lack of skilled workers, which could grow quickly if unaddressed. In addition, cross-border service provision needs to be facilitated. Currently, the number of skilled professionals in the area of solar PV seems to be strongly concentrated in only a few countries (Germany, Netherlands, Spain and Poland have about two thirds of professionals active in the solar PV sector<sup>65</sup>). It is not unlikely that the cross-border activities of these solar PV professionals would increase in the coming years, together with the increased further take up of solar energy. Nevertheless, such professionals face a number of Single Market barriers including a wide variety of national certification schemes as well as obstacles in the area of posted workers (as discussed in annex 3).

**These obstacles can be addressed in different ways.** The EU large-scale skills partnership for onshore renewables (including solar) will develop a vision of concrete

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<sup>64</sup> COM(2022)221

<sup>65</sup> <https://www.eurobserv-er.org/online-database/#>

upskilling and reskilling measures for solar energy expansion.<sup>66</sup> In addition, the proposed revision of the Renewable Energy Directive (2021) outlines requirements for mutual recognition of certification schemes across the Single Market. Work is also underway to reduce burden for posted workers including through the development of a common form and discussions under the Single Market enforcement task force.

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<sup>66</sup> COM(2022)221

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