

Economic effects of reform in professional services

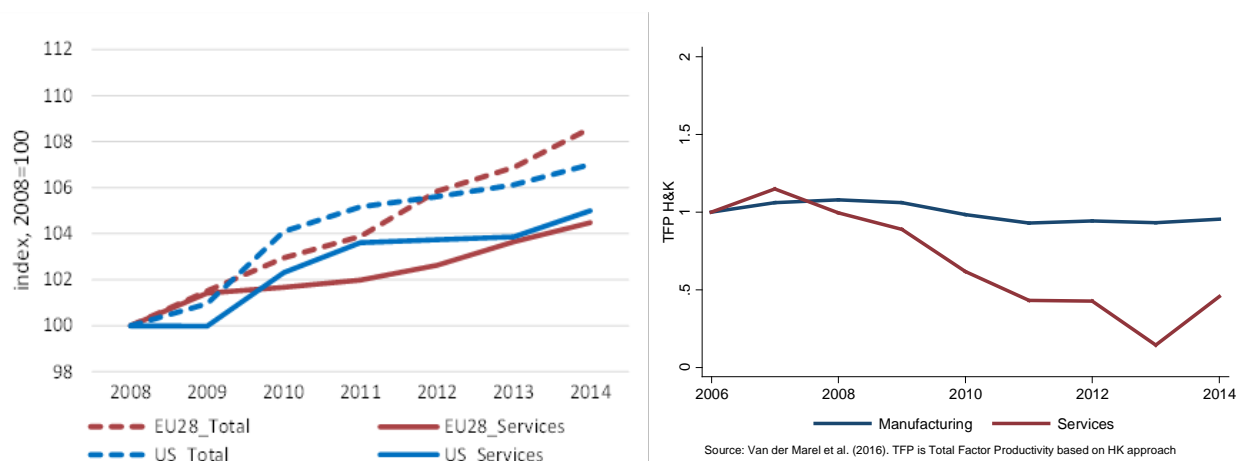
KEY FINDINGS

- **This briefing is based on:** World Bank Regular Economic Report; van der Marel, E., J. Kren and M. Iootty (2016) "Services in the European Union: What Kinds of Regulatory Policies Enhance Productivity?", World Bank Policy Research Paper Series, No. 7919: <http://bit.ly/2dtb45p>; van der Marel, E. (2017) "Reforming Services: What Policies Warrant Attention?", ECIPE Five Freedoms Policy Brief, No. 1/2017: <http://bit.ly/2uhz13W>.
- **Reforms in professional services pay off:** the economic gains are significant based on firm-level data of European Union countries.
- **Entry barriers as Step 1; Step 2 barriers to firm growth:** Many professional services are still marked by entry barriers. High entry barriers are associated with lower productivity rates in European Union countries on the whole.
- **Strong domestic institutions long-term *sine qua non*:** Domestic institutions are of utmost important for services liberalization as they strongly enhance reaping the gains from services liberalization.
- **DG GROW indicator "of a higher regulatory level":** The European Commission's indicator of regulations in services is overall of a higher level of restriction than found at the OECD, plus there are some country outliers depending on the restrictions included in the analysis.

1. INTRODUCTION

Economic growth in the European Union has been low for more than a decade now. While some of the poor performance can be explained by the crisis, the sustained low growth is to a very large extent the consequence of sluggish productivity performance. Productivity is above all an indicator of a society's long-term welfare and measures how effective we are at using our scarce resources in the economy.

Figure 1 shows that productivity in particular services has been laying behind. The left-hand panel shows that there is a gap in productivity between services and the overall economy both in the EU and the US. However, for the EU this gap has been increasing faster. This points out that especially in Europe, sluggish productivity in services in Europe is of main concern. Moreover, within this measure of productivity, Total Factor Productivity (TFP) is a more precise measure of how economic growth is advancing. The right-hand panel points out that the gap between services and the rest of the economy regarding TFP is also increasing.

Figure 1: Labor productivity and Total Factor Productivity developments

Source: World Bank (2016); van der Marel et al. (2016)

Therefore, it is critically important – and any reform effort should focus on boosting growth through higher productivity growth. The recent Services Package – a set of proposals to support Europe’s services sector – is a case in point. It has long been established that rates of productivity growth in Europe’s services sector trails the rates in the United States and other comparable economies. As the economy increasingly gets dependent on services, the risk for Europe is that the natural economic transformation will weigh down our productivity growth.

Obviously, any services reform aiming at delivering growth should start from the policy barriers that hold back growth and a greater degree of economic dynamism. Few, however, do. The type of restrictive policy measures in the EU vary across different services sectors – and, hence, what is the right policy priority for one country may not be right for the other. Yet, when looking at some services policy developments in Europe more closely, some patterns do become clear. Those should now be the focus of policy reform.

2. BARRIERS TO ENTRY – AND BARRIERS TO OPERATION

Generally, domestic regulatory policy barriers in services can be broken down into those that affect *entry of firms* into a market and other policy barriers that have an impact on the *operations of firm activity*. The two policies are connected, of course, and have a distinctive impact on productivity.

Barriers to entry restrict foreign and domestic service providers from bringing competition to the market. If entry barriers are high, domestic incumbents will be sheltered from competition and less incentivized to perform better. Eventually, this leads to higher prices for European consumers and businesses using services. Barriers to operations, on the other hand, are barriers that firms encounter after entry has taken place.

Previous studies have shown that in order to generate growth, the EU’s rate of new firms entering the markets does not substantially differ from the United States (i.e. Bertelsman et al, 2003). What differs is what happens next: firms in the EU are less likely to expand quickly and have greater difficulties pushing out less-productive firms from the market (OECD, 2016). Hence, barriers to operations are essential in the EU or what could be called barriers to firm growth.

This is important. To generate growth in Europe, there needs to be much more work on the regulatory burden – the regulations that prevent the well-known Schumpeterian dynamic of ‘creative destruction’. Indeed, in the EU a great deal of potential productivity growth would come from services reform in the post-entry phase. A recent study by Van der Marel et al (2016), using data from millions of European firms, shows that in order to raise productivity growth in services markets it is the removal of conduct barriers that really matters. This does

not mean, however, that reforms on operational restrictions can be successfully pursued without reforming entry barriers. As a matter of fact, work still needs to be done to ease market-entry for firms, particularly in professional services; an area that the Services Package tries to tackle.

As a matter of fact, van der Marel et al. (2016) and World Bank (2016) show that in professional services, both types of regulations still matter. This can be seen in Table 1 which summarizes the regression coefficient outcomes of the regulatory variable that takes entry as well as conduct regulatory barriers together on TFP using firm-level data. This extensive research confirms that both types of regulatory measures still matter. This result is extremely robust when using alternative firm-level proxies for TFP. Moreover, both research paper also show that the regression coefficients are for professional services only compared to all services. This means that the economic effects from deregulation in services are economically more meaningful.

Table 1: Regression output table of regulatory barriers in professional services

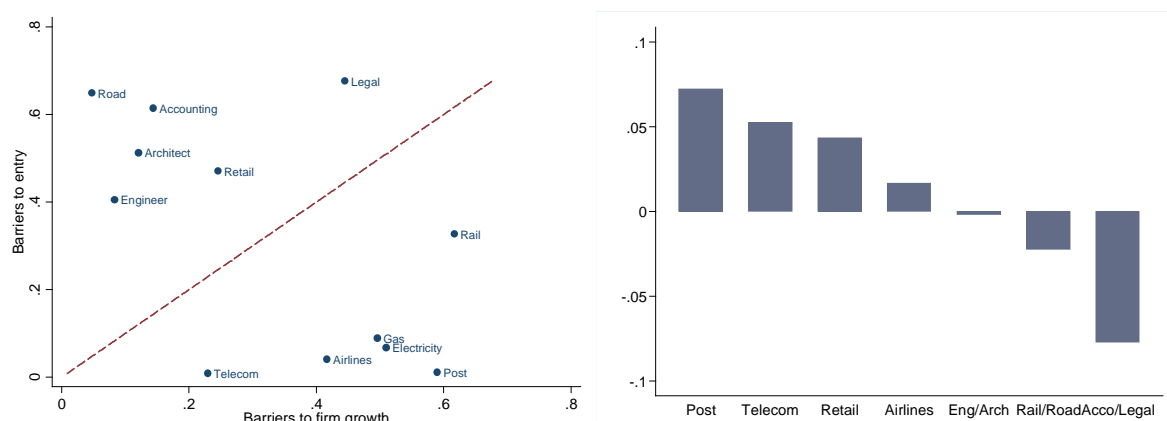
	(1)	(2)	(3)	(4)
	TFP ACF	TFP OP	TFP LP	TFP HK
Professional services regulation	-0.328*** (0.001)	-1.488*** (0.004)	-1.065** (0.048)	-4.188*** (0.000)
Observations	5705941	5705941	5705941	5706016
R2A	0.982	0.907	0.868	0.824
R2W	0.000	0.000	0.000	0.000
RMSE	0.129	0.459	0.433	0.690

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$. Robust standard errors clustered at the country-industry-year level. TFP figures are based on Akerberg et al. (2006) in second column, Olley and Pakes (1996) in third column, Levinsohn and Petrin (2006) in fourth column and Hsieh and Klenow (2009; 2014) in fifth column.

Admittedly, although TFP is important to measure economic growth, economic growth itself is only one indicator of economic development. Alternative indicators recently developed are taking into account the wider aspect of the social economy going beyond income and wealth, such as environmental quality, health status or personal security. Yet, some services do in fact touch upon the social economy and their effective provision without unnecessary barriers would stimulate both social and economic goals. For instance, health services as such are an important ingredient for an optimal working population that in turn stimulates the economy. Educational services help to develop human capital, an important factor for economic growth as such. Besides, burdensome restrictions also affect social outcomes themselves. For instance, high restrictions in legal service artificially limits the supply of legal services and therefore has a detrimental impact on equal access to justice. By similar token, limitations on health services providers such as doctors through unnecessary restrictions depress fair access to health services.

In terms of policy, the fact that both entry as well as conduct barriers still matter in professional services can also be seen in Figure 2 below. The left-hand panel splits up the two types of regulatory barriers into entry barriers on the vertical axis and barriers to firm growth, i.e. operational barriers, on the horizontal axis. Services sectors placed in the upper-left corner of this figure show a relatively high share of entry barriers in their markets compared to their operational barriers. It means that entry barriers in these services are currently greater than their operational barriers. Conversely, sectors positioned in the lower-right corner of the figure still have a relatively high share of operational barriers in their markets, inhibiting firm growth compared to their level of entry barriers.

Figure 2: Barriers to entry vs barriers to firm growth and services productivity (2013-2014)



Source: OECD; van der Marel et al. (2016). Productivity figures are TFP based on Akerberg et al. (2015)¹

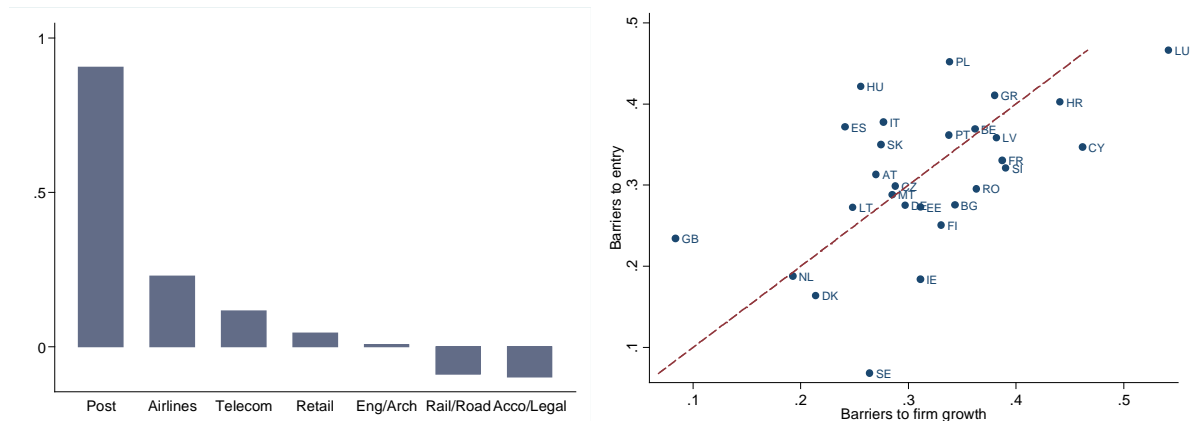
The figure shows that many professional services such as engineering, legal, accounting and architectural services still have high entry barriers in place. Many domestic and foreign firms are therefore still prevented from reinforcing competition in their sectors, and these restrictions ultimately reduce consumer choice and the positive effects of a true single European services market. Other services such as transportation services and utilities have relatively lower barriers to entry, but comparatively higher conduct barriers.

These categories of services regulation have a knock-on effect on productivity in the EU. Detailed studies such as Arnold et al. (2011) and Van der Marel et al. (2016) have shown how they depress productivity in EU countries.² This can also be seen in the right-hand panel of Figure 2 in which the average productivity of each sector is shown in order of importance. It shows that postal, telecoms, retail and airline services all have positive growth effects. These are exactly the sectors which already have experienced lower entry barriers for firms. However, their growth is still below their potential and their productivity levels are still modest. Reducing these sectors' post-entry barriers of firm growth and expansion will therefore increase the potential to create further productivity growth.³

There is a different story for professional services – and rail and road services. These sectors have seen negative productivity growth in recent years, underlying the fact that competitive forces – increasing the level of productivity – remain untapped. This is most likely due to the high entry barriers in these sectors. The results of these productivity figures are robust to alternative productivity measures. There are several ways in which productivity can be computed – and they could provide different results. Yet, using another commonly used methodology of calculating productivity provides the same sectoral ranking as can be seen in the left-hand panel of Figure 3.

In addition, the right-hand panel of Figure 3 points out which countries, across all services sectors, have relatively high entry barriers or conduct barriers. In a similar manner, countries which are more placed towards the vertical axis have relatively high entry barriers, whilst countries which are more located towards the horizontal axis have a relatively large share of regulatory policies inhibiting firm growth. Austria, Poland and Italy, for instance, still have services barriers in place which prohibits firms from entering, whilst other countries such as Finland, Romania and France have relatively high restrictions on firm expansion.

Figure 3: Services productivity and barriers to entry vs barriers to firm growth (2013-2014)



Source: OECD; van der Marel et al. (2016). Productivity figures are TFP based on Olley and Pakes (1996).

3. GOING FOR GROWTH – NECESSARY POLICY REFORMS

What does this mean for the Services Package? The Services Package is a set of measures that aims at making it easier for companies and professionals to start and expand their services, particularly in professional services such as lawyers, accountants and engineers. Whereas many services are already regulated and harmonized at EU level, the aim of the Services Package is not to de- or re-regulate provision of services but to ensure that these rules are applied in a *good* way through *better* regulatory practices that are not overly burdensome or out-of-date.

One of the instruments the EU announced in the Services Package is the proportionality test for regulated professions, i.e. service activities for which a certain professional qualification is required. This test assesses precisely whether new legislations and changes to existing rules in services are adhering to these conditions of not being overly burdensome or outdated and ensures that regulations are justified and proportionate. For professional services, this test should therefore specifically pay attention to barriers to entry for outsiders willing to come into the market. The European Commission is aware of that aspect since the long list of restrictions, stemming from the case-law of the Court of Justice that it takes up in the mutual evaluation process has many entry restrictions.

However, the EU should not lose sight of conduct barriers or the *de facto* barriers to firm growth. A number of conduct barriers such as the specific legal form of business, inter-professional cooperation restrictions or requirement concerning the insurance cover with regard to professional liability are addressed in the proportionality test initiative, but as the list is not exhaustive, rules on advertising or fixed tariffs are not explicitly mentioned. Although they seem to be less prevalent in professional services than other services (as Figure 1 shows), some services professions such as legal services do still have many conduct barriers in place.⁴ It is important to tackle these restrictions as barriers to firm growth form a set of second-generation barriers that over time reduces the long-term dynamic effects of creative destruction and prevents the EU to raise its productivity.

Moreover, the EU should be attentive to Member States that are substituting entry barriers with other murky rules and regulations, outside the scope of the proportionality test. They may just be another form of barriers of conduct – leading to a shift from entry to post-entry barriers. This is important because the rate of regulatory change in professional services is high, creating many opportunities for the regulations to move in the wrong direction. Without a strong proportionality test, there is a risk of regulations sliding into new “hidden” barriers that cover operational restrictions and preventing long-term productivity effects even if entry barriers are lowered.⁵

On top of that, the EU has issued a guidance report on specific reforms that Member States need to implement for each profession. These efforts are laudable as they provide transparency and pressure on governments to continue their reform process. Previous efforts for enhancing transparency through a mutual evaluation exercise as part of Directive 2013/55/EU revealed that regulatory decisions by Member States were “not always based on sound and objective analysis or carried out in an open and transparent manner” (European Commission, 2017b). And therefore, it did not adequately contribute to a correct and full implementation of the Professional Qualifications Directive.

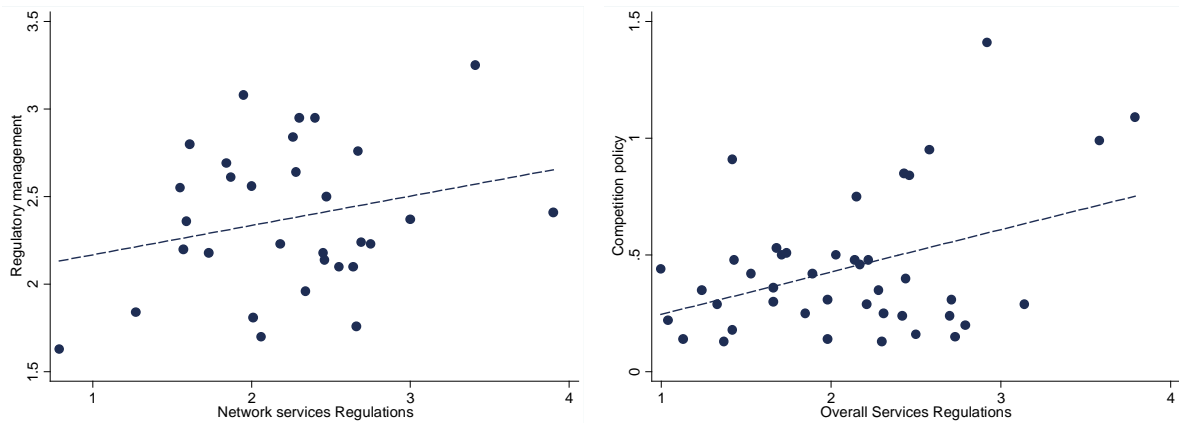
This is an issue of concern. Although some Member States do not want to reform, there are countries that simply have limited regulatory capacity and are not capable of organizing regulation in a way that reinforces the benefits from reforming services markets. That is, governments and regulators need expertise, resources and the right governance structure to undertake regulatory changes in their systems, for example by fine-tuning complementary rules in competition policy, providing adjustment mechanisms to compensate losers, or monitoring firm behavior in services markets and the economic impact of reforms.⁶

This goes well-beyond any Directive or proportionality or guidance report for national reforms and rather focuses on how well-equipped regulatory bodies and governments are in terms of monetary resources, regulatory expertise and overall regulatory management practices. These items are complementary to reducing or reforming regulatory barriers. If the proportionality for professional services inside the Services Package aims at creating *good* and *better* regulatory practices, which it does by setting concrete criteria for regulatory authorities and therefore provides regulatory expertise, the EU also needs to take the aspects of regulatory governance into account, i.e. the institutional set-up of regulatory bodies.

Some Member States will not be able to reform services markets optimally because of these institutional limitations. While the European Commission observes that the new proportionality test does not create any disproportionate new costs for Member States – they are already obliged to ensure the proportionality of the regulations under the Treaty and the Professional Qualifications Directive – it neglects the question of *how* public authorities have to deal with post-services market reforms when knowledge, expertise and regulatory management are required.

An OECD indicator on regulatory management in services – that measures the governance of the bodies that design, implement and enforce these regulations in services – provides further insights.⁷ It shows that some countries such as Italy, the UK and Germany have good performance. Other countries such as Austria, Denmark and Estonia score well below the OECD average. Scores vary according to sectors and sub-components, but an interesting fact is that some EU countries that otherwise score well in their regulatory policies score bad in their regulatory governance.

Yet, there is generally a strong relationship between regulatory policies and regulatory governance as shown in the left-hand panel of Figure 4. The vertical axis shows the score of regulatory management from 0 (the most effective governance structure) to 6 (the least effective governance structure) in services.⁸ The horizontal axis illustrates the level or regulatory restrictions in services. The figure shows indeed that countries with higher regulatory barriers in services are also the ones with least effective governance structures to tackle services reforms.

Figure 4: Regulatory governance policies in services and services reforms (2013)

Source: OECD; author's calculations.

Another indicator, from the World Bank, showing the economy-wide regulatory quality and government effectiveness of countries, exhibits a performance where the Northern EU block scores well whilst the Southern and Eastern blocks together score lower than expected. Whatever the right ranking, the main point is that countries vary in their ability to govern regulations for services markets.

This governance factor is not restricted to regulatory management or regulatory quality in services alone. There are other governance policies for how services markets are organized that are important. One is related to competition policy. It is necessarily not about the competition rules *per se*, but – again – *how* policies are pursued within the framework, for example the effectiveness, soundness and transparency of competition-policy institutions, and the strength and scope of competition regimes.

Another indicator from the OECD precisely measures this aspect of competition governance and is used in the right-hand panel of Figure 4.⁹ This score is shown on the vertical axis and varies between a scale of 0 and 6 (from the most to the least effective competition regime). On the horizontal axis, the level or regulatory restrictions in services is shown. Here, too, the panel points out that there are strong complementarities between the governance of competition regimes, i.e. the institutional set-up of effective competition structures, and services barriers reform. Countries which have less effective competition regimes also show higher regulatory barriers in services.

4. POLICY MEASURES AS MEASURED BY THE EUROPEAN COMMISSION

The results so far have shown the effects of services liberalization using the OECD's sector-specific Product Market Regulations (PMR) as used in van der Marel et al. (2016) and World Bank (2016). However, the European Commission (EC) has developed their own regulatory indicators for services. Although one may wonder whether an additional indicator measuring regulatory policies of EU countries is warranted, there are important reasons to for why we develop and use quantitative indicators for services.

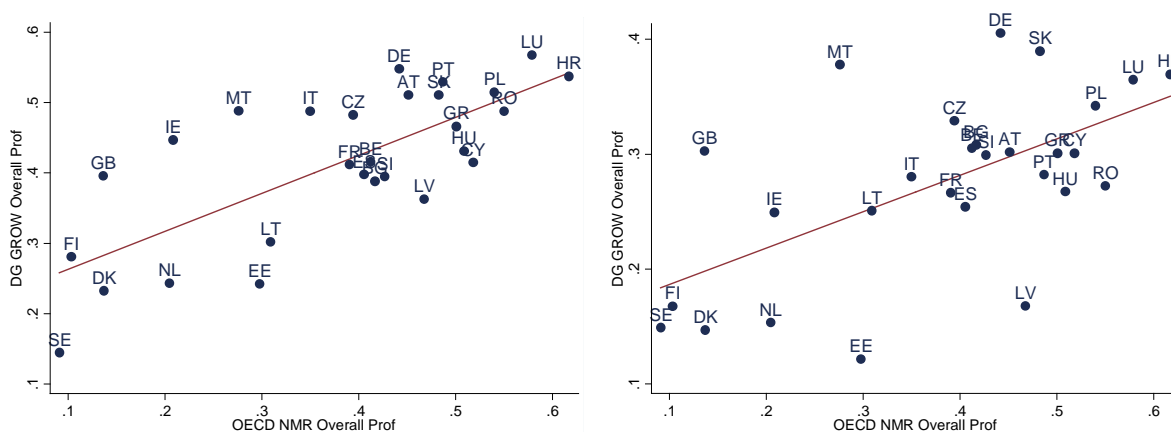
First, although previous indicators for services do indeed exist, this is a far cry from the information on policy barriers that exists for goods markets. This is because services markets are complex, intangible and hence difficult to assess. As the services economy is already big for many European countries and the main source for income, more indicators on services market barriers so as to provide transparency is a welcome issue. Second, with increased transparency economists and policy analysts are only then able to assess which regulatory barriers are significantly burdensome for the EU economy. This is *ex post* assessment is extremely important as it give policy makes precise guidance where to focus on.

Third, as noted by European Parliament (2014) the complex reality of the Single Market project is one that is not always captured well by existing indicators that measure services barriers as the EU has targets a wider set of policy barriers to its Single Market integration and existing indicators have analyzed a selective set of policy measures. Yet, one should also take into account that there are limitations by creating quantitative indicators. For instance, the depth and intensity of regulatory barriers can never be fully captured as the nature of regulations are just complex and may have different workings in one economy compared to another. This also leads to the fact that some heterogeneity may exist between countries between the precise implementation of a similar regulatory barrier, which may be hard to fully capture.

The EC's indicator has a somewhat broader scope in the sense that they include three additional services sectors, namely patent agents, real estate agents and tourist guides), but also cover additional regulatory barriers than measured by the OECD's PMRs. In particular, the EC indicator takes two regulatory additions into account under the sub-heading of entry barriers, namely Regulatory Approach and Qualification Requirements, besides standard entry barriers as measured by the OECD as well. The Regulatory Approach measures existing title protections and the existence of exclusive or share reserved activities of the professional activities. Qualification Requirements cover specific educational requirements as well as CPD requirements for the professional services.¹⁰

When comparing the two indicators with each other, only the four professional services that have also been covered by the OECD's PMR are selected. These are lawyers, engineering services, architectural services and finally accountants. The results of this exercise can be seen in Figure 5. The left-hand panel shows the two indicators (rescaled between 0-1) when selecting all regulatory measures that the EC covers in its indicator which is plotted on the vertical axis (i.e. DG GROW), including Regulatory Approach and Qualification Requirements. The OECD's PMR indicator is plotted on the horizontal axis. A strong correlation appears which means that both indicators pick up similar trends of services restrictiveness across all European countries.¹¹

Figure 5: Comparing services barriers between EC and OECD



Source: OECD and European Commission. Note: due to data limitations, the OECD indicator covers the year 2013 only whereas the EC indicator (DG GROW) covers year 2016.

However, given the fact that the fitted values line starts at higher levels on the vertical axis (and not from the origin) in the left-hand panel, the EC indicator is of a “higher regulatory level”. Various explanations may lay ground to this outcome. One is that the EC could be in the possession of better information about the regulatory barriers as the two procedures of collecting information are different. Second is the fact that the EC indicator takes up two additional layers of regulatory entry barriers which therefore may seem as if it is of a higher regulatory level for all countries. A third reason may be that the EC indicator takes into account all regulatory barriers and therefore has a so-called “cumulative effect” of regulatory barriers whereas the OECD indicator takes only the most restrictive regulatory barrier of a

country. This may bias the indicator downwards if other regulatory barriers are also assessed as very restrictive but not most restrictive.

Therefore, in order to shed light on this possibility, the right-hand panel provides a robustness check in which the two layers of regulatory entry barriers have been excluded (i.e. Regulatory Approach and Qualification Requirements) so as to have a clean comparison with the entry barriers of taken up by the OECD indicator. The figure shows that the fitted values line indeed starts from a lower level when looking at the vertical axis, although still not precisely at the origin. Surprisingly, however, is the fact that the deviations from the fitted values line seem to be greater than the left-hand panel. The UK (GB), Malta (MT), Germany (DE), Slovakia (SK), Latvia (LV) and Estonia (EE) appear to be further away from the fitted values line in the right-hand panel indicating that when strictly comparing entry barriers and conduct barriers as picked up by the OECD, substantial differences for these countries come into effect.¹²

5. CONCLUSION

The Single Market for services is still not complete. Many countries in the EU still uphold regulatory barriers in services whilst some already show a much lower level of services restrictions in their markets. As the EU has a real productivity problem, it is important to focus more precisely on the types of barriers in each services market. Entry barriers is an area that allows for a first opportunity of introducing more competition in services, unleashing pressure on providers to become more efficient. Reforming barriers on operations is another opportunity. Reducing barriers on operations is important for the EU's long-term growth as shown in this briefing. These are second-generation barriers which in some services markets are hard to handle. Reducing them create sustained dynamism in services by allowing firms to expand and grow, reaping further productivity gains that will eventually lead to higher economic growth.

Both these policy barriers have been taken up in the EC's effort to produce comparative restrictiveness indicators in the Single Market for services. The function of set of indicators is to allow for transparency and international comparison of best practice across Member States. Economic research shows that reforms in services regulation, or the implementation of non-excessive regulations in (professional services) stimulates economic growth in the EU. Comparative indicators measuring the extent to which services markets are regulated can therefore serve as a reference point for countries that score as restrictive compared to those which are found to be least restrictive. At the same time, by making public the restrictive level of countries, it provides on way of peer review to pressure countries for reform.

While barriers in services are important, they are only half of the story. A services reform package should also look at *how* capable and equipped member states are in governing services markets during and after the reform process. Some countries show a greater capacity to deal with new regulations while others are less capable to do so. This varying degree of good regulatory governance in services across countries has an additional impact of how well these countries can generate productivity through services reform. That includes regulatory propositions by the EU. Regulatory governance and regulatory reform are closely connected with each other. Therefore, the EU needs to pay far more attention to how services markets are governed.

In terms of direct recommendations, the EC could take into account regarding the quantitative index, they are the following:

1. find as much common support with the OECD to overcome significant differences in methodology. Although the EC's larger scope of regulatory policies in professional services are a good starting point, its cumulative nature remains unclear;
2. find out the differences in scoring results between the OECDs and DG GROW as presented in the right-hand panel of Figure 5. There is large variation between the two indicators for a sub-set of Member States and therefore the underlying reasons must be clarified;

3. compose this index on a yearly basis so as to uncover time trends. This is important for policy research and best recommendations for Member States;
4. it would be good to provide an improved motivation for the weighting scheme for each specific policy and more motivation for including specific policies that are considered as barriers (i.e. qualification requirements), including the whole list of type of measures that are included under detailed category;
5. the EC should use its composite indicators for more extensive econometric research to prove its usefulness and therefore the approach taken in European Commission (2017c) should be extended.

REFERENCES

- Akerberg, D., K. Caves and G. Frazer (2015) "Identification Properties of Recent Production Function Estimators", *Econometrica*, Vol. 83, Issue 6, pages 2411-2451.
- Aleman, E., C. Klein, I. Koske, C. Vitale and I. Wanner (2013), "New Indicators of Competition Law and Policy in 2013 for OECD and non-OECD Countries", OECD Economics Department Working Papers, No. 1104, OECD Publishing, Paris
- Arnold, J., B. Javorcik and A. Mattoo (2011) "The Productivity Effects of Services Liberalization: Evidence from the Czech Republic", *Journal of International Economics*, Vol. 85, No. 1, pages 136-146.
- Arnold, J., B. Javorcik, M. Lipscomb and A. Mattoo (2015) "Services Reform and Manufacturing Performance: Evidence from India", *The Economic Journal*, Vol. 126, Issue 590, pages 1-39.
- Barone, G. and F. Cingano (2011) "Services Regulation and Growth: Evidence from OECD Countries", *Economic Journal*, Vol. 121. No. 555, pages 931-957.
- Bartelsman, E.J., S. Scarpetta and F. Schivardi (2003) "Comparative Analysis of Firm Demographics and Survival: Micro-Level Evidence for the OECD Countries", OECD Economics Department Working Papers, No. 348, OECD, Paris.
- Bourlès, R., G. Clette, J. Lopez, J. Mairesse and N. Nicoletti (2013) "Do Product Market Regulations in Upstream Sectors Curb Productivity Growth? Panel Data Evidence for OECD Countries", *The Review of Economics and Statistics*, Vol. 95, No. 5, pages 1750-1768.
- European Commission (2017a) "Communication on Reform Recommendations for Regulation in Professional Services", COM(2016) 820, final, Brussels: EC.
- European Commission (2017b) "Proposal for a Directive of the European Parliament and of the Council on a Proportionality Test before Adopting of New Regulations of Professions, COM(2016) 822 final, Brussels: EC.
- European Commission (2017c) "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Reform Recommendations for Regulation in Professional Services", EC Staff Working Document, SWD(2016)436, Brussels: EC.
- European Parliament (2014) "Towards Indicators for Measuring the Performance of the Single Market", Briefing for the IMCO committee, DG for Internal Policies.
- Hsieh, C-T. and P. Klenow (2009) "Misallocation and Manufacturing TFP in China and India", *Quarterly Journal of Economics*, Vol. 124, Issue 4, pages 1403-1448.
- Hsieh, C-T. and P. Klenow (2014) "The Life Cycle of Plants in India and Mexico", *Quarterly Journal of Economics*, Vol. 129, Issue 3, pages 1035-1084.
- Koske, I., F. Naru, P. Beiter and I. Wanner (2016), "Regulatory management practices in OECD countries", OECD Economics Department Working Papers, No. 1296, OECD Publishing, Paris.

Levinsohn, J. and Am Petrin (2003) "Estimating Production Functions Using Input Control for Unobservables", *Review of Economic Studies*, Vol. 70, No. 2, pages 317-341.

OECD (2015) "The Future of Productivity", OECD Publication, Paris.

Olley, S. and A. Pakes (1996) "The Dynamics of Productivity in the Telecommunications Equipment Industry", *Econometrica*, Vol. 64, Issue 6, pages 1263-1295.

van der Marel, E., Janez Kren and M. Iooty (2016) "Services in the European Union: What Kinds of Regulatory Policies Enhance Productivity?", World Bank Policy Research Paper Series, No. 7919, Washington DC: The World Bank.

World Bank (2016) "Regular Economic Report: Growth, Jobs and Integration: Services to the Rescue", Washington DC: The World Bank.

- ¹ The firm-level TFP measure are weighted by firm-size in the aggregation process across each services sector.
- ² Country-specific studies using firm-level data show this knock-on effect outside the EU as well such as Arnold et al. (2015). Studies using industry-level data showing this effect for OECD economies are Barone and Cingano (2011) and Boursès et al. (2013).
- ³ The only exception is retail services which still has relatively high entry barriers. However, this sector's measurement of productivity is difficult to measure and therefore needs to be taken with some margin of error.
- ⁴ High conduct barriers for the legal profession also became visible in its EU Regulated Professions Database.
- ⁵ A study by the World Bank (2016) and van der Marel et al. (2016) pointed out that precisely in the EU barriers on the conduct of the firms have strongest and most important economic impact on services generally, including non-professional services.
- ⁶ As European Commission (2017b) states: "The [previous] mutual evolution process revealed that regulatory decisions are currently not always based on sound and objective analysis or carried out in an open and transparent manner".
- ⁷ Professional services are excluded from this indicator but nonetheless provides a good state of regulatory play of the institutional setting for each country regarding the entire services sector.
- ⁸ See Koske et al. (2016) for further explanations on this indicator.
- ⁹ See Alemani et al. (2013) for further explanations of this indicator.
- ¹⁰ These two supplementary layers of regulatory barriers together account for 48 percent in the weighting scheme which is sizable of which 31 percent for Regulatory Approach and 17 percent for Qualification Requirements.
- ¹¹ The coefficient of correlation is indeed high and stands at 0.74.
- ¹² However, it is not entirely clear to what extent the EC indicator also broadens the scope for conduct requirements that go beyond the OECD. EC (2017a; 2017b) indicate that restrictions on corporate forms/ incompatibilities (shareholding requirements, voting rights control, incompatibilities of activities for a professional and other authorisation requirements) are included, which suggests that also for this type of services regulations, the EC indicator could have included more regulatory measures than compared to the OECD PMRs.

DISCLAIMER

The content of this document is the sole responsibility of the author and any opinions expressed therein do not necessarily represent the official position of the European Parliament. It is addressed to Members and staff of the EP for their parliamentary work. Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the European Parliament is given prior notice and sent a copy.

This document is available at: www.europarl.europa.eu/studies

Contact: Poldep-Economy-Science@ep.europa.eu

Manuscript completed in July 2017

© European Union

IMCO-2017-03

PE 607.337



CATALOGUE: QA-02-17-978-EN-C (paper)

CATALOGUE: QA-02-17-978-EN-N (pdf)

ISBN: 978-92-846-1614-5 (paper)

ISBN: 978-92-846-1613-8 (pdf)

doi:10.2861/232636 (paper)

doi:10.2861/36240 (pdf)