

ECONOMIC MODELLING FOR THE SINGLE MARKET PERFORMANCE REPORT 2019

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- The European Single Market permits free movement of goods and services within the European Union (EU). By stimulating competition and trade, it improves efficiency, it raises quality and helps cutting prices.
- The European Commission has a strategy in place to unlock the full potential of the Single Market by improving mobility for service providers, facilitating innovation, enabling across-borders retailing, and enhancing EU-wide access to goods and services.
- This Policy Insight presents the results of the modelling exercises on the macroeconomic effects of a barriers reduction in regulated business services sectors and construction.
- Simulations made with the RHOMOLO and FIDELIO models suggest that price reductions in relatively small sectors may have sizeable GDP effects in the EU with sizeable sectoral and country spillovers.
- For instance, tackling the regulatory restrictiveness in legal, accounting, architectural and engineering services may increase EU value added by up to €41 billion, generating jobs for 500,000 persons, after ten years.

1. Policy context

The European Single Market refers to the EU as one territory without any internal borders or other regulatory obstacles to the free movement of goods and services. A functioning Single Market stimulates competition and trade, improves efficiency, raises quality, and helps cut prices. The European single market is one of the EU's greatest achievements. It has fuelled economic growth and made the everyday life of European businesses and consumers easier.

The Single Market strategy of the European Commission is in place to unlock the full potential of the Single Market, whose benefits do not always materialise because its rules are either not known or fully implemented, or they are undermined by other barriers. The strategy aims at improving mobility for service providers, ensuring that innovative business models can flourish, making it easier for retailers to do business across borders, and enhancing access to goods and services in the EU.

The European Commission continuously monitors the performance of the Single Market and in November 2019 published the Single Market Performance Report 2019 (European Commission, 2019). The Report highlights the importance of structural reforms at Member State (MS) level, as well as the need for improvement in the compliance and application of Single Market legislation not just in goods markets, but also in services markets.

Indeed, free trade and cross-border investments do not guarantee lower prices for consumers and new business opportunities unless markets are also open to competition in terms of existing market power, regulations, and sufficient energy and transport infrastructures. This is the reason why the Report emphasises the key role played by structural reforms to deliver the Single Market benefits to citizens and businesses.

A number of modelling exercises have been carried out with the aim to analyse the performance of the Single Market. This Policy Insight reports the results of the simulations done with the JRC's RHOMOLO and FIDELIO models. The dynamic spatial Computable General Equilibrium (CGE) model RHOMOLO is routinely used in the ex-ante impact assessments of European policies and has been used recently to assess the potential benefits of the Single Market measures contained in the third pillar of the Investment Plan for Europe (Christensen et al., 2018). The dynamic econometric input-output FIDELIO model has also been used in light of the higher sectorial detail with respect to that of RHOMOLO.

This Insight reports the main features of the modelling analysis and its results.

2. The modelling assumptions

Modern macroeconomic models like RHOMOLO (see Lecca et al., 2018, for a full description of the model) and FIDELIO (see Rocchi et al., 2019, for details on its equations and data sources) provide coherent and internally consistent frameworks to analyse the channels through which policies affect an economy. RHOMOLO is calibrated with data for the 267 NUTS-2 regions (and the residual rest of the world - see Thissen et al., 2019) and is defined over 10 economic sectors. On the other hand, FIDELIO models the 28 EU MS plus seven large non-EU economies and the rest of the world with data on 56 sectors. Both models have been used for the Single Market Performance Report 2019 as explained below.

A first set of RHOMOLO simulations deals with the reduction in the restrictiveness in the regulated sectors of legal, accounting, architecture, and engineering services (these are the M69 and M70 sectors according to the NACE-2 classification used by Eurostat). In particular, the hypothesis behind this scenario is that, by means of structural reforms, the EU MS are able to reach the restrictiveness level of the top EU performers which, considering the four services combined, are Denmark, Estonia, the Netherlands, and Sweden (data on the restrictiveness indicators were provided by DG GROW to the JRC). This was labelled the “closing the gap” scenario.

First, the hypothesised reduction in the restrictiveness indicator was converted into a reduction in market frictions using an assumed semi-elasticity of 3.4 per unit as suggested in Appendix VI of European Commission (2016). Then, it was necessary to compute the weight of the M69 and M70 sectors over the composite M_N sector defined in RHOMOLO in order to rescale the shock: according to Eurostat data, this weight is on average 25% across the EU.

A second set of simulations deals with the construction sector. Since no data on its restrictiveness are available, the simulations were built on the hypothesis of a 5% increase in labour productivity in the sector resulting from reforms tackling the national regulation which at the moment results in little cross-border activity. In this case, no additional adjustments were necessary since the construction sector (F, according to the NACE-2 classification) is one of the ten RHOMOLO sectors.

Finally, the detailed sectorial classification of the FIDELIO model was exploited by performing similar

types of simulations and calculating the spillover effects of the reforms on the rest of the sectors of the economy.

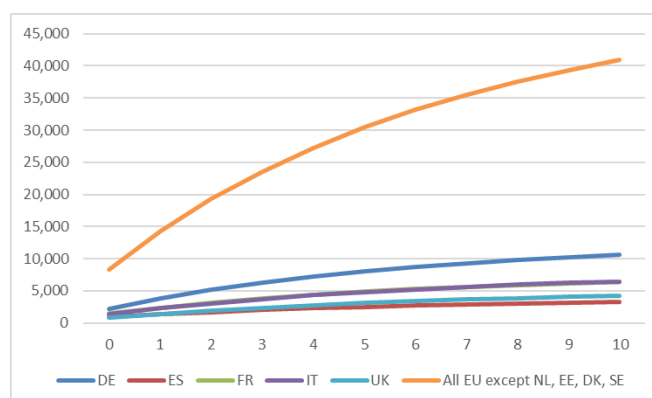
The policy impact of this research

The results of this analysis are featured in the Commission Staff Working Document “Single Market Performance Report 2019” (European Commission, 2019). That report analyses the role of structural reforms at a Member State level for the performance of the Single Market. An economic analysis with the RHOMOLO and FIDELIO models shows the potential effects of reducing barriers in highly regulated sectors.

3. Main results

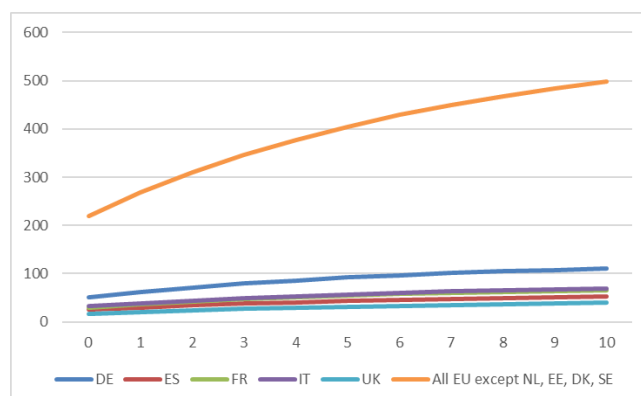
The results of the closing the gap scenario are reported in Figures 1a and 1b below which depict the impact over time on value added and employment, respectively.

Figure 1a: Value added impact in millions of € - “closing the gap” scenario



Source: RHOMOLO calculations.

Figure 1b: Employment impact in thousands of persons employed - “closing the gap” scenario



Source: RHOMOLO calculations.

After ten years, the model predicts a positive gain of EU-wide value added and employment of up to €41 billion and 500,000 persons with respect to the baseline scenario, respectively, if all EU Member States reached the restrictiveness level of the top performers. The effects would be lower if the change occurred in one country only, as can be seen with the examples of the change only affecting Germany, Spain, France, Italy, or the UK.

The impact on value added and employment varies across Member States. In the short run, the change in VA ranges from -€79 million in the Netherlands to +€2.42 billion in Germany and +€1.38 billion in Italy. After 10 years, however, all Member States experience an increase in value added, the highest being recorded for Germany (+€11.42 billion) and the lowest for Estonia (+€5 million). As for the change in employment, after 10 years it ranges from +100 persons employed in Estonia to +118,000 in Germany.

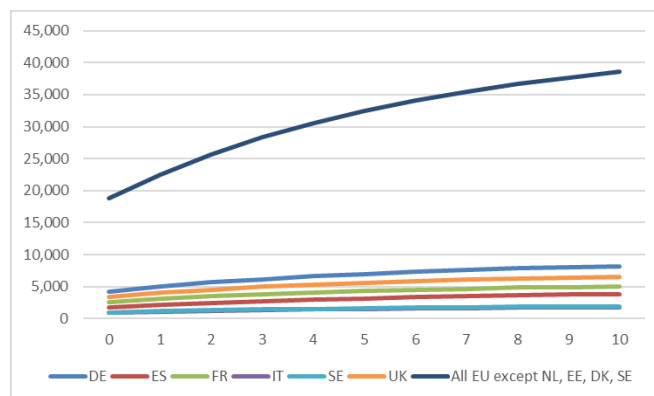
In most Member States, the professional services sector experiences a decline in value added and employment, resulting from the relatively low substitution elasticities in intermediate inputs and consumption used in RHOMOLO. Thus, this sector experiences only a very modest rise in demand for its goods.

The positive overall value added effects of the lower barriers in the four considered business services comes from the positive spillovers to the other sectors of the economy. In the short run, the largest contribution to the rise in EU value added can be traced to the manufacturing (+€3.5 billion) and the public administration, education and health sectors (+€2.7). After 10 years, the largest contributing sectors are manufacturing (+€16 billion) and financial services (+€8 billion). As for employment, after 10 years the largest changes are recorded in the manufacturing sector (more than 200,000 persons employed) and in the Public administration, education and health sector (more than 100,000 persons). Moreover, FIDELIO simulations suggest that only 7% of the total benefits realised after 10 years are recorded in the shocked sectors, while 77% happen in other sectors, and 16% in the rest of the EU.

Figures 2a and 2b report the results of the simulations on the construction sector. Similarly to before, the impact on value added is depicted in Figure 2a, and the employment impact in Figure 2b. Once again, the productivity increase would have a

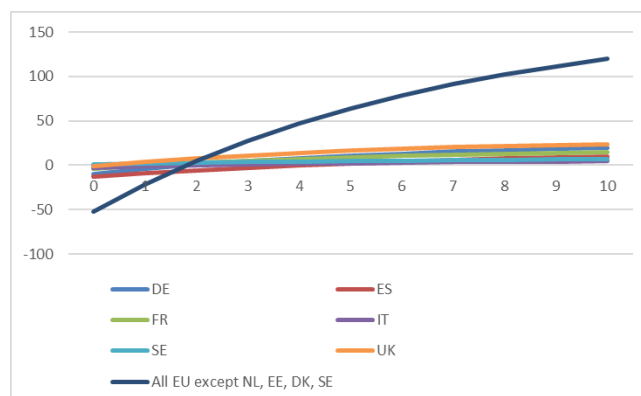
smaller impact should it happen in only one country rather than in all the EU MS. Figures 2a and 2b show the effects of the productivity change when assumed in the whole EU and also in few selected countries one at a time (namely, France, Germany, Italy, Spain, Sweden, and the UK).

Figure 2a: Value added impact in millions of € - productivity in construction scenario



Source: RHOMOLO calculations.

Figure 2b: Employment impact in thousands of persons employed - productivity in construction



Source: RHOMOLO calculations.

The simulated 5% increase in labour productivity in construction illustrates the potential gains from reducing barriers in that sector, with up to +€38.60 billion in terms of EU-wide value added and +119,000 persons employed after 10 years in the scenario in which all EU Member States experience the change.

Again, FIDELIO results show that on average only 5% of the benefits are realised in the construction sector itself, while 79% accrue to other sectors of the same country and 16% to other countries. Importantly, if only one country makes progress in reducing barriers in the sector, benefits are lower than when more or all do it.

4. Conclusions

The analysis summed up in this Policy Insight provides estimates of the potential benefits of structural reforms made to further unlock the potential of the European Single Market. In particular, the model simulations presented here assess the likely effects on value added and employment stemming from changes in the restrictiveness of the legal, accounting, architecture, and engineering services, as well as of the construction sector. The results suggest that there may be sizeable economic effects despite the relatively small price and productivity changes affecting only some of the sectors of the EU economy.

As for any modelling outcome, the numbers reported here should be interpreted with care as they result from a number of assumptions embedded in the nature of the two models used, RHOMOLO and FIDELIO. The analysis has been used in the context of the Single Market Performance Report 2019 together with additional qualitative and quantitative evidence.

How to cite:

Christensen, M., Barbero, J., Rocchi, P., Conte, A., Marschinski, R., and Salotti, S. (2019). Economic modelling for the Single Market performance report 2019. Territorial Development Insights Series, JRC118689, European Commission.

Read more

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RHOMOLO

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