



A general equilibrium analysis of the economic impact of the post-2006 EU regulation in the services sector

JRC Technical Report

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Overall research design

Mapping and assessment of services restrictions

- Qualitative analysis of restrictions over time
- Quantification of restrictions
- Database of values for restrictions in 13 services sectors in 31 countries over 2006-2012-2017
- [Commission report](#)
- [Database with restrictions](#)

Analysis of economic impact of removing restrictions

- Econometric estimation of inefficiency in services sectors
- Estimation of impact of different scenarios of removal of services restrictions using the general equilibrium model RHOMOLO
- Cumulative impacts on GDP and employment
- [JRC working paper by Javier Barbero, Manol Bengyuzov, Martin Christensen, Andrea Conte, Simone Salotti and Aleksei Trofimov](#)

Research context

- OECD Product Market Regulation indicators (periodically published since 1988).
- Copenhagen Economics. Economic Assessment of the Barriers to the Internal Market for Services (2005).
- Monteagudo, J., Rutkowski, A., and Lorenzani, D. The economic impact of the Services Directive: A first assessment following implementation (2012).
- European Commission. Assessment of the economic impact of the Services Directive – update of the 2012 study (2015).
- World Bank. Growth, jobs and integration: Services to the rescue. World Bank EU Regular Economic Report (2016).
- OECD intra-EEA Services Trade Restrictiveness Index (since 2014).
- European Commission. Restrictiveness indicator for professional services (first edition 2017, second edition 2021).

Study on mapping and assessment of barriers in the services sector

Objectives

- An updated detailed inventory of existing barriers in a range of services sectors
- Understanding the evolution of barriers over time
- Prepare the basis for the subsequent analysis of economic impact

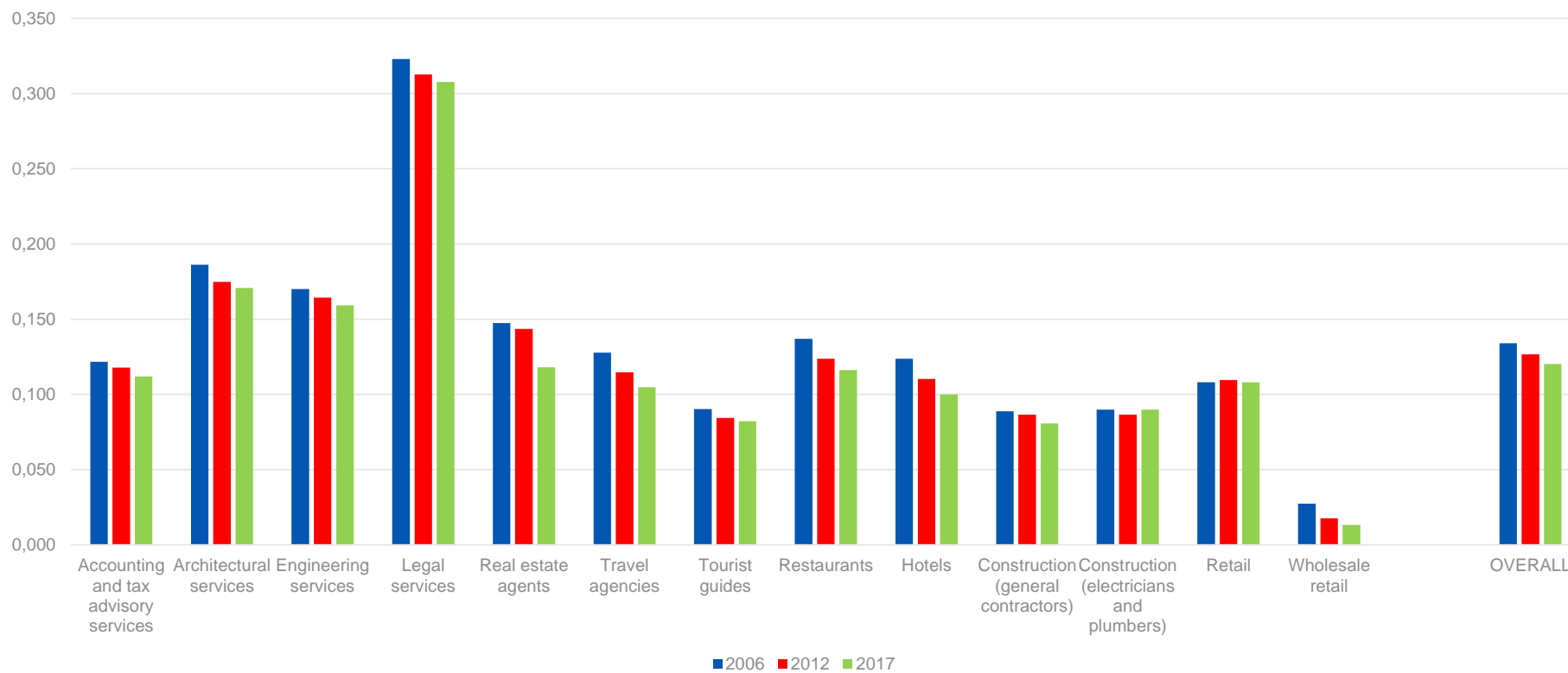
Scope

- requirements covered by the Services Directive and related requirements
- 13 services sectors
- 3 time points: 2006, 2012, 2017
- all Member States as well as UK and EEA-EFTA

Methodology

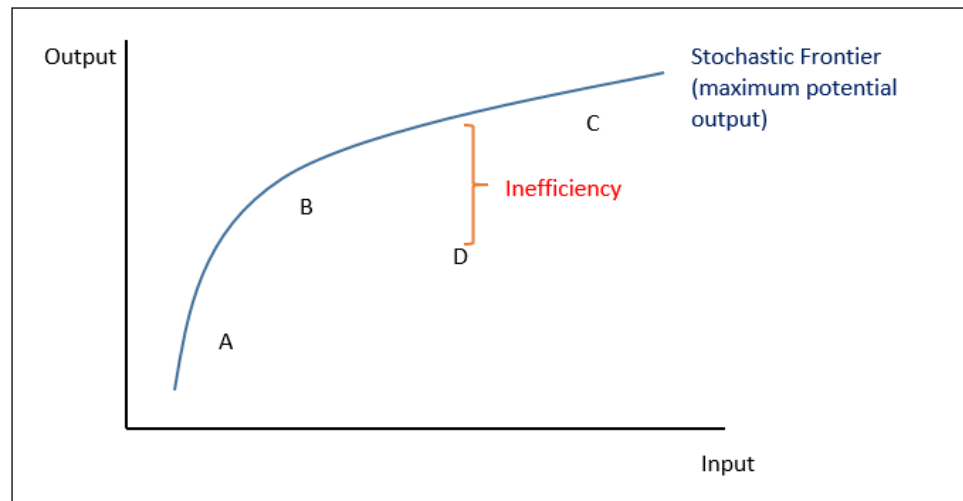
- legal reports by Member State prepared by an external contractor
- detailed review by the Commission
- consultation with Member States
- synthesis report prepared by the Commission
- restrictions database publicly available

Overall evolution of barriers in services, EU27



Econometric estimation

- Stochastic frontier approach
- Prediction of country/sector efficiency based on characteristics of each country/sector pair



- $GVA_{\text{country, sector, time}} = f(\text{capital stock, employment stock, country fixed effects, time fixed effects, inefficiency term, random noise})$
- Inefficiency term = $f(\text{services restrictions})$
- By changing the value of the services restrictions variable, the model can be used to predict the changes in inefficiency
- Assume a decrease in inefficiency (=increase in efficiency) thanks to the removal of restrictions is an increase in TFP

General equilibrium modelling

General equilibrium model

- RHOMOLO: dynamic spatial equilibrium model
- 10 macro sectors based on NACE2
- Routinely used to study the macroeconomic impact of EU policies
- Removal of services restrictions is treated as a positive Total Factor Productivity shock impacting the economy

Scenarios

1. Historical (change 2006-2017)
2. Best of five hypothetical
3. At least EU average hypothetical
4. Ambitious (1+2)
5. Conservative (1+3)

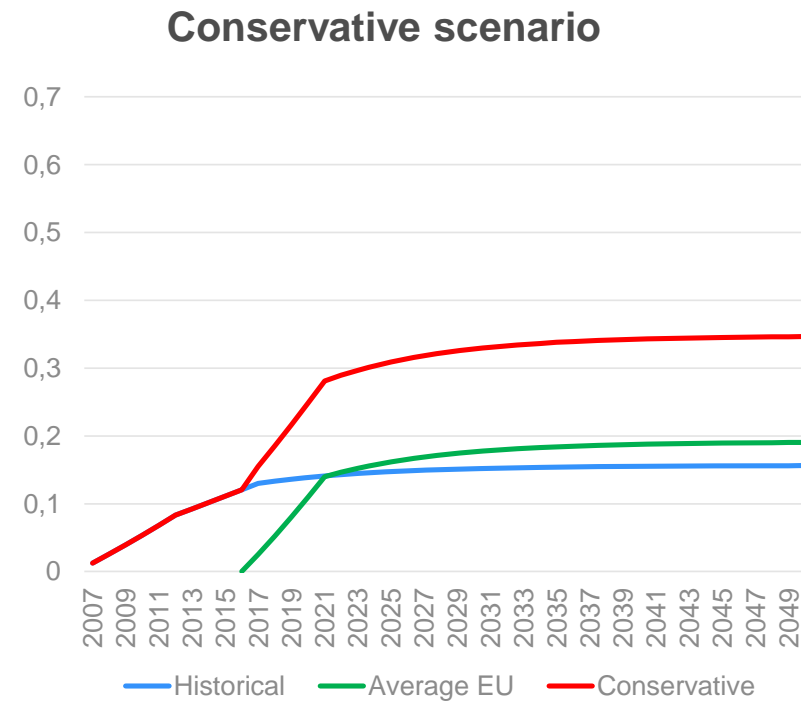
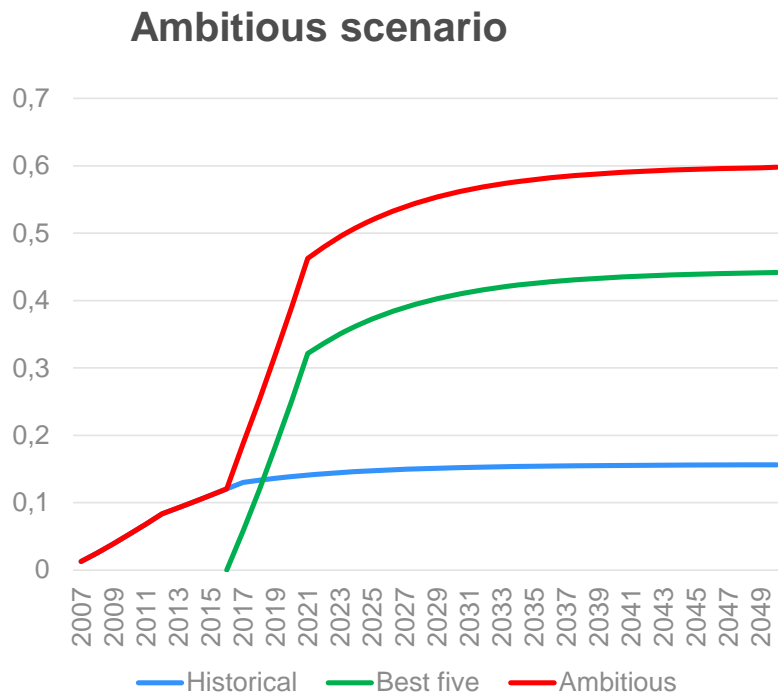
Results

- Expressed as cumulative discounted gains in GDP
- Can also be expressed as % deviation from the baseline in a given year
- Long-term impacts on employment

Impacts of main scenarios: cumulative discounted gains



Impacts of main scenarios: deviation from baseline



% of GDP

Results of the impact estimation

Cumulative discounted GDP gains as % of base year GDP

	2007-2022	2007-2025	2007-2027	2007-2030
“Historical” (scenario 1)	1.46	1.86	2.13	2.54
“Best five” (scenario 2)	0.87	1.83	2.52	3.58
Total (scenario 4 “Ambitious”)	2.33	3.69	4.65	6.12
“Historical” (scenario 1)	1.46	1.86	2.13	2.54
“Average EU” (scenario 3)	0.38	0.80	1.09	1.56
Total (Scenario 5 Conservative”)	1.84	2.66	3.22	4.09

Long-term rise in employment of 100'000 FTEs (historical scenario), plus additional gains of 260'000 FTEs (ambitious scenario) or 100'000 FTEs (conservative scenario).

Main conclusions

Mapping and assessment of services restrictions

- Overall evolution of services barriers: a small decrease in the absolute level of barriers
- Wide divergence of regulatory approaches taken by Member States
- Most restrictions are only present in a limited number of Member States
- Large scope for mutual learning and further relaxation of requirements

Analysis of economic impact of removing restrictions

- Already implemented regulatory reforms in services have led to important gains in GDP and employment
- More ambitious reforms would result in further significant boost for the performance of the Single Market

Thank you



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