STRUCTURAL REFORMS AND THE BENEFITS OF THE ENLARGED EU INTERNAL MARKET: STILL MUCH TO BE GAINED[1]

by Jens Matthias Arnold[2] and Andreas Wörgötter,
OECD Economics Department

Abstract

In the light of recent calls for additional structural reforms in Europe, this paper looks at the role that a reduction of remaining barriers for integration and competition in the EU internal market can play in this context. This paper presents new estimates of the likely impact of product market reform on labour productivity in old and new EU member countries, with a particular focus on network industries, professional services and retail trade. These estimates reveal that labour productivity could be boosted by an average of 10 per cent over a time horizon of 10 years, in reward for a reform agenda that would align the stringency of anti-competitive regulation in services sectors to European best practice across all countries.

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2 .   Corresponding author: jens.arnold@oecd.org

1. Introduction

There are strong reasons to believe that intensifying economic integration among European economies will bring substantial benefits, and indeed the expectations on this process, both for the countries that were part of the initial integration process as well as for those that joined more recently, have been high. One key channel through which integration and enlargement could carry economic benefits is an improved functioning and deepening of markets. Competition is crucial for market allocation mechanism to work properly, and economic policy can influence the degree of competition, particularly in industries that are subject to regulatory interventions, which can be more or less competition-friendly. The present paper will argue that there is still substantial room for further competition-enhancing reform in the EU. To substantiate this argument, we will present estimates of the potential productivity benefits that such reforms could bring about for a number of European countries.

2. Product market reforms in services industries

The European Single Market has reduced internal tariffs on goods to zero, which implies that the level of competition in the markets for manufactured goods have –minor transaction costs apart- been equalised throughout the European Union. If a market is insufficiently serviced by competitive domestic producers, free trade will allow a country to benefit immediately from the level of competition in the remaining member states. In services industries, however, the scope for cross-border trade is substantially lower than in the case of manufactured goods, and at the same time these industries tend to be more heavily regulated than manufacturing. Product market regulations in services industries generally address public interest concerns about market failures, including monopoly conditions, externalities and asymmetric information. However, some regulations may drift away from their original public interest aims, resulting in the protection of special interest groups, and regulations (and their implementation) sometimes involve costs that exceed their expected benefits. In addition, technical progress, the evolution of demand and progress in regulatory techniques can render regulations obsolete.

Reforming inappropriate regulations can foster the productivity of existing firms by improving incentives to invest and adopt the leading technologies or to innovate. It can lower entry costs, intensifying competitive pressure and facilitating the reallocation of resources across sectors and, within each sector, across firms with different productivity levels. To the extent that greater competitive pressure lowers prices or improves quality, this effect can generate trickle-down effects into downstream sectors by reducing the costs of intermediate inputs, particularly for intermediate services inputs where import competition is limited. Such reforms are thus an essential element of reaping the full benefits from the completion of the internal market.

The link between regulation, competition and productivity growth is by now amply documented in the literature (Aghion *et al.*, 2004, Bourlès *et al.*, 2010, Nicoletti and Scarpetta, 2003). Arnold, Nicoletti and Scarpetta (2008) and Conway *et al.* (2006) present empirical evidence of a positive relationship between lighter product market regulation and productivity growth in OECD countries. The following analysis relies on the findings of these studies and a new vintage of OECD Product Market Regulation (PMR) indicators to illustrate the potential gains from regulatory reforms in terms of economic performance.

3. Measuring product market regulation

Quantifying the expected benefits from product market reforms requires a quantitative measure of product market policies. Measuring regulation is not an easy task, and only few measures providing cross-country

comparability are available. The OECD PMR indicators used in this paper rely on extensive country surveys of regulatory practices in services industries, and are probably the most complete set of information available on this kind of regulation in OECD economies. These industry-specific indicators cover two broad groups of sectors: network industries, including energy (electricity and gas), transport (air, rail and road transport) and communication (post and telecommunications); and retail trade and professional services. The regulatory domains covered for these sectors are State control, barriers to entry, involvement in business operations, and, in some cases, vertical integration and market structure. The latest year covered by the PMR indicators is 2008.

The indicators show a wide variation in the competition-friendliness of regulatory frameworks (Woelfl *et al.*, 2009). Among European countries, three country groups can be distinguished: Sweden and the United Kingdom have a very competition-friendly regime, while many other European countries cluster around a middle range of the indicator. Finally, the most restrictive regulations are found in Belgium, the Czech Republic, Hungary, Norway, Poland, and Portugal. Over time, there has been considerable progress in easing regulations, especially in network industries. But there is still considerable scope for liberalisation in the services sectors, notably in the eastern European countries.

4. Estimating the impact of reforms on economic performance

The simulations presented here evaluate the labour productivity impact of a hypothetical regulatory reform in non-manufacturing sectors, on the basis of the empirical model of labour productivity in Conway *et al.* (2006), which is based on the theoretical work of Aghion and Howitt (2006). The model is estimated on industry-level panel data for 20 sectors across 20 OECD countries. Given the dynamic nature of the model the adjustment of productivity to policy reforms is gradual, and we calculate the impact over a time period of 10 years after the reform.

The simulations proceed in two steps. First, the simulated policy changes are defined at the level of sector-specific regulation indicators for each non-manufacturing sector. These changes in service sector regulation measures are translated into the corresponding knock-on effects for each sector of the economy, including manufacturing sectors, on the basis of input-output relationships between different sectors of the economy. This approach captures the idea that a sector that relies relatively heavily on inputs from a given non-manufacturing sector is likely to be affected relatively strongly by changes in that non-manufacturing sector (Conway *et al.*, 2006). In a second step, the impact of this reform on labour productivity growth is simulated for each sector of the economy using a dynamic empirical model. An estimate of the reform impact is obtained by comparing the model predictions on labour productivity outcomes both with and without the hypothetical regulatory reform.

In the empirical model labour productivity growth of a given sector in a given country depends on its ability to keep pace with the growth of the same sector in the country with the highest sector-specific level of labour productivity (the productivity leader) by either innovating or taking advantage of technology transfers. The prospects of catching up with the productivity leader are affected by the policy environment in follower countries. In particular, Aghion *et al.* (2005) stress the role played by institutions that promote (or hinder) firm rivalry and/or entry of new firms in raising (or curbing) incentives to enhance productivity. In the model presented here, these institutions are proxied by the OECD indicators of anti-competitive regulations described above.

There is also growing evidence on the particular role of industries that are intensive in the use of information and communication technologies (ICT) for productivity growth, and to some extent the recent disparities in productivity growth across OECD countries reflect differing degrees of adaptability across

countries to recent technology shocks in ICT (Triplett and Bosworth, 2004; OECD, 2003). To allow for this particular role of ICT-intensive sectors, the model distinguishes between the effect of regulation on ICT-intensive and non-ICT intensive sectors. Indeed, the empirical findings obtained in the estimations suggest that there is a stronger effect of regulation in ICT-intensive sectors.

The labour productivity effects of the simulated regulatory reform are calculated for each sector separately, and then aggregated to a weighted average at the economy-level. The estimation equation used in the empirical model is the following:

$$\Delta \ln LP_{ijt} = \delta \, (\Delta \ln LP_{ijt}^{\,leader}) + \sigma \, prodgap_{ijt-1} + \gamma_1 \, PMR_{ijt}^{\,ict} + \gamma_2 \, PMR_{ijt}^{\,non\text{-}ict} + \alpha \, (PMR_{ijt-1} * prodgap_{ijt-1})$$

$$+ \text{country/industry dummies} + \text{time dummies} + \varepsilon_{ijt} \qquad \text{with } \varepsilon \sim N(0, \Sigma).$$

In this equation, the indices i, j and t denote countries, industries and years, respectively; LP denotes labour productivity; prodgap is the 'productivity gap' - which is measured as the (log) difference between the level of productivity of a given sector in each country and that of the productivity leader - and PMR is the regulation impact indicator of anticompetitive product market regulation. Fixed effects for each country-industry combination are included so as to account for unobserved time-invariant factors affecting productivity growth in a particular sector or country (e.g. natural endowments or location). Time dummies are also included to control for global productivity shocks in any given year. A table with the model specification estimated by Conway *et al.* (2006) is presented in the Annex.

The empirical model is hence able to take into account certain specific conditions in a country – notably differences in industry structures and the distance between industry-specific productivity levels in each country and those in the corresponding industry leader country. In contrast to earlier work, however, the present analysis does not have to rely on the PMR indicator analysis from 2003, but can make full use of the most recent assessment of product market regulation in most OECD member countries (see OECD, 2009).[3]

5. What can be expected from integration barriers reducing regulatory reform?

The simulation exercise quantifies the effect of aligning countries' product market regulation for each non-manufacturing sector with international best practice in regulation. This is, of course, a very ambitious reform package. No single country has the least restrictive regulatory policy in every single sector, so that this simulation would imply a lower average level of regulation (across all sectors) than is currently in place in any single OECD country. The simulations have been undertaken for most EU countries that are OECD members. For a few countries, no response to the product market indicator questionnaire was received, while for some others industry-level data coverage is incomplete. Figure 1 presents the results of the simulations.

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3. This approach is in line with Ilzkovitz *et al.* (2008) who identify four obstacles to a better working of the internal market: regulation, integration, competition and innovation. Problems are in particular identified in the areas of competition and innovation, thereby also shedding some light on the disappointing productivity performance of European economies.

Figure 1. Simulated changes in labour productivity, cumulated over 10 years
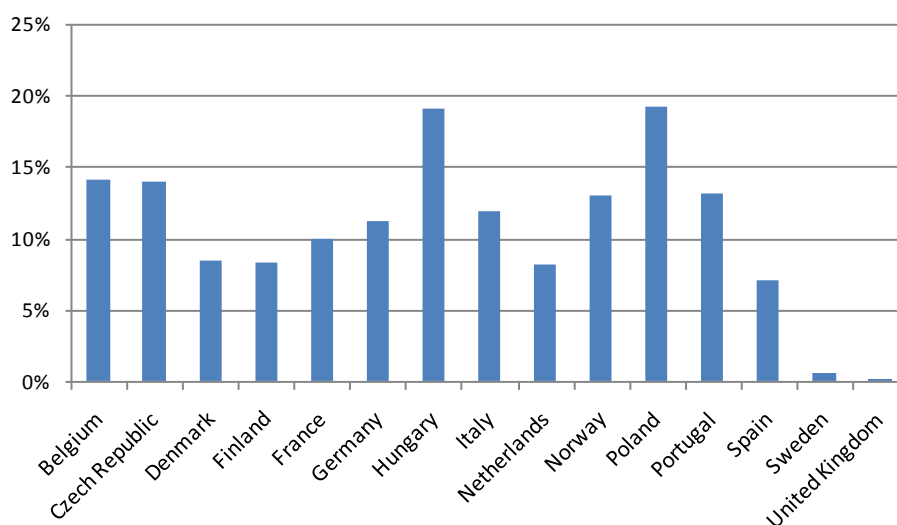
The potential benefits that could accrue from aligning product market regulation to international best practice, in the sense just described, vary substantially: They range from an increase in the level of labour productivity of almost to 20% in Hungary and Poland over ten years, to about 10% for EU member countries like France, Germany, and Italy, to close to zero in the United Kingdom and Sweden. Cross-country differences in the potential benefits from an ambitious reform can be due to differences along three dimensions: how far a country is away from international best practice, in which sectors a country's regulation is particularly behind and to what extent the country uses inputs from sectors that are over-regulated. It is therefore likely that further progress of internal market reform (in the sense of aligning PMR with OECD wide best practice) would also speed up convergence because this is an area where new member countries have a bigger unfinished reform agenda.

6. Conclusion

The completion of the internal market is progressing at an uneven pace. While progress has been made in cross-border trade in goods and mutual recognition of standards, comparatively less progress can be seen in services industries and in the mutual recognition of qualifications. This study suggests that market efficiency could improve if further competition-enhancing reforms of regulatory policies in the services sector, part of which are currently protected from foreign and domestic competition, were implemented.

We attempt to quantify the potential benefits from additional reforms and enhanced integration of EU services markets, and provide estimates of the expected increase in labour productivity growth that could result from aligning market regulation to international best practice in regulation. For the average of the EU countries analysed, labour productivity could be nearly 10% higher after ten years. At the same time, however, the estimated benefits vary substantially across countries. While it is the new EU member countries that should expect the greatest benefits from product market reforms, the potential gains for some of the old members are also sizeable, and should be sufficient reason for them to press forward with their own reform efforts.

Annex

Conway et al. (2006) estimate the specification described in section 4, and obtain the coefficient estimates presented below. These estimates form the basis for the simulation analysis performed in this paper.

Results of productivity growth regressions at the sectoral level
(Replicated from Conway et al. (2006), Table 1, Panel B, Column 4)

Dependent Variable: Growth in labour productivity per employee	
Change in productivity in the technology leader	0.106***
	[0.015]
Gap in productivity levels (lagged 1 year) [2]	-0.093***
	[0.008]
Product market regulation ICT-intensive sectors	-0.076**
	[0.038]
Product market regulation non-ICT-intensive sectors	0.004
	[0.031]
Effect of regulation on catch up (interaction of regulation and productivity gap[2])	0.049**
(lagged 1 year)	[0.022]
Country-Industry fixed effects	yes
Industry time trends	yes
Time dummies	yes
Observations	6439
R-squared	0.187

Robust standard errors in brackets. The sectoral model is estimated for 20 OECD countries over the period 1981 to 2003. It is estimated for 21 ISIC rev. 3 sectors.

2 Measured as the difference in the (log) level of productivity in each country/sector relative to the productivity leader. The productivity leader is allowed to change over time and across sectors.

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