

ARTICLES

PROGRESS WITH STRUCTURAL REFORMS ACROSS THE EURO AREA AND THEIR POSSIBLE IMPACTS



Structural reforms have the potential to substantially boost productivity and employment and to reinvigorate growth in the euro area, while also improving the ability of countries to rapidly adjust to shocks, reallocate resources and restructure their economies. This article illustrates the effects of structural reforms on key macroeconomic variables, describes the recent progress of product and labour market reforms, and suggests that further structural reforms could be a powerful tool to restore growth and competitiveness in the euro area. There are signs that reforms undertaken since the start of the crisis have already had a positive impact; wages and prices appear to be more flexible and have helped the adjustment process, while export performance also seems to have improved in countries which have adopted reforms. Even though some euro area countries have made significant progress, indicators show that there is still ample room for further reforms across the euro area. This is necessary to support long-term sustainable growth, to increase the adjustment capacities of the euro area countries and to support the smooth functioning of the Monetary Union.

I MACROECONOMIC IMPACTS OF STRUCTURAL REFORMS

Structural reforms can lead to higher sustainable employment, investment and growth as well as provide the flexibility needed for a smooth-functioning Monetary Union. Reforms to boost competition and enhance wage and price flexibility help to increase competitiveness and productivity. This is particularly important for individual euro area countries where price competitiveness gains come from changes in wages and prices, thereby increasing the importance of flexibility. Flexibility in labour and product markets also helps to provide the necessary adjustment capacity and market signals for euro area economies to restructure, reallocate and grow. Hence, structural reforms help to achieve a more efficient allocation of resources, which boosts the longer-run growth potential of economies and creates new jobs via various transmission channels.¹

I.1 TRANSMISSION CHANNELS OF STRUCTURAL REFORMS

Labour and product market reforms have different theoretical effects on wages, prices, and employment. Labour market reforms, to the extent that they reduce the wage mark-up or the reservation wage, should have a wage-moderating effect, which is reflected in improved competitiveness and/or higher profit margins for firms and an increased demand for labour, which can lead to higher employment and, all other things being equal, lower structural unemployment. The latter would also be helped by higher wage differentiation across different types of worker (according to age, skill, etc.), which would contribute to reducing structural mismatch in the labour market. Real wages could also subsequently exceed initial levels as a result of higher demand for labour and potential productivity increases.² Product market reforms that facilitate the entry of firms and increase competition reduce the price mark-up. This also helps to increase real wages, thereby stimulating higher aggregate demand, and thus results in higher output and employment. To the extent that product market reforms also increase productivity, real wages may increase further, while the effect on employment depends on the relative importance of income and price

1 See, for example, Bayoumi, T., Laxton, D. and Pesenti, P., “Benefits and spillovers of greater competition in Europe: a macroeconomic assessment”, *Working Paper Series*, No 341, ECB, April 2004; Coenen, G., McAdam, P. and Straub, R., “Tax reform and labour-market performance in the euro area: a simulation-based analysis using the euro area-wide model”, *Working Paper Series*, No 747, ECB, April 2007; see also Gomes, S., Jacquinot, P., Mohr, M. and Pisani, M., “Structural Reforms and Macroeconomic Performance in the Euro Area Countries: A Model-Based Assessment”, *International Finance*, Vol. 16(1), Wiley Blackwell, 2013, pp. 23-44.

2 See, for example, Lusinyan, L. and Muir, D., “Assessing the Macroeconomic Impact of Structural Reforms: The Case of Italy”, *Working Paper Series*, No 13/22, IMF, January 2013.

effects.³ The overwhelming majority of studies support the view that labour and product market reforms have a positive effect on employment. Concerning real wages, results are less uniform; while product market reforms are generally associated with higher real wages, the effects of labour market and other structural reforms depend on the specific nature of the reform.⁴

Product market and labour market reforms are likely to raise investment. This occurs via two main channels. First, because the initial wage-moderating effect of labour market reforms is reflected in a higher profit margin, firms have additional funds to invest and a higher return to capital. Employment increases, not only as a result of higher investment but also as a result of wage moderation. Consequently, consumption tends to rise in the long run, providing additional incentives for investment owing to expected higher (future) demand. Second, product market reforms that facilitate entry and competition tend to reduce price mark-ups and thereby increase both real wages and demand, thus stimulating investment.⁵ Evidence shows that labour and product market reforms have positive effects on investment. These findings are underpinned by simulating the results of structural reforms in the euro area using the EAGLE model (see Box 1). According to the model estimates, the output increase would largely be a result of higher investment.

3 Empirical evidence suggests that permanent productivity increases lead to a fall in employment. See Gali, J., “Technology, Employment, and the Business Cycle: Do Technology Shocks Explain Aggregate Fluctuations?”, *American Economic Review*, Vol. 89, No 1, American Economic Association, March 1999, pp. 249-271.

4 For instance, lowering tax wedges in the euro area could boost not only hours worked but also real wages. See, for example, Coenen et al., op. cit. This positive impact is not observed in the case of conventional labour market reforms such as reductions in the minimum wage, lower unemployment benefits or a move from industry to firm-level wage bargaining. See also Krebs, T. and Scheffel, M., “Macroeconomic evaluation of labour market reform in Germany”, *Working Paper Series*, No 13/42, IMF, February 2013.

5 A third channel is the direct impact of reforms on productivity, which could boost investment as the return to capital increases. See Griffith, R., Harrison, R. and Simpson, H., “Product Market Reform and Innovation in the EU”, *The Scandinavian Journal of Economics*, No 112, April 2010, pp. 389-415. It should be noted that increased competition lowers profit margins, which may reduce investment by the incumbent firms in the sector. This effect tends to be dominated by the investment-increasing effects. See Alesina, A., Ardagna, S., Nicoletti, G. and Schiantarelli, F., “Regulation and Investment”, *Journal of the European Economic Association*, Vol. 3, Issue 4, June 2005, pp. 791-825.

Box 1

MACROECONOMIC EFFECTS OF STRUCTURAL REFORMS: AN EAGLE-BASED ASSESSMENT

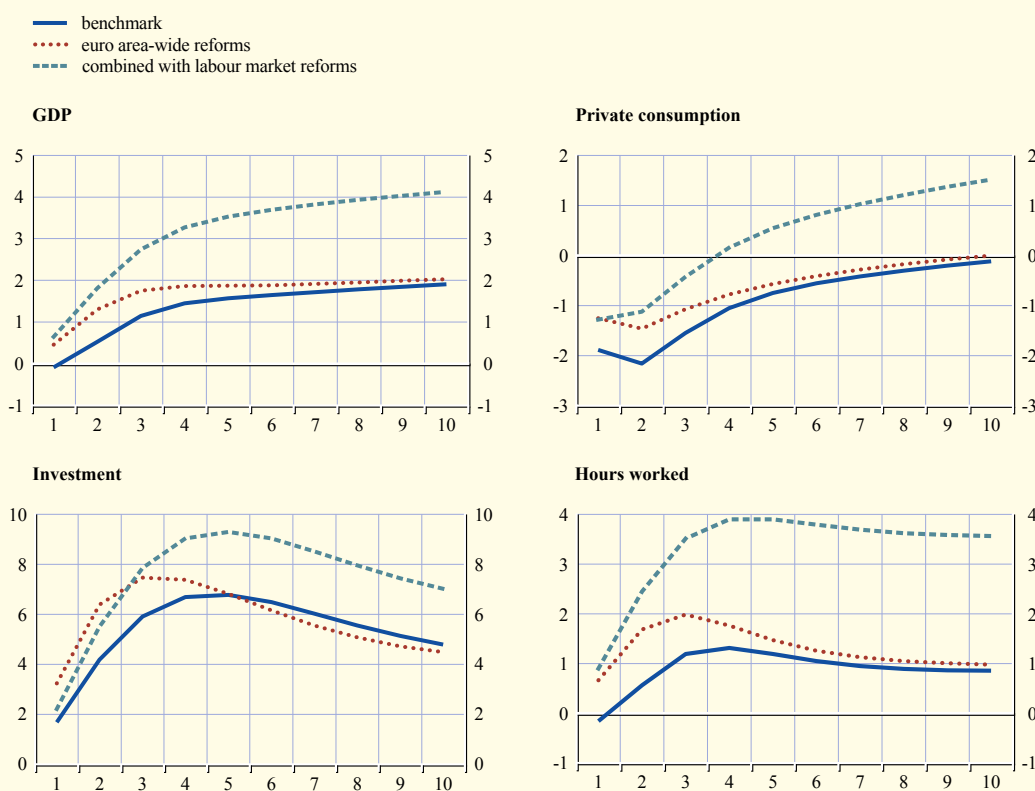
A quantitative assessment of the macroeconomic effects of structural reforms is an integral part of the overall policy analysis. To this end, formal model-based simulations are widely employed. In this Box, the Euro Area and Global Economy (EAGLE)¹ model is used to analyse the macroeconomic effects of structural reforms. In the EAGLE model households supply labour services and set their wages in monopolistically competitive markets by charging a mark-up over their marginal rate of substitution between hours worked and consumption. Similarly, firms set prices on their differentiated goods by charging a mark-up over their marginal cost of production. The wage and output price mark-ups reflect the level of monopolistic powers in the economy

1 EAGLE is a large-scale calibrated multi-country micro-founded model. Explicit micro-foundations enable the identification of structural parameters and the proper analysis of the impact of structural changes, while the general equilibrium framework allows the effects of the behaviour of households and firms to be appropriately taken into account. In its benchmark version, the EAGLE comprises four regions: the United States, rest of the world (ROW) and two euro area regions, that is, a specific euro area country and the rest of the euro area. The euro area regions are subject to a common monetary policy which reacts to a weighted average of the regional inflation rate and output. In terms of its theoretical foundation, EAGLE is similar to the New Area-Wide Model (see Gomes, S., Jacquinot, P. and Pisani, M., “The EAGLE. A model for policy analysis of macroeconomic interdependence in the euro area”, *Economic Modelling*, Vol. 29(5), Elsevier, 2012, pp.1686-714).

and result in sub-optimal levels of labour utilization and production. Thus, in the context of this modelling framework, the implications of competition-enhancing reforms can be investigated by analysing the effects of a reduction in mark-ups. Overall, the simulations suggest that structural reforms can significantly increase GDP growth, even in the short term.

Structural reforms can be implemented in a variety of ways, which may have diverse macroeconomic impacts. For illustrative purposes, in what follows, three alternative service sector reform scenarios are considered:² (1) unilateral policy implementation in one large euro area country (“*benchmark*”); (2) coordinated policy implementation (“*euro area-wide reforms*”); and (3) unilateral policy implementation in the large euro area country of service sector reform combined with labour market reform (“*combined with labour market reforms*”). In the simulations below the reforms are implemented via a hypothetical permanent reduction in the non-tradable sector price mark-up and the economy-wide wage mark-up by 10 percentage points and 7.5 percentage points respectively, gradually over two years. The specific size of the shocks ensures that both types of reform have roughly the same long-term impact on GDP. The simulation results are displayed in the chart below.

Simulated impact of structural measures on reforming euro area country under alternative scenarios, selected macroeconomic variables

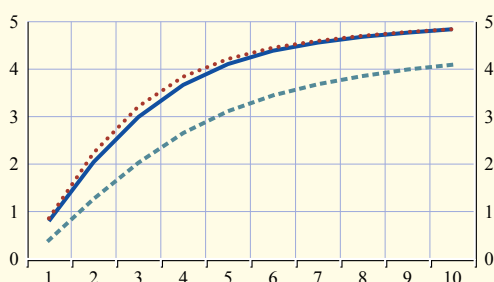


² See also Gomes, S., Jacquinot, P., Mohr, M. and Pisani, M., “Structural Reforms and Macroeconomic Performance in the Euro Area Countries: A Model-Based Assessment”, *International Finance*, Vol. 16(1), Wiley Blackwell, 2013, pp. 23-44.

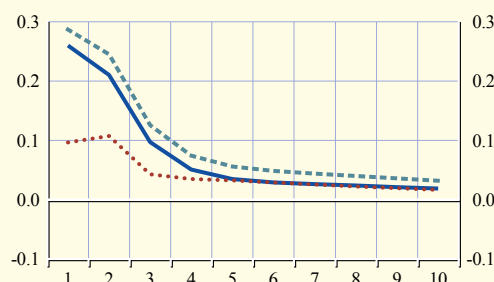
Simulated impact of structural measures on reforming euro area country under alternative scenarios, selected macroeconomic variables (cont'd)

— benchmark
 euro area-wide reforms
 - - - combined with labour market reforms

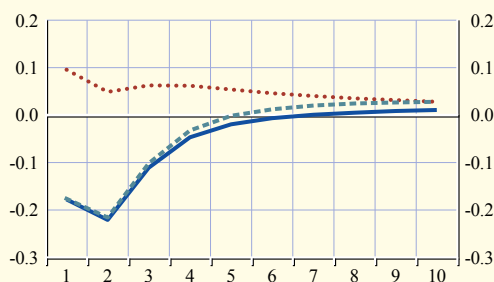
Real wage



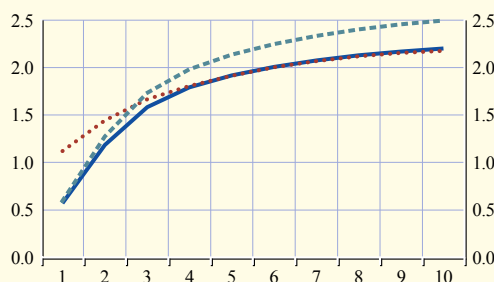
Real interest rate



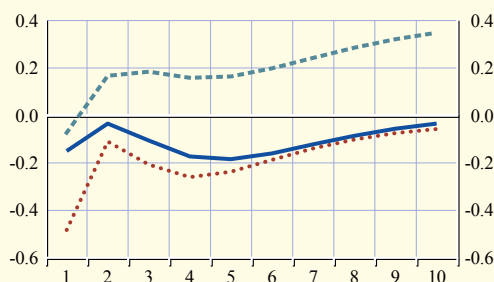
Consumption inflation



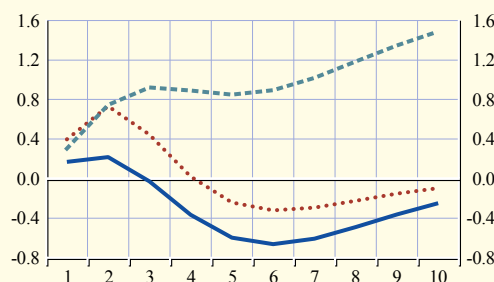
Real exchange rate



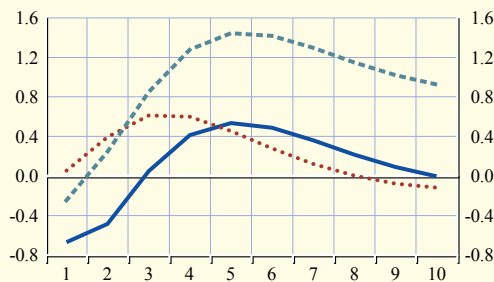
Terms of trade



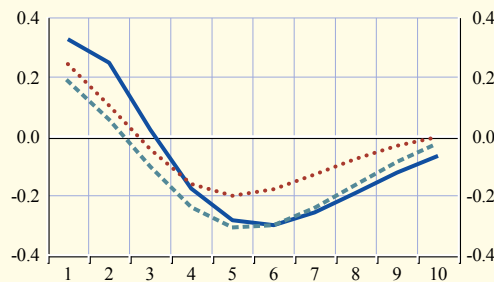
Exports



Imports



Trade balance-to-GDP ratio



Note: The chart depicts percentage deviations from the baseline over a ten-year horizon (but percentage point deviations for consumption inflation, real interest rate and trade balance-to-GDP ratio).

The unilateral implementation of service sector reform may lead to transitional economic costs for some components of GDP, such as consumption, while investment rises in the short run. For the *benchmark case*, service sector reform leads to a delayed pick-up in domestic output and substantial downward pressure on inflation in the short run. Following the positive permanent supply-side shock, households anticipate reductions in prices of services, leading to lower domestic inflation and a higher domestic real interest rate. As a result, consumption drops in the short run. By contrast, in anticipation of higher future production levels over the longer term, firms boost investment demand and gradually accumulate capital. This increases their labour demand, pushing up real wages. Overall, the external trade balance initially rises as domestic demand decreases. In the medium run, it stays below its equilibrium level, as aggregate demand increases. The country's real exchange rate depreciates over time to absorb the increased supply.

Coordinated policy implementation, through positive cross-border spillover effects and stronger adjustment in the nominal exchange rate of the euro, means that the benefits of the reforms are felt more quickly. *Euro area-wide reforms* support domestic output as the entire euro area now grows at the same pace. This extra gain in economic activity is mainly driven by trade (exports are growing much faster), eliminates the downward pressure on inflation and results in a more favourable domestic real interest rate evolution. As a consequence, the decrease in domestic consumption is also smaller compared to the benchmark scenario. In the short term, this reduction in consumption combined with the expansion of exports results in an initial trade surplus, although this is smaller compared to the benchmark case as reforms are now implemented at the euro area level. When reforms gradually kick in and euro area aggregate demand increases, the trade balance moves below its equilibrium level and leads to stronger real exchange rate depreciation. In the long run, the cross-border spillover effects are estimated to be positive, albeit quite limited. Consequently, the long-term effect on the domestic economy when reforms are simultaneously implemented in all euro area countries is similar to the benchmark case.

The implementation of service sector reform jointly with labour market reform allows faster and more balanced economic expansion. When service sector reform is *combined with labour market reform* the rise in economic activity is significantly accelerated, while downward pressure on inflation remains strong. Labour market reform pushes down wages by increasing labour supply. The higher domestic real interest rate weakens domestic demand during the initial stages, but output rises in the first year. At the same time, competition in the labour market boosts labour supply and lowers real wages, which motivates firms in both non-tradable and tradable sectors to increase labour demand. As a result, employment rises, contributing positively to domestic demand over the medium run. Driven by strong competitiveness gains and large positive spillover effects from the country under reform to the rest of the euro area, domestic exports rise substantially. In comparison to the benchmark case, the terms of trade deteriorate, reflecting lower prices of tradable goods. Import demand increases in line with higher domestic income. Consequently, improvement in the trade balance in the short run is weaker than in the benchmark case. The long-term impact on the economy is significantly stronger. The most noticeable exception is real wages, which increase by less than in the benchmark case. The GDP response is twice as large as in the benchmark case, driven by labour market reform, which contributes to a proportionately greater response in consumption, employment and foreign trade flows.

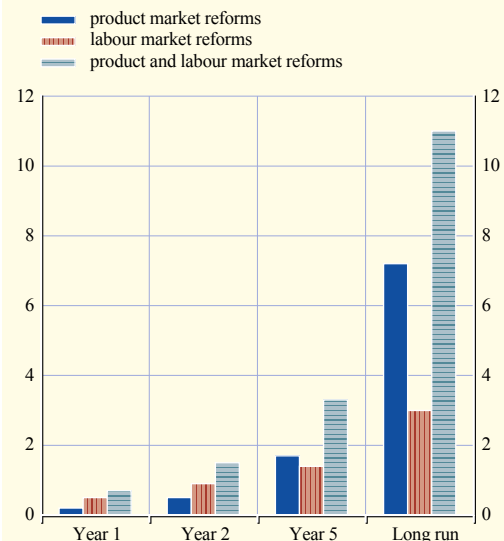
1.2 IMPLEMENTATION DESIGN ASPECTS OF STRUCTURAL REFORMS

If reforms are properly targeted and implemented, the short-term benefits can significantly outweigh any potential short-term costs, while longer-term impacts are positive. Labour market and service sector reforms may have transitional costs, as they can potentially induce a temporary decline in some components of GDP, such as consumption. For instance, measures which increase product market competition may lead to the exit of incumbent firms, which could temporarily lead to lower private consumption, lower output and higher unemployment in the affected sector. However, as new firms enter the market and the industry as a whole becomes more efficient, firms tend to increase investment and employment and production expands beyond initial levels. Similarly, making it easier to hire and lay off workers could temporarily lead to lower employment in the period immediately after the reform. However, it also enables firms to restructure faster, boosting competitiveness and increasing investment and, ultimately, employment.⁶ Also, expectations of higher future incomes, along with rapid positive financial market reactions to reforms, can bring forward the expected positive growth effects on GDP to the short run and significantly outweigh any transitional costs.

Coordinated labour and product market reforms usually have greater macroeconomic effects than stand-alone reforms (see Box 1). To reap the benefits of such coordination, product and labour market reforms should complement rather than substitute each other. Several authors point to the fact that packaging reforms together induces faster short-run adjustments and minimizes or even eliminates short-run costs relative to implementing individual reforms. The impacts reported by Anderson et al. are an illustrative example of the general results from the literature. Chart 1 shows the simulated impacts of possible reforms in all euro area countries over both the short and the long run mainly via reducing mark-ups and increasing labour market productivity. For each of the euro area countries, the simulations model the impact of closing roughly 50% of the gap with the Organisation for Economic Co-operation and Development's (OECD) frontier cases in labour and product market policies. Chart 1 shows that reforms could substantially boost growth in the long run, the impact being stronger when product market reforms are implemented jointly with labour market reforms (rather than separately). In addition, the positive impacts of reforms on GDP can already be observed in the first year.

Chart 1 Simulated euro area GDP effect of a euro area-wide structural reform package

(percentage deviation from the baseline)



Source: Anderson et al.

6 See Hobza, A. and Mourre, G., "Quantifying the potential macroeconomic effects of the Europe 2020 Strategy: stylised scenarios", *European Economy - Economic Papers*, No 424, DG ECFIN, European Commission, 2010, which shows the positive dynamics for the EU, and Anderson, D., Barkbu, B., Lusinyan, L. and Muir, D., "Assessing the Gains from Structural Reforms for Jobs and Growth", *Jobs and Growth: Supporting the European Recovery*, IMF, 2013, which shows the positive short-run GDP dynamics for the euro area.

The sequencing of reforms is important. Starting with product market deregulation can raise employment and real wages and thereby complement subsequent labour market reforms.⁷ Some authors show that implementing reforms faster produces better short-run and long-run outcomes than gradual implementation, as frontloading reforms can lead to a quicker adjustment of wages and prices and a more rapid rebound in growth and job creation.⁸

The initial degree of market regulation seems to influence the effectiveness of reforms. The more regulated the market initially, the higher the positive impact of reforms will be in the long run. Some authors report that reforms in the non-traded (service) sector yield the largest gains because the degree of competition in this sector is relatively low.⁹

There is no consensus on the impact of the state of the business cycle on reform success. Several papers show that in times of weak demand some labour market reforms may be less beneficial or may even have negative effects, while other studies demonstrate that the position in the business cycle has no bearing on the success of reforms.¹⁰

The strength of confidence channels, which support the positive effects of structural reforms, crucially depends on the credibility of the reforms. If reforms lack credibility, their impact will not be as large in comparison to a situation in which economic agents have full confidence in the announced reform package from the outset. Anderson et al. demonstrate that if the credibility of the reform package is only gradually built up, its impact on growth will be smaller in the shorter term. Accordingly, the positive effects of reforms can be more pronounced, manifest themselves more rapidly and last longer if they are credible.

Structural reforms can also be undertaken when monetary policy is constrained by the zero lower bound (ZLB). Based on the theoretical literature, the real interest rate usually increases when structural reforms are implemented owing to the downward impact of reforms on price levels. This may cause private consumption to fall over the short run, because forward-looking consumers readjust their consumption and saving patterns.¹¹ According to those models, the response of the real interest rate tends to be more significant when the ZLB is binding, reinforcing this channel. However, other studies have found that the implications of the ZLB can be overcome via strongly operating confidence effects and the investment channel, particularly if supported by an immediate positive response by stock markets in anticipation of the future benefits of reforms.¹² It is important to note that monetary policy also has non-conventional measures at its disposal to provide further monetary accommodation even if the ZLB for interest rates is binding.

7 See, for example, Blanchard, O. and Giavazzi, F., “Macroeconomic Effects of Regulation and Deregulation in Goods and Labor Markets”, *Quarterly Journal of Economics*, Vol. 118, No 3, August 2003, pp. 879-907.

8 For a discussion of this, see Blanchard, O.J., Froot, K.A. and Sachs, J.D. (eds.), *The Transition in Eastern Europe*, University of Chicago Press, 1994.

9 See, for example, Everaert, A. and Schule, W., “Structural Reforms in the Euro Area: Economic Impact and Role of Synchronization across Markets and Countries”, *Working Paper Series*, No 06/137, IMF, 2006.

10 See, for example, Tompson, W., *The Political Economy of Reform: Lessons from Pensions, Product Market and Labour Markets in Ten OECD Countries*, OECD Publishing, 2009.

11 For a discussion of this, see Eggertsson, G., Ferrero, A. and Raffo, A., “Can Structural Reforms Help Europe?”, *Journal of Monetary Economics*, Vol. 61, Elsevier, January 2014, pp. 2-22.

12 See Fernández-Villaverde, J., “Discussion of ‘Can Structural Reforms Help Europe?’ by Gauti Eggertsson, Andrea Ferrero and Andrea Raffo”, *Journal of Monetary Economics*, Elsevier, 2013, or Vogel, L., “Structural reforms at the zero bound?”, *European Economy - Economic Papers*, No 537, DG ECFIN, European Commission, November 2014, for the most recent findings.

2 STRUCTURAL REFORMS IN THE EURO AREA DURING THE CRISIS

Euro area countries adopted a wide spectrum of structural measures in response to the economic crisis and the financial market turmoil. Reform efforts were mainly concentrated in countries under stress (see Box 2) facing strong macroeconomic imbalances and vulnerabilities. Areas covered by the measures ranged from labour, product and financial markets to trade and fiscal policy, with the aim of making economies more flexible and resilient and ultimately increasing sustainable growth and restoring employment creation.

Box 2

IMPACTS OF STRUCTURAL REFORMS IN STRESSED EURO AREA COUNTRIES

Since the financial crisis, stressed euro area countries have implemented a number of structural reforms with initial results suggesting substantial gains in terms of output. The aim of this Box is to shed some light on the possible quantitative impact of structural reforms on key macroeconomic variables in a selected group of stressed euro area countries.¹

A number of structural reforms were implemented in Greece. The IMF² estimates that policies which close roughly half the gap in product and labour markets with the rest of the euro area – which seems to be what Greece achieved during the crisis according to changes in the OECD’s product market regulation (PMR) and employment protection legislation (EPL) indicators – could raise real GDP by about 4% after five years and by 10% in the long run. A study by the Foundation for Economic and Industrial Research,³ which also uses the Global Integrated Monetary and Fiscal (GIMF) model, suggests similarly significant effects on output, employment, productivity and competitiveness in the long run.

A wide range of structural reforms support recovery in Ireland. The Irish Government Economic and Evaluation Service (IGEES),⁴ for example, estimates that a range of reforms in the areas of tax policy, access to finance, competition policy, wage competitiveness, labour market activation and human capital could result in a permanent increase of 1.3% in the level of GDP by 2020 relative to the baseline forecast. Additionally, 26,000 jobs relative to the baseline could be added.

In Italy, further reforms are crucial to enhancing the output potential. Several studies⁵ on the possible impacts of potential structural reforms are available. In the case of significant labour and product market reforms, which would align Italy with “best practices”, GDP could increase by more than 10% in the long run. Implementing both reforms simultaneously could yield even higher gains in GDP.

1 The total impact has not been fully captured yet by the data or respective models. Another caveat, which is particularly relevant for stressed countries, is that it is difficult to differentiate between fiscal measures and purely structural measures, because they are implemented simultaneously in many cases. With these caveats in mind, preliminary evidence suggests that substantial gains in terms of output can be attributed to structural reforms.

2 IMF Country Report No 13/155, June 2013.

3 Foundation for Economic & Industrial Research, “Assessing the Macroeconomic Impact of Structural Reforms in Greece”, 2014.

4 “Quantification of the Economic Impacts of Selected Structural Reforms in Ireland”, *IGEES Working Paper*, July 2014.

5 For a summary of studies on the impacts of structural reforms on the Italian economy, see “OECD Economic Surveys: Italy 2013”, OECD Publishing, 2013.

In Portugal, the 2009-13 reforms have already raised the levels of productivity and potential GDP. According to OECD estimates,⁶ the reforms will have resulted in a 3.5% increase in these variables by 2020. Further analysis by the OECD suggests that were Portugal to move to best practice among OECD countries in various areas of product market regulation, this would yield an additional increase in the level of GDP of 5.5% by 2020.⁷

In Spain, the main benefits seem to have derived from the 2012 labour market reform. A study by the OECD,⁸ for example, shows that up until the second quarter of 2013 50% of the observed drop in unit labour costs and at least 25,000 new permanent contracts per month mainly in the small firms segment can be attributed to this reform. The 2012 labour market reform crucially included a move toward firm-level bargaining and changes to dismissal legislation. In this context, a separate analysis by the Banco de España⁹ indicates that the residuals from a regression of wages on prices, unemployment, and productivity have been declining since 2008. This suggests that the labour market reforms implemented over this period are also potentially reflected in wage moderation beyond what is caused by productivity, price and business cycle developments.

Significant gains for stressed euro area countries have also been made in the area of product market reforms. The European Commission estimates that the EU's Services Directive and the business environment reforms implemented up until mid-2013 have boosted labour productivity in the sectors affected by the Directive by around 4.3%, 5.7%, 7% and almost 9% in Portugal, Spain, Italy and Greece, respectively.¹⁰

6 "Portugal: Reforming the State to promote growth", *Better Policies Series*, OECD Publishing, May 2013.

7 "Portugal: Deepening structural reform to support growth and competitiveness", *Better Policies Series*, OECD Publishing, July 2014.

8 "The 2012 Labour Market Reform in Spain: A Preliminary Assessment", OECD Publishing, June 2014.

9 Izquierdo, M., Lacuesta, A. and Puente, S., "The 2012 labour reform: an initial analysis of some of its effects on the labour market", *Economic Bulletin*, Banco de España, September 2013.

10 "Market Reforms at Work in Italy, Spain, Portugal and Greece", *European Economy*, 5/2014, DG ECFIN, European Commission; in addition, Varga, J., Werner, R. and 't Veld, J., in "Growth Effects of Structural Reforms in Southern Europe: The case of Greece, Italy, Spain and Portugal", *European Economy - Economic Papers*, No 511, DG ECFIN, European Commission, December 2013, identify education and tax reforms as the most promising areas for structural policy intervention and confirm that structural reforms yield significant economic gains in the medium and long run.

A number of countries have introduced labour market reforms to increase labour market flexibility and boost employment. Labour market flexibility has been increased by reducing severance payments, streamlining the administrative procedures for the termination of open-ended contracts, facilitating alternative employment dispute resolutions and introducing a faster dedicated judiciary track. At the same time, in those countries where the degree of labour market segmentation was particularly high and therefore detrimental to productivity, reductions in excessive employment protection for permanent workers have often been combined with stricter criteria for the use of temporary contracts. A number of countries have taken measures to reduce the tax wedge and to revise wage-setting mechanisms towards giving more prominence to firm-level bargaining relative to economy-wide collective agreements.

Pension market reforms to build more sustainable pension systems and to increase labour supply have also been implemented. Major reforms in pensions increased statutory retirement ages, while pension benefits were reduced in order to improve the sustainability of pension systems while also increasing labour supply and thereby raising potential output.¹³

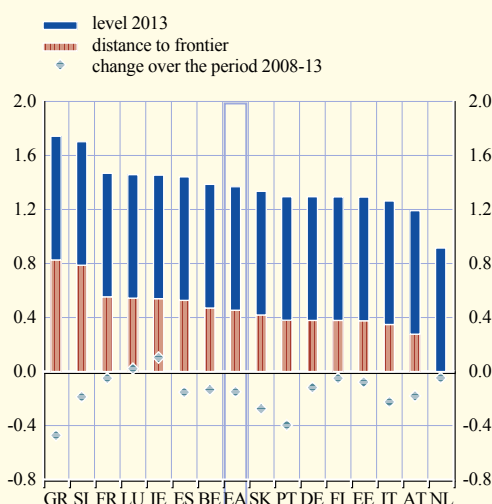
13 See the article entitled "The impact of the economic crisis on euro area labour markets", *Monthly Bulletin*, ECB, October 2014. See also "Euro area labour markets and the crisis", *Occasional Paper Series*, No 138, ECB, October 2012, which shows that pension market reforms led to an increase in employment and participation.

Progress with product market reforms has also been notable. Measures have been adopted in some euro area countries to reduce the administrative burden involved in setting up a new business, to improve firms' access to finance and to improve competition in sheltered sectors. Regulations regarding market entry have been revised in the energy, professional services and transport sectors in many countries. A number of product market reforms have also been initiated in the context of strengthening the EU Single Market.

The pace of reform implementation has slowed down recently, despite emerging evidence highlighting the beneficial effects of significant reforms implemented since 2008. The product market regulation (PMR) and employment protection legislation (EPL) indicators calculated by the OECD show that reform implementation was significant, particularly in the stressed countries, between 2008 and 2013. Evidence on the impact of structural reforms implemented up to 2013 suggests that measures have started to deliver along various dimensions, ranging from productivity increases, export performance, and possibly increased responsiveness of inflation to economic activity (see Boxes 2 and 3). However, the pace of reform has recently slowed.

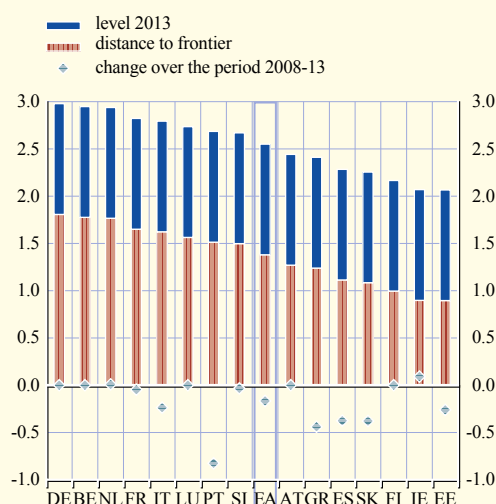
Ample space for potential reforms in the euro area remains, although there is substantial heterogeneity across countries. The PMR and EPL indicators both reveal substantial cross-country heterogeneity in the euro area and confirm that the distance to the frontier of the most flexible OECD country is still substantial (see Charts 2 and 3). Although the PMR and EPL indicators do not capture all the factors which may affect regulation, they provide a reasonable indication of rigidities that can be compared across countries.

Chart 2 Product market regulation



Source: OECD.
Notes: Countries ordered by rank in 2013. Synthetic indicators of the strictness of the regulation of product markets (e.g. state control, barriers to entrepreneurship, trade and investment, etc.). A higher value means stricter regulation. The frontier is the best performer in the OECD, namely, the Netherlands. The euro area average consists of countries which are members of the OECD and for which values are available.

Chart 3 Employment protection legislation



Source: OECD.
Notes: Countries ordered by rank in 2013. Synthetic indicators of the strictness of the regulation of labour markets (e.g. notice periods, severance payments, use of temporary contracts). A higher value means stricter regulation. The frontier is the best performer in the OECD, namely, the United States. The euro area average consists of countries which are members of the OECD and for which values are available.

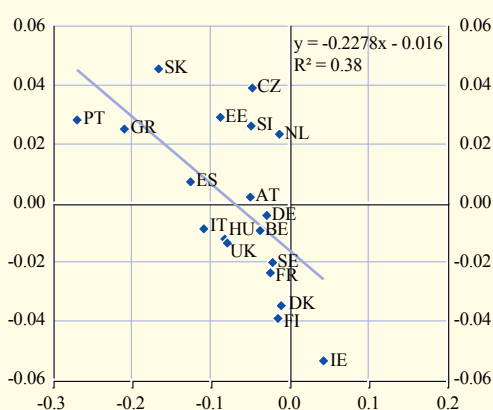
Box 3

EARLY EVIDENCE OF STRUCTURAL REFORMS AT WORK IN THE EURO AREA

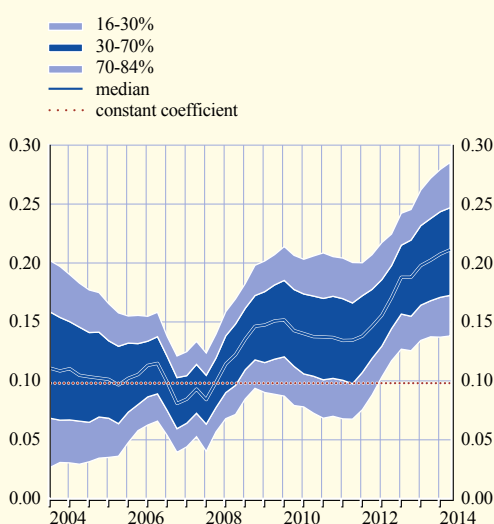
Euro area countries which have implemented structural reforms appear to have improved their export performance. Based on data for the period from 2008 to 2013, those countries tend to show better “underlying” export performance compared to countries which implemented fewer reforms over this period.¹ This is well reflected in the strong positive correlation between underlying export performance and structural reforms, where the latter are measured by the change in the OECD’s employment protection legislation and product market regulation indicators (see Chart A). The measure of export performance is based on Gaulier et al.² and excludes the change in export market share growth which is due to specialisation in fast-growing geographical areas or sectors. It thus captures the underlying export performance driven by price and non-price competitiveness developments, the main channels through which structural reforms affect exports. Model-based simulations for product and labour market reforms – illustrated as gradual decreases in price and wage mark-ups – in a small euro area country using the EAGLE model support the empirical findings from Chart A (see Box 1).³

Chart A Structural reforms and export performance

x-axis: change in reform indicator (EPL+PMR, in logs), negative values = more flexibility, 2008-13
y-axis: average year-on-year change in export performance (in logs), 2008-13



Sources: OECD, Gaulier et al. (2015) and ECB calculations.
Note: Slope parameter is significant at the 5% level.

Chart B Time-varying estimates of the Phillips curve slope¹⁾

Sources: Eurostat and ECB calculations.

1) The Phillips curve relates de-meaned annualised quarterly growth rates of the HICP excluding energy and food (seasonally adjusted) to its first two lags and the first lag of the output gap. The coefficients and the log of the error variances evolve as random walks without drift and are estimated using Bayesian methods. The slope is the coefficient of the output gap. “Constant coefficient” refers to the estimates of a constant coefficient model based on the 1996-2014 sample.

- Two main caveats to this analysis are noteworthy. First, the analysis is only available for exports of goods. While this limits the scope of the exercise, there is no reason to believe that structural reforms affect goods and services exports in a substantially different way. Second, the measurement of export performance is based on the intensive margin of trade only.
- Gaulier, G., Santoni, G., Taglioni, D. and Zignago, S., “In the wake of the global crisis: evidence from a new quarterly database of export competitiveness,” *Policy Research Working Paper Series*, No 6733, The World Bank, 2013.
- See the *Monthly Bulletin* article entitled “Country adjustment in the euro area: where do we stand?”, ECB, May 2013.

Structural reforms might also have affected inflation dynamics in the euro area. Such an impact can occur through increased flexibility of prices and wages, which can render inflation more responsive to economic activity. This is consistent with empirical results which show an increase in the estimated slope of the Phillips curve for the euro area in recent years (see Chart B). An analysis of wage developments also indicates an increasing responsiveness of wages to unemployment as the crisis becomes more protracted, possibly suggesting that labour market reforms are starting to make wages more flexible in some euro area countries.^{4,5}

4 Nominal wage rigidities seem to have declined as the crisis has become more protracted, perhaps indicating that recent labour market reforms are putting downward pressure on wages (see “Comparisons and contrasts of the impact of the crisis on euro area labour markets”, *Occasional Paper Series*, No 159, ECB, February 2015).

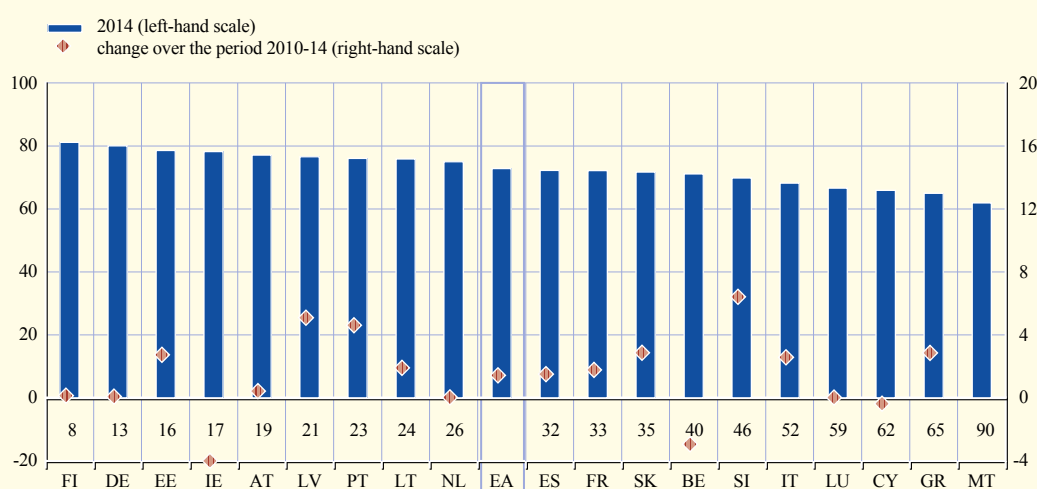
5 Several caveats are associated with the estimation of a reduced-form Phillips curve. Since there is no agreed upon functional form of the Phillips curve, results might be sensitive to the chosen specification and estimation method.

3 FURTHER REFORM NEEDS IN THE EURO AREA

Structural reforms should be a matter of priority for euro area countries. Further reforms would not only benefit the countries implementing them, but would also support the euro area recovery and strengthen the monetary policy transmission mechanism.

Reforms which directly address bottlenecks and barriers to entry to increase the ease of doing business are of key importance. Chart 4 shows that in a majority of euro area countries the business environment remains unfriendly and could be substantially improved. Indeed, several euro area countries remain far from the frontier and well below the top ranking countries in the world, with only one euro area country among the top ten. Reducing costs associated with starting a business and decreasing regulatory barriers to firm entry would significantly improve the business environment.

Chart 4 World Bank's ease of doing business index: distance to frontier



Source: World Bank.

Notes: Countries ordered by distance to frontier in 2014. The 2014 score measures the gap between a particular economy's performance and best practice. Zero represents the lowest performance and 100 represents the frontier (measured by the highest ranking country). No value for Malta prior to 2013 is available. EA reflects the simple average across the euro area countries. Values on the x-axis reflect the respective country's position in the overall 2014 ease of doing business index.

Further reforms are necessary in labour markets. Reforms are needed which allow workers to redeploy quickly to new sectors and job opportunities and which reduce unemployment duration and structural unemployment. This requires policies which enable firm-level agreements that allow wages to better reflect local labour market conditions and productivity developments, allow greater wage differentiation across workers and between sectors, reduce employment adjustment rigidities and labour market dualities and enhance labour mobility within and across euro area countries, thereby helping to reduce structural mismatch. The latter will also be helped by building up the skills of the workforce through effective active labour market programmes for the unemployed and enabling more vocationally relevant qualifications to be gained through training and education.

More reform in product markets would increase the potential for growth in the euro area and help speed up the reallocation of resources and employment to more productive sectors. Continued product market reforms, including the liberalisation of the professions, are essential to reducing excessive administrative burdens and providing the necessary market signals for the successful reallocation and restructuring of the euro area economy. One of the sectors in which EU-wide initiatives are already underway is the services sector. However, there is still significant room for further reforms to boost competition and productivity.¹⁴

4 CONCLUSION

Structural reforms have the potential to reinvigorate growth in the euro area in both the short and longer run. With the appropriate design, as well as credible and careful implementation, reforms can minimise or eliminate possible negative short-term dynamics for some components of GDP and maximise longer-run positive impacts. The credibility of reforms and their implementation plays a crucial role by strengthening confidence channels and bringing forward the positive impacts of reforms via higher anticipated incomes and positive responses in the financial markets.

More reforms are needed at the country level to reinforce and stimulate the Monetary Union's growth potential. Although significant progress has been made in recent years, there is still considerable scope and urgent need for more structural reforms across the euro area. Countries with comparatively more rigidities will benefit the most from structural reforms. While reforms remain first and foremost in the interest of the individual euro area country concerned, they also facilitate the smooth functioning of the Monetary Union as a whole by making the euro area more flexible and resilient in response to macroeconomic shocks and also facilitating the restructuring of economies.

14 See, for example, Monteagudo, J., Rukowski, A. and Lorenzani, D., "The economic impact of the Services Directive: A first assessment following implementation", *European Economy - Economic Papers*, No 456, DG ECFIN, European Commission, June 2012, or Fernández-Corugedo, E. and Pérez-Ruiz, E., "The EU Services Directive: Gains from Further Liberalization", *Working Paper Series*, No 14/113, IMF, 2014.