

Increasing resilience and long-term growth: the importance of sound institutions and economic structures for euro area countries and EMU

Sound institutions and economic structures are essential for the resilience and the long-term prosperity of the euro area. However, there remains a significant gap in terms of the quality of national institutions and the efficiency of economic structures between most euro area countries and the best performing members of the Organisation for Economic Co-operation and Development (OECD). After having increased in the period 2011-13, the momentum of structural reforms has weakened in recent years in euro area countries, despite the fact that significant reform effort is still needed to strengthen resilience and ensure long-term growth. This article recalls the main benefits of sound institutions for Economic and Monetary Union (EMU), provides evidence for gaps between euro area countries and best performers in terms of institutional quality and labour and product market functioning, and considers the national versus the common perspective in shaping a stronger and more resilient euro area. It shows that in terms of quality of institutions as well as for labour and product market functioning euro area countries are still distant from international best-performers. The article reports evidence that reducing the gap to the frontier would increase productivity and long-term growth as well as ensure more resilience to adverse shocks. The latter would be important not only for the countries themselves, but also for improving the smooth functioning of EMU. It is therefore of utmost importance that decisive institutional and structural reforms are carried out to foster employment and investment growth, and increase potential output in all euro area countries.

1 Introduction

This article reviews the role of institutional and structural factors in the economic resilience and long-term growth prospects of the euro area countries. It builds on two previous Economic Bulletin articles, which dealt with the importance of structural reforms in the euro area and the need to foster real convergence.¹ They showed the effects of structural reforms on key macroeconomic variables as well as how weak institutions and structural rigidities constrained real convergence among EU countries. They also suggested how further structural reforms could be a powerful tool to restore growth and competitiveness in the euro area. This article complements the previous analysis by revisiting the importance of

¹ “Progress with structural reforms across the euro area and their possible impacts”, *Economic Bulletin*, Issue 2, ECB, 2015, and “Real convergence in the euro area: evidence, theory and policy implications”, *Economic Bulletin*, Issue 5, ECB, 2015.

sound institutions, particularly as regards two key pressing issues: how to increase resilience and how to boost productivity and potential growth across the euro area countries.

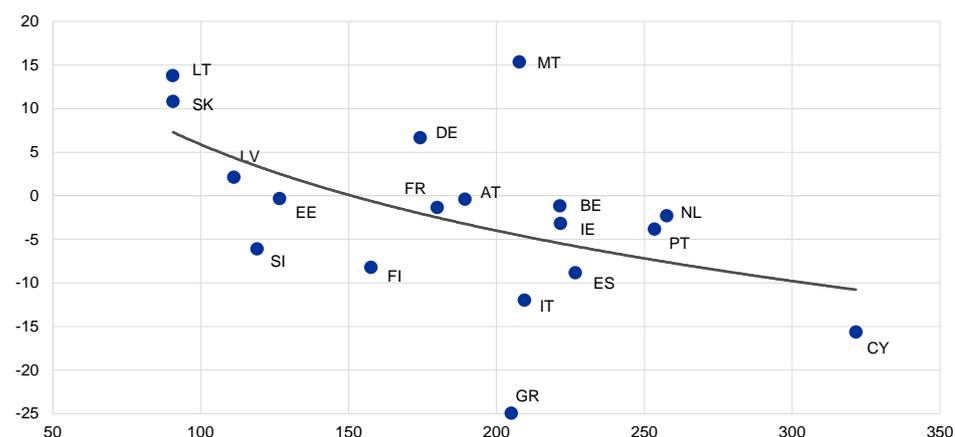
Resilience is hampered by rigid economic structures and high levels of debt.

In the event of structural changes or an abrupt adverse shock, rigid economic structures hinder a timely reorientation of resources, i.e. capital and labour, towards other sectors. High public debt makes it more difficult to pursue counter-cyclical fiscal policies,² while high private debt thwarts the ability of households and firms to take smooth consumption and investment decisions. Similarly, and relatedly, high net external indebtedness makes countries vulnerable to a sudden withdrawal of foreign investors’ funds. Chart 1 shows that the high debt problem is relatively widespread across the euro area countries and has been generally associated with poor economic growth since the beginning of the financial and economic crisis.

Chart 1

Private and public debt (2007) and output growth per capita (2007-15)

(x-axis: public and private debt as a percentage of GDP (2007); y-axis: change in GDP per capita since the peak)



Sources: ECB calculations based on Eurostat data for private and public debt and IMF estimates for potential output growth. Note: 2007 represents the cyclical peak for the euro area as a whole.

Low productivity growth, partly as a result of many structural and institutional obstacles, is a long-standing issue in the euro area.

Chart 2 shows that for two-thirds of the euro area countries total factor productivity (TFP) growth has averaged at below 1% over the past 20 years. At the same time the United States has seen rates of slightly above 1%. This picture is worrying, as TFP is a key determinant of GDP growth and, in turn, GDP growth is necessary to boost employment and help reduce high levels of private and public indebtedness.

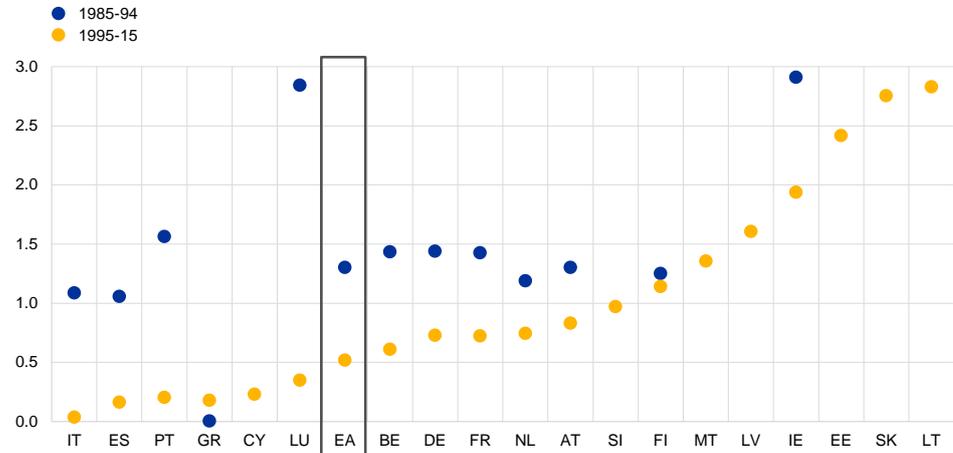
Against this background, the article examines how sound institutions and economic structures can address insufficient resilience and weak productivity, particularly in a monetary union. This is done in three steps.

² For a discussion of this, see the article entitled “Government debt reduction strategies in the euro area”, *Economic Bulletin*, Issue 3, ECB, 2016.

Chart 2

Average total factor productivity growth in 1985-95 and 1995-2015

(annual percentage changes)



Source: Unweighted average of ECB, European Commission and IMF estimates.

Notes: For the period 1985-95 estimates are not available for some countries. EA stands for euro area.

Section 2 examines euro area countries' performance based on a selection of institutional and structural indicators. It shows that on the main economic structures (i.e. labour and product markets), as well as on a set of principal institutions, euro area countries remain far from the OECD frontier of best practices.

Section 3 reviews the empirical evidence for the benefits of sound institutions and structures with a particular focus on the euro area countries. It shows how sound labour and product market regulations as well as good governance institutions increase resilience and are a key source for long-term growth. This section shows that despite the significant benefits to be gained from institutional and structural reforms and the still large distance from best practices, the pace of reforms across the euro area has, after picking up early in the crisis, been slow, especially in countries under an economic adjustment programme.

Section 4 shows how moving towards sound economic structures and institutions is important for ensuring the smooth functioning of EMU as a whole. There is ample evidence and consensus on the importance of adaptable product, labour and capital markets for the smooth functioning of EMU, in the context of a single monetary policy. Against the background of slow implementation of reforms, this section reviews the current EU governance framework and draws some lessons for the future.

2 Institutions and economic structures in the euro area

International institutions such as the International Monetary Fund (IMF), the OECD, the European Commission and the ECB repeatedly call for ambitious

structural reforms.³ This is because such reforms can i) promote a better use of an economy's resources by reducing barriers to the swift movement of capital and labour across firms, leading to a better use of labour and thus higher employment rates, ii) eliminate barriers to entry for new firms and iii) more generally ensure a level playing field across all economic actors.

Structural reforms are typically associated with regulatory policies aimed at strengthening market-based incentives in domestic labour and product markets. The latter often includes the overall conditions for setting up and running businesses.

However, they also relate to the quality of basic economic institutions. Sound institutions, such as legal certainty, efficient public administration or the absence of corruption, provide the basis for all specific economic structures, such as labour and product markets, to work appropriately. Box 1 elaborates on the concepts of institutions and economic structures and lists possible policies which could impact their functioning.

Box 1

The concept of institutions and economic structures and how they impact the economy

Acemoglu et al.⁴ define institutions as the set of rules and policies able to deliver a level playing field for all economic actors and ensure that sound economic incentives are in place for encouraging people to invest, innovate, save and solve problems of collective action, and for ensuring the efficient provision of public goods. One of the most prominent examples in this regard is the enforceability of property rights, which – if guaranteed – significantly influences the incentives to invest and innovate.

Building on institutions that fulfil the criteria described above, economic structures can be defined as the frameworks which set the incentives for all transactions among economic agents in an economy. In market economies, regulations try to prevent market failure and preserve social cohesion, and therefore play a significant role in determining economic structures, for example in labour or product markets. There are several cases in which regulations can be welfare-enhancing if used appropriately. If a market does not function well, such as in cases of natural monopoly in large network industries (e.g. energy), it might be beneficial to regulate the market. In general, however, too much regulation could create the wrong incentives for investors, firms and employees, so that labour or capital is not used where it is most useful from a welfare perspective. Such excessive regulation or protection could ultimately hinder productivity and employment growth as well as a swift response to adverse shocks.

Labour market regulations affect the rate of job creation and destruction, levels of unemployment, productivity, wages and profits and the degree of social protection. On the

³ See, for example, *World Economic Outlook*, IMF, April 2016; *Economic Policy Reforms 2016: Going for Growth Interim Report*, OECD, 2016; European Commission 2016 European Semester package including country-specific recommendations; or introductory statements to the ECB press conference by the President of the ECB.

⁴ As defined in Acemoglu, D. et al., "Institutions as the Fundamental Cause of Long-Run Growth", *NBER Working Paper*, No 10481, 2004.

one hand, job security arrangements, minimum wages and collective bargaining might need to be regulated to provide sufficient social protection for workers or to encourage productivity growth (through training and the development of firm-specific skills). On the other hand, excessive regulation impedes the timely adjustment of firms and employees to economic shocks by discouraging hiring and favours people currently in employment over the unemployed. The key issue for policymakers is to try to balance the need for a certain degree of regulation with the need to avoid excessive distortions. The main categories of labour market institution cover (i) the rules of the wage-setting process, (ii) labour (protection) legislation, (iii) activation policies, (iv) income replacement policies (v) labour taxation and (vi) education and vocational training policies.

Labour market structures affect the potential of an economy to grow and adapt in a timely manner to (abruptly) changing circumstances. Economic changes could happen gradually, such as structural change brought about by globalisation, or more abruptly in the event that adverse shocks hit the economy. In such cases, the price and quantity of labour need to be able to adjust. Moreover, the degree to which reallocation between sectors is possible can be very important. Against this background, labour market policies must provide sufficient flexibility in the wage-setting framework and prevent excessively strict labour protection legislation from creating a “lock-in” effect. At the same time, security must be ensured for workers in the event of temporary unemployment by granting sufficient unemployment benefits, and the reactivation of workers must be facilitated through targeted employment programmes.

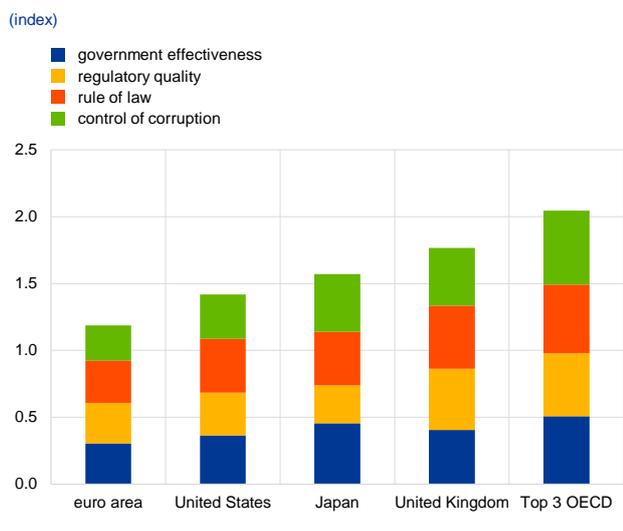
Excessive product market regulation is likely to have adverse effects on productivity and GDP growth. A high degree of competition among firms in goods and services markets ensures that prices do not become excessive in relation to the costs of production. Given that markets with higher competition tend to exhibit lower prices than markets with limited competition, consumers benefit from more competitive markets. This in turn reduces unjustified rents for producers and raises consumer welfare. Moreover, competition also tends to favour the variety of products, thereby giving consumers more choice. In addition, it seems that firms in markets with high barriers to entry tend to innovate less. This in turn impedes technological progress, productivity and thus job creation.

Product market structures affect the shock absorption capacity of economies. In order for the economy to weather shocks, it must be possible for prices to adjust quickly and for production factors to be reallocated between firms and sectors. The price adjustments are essential to ensure a pass-through of changes in labour costs to consumer prices. In the event of a decline in labour costs after a negative shock, the competitiveness of an economy can only improve if prices also adjust. Without swift price adjustment the cost of an adverse shock would otherwise fall on the real disposable income of households.

Various product market policies exist to facilitate competition. General policies relate, for example, to ensuring a strong and efficient regulation authority that can monitor the state of competition in all relevant markets. Moreover, policies can create favourable broader business conditions to facilitate the entry of new firms and alleviate the administrative burden of existing firms. Sector-specific policies include, for example, competition policies for network industries (e.g. energy, telecoms or transport), the retail sector and closed professions (e.g. notaries, pharmacies or lawyers).

Chart 3

Quality of institutions in the OECD in 2015



Sources: ECB calculations based on World Bank data.
Notes: "Top 3 OECD" comprises Finland, New Zealand and Switzerland. The higher the index number, the better the quality of institutions. Data for the euro area are an unweighted average of member countries.

Measuring the quality of institutions and economic structures is a challenging task.

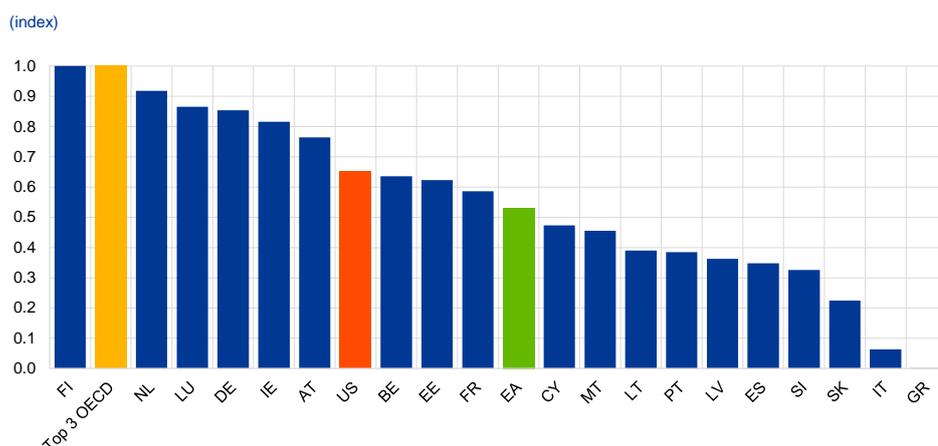
It is common practice to measure institutional quality, in particular, in terms of perceptions; this may not necessarily reflect the quality of the law but rather the actual workings of the economy. In this article we use as a proxy for institutional quality the four governance indicators computed by the World Bank: government effectiveness, regulatory quality, rule of law and control of corruption. The aggregate of these indicators has been referred to as the delivery quality of government services,⁵ or simply as institutional delivery. Chart 3 shows these four indicators for the euro area countries, the United States, and the three best performers in the OECD. A higher index number indicates higher institutional standards. For all four indicators, the quality of institutions in the euro area is on average weaker than in its peer regions.

While almost all euro area countries have weaker institutions compared with the best performers in

the OECD, there is significant heterogeneity among them. Chart 4 shows that the institutional quality indicator varies greatly across the euro area countries, with Finland at the frontier of institutional strength, some countries (e.g. the Netherlands and Luxembourg) very close to the OECD best performers, and some (e.g. Greece and Italy) close to the OECD worst performers.

Chart 4

Euro area countries' distance to the frontier in terms of quality of institutions (2015)



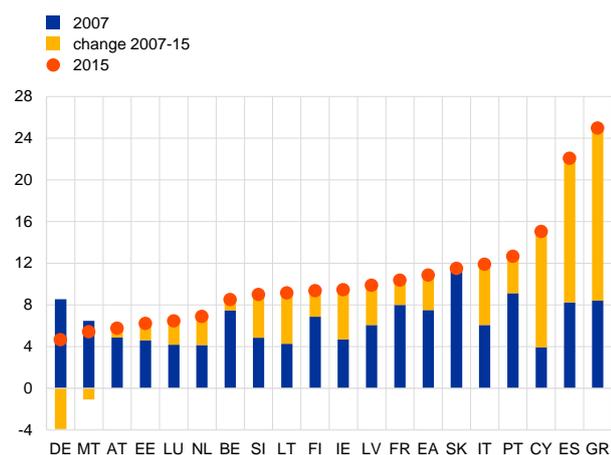
Sources: World Bank Worldwide Governance Indicators 2015 (WGI; government effectiveness, rule of law, regulatory quality, control of corruption) and ECB calculations.
Notes: Composite indicator covering the standardised indices above, averaged, and rescaled to rank between 0 and 1 (frontier). "Top 3 OECD" comprises Finland, New Zealand and Switzerland. EA stands for euro area.

⁵ Helliwell, J.F. et al., "Good Governance and National Well-being: What are the Linkages?", *OECD Working Papers on Public Governance*, No 25, 2014.

Measuring labour market efficiency requires looking at a broad spectrum of regulations. This is because the suitability of specific regulations (e.g. employment protection) can only be assessed in a wider context (e.g. the level of social protection). For this reason, a wide range of indicators should be used to assess the overall efficiency of the labour market. As stated in the Five Presidents' Report,⁶ best practices for labour markets should combine elements of security and flexibility. This means flexible and reliable labour contracts that avoid a two tier labour market, comprehensive lifelong learning strategies, effective policies to help the unemployed re-enter the labour market, modern social security systems and enabling labour taxation. There was a rise in unemployment in euro area countries during the crisis and it still remains very high in some member states (see Chart 5). Reforms which enhance flexibility and security in a balanced manner increase labour market efficiency, thereby facilitating job creation and reducing the high rates of unemployment in the countries concerned.

Chart 5
Unemployment in euro area countries

(as a percentage of the labour force)



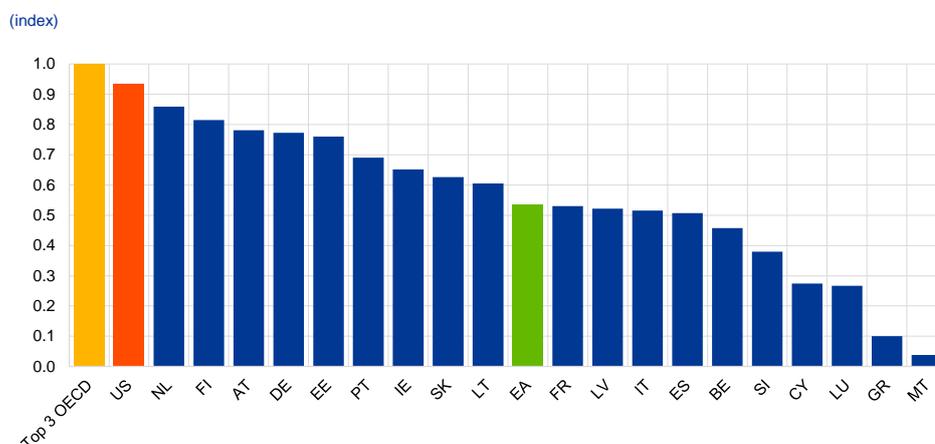
Source: Eurostat.

To measure product market regulations, it is necessary to look at the functioning of many sectors of the economy. The indicators consulted have de jure and de facto aspects. The OECD product market regulation (PMR) index focuses on the legislative aspects of the regulatory environment related to economy-wide regulation (e.g. state control) and industry-level regulation (e.g. barriers to trade in manufacturing). By contrast, the World Bank Doing Business indicator focuses mainly on the implementation aspects of the cost of doing business. Chart 6 shows the (standardised) aggregate of the two indicators. This aggregate indicator suggests that the euro area appears to have less well-functioning product markets than the top three OECD countries. On the basis of this indicator, all euro area countries, and in particular the countries with the greatest distance to the frontier, need to improve competition and overall conditions for doing business.

⁶ Juncker, J.-C. et al., *Completing Europe's Economic and Monetary Union*, 22 June 2015.

Chart 6

Euro area countries' distance to the frontier in terms of product market efficiency (2015 or latest available data)

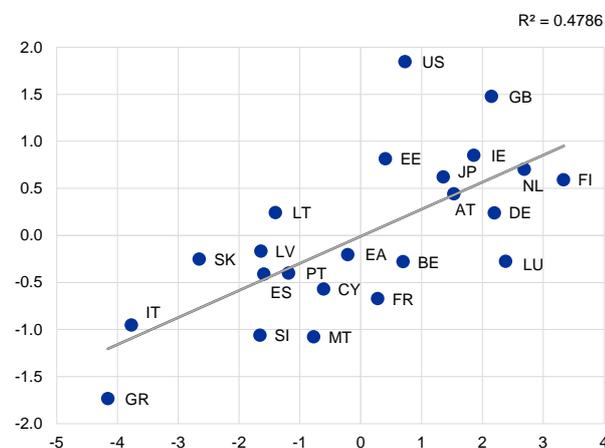


Sources: Latest OECD PMR, World Bank Doing Business indicator and ECB calculations.
Notes: Composite indicator covering the two standardised indices, averaged, and rescaled to rank between 0 and 1 (frontier). "Top 3 OECD" comprises New Zealand, the United Kingdom and Denmark.

Chart 7

Institutional quality and product and labour market efficiency (2015 or latest available data)

(x-axis: institutional quality (z-score); y-axis: product and labour market efficiency (z-score))



Sources: ECB calculations based on World Bank, OECD, Global Competitiveness Index, Heritage Foundation and Fraser Institute data.
Notes: Institutional quality is measured as an average of the six World Bank Worldwide Governance Indicators (voice and accountability, government effectiveness, rule of law, regulatory quality, control of corruption, and political stability and the absence of violence). Indicators reported in the form of z-scores.

There is a high correlation between the quality of institutions and well-functioning labour and product markets. Chart 7 shows that, on the basis of the indicators used for this analysis, countries with below average quality of institutions also tend to have below average quality of product and labour markets.

This high correlation might, among other things, reflect the fact that, in the presence of sound institutions, societies and lawmakers are more likely to overcome vested interests and carry out reforms that benefit the majority of citizens.

All indicators aiming to assess the quality of institutions and economic structures face significant measurement issues. As noted in greater detail in Box 1, institutions and certain economic structures (such as those pertaining to labour and product markets) are multifaceted and often not easily or not at all quantifiable. Also, given that indicators are often based on perceptions, they might be affected by cyclical influences, e.g. in times of crisis perceptions of the functioning of certain institutions could be worse than in good times. Another issue relates to the

arbitrariness of the scale used, in particular for de facto indicators. Moreover, the sample size and composition of the surveyed matter, as do their changes through time. Therefore, the conclusions drawn from the broad composite indicators chosen in Charts 4-6 regarding the institutional and regulatory quality of a particular country would need to be complemented with a more profound investigation of the actual functioning of the economy and its public sector.

3 Evidence for the impact of institutional and structural reforms for euro area countries

Building on the above indicators, this section looks into the empirical evidence linking both institutions and economic structures to resilience and long-term productivity growth.

3.1 Increasing economic resilience

Institutional and structural reforms are key for increasing economic resilience.

Economic resilience has an ex ante and an ex post aspect. In general, ex ante resilience refers to the capacity to resist to shocks while ex post resilience refers to the capacity to moderate the costs of, and recover quickly after, an adverse shock. The two aspects are interconnected. How well economies deal with shocks depends on a range of factors, including the policy environment, the depth of economic and financial diversification and, in particular, the quality of institutions and economic structures.

The resilience of countries is usually tested empirically by first identifying the sources of shocks.

Adverse shocks hitting economies can have a common origin or be idiosyncratic. In the case of a common origin (e.g. the bursting of the dot-com bubble or the financial crisis of 2007-08) economic resilience can be tested by comparing the reaction of different countries to the same shock. This comparison is usually done by assessing the impact of the shock on the economy (ex ante resilience) and by computing the recovery time (ex post resilience).

Starting with ex ante resilience, it has been shown that the depth of the recession or crisis following an adverse shock is related to the institutional setting of a country.

Acemoglu et al.⁷ find that countries with institutional problems suffer substantially more volatility as measured by the standard deviation of per capital output. Rodrik⁸ comes to a similar conclusion, finding that the effect of external shocks on growth is larger the greater the latent social conflicts in an economy and the weaker its institutions of conflict management. High quality institutions and economic structures also tend to reduce the probability of crises, as Box 2 shows. Countries with the weakest institutions in the sample of OECD countries are significantly more prone to economic shocks than countries with well-functioning institutions and sound labour and product markets.

Many empirical studies have confirmed the importance of well-functioning product and labour markets for increasing economic resilience ex post, i.e. after a shock has occurred.

Canavo et al.⁹ uses the approach described above,

⁷ See footnote number 4.

⁸ Rodrik, D., "Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses", *Journal of Economic Growth*, Vol. 4, No 4, 1999, pp. 385-412.

⁹ Canavo et al., "Measuring the macroeconomic resilience of industrial sectors in the EU and assessing the role of product market regulations", *European Economy – Occasional Papers*, No 112, European Commission, July 2012.

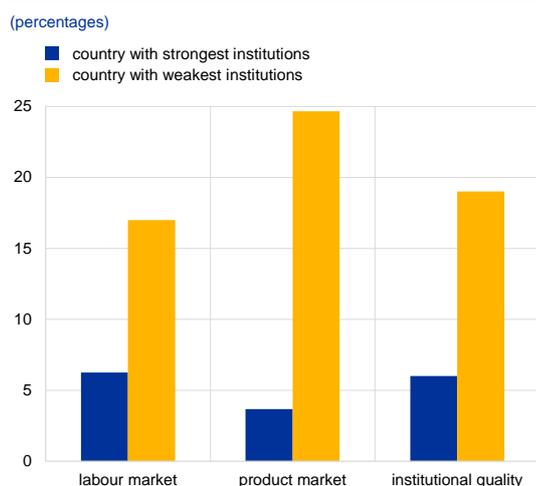
identifying common shocks and testing their impact on countries with different economic structures. They look at sectoral data across European countries and find that a high level of product market regulation makes industries less resilient to adverse shocks. They show that the different capacity to absorb shocks within industrial sub-sectors seems to be explained to a large extent by how far product market reforms have advanced. Duval and Vogel¹⁰ conduct a similar analysis, focusing, however, on the persistence of shocks in the output gap. Their simulations indicate that rigid labour and product markets lengthen the time it takes for output to return to potential following a shock and increase the cumulative output loss incurred over the period. Box 3 highlights an example of ex post resilience, giving evidence of unemployment decline episodes after the implementation of structural reforms.

Box 2

Higher quality institutions and economic structures reduce the probability of crisis

Chart

Probability of crisis events occurring, conditional on the quality of institutions



Source: ECB calculations.

Notes: The chart shows the result of a probit model where the probability of crisis is computed on the extremes of institutional variables, i.e. the lowest and the highest institutional value across countries, while control variables (total government expenditure and nominal short-term interest rates) are assumed to be average. For institutional quality, the average probability is obtained from WGI; for product market institutions, the average probability is obtained from Doing Business and GCI product market efficiency; and for labour market institutions, average probability is obtained from EPL, GCI and Heritage labour market flexibility. Data are based on the period 1990-2014 and are for a sample of OECD countries.

This box describes a simple exercise to test whether the probability of large falls in GDP is dependent on different institutional and structural settings. The exercise, the outcome of which is shown in the chart, first identifies a large fall in output. This is done by taking the distribution of annual GDP growth across all OECD countries from 1990 to 2014 and defining the tenth percentile of the distribution as a crisis event. This percentile has a median GDP growth rate of -4%. Second, a probit regression model is estimated, where the dependent variable is the probability of experiencing a GDP slump in the order of magnitude covered by the tenth percentile. On the right-hand side of the equation, institutional and structural variables as well as a set of control variables, such as government expenditure and short-term interest rates, are added. The results show that the probability of a severe reduction in GDP, i.e. a crisis event falling under the tenth percentile of the distribution, is significantly lower for a country with the strongest institutions and structural characteristics in the sample than for a country with the weakest institutions and characteristics. The message appears consistent across the three policy areas: labour market, product market and institutional quality. Improving on all these fronts is therefore very important to reduce the probability of being affected by a severe crisis. In particular, product market reforms, which also include overall conditions for setting up and

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¹⁰ Duval, R. and Vogel, L., "Economic resilience to shocks. The role of structural policies", *OECD Journal: Economic Studies*, Vol. 2008/1.

running businesses, seem to be particularly beneficial for increasing the adjustment capacity of a country.

Ex post resilience would be significantly improved if the competitiveness channel worked properly in the euro area. Prior to the financial crisis, several studies had shown how the working of the competitiveness channel had been slow in the euro area owing to structural rigidities.¹¹ In a recent study, Biroli et al.¹² confirm these results. Overall they find that excessive regulations in product and labour markets appear to make inflation differentials more persistent in the face of a common shock. This implies that in a monetary union, where the nominal exchange rate channel is no longer available as a mode of adjustment, the working of the competitiveness channel is impeded by highly regulated labour and product market structures, thereby preventing an automatic smoothing of shocks at the country level. Between 2011 and 2013 structural reforms undertaken in the countries most affected by the sovereign crisis are likely to have improved the functioning of the competitiveness channel.

High indebtedness constrains economic resilience both ex ante and ex post. High levels of debt can make the economy more vulnerable to shocks and intensify or prolong economic downturns. This is because they hinder the ability of households and firms to smooth consumption and investment spending decisions, and the ability of governments to cushion adverse shocks. High public debt generally implies high future tax rates, which will undermine investment. Negative feedback loops between high sovereign debt and a weak financial sector are still constraining investment decisions and economic growth. High private and public sector debt remains a major vulnerability in many euro area countries. Some empirical studies derive implicit thresholds for debt ratios and find that, once a certain level of debt has remained for a number of years, there is evidence that GDP growth remains subdued.¹³

There appears to be a robust empirical relationship between the debt dynamics of the private sector and the effectiveness of national insolvency frameworks. For example, recent analysis by staff of the European Commission found evidence that, in the presence of a high stock of private debt, the quality of insolvency frameworks is important for financial stability and for spurring entrepreneurship and thereby mitigating the impact of deleveraging on growth. In particular, it was found that a good insolvency framework is associated with speedier

¹¹ For example *The EU Economy: 2006 Review: Adjustment Dynamics in the Euro Area: Experiences and Challenges*, European Commission, 2006.

¹² Biroli et al., "Adjustment in the Euro Area and Regulation of Product and Labour Markets: An Empirical Assessment", *European Economy – Economic Papers*, No 428, European Commission, October 2010.

¹³ On the relationship between public debt and growth, see Checherita-Westphal, C. and Rother, P., "The impact of high government debt on economic growth and its channels: An empirical investigation for the euro area", *European Economic Review*, Vol. 56, No 7, October 2012, pp. 1392-1405. On the relationship between private debt and growth, see Cecchetti, S., Mohanty, M. and Zampolli, F., "The real effects of debt", *Working Papers*, No 352, Bank for International Settlements, September 2011.

adjustment of non-performing loan (NPL) ratios.¹⁴ High NPL ratios tend to be associated with weaker insolvency frameworks. The quality of insolvency frameworks is important for speeding up the process of resolving bad debt, which in turn supports efficient investment and long-term growth.

Box 3

Episodes of unemployment decline in the euro area and the role of structural reforms

One of the largest costs inflicted by the financial and sovereign crisis has been the sharp rise in the unemployment rate in many euro area countries. This box aims to explain episodes of unemployment absorption, by focusing on the relative importance of the unemployment rate, GDP growth and labour and product market reforms. This is done using an event study approach. The unemployment absorption event is defined as an event that cumulatively fulfils the following conditions: (1) the unemployment rate declines by at least 3 percentage points in a three-year period; (2) the decline in the unemployment rate over a three-year period is at least 25% of the initial unemployment rate; and (3) after five years the unemployment rate remains below that at the beginning of the episode.¹⁵ The data sample covers the euro area countries over the period 1995-2015. In total 12 episodes can be identified (see Table A).

Table A

Countries and years of strong and sustained unemployment absorption episodes

Germany	2005
Estonia	2003, 2010
Ireland	1995
Spain	1996
France	1998
Latvia	2002, 2010
Lithuania	2001, 2010
Slovakia	2004
Finland	1996

Source: ECB calculations based on Eurostat data.

Note: The year indicates the beginning of an episode of unemployment absorption. For instance, Germany started an episode of unemployment absorption in 2005 which, according to the definition applied, means that in the period 2005-08 the unemployment rate declined by at least 3 percentage points and by 25%, and that in 2010 the unemployment rate was below the level registered in 2005.

Table A shows that periods of significant unemployment reduction are not common but also not rare events. Macroeconomic developments play an important role in driving these episodes. The chart (first panel) shows that the unemployment rate increases before an episode of absorption and is substantially higher than the sample average. In addition, the unemployment peak is preceded by a sharp deceleration in the GDP growth rate (see chart, second panel). GDP growth picks up in the period before the episode starts, and the unemployment rate falls with a lag.

In addition to the role played by the economic cycle, the reform stance also seems to be very important. The reform

stance is computed using the OECD's indicators of employment protection legislation (EPL) and of regulation in energy, transport and communications (ETCR)¹⁶. These series are a proxy for labour and product market reforms. The focus is on relatively large reforms, which are defined as reforms that exceed one standard deviation of the change in the indicator over all observations in each

¹⁴ Carpus Carcea, M. et al., "The Economic Impact of Rescue and Recovery Frameworks in the EU", *European Economy – Discussion Papers*, No 004, European Commission, September 2015.

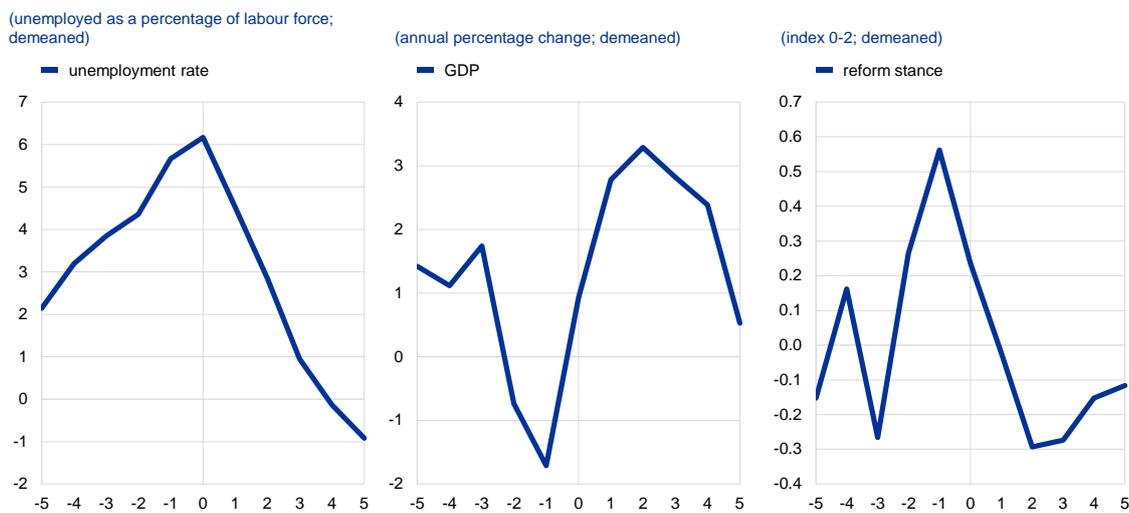
¹⁵ A related approach has been followed by Freund, C. and Rijkers, B., "Episodes of unemployment reduction in rich, middle-income and transition economies", *Journal of Comparative Economics*, Vol. 42, issue 4, December 2014, pp. 907-923.

¹⁶ The ETCR index is used, in view of its annual frequency, instead of the OECD's broader product market regulation (PMR) index, which is only available with a 5-year frequency.

series.¹⁷ The sum of the episodes in the area of labour and product markets gives the reform stance, which equals 0 in the case of the absence of any reform according to the definition above, 1 in case of one reform episode and 2 in the case of simultaneous reform episodes in EPL and ETCR. The chart (third panel) shows that in the years before the unemployment absorption episode, countries tend to have implemented more reforms. The reform activity peaks one year before the episode starts and declines thereafter. Taken together, the three panels in the chart indicate that on average the willingness to introduce reforms is higher when GDP grows at slower pace and unemployment is high and increasing. In other words it rises during adverse economic conditions.

Chart

Evolution of key variables of unemployment absorption episodes



Notes: "0" marks the beginning of the unemployment absorption episode. Each variable is demeaned by the sample average of observations in each year (the unemployment rate is demeaned by the average unemployment rate in each year; the GDP growth is demeaned by the average GDP growth in each year; and reform stance is demeaned by the number of the selected reforms in each year).

Table B

Probability of an unemployment absorption episode (result from a linear probability model)

	(1)	(2)
Unemployment rate	0.0596*** ⁿ	0.0533***
GDP growth	0.0274***	0.0432**
Reform stance (t-1)		0.0928*
Year dummies	yes	yes
Country dummies	yes	yes
No of observations	223	143
r-squared	0.427	0.539

Notes: Regression performed for the sample period 1995-2010 for countries with an unemployment rate above 5%. Robust standard errors are shown in parenthesis.

A linear probability model is used to cross-check the importance of the reform stance in predicting unemployment absorption episodes. In this model the dependent variable equals 1 where an unemployment absorption episode starts and 0 in the absence of unemployment absorption episode. The regression results show that higher unemployment rates and higher GDP growth rates have a positive impact on the probability of an unemployment absorption episode beginning. In addition, the results show that the reform stance, after controlling for the

¹⁷ A similar approach is followed by Bouis, R. and Duval, R., "Raising Potential Growth After the Crisis: A Quantitative Assessment of the Potential Gains from Various Structural Reforms in the OECD Area and Beyond", *OECD Economics Department Working Papers*, No 835, 2011.

unemployment rate and the GDP growth rate, is also positively correlated with the start of an unemployment absorption episode. Table B suggests that a reform episode is associated with an increase of 9% in the probability of a successful unemployment absorption episode.

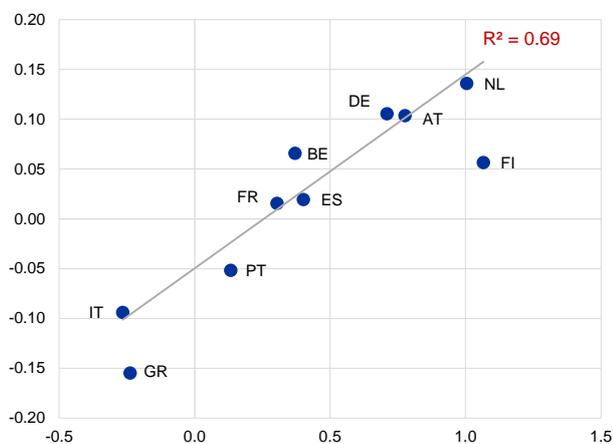
Overall, these results show that the implementation of significant reforms could contribute to ex post resilience by accelerating the reduction of unemployment.

3.2 Strengthening productivity and long-term growth

The importance of sound and efficient institutions for long-term growth has been established in a number of research contributions since the 1970s. In the early 1970s, the development of an efficient economic system and well-defined property rights had already been shown to be a key factor in allowing western economies to raise their wealth compared with the rest of the world.¹⁸ Thirty years later, Acemoglu et al.¹⁹ showed, by means of a number of historical episodes in developed and developing economies, how the existence (and enforceability) of property rights has determined individuals' incentives to invest in physical or human capital or adopt more efficient technologies.

Chart 8

Link between institutions and growth in Europe



Sources: Eurostat, World Bank and ECB calculations.

Notes: Institutional quality is measured as an average of the six World Bank Worldwide Governance Indicators (voice and accountability, government effectiveness, rule of law, regulatory quality, control of corruption, and political stability and absence of violence). In the y-axis expected growth is the outcome of a simple catching-up regression, where the average per capita GDP growth between 1999 and 2014 depends only on the level of GDP per capita in 1999 and a constant.

Empirical evidence for the importance of institutional quality in Europe is relatively limited.

Chart 8 shows the correlation between the residual of a simple catching-up model and the quality of institutions in 1999, where the average per capita GDP growth between 1999 and 2014 depends only on the level of GDP per capita in 1999 and a constant. For the euro area countries a clear positive relationship emerges between institutional quality and the residual. Starting with the evidence shown in Chart 8, recent work (Masuch et al.²⁰) provides some analysis in support of the view that the quality of institutions is an important determinant of long-term growth in European countries. The results seem particularly relevant for countries where institutional delivery is below the EU average and initial public debt is above a certain threshold. They are also consistent with the view that the quality of institutions may be more important for long-term growth in countries where the exchange rate tool is no longer available. A key channel through which higher quality

¹⁸ North, D. and Thomas, R., *The Rise of the Western World: A New Economic History*, Cambridge University Press, Cambridge, 1973.

¹⁹ See the reference in footnote 4.

²⁰ Masuch et al. in, "Institutions and Growth in Europe", *CEPS Working Document*, No 421, 2016, find, among other things, that relatively weak institutions seem particularly detrimental to long-term growth in the presence of high public debt.

institutions affect growth is productivity growth. De Rosa et al.²¹ find that for a panel including European countries corruption tends to reduce firm-level productivity growth.

Improving the functioning of product and labour markets also leads to higher economic growth in the long term. This has been shown in many empirical cross-country or country-specific studies. As regards product market regulation, there is considerable evidence that product market regulation raises barriers to entry for new firms, in turn contributing to higher prices and lower turnover, and is likely to slow the process of reallocation of resources.²² Lower competition in one sector can also impact competition in other sectors in the value chain. Studies show that reducing regulation in sectors which provide input to the next level in the value chain could improve the access to key intermediate inputs and thereby increase competition at the next level.²³ Moreover, countries could expect significant productivity growth gains from structural reforms that would allow them to achieve the level of the best performers in labour and product markets. As regards labour market regulations, Bouis and Duval²⁴ and Bassanini et al.²⁵ find evidence that overly stringent EPL weakens productivity in sectors where labour turnover is generally relatively high. These findings are consistent with the view that strict EPL makes it more difficult for firms to respond quickly to changes in technology or product demand that require reallocation of staff or downsizing, thereby inducing them to use their resources less efficiently. Relatedly, Box 4 looks at labour market rigidities and how they affect wage responsiveness in euro area countries. It shows that better functioning labour market structures would affect wage responsiveness, in turn facilitating the adjustment process by allowing wages to react properly to developments in the level of unemployment. However, there are also some studies in which the impact of EPL on productivity is less clear. Koeniger²⁶ argues that the lack of clear impact could be driven by incumbent firms, which are pushed to innovate in order to avoid downsizing, whereas, on the other hand, higher EPL prevents the entry of new firms and therefore suppresses productivity. Stringent product market regulation can also have a negative impact of the allocation of labour, as it prevents the exit from the market or downsizing of less productive firms, thereby hampering allocative efficiency.

²¹ De Rosa, D., Gooroochurn, N. and Görg, H., "Corruption and Productivity: Firm-Level Evidence from the BEEPS Survey", *Policy Research Working Paper*, No 5348, World Bank, 2010.

²² See, for a literature overview, Schiantarelli, F., "Product Market Regulation and Macroeconomic Performance: A Review of Cross-Country Evidence", *Boston College Working Paper*, No 623, 2005.

²³ Bourlès et al., "Do product market regulations in upstream sectors curb productivity growth? Panel data evidence for OECD countries", *The Review of Economics and Statistics*, Vol. 95, issue 5, December 2013, pp.1750-1768.

²⁴ See the reference in footnote 15.

²⁵ Bassanini, A. et al., Economic Growth: "The Role of Policies and Institutions: Panel Data. Evidence from OECD Countries", *OECD Economics Department Working Papers*, No 283, 2001.

²⁶ Koeniger, W., "Dismissal costs and innovation", *Economics Letters*, Vol. 88, issue 1, July 2005, pp. 79-84.

Box 4

The impact of institutional rigidities on wage responsiveness in the euro area

This box looks at the relationship between institutional rigidities and wage responsiveness in various sectors and how this may affect the euro area’s resilience and adjustment to shocks. It shows how institutional rigidities – such as labour and product market institutions and regulations – reduce the responsiveness of euro area wages to unemployment. Such institutional rigidities tend, therefore, to increase employment and output losses associated with downward asymmetric shocks, and impede adjustments which prevent excessive overheating of the economy during upward shocks. Reforms in product and labour markets can reduce wage rigidities, thereby enhancing the euro area’s growth, resilience and adjustment to shocks.

Table

Institutional rigidities which weaken the responsiveness of euro area wages to unemployment

	EPL	ETCR	Union density
Manufacturing	0.24	0.04	0.01
Construction	0.31	0.03	0.00
Services*	0.27	0.01	0.00

Sources: Anderton et al. and ECB calculations.

Notes: Coefficients reported are the interaction terms between the unemployment rate and institutional rigidity indicators from separate wage Phillips curve regressions estimated on a sectoral level (nominal compensation per person hour). Coefficients are in bold if the significance is at least 10%. The positive sign of the interaction parameter implies a lower response of unemployment to wages – i.e., the Phillips curve becomes less steep – in the cases of: higher employment protection (OECD indicator measuring the strictness of regulation of individual and collective dismissals of employees on regular/indefinite contracts); stricter product market regulation (OECD indicator of regulation in energy, transport and communications); and higher union density (the ratio of wage and salary earners that are trade union members divided by the total number of wage and salary earners (OECD labour force statistics)).

* Coefficient refers to that obtained from a real wage Phillips curve regression.

Evidence shows that wage rigidities appear to be present in key sectors of the euro area economy. Anderton et al.²⁷ obtain panel estimates of wage Phillips curves for four sectors of the euro area economy – manufacturing, market services, construction and the public sector – by pooling data across the individual euro area countries.²⁸ Interaction terms between institutional rigidity indicators and the unemployment rate are statistically significant and positively signed, indicating that the response of wages to unemployment is smaller – i.e. the Phillips curve is less steep – if labour and product markets are more regulated. The table shows that higher employment protection, stricter product market regulation and higher union density all seem to

weaken the response of wages to unemployment in both upturns and downturns, especially in sectors such as manufacturing, thereby impeding the workings of the competitiveness channel.²⁹

²⁷ Anderton, R., Hantzsche, A., Savsek, S. and Tóth M., “Sectoral Wage Rigidities and Labour and Product Market Institutions in the Euro Area”, *CFCM Working Paper*, No 16/01, University of Nottingham, March 2016.

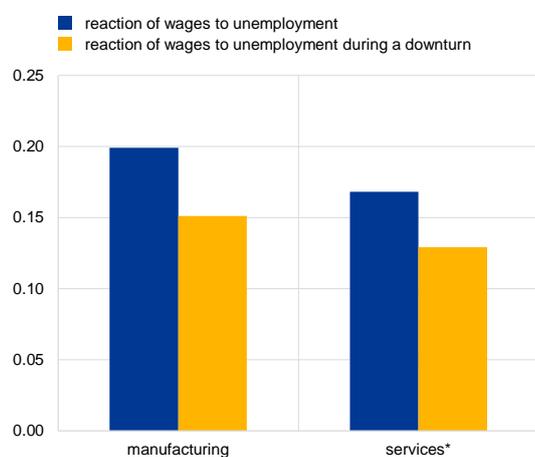
²⁸ Their findings are in line with standard Phillips curves, i.e. that wage growth rises with increases in productivity and inflation, and falls when unemployment rises.

²⁹ Furthermore, the estimated wage Phillips curves from Anderton et al. for manufacturing and services – sectors crucial for competitiveness adjustments – also show the slowest speed of adjustment when reacting to shocks.

Chart

Reaction of wages to unemployment in the manufacturing and services sectors

(semi-elasticity)



Source: Anderton et al. and ECB calculations.

Notes: The chart shows absolute values of coefficients from the regressions. It reports the percentage change in wages when unemployment changes by a percentage point, i.e. semi-elasticities. The downturn parameter indicates the extent to which the response of nominal wage growth to changes in unemployment is dampened during economic downturns (based on panel regressions pooling the data across euro area countries). All variables are statistically significant at the 10% level from separate regressions.* denotes the estimation of real wages.

In addition, the response of euro area wages to changes in unemployment seems to be even more limited during economic downturns, suggesting euro area wages are characterised by significant downward wage rigidities. The chart shows that the response of wages to unemployment is lower by about one-quarter during economic downturns, with downward wage rigidity particularly apparent in the manufacturing and service sectors, which further impedes competitiveness adjustments.³⁰ Downward wage rigidity seems to be confirmed by recent micro-level survey evidence³¹ which seems to indicate that wage freezes are frequently a lower bound on wage flexibility due to institutional or negotiation-related difficulties in implementing wage cuts.³²

Structural reforms are critical to increasing the reaction of wages to unemployment.

Greater wage flexibility will deliver higher wage differentiation across different types of workers and sectors. This will allow wages to rise

appropriately in growing sectors, which is necessary to help accelerate the reallocation process and ensure a more efficient match between labour supply and demand. Furthermore, eliminating rigidities in the economy will enable economic growth to pick up faster, promoting employment and dampening disinflationary pressures.

Combining and properly sequencing product and labour market reforms has also been shown to deliver larger gains than in the case of reforms implemented in isolation. Varga and in't Veld³³ compared structural indicators of labour and product markets and defined the gap for each indicator relative to the three best performers. Assuming that half of the gap vis-à-vis best performance is closed, the simulations show large potential gains in output and employment, raising EU GDP by 3% after five years and 6% after ten years. Cette et al. conduct an alternative analysis (Chart 9) supporting these findings. In their framework, the productivity impact of regulations is channelled via the effects on production, prices and wages. They simulate the impact on TFP of

³⁰ For a more detailed explanation of how downward wage rigidity is derived, and further possible underlying reasons for such rigidities, see the box entitled "Downward wage rigidity and the role of structural reforms in the euro area", *Economic Bulletin*, Issue 8, ECB December 2015.

³¹ For more details see the article entitled "New evidence on wage adjustment in Europe during the period 2010-2013" in this issue of the *Economic Bulletin*.

³² Various papers find evidence that downward wage rigidity at the macro-level for euro area (or EU) countries is related to institutional rigidities such as, among other things, a high degree of employment protection or union coverage. See, for example: Anderton, R. and Bonthuis, B., "Downward Wage Rigidities in the Euro Area", *GEP Research Paper Series*, No 15/09, University of Nottingham, July 2015; Heinz, F. F. and Rusinova, D., "How flexible are real wages in EU countries? A panel investigation", *Working Paper Series*, No 1360, ECB, Frankfurt am Main, July 2011.

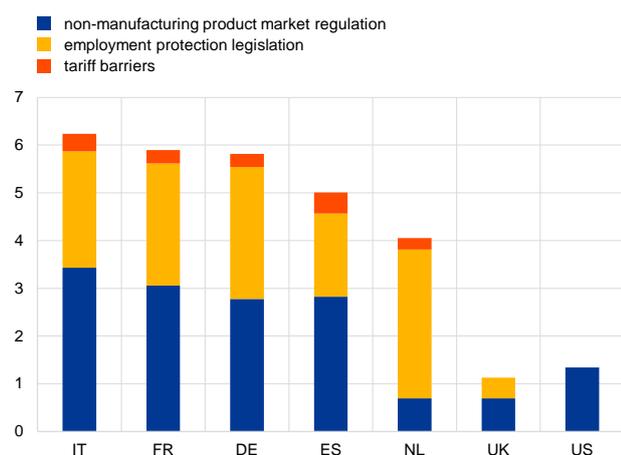
³³ Varga, J. and in't Veld, J., "The potential growth impact of structural reforms in the EU: A benchmarking exercise", *European Economy – Economic Papers*, No 541, European Commission, 2014.

reforms towards the lightest regulations in product and labour markets. For the larger euro area countries, they show that all countries could achieve significantly higher productivity growth if they moved towards best practices.

Chart 9

Simulated long-term impact on TFP levels of the adoption of lightest regulation in labour and product markets in the largest euro area countries, the United Kingdom and United States

(percentages)



Source: Cette, G et al., Market Regulations, Prices, and Productivity, *American Economic Review*, Vol.106(5), 2016, pp.104-108.

Note: Simulation assumes that the "lightest practice" regulations observed as of 2013 could be immediately enforced in all industries. "Lightest practices", according to Cette et al., are the lowest levels of regulations in the 14 countries of their sample for the following three indicators: OECD indicators for non-manufacturing regulation, OECD harmonized tariffs indicator and OECD EPL indicator.

While the literature is unanimous on the positive long-term impact of reforms, the effect on economic growth in the short term is less clear.

For example, the IMF³⁴ and Bouis et al.³⁵ find that while product market reforms can already deliver gains in the short term, the impact of some labour market reforms depends significantly on the prevailing economic conditions at the time of implementation. Reductions in labour tax wedges, for example, would have larger effects during periods of slack. By contrast, reforms to employment protection arrangements and unemployment benefit systems would exert positive effects in good times, but can have negative distributional consequences in the short to medium term in periods of slack. This calls for a proper sequencing of reforms. For example, reforms addressing key bottlenecks and inefficiencies in the regulatory environment, business conditions, public administration or the judicial system, and thereby incentivising market entry and business expansion, should help domestic demand and boost output even in the short term. While an appropriate sequencing of reforms can overcome potential short-term costs, a protracted postponing of necessary reforms can be

welfare-decreasing in the long run and hinder the necessary adjustment capacity of countries.

3.3 Reform progress

Although there is a clear case for reforms given the prevailing gap in institutions and economic structures compared with the best performers, structural reform momentum has overall been relatively weak across the euro area countries in recent years. The financial crisis created additional reform momentum compared with pre-crisis years. However, the more far-reaching policy measures have generally been confined to the most vulnerable countries. In particular, countries under macroeconomic adjustment programmes have implemented significant reforms aimed at reducing rigidities in labour and product markets. This is also mirrored in the track record of addressing the OECD's Going for Growth policy recommendations (Chart 10).³⁶ Despite the remarkable progress

³⁴ *World Economic Outlook: Too slow for too long*, IMF, April 2016.

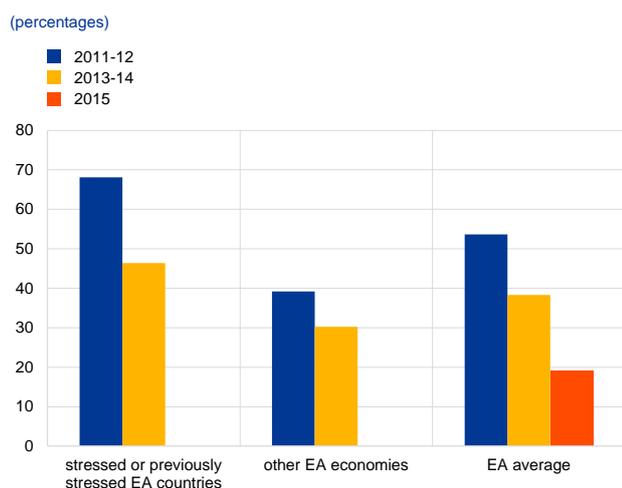
³⁵ Bouis, R. et al., "The Short-Term Effects of Structural Reforms: an Empirical Analysis", *OECD Economics Department Working Papers*, No 949, 2012.

³⁶ *Economic Policy Reforms 2016: Going for Growth Interim Report*, OECD, 2016.

during crisis years, the OECD identified a significant slowdown of reform momentum in the more vulnerable euro area countries in more recent years, often associated with the end of an adjustment programme. The track record is also moderate as regards following the EU's country-specific recommendations (CSRs).³⁷

Chart 10

Share of OECD Going for Growth recommendations implemented



Sources: OECD Going for Growth (2015, 2016).

Notes: The chart illustrates the pace of reform as captured by the OECD indicator of reform responsiveness. The data for 2015 refer to fully implemented measures and are not available for individual countries. The stressed and previously stressed countries are Ireland, Greece, Spain, Italy, Portugal and Slovenia. "Other EA economies" comprises the euro area economies not captured in the former group. Cyprus, Latvia, Lithuania and Malta are not captured in the OECD report.

The weak reform momentum is a cause for concern given the still large stock imbalances.

High level of public and private debt and high unemployment rates are weighing on the ability of the economy to recover and call for renewed reform impetus. Despite some adjustment of imbalances in recent years, further structural reforms would increase resilience to any future adverse shock and increase the countries' capacity to grow.

More competitive and many larger euro area countries have shown little effort to improve economic structures and institutions.

The track records for implementing both the OECD's Going for Growth recommendations and the CSRs indicate that major reforms have not taken place in recent years. While these countries are less prone to shocks, the lack of structural reforms reduces their economic growth, and to some extent also the economic growth of the euro area overall (see in more detail Section 4).

4 Facilitating a smooth functioning of EMU

In a monetary union, there are many channels through which national economic (and other) policies can affect other member countries as well as the union as a whole.

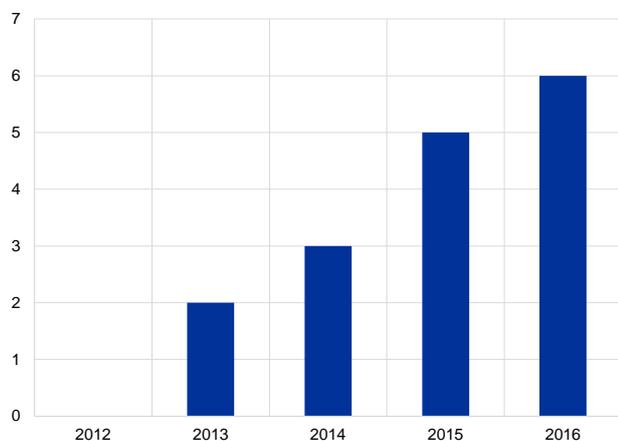
Structural reforms in one member country can have a positive impact on the euro area as a whole, although the effect will probably be relatively small.³⁸ If necessary structural reforms are not made, however, this could undermine the smooth functioning of EMU, as it is likely to increase the vulnerabilities of the countries in question and thereby make the euro area as a whole more susceptible to adverse shocks.

³⁷ See the box entitled "The 2016 macroeconomic imbalance procedure and the implementation of the 2015 country-specific recommendations", *Economic Bulletin*, Issue 2, ECB, March 2016.

³⁸ See "Cross-border spillovers in euro area countries", *Quarterly report on the euro area*, Vol. 13, No 4, European Commission, 2014; Weyerstrass, K. et al., "Economic spillover and policy coordination in the Euro Area", *European Economy – Economics Papers*, No 246, European Commission, March 2006; Gomes, S. et al., "Structural reforms and macroeconomic performance in the euro area countries: a model-based assessment", *Working Paper Series*, No 1323, ECB, Frankfurt am Main, April 2011.

Chart 11

Number of countries with excessive imbalances under the macroeconomic imbalance procedure since 2012



Source: ECB computations

Note: The chart counts for each year the countries which the European Commission deemed to exhibit "excessive imbalances". Countries under an economic adjustment programme enter the MIP automatically after the end of their programme. In 2014 Ireland, in 2015 Portugal, and in 2016 Cyprus were added to the procedure.

The common EU economic governance framework is meant to ensure sound national economic policies for a smooth functioning of EMU. The

increased interdependence that arises from sharing a single currency and monetary policy calls for greater scrutiny of national economic policies in the euro area. As a lesson from the crisis, the governance framework has been strengthened. As regards the proper functioning of economic structures, the creation of the macroeconomic imbalance procedure (MIP) and the reinforced country-specific (reform) recommendations were meant to ensure sufficient reform momentum. Like CSRs, the MIP applies to all EU countries but is of particular importance for the euro area countries, as it provides a surveillance framework for ensuring that harmful imbalances do not endanger the smooth functioning of EMU.

However, the existing procedures have not yet been effective enough to ensure that necessary reforms

are implemented in euro area countries. As outlined, for example, in the Five Presidents' Report, the full application of the existing governance tools is essential to facilitating reform efforts and ensuring a smooth functioning of EMU. Yet, as regards the MIP, despite the identification of excessive imbalances in an increasing number of countries over several years (see Chart 11), the corrective arm (the excessive imbalance procedure) has not been applied so far. The full application of the corrective arm of the MIP, including the agreement of corrective action plans with the countries concerned, could facilitate the timely correction of excessive imbalances and increase the reform momentum. The current framework, if fully applied, could improve the scrutiny of national economic policies in the short term.

In the longer term, as envisaged in the Five Presidents' Report, the next stage could then include a more binding convergence process towards resilient structures. This new convergence process towards more resilient economic structures would help to outline a clear path of reforms which would increase the resilience of euro area countries and the euro area as a whole. A first step in this respect was taken with the European Commission's communication of 21 October 2015, which suggests progressively identifying best practices and carrying out cross-examinations across policy or thematic areas in the application of the governance framework. The implementation of such best practices would increase the resilience and the growth potential of euro area countries as described in Section 3.

5 Conclusion

This article has shown how sound institutions and economic structures are key for achieving greater resilience and sustainable growth. It has discussed how improving national institutions and economic structures can lead to a double

dividend by raising individual countries' well-being and improving the smooth functioning of EMU. While there is ample empirical evidence for this double dividend, reform progress towards best practices has, overall, been relatively modest since the inception of EMU. This comes at a high cost. Weak trend GDP and employment growth seem to be caused predominantly by relatively weak national institutions and rigid market structures and thus a lack of proper structural and institutional reforms. After a strong pick-up in reform momentum between 2011 and 2013, particularly in the countries involved in adjustment programmes, there seems to have been a return to the slow pace observed in the pre-crisis period. However, this slowdown seems unjustified in the light of the performance of the euro area countries compared with peer OECD countries.

The euro area countries appear still very far from best practices. This is a concern as productivity growth remains weak and the stock of debt, in particular public and non-performing private debt, is elevated and only declining at a slow pace. Fostering reform implementation is one of the objectives of the new economic governance structure. However, this objective has hardly been met during the first four years of application of the MIP. A more forceful application of the economic governance instruments is essential if the timeline for completing EMU proposed in the Five Presidents' Report is to be met.