

# Quarterly Economic Commentary

David Duffy  
Joseph Durkan  
Cormac O'Sullivan

Winter 2011/  
Spring 2012



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## **Winter 2011/Spring 2012**

*The forecasts in this Commentary are based on data available by 16 February 2012. Draft completed 22 February 2012.*

## **Special Articles**

**Tim Callan, Claire Keane, Michael Savage and John R. Walsh**

## **Research Bulletin**

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# Summary Table

	2010	2011	2012(f)	2013(f)
<b>OUTPUT</b>				
(Real Annual Growth %)				
Private Consumer Expenditure	-0.8	-3.0	-1.8	-1.0
Public Net Current Expenditure	-3.8	-3.6	-2.5	-2.0
Investment	-24.9	-14.9	-3.3	-1.9
Exports	6.3	4.4	3.4	3.8
Imports	2.7	0.5	1.1	1.6
Gross Domestic Product (GDP)	-0.4	0.9	0.9	2.3
Gross National Product (GNP)	0.3	-0.6	0.1	1.0
<b>PRICES</b>				
(Annual Growth %)				
Harmonised Index of Consumer Prices (HICP)	-1.6	1.1	1.4	1.3
Consumer Price Index (CPI)	-1.0	2.6	1.6	1.3
Growth in Average Hourly Earnings	-1.5	0.1	0	0
<b>LABOUR MARKET</b>				
Employment Levels (ILO basis (000s))	1,848	1,804	1,777	1,763
Unemployment Levels (ILO basis (000s))	292	300	290	280
Unemployment Rate (as % of Labour Force)	13.6	14.2	14.0	13.7
<b>PUBLIC FINANCE</b>				
Exchequer Balance (€m)	-18.7	-24.9	-18.7	-14.2
General Government Balance (€m)	-48.8	-15.7	-13.6	-12.2
General Government Balance (% of GDP)	-31.3	-10.1	-8.6	-7.5
General Government Debt (% of GDP)	92	108	115	120

# Summary

The euro zone financial crisis remains unresolved. The euro zone economy is slipping into recession due to the impact of both the austerity measures and the effect of policy uncertainty in the euro zone on investment, consumer spending and employment. The euro zone banking system needs to be recapitalised, and account must be taken of the effect that the write-down of Greek debt will have on this. The UK economy has been adversely affected by the euro zone crisis and is unlikely to meet its fiscal targets unless more restrictive measures are introduced, which in turn will worsen its economic performance. By contrast the US economy seems to be performing somewhat better than many had expected. Thus in the two regions that are of great importance in trade terms for Ireland – the euro zone and the UK – the country is facing weak or declining demand, while in the US, demand is growing modestly. The overall picture is weak.

We estimate that the Irish economy returned to modest growth in 2011, with real GDP increasing by about 0.9 per cent. However, employment has continued to fall and as a consequence the unemployment rate averaged 14.2 per cent. Economic growth is expected to continue in 2012 but remain muted. Once again growth will be driven by external demand as domestic demand will remain weak. All categories of final domestic demand, excluding stocks, are expected to experience declines. The unemployment rate will more or less stabilise, at 14.0 per cent, both because of migration and because of a reduced participation rate. We now expect GDP growth to be the same in both years, at 0.9 per cent, and GNP to remain broadly unchanged in 2012.

This *Commentary* presents our first forecast for 2013. The external environment is expected to remain weak in 2013, though not as weak as in 2012. The Budget measures required for 2013 will again have a negative impact on domestic demand, though to a lesser extent than this year – 2012. As a consequence of the international and domestic environment, GDP and GNP are forecast to increase by 2.3 per cent and 1.0 per cent respectively in 2013. Unemployment will remain high at 13.7 per cent.

The austerity measures currently being undertaken, and those implemented over the past four years, are having an impact, as evidenced by the improvement in the public finances. However, while these measures correct the public finances

they have a dampening effect on economic activity. There are very few policy options open to the government to stimulate growth as the traditional instruments of macro policy are either not available (monetary and exchange rate policy) or completely constrained (fiscal policy). Structural reforms could be the mechanism to improve the productive capacity of the economy along with reforms of the tax system and infrastructural improvements.



## NATIONAL ACCOUNTS 2011 (Estimate)

### A: Expenditure on Gross National Product

	2010	2011	Change in 2011		
	Estimate €bn	Estimate €bn	Value	Price %	Volume
Private Consumer Expenditure	82.6	81.3	-1.5	1.5	-3.0
Public Net Current Expenditure	26.2	25.4	-3.1	0.5	-3.6
Gross Fixed Capital Formation	18.1	15.3	-15.6	-0.7	-14.9
Exports of Goods and Services (X)	157.7	164.6	4.4	-0.1	4.4
Physical Changes in Stocks	-0.9	1.1	-	-	-
<b>Final Demand</b>	<b>283.7</b>	<b>287.7</b>	<b>1.4</b>	<b>0.7</b>	<b>0.7</b>
less:					
Imports of Goods and Services (M)	127.9	133.0	4.0	3.5	0.5
Statistical Discrepancy	0.2	0.2	-	-	-
<b>GDP at Market Prices</b>	<b>155.8</b>	<b>154.9</b>	<b>-0.7</b>	<b>-1.6</b>	<b>0.9</b>
less:					
Net Factor Payments (F)	-27.8	-30.0	-	-	-
<b>GNP at Market Prices</b>	<b>128.2</b>	<b>124.8</b>	<b>-2.6</b>	<b>-2.0</b>	<b>-0.6</b>

### B: Gross National Product by Origin

	2010	2011	Change in 2011	
	Estimate €bn	Estimate €bn	€bn	%
Agriculture, Forestry, Fishing	2.7	3.0	0.3	9.8
Non-Agricultural: Wages, etc.	68.8	66.8	-2.0	-2.9
Other:	53.2	55.7	2.5	4.7
Adjustments: Stock Appreciation	-0.3	-0.3	-	-
Statistical Discrepancy	-0.2	-0.2	-	-
<b>Net Domestic Product</b>	<b>124.2</b>	<b>124.9</b>	<b>0.8</b>	<b>0.6</b>
less:				
Net Factor Payments	-27.8	-30.0	-2.3	-
<b>National Income</b>	<b>96.4</b>	<b>94.9</b>	<b>-1.5</b>	<b>-1.5</b>
Depreciation	16.2	14.4	-1.9	-
<b>GNP at Factor Cost</b>	<b>112.6</b>	<b>109.2</b>	<b>-3.4</b>	<b>-3.0</b>
Taxes less Subsidies	15.6	15.6	0	-0.1
<b>GNP at Market Prices</b>	<b>128.2</b>	<b>124.8</b>	<b>-3.4</b>	<b>-2.6</b>

### C: Balance of Payments on Current Account

	2010	2011	Change in 2011
	Estimate €bn	Estimate €bn	€bn
Exports (X) less Imports (M)	29.4	31.1	1.7
Net Factor Payments (F)	-27.8	-30.0	-2.3
Net Transfers	-1.2	-1.0	0.2
<b>Balance on Current Account</b>	<b>0.8</b>	<b>0.5</b>	<b>-0.3</b>
as % of GNP	0.6	0.4	-0.2

## FORECAST NATIONAL ACCOUNTS 2012

### A: Expenditure on Gross National Product

	2011	2012	Change in 2012		
	Estimate €bn	Estimate €bn	Value	Price %	Volume
Private Consumer Expenditure	81.3	81.0	-0.4	1.3	-1.8
Public Net Current Expenditure	25.4	25.1	-1.4	1.1	-2.5
Gross Fixed Capital Formation	15.3	14.8	-3.2	0.0	-3.3
Exports of Goods and Services (X)	164.6	171.5	4.2	0.8	3.4
Physical Changes in Stocks	1.1	1.0	-	-	-
<b>Final Demand</b>	<b>287.7</b>	<b>293.4</b>	<b>2.0</b>	<b>1.0</b>	<b>0.9</b>
less:					
Imports of Goods and Services (M)	133.0	135.6	1.9	0.9	1.1
Statistical Discrepancy	0.2	0.2	-	-	-
<b>GDP at Market Prices</b>	<b>154.9</b>	<b>158.0</b>	<b>2.0</b>	<b>1.2</b>	<b>0.9</b>
less:					
Net Factor Payments (F)	-30.0	-31.4	-	-	-
<b>GNP at Market Prices</b>	<b>124.8</b>	<b>126.6</b>	<b>1.4</b>	<b>1.4</b>	<b>0.1</b>

### B: Gross National Product by Origin

	2011	2012	Change in 2012	
	Estimate €bn	Forecast €bn	€bn	%
Agriculture, Forestry, Fishing	3.0	3.3	0.3	10.0
Non-Agricultural: Wages, etc.	66.8	65.7	-1.1	-1.6
Other:	55.7	59.5	3.8	6.9
Adjustments: Stock Appreciation	-0.3	-0.3	-	-
Statistical Discrepancy	-0.2	-0.2	-	-
<b>Net Domestic Product</b>	<b>124.9</b>	<b>128.0</b>	<b>3.0</b>	<b>2.4</b>
less:				
Net Factor Payments	-30.0	-31.4	-1.3	-
<b>National Income</b>	<b>94.9</b>	<b>96.6</b>	<b>1.7</b>	<b>1.8</b>
Depreciation	14.4	14.1	0	-
<b>GNP at Factor Cost</b>	<b>109.2</b>	<b>110.6</b>	<b>1.4</b>	<b>1.3</b>
Taxes less Subsidies	15.6	16.0	0.4	-
<b>GNP at Market Prices</b>	<b>124.8</b>	<b>126.6</b>	<b>1.8</b>	<b>1.4</b>

### C: Balance of Payments on Current Account

	2011	2012	Change in 2012
	Estimate €bn	Forecast €bn	€bn
Exports (X) less Imports (M)	31.1	35.5	4.4
Net Factor Payments (F)	-30.0	-31.4	-1.3
Net Transfers	-1.0	-1.1	-0.1
<b>Balance on Current Account</b>	<b>0.5</b>	<b>3.5</b>	<b>3.0</b>
as % of GNP	0.4	2.7	2.3

## FORECAST NATIONAL ACCOUNTS 2013

### A: Expenditure on Gross National Product

	2012	2013	Change in 2013		
	Estimate €bn	Estimate €bn	Value	% Price	Volume
Private Consumer Expenditure	81.0	81.5	0.6	1.6	-1.0
Public Net Current Expenditure	25.1	24.9	-0.7	1.3	-2.0
Gross Fixed Capital Formation	14.8	14.5	-1.8	0.1	-1.9
Exports of Goods and Services (X)	171.5	179.1	4.4	0.6	3.8
Physical Changes in Stocks	1.0	1.0	-	-	-
<b>Final Demand</b>	<b>293.4</b>	<b>301.0</b>	<b>2.6</b>	<b>0.6</b>	<b>2.0</b>
less:					
Imports of Goods and Services (M)	135.6	138.6	2.2	0.6	1.6
Statistical Discrepancy	0.2	0.2	-	-	-
<b>GDP at Market Prices</b>	<b>158.0</b>	<b>162.6</b>	<b>2.9</b>	<b>0.6</b>	<b>2.3</b>
less:					
Net Factor Payments (F)	-31.4	-33.8	-	-	-
<b>GNP at Market Prices</b>	<b>126.6</b>	<b>128.8</b>	<b>1.7</b>	<b>0.7</b>	<b>1.0</b>

### B: Gross National Product by Origin

	2012	2013	Change in 2013	
	Estimate €bn	Forecast €bn	€bn	%
Agriculture, Forestry, Fishing	3.3	3.6	0.3	10.0
Non-Agricultural: Wages, etc.	65.7	65.2	-0.5	-0.8
Other:	59.5	63.9	4.4	7.4
Adjustments: Stock Appreciation	-0.3	-0.3	-	-
Statistical Discrepancy	-0.2	-0.2	-	-
<b>Net Domestic Product</b>	<b>128.0</b>	<b>132.1</b>	<b>4.2</b>	<b>3.3</b>
less:				
Net Factor Payments	-31.4	-33.8	-2.5	-
<b>National Income</b>	<b>96.6</b>	<b>98.3</b>	<b>1.7</b>	<b>1.8</b>
Depreciation	14.1	14.1	0	-
<b>GNP at Factor Cost</b>	<b>110.6</b>	<b>112.3</b>	<b>1.7</b>	<b>1.6</b>
Taxes less Subsidies	16.0	16.4	0.4	-
<b>GNP at Market Prices</b>	<b>126.6</b>	<b>128.8</b>	<b>2.2</b>	<b>1.7</b>

### C: Balance of Payments on Current Account

	2012	2013	Change in 2013
	Estimate €bn	Forecast €bn	€bn
Exports (X) less Imports (M)	35.5	40.1	4.5
Net Factor Payments (F)	-31.4	-33.9	-2.5
Net Transfers	-1.0	-1.1	-0.1
<b>Balance on Current Account</b>	<b>3.5</b>	<b>5.5</b>	<b>2.0</b>
as % of GNP	2.7	4.3	1.5

# 1. Introduction

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This *Commentary* sets out our forecast for the economy this year and provides a preliminary forecast for 2013. The picture that emerges for this year is of another year of relatively poor performance under the combined weight of domestic contraction necessitated by the need to correct the public finances and a worsening international environment. Next year could be better if the international situation improves and domestic demand does not fall to the same extent as this year. The international situation is of very great importance to the Irish economy as it sets the scene for exports and investment.

## THE INTERNATIONAL ECONOMY<sup>1</sup>

**“Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again.”** J.M. Keynes, *A Tract on Monetary Reform*, 1923, and *The Collected Works of John Maynard Keynes*, Volume IV, 1971.

In the previous *Commentary* we argued that the euro zone economy faced a return to recession in the absence of decisive action to deal with the financial crisis and a willingness to act collectively to provide a fiscal stimulus. There has been no effective progress on either of these fronts. Instead, much of the policy emphasis in the past three months has been on providing a fiscal framework, the Fiscal Compact, designed to ensure that fiscal behaviour in the future is pursued on sound lines in the apparent belief that this in itself will restore confidence to financial markets. It is important to think beyond the current crisis and to learn from it, but it is also important to resolve the crisis.

## EURO ZONE

The euro zone has remained in crisis. The European Central Bank (ECB) has introduced some welcome changes which have eased the extent of the crisis but we do not envisage the decisive intervention needed, namely, recapitalisation of the

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<sup>1</sup> We are grateful to Nusa Znuderl for assistance in compiling the *International* forecasts.

euro zone banking system, monetisation of some debt and a concerted fiscal stimulus will occur in the near future.

The unresolved debt crisis in the euro zone, the debates in certain countries about the break-up of the euro zone, and the negotiations of the new Treaty demonstrate that in the aftermath of the Great Recession, increased uncertainty is a fundamental feature of the world. Blanchard (2011)<sup>2</sup> summarised the implications of such rapid change by saying that “...post the 2008-09 crisis, the world economy is pregnant with multiple equilibria – self-fulfilling outcomes of pessimism or optimism, with major macroeconomic implications.”

Recognising that the task of providing a comprehensive outlook for the euro zone requires the analysis of these “multiple equilibria”, the EUROFRAME Group<sup>3</sup> presented three alternative scenarios for the euro zone over the next two years.<sup>4</sup> The assumptions which underpin the scenarios are described in detail in Box 1, but the differences between them are primarily driven by the differences in assumptions about risk premia on government debt, and also by differences in assumptions on bank lending conditions and liquidity constraints on consumers.

#### **BOX 1: Assumptions Behind the Scenarios in the EUROFRAME Winter 2011/12 Report**

In order to provide a comprehensive outlook for the euro zone in the context of acute uncertainty surrounding the euro zone in winter of 2011/12, the EUROFRAME Group used NIESR’s *NIGEM* model to develop a central forecast, characterised as “muddling through” the crisis, and two alternative scenarios, which represent more optimistic and more pessimistic outcomes. The aim of this Box is to describe the assumptions which underpin the scenarios and the channels through which they were implemented.

The scenarios assume that fiscal programmes as announced by governments are implemented, with the impact on GDP depending on the fiscal multipliers in each

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<sup>2</sup> Blanchard, O. (2011). “2011 in Review: Four Hard Truths”. IMFdirect. Weblog. [Online] Available from: <http://blog-imfdirect.imf.org/2011/12/21/2011-in-review-four-hard-truths/> [Accessed 11 January 2012].

<sup>3</sup> The EUROFRAME Group comprises 10 independent economic forecasting and research institutes in Europe, who combine their knowledge in providing quantitative analysis, forecasts and policy recommendations for the European Union and for national decision makers. More information about EUROFRAME Group can be found at [www.euroframe.org](http://www.euroframe.org).

<sup>4</sup> EUROFRAME (2012). “Economic Assessment of the Euro zone: Winter 2011/12 Report”. [Online] Available from: <http://www.euroframe.org/index.php?id=3> [Accessed 02 February 2012].

country. This fiscal programme is assumed to be fixed in the three scenarios, and therefore the projections would be lower if additional fiscal tightening measures are required under the new compact. Furthermore, it is assumed that financial markets are forward-looking and policy rates in the euro zone are bounded by a floor of 0.5 per cent per annum.

The differences between scenarios are driven by assumptions about risk premia on government debt, and liquidity constraints on both firms and households. The main assumptions behind each scenario are outlined in Table 1A. Overall, the central scenario assumes that sovereign bond spreads will begin to recede in the second half of 2012, and that consumers and firms will face high borrowing constraints.

**TABLE 1A: Summary of Assumptions, in EUROFRAME “Winter 2011/12 Report”**

	<b>Government Bond Spreads Over Germany</b>	<b>Bank Lending Rates</b>
Central	To remain at January 2012 levels until June 2012, then narrow gradually	2.4 percentage points increase in Q1 and Q2 of 2012
Upside	To return to ‘normal’ levels in 2012 Q1, except in countries operating under bail-out programmes	0.8 percentage point rise in Q1 and Q2 of 2012
Downside	To remain at January 2012 levels until the end of 2012; further 275 basis points increase in Italy and Spain	5 percentage points increase in 2012 Q1, to remain at this level until 2012, then recede

Compared to the assumptions in the central forecast, in the upside scenario government bond spreads are expected to recede to normal levels sooner, and tightening in bank lending conditions is assumed to be at the minimum levels needed to support capital ratio requirements. Liquidity constraints on consumers are eased, allowing for a greater degree of consumption smoothing through borrowing than in the central forecast.

On the other hand, the assumptions in the downside scenario essentially mean a return to the banking crisis conditions in Europe in 2008-2009. Conditions in the sovereign debt markets are assumed to remain acute throughout the year, particularly in Spain and Italy. Risk premia on borrowing reach their 2009 peak in the first quarter and remain at this level until the end of the year. Liquidity constraints are raised further than in the central forecast, but the impact on consumer spending is offset by weaker inflation.

Table 1 summarises the forecast for GDP in each scenario, including the central forecast. The downside scenario attempts to model the effects of a further deepening of the crisis as uncertainty continues unabated until the end of 2012. The upside scenario aims to capture the effects of some decisive action taken by European policy makers, which would shock the markets out of the current mood of pessimism and uncertainty about euro zone government debt obligations. Overall, depending on the response of policy makers and the developments in the confidence of consumer and the financial markets, the euro zone could return to recession or could claw its way back to growth over the coming year.

**TABLE 1: Summary of Forecast for GDP in Different Scenarios Considered in EUROFRAME Group’s Winter 2011/12 Report**

	2011	2012	2013
Central Forecast	1.7	0.0	1.4
Upside scenario	1.7	0.8	1.8
Downside scenario	1.7	-2.1	-1.2

*Source: EUROFRAME Group’s Winter 2011/12 Report.*

We take our outlook for the euro zone from the central forecast set out in the EUROFRAME report. In this central forecast the euro zone will continue to “muddle-through” the crisis, with current levels of uncertainty about debt sustainability persisting during the first half of 2012. It is assumed, however, that in order to avoid the collapse of the euro, policy changes will be implemented gradually over the first half of the year, allowing the return of some confidence in euro zone debt, reducing risk premia from the second half of the year and throughout 2013. However, a key factor will be the reaction of the private sector to this policy uncertainty. In addition, a significant pro-cyclical tightening of fiscal policy across Europe is also assumed in conjunction with a sharp tightening of bank lending conditions due to recapitalisation requirements imposed by the European Banking Authority<sup>5</sup> as a result of the latest round of stress tests.

Table 2 shows the central forecast for some of the main economic variables in the Euroframe central forecast. In 2012 the euro zone economy is expected to show no growth, recovering to grow by 1.4 per cent in 2013. The standardised unemployment

<sup>5</sup> European Banking Authority (2011) 2011. “EU Capital Exercise”. [Online] Available from: <http://eba.europa.eu/capitalexercise/2011/2011-EU-Capital-Exercise.aspx> [Accessed 12th January 2012].

rate is expected to remain above 10 per cent. Government balance as a proportion of GDP is expected to fall to 3.3 and 3.1 per cent in 2012 and 2013, respectively.

**TABLE 2: Euro zone Forecast: Central Scenario, EUROFRAME Group “Winter 2011/12 Report”**

	Annual Percentage Change		
	2011	2012	2013
GDP growth	1.7	0.0	1.4
Standardised unemployment rate, %	10.1	10.5	10.2
Government balance as % of GDP	-4.2	-3.3	-3.1
Government debt as % of GDP	87.9	89.6	89.5
Current account balance as % of GDP	0.2	2.0	1.3

*Source: EUROFRAME Group’s Winter 2011/12 Report.*

### **BOX 2: Monetary Policy in the Euro zone**

Monetary policy in the euro zone remains relatively loose with reductions in interest rates and significant liquidity provided to the banking system, although a lower refinancing rate for the banking system may not translate back into lower interest rates for customers. In terms of the euro zone banking system, the interbank or wholesale market is still not functioning. The additional liquidity of just less than €500 billion provided in December found its way back to the ECB rather than to the money markets. In the short-run this may have been inevitable as (i) attempts to place these funds on the money markets would have depressed interest rates from already low levels and it is not clear what the uptake would have been, and (ii) banks are still unwilling to lend to each other because of fears about the riskiness of lending to euro zone banks when the full extent of individual banks’ capital shortages is unknown. Banks were also facing large losses on their lending to Greece as attempts are made to reduce the level of Greek debt. Of course, the objective of the ECB in providing funding may also have been to ensure that sufficient funds were available to rollover euro zone governments’ debt due for repayment in the first half of this year. There has been some limited success in the case of Italy and Spain, and in the extension of some Irish Government debt to 2015, even if the uptake was mostly by Irish banks.

On the face of it, the recent currency swaps between the major economies, were designed to deal with a “shortage” of dollars. In a freely functioning foreign exchange market there could not be a shortage of dollars as the exchange rate would simply adjust to the appropriate rate. Therefore, the concern appears to have been driven



by a desire not to see a change in the exchange rate i.e., to prevent euro depreciation and dollar appreciation. While this might be useful in containing inflationary pressure through the exchange rate, it hinders the adjustment in the Irish economy. A depreciation of the euro would provide an important stimulus to exports, and while inflation would increase, the labour market is such that it is unlikely this would lead to increased wage inflation. There was also some concern about the ability of euro zone banks to rollover the dollar-denominated debt because of uncertainty in US markets about the viability of some banks. In these circumstances euro zone banks would have also been forced into the foreign exchange market.

Overall, the failure of the interbank market to function is a good indication of the need to correct the euro zone banking system. It is widely believed that banks will be seeking more than €500 billion in the next money auction at the end of February. As things now are, the ECB must continue to replace the interbank market for the foreseeable future. Liquidity constraints are a symptom, rather than the cause, of the financial strain in the euro zone. This is not a long-term solution, and it is necessary to ensure that banks are effectively recapitalised in a transparent manner, taking account of their existing shortfalls, losses arising from the recession, the Basel III requirements, and losses from Greek and other countries' debt. This recapitalisation is beyond the capacity of most governments in the euro zone at present, but not beyond that of the ECB. If the euro zone had a singular fiscal authority in addition to the European Central Bank then this recapitalisation could be effected without the individual central banks taking equity in institutions they are required to regulate. A mechanism needs to be found to overcome this impasse, as without it the financial crisis, the uncertainty associated with it, the contraction and poor growth of the euro zone economy will continue.

## **UNITED STATES**

Following weak performance at the beginning of the year, the US economy performed significantly better in the second half of 2011, due to strong private consumption and fixed non-residential investment. Growth for the year was 1.5-2.0 per cent, and the Federal Reserve forecasts growth of about 2 ½ per cent for 2012.

Despite the positive developments in the US economy, it remains the case that the recovery phase of this recession is much more muted than recoveries in previous recessions. There are several possible reasons for this. First, it is unclear whether the recent fiscal stimulus will be sufficient to offset the negative impact of reduced

consumption and investment, and restore growth in the economy. A simulation using NIESR's *NiGEM* model suggests that the package will raise growth by only 0.3 percentage points in 2012 and 0.2 per cent in 2013.<sup>6</sup> Second, during the crisis attitudes towards risk-taking were altered, and by reducing investment this also reduced growth. Third, there remains a very large overhang of private (household and corporate) debt, and the need to reduce it has affected savings and expenditure decisions. Fourth, compared to previous recoveries, this recovery is characterised by a significantly weaker labour market, which exacerbates the already vulnerable position of households who need further balance sheet correction at the time when they are also adversely affected by negative wealth impacts. Against these, the shift in monetary policy to reducing long-term interest rates is designed to encourage private sector investment, whereas previously the emphasis was on reducing short-term interest rates to stimulate household consumption. While it is too early to be confident that this policy shift will work, there has been an increase in investment in the US as firms cut back on overseas investment.

## UNITED KINGDOM

The UK economy exhibited weak performance in 2011: average quarterly growth in 2011 was 0.3 per cent, and annual GDP growth decelerated from 2.1 per cent in 2010 to 1 per cent in 2011, according to EUROFRAME Group's "Winter 2011/12 Report".

Furthermore, according to Euroframe, the rebalancing in the UK economy is further away than previously estimated. In particular, the estimate for current account deficit has been revised upwards to 3.3 per cent of GDP for 2010, and data shows a deterioration in the UK's balance of payments in 2011, as the current account deficit widened from 2 per cent of GDP in the first two quarters to 4 per cent of GDP in the third quarter of 2011. According to Euroframe, the Office for National Statistics, has suggested that the main factor behind the deterioration is the shrinking of the surplus on the income account, which occurred because of lower profits of UK banks and the foreign subsidiaries of UK non-financial corporations, and an increase in profits of foreign-owned banks operating in the UK. Moreover, the widening current account balance is also due to the deterioration in trade, income and transfer balances. According to the EUROFRAME Group, the deficits on both the current and the trade accounts are expected to narrow, but it is important to note that the latter is due to depressed demand for imports as a result of weak domestic economy rather than export growth. Overall, net trade is expected to contribute positively to GDP

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<sup>6</sup> EUROFRAME (2012). "Economic Assessment of the Euro zone: Winter 2011/12 Report". [Online] Available from: <http://www.euroframe.org/index.php?id=3> [Accessed 02 February 2012].

growth, while the domestic economy would impact negatively, and despite the recession in the first half of 2012, the UK economy is forecast to expand by 0.2 per cent and 2.3 per cent per annum in 2012 and 2013, respectively.

In 2011, inflation as measured by CPI has been consistently above the target of 2 per cent per annum, which was due to increases in VAT at the start of the year, increases in commodity prices and high import prices, which were translated to consumer prices. These factors are temporary, and the Group expects inflation to fall below 2 per cent per annum in 2012.

Unemployment (on ILO basis) in the UK increased from 7.7 per cent at the beginning of 2011 to 8.3 per cent in the third quarter of the year, as reported in EUROFRAME Group's "Winter 2011/12 Report". The Group expects unemployment to increase during 2012 to approximately 9 per cent, and to decline gradually in 2013. The UK government's primary fiscal target is to balance the cyclically-adjusted public sector current budget on a fiscal year basis over a 5 year horizon ending in 2016-2017. The newly created Office of Budget Responsibility positively evaluated the chances of a successful outcome, but this came only after additional spending cuts of 1.5 per cent of GDP between 2015 and 2017 were announced. The government deficit is therefore expected to shrink from 10.2 per cent of GDP in 2010 to 7.4 per cent in 2013.

## 2. Exports of Goods and Services

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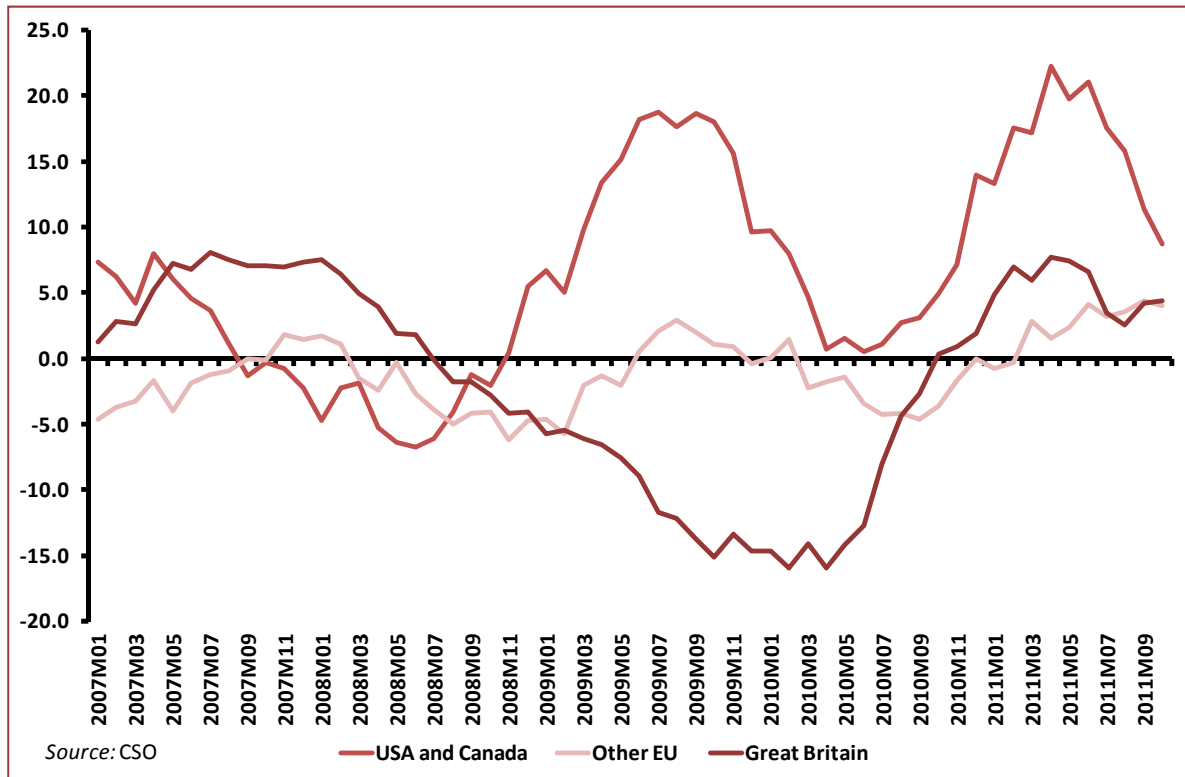
Exports of goods and services increased by 8.1 per cent in value and 6.3 per cent in volume in 2010. We estimate that the value and volume change in 2011 was 4.4 per cent. Exports fell for 7 consecutive quarters from the end of 2007 and began to recover at the end of 2009. In the second half of 2011 the rate of growth faltered, reflecting the general slowdown in economic activity in some major economies. Export growth was somewhat less than we had expected as was the growth in other economies. The slowdown was primarily in goods exports as exports of services continued to grow rapidly, though it is clear that tourism receipts weakened in the second half of the year.

Given the profile for the world economy we expect merchandise export growth in volume terms to be 3 per cent in 2012, compared with 4.8 per cent in 2011. The value of exports will be affected by one significant product in the pharmaceuticals sector coming off patent. It is not clear what the volume effect will be as the product will still command some brand loyalty and there could be exports of generics. Exports of services, which are now almost as important as goods exports, should continue to grow at about 4 per cent. This is very similar to the increase in 2011 as there continue to be additions to the number and size of firms particularly in the multinational IT sector. We expect tourism receipts to show very modest growth of about 3 per cent, as the squeeze on real incomes takes effect in the UK and the continental Europe markets.

As discussed later, wage growth has been muted, implying increased labour cost competitiveness versus the rest of Europe, and price competitiveness has improved significantly in tourism. The impact of these developments is not obvious in a downturn when demand simply falls/weakens almost irrespective of price in the short run. However, the gain in competitiveness is important for indigenous industry winning market share and as one factor for multinationals in considering location.

We expect export growth in 2013 to pick up despite continued weakness in the euro zone recovery, reflecting further competitiveness gains relative to other countries and continued strong demand from the US. As seen in Figure 1, growth in merchandise trade has been led by an increase in exports to the US and Canada. We are forecasting merchandise exports will grow by 3.5 per cent and services exports will grow by 4.1 per cent in real terms in 2013, with tourism increasing by 4.8 per cent in volume.

**FIGURE 1: Annualised Percentage Growth of Manufacturing Exports By Destination**



**TABLE 3 : Exports of Goods and Services**

	2010	% Change in 2011		2011	% Change in 2012		2012	% Change in 2013		2013
	€b	Value	Volume	€b	Value	Volume	€b	Value	Volume	€b
Merchandise	82.9	3.7	4.8	86.0	3.8	3.0	89.3	4.6	3.5	93.4
Tourism	3.1	8.6	7.0	3.3	4.4	3.0	3.5	6.5	4.8	3.7
Other Services	70.8	4.9	3.9	74.3	4.7	4.0	77.8	4.1	4.1	81.0
Exports of Goods and Services	156.8	4.4	4.4	163.6	4.2	3.4	170.6	4.4	3.8	178.1
FISIM Adjustment	0.9			0.9			1.0			1.0
Adjusted Exports	157.7	4.4	4.4	164.6	4.2	3.4	171.5	4.4	3.8	179.1

# 3. Investment

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Investment fell by an unexpectedly large amount in the third quarter of 2011 according to the preliminary *Quarterly National Accounts*, down by just under 21 per cent on the previous quarter. Much of this is accounted for by a lower level of investment in aircraft in Quarter 3 compared with Quarter 2, suggesting that the underlying decline is not as great as suggested by the overall numbers.

There were some positive signs in 2011, some of which will carry into this year and next. We have referred in previous *Commentaries* to the increase in agricultural investment deriving from expected changes in the CAP, in particular the ending of the milk quota system.

A significant expansion of the fleet of one major airline has been announced and the aircraft leasing companies continue to expand their fleets. In the manufacturing sector, there was announcement of new firms establishing and existing enterprises expanding in the IT and Pharmaceuticals sectors during 2011. There continues to be investment in process development in existing manufacturing enterprises – an essential part of improving cost competitiveness – and we expect this to remain the case over the forecast period. Oil and gas exploration is set to resume over the next few years.

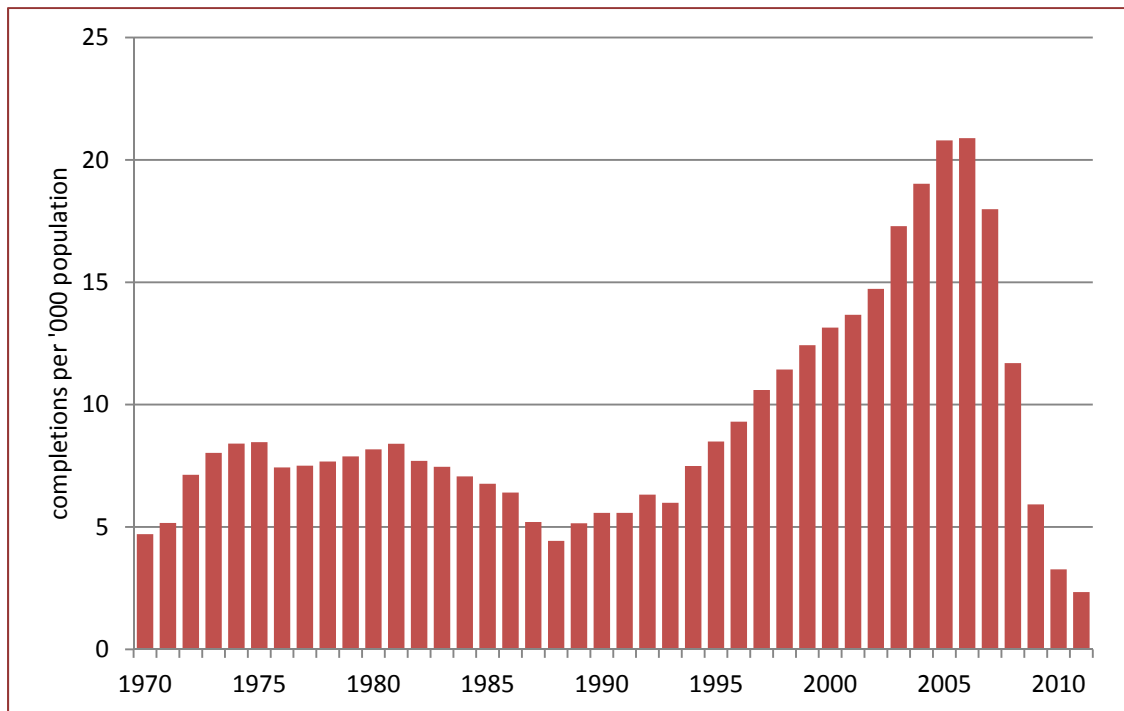
There has been increased investment in the multinational services sector. While this exhibits relatively low capital expenditure per head, it will help alleviate the problem in relation to the overhang of unused commercial property.

Investment in other productive market services is likely to remain subdued. The retail sector is operating well below the previous peak as household spending is still declining, and while there has been some destruction of enterprises, as firms have ceased trading, there remains significant excess capacity. This is also the case in many business support services – legal, financial and professional services – so that little investment is likely here.

Direct investment by government, as outlined in the Public Capital Programme will decline. There may be some projects connected with water charges, but the extent is unclear until more details become available on the nature and form of the charging system. There may also be some new school building and small-scale refurbishment of schools arising from increased numbers of pupils.

In relation to housing investment, data from the Department of the Environment, Heritage and Local Government show that just 10,480 dwellings were completed in Ireland in 2011. This represents a decline of over 28 per cent when compared to 2010 and brings completions to levels of the early 1970s. Figure 2 shows the number of housing completions in Ireland per '000 population. Revisions to the population estimates that are due to take place following *Census 2011* will impact on the estimates for recent years, but current completion levels mean that approximately 3 houses per '000 population are being completed. A marginal decline in housing output is forecast for this year, with completions totalling just 10,000 units, and our view is that completions will stabilise at around this level and so no further decline is forecast for 2013.

**FIGURE 2: Dwelling Completions per '000 Population**





Overall, when account is taken of the construction component of other investment, we expect output from building and construction to contract in 2012 and 2013, although the rate of decline is expected to moderate. We are currently forecasting that the volume decline in building and construction will be approximately 12 per cent in 2012 and 8.5 per cent in 2013.

In total, investment is estimated to have fallen by nearly 15 per cent in volume in 2011. We forecast that this will moderate to a decline of 3.3 per cent in 2012, which will greatly reduce the drag the investment component exerts on output growth. In 2013 the volume of investment as a whole may fall by only 1.9 per cent.

**TABLE 4 : Gross Fixed Capital Formation**

	2010	% Change in 2011		2011	% Change in 2012		2012	% Change in 2013		2013
	€b	Value	Volume	€b	Value	Volume	€b	Value	Volume	€b
Housing	4.4	-31.1	-28.2	3.1	-6.5	-4.6	2.9	-1.0	0.0	2.8
Other Building	5.8	-14.3	-12.4	5.0	-16.1	-16.6	4.2	-13.0	-14.5	3.6
Transfer Costs	0.4	-7.1	-8.0	0.4	-8.9	-10.0	0.4	-7.7	-9.0	0.3
Building and Construction	10.7	-21.0	-18.8	8.4	-12.3	-11.8	7.4	-8.1	-8.5	6.8
Machinery and Equipment	7.4	-7.7	-8.8	6.8	8.0	8.8	7.4	4.5	5.5	7.7
<b>Total</b>	<b>18.1</b>	<b>-15.6</b>	<b>-14.9</b>	<b>15.3</b>	<b>-3.2</b>	<b>-3.3</b>	<b>14.8</b>	<b>-1.8</b>	<b>-1.9</b>	<b>14.5</b>

# 4. Household Consumption

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The third quarter National Accounts show that the volume of personal consumption fell by -1.3 per cent compared with the previous quarter.

Retail sales data, which have been a good indicator of the change in private consumption, are available for all of 2011. Compared to 2010, retail sales were down 1 per cent in volume terms and 2.5 per cent in value terms. Retail sales picked up in the fourth quarter of last year in seasonally adjusted terms, implying a positive carryover into 2012.

Looking at the pattern of the separate retail components gives some insight in to consumption in 2011. Although most sectors were broadly negative, motor trades continued to rebound from their 2009 low, increasing 6.2 per cent in volume terms and 2.8 per cent in value terms. January registrations data for private cars show an increase of 5.8 per cent compared to January 2010. This indicates that further growth has occurred even following the removal of the scrappage scheme, albeit at a slower rate than 2010, when January registrations increased 25.2 per cent.

For most components of retail sales, the falls in terms of value were greater than in terms of volume. This indicates that retailers have been prepared to reduce their prices in the face of reduced demand.

In addition to reduced retail activity, tourism spending abroad is likely to have contracted in 2011 and so, on the basis of this evidence, we have revised downwards our estimate of the volume change in personal consumption in 2011 to -3.0 per cent.

Households have been deleveraging their debt burden since early 2009. Data on household credit transactions from the Central Bank show that debt repayments exceeded new borrowing by €14.16 billion over the period 2009-2011. This large-scale deleveraging has contributed – along with increased precautionary savings – to a higher savings ratio in recent years, and we are assuming that this behaviour will continue in 2012 and 2013.

With employment expected to fall, a reduction in incomes and weak consumer confidence, coupled with high uncertainty and a high personal savings rate we expect that the volume of personal consumption will fall again in 2012 and in 2013, although these declines are expected to be smaller than that experienced in 2011. In 2012, the forecast fall in consumption is 1.8 per cent in volume terms.

For 2013, we are forecasting that reductions in transfers from government and increases in taxation will combine with static average earnings to reduce personal disposable income. The savings rate, which incorporates income that is saved as well as income that is used to pay off debt, will remain high as some households seek to protect themselves against future losses to disposable income while others continue to deleverage. Consequently, consumption is expected to fall by a further 1.0 per cent in volume terms in 2013.

**TABLE 5 : Personal Disposable Income**

	2010	% Change in 2011		2011	% Change in 2012		2012	% Change in 2013		2013
	€b	%	€b	€b	%	€b	€b	%	€b	€b
Agriculture, etc.	2.7	9.8	0.3	3.0	10.0	0.3	3.3	10.0	0.3	3.6
Non-Agricultural Wages	68.8	-2.9	-2.0	66.8	-1.6	-1.1	65.7	-0.8	-0.5	65.2
Other Non-Agricultural Income	16.7	9.6	1.6	18.3	10.3	1.9	20.2	16.7	3.4	23.6
Total Income Received	88.2	-0.1	-0.1	88.1	1.2	1.1	89.2	3.5	3.2	92.4
Current Transfers	26.5	-3.8	-1.0	25.5	-0.1	0.0	25.5	-4.7	-1.2	24.3
Gross Personal Income	114.7	-1.0	-1.1	113.6	0.9	1.1	114.7	1.7	2.0	116.7
Direct Personal Taxes	20.8	6.4	1.3	22.2	3.6	0.8	23.0	7.2	1.7	24.6
Personal Disposable Income	93.9	-2.6	-2.4	91.5	0.3	0.3	91.7	0.3	0.3	92.0
Consumption	82.6	-1.5	-1.2	81.3	-0.4	-0.4	81.0	0.6	0.5	81.5
Personal Savings	11.3	-10.6	-1.2	10.1	6.1	0.6	10.7	-1.8	-0.2	10.5
Savings Ratio	12.0			11.1			11.7			11.4
Average Personal Tax Rate	18.1			19.5			20.0			21.1

# 5. Public Finances

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The budget outcome in 2011 was very close to our expectations. The numbers, both in terms of the traditional exchequer borrowing requirement and the general government balance, were within the targets set by government and agreed with the IMF, ECB and EU Commission – the Troika. This was in spite of the poorer performance of the economy in the second half of the year. Net expenditure on goods and services is estimated to have declined by 3.6 per cent in volume terms in 2011.

Turning to 2012, we are now forecasting a lower level of output than previously, with GDP increasing by 0.9 per cent. This is slightly lower than official forecasts on which the budget was based. Nonetheless, we think the fiscal targets are realisable. The expenditure reductions in the budget will be achieved, as numbers employed may decline by somewhat more than anticipated as early retirement and retirement are not the only reasons for reductions in numbers. People leave to take up alternative employment and to emigrate. Those who are mobile and with good skills can get employment elsewhere. Our forecasts for employment indicate little change in the numbers unemployed and payments and schemes have been cut. This is an ongoing process not confined directly to the budget so that additional savings are likely to be realised.

On the revenue side we are forecasting broad estimates for revenue similar to those in Budget 2012, though there are differences by revenue head. The net effect is relatively small so that the overall target should be met. At this point, we forecast that the targets agreed with the troika will be met with a General Government Balance of -8.6 per cent of GDP in 2012 and -7.5 per cent in 2013. Obviously, the numbers must be monitored during the year, as any further weakening in the eurozone economy beyond what we are forecasting could lead to weaker growth. On the other hand, a decisive intervention to correct the financial imbalances in the eurozone could lead to a positive second half. Some aspects of the January figures were good, though the revenue figures included some €250 million in corporation taxes originally due in December but which did not hit the Exchequer account until January. This improves the exchequer balance in 2012, but has no effect on the

General Government Balance which is on an accruals basis. Even allowing for this, taxes were still up by 9 per cent compared with the same month a year earlier.

The uncertainty about policy in the eurozone underlies our overall forecast for 2013. If the eurozone economy remains in recession then the targets may not be realised without further measures. At present we are forecasting that the general government debt will reach a ratio of 120 per cent of GDP in 2103. This is marginally higher than the forecast in the *Economic and Fiscal Outlook*, contained in Budget 2012. Given that we forecast a higher ratio it is important to note that our forecast for the level of debt is broadly similar to those in the Budget documentation, while our forecast for nominal GDP is lower, resulting in the higher debt ratio. As the public finance situation develops in 2012, the position in 2013 will become clearer.

**TABLE 6: Exchequer Finances, € billion**

	2011 Outcome, €bn	2012 Forecast, €bn	2013 Forecast, €bn
Net current expenditure	48.0	49.5	48.8
<i>Net voted expenditure</i>	41.4	40.5	39.1
<i>Non-voted expenditure</i>	6.6	9.0	9.7
Current revenue	36.8	38.3	39.9
<i>Tax revenue</i>	34.0	35.8	38.0
<i>Non-tax revenue</i>	2.8	2.5	1.9
<b>Current Budget Surplus</b>	<b>-11.2</b>	<b>-11.2</b>	<b>-9.0</b>
Capital resources	2.5	1.8	1.8
Capital expenditure	16.2	9.5	7.2
<i>Net voted expenditure</i>	4.3	3.6	3.0
<i>Non-voted</i>	11.9	5.9	4.2
<b>Capital Borrowing</b>	<b>-13.7</b>	<b>-7.7</b>	<b>-5.4</b>
<b>Exchequer Balance<sup>†</sup></b>	<b>-24.9</b>	<b>-18.9</b>	<b>-14.4</b>
<i>As % of GDP<sup>†</sup></i>	-16.1	-12.0	-8.9
<b>General Government Balance<sup>†</sup></b>	<b>-15.2</b>	<b>-13.6</b>	<b>-12.2</b>
<i>As % of GDP<sup>†</sup></i>	-9.8	-8.6	-7.5

<sup>†</sup> These are based on ESRI estimates.

# 6. Population and the Labour Market

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As the latest *Quarterly National Household Survey (QNHS)* from the CSO shows, the high rate of unemployment persisted in to 2011 Q3, with the rate of unemployment being measured at 14.4 per cent. Subsequent data from the Live Register have estimated the seasonally adjusted unemployment rate at 14.2 per cent as of January.

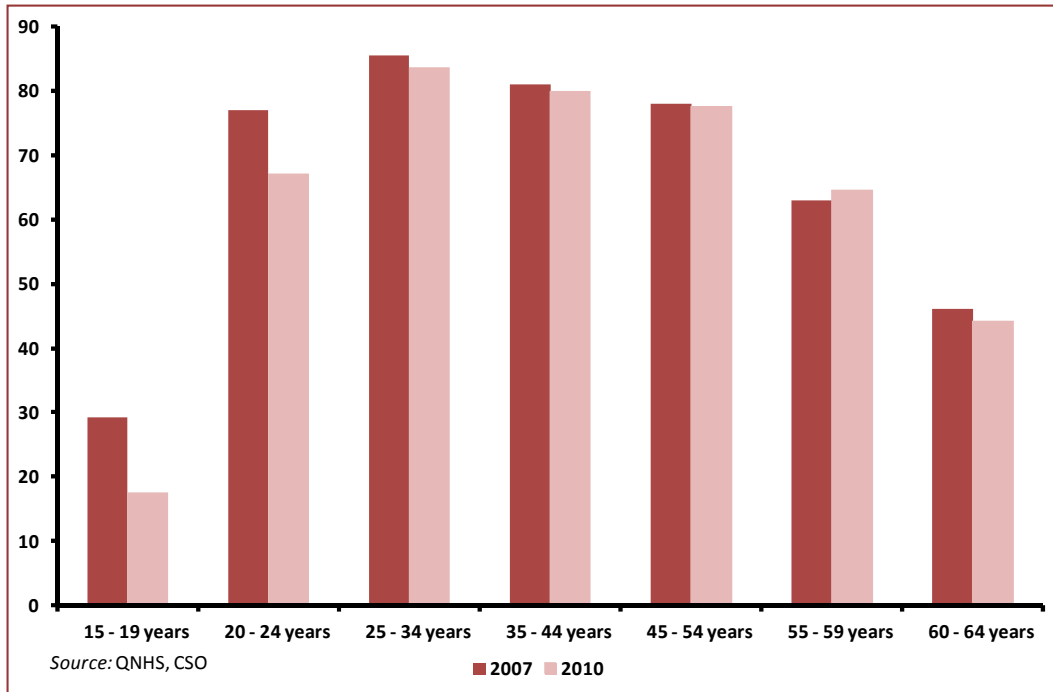
Youth unemployment rates according to the *QNHS* have become particularly elevated. At 39 per cent, unemployment amongst the 15-19 year age bracket is the highest amongst any age cohort, while 20-24 year olds come second with an unemployment rate of 27.4 per cent. Typically, unemployment rates would be expected to be higher in younger age brackets than for the population as a whole, indicative of, amongst other things, the impact of experience on employability. This has been exacerbated more recently by enterprises reducing hiring which has a particularly detrimental effect on new entrants in to the labour market. However, the headline rates of youth unemployment can mask the significant movement of younger people out of the labour force. Participation rates have fallen generally, but the largest reductions have taken place in the younger age brackets (Figure 3). Conefrey (2011) finds that the majority of young people who have exited the labour force have gone on to education.<sup>7</sup> Given the change in participation amongst the younger age groups, measuring unemployment as a percentage of the labour force can distort the reality of the situation that young people face. The unemployment ratio – the percentage of the population in a particular age cohort that are unemployed – is arguably a more appropriate measure. Combining yearly population data from the CSO's *Population and Migration Estimates* with quarterly unemployment data from the *QNHS*, we can infer an unemployment ratio in 2011 Q3 of 7.1 per cent for the 15-19 year age cohort. This compares to an unemployment ratio of 4 per cent in 2007 Q3. For the 20-24 year age bracket, the increase has been more dramatic. The unemployment ratio has increased rapidly from 6.3 per cent in 2007 Q3 to 18 per cent in 2011 Q3.

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<sup>7</sup> Conefrey, T., 2011. "Unemployment and Labour Force Participation during the Recession," *Economic Letters*, Central Bank of Ireland, Vol. 2011(4), June.

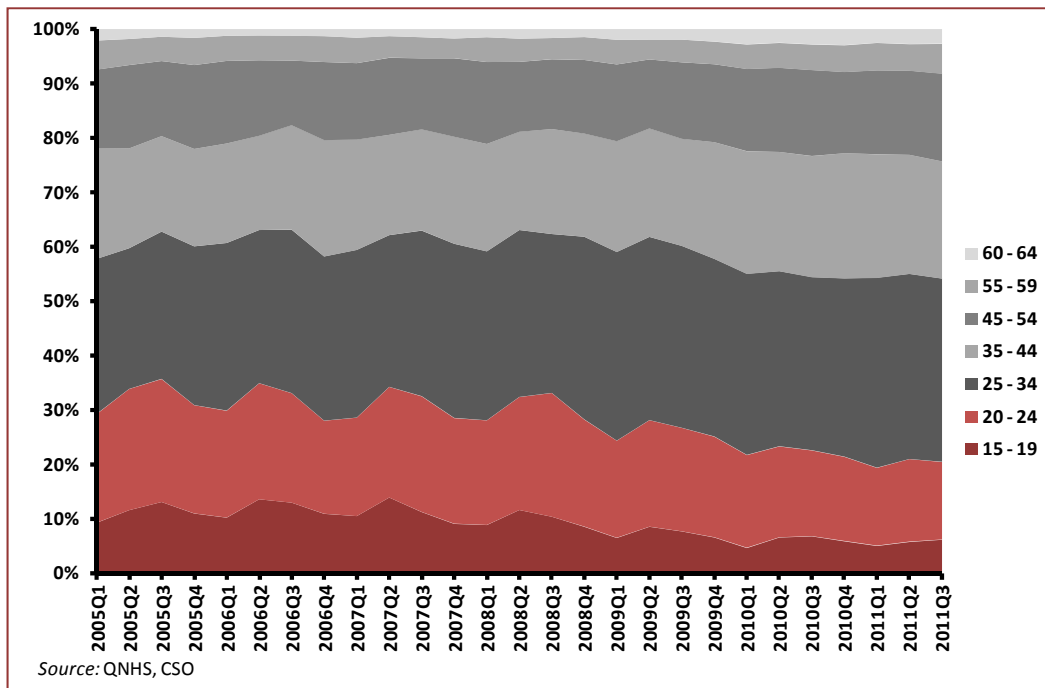


**FIGURE 3: Changes in Participation 2007-2010 by Age**



Furthermore, while unemployment rates may be more prevalent amongst the younger age groups, unemployed people aged 15-24 years as a fraction of the total population of unemployed has been decreasing. In 2005 Q3 they made up 36 per cent of the unemployed population, compared to 20 per cent in 2011 Q3.

**FIGURE 4: Age Structure of the Unemployed Population**

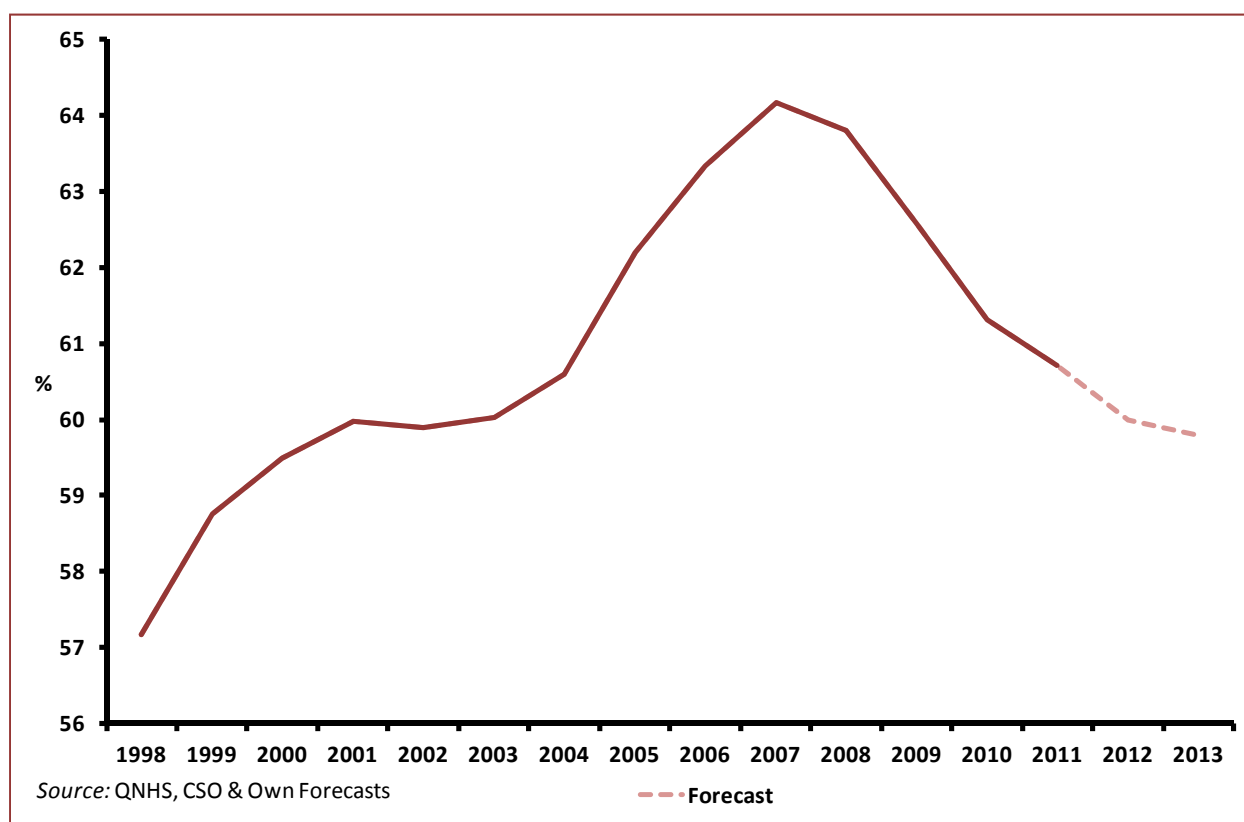


In terms of employment, the *QNHS* shows that in 2011 Q3, employment in all sectors of the economy had fallen by 46,000 compared to the same period in 2010. There were some areas of modestly increased employment, including an additional 5,900 employed in administrative and support service activities, representing an increase of 9.8 per cent, and 3,400 employed in transportation and storage, an increase of 3.7 per cent. There was continued deterioration in other areas, with the largest year on year declines being recorded in the area of accommodation and food services, which fell by 6.9 per cent, or 8,500.

Of particular interest is the moderate 1.1 per cent quarterly rise in employment in the construction sector, which is corroborated by evidence from the *Earnings, Hours and Employment Cost Survey (EHECS)*, which suggests employment in construction increased 3 per cent between the first and third quarters of 2011. These are the first quarterly increases in construction employment recorded since 2007. As a percentage of the labour force, construction has fallen from 13 per cent in 2006 to 6 per cent in 2011, which is in line with OECD averages.

Moving on to our forecasts, we expect unemployment to average 14.0 per cent and 13.7 per cent respectively in 2012 and 2013. This should not be construed as a belief that labour market conditions are set to improve. We expect numbers employed to fall in both years, but the declining participation rate (see Figure 5) will account for part of this decrease, as will outward migration. Outward migration is also expected to reduce the total numbers unemployed. These forecasts are based on assumptions about migration – about which we lack sufficient accurate data – so that there is much uncertainty surrounding them.

**FIGURE 5: Participation Rates, Historical Data and Forecast**



**TABLE 7: Employment and Unemployment**

	Annual Averages 000s			
	2010	2011	2012	2013
Agriculture	85	84	85	85
Industry	360	338	325	315
<i>Of which: Construction</i>	<i>120</i>	<i>106</i>	<i>100</i>	<i>97</i>
Services	1,403	1,383	1,367	1,363
Total at Work	1,848	1,804	1,777	1,763
<i>Of which: Non-agricultural employees</i>	<i>1,446</i>	<i>1,420</i>	<i>1,397</i>	<i>1,388</i>
<i>Others</i>	<i>317</i>	<i>300</i>	<i>295</i>	<i>290</i>
Unemployed	292	300	290	280
Labour Force	2,140	2,104	2,067	2,043
Unemployment Rate %	13.6	14.2	14.0	13.7

# 7. Earnings and Prices

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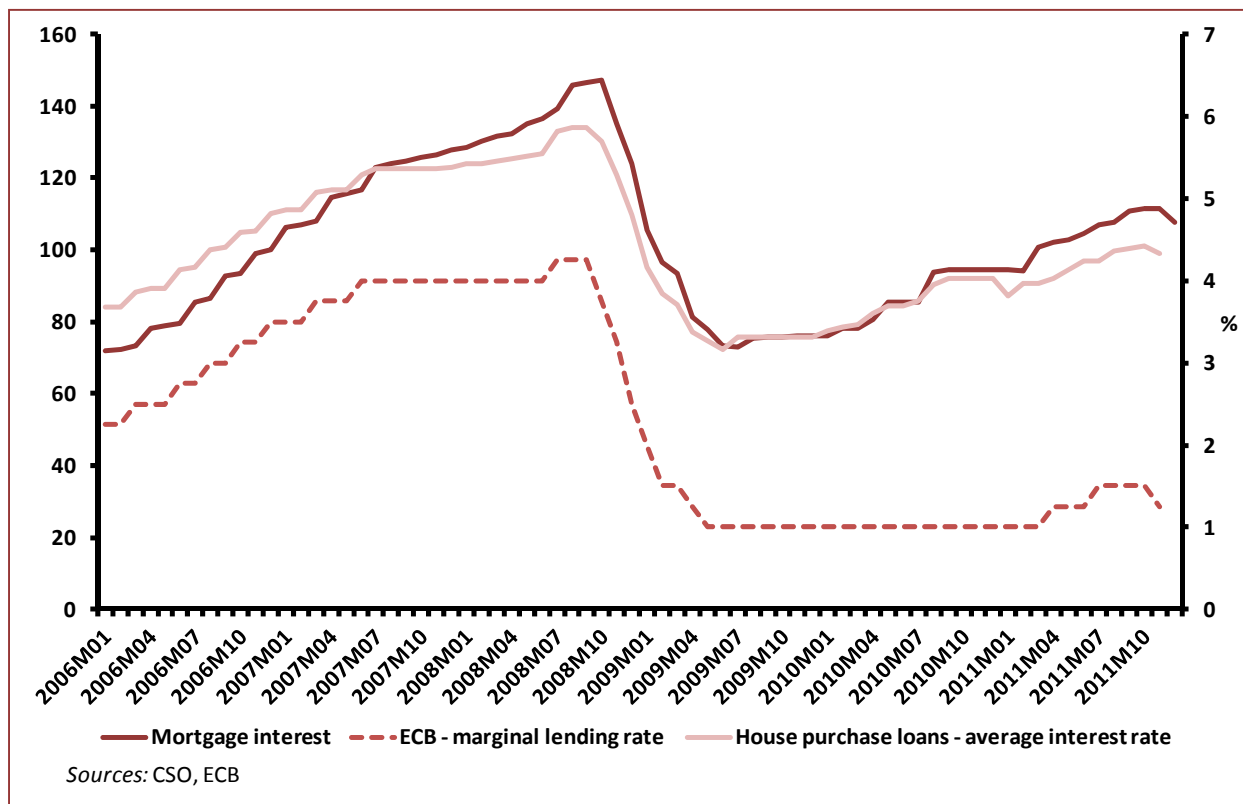
In 2011 we saw a return to consumer price inflation, following two years of deflation during which the CPI fell 5.4 per cent. Inflation averaged 2.6 per cent over 2011, with mortgage interest and health insurance being the main sources of inflation. There was also moderate price growth in household electricity and gas, fuel costs and health. Luxury and non-essential goods continued to decline in price, however. Clothes, restaurants, accommodation and alcohol prices all decreased marginally in 2011, while the continued decline of the construction industry led to further price falls in the area of furnishings and household equipment.

We noted in the *Quarterly Economic Commentary Spring 2011* that price indices such as the CPI and the HICP are limited as a measure of the price level when patterns of expenditure are experiencing dramatic shifts. Price indices are based on a fixed basket of goods and services, identified by the *Household Budget Survey 2004-2005*, with the weighting of each component dependent on its share of household consumption. Shifting expenditure patterns can change both the composition of the basket and the weights attached to each component. We demonstrated how expenditure patterns have changed markedly by looking at the Retail Sales Index and the differing performances of the separate areas of retail sales over the years 2007-2010, and by looking at the implicit Consumption Deflator.

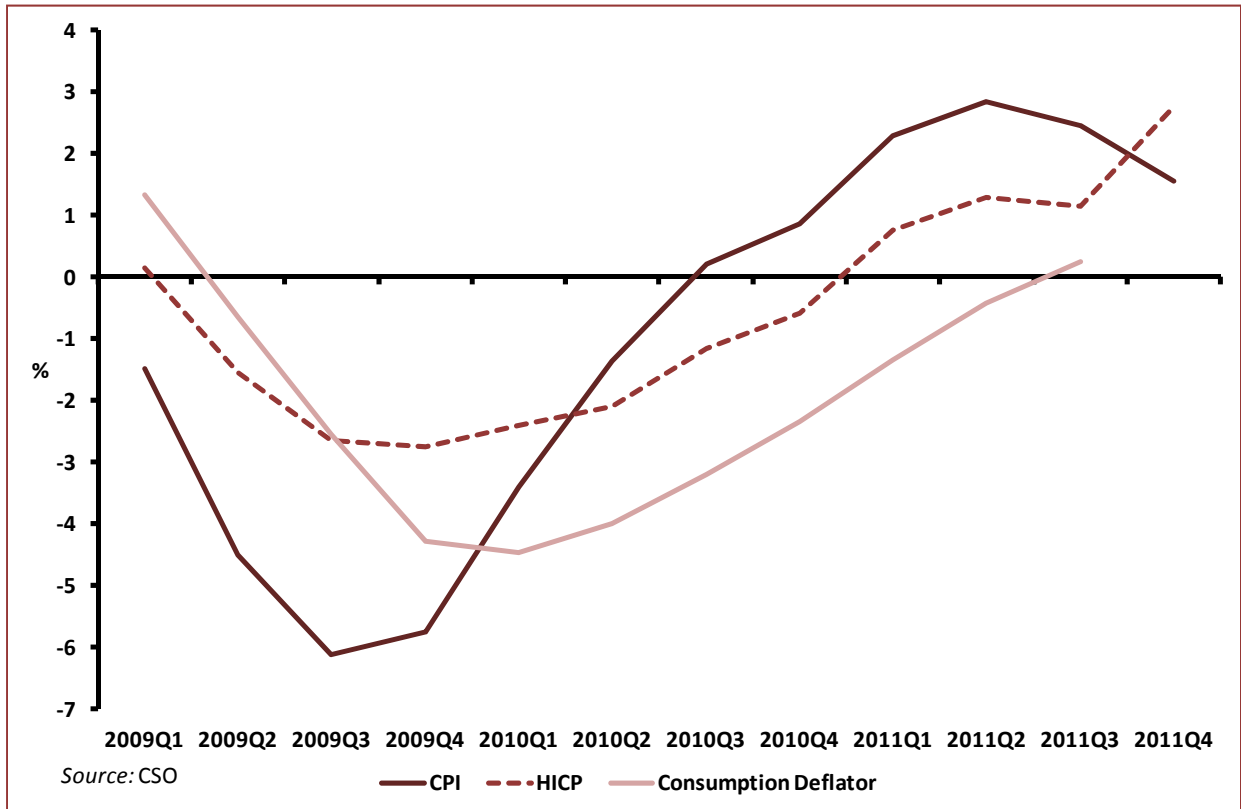
In Quarter 1 2012, the Central Statistics Office is due to release a new Household Budget Survey which will help to provide a more accurate picture of the price level that currently faces households. The most significant anticipated change is the inclusion of tracker and fixed rate mortgages in the calculation of mortgage interest, which is currently based solely on the standard variable rate. While the standard variable and tracker rates moved in tandem, this did not present a problem in terms of the measurement of the price level. However, when the ECB cut interest rates to record lows in 2009, mortgage providers attempted to minimise losses incurred on their tracker loans by increasing the interest rate on their standard variable rate loans, and the series diverged as seen in Figure 5 below. Trackers and fixed rate mortgages were not included in the *Household Budget Survey 2004-2005* as variable rate mortgages predominated during that time and so are not measured in the CPI. In

the interim between surveys, lending continued to increase rapidly and the majority of new mortgages were tracker rates. Currently, trackers and fixed rate loans make up roughly two-thirds of the mortgage market. Thus, the increases in the standard variable rate exaggerated the impact of the mortgage interest component on the true level of consumer prices. Our forecasts for the CPI are based on the current weights, and will thus be subject to some revision. For the HICP, the changing weights are anticipated to be less of an issue, as the HICP has tracked the Consumption Deflator more closely (see Figure 6).

**FIGURE 5: ECB Main Refinancing Rate, Average Variable Mortgage Interest Rate, and the Mortgage Interest Component of the Consumer Price Index**



**FIGURE 6: Year-On-Year Percentage Change in Measures of the Price Level**



Further contractions in disposable incomes will keep inflation subdued over the forecast horizon. Some inflationary pressure is expected to be imported in 2012 through higher oil prices which will feed in to higher transport and home fuel costs. With the cessation of the conflict in Libya, it was initially hoped that inflation from this sector might ease or even reverse. However, with the EU-wide embargo of Iranian oil this now seems unlikely. Home-grown inflation is expected to stem from increases in charges for government services and increases in indirect taxes. Increases in health insurance premia have already been announced following increased charges for using beds in public hospitals, while the decision to raise third-level registration fees will have a carryover impact on the education component this year, and further increases will have a similar impact in 2013. The VAT increase will offset some negative pressures to underlying prices elsewhere in the economy, while the increase in excise on fuel will add further upward impetus.

In light of the continuing lack of demand in the Irish economy, which we see persisting over the short run, we have downgraded our price level expectations. We are now forecasting a modest increase in CPI and HICP inflation in 2012 of 1.6 per

cent and 1.4 per cent respectively, and for both the CPI and HICP to increase by 1.3 per cent in 2013.

Table 6 provides the latest data on year-on-year changes in weekly earnings, hourly earnings and hours worked from the *EHECS*. Year-on-year change in average hourly earnings for the economy as a whole, which had been falling throughout 2010 and the beginning of 2011, grew marginally, although the pattern is not uniform across sectors.

**TABLE 8: Year-on-Year Percentage Change in Earnings and Hours Worked, All Employees, 2011 Q3**

	Average Weekly Earnings	Average Hourly Earnings	Hours
All NACE economic sectors	0.4	0.4	-0.3
Mining and quarrying (B)	19.4	17.8	1.2
Manufacturing (C)	-1.3	-1.5	0.0
Construction (F)	1.8	-2.9	4.8
Wholesale and retail trade; repair of motor vehicles and motorcycles (G)	2.4	1.9	0.3
Transportation and storage (H)	0.4	1.0	-0.6
Accommodation and food service activities (I)	1.3	0.5	0.7
Information and communication (J)	-4.5	-2.5	-1.9
Professional, scientific and technical activities (M)	-4.4	-3.1	-1.2
Administrative and support service activities (N)	3.8	5.5	-1.7
Public administration and defence; compulsory social security (O)	2.1	0.2	2.0
Education (P)	3.3	4.6	-1.2
Human health and social work activities (Q)	-2.7	-0.4	-2.2
Industry (B to E)	-1.4	-1.5	0.3
Electricity, water supply and waste management (D,E)	-8.4	-7.1	-1.3
Financial, insurance and real estate activities (K,L)	0.7	1.4	-0.9
Arts, entertainment, recreation and other service activities (R,S)	-6.6	-2.4	-4.0

Source: *EHECS*, CSO.

There has been remarkably little change in private sector average hourly wages throughout the crisis. Following a 1 per cent increase in 2009, average hourly wages for the private sector fell by 0.1 per cent in 2010. Recent research from the CSO<sup>8</sup> has attempted to account for a portion of the compositional effect – whereby enterprises shed proportionately more low paid jobs than higher paid jobs and thus upwardly bias the average wage reported by the enterprise – through the creation of standardised average hourly earnings. These are weighted to account for changes in the composition of employment in terms of broad occupational groups (managers and professionals, clerical and service employees, and manual workers) in individual enterprises across time. Any compositional effects that took place within occupational groups, however, were not accounted for. The research suggests that standardised average hourly earnings in the private sector have remained unchanged during the period 2009-2011.

A second potential source of data on wages has emerged through the CSO's experimental Job Churn dataset, which looks at dynamic aspects of the labour market such as job creation, job destruction and flows between enterprises and sectors using data from the Revenue Commissioners. By tracking the earnings of individuals who have remained employed by the same private sector enterprise for at least a year, the compositional effect is accounted for. However, the data are as yet quite limited. Unlike the *EHECS* data, we are unable to distinguish cuts in rates of pay from reductions in hours worked, either of which could account for a decrease in weekly reckonable pay. Furthermore, the data do not distinguish between full-time or part-time workers and do not record changes in job function over time.

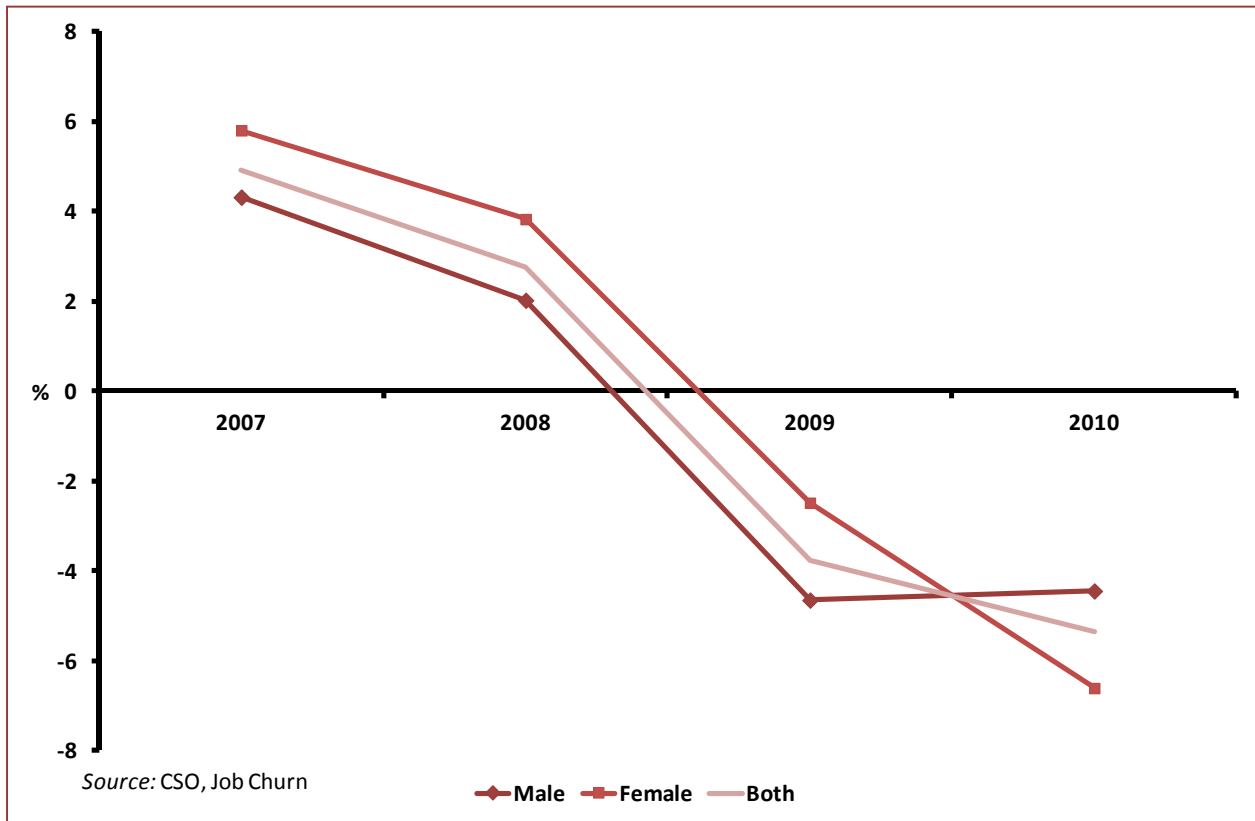
Looking at mean weekly reckonable pay from 2006-2010 confirms earlier findings from the *EHECS* data that weekly wages in the private sector contracted in both 2009 and 2010. Over the course of those two years, weekly earnings as recorded by the Job Churn dataset fell by 8.9 per cent, compared to a cumulative fall of just 3.2 per cent recorded by the *EHECS*. How much of the fall in weekly wages between 2008 and 2010 is due to reductions in hours worked is unclear in the Job Churn data. However, the *EHECS* data suggest that reductions in hours were the primary adjustment mechanism during those years.

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<sup>8</sup> Walsh, Kieran (2012). "Wage bill change in Ireland during recession - how have employers reacted to the downturn", paper read at a meeting of the Statistical and Social Inquiry Society of Ireland, February 9<sup>th</sup>, 2012.

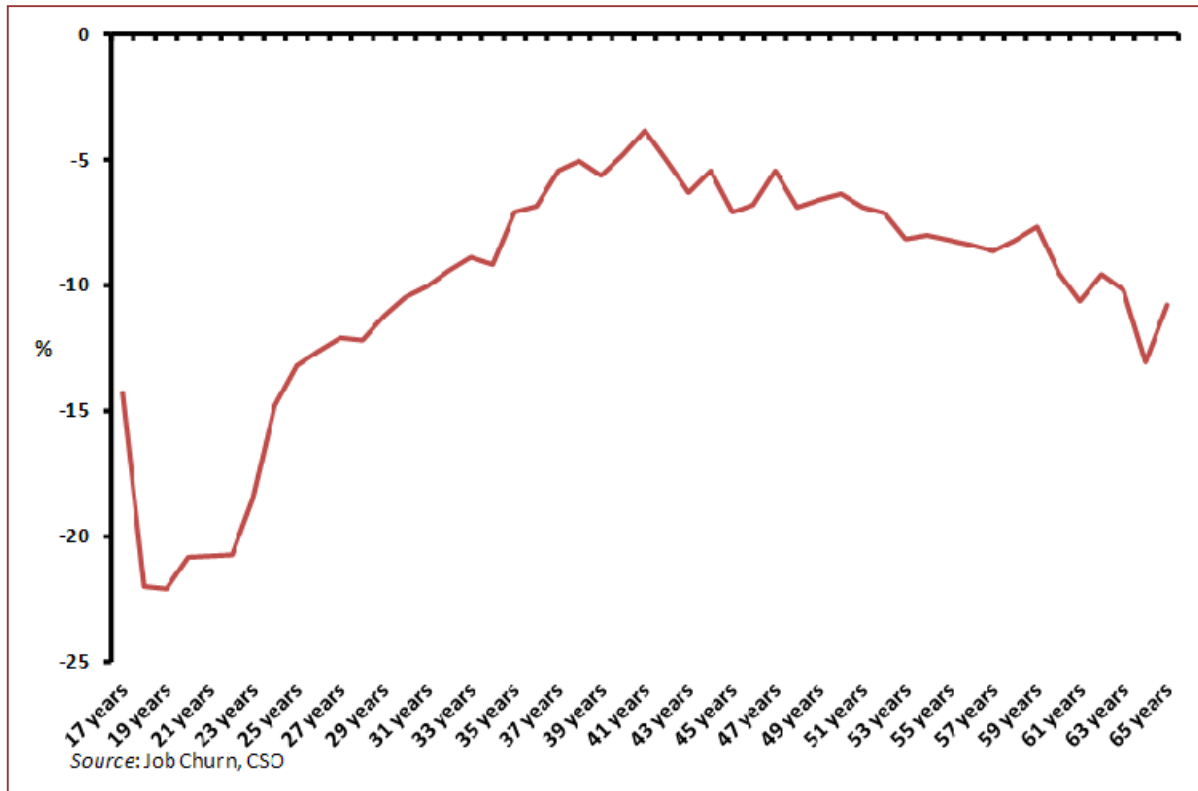


**FIGURE 7: Yearly Percentage Change in Mean Weekly Reckonable Pay**



The caveats above advise against the interpretation of Job Churn earnings data as indicative of an increase in wage competitiveness following the downturn in the economy. However, Job Churn data also breaks down average weekly reckonable wages by age and gender, which allows us to look at the distribution of weekly wages. As can be seen in Figure 8, weekly wages for all ages decreased during the recession, but the falls were far greater for younger workers. Given that wages were higher amongst middle aged and older workers to begin with, this has led to a decrease in equity amongst age groups over the course of the recession.

**FIGURE 8: 2008-2010 Percentage Change in Mean Weekly Reckonable Pay by Gender and Age**



We expect downward pressure on wages will be ongoing given the forecasts for the labour market. In some areas such as ICT where there is evidence of skills shortages we may see some increase in earnings. In other sectors that are protected through enforced minimum wage rates or through lack of competition, there may be little change. However, with demand now expected to remain tight in the short run, we are now forecasting that the non-agricultural wage bill will fall by 1.2 per cent in 2012 and by 1.7 per cent in 2013. Average hourly earnings are forecast to remain unchanged in both 2012 and 2013.

# 8. Imports and the Balance of Payments

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Imports of Goods and Services grew by 5.7 per cent in value and 2.7 per cent in volume in 2010. We estimate that the corresponding figures for 2011 were 4.0 per cent and 0.5 per cent. Imports of goods and services were fairly flat for the final three quarters of 2010 and the first half of 2011 before falling in the second half of 2011. This mirrored the pattern of final demand in the economy, with exports and investment weakening. Investment was particularly volatile, reflecting the timing of aircraft investment by operational and leasing companies. This volatility masked some real investment in agriculture, following the increase in incomes and expected future developments and in manufacturing, where process development, which adds to competitiveness and some capacity expansion took place.

We expect growth of imports of goods to decline in 2012, given the declines we are forecasting in domestic demand and the slower growth in exports of goods, though there might be some very modest rise in 2013 as we are expecting exports to increase by slightly more than in 2012 and the deflationary effect of the 2013 budget should be less than in 2011. Increased expenditure on aircraft during the next two years will add to the investment total, but it is difficult to know when the imports will be recorded.

Imports of services are running at a level twice that of imports of goods. The dominant factor affecting services imports are services associated with multinational exports, and we expect the growth of these to moderate in both years, but still to grow by some 3 per cent in both 2012 and 2013. Tourism expenditure abroad is likely to fall significantly both this year and next as real disposable income is set to fall, overseas travel costs are set to rise and the relative position of domestic tourism continues to improve.

Overall we expect imports of goods and services to rise by 1.1 per cent this year and 1.6 per cent in 2013 (see Table 10).

Net factor payments are estimated at €30 billion in 2011. The net figure is the difference between very large gross flows. The net income figure from the balance of payments in 2010 is €27.4 billion, almost identical to the net factor payments figure for that year. Total receipts were €57.7 billion, while total payments were €85.1 billion. In the first nine months of 2011 total receipts were down €0.4 billion, while total payments were up €1.3 billion, so that the net position worsened by €1.8 billion, compared with the same period in 2010. Gross payments by multinationals of direct investment income were almost unchanged at €30.7 billion compared with €30.6 billion in 2010. The net position is expected to worsen over this year and next, due to increased interest payments abroad on foot of official borrowing, increased profit repatriations by multinationals (though the increase in such repatriations may be modest given the slowdown in export growth), a reduction in profits earned by Irish multinationals in the UK and euro zone area, and weaker receipts from portfolio investment abroad.

The Balance of Payments in 2011 is estimated to have been in surplus again at €0.5 billion. This surplus is less than in 2010 and while it might seem surprising given the decline in domestic demand, the terms of trade worsened by 3¼ per cent. In a purely arithmetic sense this reduced the balance of payments surplus by a significant amount. Of course, if the terms of trade were constant the configuration of exports, imports and net factor payments would have been different. There may be some deterioration in the terms of trade in 2012, but the amount is small, so that the surplus is expected to increase this year to €3.5 billion and to €5.5 billion in 2013. The driving force behind this is the continued growth in exports, albeit at reduced rates and the weakness in domestic demand.

**TABLE 9: Balance of Payments 2010-2012, € billion**

	2011	2012	2013
Exports of goods and services	164.6	171.5	179.1
Imports of goods and services	133.0	135.6	138.6
Net Factor Payments	-29.7	-31.0	-33.4
Net Transfer	-1.0	-1.1	-1.2
Balance on current account	0.5	3.5	5.5
<i>As % of GNP</i>	<i>0.4</i>	<i>2.7</i>	<i>4.3</i>

**TABLE 10: Imports of Goods and Services**

	2010	% Change in 2011		2011	% Change in 2012		2012	% Change in 2013		2013
	€b	Value	Volume	€b	Value	Volume	€b	Value	Volume	€b
Merchandise	46	4.1	-3.8	48.4	0.0	-1.0	48.4	1.1	1.1	48.9
Tourism	5.8	-5.2	-6.6	5.5	-6.1	-7.0	5.2	-8.7	-9.9	4.7
Other Services	75.1	4.6	3.6	78.6	3.6	2.8	81.4	3.6	2.7	84.4
Imports of Goods and Services	127.4	4.0	0.5	132.5	1.9	1.1	135.0	2.2	1.6	138.0
FISIM Adjustment	0.5			0.5			0.6			0.6
Adjusted Imports	127.9	4.0	0.5	133.0	1.9	1.1	135.6	2.2	1.6	138.6

## 9. GDP and GNP

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Table 9 below shows the estimated percentage change in GDP and GNP in 2011 and the forecast changes in 2012 and 2013. There is very little change in GDP in 2012 while GNP is set to remain broadly unchanged. While growth will improve in 2013, high levels of factor flows will result in GNP growth remaining moderate. The general picture of the economy is that following the fall of 7 per cent in GDP and almost 10 per cent in GNP in 2009 the economy has been fairly flat. The main factor behind this was the weakness in domestic demand. This has fallen every year since 2007 and is estimated to have declined by nearly 5 per cent in 2011 and is forecast to fall again this year and next.

**TABLE 11: Measures of Output, Percentage Volume Change**

	2011	2012	2013
GDP	0.9	0.9	2.3
GNP	-0.6	0.1	1.0
Domestic Demand (excluding stock changes)	-4.8	-2.1	-1.3

# 10. General Assessment

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National Accounts for the Third Quarter 2011 show a marked deceleration in activity in the Irish economy. Although these numbers will be subject to revision they show that the volume of GDP contracted by 1.9 per cent in Quarter 3, while the volume of GNP was 2.2 per cent lower. Looking at the data for the first 9 months of 2011 suggest that the economy grew by a modest 0.7 per cent in GDP volume, when compared to the same period in 2010.

These data, coupled with subsequently released economic indicators, suggest that 2011 was a mixed year for the Irish economy. Following three years of contraction we estimate that the economy will record modest growth in GDP volume, growing by just under 1 per cent in 2011. Despite this increase the volume of output is now at levels last seen in 2004/2005. As outlined earlier in the *Commentary*, net factor payments grew in 2011, reflecting a combination of higher national debt interest payments, greater profits by multinationals operating here and lower profits by Irish multinationals abroad. Thus, we estimate that GNP continued to contract in 2011, bringing the level of GNP in volume back to 2003 levels.

The principal uncertainty concerning the outlook for the economy remains the international environment, particularly prospects for the euro zone economy. If euro zone activity turns out to be substantially weaker than anticipated, this would seriously reduce the Irish growth rate.

Thus, continued international uncertainty and domestic austerity leads us to expect domestic demand to be very weak in 2012. Export and import growth is expected to slow. However, net trade will remain positive and so the contribution from net trade is forecast to offset the drag from contracting domestic demand. However, economic growth is anticipated to be moderate, with the volume of GDP growing by just 0.9 per cent in 2012.

In this *Commentary* we present our first forecast for 2013. On the basis of the international forecasts, the most likely prospect is that the growth rate will rise to approximately 2.3 per cent in 2013, with inflation remaining moderate at just 1.3 per cent. While GDP will grow in volume terms, increases in net factor payments means that we expect to see more moderate changes in output as measured by

GNP over the forecast period. GNP is forecast to be relatively unchanged this year and to grow by 1.0 per cent in 2013. Our view is that the upturn in growth will continue to reflect the current two-speed nature of the Irish economy, with domestic demand falling and exports rising. The components of domestic demand will weaken, albeit at a more moderate pace than in recent years, while net trade will remain the driver of growth. Although there is expected to be some improvement in the rate of unemployment, much of this will likely derive from lower participation rates and high net migration rather than an increase in employment. Prospects for employment are more tightly linked to domestic demand, and thus we are forecasting further falls in the numbers employed in 2013. Our expectation is that against this backdrop the government will continue to make steady progress in correcting the public finance.

The consequences of the collapse of the bubble affecting the economy in the 2000s are plain and obvious. The accumulated deficits to date and the costs of the banking bailouts have pushed the debt/GDP ratio to levels close to those experienced during the crisis of the 1980s. The budget deficit remains large and still requires several years of adjustment. The international climate is much less favourable now for raising funds on international capital markets than it was in the 1980s and this has forced the economy into the “Troika” bailout. Without funding from the Troika, Ireland would not be in a position to maintain even the present reduced level of expenditure. This is a reality that appears to have been lost on some. In the absence of this funding the forced adjustment would have been much more sudden and serious with consequent output, employment and income effects adding to an already difficult situation.

There is also a view gaining some currency that “austerity alone is not working”. By their very nature austerity measures will reduce domestic demand, and consequently this will not cause the economy to grow in the short to medium term. If the economy had a much larger indigenous manufacturing base or export orientated service sector then austerity could lead to increased exports which could conceivably outweigh the effects of domestic contraction on the economy and allow the economy to grow at its potential. While the indigenous tradeable goods sector is very resilient and has seen increased exports in the food and drink sectors particularly, it is too small to counteract the decline in total domestic demand through exports. A substantial improvement in competitiveness and in productive capacity is needed to generate an increase in domestic demand sufficient to outweigh fully the negative impact of the austerity measures.

It is important to remember that austerity measures are absolutely necessary to restore sustainability to the public finances. The real rate of interest is well above the growth rate of the economy and, hence, it is necessary to generate a primary



budget surplus sufficiently large to prevent the debt/GDP ratio rising continuously under current circumstances. Until such sustainability is achieved austerity measures are needed. Stabilising the debt/GDP ratio is the first step. Even without our commitments arising from the Fiscal Compact it is necessary to reduce the debt/GDP ratio well below the 60 per cent target. Recent experience has shown that in the event of a shock to the economy the debt/GDP ratio can increase very quickly. This does not mean that growth enhancing measures cannot be undertaken, but these should not involve major increases in government expenditure.

Nevertheless, it is correct to say that for the euro zone as a whole austerity will not work. The difficulty is that the model which suits German economic policy – keeping a tight rein on domestic demand does encourage firms to seek export markets – cannot work if all countries are doing the same. Within the EU there is a very high degree of interdependence so that austerity is self-defeating. As mentioned in the Autumn 2011 *Quarterly Economic Commentary* if the euro zone economy were considered as a unit then, with unemployment at 10 per cent and external balance, the policy recommendation would be for a fiscal and monetary expansion.

For Ireland, however, there is no realistic alternative to austerity given the fiscal imbalances and the scale of government debt. Given this background and the lack of macro-policy instruments, structural reforms are necessary and provide the most important mechanism for renewed growth.

Funding via the Troika, in addition to providing the financial resources that are needed, also provides a short window of opportunity to perform essential structural changes so that the economy can get back onto a growth path. The deterioration in the world economy has made that adjustment more necessary as Ireland cannot rely on growth elsewhere to pull itself out of the downward trend in domestic demand, but the poor international environment has also made the adjustment more difficult. In the 1980s, a variant of incomes policy was adopted and while its contribution may subsequently have been oversold<sup>9</sup> it provided a framework that kept wage inflation somewhat lower than it might otherwise have been. This option is likely to prove less effective now as the degree of unionisation is much lower than in the 1980s and price inflation is relatively low so that reductions in real incomes leading to increased profitability is harder to achieve without reductions in nominal incomes. A reduction in nominal incomes effectively realises what has been called an “internal devaluation” – it leads to gains in wage cost competitiveness without increasing the price level. What might

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<sup>9</sup> Durkan, J., (1999). “The role of Budgetary Policy in Social Consensus” in., C. Kearney (ed.), *Budget Perspectives: Proceedings of a Conference held on 27 September 1999*, Economic and Social Research Institute.

be expected from an internal devaluation is that the price level might begin to fall as prices in the non-traded goods sector decline with the decline in the cost base. This has not been the general experience to date. Prices in many parts of the non-traded sector have continued to increase, whereas if they had fallen then the possibility of further declines in nominal incomes across the whole economy might have been realisable. Further structural reforms are needed to realise both price reductions and increased output.

# Special Articles

*Distributional Impact of Tax, Welfare and Public Sector  
Pay Policies: 2009-2012*

*Tim Callan, Claire Keane, Michael Savage and  
John R. Walsh*



# Distributional Impact of Tax, Welfare and Public Sector Pay Policies: 2009-2012

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*\*Tim Callan, Claire Keane, Michael Savage and John R. Walsh*

The banking and fiscal crises, coupled with the worldwide Great Recession, have led to major declines in Ireland's national income. In this article, we examine the direct impacts of changes in income-related taxes and social welfare policies on disposable incomes across the income distribution and for different family types. We also examine the effects of changes in public sector pay. The size and shape of the impacts in Budget 2012 are compared with the cumulative impact of policy over the full period since the initial budgetary response to the emerging crisis in October 2008. We also draw on recent work on the distributional impact of austerity packages in other EU countries to see how Ireland's policy impacts compare with countries including Greece, Spain and the UK.

## MEASURING THE DISTRIBUTIONAL IMPACT OF POLICY

Who will lose most from Budget 2012? What has been the overall impact of the austerity budgets of the past four years? Analysis based on a few household examples cannot provide accurate answers to these questions – the results would depend too much on the particular cases chosen. Instead, to get the true picture we must calculate the impact of tax and welfare policy changes on large numbers of real households in a nationally representative sample. The ESRI tax-benefit model (*SWITCH*) allows us to do this: it estimates the impact of direct tax and welfare changes using anonymised data from the CSO's *Survey on Income and Living Conditions*. Given the importance of indirect tax measures in Budget 2012, we combine this analysis with results on the impact of the increases in VAT and carbon tax.<sup>1</sup> Again, these are firmly based on national survey data – in this case, the CSO's *Household Budget Survey*.

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<sup>1</sup> Thanks are due to Seán Lyons and Anne Pentecost for the analysis of budgetary changes in indirect taxation, building on the paper by Leahy, Lyons and Tol (2011). Indirect tax changes for the years 2009 to 2011 could not be taken into account in this way. We are also grateful to two anonymous referees for helpful comments.

The impact of policy change must be measured against an alternative specifying what would happen if the policy change did not take place (a “counterfactual” policy). In the construction of budgets, the official procedure constructs an “opening budget” against which changes are measured. For tax and welfare the conventional opening budget simply freezes tax rates, credits and welfare payments at their existing levels. While this is useful in accounting terms, it would be highly misleading in analysis of distributional impact.<sup>2</sup> In normal times, with wage growth and price inflation positive, and positive real wage growth, implementing the conventional opening budget would lead to real income losses for those dependent on welfare, while incomes would rise further up the income distribution. (Callan *et al.*, 2001, Bargain and Callan, 2008).<sup>3</sup> The alternative used here is a policy which indexes both tax and welfare parameters with respect to the expected growth or decline in wages. This ensures that average tax rates are held constant (no fiscal drag); and approximates equal growth (or decline) in income across different income groups. It should be clear that this is designed to provide a “distributionally neutral” benchmark, rather than a policy recommendation. There are many reasons why it may be desirable to depart from this benchmark; but having a distributionally neutral benchmark is an essential aid to clear thinking in this area.

Forecasts of wage growth and decline are needed to implement this approach on a prospective basis. Similarly, accurate economy-wide measures of wage growth are needed for implementation on a retrospective basis. Forecasts for 2012 are centred on zero growth, as in this *Commentary*. Over the 2008-2011 period this *Commentary* estimates an economy-wide decline in hourly wages of 1.5 per cent, and this is the figure used in our analysis. In comparisons with other EU countries, summarised in a later section, we have found broadly similar impacts with a constant wage scenario over the 2008 to 2012 period.

The welfare measures in Budget 2012 are unusual in a number of respects. They include a number of large-scale items which are not part of the core income supports provided by the welfare system – for example, the reduction in the refunds of redundancy payments to employers. It is unclear where the burden from this change will ultimately fall – for those made redundant, there is still a guarantee of statutory entitlements, but there could be implications in terms of redundancy terms above this minimum. Given the uncertainty as to where the burden may fall, this measure cannot be included in our analysis. We estimate

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<sup>2</sup> For a more detailed exposition, see Callan *et al.* (2001).

<sup>3</sup> When wages are falling, the conventional benchmark would give rise to income gains for welfare recipients and income losses for those in employment.

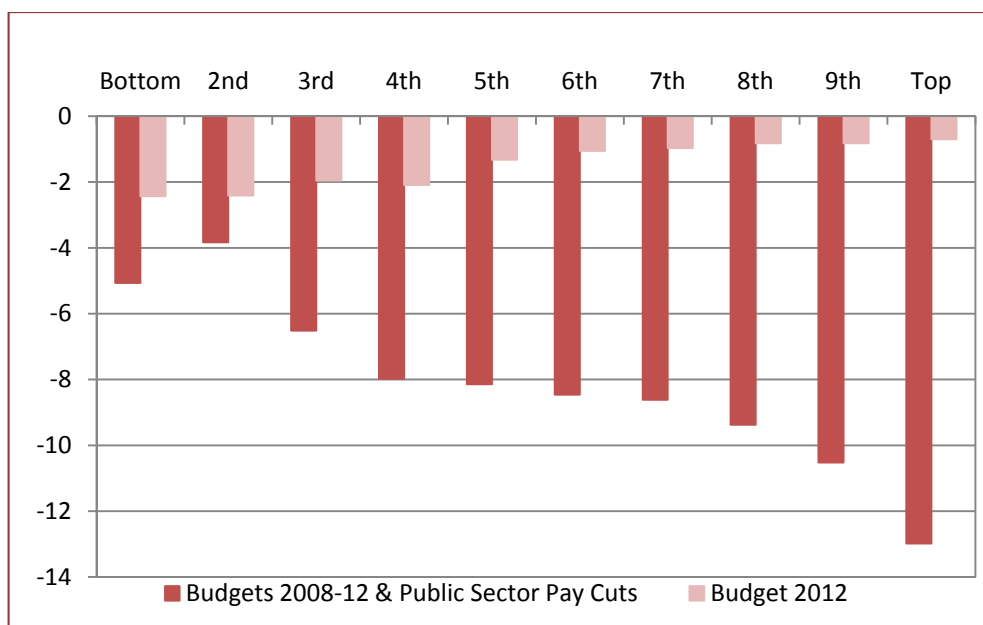
that of the total reduction in welfare spending of €475 million, about €300 million is in the form of reductions in income support payments – with the rest made up of a variety of savings in expenditures not directly contributing to income supports.

The welfare measures which are directly included in our analysis are:

- Reductions in Child Benefit payable to families with 3 or more children.
- Reductions in the amounts payable under the Rent Supplement Scheme.
- Restriction of the Fuel Allowance to 26 weeks.
- Reduction in the amount of earnings which is “disregarded” in the means test for One Parent Family Benefit.
- Reductions in the amounts payable under the Back to School Scheme.

Taken together these changes account for about 70 per cent of the total reductions in income support. We make allowance for the remaining 30 per cent by assuming that the impact of other cutbacks is distributed across income groups in the same way as the set of items listed above. On the tax side, we allow for the impact of the increases in VAT and carbon tax, and for the introduction of a household charge; but increases in motor tax (road tax) are not covered. We also take into account the increase in the exemption limit for the Universal Social Charge.

**FIGURE 1: Impact of Budgetary Policy (2012 and 2009-2012) by Income Decile**



Looking at the impact of the Budget 2012 (see Figure 1), it is clear that the greatest reduction in income is for those on the lowest incomes – a fall of about 2 to 2½ per cent for the poorest 40 per cent of households. This compares with a fall of close to 1 per cent for deciles 5 to 7, and of about 0.7 per cent for the top 30 per cent. These results reflect the fact that increases in indirect taxes are regressive, and that cuts in welfare have a greater impact on low income groups.

How do the measures in Budget 2012 affect the overall impact of policy changes from October 2008 up to and including the present Budget? In this analysis we include the main changes to income tax – including cuts to income tax credits and the width of the standard rate band – elimination of the PRSI ceiling and the introduction of Universal Social Charge. Also included are the initial rise in welfare payments in the October 2008 Budget, and the subsequent cuts in payment rates for working age payments and Child Benefit. Other measures included are the impact of the public sector pension levy (Pension Related Deduction – PRD) and the explicit cuts in public sector pay. (As these policy measures are quite different from the usual tax/welfare policies, we also reconsider the tax/welfare and pay elements in a subsequent chart.)

Figure 1 shows that over this 4 year period, the distributional impacts show a strongly progressive pattern, with the lowest income group losing by about 4 to 5 per cent and the highest income group losing by close to 13 per cent.<sup>4</sup> The scale of the progressive impact of earlier budgets, which raised income tax, abolished the ceiling on PRSI payments, and introduced the Universal Social Charge is much greater than the regressive impact of Budget 2012. The net effect over the whole period is therefore strongly progressive.

Figure 2 shows how results over the 2009 to 2012 period<sup>5</sup> vary depending on whether attention is focused on traditional tax/welfare measures or includes decreases in public sector pay via explicit cuts and/or the public sector pension levy (PRD). It is clear that the public sector pay cuts have a progressive impact – as would be expected, given that the rate of pay cut was designed to increase

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<sup>4</sup> While this analysis does not include the elimination of the Christmas bonus, the pattern would not be substantially affected by its inclusion. While for individual cases, the elimination of the bonus means a reduction of about 2 per cent, the impact on low income households is not as great as this – not all welfare recipients receive the bonus, and not all of those who received the bonus are in low income households. The full year cost of the bonus was about €170 million, as against total social welfare cuts of close to €3,000 million between the Budgets of April 2009 and December 2011. As a result, the broad figures given in our analysis are a good guide to the overall distributional impact of the budgets.

<sup>5</sup> This includes the October 2008 budget which was implemented in 2009, and further amended by a supplementary Budget in April 2009.



with income. The public sector pay cuts make little difference to low income households, but reduced the income of higher income households. While the results are broadly similar – least impact on low income households, and the greatest impact on high income households – it is noteworthy that the tax/welfare measures alone led to a reduction in income of about 7 per cent for the middle income deciles (deciles 4, 5, 6 and 7). Inclusion of the public sector pay cuts means that losses rise with income over these deciles.

**FIGURE 2: Impact of Budgetary Policy (2009-2012) With and Without Public Sector Pay Cuts**

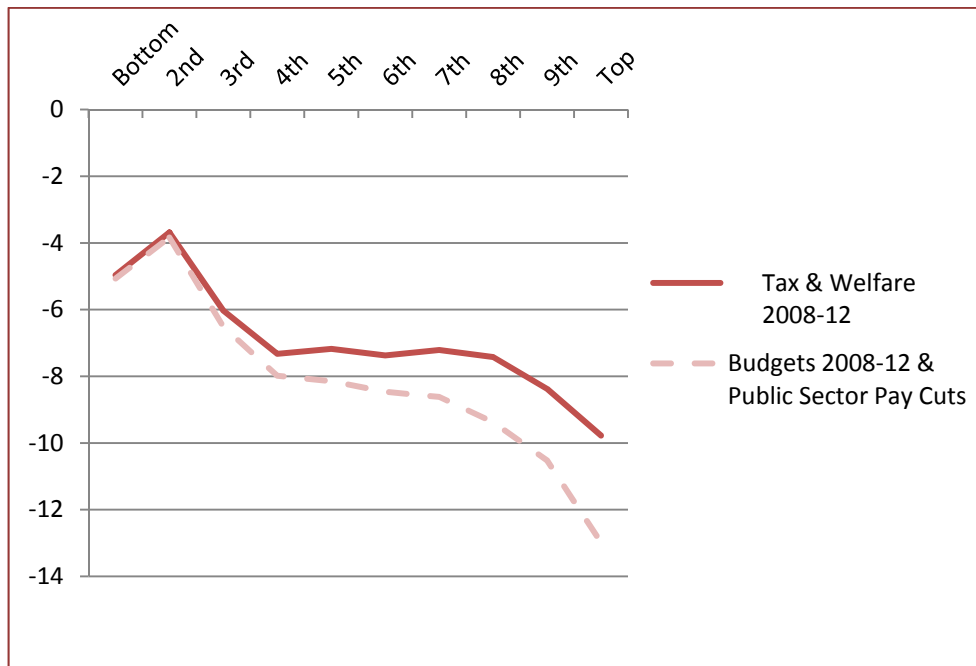


Table 1 looks at how the policy impacts were distributed over a “family type” classification which combines demographic elements (age, marital status, presence of children) and economic characteristics (number of earners).<sup>6</sup> Losses for single employees and families with one or two earners were between 9 per cent for those without children and 11 to 12 per cent for families with children. The greater losses for families with children reflect the focus of cuts on Child Benefit.

<sup>6</sup> This analysis does not include the impact of indirect tax changes. A fully integrated analysis of direct and indirect tax changes would require a dataset which combines the key features of the CSO’s *Survey on Income and Living Conditions and the Household Budget Survey*.

**TABLE 1: Impact of Budgetary Policy Changes by Family Type**

Family type	Impact of Policy Changes, 2008-2012 vis-à-vis Wage Indexed Policy
	Percentage Gain or Loss
Single, employed	-9.0
Couple, 1 earner	-8.7
Couple, 1 earner with children	-11.4
Couple, 2 earners	-10.8
Couple, 2 earners, with children	-11.7
Single unemployed	-11.1
Couple, unemployed/not at work	-2.2
One parent family	-6.6
Single retired	-1.6
Retired couple	-3.6
Other (ill/disabled)	-3.5
All family types	-8.4

Policy changes offered greater protection to most, but not all, family types which were mainly dependent on welfare income, with losses of about 3½ per cent for categories including those who are ill or disabled, and retired couples. The loss for single retired people was even smaller at about 1½ per cent, while couples affected by unemployment experienced a loss of just over 2 per cent on average. It should be remembered in this context that couples with children form only a small proportion of the live register, as demonstrated by NESC (2011).

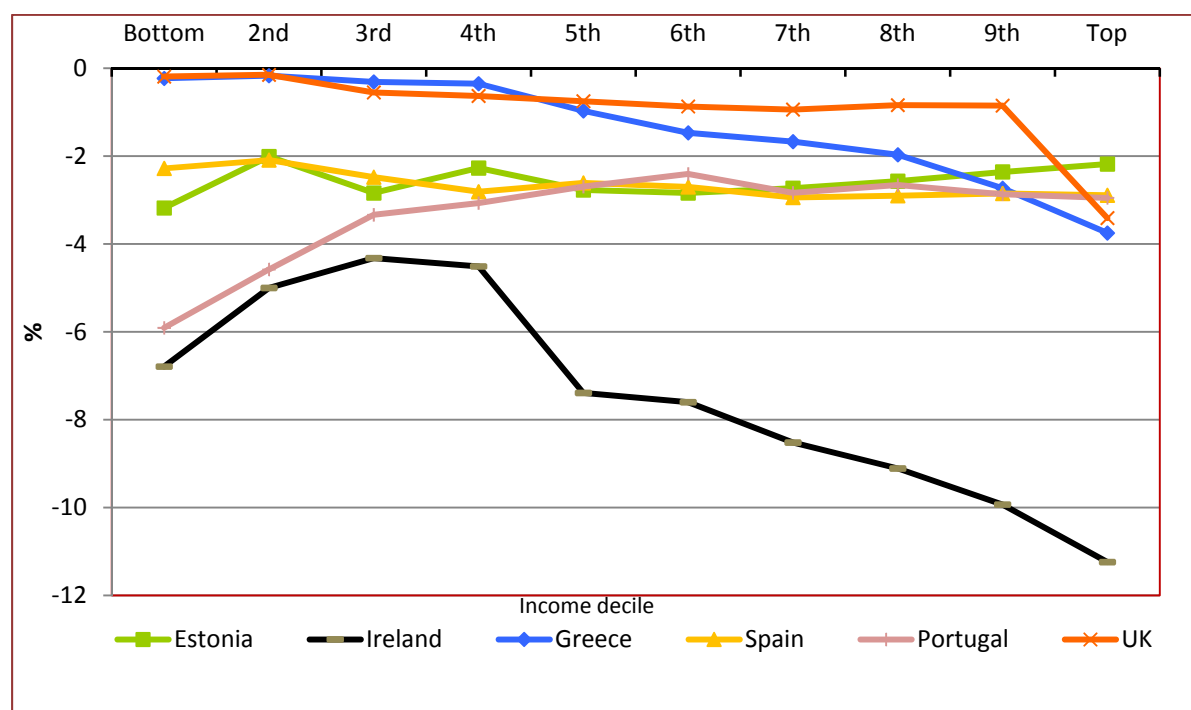
Two groups of welfare recipients experienced much greater losses: the single unemployed, with an average loss of 11 per cent, and one-parent families, with an average loss of over 6 per cent. The single unemployed group includes those aged under 25, for whom payment rates on Jobseeker's Assistance payments were cut by between 25 and 50 per cent. Losses for the unemployed aged over 25 were much more limited. These results refer to incomes at the narrow family unit level, which counts a single unemployed person as a separate unit; household incomes for young unemployed persons living with their parents have not fallen so dramatically.

The loss of more than 6 per cent experienced by one-parent families reflects a number of factors. Many in this group are both in employment and in receipt of welfare, and are thus affected by reductions in the value of the One-Parent Family Payment, reductions in the amount of employment income disregarded in the means test for one-parent families, the introduction of USC, and, as parents, by the general cuts in Child Benefit.

## AUSTERITY PACKAGES IN EU COUNTRIES: DISTRIBUTIONAL ANALYSIS

Some recent work in collaboration with European research partners has examined the distributional impact of austerity measures in six EU countries – the UK, Spain, Portugal, Greece, Estonia and Ireland. The analysis incorporates policy changes implemented during the period 2009 to 2011 for Ireland, the UK and Portugal and for 2010-2011 in Spain, and for 2009 in Estonia. For Greece, the analysis incorporates the combined impact of the first wave of austerity measures from March 2010 up to and including the measures agreed with the Troika in May 2010; the later (June 2011) package is not included. Two key features stand out from an Irish perspective in Figure 3, reproduced from Callan *et al.* (2011). First, the size of the adjustment undertaken by Ireland is substantially greater than that analysed for the other countries. Second, the distributional impact of the policy changes in Ireland is among the most progressive – with one important caveat. The lowest income losses are not at the very bottom of the distribution, but for those with somewhat higher incomes (deciles 2, 3 and 4). The major factor contributing to this is the special treatment afforded to the elderly, with a rise in the State pension in 2009, and no subsequent downward adjustment, unlike other welfare payments over that period.

**FIGURE 3: Percentage Change in Household Disposable Income Due to Austerity Measures in 6 EU Countries: Classified by Income Decile**

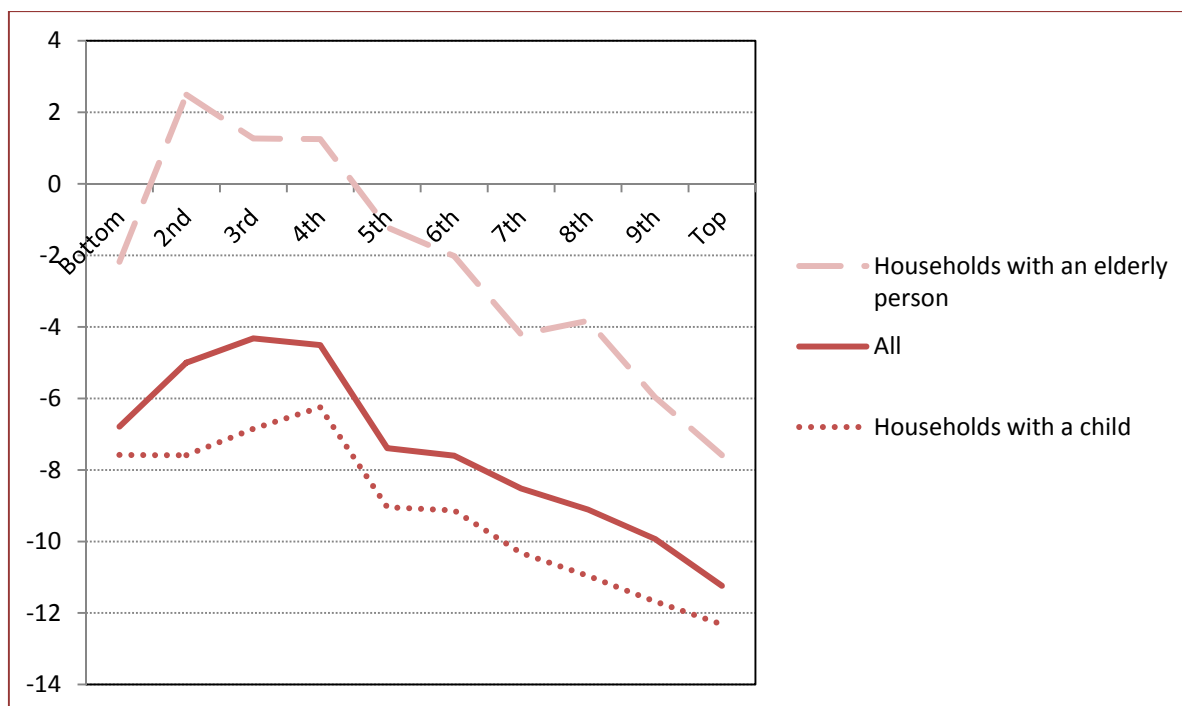


*Notes:* The austerity measures included here are limited to those that have a direct effect on household disposable income (changes to direct taxes, cash benefits and public sector pay). They do not include changes to employer or credited contributions. In addition, increases in indirect tax, cuts in public services and some minor tax-benefit changes (see text) are not included. Deciles are based on equivalised disposable income in the counterfactual (before austerity) scenario and constructed using the modified OECD equivalence scale to adjust incomes for household size.

*Source:* EUROMOD version F4.19 and SWITCH.

Figure 4, reproduced from a study of austerity impacts in 6 EU countries (Callan *et al.*, 2011) gives a different perspective on impacts by family type. It compares results for households containing children and households containing an elderly person with the average for all households.

**FIGURE 4: Percentage Change in Household Disposable Income Due to Austerity Measures: Classified by Type of Household and Income Decile, Ireland, 2009-20121**



*Notes:* The austerity measures included here are limited to those that have a direct effect on household disposable income (changes to direct taxes, cash benefits and public sector pay). They do not include changes to employer or credited contributions. In addition, increases in indirect tax, cuts in public services and some minor tax-benefit changes are not included. Deciles are based on equivalised disposable income in the counterfactual (before austerity) scenario and constructed using the modified OECD equivalence scale to adjust incomes for household size. Children are defined as those aged under 18 and “elderly people” as all those aged 65 or more.

*Source:* SWITCH.

The calculations underpinning the analysis in Figure 4 are based on examination of policy without indexation of wages, but the broad result would not change under wage indexation. Households containing an elderly person fare better than the others at all income levels, not just at low incomes. This is not uncommon in the other EU countries examined, though Greece is an exception because of its pension cuts; but the size of the gap between households containing an elderly person and other households is particularly great in Ireland. Households containing a child fare consistently worse than others in Ireland, reflecting the sharp decreases in child benefit over the period. Households with children also fare worse in Spain, Estonia and Portugal, though not in Greece. Low income households with children fare somewhat better under the UK austerity measures than others, but middle income households with children fare somewhat worse

and high income households with children about the same as other high income UK households.

## **CONCLUSION**

Budget 2012 involved greater proportionate losses for those on low incomes: reductions of about 2 to 2½ per cent for those with the lowest incomes, as against losses of about ¾ of a per cent for those on the highest incomes. A combination of indirect tax increases (VAT and carbon tax) and selective reductions in welfare payments gave rise to these effects. However, austerity measures over the full period since the October 2008 budget show a very different pattern. Losses imposed by policy changes in tax and welfare have been greatest for those on the highest incomes, and smaller for those on low incomes. Increases in income tax, elimination of the PRSI ceiling and introduction of the Universal Social Charge, coupled with increases in old age pension payments, have contributed to these results. The structure of public sector pay cuts (both directly and via the public sector pension levy) has also imposed greater losses on high income groups in the population. The overall distributional pattern of Irish austerity measures is among the most progressive in 6 EU countries examined in a recent study.



# Research Bulletin 12/1

*What Determines the Diffusion of ICT at Firm Level?*

Stefanie Haller and Iulia Siedschlag

*A Statistical Analysis of Households and Families in Ireland*

Pete Lunn





# What Determines the Diffusion of ICT at Firm Level?

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\**Stefanie Haller and Iulia Siedschlag*

Growing empirical evidence indicates that Information and Communication Technologies (ICT) are strong determinants of productivity growth differentials as well as the ability of countries to benefit from globalisation. The impact of ICT investment on productivity and growth has been found to be greater at firm level than at industry and country levels. At the firm level, ICT use leads to improvements in product design, marketing, production, finance and the organisation of firms. Furthermore, it has been shown that ICT use increases the productivity of R&D activities and facilitates the creation of new goods and services.

Yet, empirical evidence indicates that the diffusion of ICT has been uneven across firms, industries, regions and countries. From the policy perspective, to the extent that a wide and fast diffusion of ICT is desirable, it is essential to understand what factors are likely to influence the diffusion of ICT. New technologies are adopted at different dates and speed depending on firm characteristics and the characteristics of the environment in which firms operate. To understand the diffusion of ICT as a new technology it is essential to uncover the factors that explain the variation in the rates of its adoption and use across firms, industries, regions and countries.

A recent published paper<sup>†</sup> analyses the patterns and determinants of ICT diffusion at the firm level in the manufacturing sector in Ireland using a novel data set including survey information on e-Commerce and ICT over the period 2001 to 2004. The analysis is based on a consideration of the relevant theoretical literature.

The early theoretical models of new technology diffusion known as *epidemic models* focus on the uncertainty related to new technologies and predict that the adoption of new technologies increases over time as the risk associated with adoption decreases due to learning effects across and within firms. Another

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group of theoretical models focus on the link between different adoption dates and differences in returns to the adoption of new technologies. *Rank* (or *probit*) *models* focus on the impact of firms characteristics on gross returns from adopting new technologies. Consequently, firms with high returns from using the new technology will be early adopters while firms with low returns will be late adopters. *Stock models* assume that the benefit to the marginal adopter from acquiring a new technology decreases with the number of previous adopters. Thus, for any cost of acquiring the new technology, adoption will not be profitable beyond a certain number of adopters. *Order models* assume that the return to a firm from adopting a new technology depends upon its position in the order of adoption. Early adopters achieve a greater return than late adopters. This implies that the firm's decision to adopt a new technology takes into account how waiting will affect its profits. The theoretical literature also distinguishes between the number of firms using the new technology (*inter-firm diffusion*) and the intensity of using the new technology by individual firms (*intra-firm diffusion*).

The analysis in the paper relates indicators of *inter-firm ICT adoption* (the usage of websites and online orders) and indicators of *intra-firm ICT use* (the share of employees using computers and the share of turnover due to online transactions) to characteristics of firms and features of the environment in which firms operate as suggested by the existing theoretical and empirical literature on new technology adoption. The research results suggest that firms that are larger, younger, fast growing, skill-intensive, export-intensive and firms located in the Dublin region have been relatively more successful in adopting and using ICT. The article also establishes that the probability of adopting and using ICT increased with the proximity to earlier ICT adopters in the same industry and region.

The determinants of inter- and intra-firm adoption of ICT were broadly similar with the exception of the effect of firm size and foreign ownership. Larger firms were more likely to be early adopters than small firms, but small firms used ICT more intensively than medium-sized firms. While the propensity to adopt ICT was not significantly different in foreign-owned firms in comparison to domestic firms, foreign-owned firms used ICT more intensively than domestic firms. With respect to inter-firm adoption of ICT, the research results indicate that the propensity to have a website was higher for larger, younger, fast-growing skill-intensive and export-intensive firms.

<sup>†</sup>Stefanie Haller and Iulia Siedschlag. 2011. Determinants of ICT adoption: Evidence from firm-level data, *Applied Economics*, 43:26, 3775-3788.

# A Statistical Analysis of Households and Families in Ireland

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\* *Pete Lunn*

One third of all families in Ireland do not fit the traditional model of a married couple both in their first marriage. This and other new insights into Ireland's families come from an analysis of Census 2006 micro-data, access to which was granted through a formal agreement with the Central Statistics Office. The second in a series of studies based on these data<sup>†, ‡</sup>, was able to address research questions that were previously beyond quantitative investigation, producing new findings relating to couples, cohabitation, the family circumstances of children, and fertility patterns in Ireland.

## WHO PARTNERS WHOM?

Couples (cohabiting and married) are considerably more likely to form if the man is older, even if by only a small amount. The average age difference is 2.3 years, but among younger couples has narrowed somewhat. Younger couples are also more likely to bridge social boundaries, including between religious affiliations and, to a lesser extent, different nationalities and ethnicities. This might reflect changed attitudes, but opportunities have changed too. Couples still mostly form among people with similar levels of education and similar occupations, but there has been a striking shift in the gender balance in this regard. Among couples with a mean age of 26-40, the woman has a higher level of educational attainment in 34% of couples, versus 16% where the man has. In 42% of cases she has the higher occupational classification, as against 28% where he has. This represents a radical change from previous generations: among couples with a mean age of 56-70, the gap in educational attainment is much narrower (26% versus 21%) and the man is more likely to have the higher occupation (31% versus 36%).

## COHABITATION

Following a four-fold increase in cohabitation in ten years, childless couples under 45 are now more likely to cohabit than be married. But those with children are much more likely to be married and the likelihood that a cohabiting couple gets married increases sharply after the birth of a first child.

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One quarter of cohabiting couples contain at least one partner who is separated or divorced following a previous marriage. The mean age of this subset is over 40 and includes couples in their 50s and 60s, showing that older people in Ireland also took advantage of the growing acceptability of cohabitation. While cohabitation now occurs across all social groups, it is significantly more common among lower socio-economic groups and people who are not religious.

### **FAMILY CIRCUMSTANCES OF CHILDREN**

Of children aged under 21, 75% live with two married parents, 10% with a never-married lone parent, 9% with a divorced or separated lone parent, and 6% with a cohabiting couple. The chance of living with two married parents is much higher where parents have a high level of education. At least 2.5% of children live in step-families and 1.3% are step-children. Although the numbers may under-record somewhat, because some step-families may not identify themselves via the Census form, international comparisons reveal that Ireland has a low overall level of second relationships and remarriage. Most step-families consist of a single step-child with younger half siblings, the oldest of which is an average of 8 years younger.

### **FERTILITY**

There were significantly more live births in Ireland in the three years prior to Census 2006 than children under 3 living here at the time of Census 2006. This discrepancy is due to net emigration of families with very young children from 2003 onwards. The increase in the number of births beginning in the late 1990s occurred mostly among immigrants, including returning Irish emigrants. Births to long-term residents fell marginally, but this largely reflected the ongoing tendency to delay having children. The prevalence of delayed childbirth has probably led the most common measure of fertility (the Total Fertility Rate) to underestimate the average number of children being born to each woman, which may never have fallen below two. Those with higher levels of education have children later, but the relationship between educational attainment and fertility has also changed: historically, those with lower attainment had the most children, now those in the middle of the educational range (i.e. Leaving Certificate) do. The likelihood and timing of a first birth to a couple is almost as strongly related to the father's educational level as to the mother's. This finding suggests that delayed childbearing it is not the result only of concern about the potential impact on the woman's career, because the man's human capital matters to the decision almost as much.

## SELECTED POLICY IMPLICATIONS

By providing a more accurate picture of the incidence of different family types, this research lets policymakers know who is affected by policies that differentiate between family structures. It also raises two specific issues. First, since the woman is now likely to be the higher earner in many young couples, the economic consequences of decisions to balance work and family have changed. Greater workplace flexibility may not only be welcomed by families but may also be good for the economy, allowing more people with higher human capital to stay in the labour market. Second, the rapid and widespread incidence of cohabitation may not be matched by widespread knowledge of the new rights and responsibilities of cohabitants, which came into force in 2011. Cohabitants now enter marriage-like contracts by default after five years (two where they have children), and may be surprised to discover this. Lastly, earlier and more complete demographic analyses of Census 2006 would have offered policymakers insights that could, in principle, have substantially improved various planning and other decisions. Rapid and comprehensive analysis of Census 2011 could similarly be beneficial.

<sup>†</sup> Lunn, P. and Fahey, T. (2011). *Households and Family Structures in Ireland: A Detailed Statistical Analysis of Census 2006*. Dublin: Family Support Agency/ESRI. Available at <http://www.esri.ie/UserFiles/publications/SUB002/BKMNEXT202.pdf>

<sup>‡</sup> Lunn, P., Fahey, T. and Hannan, C. (2010). *Family Figures: Family Dynamics and Family Types in Ireland 1986-2006*. Dublin: Family Support Agency/ESRI. Available at <http://www.esri.ie/UserFiles/publications/SUB002/bkmnext206.pdf>



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