Quarterly Economic Observer

Summer 2017

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NERI Nevin Economic Research Institute

About NERI and this publication

The Nevin Economic Research Institute (NERI) was established to provide information, analysis and economic policy alternatives. Named in honour of Dónal Nevin, scholar, trade unionist and socialist who gave a life of service to the common good, the Institute aims to undertake research that will be of relevance to the Trade Union movement and the general public across the island of Ireland.

This is the 22nd *Quarterly Economic Observer* (QEO) of the Institute. The purpose of the QEO is to provide regular, accessible and timely commentary so as to equip trade unions and others in articulating and advancing a new economic paradigm where the old has failed. Unless otherwise stated, the data cited in this Observer are the latest available as of 16th June 2017. The final draft of this document was completed on the 22nd of June 2017.

This report has been prepared by staff of the Institute. The lead author of this QEO is Dr Tom McDonnell with contributions from Paul Goldrick-Kelly, Paul MacFlynn, Ciarán Nugent and Dr Lisa Wilson. We are grateful to our external reviewers from the academic and research community who reviewed and commented on an earlier draft of this document. The analyses and views expressed in this publication are those of the NERI and do not necessarily reflect those of others including the Irish Congress of Trade Unions or the unions supporting the work of the Institute.

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The Nevin Economic Research Institute

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Executive Summary

This edition of the NERI's *Quarterly Economic Observer* (QEO) outlines our latest expectations for the economic outlook in the Republic of Ireland and Northern Ireland (Section 1) and examines the public finances and public spending in the Republic of Ireland (Section 2).

Economic Outlook for the Republic of Ireland

- We are projecting that real GDP will grow by a strong and above trend 4.4% in 2017 on the back of strong employment growth and the work through of pent-up demand. Growth should start to slow towards its trend rate thereafter and we are currently projecting real growth of 3.3% in 2018 and 3.2% in 2019.
- Labour market conditions should continue to improve in 2017 and 2018 with strong employment growth and increasing real wages. The unemployment rate will fall below 6% sometime in early 2018.
- Despite the strong growth it is our view that the economy is not as of yet overheating. Our analysis is that there is a small but closing negative output gap. We expect the economy to reach its potential sometime in 2018.
- Risks to the forecast are mainly skewed to the downside. The post-2018 outlook is particularly uncertain. Brexit and the nature of the Brexit outcome remains the most significant uncertainty although it is impossible to quantify the scale of the potential damage.

Public Finances and Fiscal Policy in the Republic of Ireland

- Fiscal space is just €350 million in 2018. On a no policy change basis the Republic will have the lowest public spending-to-GDP ratio in the EU by 2021. However, GDP based comparisons involving the Republic are problematic.
- To get around the problem we instead compare per capita public spending in the Republic to that of other similarly high-income EU countries across a range of functional areas such as education and health.
- We estimate that the Irish state under-spends on a per capita basis compared to these countries in a number of areas fundamental to long-run economic

growth. The cumulative under-spend on education per pupil, infrastructure and R&D, when scaled up to the population, is in the order of €2.5 to €3 billion.

- In this context we argue that long-run economic growth; employment and equity goals can best be achieved by prioritising use of the available fiscal space to increase public capital investment levels; increase spending on education, and increase direct spending and subsidies for R&D.
- This has implications for the needed direction for tax reforms.

Macroeconomic performance & projection, Republic of Ireland

	2016	2016	2017	2018	2019
Real Output		*Percentage real change over previous year*			
Gross Domestic Product	€265.4bn	5.2	4.4	3.3	3.2
Personal Consumption	€96.1bn	3.0	3.4	2.7	2.7
Government Consumption	€28.5bn	5.3	2.4	2.2	2.0
Investment	€77.8bn*	45.0	0.0	5.5	3.6
Exports	€318.8bn	2.4	5.1	4.4	3.8
Imports	€257.2bn	10.3	3.5	5.0	3.7
Earnings		*Percentage nominal change over previous year*			
Average Hourly Earnings	€22.05	0.6	2.6	2.6	2.7
Government Finances		*Percentage of GDP*			
General Government Balance	-€1.5bn	-0.6	-0.4	-0.1	0.1
Gross Debt	€200.6bn	75.4	72.9	71.2	69.3
Labour Force		*Percentage change over previous year*			
Employment	2,020,000	2.9	3.4	1.7	1.6
		Percentage of labour force			
Unemployment	173,100	7.9	6.3	5.8	5.5

Outlook for Northern Ireland and the United Kingdom

- The outlook for the Northern Ireland economy remains uncertain. In terms of output, strong growth in the final quarter of 2016 looks to have abated somewhat in early 2017 and on the labour market, falling unemployment is largely attributable to a surge in economic inactivity.
- Sterling's devaluation is the only concrete impact of Brexit to date. The increase in volume of goods exports has aided manufacturing, but this has yet to make up for the drop in output around the time of the Brexit vote last year.
- The currency situation had also given a boost to the services sector in the latter half of 2016, mostly through increased tourism particularly from the Republic. However, as inflationary pressures have hit household budgets, the retail and hospitality sector has seen that growth stall.

1 Economic Trends and Outlook

1.1 World

Northern Ireland and the Republic of Ireland are small trade-dependent economies. The Republic is one of the most open economies in the world and both economies are heavily dependent on the performance of their major trading partners (shown in Table 1.1). The euro area economy has underperformed relative to the United Kingdom (UK) and the United States (US) in recent years. The euro area and the United States (US) are both expected to record moderate real GDP growth in 2017 while the outlook for the United Kingdom (UK) is more mixed.

Table 1.1 Dashboard of Macroeconomic Indicators, Selected Regions*

	2012	2013	2014	2015	2016	2017
Real GDP			*Percentage volume change over previous year*			
Euro area	-0.9	-0.3	1.2	2.0	1.7	1.8
United Kingdom	1.3	1.9	3.1	2.2	1.8	1.6
United States	2.2	1.7	2.4	2.6	1.6	2.1
Unemployment**			*Percentage of labour force*			
Euro area	11.3	12.0	11.6	10.9	10.0	9.3
United Kingdom	8.0	7.6	6.2	5.4	4.9	4.8
United States	8.1	7.4	6.2	5.3	4.9	4.6
Inflation***			*Percentage annual average rate of change*			
Euro area	2.5	1.3	0.4	0.0	0.2	1.7
United Kingdom	2.8	2.6	1.5	0.1	0.6	2.5
United States	2.1	1.5	1.6	0.1	1.3	2.7
Compensation per Employee			*Percentage change from previous period*			
Euro area	1.1	1.4	1.4	1.4	1.4	1.8
United Kingdom	1.7	2.1	0.7	1.2	2.8	2.5
United States	2.4	1.1	2.6	2.6	2.1	2.5
Current Account Balance			*Percentage of Gross Domestic Product*			
Euro area	1.3	2.2	2.4	3.0	3.4	3.0
United Kingdom	-3.7	-4.4	-4.7	-4.3	-4.4	-3.3
United States	-2.8	-2.2	-2.3	-2.6	-2.6	-2.7
Fiscal Balance			*Percentage of Gross Domestic Product*			
Euro area	-3.6	-3.0	-2.6	-2.1	-1.7	-1.5
United Kingdom	-7.7	-5.6	-5.7	-4.4	-3.1	-2.8
United States	-7.9	-4.4	-4.0	-3.5	-4.4	-4.0

Notes: *2017 figures for *Inflation*, *Current Account and Fiscal Balance* are latest IMF projections. 2016 figure for US *Fiscal Balance* is latest IMF projection. 2016 and 2017 figures for *GDP*, *Unemployment* and *Compensation per Employee* are latest OECD projections.
**National definitions
***Average consumer prices

Sources: IMF *World Economic Outlook Database*, OECD *Economic Outlook: Annex Tables*

Most forecasters are projecting moderate growth in the **world** economy in 2017. The OECD's Composite Leading Indicators (CLI) are designed to anticipate economic activity relative to trend six to nine months ahead. The CLIs point to stable growth momentum in the US, Japan, UK, euro area, Canada, China and India and point to growth gaining momentum in Germany, Brazil and Russia. The IFO world survey of economic experts reports a markedly improving climate with expectations following an upward trend in most countries. The IMF foresee world growth rising from 3.1% in 2016 to 3.5% in 2017 and 3.6% in 2018.

There are a number of downside risks to the global forecast including the threat of protectionism and even trade wars. A second significant risk is geopolitical tensions in the Middle-East and Eastern Europe driving up oil prices. This would reduce growth in energy importers. A more structural concern for the global economy relates to falling trend productivity growth in most advanced economies. There is a concern that failure to adequately invest in infrastructure, human capital and R&D will embed lower growth across the world economy. Rising inequality is another concern with the labour share of income falling in many countries.

Brexit related uncertainty continues to cloud the outlook for the **UK** economy. Growth is expected to slow in 2017 and 2018 while unemployment is likely to gradually tick up. The fall in the relative value of Sterling has already started to feed through into higher inflation and is very likely to lead to falling real wage growth. More positively, the outcome of the UK general election appears to have improved prospects for a 'softer' and less economically damaging Brexit. In addition, the scale of austerity related cutbacks is likely to be less severe than previously expected and this will benefit domestic demand.

On the other hand the **euro area** should experience reasonably solid growth in 2017 and 2018 as its recovery increasingly takes hold. Unemployment will remain high but should continue its downward trend. Monetary policy will remain highly supportive for at least the next 12 months although ECB asset purchases may start to fall in 2018 as core inflation starts to pick-up. The euro area's low level of investment is a threat to the bloc's medium-term growth prospects and fiscal policy should be loosened in a number of countries in order to support a programme of public capital investment. A hard Brexit would provide a negative shock to the European economy although the scale of the impact would be dwarfed by the impact on the UK itself.

The **US** economy has performed much better than the euro area since the start of the 2008 economic crisis and it should grow moderately over the next 18 months notwithstanding uncertainty surrounding trade policy and fiscal policy. The unemployment rate is now back to its pre-crisis level although productivity growth continues to slow as it has in most advanced economies. The prospect of a large scale fiscal expansion based on tax cuts and infrastructure spending seems to have receded somewhat but may still happen. In any event, despite inflation remaining relatively low, monetary policy should continue to tighten gradually and a number of interest rate increases are projected between now and the end of 2018. Tightening monetary policy will impact on borrowers, and could damage financing conditions in a number of emerging economies and increase economic instability.

1.2 Republic of Ireland

Trends and analysis

The scale of distortion to the national accounts has been emphasised repeatedly in previous editions of the QEO and makes it difficult to assess the economy's performance and cyclical position. Even so, as Table 1.2 makes clear, the real economy has been growing strongly with employment expanding by 2.9% in 2016 and then by 3.5% year-on-year in the first quarter of 2017. Unemployment and long-term unemployment are on steady downward trajectories. Investment in dwellings and in building and construction grew sharply in 2016 while remaining modest in aggregate terms. Year-on-year personal consumption grew by 3% in real terms in 2016 though it slowed somewhat in late 2016. Finally, activity indicators such as volume retail sales were also strong in 2016 (+5.4%) although this too appears to be slowing.

While the economy is growing strongly the claim (see e.g. OECD) that it is overheating would not appear to stand up to close scrutiny and is certainly contestable. While the unemployment rate is falling, it is still relatively high. Total employment and the employment rate are still well below their pre-crisis peaks and the Republic's 20-64 employment rate is below the EU average. In addition, price inflation measured by the CPI and HICP are close to zero while average hourly earnings are growing at less than 1% year-on-year. Property prices were up 10.5% over the previous year in April. However, they are still only 70% of peak value and the fast rate of property price growth should be understood as a by-product of lack of supply which is currently less than one half of projected long-run demand.

Table 1.2 Dashboard of Macroeconomic Indicators, Republic of Ireland

	2012	2013	2014	2015	2016	Latest
	Percentage volume change over previous year					
Gross Domestic Product	-1.1	1.1	8.5	26.3	5.2	7.2 *(Q4'16)*
Domestic Demand	1.4	-1.9	7.7	9.9	16.8	30.6 *(Q4'16)*
Personal Consumption	-1.0	-0.8	1.7	4.5	3.0	1.6 *(Q4'16)*
Retail Sales	-0.6	1.6	5.6	7.6	5.4	1.6 *(M4'17)*
Industrial Production	-1.5	-2.2	22.9	34.8	0.7	-1.0 *(M4'17)*
	Percentage annual average rate of change					
Employment	-0.6	2.4	1.7	2.6	2.9	3.5 *(Q1'17)*
Average Hourly Earnings	0.2	-0.3	-0.1	0.2	0.6	0.7 *(Q1'17)*
Average Weekly Earnings	0.6	-0.5	0.3	1.2	1.1	1.4 *(Q1'17)*
Inflation (HICP)	1.9	0.5	0.3	0.0	-0.2	0.0 *(M5'17)*
	Percentage of gross domestic product					
Investment	19.4	18.2	20.5	21.2	29.3	29.3 *(2016)*
Current Account Balance	-2.6	2.1	1.7	10.2	4.7	-15.4 *(Q4'16)*
Government Balance	-8.0	-5.7	-3.7	-2.0	-0.6	2.2 *(Q4'16)*
Government Gross Debt	119.5	119.5	105.3	78.7	75.4	75.4 *(Q4'16)*
	Percentage of labour force					
Unemployment	14.7	13.0	11.3	9.4	7.9	6.4 *(M5'17)*
Long-term Unemployment	9.0	7.8	6.6	5.3	4.2	3.6 *(Q1'17)*
	Percentage of households					
Deprivation	26.9	30.5	29.0	25.5	-	25.5 *(2015)*
At Risk of Poverty	17.3	16.5	17.2	16.9	-	16.9 *(2015)*
	Percentage					
Gini Coefficient	31.8	32.0	32.0	30.8	-	30.8 *(2015)*

Notes: Quarterly ('Q') and monthly ('M') data is compared to same period of the previous year. Rates of change represent the average value over the four quarters, or twelve months. *Gross Debt* is end-year figure as a % of annualised GDP or latest quarterly figure as % of annualised GDP. *Unemployment* is average for four quarters or latest quarter seasonally adjusted.

Underlying investment has been growing quickly but is coming from a very low base by historical standards and while private consumption grew strongly in 2015 it moderated to 3% in 2016 and grew by just 1.6% year-on-year in the fourth quarter of 2016. In any event, the fast growth in consumption in 2015 came in the wake of a long period of decline and stagnation so a period of temporarily faster than average growth in private consumption was to be expected. Private consumption grew just 0.3% in real terms between 2008 and 2015. Credit growth is low with lending to households just 0.4% to end-March having declined year-on-year in each quarter of 2016. On the other hand property related loans are increasing quickly, as are loans to Irish SMEs – particularly in construction and real estate. The savings rate of households increased from 10.7% of gross disposable income in 2015 to 11.5% in 2016 with the Irish economy now a net lender to the rest of the world. Unfortunately the distortions to the national accounts make it difficult to interpret the current account balance. There was a headline current account surplus of 4.7% in 2016 and the Department of Finance is projecting a surplus of 10.9% in 2017. However, these headline figures may not be that meaningful. It is hoped that new national accounts data which is to be released by the CSO at the end of June this year, including data for newly created indicators, will enable us to better understand what is happening in relation to economic activity in the Republic.

Overall, given the evidence our baseline position remains that the Irish economy still has a modestly negative output gap i.e. is not overheating, and is only likely to reach its long-run potential output sometime in 2018. Even then, some regions, sectors and groups of workers will still suffer from under-employment.

Box 1.1 Intergenerational Inequality in the Republic of Ireland

In recent years, many commentators have argued that young people have borne a disproportionate burden of the adjustment of austerity in the aftermath of the financial crisis. This assertion is strongly supported by the figures and in fact, there is strong evidence that these trends continue in recovery as the circumstances of young people improve at a slower pace than for older cohorts.

Unemployment and Inactivity

In the Republic of Ireland, latest figures show the unemployment rate is 17% for under-25s with 31.9% of those long-term unemployed (9 months or more). Unemployment is 7.1% for over-25s (Q2 2016). The *NEET* rate (*neither in employment, formal education or training)* for 18-24 year olds is 18.5% (2015). The figure was 12.6% in 2007 and is significantly above the Eurozone average (16.2%). Young Irish men are more likely to be inactive (19.3%), as are 18-24 year olds in the Border, Midlands and West region (24.1%). These rates have only declined marginally since 2012.

Precarious work

20% of workers under the age of 30 are in part-time positions they would rather trade for full-time jobs (2015). This compares to 9% of workers over 30. There has been a rise of 40% in the incidence of temporary employment contracts for workers under-30 to 21% of all employment. The rate has actually fallen slightly for workers over-30 in the same period. 65% of young temporary workers would rather have a permanent job but cannot find one. This translates to roughly 13% of all workers under-30 compared to 3% for workers over 30.

Jobseekers supports

Supports for the young unemployed are still at 55% of the standard rate. The rate for 18-24 year olds was been cut during the recession.

Earnings and Working-Poor

According to the CSO, average weekly earnings of 15-24, 25-29 and 30-39 year olds all fell between 2011 and 2014 whilst they rose for those 50-59 and 60 and over. Workers under-30 are also much more likely to be in material deprivation than older workers (deprivation is measured by inability to afford 2 or more of a list of 11 basic goods such as a winter coat or a night out). 21% of young workers fall into this category compared to 16% for all workers and 17% of female workers. The latest CSO figures on home ownership also show that in 1991, a majority of Irish citizens over 26 years of age owned a house. This age has steadily risen since, with an equivalent age of 35 in 2016.

Outlook

We are projecting that real GDP will grow by a strong, and above trend, rate of 4.4% in 2017 on the back of strong employment growth and the working through of pent-up demand. Growth should start to slow to its trend rate thereafter and we are currently projecting real growth of 3.3% in 2018 and 3.2% in 2019 (Table 1.3). We should note that the forecasts make no account for the possibility of further distortions to GDP arising from multinational tax planning. As always there are a lot of risks and uncertainty surrounding the baseline forecast. These are mainly skewed to the downside (see Box 1.2). Uncertainty around the final outcome of Brexit negotiations makes the 2019 forecast particularly tentative.

Underlying domestic demand will drive growth throughout the forecast period. We expect that gross fixed capital formation (investment) will expand rapidly given the persistently low underlying investment ratio, years of pent-up demand, and the expected increase in housing output. While we do not project investment to increase in 2017 this is due to our assumption that the sharp increase in the level of investment in the last quarter of 2016 is due to a once-off investment or small number of investments in intangibles that will not be replicated in 2017. Investment in the fourth quarter of 2016 was up 162.4% year-on-year. We also anticipate that personal consumption will grow strongly in 2017. This will be driven by a sharp increase in employment, a falling unemployment rate, rising wage and income levels, and improving household net wealth.

Uncertainty related to Brexit; US trade policy, currency fluctuations and the outsize impacts of a small number of multinationals make it difficult to project trade flows. We expect that headline imports will grow relatively slowly in 2017 on account of the sharp rise in imports in the fourth quarter of 2016 which we believe was related to once-off multinational activity. Exports should benefit from the moderate growth expected in the Republic's main trading partners while underlying imports (non-intangibles) will grow strongly on the back of robust growth in domestic incomes and underlying domestic demand.

Table 1.3 Macroeconomic performance & projection, Republic of Ireland

	2016	2016	2017	2018	2019
Real Output		*Percentage real change over previous year*			
Gross Domestic Product	€265.4bn	5.2	4.4	3.3	3.2
Personal Consumption	€96.1bn	3.0	3.4	2.7	2.7
Government Consumption	€28.5bn	5.3	2.4	2.2	2.0
Investment	€77.8bn*	45.0	0.0	5.5	3.6
Exports	€318.8bn	2.4	5.1	4.4	3.8
Imports	€257.2bn	10.3	3.5	5.0	3.7
Earnings		*Percentage nominal change over previous year*			
Average Hourly Earnings	€22.05	0.6	2.6	2.6	2.7
Government Finances		*Percentage of GDP*			
General Government Balance	-€1.5bn	-0.6	-0.4	-0.1	0.1
Gross Debt	€200.6bn	75.4	72.9	71.2	69.3
Labour Force		*Percentage change over previous year*			
Employment	2,020,000	2.9	3.4	1.7	1.6
		Percentage of labour force			
Unemployment	173,100	7.9	6.3	5.8	5.5

Notes: Projections for *Gross Domestic Product* and components refer to real economic activity; *Investment* refers to Gross Fixed Capital Formation; *Employment*, *Unemployment* and *Earnings* all represent the average value over the four quarters.
*2016 data for Gross Fixed Capital Formation (GFCF) excluding intangibles is unavailable. Intangibles made up 43.4% of GFCF in 2015

Sources: NERI estimates for 2017-2019; 2016 data is from CSO *National Income and Expenditure*, CSO *Earnings and Labour Costs Survey*, CSO *Government Finance Statistics* and CSO *Quarterly National Household Survey*.

Labour market conditions should continue to improve in 2017. We are projecting robust growth of 3.4% in employment and for average hourly earnings to increase by 2.6% thus marking an end to years of wage stagnation. A tightening labour market will drive wage growth as unemployment falls below 6% in early 2018. However, wage and employment growth will vary from sector to sector. We foresee particularly strong gains in the construction sector as housing output and supply starts to slowly narrow the gap with housing demand. Inflation should remain subdued in the short-term as oil prices are expected to stabilise. However, wage pressure and strengthening domestic demand should start to push up prices gradually over the next 6-18 months.

Box 1.2 Macroeconomic Risks and Uncertainties: Republic of Ireland

Brexit and the nature of the Brexit outcome remains the most significant economic uncertainty although it is impossible to quantify the scale of the potential damage. A 'hard-Brexit' with a WTO style arrangement would have a very damaging impact on Irish-UK trade due to the imposition of tariffs. In addition, UK growth and potential output would be lower thereby reducing demand for Irish exports. Sterling would be expected to weaken further in the event of a hard-Brexit and this too would damage exports (particularly in traditional sectors) along with retail sales in Border counties. The Agri-food sector is particularly vulnerable to Brexit. We expect significant currency volatility in the period leading up to the end of negotiations.

A US led move towards **protectionism** would have a very damaging impact on the Republic given the openness of the Irish economy while an increase in the Euro **exchange rates** would reduce demand for Irish exports.

Proposed policy changes in the US in relation to **corporate taxation** would negatively impact on the attractiveness of the Republic as a location for Foreign Direct Investment. The Republic's tax and regulatory advantages may also come under threat from momentum towards a Common Consolidated Corporate Tax Base at EU level as well as from an understandable desire at EU level to prevent facilitation of aggressive tax avoidance by large corporations.

Monetary policy should remain supportive. However, the ECB may start to tighten policy towards the end of the forecast horizon if the recovery in the Euro area starts to firm up, unemployment continues to fall and prices start to rise. An increase in **interest rates** would be very problematic for the Irish economy given the still high public and private debt ratios and would exert downward pressure on domestic demand and employment.

Geopolitical factors could lead to an increase in **oil prices**. As an energy importer, a sharp rise in oil prices could reduce real household disposable incomes and personal consumption. It would also reduce investment to the extent that it impacts on corporate balance sheets. The chronic undersupply of housing and the associated impact on rental costs may start to erode Irish **competitiveness** while tax cuts could increase the fragility of the **public finances**.

The **future path of labour productivity growth** will have an immensely important influence on the economy's growth trajectory. Yet productivity growth is inherently volatile and difficult to forecast as it is dependent on hard to track processes such as the diffusion of innovation, the changing composition of inter- and intra-sector employment, and the damage done to the quality of human capital during the period of austerity. A continuation of the secular trend towards lower productivity growth will mean lower real GDP in the future with knock-on implications for fiscal capacity and economic and social well-being. The best way to insulate the economy against lower productivity growth is to pursue pro-productivity policies such as higher spending on infrastructure, education and R&D.

Government revenue to end-May was up 1.7% year-on-year but down 1% against profile (i.e. down 1% compared to the Department of Finance's projection). Expenditure was up 2.6% year-on-year but down 2.8% against profile with much of the difference perhaps timing based as it is related to EU budget contributions. We are currently projecting modest deficits of 0.4% and 0.1% of GDP in the public finances in 2017 and 2018, respectively. We project the public finances will be marginally in surplus in 2019.

1.3 Northern Ireland

In the Spring QEO in March we presented initial indications of the impact of Brexit on the Northern Ireland economy. This showed a small but significant slowdown in the local economy. However, it was pointed out that these were initial estimates. As Table 1.4 shows the data for the final quarter of 2016 indicate a considerable upswing in growth across the Northern Ireland economy.

Table 1.4 Dashboard of Macroeconomic Indicators (Northern Ireland)

	2012	2013	2014	2015	2016	Latest
			Percentage volume change over previous year			
Gross Value Added	1.1	1.1	0.2	1.6	-	1.6 *(2015)*
NICEI	-1.4	0.0	0.7	1.5	1.6	2.1 *(Q4 2016)*
Index of Services	-1.4	0.5	1.2	1.3	3.2	0.5 *(Q1 2017)*
Index of Production	-1.4	1.0	2.3	2.0	0.0	-0.2 *(Q1 2017)*
			Percentage annual average rate of change			
Employment Rate	-0.3	-0.6	1.8	0.3	1.5	-0.5 (M2-M4'17)
Average Hourly Earnings	1.5	2.5	-1.3	4.2	-	4.2 *(2016)*
Price Inflation (UK)	2.8	2.6	1.5	0.0	1.0	2.7 *(M5'17)*
				Percentage of GVA		
Exports	28.9	30.0	28.4	26.5	-	26.5 *(2015)*
Government Spending	61.6	60.2	60.6	-		60.6 *(2014)*
				Percentage of labour force		
Unemployment	7.5	7.5	6.4	6.1	5.8	5.4 (M2-M4'17)
Youth Unemployment	20.1	22.5	19.0	19.3	14.9	13.3 (M2-M4'17)
Long-term Unemployment	3.8	4.0	3.4	3.6	2.6	2.5 (M2-M4'17)
				Percentage of households		
Relative Poverty	19.0	21.0	22.0	18.0	-	18.0 *(2015)*

Notes: Employment Rate refers to all persons in employment (ILO definition) aged 16-64 as proportion of all persons 16-64. GVA is deflated using UK GDP deflator. NI Exports refer to sales outside the UK. Exports refers to both goods and services sold from NI beyond the UK. Government Spending refers to Total identifiable expenditure on services apportioned to NI.

Source: ONS Regional Gross Value Added *(Income Approach)*; HMT GDP Deflators; NISRA Northern Ireland Composite Economic Index; NISRA Index of Production; NISRA Index of Services; NISRA Labour Force Survey; NISRA Annual Survey of Hours and Earning; ONS Consumer Price Inflation; HMT Public Expenditure Statistical Analyses; NISRA Households Below Average Income

As with the data for the third quarter, the same health warning applies. Brexit has been the defining economic issue of the last year but as long as it remains a vague political intention, its impact on the economy will be hard to judge and even harder to measure. At present, all we can say from the official statistics is that there is no discernible slowdown in the Northern Ireland economy for the second half of 2016. The UK economy rebounded strongly in the final quarter of 2016 before falling sharply below expectations in the first quarter of 2017. There are concerns that consumer spending, the main driver of growth, which had been holding up well despite the depreciation of Sterling, is beginning to weaken.

While there was a return to growth in the final quarter of 2016 the initial indications of output for 2017 show a more mixed picture. In the final quarter of 2016 the production sector, which includes manufacturing, increased to the highest level of output on record, growing by 5.4% over the quarter and 2.3% over the year. However, the index of production declined by 0.2% in the first quarter of this year. For the manufacturing sector itself, whilst Q4 2016 saw impressive growth of 3.1% over the previous quarter, the Q4 result is actually a decline of 0.4% when compared with the same quarter in 2015. When all four quarters of the year are combined and compared with the same period in 2015, the manufacturing sector actually declined by 1.1%.

The significant increase in Construction sector activity was a surprise. Whilst the sector is still far below pre-crisis levels, output increased by nearly 7% in Q4 of 2016 compared to Q3 and almost 13% when compared with Q4 of 2015. The level of Housing output is back to levels similar to those in late 2010. Output in the construction sector has been growing slowly since late 2013, but the latest results are well above that trend of growth. Within the sector, all of the recent growth has come from new build in infrastructure and other work, whilst housing output has actually decreased. This is a welcome uplift for the sector, but the published statistics do not make a distinction between work carried out in Northern Ireland and activity by Northern Irish firms in the Republic of Ireland. Based on the survey data it should be possible to report this and it would indicate to what extent the depreciation in Sterling has boosted the business of NI firms in the Republic.

Growth in the services sector was 1.6% in the final quarter of 2016 followed by more modest growth of 0.5% in the first quarter of 2017. There are indications that the impact of the depreciation of Sterling is impacting on the domestic economy with Retail & Accommodation sector recording no growth compared to the final quarter of 2016. Business & Professional Services which have been almost static for the last five years have experienced welcome growth over the last two quarters. However, current output is still 27% below its 2008 pre-crisis peak and well below the pace of recovery in the same sector at UK level.

The experience of the Retail & Accommodation sector is noteworthy. Whilst the growth in the sector over the last number of years has been stronger at UK level, the proportionate size of the retail sector in Northern Ireland is much larger. Consumer spending has been a key driver of recent growth in the UK economy and this may be under threat as indicators of consumer confidence at UK level show that recent increases in inflation have dented consumer spending leading to concerns about overall growth. As Table 1.4 shows, UK inflation increased to 2.7% in May, up sharply from just 0.7% in May 2016.

How and when these inflationary pressures will impact on household budget remains to be seen, but it is unlikely that consumer spending in Northern Ireland can avoid these pressures for long. Data for Great Britain indicates that pay has not risen to match increased inflation and while there are no recent data available for wages in Northern Ireland it seems highly unlikely that the situation is much different. The threat to services output from a contraction in consumer spending remains the key threat to Northern Ireland's growth over the medium term.

The Northern Ireland labour market showed mixed results in the three months ending in April this year. Whilst the unemployment rate reached a new low of 5.4%, both the employment rate and the rate of economic activity decreased sharply. The fall in the numbers of people unemployed (4,000) was dwarfed by the (10,000) decrease in those in employment. The largest increase in economic inactivity was among the 18-24 and the 65+ age groups. However, whilst there some increases in students and retirees, the seasonally adjusted increase in economic inactivity was 15,000 over the quarter and 27,000 over the year. This trend in inactivity has been a persistent feature of the Northern Ireland labour market and whilst there have been attempts by the NI Executive to look into the issue more deeply, this should remain a key policy focus for any incoming administration.

Box 1.3 Precarious work in Northern Ireland

One of the most striking changes in the structure of the labour force in Northern Ireland in recent years has been the shift in the structure of employment away from the traditional 'standard' of full-time, permanent and regular employment arrangements toward more precarious non-standard employment arrangements. Indeed, a recently published NERI working paper shows that permanent full-time contracts comprise the lowest share of the Northern Irish labour market than what has been the case in any other period throughout 2008-2016, and so by the last quarter of 2016 close to two in five of workers were employed in non-standard working arrangements. The findings point to an increase in the replacement of standard jobs with non-standard jobs, as well as an increased likelihood of new jobs being non-standard in nature. Particular rises in temporary and self-employment are clear.

This shift in the structure of employment however is not peculiar to Northern Ireland. Rather, across advanced nations, in recent years we have witnessed a general trend toward the erosion of standard employment arrangements **(ILO, 2016)**. However, in comparing the structure of employment in Northern Ireland with that of Great Britain we find some idiosyncrasies unique to Northern Ireland.

A **NERI Research InBrief** found that a higher proportion of workers in Northern Ireland are temporary or self-employed. Indeed, even amongst public sector workers we find a higher proportion of workers in Northern Ireland are on temporary contracts than is the case in Great Britain. Specifically, 11% of workers employed in the public sector in Northern Ireland are working on a temporary contract. This compares to 7% in Great Britain.

For some commentators, the recent rise in non-standard employment brings positive implications for both workers and employers. In this way, some argue that non-standard employment allows for an alternative form of participation in the labour force offering workers and employers alike greater freedom, flexibility and autonomy (**Buddelmeyer et al, 2015**). This, it is argued, allows workers to better balance work and personal commitments. Moreover, it is argued that the ability to utilize non-standard forms of employment helps employers manage more efficiently fluctuations in supply and demand (Ko, 2003).

Others however argue that the recent rise of non-standard employment inevitably means a rise in sub-standard jobs for workers. Studies assessing the quality of non-standard employment arrangements compared to standard employment arrangements by and large find evidence to support the supposition that non-standard jobs are of poorer quality (See **ILO, 2016**). Indeed, empirical evidence has found that when compared with those in standard employment, those in non-standard employment arrangements tend to be lower paid, have fewer entitlements, less access to training opportunities, and have a lower likelihood of being represented by a union, which in turn results in less bargaining power for employees working in these arrangements (See **ILO, 2016**). Other studies have found that whilst non-standard employment arrangements may suit some individuals who seek flexible forms of work many others are involuntary non-standard employed, in that they feel pressured into accepting non-standard forms of employment, so as to avoid unemployment (**Standing, 2011**).

Moreover, beyond the negative effects of non-standard employment compared to standard employment for workers a body of evidence suggests that there are significant negative effects associated with their use for businesses. Specifically, **research** has found that extensive use of non-standard forms of employment undermines competitiveness, reduces innovation, lowers employee commitment, and results in less team working and ultimately lower co-operation between staff.

2 How does Irish Public Spending Compare to other High-income EU Countries?

2.1 Introduction

The most recent data from the CSO shows a 2016 general government deficit of €1.5 billion and 0.6% of GDP. The gross public debt had fallen to 75.4% of GDP by the end of 2016. While the improvement partially reflects the once-off surge in nominal GDP in 2015, it also reflects a decline in the value of the debt. The net fiscal space available to Irish policymakers in Budget 2018 is in the region of just €0.35 billion as of mid-June 2017. This is around half of 1% of the Department of Finance's estimated €70 billion of non-interest public expenditure in 2017.

On a no policy change basis the Republic will have the lowest public spending-to-output ratio in the entire EU by 2021, and a historically low spending ratio by modern Irish standards. The IMF project that the Republic will have a public spending-to-GDP ratio of 25.8% in 2021 compared to 46.6% in the euro area and even 36.0% in the 'low-spending' United States. Such a low level of spending will have consequences for the future provision and quality of public services and infrastructure, and has implications for the sufficiency of welfare payments.

GDP based comparisons involving the Republic are extremely problematic given the effect of multinational activity on the Irish national accounts. Some of this activity is only marginally connected to the domestic economy and the potential tax yield from foreign owned multinationals is likely to be somewhat less than the yield from more domestically ingrained activity. However, foreign-owned multinationals account for a substantial portion of corporation tax receipts.

To get around the problem we instead compare per capita public spending in the Republic to that of other similarly high-income EU countries across a range of functional areas such as education and health. We estimate that the Irish state under-spends on a per capita basis compared to these countries in a number of areas fundamental to long-run economic growth. Most significantly from the perspective of the Republic's long-run productive capacity are the relative under-investments in education, in infrastructure, and in Research and Development (R&D). McDonnell and Goldrick-Kelly (2017) estimate that the Republic's cumulative under-spend on education, infrastructure and R&D, when scaled up to a population level, is close to €3 billion.

In this context we argue that the Republic's long-run economic growth; employment and equity goals can best be achieved by prioritising use of the fiscal space to increase public capital investment levels; increase spending on education, and increase direct spending and subsidies for R&D and innovation capacity building. Priority should also be given to measures to reduce barriers to employment such as more generous subsidies for childcare. Our findings have clear implications for the needed direction of future reforms to government revenue raising and taxation. Our conclusion is that there is no economic case for tax cuts over the next three years particularly in the context of future age related public spending pressures and existing spending deficits.

2.2 The Public Finances

The Republic's public finances have been on a steadily improving trajectory since 2010 and the most recent data from the CSO shows a 2016 general government deficit of €1.5 billion and 0.6% of GDP. The deficit was €5 billion and 2% of GDP in 2015 and €7.2 billion and 3.7% of GDP in 2014. We forecast the general government balance will be very marginally in deficit in 2017. At the same time the gross level of public debt has declined from its peak of 119.5% of GDP in 2012 and 2013 and was 75.4% of GDP at the end of 2016. The improvement in the debt-to-GDP ratio is partially a byproduct of the once-off and artificial surge in nominal GDP in 2015. Table 2.1 shows the dramatic fall in Irish general government gross debt as a percentage of GDP in 2015. The headline rate should be treated as misleadingly benign.

The Irish government has broad flexibility over the composition and scale of its spending and revenue raising. The major constraint on government under the fiscal rules is over the fiscal stance. The fiscal space is the projected amount of resources available to government for additional expenditure while ensuring compliance with the fiscal rules. As of mid-June 2017 it stands at close to €0.35 billion for Budget 2018. This is a very small amount when one considers that government expenditure amounted to €74.39 billion in 2016. The fiscal space does increase from Budget 2019 onwards with an estimated €7.4 billion cumulatively available over the three budgets from 2019 to 2021 assuming the June 2017 public sector pay deal erodes the 2018-21 fiscal space by €0.9 billion.

The Fiscal Council estimates that demographic and inflation pressures on public spending just to 'stand-still' in terms of public service delivery and benefits will cost €6 billion extra public spending by 2021 and that, while €2.3 billion had been pre-committed to current spending prior to the June 2017 public sector pay deal, 'standing-still' will require a further €3.7 billion of fiscal space. As it stands just €3.6 billion of the fiscal space is currently earmarked for current spending by the Department of Finance. In other words, the government's fiscal policy is consistent with a *decline* in the real quality of public services and rates for social transfers over the next few years. This deterioration can only be avoided within the fiscal rules if the government diverts money from capital spending (already at a low level), from its proposed tax cuts, or from its proposed rainy day fund.

Table 2.1 Public finance indicators, Rep. Ireland and EU15, % GDP

	2014	2015	2016	2017	2018
General government gross debt: Excessive deficit procedure (EDP)					
EU15	91.7	89.6	88.1	87.8	86.6
Rep. Ireland	105.3	78.7	75.4	73.5	72.7
Net lending (+) or net borrowing (-), general government, € billions					
EU15	-385.9	-328.0	-232.6	-221.3	-205.2
Rep. Ireland	-7.2	-5.0	-1.5	-1.5	-0.8
Net lending (+) or net borrowing (-), general government					
EU15	-3.0	-2.4	-1.7	-1.6	-1.4
Rep. Ireland	-3.7	-2.0	-0.6	-0.5	-0.3
Structural balance of general government: Adjustment based on potential GDP (EDP)					
EU15	-1.7	-1.6	-1.3	-1.5	-1.5
Rep. Ireland	-3.8	-2.0	-1.7	-1.1	-0.3

Source: European Commission (2017) AMECO database
Notes: ESA 2010 basis; 2017 and 2018 are European Commission forecasts.

2.3 Per capita Public Spending Comparisons

We need some common basis for comparison if we are to evaluate whether the Republic of Ireland has a relatively high low level of public spending. Spending as a proportion of economic output is a commonly used indicator because output is considered a good measure of a country's revenue or fiscal capacity. GDP is the most standard measure of a country's economic output. A straight-up comparison shows the Republic to have a relatively low rate of public spending in the economy at 37.8% of GDP in 2014 with a substantial 'gap' of 11.5 percentage points to the euro area average of 49.3%.

The Fiscal Council (2012) point out that GNP may be a more meaningful measure of the Republic's fiscal capacity given the large share of foreign multinational profits in GDP. They contend that multinational profits provide a lower, albeit not zero, tax yield per euro of income compared to other components of GDP. To account for this diminished tax capacity the Council developed a hybrid measure of capacity that is greater than GNP but not as large as GDP. Using the hybrid as the denominator for the Republic reduces the gap to 7.7 percentage points in 2014. Under the United Nation's methodology for Classifications of the Functions of Government (COFOG) we find most of the gap is attributable to the Republic's relatively low spend on '*social protection'.*

There are clearly fundamental problems associated with using either GDP or a GDP derived indicator as the denominator in cross-country comparisons. This is particularly true in the Irish case given the recent distortions to the Irish national accounts. As a consequence, it may be more relevant to compare levels of public spending by looking at per capita levels of expenditure, in other words by comparing the amount of resources actually spent on a per person basis on areas like education or health or pensions.

The EU and euro area averages are unsatisfactory bases for per capita comparisons as both of these blocs contain a number of countries that are much poorer than the Republic. One way to ensure we are only comparing the Republic to other high income countries is to exclude all EU countries with a GDP per capita of less than €30,000 in 2014. Doing so excludes all bar 10 EU countries. In order of income per capita the remaining *'peer countries'* used for comparative purposes are: Luxembourg, Denmark, Sweden, Netherlands, Austria, Finland, Germany, Belgium, UK and France. The next richest country after France, namely Italy, had a GDP per capita of just €26,700 in 2014.

As it happens European Commission data shows that the Republic had the 2nd lowest level of per capita public spending excluding interest payments, in 2016 (see Table 2.2). Only the UK had a lower level of spending within the peer group. Three of the countries had a per capita spend that was over 50% higher than the Republic's per capita spend. The per capita spend in the Republic was €14,502 compared to a population weighted average of €17,112 per person across the 10 peer countries. The Republic's per capita spending was 84.7% of the peer country average. The gap to the peer country average was €2,610 per person, which is equivalent to €12.3 billion when scaled over the Irish population.

Table 2.2 Per capita public spending excluding interest payments in 2016, €bn

		Population (thousands)	Public spending	Per capita spending €
1	Luxembourg	583.6	22.1	37,868
2	Denmark	5,729.0	144.7	25,257
3	Sweden	9,923.1	229.4	23,118
4	Finland	5,494.6	117.9	21,457
5	Austria	8,739.1	171.2	19,590
6	Belgium	11,271.0	213.0	18,898
7	France	66,671.0	1,215.2	18,227
8	Netherlands	17,030.0	296.5	17,410
9	Germany	82,484.8	1,344.3	16,298
10	**Rep. Ireland**	**4,716.5**	**68.4**	**14,502**
11	United Kingdom	65,572.0	938.1	14,306
	Peer countries (weighted average)			17,112
	Gap to peer countries (€)			2,610
	Gap scaled to Irish population (€ billions)			12.3

Sources: European Commission (2017) AMECO database: Total Population, AMECO database: Total expenditure excluding interest – ESA 2010

While this appears to show the Republic to be a low spending economy we must bear in mind that direct comparisons of aggregate data can be misleading. Table 2.3 breaks per capita spending in 2015 into its main functional areas, for example education and health. Total per capita spending including interest payments was €16,225 in the Republic while the weighted average across the 10 peer countries was €18,000. Per capita spending in the Republic was 90% of the peer country weighted average and the gap in spending was €1,775 per person. The Republic had the lowest per capita spending of the 11 countries with Germany 2nd lowest on €16,329 and the UK 3rd lowest on €16,960. Scaling the gap in per spending over the Irish population reveals a public spending gap of €8.2 billion.

Table 2.3 shows the gap in per capita public spending is primarily attributable to the Republic's relatively low level of spending on *social protection*. The Republic spends €2,109 less per capita on social protection amounting to €9.8 billion scaled over the population. In other words, if we exclude spending on social protection the

Republic actually out-spends the peer country average on a per capita basis. The other major under-spend is *defence* where the per capita under-spend is €346 per capita amounting to €1.6 billion scaled over the population. The Republic out-spends the peer country average in five of the 10 areas with the most notable out-spends occuring in *economic affairs* and *health*.

Table 2.3 Total and per capita public spending in 2015, € billions

Country	Total	A	B	C	D	E	F	G	H	I	J
Belgium	221.02	33.30	3.46	7.23	26.50	3.67	1.63	31.45	4.90	26.35	82.91
Denmark	149.01	20.16	3.06	2.67	9.95	1.21	0.67	23.26	4.79	19.14	64.10
Germany	1,333.86	180.39	30.49	47.47	95.19	18.47	11.61	217.24	30.83	127.39	574.77
France	1,242.79	137.22	38.32	35.61	124.48	21.93	23.34	178.24	29.00	119.17	535.48
Luxembourg	21.57	2.26	0.14	0.51	2.56	0.56	0.27	2.34	0.61	2.67	9.66
Netherlands	305.36	33.96	7.72	12.26	26.87	9.68	2.17	54.08	9.50	36.79	112.32
Austria	175.42	23.28	1.95	4.70	20.93	1.53	1.19	27.18	4.20	16.86	73.60
Finland	119.38	17.84	2.81	2.62	9.96	0.50	0.86	15.01	3.10	13.09	53.62
Sweden	224.45	31.60	5.07	5.83	18.76	1.30	3.33	31.06	4.89	29.17	93.43
UK	1,104.29	117.02	54.91	51.55	78.82	20.29	12.46	196.62	16.77	131.98	423.86
Rep. Ireland	**75.32**	**10.43**	**0.90**	**2.78**	**8.66**	**1.02**	**1.48**	**14.57**	**1.48**	**9.37**	**24.63**
Per capita (€000)											
Rep. Ireland	**16,225**	**2,247**	**193**	**598**	**1,865**	**219**	**318**	**3,138**	**319**	**2,019**	**5,306**
Peer country	18,000	2,199	539	627	1,530	290	213	2,864	398	1,926	7,415
Gap	1,775	-48	346	29	-335	71	-105	-274	79	-93	2,109
Gap scaled to population	8.2	-0.2	1.6	0.1	-1.6	0.3	-0.5	-1.3	0.4	-0.4	9.8

Sources: Eurostat (2017) General Government Expenditure by Function; European Commission (2017) AMECO database: Total Population

Notes: A = General public services; B = Defence; C = Public Order and Safety; D = Economic Affairs; E = Environmental Protection; F = Housing and Community Amenities; G = Health; H = Recreation, culture and religion; I = Education; J = Social Protection
Expenditure figures above are rounded to the nearest million. Rounding affects calculations.
Peer country is the population weighted average.
A negative gap means that the Republic of Ireland out-spends the peer country weighted average.

However, even this level of disaggregation can provide a misleading picture. Decomposing the 10 areas into their main subcomponents allows us to better understand the differences between spending in the Republic and spending in the 10 peer countries. Public spending is less than €1,000 per person in five of the 10 COFOG areas. Within these five areas, the Republic is close to albeit slightly below the peer country average in terms of per capita spending on *public order and safety* 95.3% of peer country average) but well below the average when it comes to *recreation, culture and religion* (80.1%);; *environmental protection* (75.5%) and especially *defence* (35.8%). If we exclude spending on the '*waste water management*' subcomponent of environmental protection, we find the Republic's per capita spending on environmental protection falls to just 48.9% of the peer country average. On the other hand, the Republic spends 149.3% per capita of the peer country average on *housing and community amenities*. This apparent out-spend on housing and community amenities is accounted for by spending on '*water supply*'. If we exclude spending on water supply we find that the Republic spends just €124 on housing and community amenities compared to a peer country average of €188. Within the housing and community amenities category the Republic spends more per capita than the peer country average on *housing development* but just one third of the average on *community development*.

The five largest areas of public spending are *general public services*, *economic affairs*, *health*, *education* and *social protection*. The Republic out-spends the peer country average on *general public services*. However, the Republic's out-spend in this area is entirely explained by the Republic's relatively large public debt burden. In 2015 the Republic spent €700 more per person on *public debt transactions* than the peer country average. This amounts to €3.3 billion scaled over the population.

The Republic's per capita spend on *economic affairs* was 21.9% higher than the peer country average with a per capita gap in spending of €335. Spending on the category *general economic, commercial and labour affairs* accounts for almost all of this gap. The Republic under-spends on both of the other major subcomponents of economic affairs, namely *transport* and *R&D economic affairs*. Turning next to *health* we find that per capita spending in 2015 was €3,138 in the Republic and averaged €2,864 over the peer countries. The Republic spends over 15% less per person than the peer country average on the largest item of health expenditure, namely *hospital services*. On the other hand the Republic spends 32.2% more than the average on *outpatient services*, 28% more than the average on *medical products, appliances & equipment*, and well over double the average on *health n.e.c*.

The Republic spends 4.3% more per capita on *education* than the peer country average. This includes above average spending on *pre-primary and primary education* as well as on *tertiary education*. However, the per capita indicator is not the appropriate comparator as countries have often very different demographic profiles and this leads to very different demand pressures on spending. What matters for comparison is the amount of spending per pupil. Eurostat provide data for annual expenditure on educational institutions per pupil/student based on Full-

Time Equivalent (FTE), by education level and programme orientation.

Table 2.4 Annual expenditure on educational institutions per pupil/student based on FTE, by education level and programme orientation, 2013, Euros

	Primary and lower secondary education (Levels 1 and 2)	Upper secondary and post-secondary non-tertiary education (Levels 3 and 4)	Tertiary education (Levels 5-8)
Belgium	8,723.70	10,617.9	13,055.4
Germany	7,189.30	9,704.3	13,132.1
Rep. Ireland	**7,220.70**	**9,763.6**	**11,611.5**
France	6,893.70	11,084.3	13,259.9
Netherlands	8,027.70	9,852.3	15,302.9
Austria	10,280.50	11,697.5	13,407.1
Finland	9,266.80	8,020.5	16,312.3
Sweden	10,938.80	11,111.0	23,540.5
UK	9,368.00	9,470.0	20,968.6
Norway	15,680.60	18,722.5	
Switzerland	18,566.10	19,847.8	26,986.8
USA	8,515.20	10,261.5	20,765.7
Japan	7,394.70	8,446.0	14,170.3
Average	10,070.43	11,569.63	17,354.69
Average (EU)	8,836.06	10,194.73	16,122.35
Median	**8,995.25**	**10,439.70**	**15,302.9**
Rep. Ireland gap to median	**1,774.55**	**676.10**	**3,691.4**
Rep. Ireland (% median)	80.27%	93.52%	75.88%

Source: Eurostat (2017)

Notes: 2013 data unless stated. Countries included are those where data is available and with GDP (PPP) per capita of at least $40,000 US (2016) and population of at least 1 million.
All ISCED 2011 levels excluding early childhood educational attainment
The unweighted average, the unweighted EU average and the median all exclude the Republic of Ireland.

Table 2.4 shows per pupil spending on a Euro basis as it was in 2013 the most recent year for which data is available. It is clear that the Republic spends well below the norm for advanced high-income economies when it comes to education. This is the case for each of primary, secondary and tertiary education. The Republic's relative under-spend per pupil is smallest in the area of *upper secondary and post-secondary non-tertiary education* where the Republic spends close to 94% of the comparator country median. The Republic's relative spend is close to 80% in relation to *primary and lower secondary education* and close to 76% in relation to *tertiary education*. Finally, out of the 13 countries compared the Republic is the 3rd lowest spender per pupil on primary and lower secondary education after France and Germany and the single lowest spender per pupil on tertiary education. Table 2.5 shows that public spending on education would have to increase by close to €2 billion per annum if the Republic wanted to increase its level of spending to the comparator country median. In this instance most of the increase would be put towards primary and lower secondary education (levels 1 and 2).

Table 2.5 Estimating the scale of the Republic's public spending gap on education

	No. of students	No. of students	No. of students	Total
	First level	**Second level**	**Third level**	**Total**
2012/13	526,442	362,847	164,863	1,045,162
2015/16	553,380	345,550	179,850	1,078,780
	Levels 1 and 2	**Levels 3 and 4**	**Levels 5-8**	
2012/13	707,866	181,423	164,863	
Rep. Ireland gap to median 2012/13 (€)	1,774.55	676.10	3,691.40	
Implied spending gap 2012/13 (€bn)	1.3	0.1	0.6	2.0
2015/16	726,155	172,775	179,850	
Implied spending gap 2015/16 (€bn)	1.3	0.1	0.7	2.1

Sources: Eurostat (2017x); Department of Education (2017) Key Statistics 2015-2016; Department of Education (2014) Key Statistics 2012-2013; author's calculations.

Notes: The 'gap' is to the median of the countries included in Table 2,4 We assume the per capita gap in 2016 remains as it was in 2013.

Social protection is by far the largest category of public spending by function. The Republic spends just 71.6% of the peer country average on a per capita basis. This amounts to €9.8 billion when scaled to the Irish population. This under-spend is mostly attributable to the Republic's low level of spending on *old age* benefits as well as significant under-spends on *sickness and disability* and on *social exclusion*. Excluding spending on *old age*, the Republic spends more per capita on social protection. In particular, the Republic spends more per capita on *family & children*, *unemployment* and *housing*. It is reasonable to assume demographics play an important role in aggregate *old age* and aggregate *family & children* spending.

Table 2.6 Adjusted old age spending, Republic of Ireland, 2015

	Population (000s)	65+ population (000s)	Over 65 ratio	Old age spend (€mn)	Old age spend per person 65+	Adjusted old age spend (€mn)	Additional spend (€mn)
Ireland	4,642,2	612.6	13.20%	6,193.8	10,111	8,652.6	2,458.6
Peer countries	271,605.6	50,068.8	18.43%	1,032,703.0	20,626		

Sources: European Commission (2017) AMECO database: Total Population, AMECO database: Total expenditure excluding interest – ESA 2010

Notes: The adjusted old age spend estimates the old age spend if the Republic had the peer country over 65 ratio and there was no policy change. The additional spend is the excess spending that would occur if the Republic had that ratio.

Table 2.7 Adjusted family & children spending, Republic of Ireland, 2015

	Population (000s)	Under 15 population (000s)	Under 15 ratio	Family & children spend (€mn)	F&C spend per person under 15	Adjusted F&C spend (€mn)	Reduced spend (€mn)
Ireland	4,642,2	1,030.9	22.21%	4,990	4,840	3,504.9	1,485.1
Peer countries	271,605.6	42,361.5	15.60%	198,015.6	4,674		

Sources: European Commission (2017) AMECO database: Total Population, AMECO database: Total expenditure excluding interest – ESA 2010

Notes: The adjusted family and children (F&C) spend estimates the F&C spend if the Republic had the peer country under 15 ratio. The reduced spend is the savings based on that ratio.

Table 2.6 and Table 2.7 show this to be the case. On a no policy change basis the Republic would have to spend an additional €2.5 billion per annum if it had the same ratio of over 65s in the population as the peer country average. On the other hand, the Republic would have to spend €1.5 billion per annum less if it had the same ratio of under 15s in the population as the peer country average.

2.4 Public Spending and Economic Growth

As discussed in McDonnell (2015), per capita output is determined by: (A) the proportion of the working-age population as a percent of the total population, (B) the percent of the working age population working for pay or profit, (C) the average number of hours worked per person working and, (D) the average output per unit of hour worked (i.e. labour productivity). Policies that favour economic growth are therefore those that either increase the amount of labour inputs employed or those that increase average labour productivity.

Fiscal policy has an extremely important role to play in determining an economy's ability to sustain growth in productivity over the long-term. In particular: (1) investments in education and skills and in family supports will increase the average level of human capital and thus the potential productivity of the labour force, (2) investments in productivity enhancing infrastructure will increase the capital stock and thus labour productivity, while (3) public investments in R&D will enhance the production and diffusion of new ideas and thus the productivity of the economy as a whole. Public spending can also influence the employment rate by removing barriers to employment such as through childcare subsidies and tapered family supports. Under-spends in any of these areas is likely to be damaging to the economy's growth potential.

Human capital development, which is a life-long process, not only enhances labour productivity but is also a necessary input for and complement to innovation and technology adoption. Spending on education and training generates positive externalities for the wider economy to the extent it represents genuine investment in human capital. Our findings suggest the Republic substantially under-spends on education relative to peer countries. This is a false economy in the long-run and there is a strong economic and fiscal argument to increase spending to the peer country average over the medium-term. The implied additional spending is in the order of €2 billion per annum in real terms.

Table 2.8 shows that the Republic also under-spends on infrastructure and R&D relative to the peer country averages. Efficient investment in infrastructure is strongly related to long-run increases in the economy's productive capacity. Investment in public infrastructure raises output in the short-term because of demand effects and in the long term as a result of supply effects. Public spending on gross fixed capital formation was close to 2% of GDP in 2015 - almost certainly lower than Ireland's medium-term growth potential. When a country's government under-spends on capital it is exposed to long-term harm in terms of key public goals such as transport, water, energy, housing and communications infrastructure. Therefore, such a low rate of public investment, if maintained, is likely to produce infrastructure bottlenecks and impede Ireland's growth potential. Year-to-year infrastructure spending can be volatile. Taking a four year average (2013-2016) we estimate that the State spent an average of €912 per capita on gross fixed capital formation. This was 86% of the peer country average of €1,059. Only Belgium and Germany spent less on average. The gap scaled over the population averages €0.7 billion per year. There is also a lot of catching up to be done given sustained underinvestment throughout this decade.

Innovation and R&D levels are determinants of long-run productivity gains, competitiveness and growth. Crucially, the inability of private knowledge producers to internalise all of the benefits of R&D investments reduces the incentive to undertake such activity, leads to a socially suboptimal level of knowledge production, and justifies state intervention. We find that the Republic under-spends on R&D and had the lowest public expenditure per capita of all 11 countries in 2014 and again in 2015. The Republic's per capita spending on R&D

averaged just 61.3% of the peer country average over 2014-2015. The 'gap' scaled over the population amounts to €0.5 billion in both years.

Table 2.8 Per capita Gross Fixed Capital Formation (GFCF) and R&D at current prices, €

Country	2015 (GFCF)	2016 (GFCF)	Four Year Average	2014 (R&D)	2015 (R&D)
Belgium	863	863	**851**	250.6	247.9
Denmark	1,729	1,792	**1756**	528.2	538.3
Germany	788	810	**778**	340.0	346.4
France	1,146	1,142	**1192**	243.5	244.2
Luxembourg	3,436	3,519	**3287**	532.2	583.8
Netherlands	1,439	1,396	**1408**	346.7	358.4
Austria	1,180	1,203	**1175**	341.4	350.3
Finland	1,491	1,515	**1533**	376.5	361.3
Sweden	1,903	2,055	**1986**	461.8	453.2
UK	1,070	946	**958**	194.9	219.2
Rep. Ireland	**936**	**1,038**	**912**	**176.9**	**182.2**
Peer countries	1,077	1,060	1059	289.9	296.4
Gap	141	22	147	113	114.2
Gap scaled to population (€ bn)	0.7	0.1	0.7	0.5	0.5

Source: European Commission (2017) AMECO database; Eurostat (2017); author's calculations

Notes: Latest data. Peer country is the population weighted average. The Republic spent €910 per capita on infrastructure (GFCF) in 2014 and just €761 in 2013 and €762 in 2012. All figures are in current prices. R&D figures represent combined spending by government and higher education sectors.

The cumulative 'under-spend' on education, infrastructure and R&D appears to be close to €3 billion per annum. If growth is the priority then we should focus on closing the under-spend. In addition, environmental and social concerns point to the need for increased spending on environmental protection and community development – areas where the Republic significantly under-spends. Finally, social protection spending will also need to be increased each year in response to price and demand pressures.

2.5 Concluding Thoughts

The Republic under-spends relative to peer countries on a number of areas crucial to economic growth. Plans to cut taxes in future budgets should be abandoned. Such cuts will simply reduce the scope for eating into the large under-spend in growth enhancing areas of public spending. Suggested reforms balancing growth and equity considerations will be discussed in the next QEO.

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