SOCIETY OF CHARTERED SURVEYORS IRELAND

The Irish Construction Industry in 2012




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DKM Economic Consultants for
the Society of Chartered Surveyors Ireland.

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Executive Summary

Construction by its nature is a cyclical industry

Construction industries, just like the economy, generally tend to be subject to fluctuations in activity levels. Such fluctuations give rise to cycles which can involve shifts over time between periods of relatively rapid growth in output and periods of relative stagnation or contraction. The very buoyant period from 1995 to 2007 was unique in that a range of very positive factors co-existed which generated record levels of construction activity across all of the broad categories of work. The economy benefitted significantly from the exceptional amount of new residential and non-residential buildings and infrastructure which was put in place in that time. However, there was also substantial overbuilding in the period, which was accompanied by rampant construction inflation. By 2007, the economy had become increasingly reliant on construction and the industry had totally overshot what would be considered a 'normal' level of output, reaching 25% of GNP at the peak.

The subsequent "boom to bust" development in the Irish construction sector over the past four years has equally been unprecedented. Thus the long and protracted period of weakness which followed the strongest construction boom on record should not come as a surprise. The industry is currently going through a difficult transition back to a situation where more 'normal' conditions can prevail and supply and demand levels can move back towards equilibrium. The industry will recover in time and the current painful adjustment is a necessary step in that process.

Construction output at just €7.5 billion this year

Thus the Irish construction sector remains in an exceptionally weak phase. Having peaked at close to €39 billion or almost 25% of GNP in 2006, the ensuing painful adjustment has led to the value of output falling to €8.7 billion in 2011, or 7% of GNP. The crisis in construction will see the value of output decline again this year to an estimated €7.5 billion, or by 14.5% in volume terms. Thus construction will record its fifth year in a row of a contraction in output, reaching just 6% of GNP.

Construction has had a major negative impact on the domestic economy

The fragile state of the construction sector has been a key factor contributing to the weak domestic economy since 2007. The investment side of the economy captures investment in building and construction. Every sector of the construction industry, without exception, has been affected by the collapse of the housing and construction bubble and by the challenging economic environment. Private sector residential and non-residential construction have been particularly affected by a range of issues, including a lack of new orders combined with intense competition for the limited work that is put out to tender, an overhang of property, continuing high debt levels amongst consumers and suppliers, delayed payments by clients and difficulties securing project finance and working capital. All continued to damage construction confidence in the first quarter of 2012, according to Ulster Bank's *Construction Purchasing Managers' index*.

The number of new dwellings built is expected to plunge to an all-time low level of just 5,000 units this year or just around 1 dwelling per 1,000 of the population, compared with an average of 8 dwellings in the 1990s and almost 15 in the 2000s. The severe drop in the overall demand for housing and associated consumer products and the decline in onsite construction employment have also adversely affected consumer expenditure, another key component of domestic demand.

Construction costs down only marginally while tender prices have plummeted

The analysis of construction costs reveals an industry which has seen overall construction costs fall only marginally in the last four years, due to continued upward pressure on building material wholesale prices but significant downward pressure on hourly earnings and the number of hours worked. In contrast, the prices bid for work, i.e. tender prices, have been under substantial downward pressure and by the end of 2011 were back to where they were thirteen years ago. This is part of the necessary adjustment back to a more sustainable level of construction inflation and a more competitive economy.

Record job losses represent a massive challenge for the retraining and upskilling sector

The further decline in output this year continues to be accompanied by a loss of jobs, with the numbers directly employed in construction down to 107,600 in Q4 2011. Including persons indirectly employed in companies supplying the construction sector, the total number of persons employed in the sector is around 150,000, compared with 380,000 at the peak of the construction boom. The last time total employment was around 150,000 was in 1997. The sharp adjustment which has been underway for five years has led to many construction companies and professional practices having to downsize dramatically or go out of business. The job losses in construction pose a real challenge for the economy in terms of the retraining and upskilling of unemployed construction workers for those sectors that are expected to expand in Ireland's next phase of economic recovery. The sector is unlikely to see employment return to the levels recorded in the run up to the peak.

Austerity in construction is felt right across the economy

Austerity measures and reduced multi-annual Exchequer capital investment provisions have meant that Government departments, local authorities and semi-state agencies, are spending substantially less on buildings and infrastructure that they would otherwise. The total Exchequer capital provision is €3.96 billion in 2012 and €3.4 billion in 2013 compared with around €8 to €9 billion per annum at the time of the 2009 Budget. At current levels, the Government's capital programme is expected to sustain in the region of 30,000 construction and related jobs annually, according to the *Action Plan for Jobs* (February 2012).

This scale of decline in capital investment is having severe negative repercussions for construction companies and professional practices right across the country. Although Government has identified three key areas - Education, Health and Enterprise – as priority areas with respect to capital investment, the Quantity Surveying industry sees little evidence of plans progressing onsite.

Some opportunities are emerging

However, there are some positive developments which are likely to create niche opportunities for construction. These include the Energy sector, where the semi-State companies have encouraging capital investment plans; and the emerging Green Economy and associated opportunities for the retrofitting of homes. The Government has committed to achieving, by 2020, a 20% reduction in energy demand across the whole of the economy through energy efficiency measures. It is expected that the residential sector will contribute 35% of the targeted savings, thus generating opportunities for improving the energy efficiency of the residential building stock. Ireland has also committed to delivering 40% of electricity consumption from renewable sources by 2020, with wind generation expected to supply the majority of the renewable electricity. The FDI sector is also a key growth area identified by quantity surveying practices, as a number of companies are proceeding with expansion plans. Finally the National Asset Management Agency (NAMA) is likely to create development opportunities as it releases finance and working capital to developers for the completion of selected unfinished estates or for the development of land.

6% of GNP is well below what would be considered 'normal' output levels for construction

The preliminary assessment for 2013 is for a further decline in the volume of output of 6.6% as all sectors are expected to be weaker in 2013, apart from some very modest improvement in the output related to private non-residential construction, albeit from a very low base. In particular there is some evidence from a SCSI Survey of Quantity Surveying practices that office and industrial building activity is beginning to pick up this year. However, the improvement is not sufficient to avoid overall output in the sector falling again in 2013, to a forecast €7.1 billion or just 5.6% of GNP. The expectation is that output will begin to recover in 2014 back towards a new equilibrium in the medium term.

In any economy the construction sector is of strategic importance, as it delivers the building and infrastructure needed by the rest of the economy and society. A viable construction sector is a prerequisite for economic recovery. There is thus a level of construction activity which can allow worthwhile investments to contribute to the productive potential of the economy. While the peak level of output was unsustainable, the estimated levels in recent years are equally unsustainable.

Based on a comparison with the size of the construction industry in other countries, it is considered that an economy the size of Ireland should be capable of sustaining a construction industry equivalent to around 12% of GNP (10% of GDP) over the medium-term, without the negative repercussions associated with periods of overbuilding. This would imply an industry of around €15 billion. Given the cyclical nature of the construction industry, output may exceed this level over the long term but it is clear that output in the industry has been below this level since 2010 and will be just half this level in 2012. The corresponding employment level is likely to be closer to 170,000, particularly if the focus is to shift towards more labour intensive renovation and improvement works in the medium term.

Risks are mostly on the downside

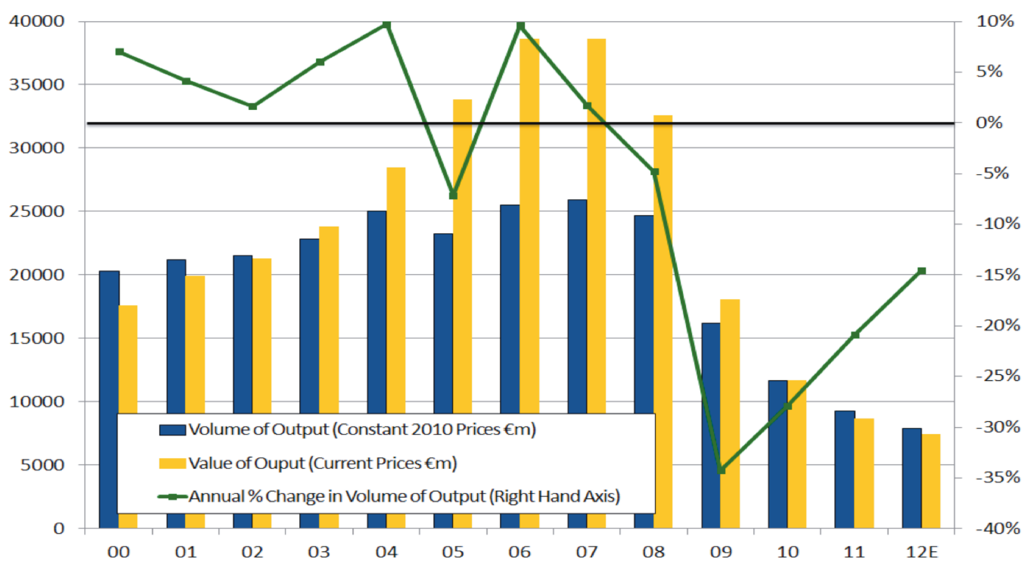
The main risks for the construction sector are the threat of a renewed weakening in economic activity in the euro area, combined with a weaker than expected US recovery both of which would hamper Irish economic prospects in 2012. This would reduce tax revenues, giving rise to the need for even greater austerity measures. If construction is to recover in the medium term, the fundamental credit constraint needs to be addressed to ensure greater access to finance for clients in the sector.

Prospects for Construction to 2013E

	2011 (€ million)	2011 % share	2009	2010	2011	2012E	2013F
			Annual % change in volume of output				
Residential Construction	3,763	43%	-45.9%	-27.3%	-14.5%	-22.5%	-5.2%
Private Non-residential Building	575	7%	-52.2%	-69.8%	-11.5%	20.7%	0.7%
Public Non-residential Building	1,166	13%	-6.9%	-4.7%	-28.1%	-20.2%	-4.0%
Total Building	5,503	63%	-43.5%	-32.4%	-17.4%	-17.8%	-4.1%
Productive Infrastructure - Civils	3,181	37%	-3.5%	-19.2%	-26.6%	-8.6%	-10.6%
Total Construction Output	**8,684**	**100%**	**-34.2%**	**-27.9%**	**-20.9%**	**-14.5%**	**-6.6%**

Source: *Annual Construction Industry Review and Outlook* publication to 2010.
DKM: 2011-2013F

Value and Volume of Construction Output 2000-2012E



Source: Annual Construction Industry Review and Outlook publication to 2010.
DKM 2011-2012E.

1. Construction Industry in Context

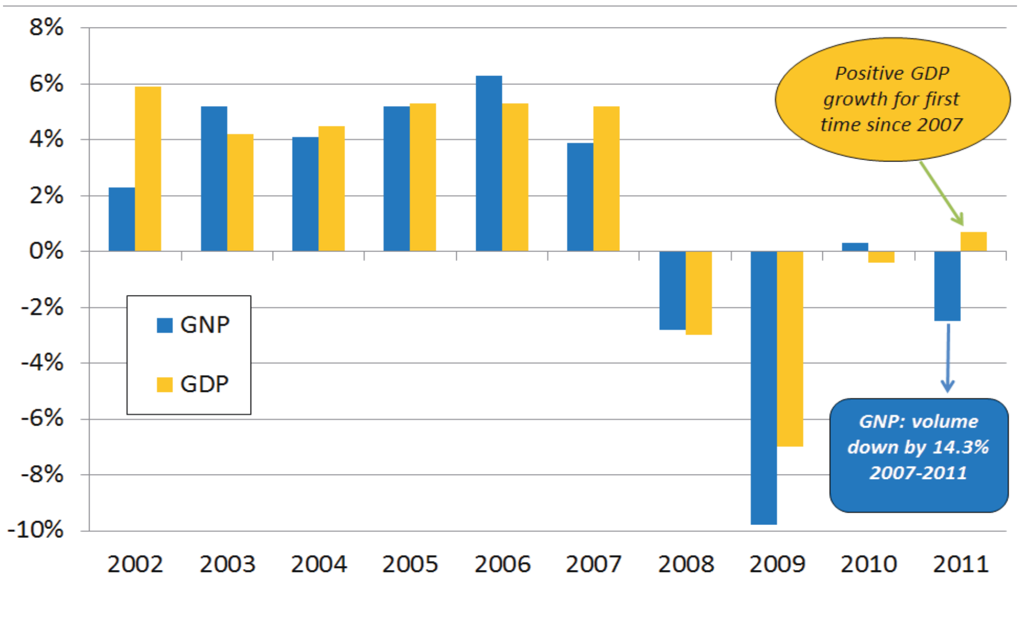
1.1 Economic Review

The Irish economy is gradually emerging from the greatest economic crisis in living memory during which economic growth suffered an unprecedented setback. The decimation of the Irish construction sector since 2007 and the simultaneous international credit crunch led to a domestic banking crisis. The large fall in Exchequer revenues has led to unsustainable budget deficits over recent years, which when combined with the bank rescue costs have seen the national debt escalate to 108% of GDP at the end of last year. The eventual €67.5 billion Troika (IMF, ECB, EU) bailout prevented Ireland from an inevitable default on its debt, which would have had immediate and catastrophic repercussions for Ireland and the euro zone as a whole.

Economy experiences positive GDP growth for first time since 2007

According to the National Accounts, GDP in 2010 was at its lowest level in the current downturn – approximately 10.1% in volume terms (or €34bn in value terms) below the level reached in 2007. Preliminary National Accounts data for 2011 show that GDP was up marginally last year (+0.7%), regaining some of the earlier ground lost. This is the first time since 2007 that the economy has experienced positive real GDP growth in a full year. The total value of GDP reached €156.4 billion.

Figure 1.1: GNP and GDP annual % change in volume (GNP at constant 2009 prices)

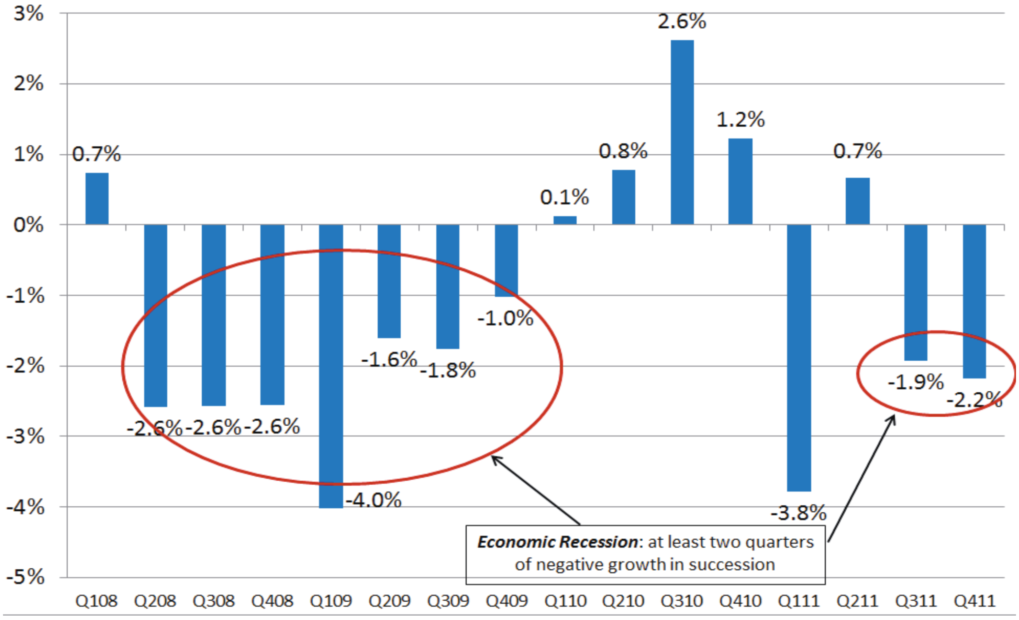


GNP, in contrast, was up marginally in 2010 (+0.3%), having declined by12.3% in volume terms between 2007 and 2009. However the preliminary data for 2011 shows that the volume of GNP suffered a setback again in 2011, as it declined by 2.5% in the full year. Adjusting GDP for net factor income flows (i.e. net external profit and interest inflows), gives the total value of GNP, which fell to €123.9 billion last year. The last time the value og GNP was at this level was in 2003/2004.

Economy records two consecutive quarters of contraction in Q4 2011

However, in terms of the seasonally adjusted quarterly data, the economy technically fell back into recession in Q4 2011, following two consecutive quarterly contractions in GDP of -1.1% and -0.2% respectively in Q3 and Q4. The quarterly data show that GNP also contracted in the last two quarters of 2011 and at an accelerating rate in Q4 (-2.2%) compared with Q3 (-1.9%).

Figure 1.2: Quarter-on-quarter % change in GNP (GNP at constant 2009 prices, seasonally adjusted)



A more detailed analysis of the annual data for 2011 indicates that domestic demand continued to be a drag on the economy with personal consumption down by 2.7% in volume terms on the previous year, while Government expenditure was down by 3.7% in the same period. A further double digit decline in investment (-10.6%) in 2011, the fourth double digit decline in a row, indicates the consistently poor performance from the investment side of the economy. Thus the domestic economy continued to weaken for the fourth year in a row, albeit the rate of decline moderated in 2011. In contrast, the overall positive GDP performance is largely attributable to a favourable export growth performance (+4.1%) although growth was lower than in the previous year (+6.3%). This trend may reflect a weakening in the economic prospects of our main trading partners over the period, a factor which could adversely affect the prospect for an economic recovery during 2012.

...while significant challenges remain

Despite recent modest improvements in aggregate economic activity (on a GDP basis), severe challenges remain:

Lacklustre domestic demand persists as personal consumption, Government expenditure and overall investment look set to remain subdued in 2012. Consumer confidence remains fragile, while the gross household savings rate (as % of disposable income) was elevated at 17.3% in Q3 2011. Households will continue to deleverage in 2012 and 2013 and this, coupled with declining disposable incomes and heightened uncertainty about employment prospects, is likely to result in consumption remaining suppressed with a decline of 1.8% expected this year followed by -1.0% in 2013[1].

[1] ESRI Quarterly Economic Commentary, Winter 2011/Spring 2012

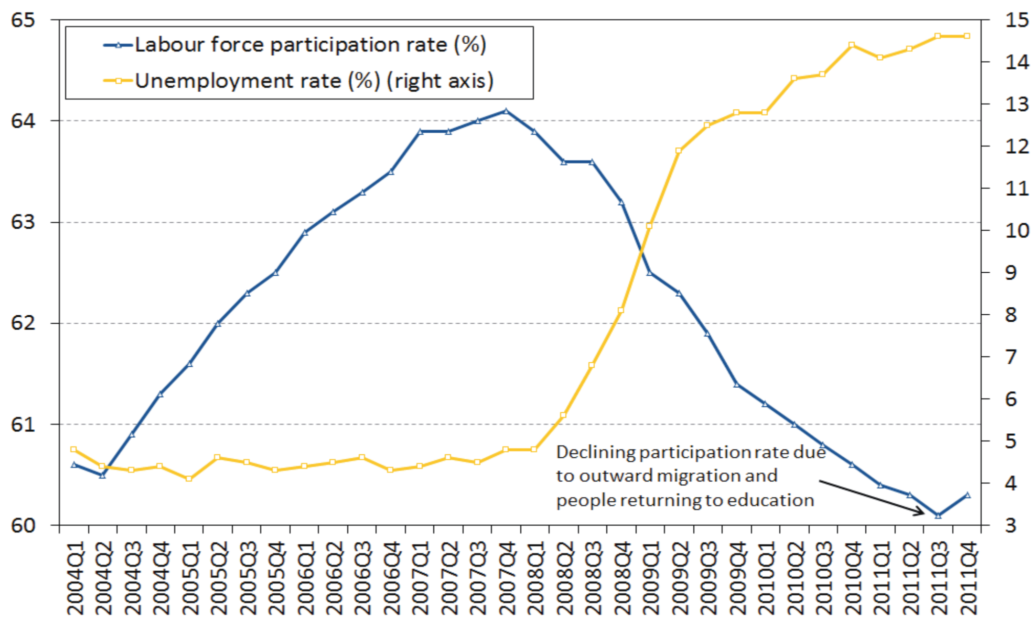
Public expenditure continues to be restrained and is likely to remain subdued for some time as the Government strives to reduce the general government deficit to less than 3% of GDP by 2015. In this respect the Government is constrained on what it can spend over the coming years due to the urgent need to rein in the borrowing requirement as per the stringent terms of the bailout. Budget 2012 was not as extreme as the previous three years however, and it has become apparent that the fiscal drag is being reduced. The most recent focus has been on reducing capital investment in addition to spending on social protection and in the health sector.

There has also been a concerted effort to boost the Government's income with ***revenue raising measures*** in the form of a household charge, a VAT increase and increases in carbon and motor tax rates. Such measures will inevitably reduce disposable incomes, which will further depress economic activity. Further revenue raising measures will be required in forthcoming budgets and apart from a full property tax in 2013 and water charges in 2014, other measures have yet to be identified.

Irish exports also face a particularly challenging climate in 2012. The difficulties in the euro zone have escalated to such an extent that the general consensus is that it will slip into recession in the first half of 2012. The UK economy has already been adversely affected by the euro zone crisis to date and it is inevitable that the protracted crisis in Europe will continue to impinge on external demand in the UK – Ireland's main trading partner. Some solace can be found from modest growth in the US economy in 2011, which has defied expectations. But despite this, the worsening conditions in Europe are an obvious threat to Irish exports and are likely to dampen the recent trend of tentative growth.

The unemployment rate is unlikely to fall any time soon. The greatest challenge remains the level of unemployment. The labour force participation rate has undergone a significant contraction since 2007 due to increased emigration and larger numbers returning to education. Despite a significantly reduced labour force, the unemployment rate in Ireland soared to 14.6% (seasonally adjusted) in Q4 2011, reflecting the extent of the fall off in demand. While the unemployment rate is projected to drop ever so slightly from an estimated 14.2% in 2011 to 14% in 2012 and 13.7% in 2013, this is not reflective of a general improvement in employment conditions. Instead, employment levels are projected to fall further over the coming years and the reduction in the unemployment rate simply captures the fact that the labour force has yet to contract even further.

Fig 1.3: Labour Force Participation Rate Q4 2004-Q3 2011 (seasonally adjusted)



The dramatic reduction - approximately 16% - in the number of persons employed since the peak in Q3 2007 saw almost 350,000 fewer persons employed across the economy in just four years. Current employment levels, totalling approximately 1.8 million in Q4 2011, are just below where they were in 2004. However, in Q1 2004 the 1.82 million employed represented 95% of the labour market, whereas the Q4 2011 level of 1.8 million employees accounted for just 86% of the labour market. This is reflective of the extent to which the labour force expanded to meet the increased demand but also highlights the fact that it has been more rigid in adjusting to the reduced availability of jobs. The ESRI expect employment levels to fall by approximately 1.5% to 1.78 million in 2012 before a more gradual decline of 0.8% to 1.76 million in 2013[1] .

GDP growth expected to moderate in 2012

Having recovered modestly in 2011, economic growth as measured by GDP is expected to moderate to around 0.5%[2] in 2012, based on the latest projections from the central bank. Projections are heavily dependent on Europe steering clear of a major recession.

Personal consumption is likely to remain suppressed well into next year due to weak consumer confidence and a high personal savings ratio. Compounding domestic woes, it is inevitable that Government spending will have to contract even further over the next couple of years, in order to meet the 2015 targets, while investment is unlikely to improve until 2014. In summary, Ireland's over reliance on exports looks set to continue as domestic demand has yet to recover from the full effects of the protracted downturn. While unemployment will remain at a high level, a modest improvement is expected but at the expense of further emigration.

Table 1.1: Key Macroeconomic Indicators for Ireland 2010-2013

	GDP	GNP	Consumption	Government Expenditure	Investment	Exports	Imports
2010 Actual	**-0.4%**	**0.3%**	-0.8%	-3.8%	-24.9%	6.3%	2.7%
2011 Actual	**0.7%**	**-2.5%**	-2.7%	-3.7%	-10.6%	4.1%	-0.7%
2012 Forecasts							
ESRI	**0.9%**	**0.1%**	-1.8%	-2.5%	-3.3%	3.4%	1.1%
Dept. Finance	**1.3%**	**0.7%**	-1.3%	-2.2%	-1.0%	3.6%	1.6%
Central Bank	**0.5%**	**-0.7%**	-1.5%	-4.2%	-3.3%	3.6%	1.6%
OECD	**1.0%**	**-**	-0.5%	-2.1%	-2.7%	3.3%	1.2%
IMF	**0.5%**	**-**	-1.6%	-1.9%	-4.5%	2.8%	1.0%
2013 Forecasts							
ESRI	**2.3%**	**1.0%**	-1.0%	-2.0%	-1.9%	3.8%	1.6%
Dept. Finance	**2.4%**	**1.7%**	0.0%	-2.2%	3.2%	4.5%	2.8%
Central Bank	**2.1%**	**1.0%**	0.2%	-2.0%	-0.9%	4.7%	3.2%
OECD	**2.4%**	**-**	0.5%	-2.2%	2.7%	5.8%	4.7%
IMF	**2.0%**	**-**	0.5%	-1.5%	3.0%	3.8%	2.8%

CSO 2010-2011.
ESRI: February 2012, Spring 2012 QEC
Department of Finance: April 2012
Central Bank: Q2 2012 Quarterly Bulletin
OECD: November 2011
IMF: March 2012

1.2 Construction Review

Against the background of such a challenging economic environment, the construction sector has been through an enormous contraction over the past five years. The speed and scale of the contraction is unprecedented in the history of the State. Starting with the property crash in late 2006/early 2007, which led to a contraction in residential construction, every sector of construction was affected by the economic recession in 2008 and 2009. The two subsequent years of virtual economic stagnation which followed in 2010 and 2011 have seen the value of output across the entire sector fall to well below normal levels over the past two years.

[1] ESRI Quarterly Economic Commentary, February 2012
[2] Central Bank: Q2 2012 Quarterly Bulletin

Construction by its nature is a cyclical industry

Construction industries, just like the economy, generally tend to be subject to fluctuations in activity levels. Such fluctuations give rise to cycles which can involve shifts over time between periods of relatively rapid growth in output and periods of relative stagnation or contraction. The very buoyant period from 1995 to 2007 was unique in that a range of very positive factors co-existed, such as the very strong economic environment, record employment growth, low and stable interest rates, strong growth in foreign direct investment and an expanding public capital programme. All of the aforementioned factors strongly contributed to the record levels of construction activity experienced over the period 1995 to 2007 across all of the broad categories of work.

The economy benefitted significantly from the exceptional amount of new residential and non-residential buildings and infrastructure which was put in place in that time. However, there was also substantial overbuilding in the period, which was accompanied by rampant construction inflation. By 2007, the economy had become increasingly reliant on construction and the industry had totally overshot what would be considered a ‘normal’ level of output, reaching 25% of GNP at the peak.

The subsequent “boom to bust” development in the Irish construction sector over the past four years has equally been unprecedented. The changed economic landscape since 2008 has seen all of these positive factors reverse over recent years, generating profoundly weak indicators right across the sector and leaving the industry in a very fragile state. Thus the long and protracted period of weakness which followed the strongest construction boom on record should not come as a surprise.

The persistent difficulties in the housing market, the combination of high debt levels and ongoing difficulties accessing credit and the reduction in confidence are all affecting potential clients and the demand for new space. Investment by the public sector, which should generally act as a countercyclical measure stimulating the economy in a downturn, has also been cut back sharply in recent years to levels last seen in 2000/2001.

The rate of decline in construction activity over the last four years has been such that, based on the 2011 estimates presented here, the volume of construction output has already declined by almost 65% between 2007 (the peak) and 2011. This scale of contraction is equivalent to an average annual decline of almost 23% over the four year period. The crisis in construction to date has seen the value of output decline to just €8.7 billion last year, or 7% of GNP (5.6% of GDP).

The industry is currently going through a difficult transition back to a situation where more ‘normal’ conditions can prevail and supply and demand levels can move back towards equilibrium. The industry will recover in time and the current painful adjustment is a necessary step in that process.

The Measurement of Construction Output

There are three different measures of construction output[3]. All three measures in the Table below show the substantial contraction in overall output and in the contribution of the construction industry to the economy since 2006.

The official measure of construction output was published by the Department of the Environment, Community and Local Government (DECLG) until 2010 in the annual Construction Industry Review and Outlook (CIRO) publication. This publication contained the official estimates for the value and volume of construction output associated with all new and repair and maintenance projects, across the private and public sectors, each year.

Depending on the measure used, construction accounted for between 6 and 7% of GNP in 2011 although in strict value added terms, the proportion had declined to an estimated 2.6%.

Taking the <u>CIRO measure</u> which is based on expenditure, construction peaked at around 25% of GNP in 2006, falling back to an estimated 7% in 2011. Based on the 2012 estimates presented in this report, construction is expected to fall back to 6.0% of GNP (4.7% of GDP).

Using the <u>investment measure,</u> building and construction output accounted for 6.9% of GNP in 2011 compared with 22% in 2006. The projected share of GNP in 2012 is lower again at 5.9%.

[3] Details and definitions are set out in Box 1.

Table 1.2: Measures of building and construction output (Current prices)

	CIRO* Measure €m	% of GNP	Investment Measure €m	% of GNP	Value-added Measure €m	% of GNP	GNP Current €bn.
2006	38,631	24.9%	33,490	21.6%	15,809	10.2%	155.0
2007	38,601	23.6%	32,999	20.2%	15,215	9.3%	163.4
2008	32,593	21.1%	27,053	17.5%	11,083	7.2%	154.7
2009	18,048	13.6%	16,065	12.1%	5,826	4.4%	132.2
2010	11,700	9.1%	10,236	8.0%	4,014	3.1%	128.2
2011E	8,684	7.0%	8,528	6.9%	3,211	2.6%	123.9
2012E	7,448	6.0%	7,400	5.9%	N/A	N/A	125.1
Contraction in value terms:							
2006-2011	77.5%		74.5%		79.7%		

Sources: DECLG, CSO, DKM.
* CIRO = Construction Industry Review and Outlook to 2010, DKM estimates for 2011 and 2012.

The value-added measure is the most accurate measure of the real contribution of the construction sector to economic activity. It shows construction peaked at 10.7% of GNP in 2006 but had fallen to just 2.6% by 2011. This figure compares with a contribution from agriculture, for example, which is estimated at around 2.4% of GNP in 2011.

All three measures provide evidence of the scale of the contraction which commenced in the industry in 2007. Using constant prices (i.e. adjusting for the effects of inflation), the volume of output in the construction sector between 2006 and 2011 declined by

- 65% using the CIRO measure,
- 59% using the investment measure,[4] and
- 59% using the value added measure.

Box 1: Measurement of Construction Output

(1) The ***CIRO expenditure*** measure calculates the value of work put in place from the construction of buildings and structures and from civil engineering projects plus the value of *major* and *minor* repair and maintenance expenditure on existing building and structures.

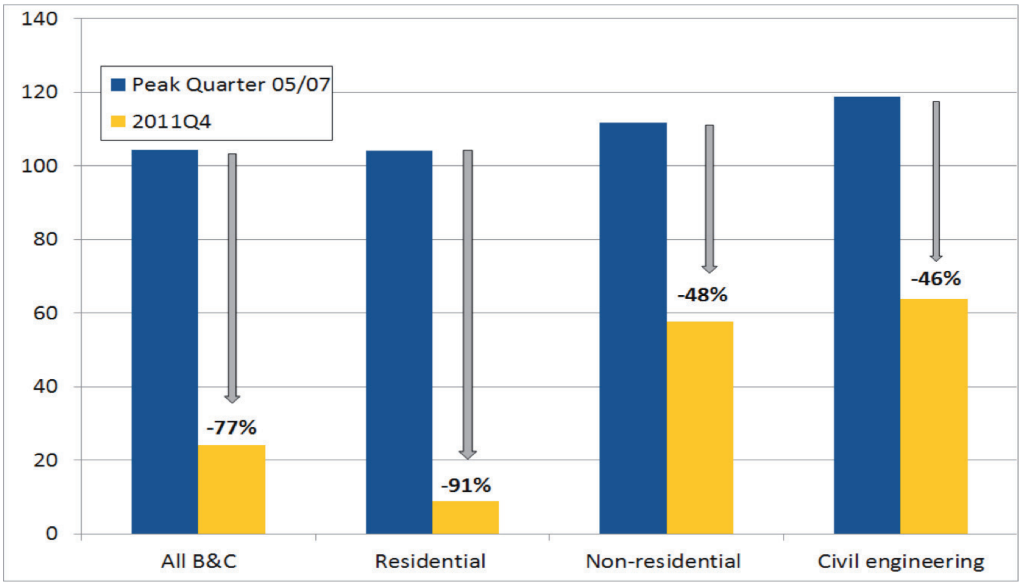
(2) The ***investment*** measure, used by the CSO for the purposes of estimating the fixed investment element of the National Accounts, measures all new investment in building and construction projects plus investment in *major* repair and maintenance work only. This measure includes the costs associated with the transfer of land and buildings (€294 million in 2011) which are normally included in the CSO measure for National Accounts purposes.

(3) The ***output*** or value added measure, also derived by the CSO, amounts to taking the gross value of outputs less the value of intermediate consumption, and consists of the wages and profits earned by building workers and construction companies. It is a more accurate measure of the contribution of the construction sector to economic growth.

[4] Excluding transfer costs, or by 63% including transfer costs.

There is a fourth measure, the new quarterly Production in Building and Construction Index produced by the CSO, which monitors trends in the value and volume of production, based on a sample survey of private firms operating in the building, construction and civil engineering sector[5]. Although this index does not generate values, it too shows the scale of the overall contraction since the peak at 77%, based on data up to 2011. The index suggests that the contraction was most severe for the residential construction sector.

Figure 1.4: Volume of Production Index for Building and Construction (Base Year Index 2005 = 100, seasonally adjusted)



Source: CSO Production in Building and Construction Index.

Based on the above index, which peaked in Q4 2006, the total value of construction output in Q4 2011 would be in line with the 2011 estimate of €8.7 billion above, having also contracted by 77%.

1.3 Construction Inflation

The substantial drop in the volume of work combined with a reduction in the number of firms in the industry have led to very competitive conditions for those projects which have been put out to tender. One outcome of the construction crisis of the past five years has been a considerable reduction in tender prices from the record level achieved at the peak in 2006/2007.

While tender prices generally reflect changes in construction materials and labour costs, they are also subject to a range of other factors including competitiveness, the number of construction projects and the capacity of firms to bid for work, business confidence, different contract forms and general economic conditions.

There are a number of indicators which measure trends in construction costs[6], notably for construction materials and labour. Those available are set out in the next Table.

The most recent annual data for the wholesale prices of building and construction materials show prices increased by 2.6% on average in 2011, almost unchanged from 2010 and the same as general consumer price inflation last year (2.6%). The composite measure known as the capital goods price index, which captures the cost of materials and wages, shows prices were down

[5] Approximately 2,000 firms are surveyed each quarter.

[6] Construction costs should include all costs incurred by the contractor to carry out construction such as the cost of transport, energy, waste disposal and the hire of capital equipment. The construction cost measures which are available generally tend to focus exclusively on construction materials and labour costs, which are probably the most important cost components for construction, while other overheads are not included.

by 2.5% on average in 2011. This was the highest rate of decline in five years. Overall construction costs fell by 1.3% on average in 2011, according to the SCSI Construction Cost Index. The most negative trends arise for average earnings per week which declined for the third year in a row in 2011 and at an accelerating rate (-6%). Based on the CSO's average annual figures for 2011, average earnings in construction fell by 9.5% since 2008. The corresponding fall in general consumer prices was 3% over the same period.

Table 1.3: Trends in Building and Construction Cost Inflation 2007 – 2012

Annual average % changes

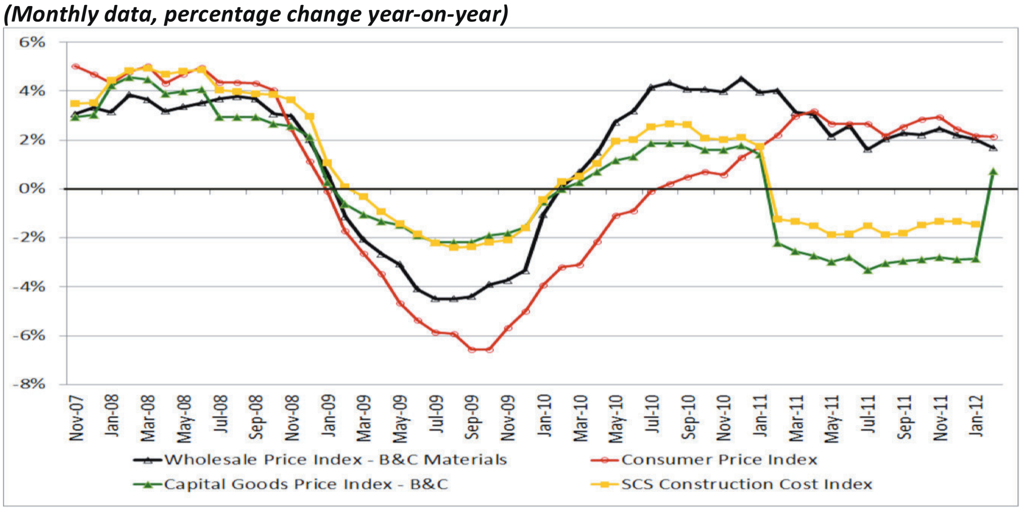
	2007	2008	2009	2010	2011	2012E
Wholesale Price Inflation - B&C Materials	5.3%	3.3%	-3.1%	2.7%	2.6%	2.4%
B&C Capital Goods Price Inflation - Materials and Wages	4.9%	3.4%	-1.5%	1.1%	-2.5%	1.0%
SCSI Construction Cost Inflation	4.5%	4.2%	-1.4%	1.6%	-1.3%	0.0%
Average Earnings per week in B&C	5.8%	1.2%	-0.7%	-3.0%	-6.0%	-3.0%
Consumer Price Inflation	4.9%	4.1%	-4.5%	-1.0%	2.6%	1.5%

Source: CSO, SCSI.

Trends on a monthly basis are shown in the next Chart up to February 2012. The rate of change in wholesale prices of building and construction materials has closely tracked general CPI inflation since March 2011. Wholesale prices were up by 1.7% in February 2012 on the same month in 2011, compared with 2.1% for general CPI inflation. However when construction costs are measured including some component for building and construction earnings, the year-on-year rates of change were negative each month from early 2011 until January 2012 but turned positive in February 2012, reaching 0.7%. The other index measuring costs, the SCSI Construction Cost Index declined by 1.4% in January 2012 (latest available) on the same month last year.

Figure 1.5: Building and Construction Costs

(Monthly data, percentage change year-on-year)



Source: CSO, SCSI.

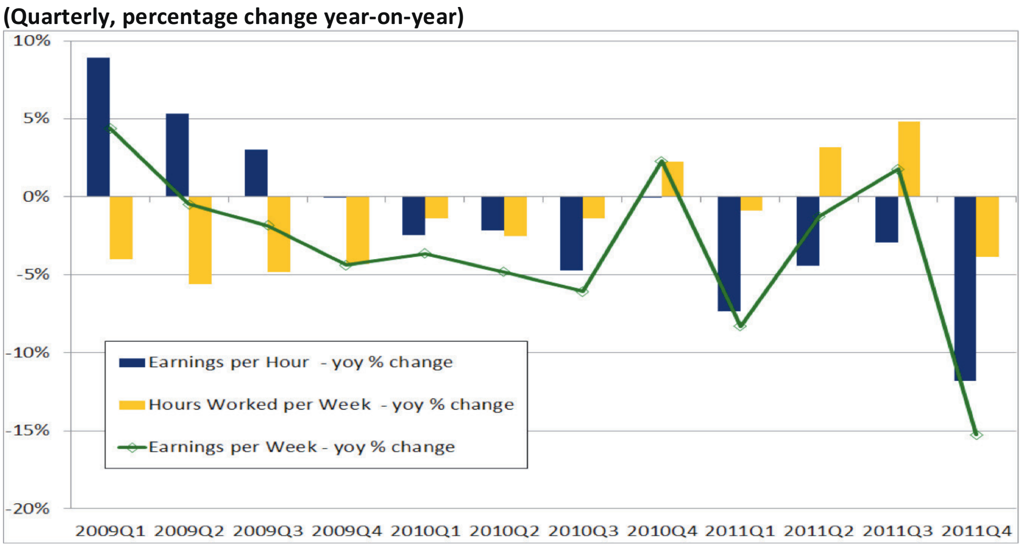
Average earnings in construction

Further information is available on construction earnings and hours worked from the CSO Earnings, Hours and Employment Costs Survey (EHECS), which has been measuring quarterly trends in weekly and hourly earnings and hours worked since Q1 2008. The most recent data relates to Q4 2011 and shows average weekly earnings in construction were down by 15.3% in Q4 2011 on the same quarter in 2010. The average annual rate of decline overall in 2011 was 6% (Table 1.3). The average weekly earnings figure was €654.22 in Q4 2011 or €681 on average in 2011. The corresponding average annual earnings figure for building and construction workers was thus €35,412 in 2011. This figure compares with an earnings peak of €40,108 in Q4 2007[7]. The average earnings figure across all economic sectors was €35,643 in 2011.

Average weekly earnings for construction workers were 5.1% behind the average for all economic sectors in Q4 2011 (€689.54) and were up to one-third below the average earnings of workers in the highest paid economic sectors, notably financial, insurance and real estate and information and communications.

Average hourly earnings in construction have been declining in year on year terms since Q1 2010. By Q4 2011, earnings per hour had declined by 11.8% to €18.65. The average hours worked has been more volatile but had fallen to 35.1 hours per week in Q4 2011, 3.8% below the figure in Q4 2010.

Figure 1.6: Trends in Construction Earnings and Hours Worked



Source: CSO

Table 1.4: Trends in Construction Earnings 2008 – 2011E

	2008	2009	2010	2011
Total Direct Employment (000s, average annual)	235.5	155.9	119.8	107.1
Average Hourly earnings (Euro)	20.1	20.9	20.4	19.1
Average Weekly Paid Hours (Hours)	37.5	35.7	35.4	35.7
Average Earnings per Week (Euro)	752.3	747.2	724.6	681.0
Average Annual Earnings (Euro)	39,118	38,855	37,678	35,412

Source: Employment QNHS, CSO Earnings, Hours and Employment Costs Survey[8]

Overall construction costs down marginally despite downward pressure on earnings

Thus the figures portray an industry which has seen overall construction costs fall marginally in the last four years. The modest reduction reflects continued upward pressure on building material wholesale prices but significant downward pressure on hourly earnings and the number of hours worked.

[7] Although the new earnings series only commenced in Q1, 2008 and covers firms with 3 or more persons engaged, this comparative figure is derived from the old release for Earnings and Hours Worked in the Building and Construction Industry which ceased in Q4 2008. In this old series, which covered firms with 10 or more persons engaged, average earnings peaked in Q4 2007. Average earnings in 2008, the year common to both series, were 9.2% higher in the old data series compared with the new series (from the EHECS). The estimated peak figure under the new series is derived by taking the old Q4 2007 figure of €842.29 per week and reducing it by 9.2% to €771.30 or €40,108 per annum.

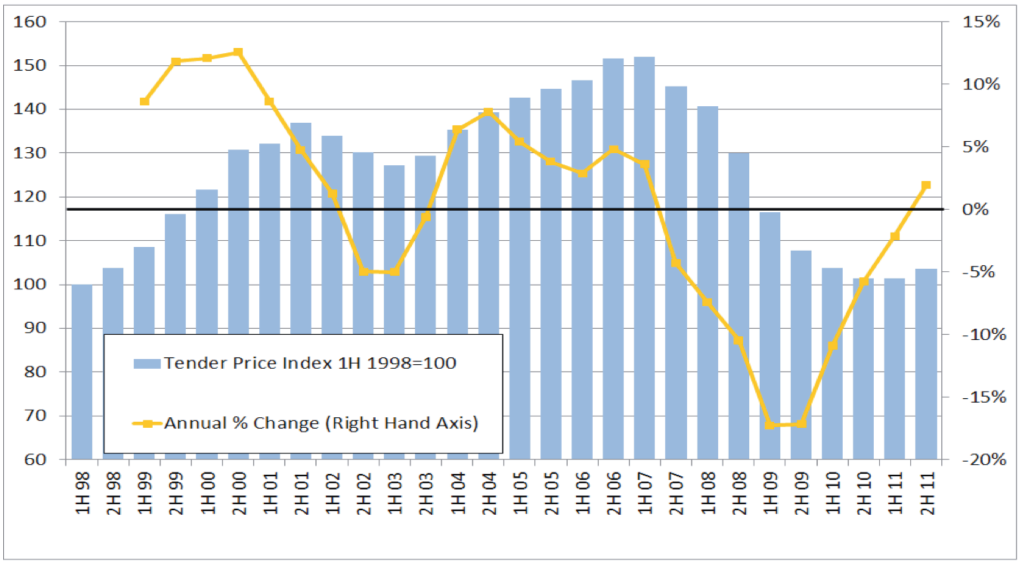
[8] Caution is advised by the CSO in the interpretation of trends in the Construction sector due to the low level of response from the sector.

Tender prices declining for three years - by up to 35% in some sectors

Other evidence on the fragile state of the industry is apparent from trends in tender prices, which capture movements in the prices charged to clients for construction work. Tender prices will vary over time in response to the level of competition in the market and market conditions.

The rapid cessation of construction activity in the period following 2007 has resulted in substantial downward pressure on tender prices since. As firms have been forced to lower their tender prices in an attempt to win work and remain competitive in the face of extremely weak demand, tender prices have fallen rapidly in some sub-sectors. According to the SCSI Tender Price Index, overall tender prices for construction work, on average, fell by one-third between the first half of 2007 and the second half of 2010. Tender prices stabilised in the following six month period with the most recent data indicating an increase of 2% in the second half of 2011. The most recent figure reported for the second half of 2011 was last reported in 1998, bringing tender prices back to where they were 13 years ago. This is part of the necessary adjustment back to a more sustainable level of construction inflation and a more competitive economy.

Figure 1.7: SCSI Tender Price Index



Source: SCSI

While it remains to be seen whether tender prices continue to increase during 2012, it is likely that more realism has been brought into the price equation over recent months. According to Mr. Andrew Nugent, the Chairman of the Quantity Surveying Professional Group of the SCSI:

> *"The levelling off and slight increase in tender prices is also due to a growing realisation that pricing work at below cost and not pricing risk items in tenders is unsustainable. Whilst there is more realism about pricing levels for construction projects recently, there is still a severe shortage of work within all construction sectors and tenders are likely to remain very competitive for the foreseeable future".*[9]

For the purpose of deriving the volume percentage change in the value of construction output this year, average tender prices across each sub-sector are assumed to be flat in 2012 compared with 2011.

[9] http: //www.scsi.ie/tenderindex11

1.4 Construction Outlook 2012

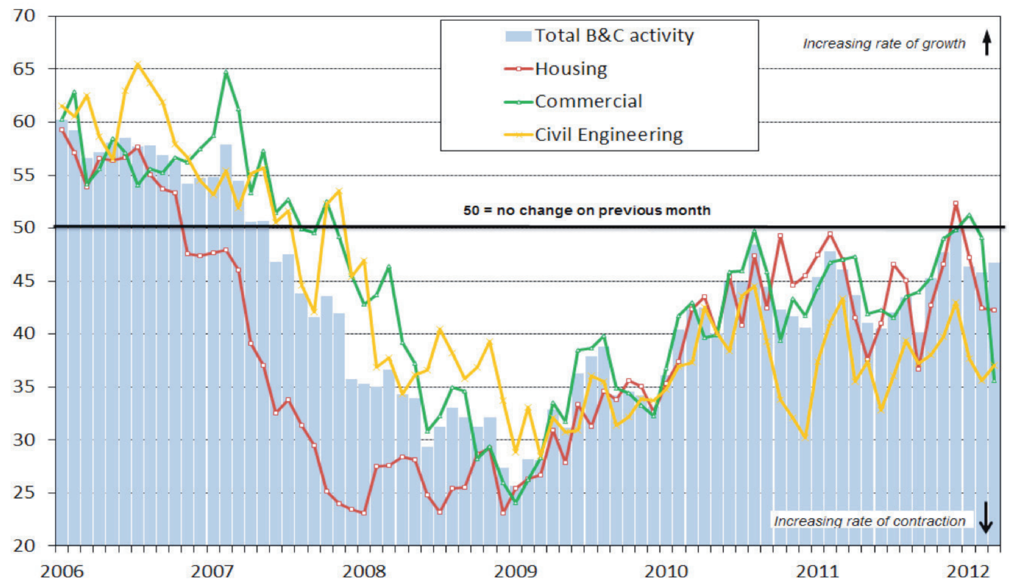
The construction sector continues to face many challenges in 2012, not least of which is the fragile economic environment which is restraining private sector investment. A combination of excess capacity from the boom years across the commercial, industrial and tourism sectors, difficulties accessing finance and the dearth of new orders are responsible for the continued decline in private construction activity in 2012 for the fifth year in a row. As a result confidence in the sector has been severely dented and employment levels have decreased consistently over the past five years[10].

Uncertain economic climate affecting the workload of Construction Purchasing Managers

The most recent Construction Purchasing Managers' Index from the Ulster Bank was disappointing as it remained in contraction at the end of the first quarter of 2012. This followed what appeared to be signs of stabilisation towards the end of 2011. The latest reading pointed to a further reduction in activity, albeit the slowest in 2012 to date.

The index reported that jobs continue to be shed in the sector although at a slower pace than in the previous month. The new orders index was broadly unchanged in March, having declined solidly in the preceding months. However, sentiment regarding future activity levels improved as 465 of respondents expected activity to be higher in twelve months' time from its current low level. That said, a number of respondents reported that a reluctance amongst clients to commit to projects was preventing a rise in new orders. It remains to be seen whether the uncertain economic conditions will lead to further weakness in the overall index over the coming months.

Figure 1.8: Index of Construction Confidence to March 2012



Source: Ulster Bank Construction Purchasing Manager's Index.

The construction bubble has had significant consequences for the public finances, as government revenues became increasingly reliant on temporary sources of revenue (i.e. stamp duties)[11]. The difficulties in the private sector have been further compounded

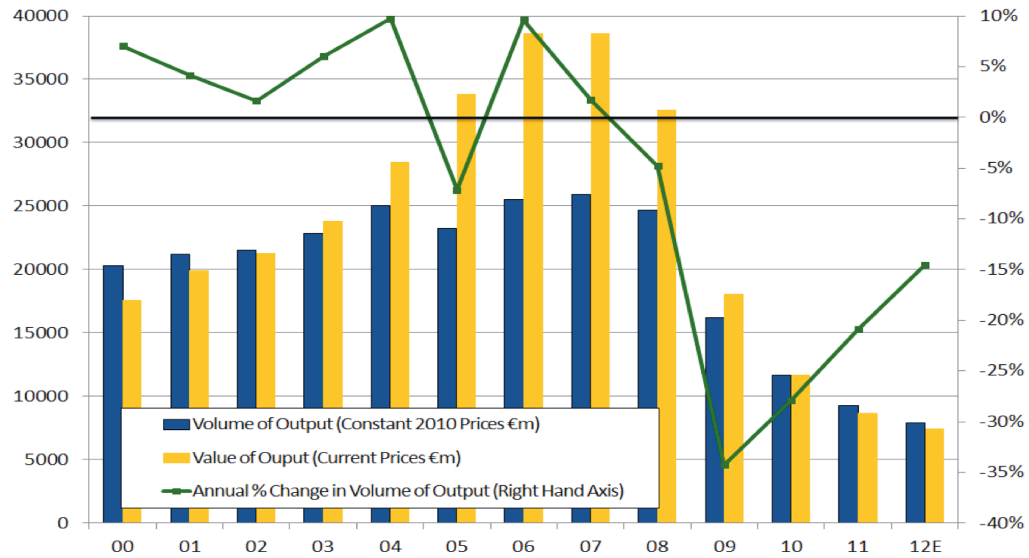
[10] Trends in overall construction employment are presented in Section 3.
[11] http://www.finance.gov.ie/documents/publications/presentation/IrishEconomydec2011.pdf page 8.

by the fact that the dearth of private investment has not been replaced by an increase in public sector investment in construction. Public sector construction activity has been severely curtailed due to the fiscal deficit situation which has resulted in a range of austerity measures in successive Budgets since 2008. Ireland's fiscal deficit was €15.6 billion (10.1% of GDP) at the end of 2011 and has to be reduced to €5.2 billion (2.9% of GDP) by 2015. This will inevitably require further reductions in public capital investment allocations over the next four years. The PCP published with the Revised Estimates for Public Service for 2012[12] contains an Exchequer capital funding provision of just €3.96 billion this year or €7 billion when the non-Exchequer provision[13] is included, compared with €10.4 billion in 2010. The implications of this reduced provision for construction are discussed in Section 2.

Further decline in activity in prospects this year

Based on preliminary estimates for the prospects for the individual sub-sectors of construction activity[14] in 2012 and combining the value of new and repair, maintenance and improvement (RM&I) projects, the prospects for construction reveal a further decline in the volume of output of 14.5% this year, following a decline of 20.9% in 2011. Thus the volume of output is projected to decline for the fifth year in a row this year.

Figure 1.9: Value and Volume of Construction Output 2000-2012E



Source: Annual Construction Industry Review and Outlook publication to 2010.
DKM 2011-2012E.

The following Table illustrates, in summary, the rise and subsequent sharp fall experienced by construction output over the past decade. It gives the value of output in 2000 and 2011 and also shows the average annual growth rates until the volume of industry output peaked in 2007. This contrasts markedly with the most recent five year period after the bubble burst and

12 http://per.gov.ie/wp-content/uploads/REV-2012-Final1.pdf

13 The non-Exchequer capital provision of approximately €3.1 billion in 2012 represents capital investment by semi-state agencies and local authorities from their own resources and from External borrowings/EU receipts. Only a proportion of this investment makes its way into the construction sector.

14 See Section 2.

Table 1.5: Value of Construction Output 2000-2012E

Current prices and volume % changes

	2000	2007	2011	2012E	2000-'07	2007-11	2012E
	Current Prices (€m.)				*Average annual % change in volume of output*		
Residential Building	9,496	23,392	3,763	2,917	7.6%	-26.9%	-22.5%
Private non-Residential Building	3,820	7,116	575	694	6.9%	-41.1%	20.7%
Public Social Infrastructure	1,207	2,327	1,166	930	6.7%	-6.7%	-20.2%
Total Building	14,523	32,835	5,503	4,540	9.1%	-27.1%	-17.8%
Productive Infrastructure - Civils	3,063	5,765	3,181	2,908	4.7%	-8.8%	-8.6%
Total Construction Output	**17,586**	**38,601**	**8,684**	**7,448**	**6.9%**	**-22.7%**	**-14.5%**

Source: Annual Construction Industry Review and Outlook publication to 2010.
DKM 2011-2012E

Trends in construction output by sector are examined in the next Section.

2. Sectoral Analysis

2.1 Introduction

The construction industry is unique in the complexity and variability of the projects which contribute to output in the sector. It includes a variety of buildings of all types, residential and non-residential buildings, civil engineering structures; as well as repair and maintenance projects. The normal breakdown of activity across sectors is as follows[15] :

- **Residential construction**, which covers public and private investment in new housing and renovation projects.
- **Private non-residential construction**, which covers investment by the private sector in buildings including industrial, commercial, agricultural and tourism buildings. Public sector investment by the semi-State companies and Government agencies in buildings is also captured here. The values for new and renovation works are also separated.
- **Social infrastructure,** which covers investment in public buildings, predominantly funded by the Exchequer/public sector and includes educational buildings, healthcare buildings including hospitals, courthouses, prisons, garda stations, public libraries, public swimming pools, museums and all other public buildings which do not fit in the above categories.
- **Productive Infrastructure,** which covers investment in civil engineering projects, is also predominantly funded by the Exchequer/public sector. It includes spending on the national and non-national road network, water services, airports, seaports and harbours, as well as investment by the respective semi-State organisations responsible for transport, energy and telecommunications. There is also some private sector investment by private companies operating in the energy and telecommunications sectors.

The following analysis of the outturn for construction in 2011 and the prospects for 2012 is informed by a number of sources, including

- ✓ The base line position for 2010 captured in the most recent annual ***Construction Industry Review and Outlook*** (CIRO) publication;
- ✓ Surveys undertaken by the SCSI for the purposes of this research[16];
- ✓ Trends in public sector construction from the Public Capital Programme[17];
- ✓ Trends in the private non-residential market, based on published reports from property agents; and
- ✓ DKM's knowledge of the construction sector.

A more detailed examination of the prospects for each sector is provided below.

2.2 Residential Construction

The housing market remains in an exceptionally weak position, having been through a sharp adjustment for the past five years. That adjustment is continuing back towards a more 'normal' market. What constitutes a 'normal' level will require some equilibrium to be reached between demand and supply. Housing activity, whether measured in regard to planning permissions, starts/commencements, completions, mortgage transactions or house prices, has reached an exceptionally low level.

[15] This is the breakdown which was used in the annual Construction Industry Review and Outlook (CIRO) publication, from the Department of the Environment, Communities and Local Government, which ceased in 2010.

[16] The SCSI conducted surveys of Quantity Surveyors and Building Surveyors to inform this research. A separate document summarising the survey results is available from the SCSI.

[17] http://per.gov.ie/wp-content/uploads/REV-2012-Final.pdf

Housing activity well below normal levels

Some sense of the substantial adjustments which have already taken place is evident from the following trends:

- The number of **planning permission** has plummeted since the peak with just 9,489 units granted planning permission in the first nine months of 2011, down 38.9% on the same period in 2010 and compared with 101,653 planning permissions in 2004 (peak). There has been a substantial reduction in the number of apartments granted planning permission with just 1,928 units granted permission in the first nine months of 2011, 68.9% below the corresponding number in the same period of 2010. When residential planning permissions in the first nine months of 2011 are broken down by total floor area (000s square metres), one-off/individual houses accounted for 52%, multi-development/estate houses 35% and apartment accounted for 13%.

- The total number of **units completed** (measured in terms of dwellings connected for electricity) across the State was 10,480 in 2011, 28.2% below the corresponding level in 2010. Of the total of 10,480, 62% represented one-off/individual houses, 25% represent estate houses and 13% represented apartments.

- **Commencements** (a proxy for housing starts) totalled 4,365 units in 2011, 31.7% below the corresponding level in 2010. The vast majority, 79%, were single units, with the following counties accounting for the highest proportions of single units dwellings: Cork County (12% of total), Mayo and Galway County (8% each), Kerry (6%) and Dublin, Limerick County and Clare (4% each). There were just 932 scheme houses commenced in 2011, almost one-third of which were in Cavan, 23% in Dublin (including 11% in Fingal) and 10% in County Louth. In the context of these very low numbers, any projections for the number of new dwellings built should take these into account (see below).

- Based on data from the Irish Banking Federation (IBF) the total value of **mortgages advanced** for the purchase of dwellings was €2.1 billion for 11,050 loans in 2011. Of the total funds advanced, first-time buyers accounted for 53%, existing owners moving house represented 44% while investors represented just 4%. The average loan in 2011, based on the loans advance for the purchase of a dwelling, was €189,502. The corresponding average loan for first time buyers was €174,600.

- The latest official data available on **residential property prices** from the Central Statistics Office (CSO) shows that property prices, on average, were down by 17.8% in february 2012 on the same month in 2011 and by almost 50% since the peak[18] . Based on the peak house price value from the permanent-tsb index (now discontinued), this would suggest an average house price currently of around €155,000, which is equivalent to 4.3 time average earnings.

Factors expected to restrain recovery in the private market

The timing of the return to a more 'normal' market is likely to be influenced by a number of factors, including the following.

a) ***Consistently weak consumer sentiment*** as householders remain cautious about economic and job prospects in the current era of austerity. There were the provisions in the Budget for increases in VAT, Motor Tax and Carbon Tax as well as the full property tax, which is to be introduced in 2013 to replace the current €100 residential property charge. Other charges, notably water charges, are expected in the medium-term while the remaining steps to restore the public finances to a sustainable position will necessitate additional fiscal consolidation measures in forthcoming budgets. All point to further pressures on disposable incomes and thus consumer confidence.

b) ***The lack of access to credit*** for those seeking mortgages coupled with an unwillingness amongst households to seek funding at this time, due to low confidence, remains a substantial barrier to transactions.

c) ***The build-up of new unsold stock*** estimated by the DECLG[19] at 18,638 or close to 1% of the total housing stock. There will also be the vacant units which are expected to be released by NAMA[20] plus the potential number of properties held by over indebted buy to let borrowers, which the banks are coming under pressure to repossess. The most recent results from the 2011 Census estimated the total vacancy rate (new and second-hand) across the housing stock at 14.7%.

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18 The CSO Index is based on mortgage based transactions by eight of the main mortgage lending institutions and thus excludes cash based transactions. Recent research by Goodbody and Davy and press statements from NAMA suggest that the true rate of price decline since the peak is of the order of 60% when cash sales are included. See http://www.rte.ie/news/2012/0314/nama-business.html?view=print

19 http://www.environ.ie/en/Publications/DevelopmentandHousing/Housing/HousingSurvey2011/

20 http://www.environ.ie/en/DevelopmentHousing/Housing/News/MainBody,29071,en.htm

Table 2.1: Housing Stock and Vacant Dwellings, 2011

	2011
State	
Housing stock 2011 (Number)	2,004,175
Vacant dwellings 2011 (Number)	294,202
Vacancy rate 2011 (%)	14.7
Actual change in vacant dwellings 2006-2011 (Number)	27,880

Source: CSO 2011 Census of Population. Figures are preliminary only.

d) ***Negative equity and mortgage arrears*** with an estimated 13.1% of mortgaged households (approximately 151,000) in negative equity at the end of 2010, based on Central Bank Research[21]. The increase in unemployment for some households combined with falling disposable incomes for others has resulted in an increase in mortgage arrears, with almost 71,000 or 9.2% of private residential mortgage accounts in arrears for more than 90 days at the end of December 2011. The corresponding value of mortgages in arrears was almost €14bn of which €1.12bn represented the value of arrears.

2.2.1 Challenges also exist in respect of the social housing sector

There are also challenges in the social housing sector, not least of which is the escalating number of households on social housing list. The most recent national assessment shows that at 31 March 2011, just over 98,000 households (circa 6% of the total) were in need compared with over 56,000 in 2008, an increase of over 75%. The figure is likely to be higher in March 2012 given the challenging economic background.

Some €691 million is available in capital and current funding to support a broad range of measures under the Social Housing Investment Programme for 2012[22]. Of this, capital funding of €390 million, which is around 19% below the corresponding provision in 2011, is being provided for housing construction, regeneration and improvement works this year (in Limerick city, Ballymun and other locations in Dublin city), to improve the standard and energy efficiency of the national social housing stock, as well as to meet commitments under existing contracts for delivering social and voluntary houses. The current budget will support flexible housing supply models based around the leasing of properties (e.g. the Capital Advance Leasing Facility[23]), including properties being made available by NAMA this year.

All of the investments under the public housing programme are expected to deliver between 3,500 and 4,000 additional social housing units this year. Additionally, investment in improving the social housing stock is expected to make some 1,500 properties, which are vacant at present, available for re-letting this year. But in the context of a growing social housing list, these figures are well short of what is needed.

2.2.2 Retrofitting expected to be a key growth area

One area supporting the private housing RM&I sector has been investment in energy efficiency. The Government has committed to achieving a 20% reduction in energy demand across the whole of the economy through energy efficiency measures by 2020. It is expected that the residential sector will contribute 35% of the targeted savings.

In recent years funds have been allocated for improving the energy efficiency of the residential building stock. This funding has taken the form of direct grant payments to households. It is estimated that to date over €300 million in public and private funding has been spent on 270,000 energy efficient measures in 110,000 homes[24].

21 Kelly, R. McCarthy, Y. and Mc Quinn, K. Impairment and Negative Equity in the Irish Mortgage Market, Research Technical Paper, Central Bank of Ireland, May 2011.
22 http://www.environ.ie/en/DevelopmentHousing/Housing/News/MainBody,29654,en.htm
23 €20m has been set aside in 2012 for the Capital Advance Leasing Facility which provides an up-front equity stake of up to 30% of the property value to approved voluntary housing bodies who raise private finance to acquire or build new social housing units, using leasing payments to repay loans in respect of their equity share.
24 http://per.gov.ie/wp-content/uploads/Infrastructure-and-Capital-Investment-2012-20161.pdf page 28.

The existing grant supports in this area are captured under the *Better Energy: the National Upgrade Programme* - which was launched in May 2011 and replaces previous energy efficiency and renewable energy programmes: the Home Energy Savings Scheme (HES), the Warmer Homes Scheme (WHS) and the Greener Homes Scheme (GHS). The Better Energy programme is designed to support the energy efficiency upgrades of one million homes, businesses and public buildings.

The total capital allocation this year in grant supports is €76.1 million for energy efficiency measures in private residential housing, low income homes and the public and commercial sectors. Although the Government is committed to providing a significant level of support in 2012 and 2013, it has signalled that there will be a transition to a non-Exchequer based funding model no later than the start of 2014[25].

2.2.3 Overall prospects for new residential construction

The most appropriate indicator of new build at present and in the future is the level of commencements. The measure of completions, based on electricity connections, is no longer an accurate measure of new building as they include transactions (and electricity connections) for units which were built in previous years. Based on the total commencements for 2011 (4,365 units) plus a lower estimate for 2012, **the number of new dwellings completions this year is forecast at 5,000 compared with an estimate of 6,400 in 2011**[26].

2.2.4 Overall prospects for housing RM&I

In the private residential sector, a surprisingly high proportion (c. 80%) of work was reported in the **QS Survey** to be in the RM&I sector. A number of such projects related to one-off houses and apartment developments. A number of QS respondents reported that distressed property remediation, such as the repair and upgrade of Dublin City Council housing stock was an important source of RM&I work. However the available funding to local authorities for remediation works is lower this year compared with previous years, implying less work is likely to be put out to tender over the remainder of the year. Nonetheless despite the **QS Survey** reporting an overall reduction in residential contracts, the RM&I sector was seen as increasingly becoming the principal source of work for some respondents.

The total housing RM&I market was worth an estimated €2.83 billion in 2010. The RM&I figure covers investment by households in major housing improvements and minor housing repair works as well as public sector investment in refurbishment of the public housing stock. In terms of expenditure by the private sector, the overall volume of housing RM&I expenditure is estimated to have declined by 10% in 2011, as household incomes continued to be affected by adverse developments in the economy.

Notwithstanding the boost from energy efficiency measures and a focus on renovation and improvement works by the local authority sector, **overall investment in housing RM&I is forecast to decline by almost 8.5% in volume terms in 2012** as private household incomes and local authority funding continue to be affected by austerity and fiscal consolidation measures.

2.3 Non-residential Construction

Non-residential construction captures all investment in non-residential buildings by the private and public sectors.

The private non-residential building sector has seen the value of construction output collapse from unprecedented levels reached during the boom years. The total value of new industrial, office, retail and other private sector buildings put in place reached almost €6 billion in 2007. Since then the ongoing economic challenges have taken their toll on private non-residential construction activity. The volume of commercial and industrial development activity fell to unsustainably low levels in 2011. This is a reflection not just of the adverse economic climate over recent years, which has dented confidence amongst developers, but also the level of vacant commercial stock and difficulties accessing finance.

Activity in the Dublin office letting market was weak in Q1 2012 as many corporate occupiers put their expansions/relocation plans on hold, due to the uncertain economic climate[27]. Demand rose significantly in Q1 2012, however, and a number of negotiations are in prospect and are expected to be reflected in the take-up figures later in the year. Despite relatively high

[25] http://per.gov.ie/wp-content/uploads/Infrastructure-and-Capital-Investment-2012-20161.pdf page 28
[26] This figure includes an estimate for new public sector dwellings which are not included in the commencements figure.
[27] Dublin Office Market Review, CBRE Research, Q1 2012
[28] The office vacancy rate in Dublin fell slightly in Q1 2012 to 22.9%, according to the above research by CBRE for Q1 2012.

vacancy rates[28], CBRE research indicates that there is a complete lack of new office development in Dublin, although older stock being vacated is adding to the vacant stock. The main sectors seeking accommodation[29] in the first quarter were business services, computer and high-tech, financial services, manufacturing, industry and energy companies.

The **QS Survey** reported strong activity in the private non-residential building sector, with much of it from commercial and industrial contracts. Projects in the commercial building sector related predominantly to office and administration buildings. Demand in the industrial market is fuelled by new projects from companies which are expanding activity or in growth sectors, including new FDI announcements. Much of the work was reported to relate to data processing centres and factories, while the recent announcements in the FDI sector were also highlighted. The latter include companies like Intel, Amgen and Eli Lilly, all of which are expected to boost the volume of industrial construction work in the medium term. On foot of the QS Survey, the total market value of new industrial and commercial work was revised upwards in 2011 and 2012. The value of industrial building output (new and RM&I) is projected at €339m in 2012, a volume increase of 71%; the corresponding value of commercial building output is projected at €216m, a volume increase of 10.8%.

The private non-residential building sector also captures investment in buildings and facilities by the agricultural and tourism sectors. Investment in both sectors has fallen substantially in recent years - due to 1) the record investment levels by the agriculture sector in 2007/2008, and 2) the over investment in the hotel sector during the Celtic Tiger period. The prospects for construction in each sector are expected to remain weak in 2012.

Public sector non-residential buildings, otherwise classified as social infrastructure, captures investment in public buildings funded by the public capital programme. Over 80% of the estimated value of construction output in 2011 represents contracts in the education and health sectors. Other public sector projects comprise investment in public sport facilities, local authority services (e.g. fire/garda stations, prisons, museums and public swimming pools) and building investment in the Gaeltacht areas.

The overall prospects for public sector construction and the provisions for capital investment in public sector building projects are covered in Section 2.4 which reviews the most recent public capital programme allocations.

2.4 Public Sector Construction

2.4.1 Provisions in the Public Capital Programme

The most recent provisions for public capital investment were published with the Revised Estimates for Public Service in February 2012[30]. More detailed information on infrastructure plans and priorities was provided in a document entitled *Infrastructure and Capital Investment 2012-2016*[31] published last November[32].

The five-year capital investment programme provides for a budget of €17.1 billion, of which €3.96 billion (23%) consists of the Exchequer provision for 2012. Looking at the provisions for the three years 2012-2014, the total is €10.6 billion, a reduction of 9.4% on the corresponding provision published in 2011 for the same period. The immediate reduction in Exchequer capital spending this year is 12.2% on the outturn for 2011 or €350 million compared with the estimate provided in July 2011. The current plan projects a further 14% decline in 2013 followed by a 5% decline in 2014.

The Table below also includes the total public capital programme (PCP) provision[33] for 2012 of €7 billion which is 1% above the 2011 provision. While most categories of investment are projected to decline this year, two areas record an increase: 1) Energy (+15%), reflecting a substantial increase in the public capital allocation for Bord Na Móna (+265%), Bord Gáis Éireann (+70%) and Eirgrid (+41%); and 2) Housing (+60%), although the total housing provision of €1 billion declines by 19% when local authority housing loans (€568m) are excluded.

29 According to CBRE Market Research.
30 February 2012 (page 271).
31 November 2011.
32 Although in the intervening three months some projects included in the November publication have been postponed, most notably the Mater Children's Hospital, following rejection by An Bord Pleanála in February.
33 The differences between the PCP and the MAECIF (€3.07 million) represent non-Exchequer capital investment by state agencies and local authorities from their own resources and external borrowings.

Table 2.2: Multi-Annual Capital Investment Provisions 2012-2014

(€ millions)	2011	2012E	2013F	2014F	2012-2014F	2012E	2013F	2014F
							annual % change	
Rev Estimates July 2011, MAECIF	4,690	4,312	3,900	3,500	**11,712**	-8.1%	-9.6%	-10.3%
Rev Estimates Feb 2012, MAECIF	4,512	3,962	3,407	3,236	**10,605**	-12.2%	-14.0%	-5.0%
Total PCP	6,963	7,034			-9.4%	+1.0%		

E = estimate. F = Forecast
MAECIF = Multi-Annual Exchequer Capital Investment Framework.
PCP = Public Capital Programme, which includes non-Exchequer capital investment.
Source: MAECIF from Revised Estimates for Public Service, July 2011 and February 2012.
The above figures include investment in machinery and equipment as well as in building and construction.

2.4.2 Main infrastructure spending departments account for 75% of total capital spend

Within the Exchequer allocation, the main Government departments which generate building, construction and civil engineering investment opportunities are:

- ✓ **Transport, Tourism and Sport (TT&S),** responsible for investment in the national and non-national road network, public transport, maritime, tourism and sport infrastructure.
- ✓ **Environment, Community and Local Government (ECLG),** responsible for investment in social housing, water, waste management, library service, fire and emergency services and rural development programmes,
- ✓ **Education and Skills (E&S),** responsible for investment in primary, secondary and third level educational infrastructure, and
- ✓ **Health,** responsible, in conjunction with the Health Services Executive, for investment in hospital and health infrastructure.

The four departments between them are expected to account for almost three-quarters of the total capital investment over the period 2012-2014.

Table 2.3: Projected Direct Exchequer Capital Investment Provisions 2012-2014

	2011	2012E	2013F	2014F	*2012*	2012E	2013F	2014F
		millions of euro			*% share*		*annual % change*	
MAECIF	**4,512**	**3,962**	**3,407**	**3,236**	***100%***	**-12.2%**	**-14.0%**	**-5.0%**
of which								
DTT&S	1,502	1,245	900	879	*31%*	-17.1%	-27.7%	-2.3%
DECLG	1,048	861	760	558	*22%*	-17.8%	-11.7%	-26.6%
DE&S	501	430	415	475	*11%*	-14.2%	-3.5%	14.5%
Health	399	398	390	390	*10%*	-0.3%	-2.0%	0.0%

Source: MAECIF from revised Estimates for Public Service, July 2011 and February 2012.

2.4.3 Priority projects

The Government's priorities with regard to the Capital Investment Programme essentially revolve around three key areas namely ***education*** and the provision of new schools, ***health*** and ***enterprise*** i.e. projects that will result in sustainable employment. The majority of projects that fall outside of this scope have been 'shelved' for the foreseeable future.

Maximising value for money and economic and social impact has been stated as the primary objective behind the current policy. The PCP has identified the following projects as key priorities over the period of the plan:

- **Educational Infrastructure**: The Department of Education and Skills (DES) will receive €430 million in 2012 or €1.3 billion for capital projects over the next three years.

  The above figures would appear to be consistent with the recent announcement[34] regarding 219 new major school building projects which are to begin over the next five years as part of a €2 billion capital investment programme. These schools are in addition to 56 other building projects which were already announced for 2012. Recent plans announced also include alternative methods of delivering projects with agencies like the Office of Public Works, the Vocational Educational Committees, the National Development Finance Agency and county council all assisting with the delivery of school building projects. However, the overall capital allocation for the Department of Education and Skills is down 14.2% in 2012.

- **Health Infrastructure**: The existing planned levels of health capital investment are unchanged over the period at around €390m per annum. The National Children's Hospital had been prioritised in addition to the replacement of the Central Mental Hospital and other mental health facilities. It was estimated in the November 2011 programme that the National Children's Hospital would commence in 2013 with the duration of construction expected to be approximately 2 years. The estimated cost of building the hospital was €650 million. However, in February 2012, the hospital was rejected by An Bord Pleanála on planning grounds, and the Government is now considering a scaled down version of the hospital and alternative sites. Investment in 2012 will be directed towards the National Project for Radiation Oncology at St. James Hospital in addition to primary care centres nationwide.

- **Transport Infrastructure**: The Minister for Transport has also outlined plans to link the Luas lines in Dublin, along with a line for Broadstone to Broombridge, where it will link up with Maynooth commuter trains. This represents the only rail project sanctioned over the 5 year plan.

- **Environmental Infrastructure**: Water services investment has been outlined as an important element of the PCP. Over the five years, almost €1.6 billion of Exchequer resources will be committed to ensure adequate capacity and adhere to environmental targets. Also outlined in the plan was a continuing commitment to investing in flood defence.

- **Housing Infrastructure**: The capital budget for the provision of the social housing programme will be focused on the Limerick Regeneration Programme, fulfilment of Part V commitments as they arise, funding for Traveller accommodation in addition to funding to cover the capital cost of small scale special needs projects delivered by voluntary housing bodies.

- **Justice**: The Prison Service Rebuilding Programme will be prioritised, with an allocation of almost €25 million in 2012.

- **Tourism Infrastructure**: Resources will be directed towards the invigoration of existing attractions.

2.4.4 Deferred projects

The November 2011 Infrastructure report also confirmed the various projects that have been deferred[35]. These include the following:

- Metro North (estimated to cost €3 billion plus) and Dart underground (estimated at €2.5 billion).

- Metro West has been deferred for consideration in 2015.

- Thornton Hall Prison - shelved due to constrained finances, however, there will be a limited allocation available to provide for additional spaces at existing prison locations.

- The DIT campus at Grangegorman, although it has been indicated that planning will take place towards an initial PPP project for possible completion in 2017.

- The Western Rail Corridor, also deferred for consideration in 2015 in advance of the next Public Capital Programme.

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[34] http://www.education.ie/home/home.jsp?maincat=10861&ecategory=10876&sectionpage=12251&12251&language=EN&link001&page=1&doc=56781

[35] http://per.gov.ie/wp-content/uploads/infrastructure-and-Capital-Investment-2012-20161.pdf November 2011.

It is clear that transport has suffered greatly as a result of the revised investment programme. However the Department of Transport will be allocated €4.7 billion over the five years which will be allocated primarily to public transport and existing road projects, but represents a reduction of just over €1 billion compared to projections provided for in the National Recovery Plan.

2.4.5 Other infrastructure funds

The multi-annual capital spending programme is expected to be supplemented by proceeds (approximately €1 billion) resulting from the sale of State assets from 2013.

In September 2011 the Government announced the establishment of a ***Strategic Investment Fund*** (SIF) which will take the form of a portfolio of funds investing in areas of importance to the Irish economy including infrastructure as well as financing for SMEs and venture capital. Last November the National Pension Reserve Fund announced a commitment of €250 million to the SIF which is seeking up to €1 billion from institutional investors in Ireland and overseas. The infrastructure fund will offer a potential source of new capital for investment in new infrastructure projects in Ireland, either directly or via the reinvestment of proceeds from sales of existing infrastructure assets.

Finally other funding in the form of working capital is likely to be made available by the National Asset Management Agency (NAMA) which will create development opportunities for the completion of selected unfinished estates or for the development of land.

2.4.6 Implications of the PCP provisions

The general rule in regard to the PCP provisions is that the construction related element represents approximately 75% of the Exchequer allocations and 60% of the non-Exchequer provisions.

In considering the 2011 outturn and the prospects for public sector construction investment in 2012, the annual allocations for each category of investment[36] (e.g. roads, public transport, hospitals, education) in 2011 and 2012 are estimated based on the percentages above and DKM's knowledge of the sector. For the few areas where categories are not separately identified (e.g. Ports and Harbours), the figures are estimated by DKM.

The one area where public sector investment is expected to increase in 2012 is Energy, reflecting the increased allocations for ESB, Eirgrid and Bord Gáis Éireann and the positive prospects for renewable energy projects.

2.5 RM&I Expenditure

The **QS Survey** sought information on the RM&I type projects which QS firms were undertaking at present.

In regard to housing, the respondents mentioned local authority housing repair and upgrade projects for Dublin City Council and refurbishment of apartments.

In the private non-residential sector, projects included administration buildings in the pharmaceutical sector, and internal improvements for a banking entity.

In the public non-residential sector, projects mentioned included refurbishment and fit out of an existing office accommodation for semi-state entity, refurbishment of municipal or public buildings, fire stations, libraries, community buildings etc.; schools summer works scheme structure and fabric repairs; third level administration and teaching buildings.

The overall prospects for RM&I over the forecast period remain weak, reflecting the difficult trading conditions for many companies, concerns about the economic prospects and job losses, and the inability to secure finance from lending institutions. Non-residential RM&I expenditure is estimated to have declined by around 20% in 2011 with a similar decline forecast for this year. Including the prospects for housing RM&I, **the overall decline in RM&I expenditure is expected to moderate to -12% in 2012 from an estimated -13.5% in 2011.**

[36] The Revised estimates for Public Service (February 2012) provide details on the annual PCP provisions at a programme level (e.g. Public Transport, Roads, Housing, Water, Hospitals etc.) in Appendix 11.

2.6 Overall Construction Prospects in 2012

Taking the estimates for the value of construction output in each sector, **the total value (new and RM&I) of construction output is estimated at €7.4 billion in 2012**. This is 14.2% below the corresponding value in 2011 (€8.7bn) or 14.5% in volume terms after allowance is made for construction inflation.

The next Table provides details on the value and volume of work by sector (new and RM&I combined) in 2010 and 2011 together with the estimate for construction output in 2012E.

Table 2.4: Value, Volume and Percentage Change in Construction Output 2010-2012E

	2010	2011	2012E	2010	2011	2012E	2010	2011	2012E
	Current prices €m.			*Constant 2010 Prices €m.*			*Annual % change in volume*		
Residential Construction									
Private Housing	3,828	2,963	2,467	3,828	3,292	2,741	-31.4%	-14.0%	-16.8%
Public Housing	1,062	800	500	1,062	889	500	-7.3%	-16.3%	-43.8%
Sub Total	**4,890**	**3,763**	**2,967**	**4,890**	**4,181**	**3,241**	**-27.3%**	**-14.5%**	**-22.5%**
Private Non-residential Construction									
Industry	169	198	339	169	204	339	-70.9%	21.0%	71.1%
Commercial	250	195	216	250	201	216	-76.6%	-19.6%	10.8%
Agricultural	150	120	87	150	124	87	-44.6%	-17.5%	-27.5%
Tourism	66	35	31	66	36	32	-75.3%	-45.5%	-11.4%
Worship	35	27	21	35	28	22	11.1%	-19.7%	-22.2%
Sub Total	**670**	**575**	**694**	**670**	**593**	**715**	**-69.8%**	**-11.5%**	**20.7%**
Productive Infrastructure									
Roads	1,345	932	809	1,345	961	834	-38.5%	-28.5%	-13.2%
Water Services	983	788	661	983	812	681	-4.1%	-17.4%	-16.1%
Airports/Seaports	117	80	65	117	82	67	-74.3%	-29.7%	-18.2%
Energy	1,300	907	1,000	1,300	935	1,031	20.1%	-28.1%	10.3%
Transport	485	325	250	485	335	258	-7.4%	-31.1%	-22.9%
Communications	240	150	123	240	155	126	-6.0%	-35.6%	-18.3%
Sub Total	**4,470**	**3,181**	**2,908**	**4,470**	**3,279**	**3,016**	**-19.2%**	**-26.6%**	**-8.6%**
Social Infrastructure									
Education	825	623	507	825	642	522	23.6%	-22.2%	-18.7%
Health	348	328	277	348	338	286	-15.2%	-2.8%	-15.5%
Public Buildings	261	97	80	261	100	83	-20.1%	-61.7%	-17.2%
Other Social	237	118	66	237	121	68	-32.0%	-48.8%	-43.8%
Sub Total	**1,671**	**1,166**	**930**	**1,671**	**1,202**	**959**	**-4.7%**	**-28.1%**	**-20.2%**
Total All Construction	**11,700**	**8,684**	**7,448**	**11,700**	**9,254**	**7,912**	**-27.9%**	**-20.9%**	**-14.5%**
of which									
New Construction	7,330	5,214	**4,467**	7,330	5,488	4,652	-33.5%	-25.1%	**-15.2%**
RM&I Construction	4,370	3,471	**3,049**	4,370	3,766	3,260	-15.9%	-13.8%	**-13.4%**

The above figures include repair and maintenance expenditure.

2.7 Preliminary Assessment of Prospects in 2013

A preliminary assessment of the prospects for construction output in 2013 suggests that the volume of output will decline again in 2013, for the sixth year in a row. Apart from some very modest improvement in the output related to private non-residential construction, albeit from a very low base, all other sectors are expected to be weaker in 2013. The total number of dwellings built next year is expected to continue on a downward trend as any recovery in private housebuilding is likely to require a sustained improvement in demand and a significant run down of the vacant stock before housebuilding resumes. Existing debt levels in the development sector and access to finance are also likely to hold back any recovery in 2013.

The analysis of public sector construction shows a further planned reduction in the Exchequer capital allocation in 2013 (-14% in Table 2.3), which indicates that the public sector contribution to construction output will be less again next year compared with 2012.

The expectation is that 2013 will be the trough of the current contraction in construction, with some potential recovery in housebuilding expected in 2014, albeit from an exceptionally low base, as well as in private sector building activity. Although the public sector allocations are lower again 2014, there is a substantial increased capital provision (+14%) for projects in the Education and Skills sector.

Thus the preliminary prospects indicate a further contraction in overall construction output of 6.6% in volume terms in 2013. The corresponding value of construction is forecast at €7.1 billion, after allowing for a recovery in tender price inflation of 2%[37].

Table 2.5: Preliminary Prospects for 2013

Current prices and volume % changes

	2011 (€m)	2009	2010	2011	2012E	2013F
		% change in volume of construction output				
Residential Building	3,763	-45.9%	-27.3%	-14.5%	-22.5%	-5.2%
Private non-Residential Building	575	-52.2%	-69.8%	-11.5%	20.7%	0.7%
Public non-Residential Building	1,166	-6.9%	-4.7%	-28.1%	-20.2%	-4.0%
Total Building	5,503	-43.5%	-32.4%	-17.4%	-17.8%	-4.1%
Productive Infrastructure - Civils	3,181	-3.5%	-19.2%	-26.6%	-8.6%	-10.6%
Total Construction Output	**8,684**	**-34.2%**	**-27.9%**	**-20.9%**	**-14.5%**	**-6.6%**

Source: Annual Construction Industry Review and Outlook publication to 2010.
DKM 2011-2013F

But as indicated earlier, the industry is going through a difficult transition back to a situation where more 'normal' conditions can prevail and supply and demand levels can move back towards more sustainable levels. The industry will recover in time and the current painful adjustment is a necessary step in that process. The hope is that in 2014 there will be some evidence of stabilisation and possibly a resumption of output growth, after six years of decline.

[37] Construction output in constant (2010) prices is forecast to decline to €7.39 billion in 2013 from €7.91 billion in 2012.

[38] Over the 25 years 1984 to 2011 the construction industry accounted for almost 16% of GNP on average. Excluding the exceptional boom period 1994-2007, construction output accounted for around 12% of GNP over the period 1984 to 1993. In 15 countries across Western Europe construction represented 10.2% of GDP in 2011; the highest percentages were in Finland (15.1%), Norway and Portugal (11.9% each) (Source Euroconstruct, November 2011).

2.8 What Level of Construction Output is the Economy Capable of Sustaining?

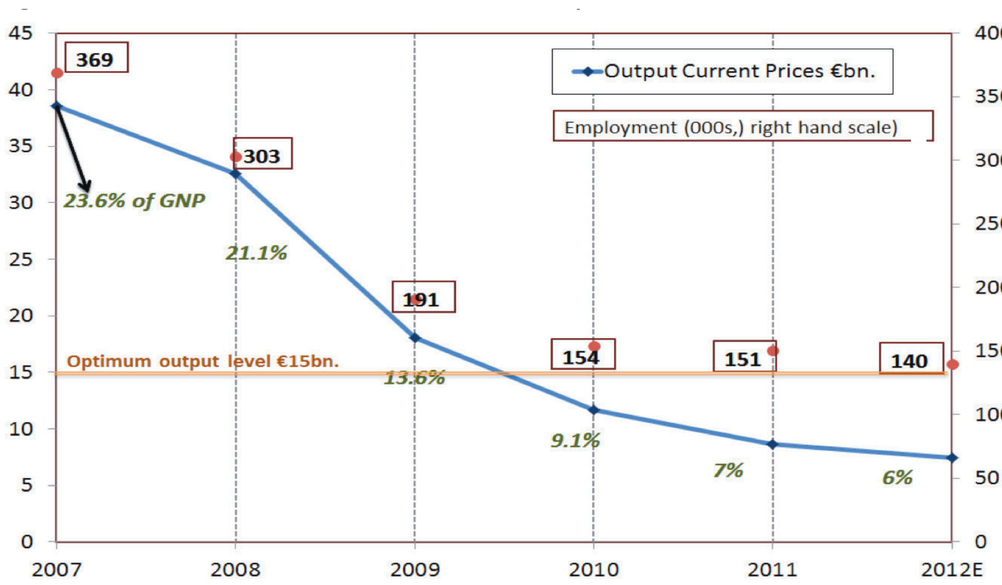
6% of GNP is well below what would be considered 'normal' output levels for construction

Based on the estimates for 2012, the construction sector will record another double digit decline in construction output for the fifth year in a row, reaching just 6% of GNP (4.7% of GDP).

Based on a comparison with the size of the construction industry in other countries and long term trends in terms of Irish construction output as a percentage of GNP[38], it is considered that an economy the size of Ireland should be capable of sustaining a construction industry equivalent to around 12% of GNP (10% of GDP) over the medium-term, without the negative repercussions associated with periods of overbuilding. This would imply an industry of around €15 billion. Given the cyclical nature of the construction industry, output may exceed this level over the long term but it is clear that output in the industry has been below this level since 2010 and will be just half this level in 2012. The corresponding employment level is likely to be closer to 170,000, particularly if the focus is to shift towards more labour intensive renovation and improvement works in the medium term[39].

Moreover, this level would allow the investment which has yet to be made, in bringing Ireland's overall infrastructure stock and quality up to OECD levels, to take place[40].

Figure 2.1: A Sustainable Construction Sector - Output around €15bn.



[39] Employment in construction is discussed in Section 3.
[40] Ireland's score in regard to overall infrastructure quality remains significantly below the OECD average according to a World Economic Forum survey of executives' perceptions regarding the overall quality of infrastructure in an economy. Annual Competitiveness Report Volume 1: Ireland's Competitiveness Scorecard 2011, National Competitiveness Council July 2011 (page 101).

3. Employment in Construction

3.1 Introduction

The sustained growth in construction employment during the boom period led to construction experiencing the most rapid growth across all sectors in the economy. Total employment in the economy peaked at 2.15 million in Q3 2007. In the previous nine years[41] total employment had increased at an annual average rate of 3.6% while employment in construction had increased by almost two and a half times the national rate, at 8.7%. The strongest single year of growth saw construction employment increase by 18.3% in the year to Q1 2005, with construction accounting for almost 39% of the increase in jobs across the entire economy[42].

There were a number of reasons for the strong growth in construction employment relative to other sectors and the economy as a whole. As well as the phenomenal increase in residential and non-residential construction, the expansion of the industry was accompanied by higher standards and new methods of construction. There was also a more rigorous regulatory environment and an increasing emphasis on new areas of activity, all of which generated a demand for more construction workers and new occupations.

After almost a decade and a half of ever strengthening growth, a turning point was reached and a sustained period of contraction in employment commenced. The severe drop in construction output from 2007 was mirrored in the construction employment numbers, which began to tumble as the volume of work declined at a rapid pace.

The situation now is that many skilled construction workers, professionals and trades persons have to emigrate to secure employment. The most recent estimates for emigration suggest that almost 142,000 persons left Ireland in the two years to April 2011, almost 50% of whom were of Irish nationality. In the most recent twelve month period, for which data is available, almost 60% of males who emigrated were Irish. The result is a substantial loss of the skills base and expertise in the construction sector, especially in design and building, which are essential to delivering the high quality infrastructure required to support a growing competitive economy focused on attracting foreign direct investment and competing in international markets.

There are considerable policy implications arising for unemployed construction workers who will require new skills to find employment in other sectors. Retraining and upskilling programmes are required for work in those sectors that are expected to expand in the next phase of Ireland's economic recovery. The sector is unlikely to see employment return to the levels recorded in the run up to the peak.

3.2 Trends in Construction Employment

Numbers directly employed back to 1997 levels

The main source of construction employment data is the CSO's Quarterly National Household Survey (QNHS) which commenced in Q1 1998. At that time, the total number of persons directly employed in construction was 117,900 (7.9% of total) out of a total employed workforce of 1.485 million. Prior to Q1, 1998, employment data was recorded in the Annual Labour Force Survey which was carried out in April/May each year over the period 1988 to 1997. However the breakdown of employment by economic sector was only reported for the period 1994 to 1997.

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[41] Covering the period Q1 1998 to Q3 2007 as the Quarterly National Household Survey (QNHS) which measures employment in the economy commenced in Q1 1998.

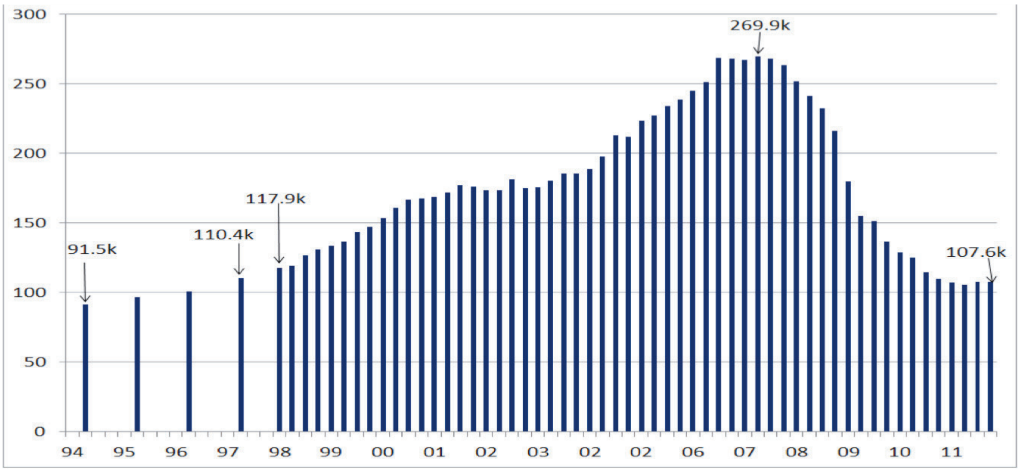
[42] The employment sector defined as Administrative and Support Service Activities actually had the strongest employment growth rate in the year to Q1 2005 at 18.4% and increased at an annual average rate of 7.6% in the period Q1 1998 to Q3 2007.

The following chart provides trends in total direct employment in construction Q1 1994 to Q4 2011 (latest data published). The phenomenal growth in employment over the period until Q2 2007 is evident from the chart which shows direct employment increased to almost 270,000 compared with just 91,500 in Q1 1994. This is equivalent to an annual average growth of 8.7% over the thirteen year period. Equally apparent is the sharp contraction in employment which commenced from Q2 2007 onwards. By Q4 2011, total employment had declined by an annual average rate of 18.5%. According to the chart, total employment in construction in Q4 2011 was back to levels last seen in 1997. A total of just 107,600 persons were directly employed in construction in Q4 2011, which corresponded to just 6% or one in every 17 persons employed across the economy as a whole compared with almost 13% or one in every 8 persons employed at the peak of the construction boom.

The majority of persons employed in the Irish construction sector today are Irish, with 92% recorded as Irish nationals compared with 83% at the height of the boom. Approximately 50,000 non-nationals worked in construction in 2007 compared with just 9,000 at the end of 2011.

In terms of numbers employed, the construction sector, with 107,600 persons employed, is currently ranked just behind Accommodation and Food Service Activities (113,400 persons employed) and ahead of Public Administration and Defence (102,900) and Financial, Insurance and Real Estate activities (102,200).

Figure 3.1: Total Direct Employment in Construction 1994-2011



Sources: Annual Labour Force Survey 1994 – 1998, second quarter data only.
Quarterly National Household Survey (QNHS) from Q1 1998.

As a result of the direct employment generated, there are further additional jobs created in those firms supporting and supplying intermediate goods and services for the sector. This employment is generally referred to as indirect employment, which is derived using a multiplier of 0.4. Thus a further 43,000 persons are indirectly employed in supply companies, generating an estimated 150,600 persons currently directly and indirectly employed in construction, just over 8% of the total persons employed. This compares with close to 380,000 persons at the peak of the construction boom, which represented almost 18% of the total numbers employed at the time.

3.3 The Composition of Construction Employment

A further breakdown of total employment across the economy by occupation[43] reveals the dramatic loss of jobs in the construction industry. From an analysis of the most recent data available[44], the main occupations associated with construction, for which employment numbers were quoted, were selected. The total number selected is 132,000 in Q4 2010[45], which suggests that not all of these persons were employed in the construction sector. There were also a number of occupations where there were fewer than 1,000 persons employed and the numbers were therefore deemed to be too small to be published[46].

The next Table shows the level of employment by occupation at the peak, the calendar quarter in which employment peaked and the level of employment in Q4 2010, the latest year for which the breakdown is available. The main points worth noting are as follows:

- The strongest reductions across the occupational mix were recorded by Bricklayers and Masons (-81.8%), Building and Civil Engineering Labourers (-78.4%), Plasterers (71.4%) and Roofers, Slaters and Tilers (67.1%). The number of Property Estate Managers and Proprietors actually increased during 2010 and reached 1,500 in Q4 2010.

- Although the numbers employed in both groups fell substantially, Construction Trades were hardest hit compared with the Construction Professions, falling by 58% and 42.1% respectively since the peak.

- In the professions, the numbers of Architects and Quantity Surveyors employed experienced the highest percentage falls, of 61% and 53.5% respectively.

- In the trades, occupations like Carpenters and Joiners (-62.7%), Painters and Decorators (53.6%), Plasterers (-71.4%) and Bricklayers and Masons (-81.8%) would all have been affected initially by the sharp decline in residential construction.

[43] This is a breakdown for total employment not just for those in construction. Thus although the occupations selected are generally considered to be construction occupations, a number of persons will be employed outside of the construction sector.

[44] The occupation classification used by the CSO for publication purposes changed in Q1 2011 (to UK SOC2010) and the CSO have not yet published the reclassifications of all occupations according to this new classification. Thus the latest data available relates to Q4 2010 and is under the old classification (UK SOC1990).

[45] There were 109,900 persons employed in construction in Q4 2010.

[46] Such occupations included Town Planners, Architectural and Town Planning technicians, Building Inspectors, Building and Civil Engineering Technicians, Glaziers, Estimators and Valuers and Scaffolders, Riggers and Steeplejacks.

Table 3.1: Construction Employment - Occupational Breakdown•

Occupation	Employment at Peak (000s)	Peak Quarter	Employment Q4 2010 (000s)	% Change from Peak
Electricians, electrical maintenance fitters	30.7	Q3 2006	17.7	-42.3%
Carpenters & joiners	45.9	Q2 2007	17.1	-62.7%
Builders, building contractors	25.4	Q4 2007	11.4	-55.1%
Plumbers, heating & related trades	17.3	Q1 2007	10.4	-39.9%
Other building & civil engineering labourers	38.8	Q4 2006	8.4	-78.4%
Civil/mining engineers	14.4	Q3 2007	8.3	-42.4%
Painters & decorators	14.0	Q2 2007	6.5	-53.6%
Construction and related workers	8.2	Q4 2007	5.6	-31.7%
Plasterers	15.4	Q4 2007	4.4	-71.4%
Building managers	8.2	Q1 2007	4.1	-50.0%
Mechanical engineers	6.4	Q2 2008	3.9	-39.1%
Bricklayers, masons	18.1	Q2 2006	3.3	-81.8%
Electrical engineers	4.9	Q3 2007	3.2	-34.7%
Road construction & maintenance workers	4.5	Q3 2007	3.1	-31.1%
Architects	7.7	Q3 2006	3.0	-61.0%
Roofers, slaters, tilers, sheeters, cladders	8.2	Q4 2006	2.7	-67.1%
Cabinet makers	5.2	Q4 2007	2.1	-59.6%
Other plant, machine & process operatives.	7.0	Q3 2005	2.1	-70.0%
Engineering technicians	2.2	Q1 2009	2.0	-9.1%
Quantity surveyors	4.3	Q1 2007	2.0	-53.5%
Building, mining and other surveyors	2.5	Q4 2006	1.5	-40.0%
Property, estate managers and proprietors	1.5	Q4 2006	1.5	0.0%
Steel erectors	2.9	Q2 2005	1.4	-51.7%
Floorers, floor coverers, carpet fitters, tilers	3.6	Q1 2006	1.2	-66.7%
Draughtspersons	2.8	Q2 2008	1.1	-60.7%
Other construction trades	8.0	Q3 2007	4.0	-50.0%
Total Employment	**308.1**		**132.0**	**-57.2%**
of which				
Construction Professions	43.9		25.4	-42.1%
Construction Trades	183.6		77.1	-58.0%
Other	80.6		29.5	-63.4%

* The main occupations included in the total QNHS which would be associated with construction and for which employment numbers were quoted were selected for inclusion in the Table. With just 109,900 persons employed in construction in Q4 2010, the table clearly includes persons working outside the construction sector.

3.4 Unemployment in Construction

With construction accounting for 47% of the total job losses in the past four years and notwithstanding the numbers who have already emigrated, the level of unemployment in construction is likely to be above the national average. Males already account for approximately two thirds of all unemployed persons, generating a male unemployment rate of 17.3% (seasonally unadjusted) in Q4 2011. While there is no published figure for the numbers unemployed by sector, it is likely, on this basis, that the unemployment rate in construction could be closer to 25 to 30% in some parts of the country.

The total number of unemployed persons across the economy was 302,000 in Q4 2011 (QNHS figure), generating an (unadjusted) unemployment rate of 14.3%. The total number of persons classified as long-term unemployed was 182,100 in Q4 2011, 60.3% of all unemployed persons. Many of these persons could have been working in construction, given the contraction in construction employment over the past five years.

Almost 35% of males signing on were last employed in craft and related occupations

There were 434,054 persons signing on the Live Register in March of which almost two thirds were males. Based on a breakdown of the Live Register data by last occupation, almost 35% of males signing on were last employed in craft and related occupations. This figure alone of 97,455 unemployed males, accounts for 22.5% of the total Live Register. The next highest proportion was for Plant and Machine operatives at 19.7%, a proportion of whom are also likely to have worked in construction previously.

Table 3.2: Live Register Numbers by Last Occupation Held

March 2012

	Total	Males	Females	Total
All broad occupational groups	**434,054**	**100.0%**	**100.0%**	**100.0%**
Managers and administrators	16,836	3.6%	4.4%	3.9%
Professional	23,057	4.0%	7.8%	5.3%
Associate professional and technical	12,210	2.5%	3.4%	2.8%
Clerical and secretarial	40,977	4.0%	19.3%	9.4%
Craft and related	104,946	**34.8%**	4.9%	**24.2%**
Personal and protective services	51,931	6.7%	**21.5%**	12.0%
Sales	46,610	6.4%	18.6%	10.7%
Plant and machine operatives	70,440	19.7%	10.0%	16.2%
Other broad occupational groups	49,104	14.2%	6.1%	11.3%
No occupation	17,943	4.1%	4.2%	4.1%

Source: Live Register, March 2012, CSO.

3.5 Future Trends in Construction Employment

Much made of the need to support construction and generate jobs…

Many of the documents published and statements issued on the economy from Government over the past twelve months have focused on the need to foster economic growth and generate jobs. The Government's medium term Infrastructure and Capital Investment Framework published in November 2011, provided a commitment to ensuring that Ireland's stock of infrastructure is capable of facilitating economic growth, and that the investment programme directly supports employment in construction and other sectors.[47] The same document discussed extensively the link between capital investment and employment and noted that the labour intensity of construction projects depends on the type of project involved: suggesting that major construction projects are less labour intensive than often imagined whereas less expensive re-fit, refurbishment, and up-grade works tend to have a higher jobs impact.

[47] http://per.gov.ie/wp-content/uploads/Infrastructure-and-Capital-Investment-2012-20161.pdf

Nonetheless, the report noted that there are employment benefits in the delivery of infrastructure and thus claimed to have protected the more labour intensive sector like school building, hospitals, roads, water services and investment in energy efficiency construction. The planned roll-out of water meters was also stated as helping to stabilise the contraction in the construction sector in the medium term.

The subsequent Action Plan for Jobs published in February 2012 stated that

"Employment will be maintained and created under the capital programme by, for example, the delivery of an additional 40 schools and expansion or new buildings for another 180, the development of the new National Children's Hospital, investment in maintenance of the National Road Network, improvement of specific road segments, the development of the cross city LUAS line, supporting the commercial sector in delivering next generation broadband technology, and committing Exchequer resources should specific instances of market failure arise, and continued investment to enhance Ireland's tourism product offering. Overall, the Government's capital investment in infrastructure can be expected to sustain in the region of 30,000 construction and related jobs annually".[48]

Although the National Children's Hospital has been deferred, the 30,000 construction and related jobs per annum projected from investment in infrastructure would be equivalent to an investment of around €3 billion per annum in infrastructure[49]. Taking the figures quoted in Table 2.3 of a total Exchequer capital investment of €10.6 billion over the three years 2012-2014 or €3.54 billion on average per annum and assuming 75% goes into construction, this is equivalent to an investment in construction of €2.65 billion per annum. This figure excludes public sector investment outside of the Exchequer framework, which is likely to create further employment.

The *Action Plan for Jobs* specifically mentions actions to be undertaken this year in respect of the construction sector [50] including supporting 4,500 jobs in the green energy economy through retrofit grants programmes and other energy efficiency initiatives. Energy performance and efficiency regulations and standards are expected to give rise to employment opportunities for craft workers with the skills to install renewable energy heating systems, ventilation systems and insulation.

However, it needs to be acknowledged that the construction sector is unlikely to see employment return to the levels recorded in the run up to the peak. This creates a major challenge for the State in terms of retraining and upskilling those unemployed construction workers for work in those sectors that are expected to expand in the next phase of Ireland's economic recovery.

In respect of the statements in the Action Plan for Jobs, the SCSI surveys suggest otherwise

Notwithstanding the above measures in the *Action Plan for Jobs*, a number of QS respondents felt despondent about government plans stating:

"Plans are being announced by government but there is little activity transferred to the building site."

"Reduction in the amount of the Public Capital Programme - many projects held up in Department of Finance awaiting approval"

"General reduction in volume of work at local authority level due to the lack of funding"

"One major project finished on site in 2011. Education - progress on individual projects is slow - 2 reasons - Department red tape and design teams not resourcing projects properly due to the fee levels. Health projects in pipeline moving very slowly - no great impetus."

Employment potential from private sector opportunities

The creation of employment from private sector construction contracts is likely to be more difficult, requiring as it does construction clients to invest in private building and construction opportunities. A key requirement for the private sector to recover is access to credit, which was mentioned by a substantial number of respondents:

[48] http://www.djei.ie/publications/2012APJ.pdf page 33.

[49] This figure is derived by assuming that the 30,000 direct and indirect jobs generated by the investment would amount to an investment in infrastructure of €3 billion per annum, based on an average of 10 jobs per million.

[50] http://www.djei.ie/publications/2012APJ.pdf page 113.

"Private sector work cannot obtain finance ONLY Bank of Ireland are in the market"

"Banks are not lending to fund any development"

"Clients holding back on capital investment"

"Lack of funding and confidence"

"Reduction in private sector workload is due primarily to lack of capital and poor sentiment"

"Predominantly lack of credit for both the developer and purchaser/tenant. Little or no return on capital investment with greater risks involved"

"My projections for private work are entirely contingent upon funding being available - funding remains the primary bottleneck"

"Yes very little private work ongoing for us due to economic downturn"

In respect of private sector work, while the **QS Survey** frequently mentioned the lack of funding and confidence both on the side of the developer and the purchaser, some respondents reported unchanged or even increased activity in the sector, in particular due to a number of large industrial projects proceeding and potential new work in the pharmaceutical sector.

A number of respondents were more positive about future work opportunities:

"My activity here is increasing"

"Increase due to a number of large industrial projects proceeding"

"No [there is no significant fall in contract value for private sector work*] - private sector has increased"*

"Construction costs for private sector work are stabilizing. Trades such as plastering, dry-lining and groundworks packages are beginning to come back to sustainable levels. In turn this will increase tender amounts. Client funding is a significant issue for the progression of projects. Financial institutions are not lending for projects."

"We have maintained a reasonable level of activity in private sector from out previous levels of involvement."

Overall employment in construction is unlikely to recover any time soon. With total estimated employment at 151,000 including 107,600 persons directly employed, the construction prospects presented in Section 2 suggest that there are likely to be more downside than upside risks to employment prospects. Whether employment levels stabilise at current levels will depend on a number of factors, including when the indigenous sector starts to invest again, the extent to which investment by the FDI sector gathers momentum, the capital programme being on schedule, household disposable incomes not being hit further and when overall domestic demand recovers. The overriding challenge will be ensuring public and private funding is available to ensure the delivery of projects and thus the creation of jobs.

3.6 Opportunities overseas for the major players

A number of Irish construction and engineering firms have had to look to export markets in order to sustain their business in the last number of years. While some companies had taken a strategic decision to move into export markets well before the construction industry collapsed at home, others have more recently have had to look to international markets for new opportunities. Enterprise Ireland has stated that its clients in the construction and timber sector had a turnover of €6.4 billion in 2010, of which more than €1.3 billion was exported. A number of engineering and construction firms have tended to work overseas in areas where they have developed the skills and experience in their home markets. These areas tend to include infrastructure development (roads, power stations, schools, hospitals, energy) in countries with an expanding public capital programme and in, countries which benefit from European Union Structural and Cohesion funds, private sector building projects in other locations for FDI companies present in Ireland (high tech, research and innovation, data centres) and energy and transport infrastructure projects in the developing world.

The *Action Plan for Jobs*[51] notes that there are opportunities overseas for experienced Irish construction and engineering companies in areas where populations and/or increasing affluence in emerging economies are driving demand for construction and increasing their investment in public infrastructure projects. It specifically mentions infrastructure development, power generation, data centres, pharmaceutical manufacturing facilities and sustainable/cleantech buildings.

The issue is to what extent such export opportunities require a certain scale of operation and skills set at home to enable firms to invest sufficient time and resources in competing for work overseas. While many of the larger firms have successfully won work overseas, the indigenous small and medium sized construction companies require, at a minimum, 1) public sector projects which are included in the public capital programme to move onsite as quickly as possible; and 2) access to credit for those companies looking to commence private sector projects, if they are to sustain current employment levels.

51 http://www.djei.ie/publications/2012APJ.pdf page 112

4. Conclusions

The construction sector experienced phenomenal growth in both the value and quantum of building and infrastructure put in place in the Irish economy during the boom years. While the economy benefitted significantly from the exceptional amount of new residential and non-residential buildings and infrastructure put in place, there was also substantial overbuilding during the boom years.

As a result the industry is going through a very painful adjustment back to a situation where more normal conditions can prevail and supply and demand can move back towards equilibrium levels. This difficult transition is now in its fifth year with output in the industry expected to decline to €7.4 billion this year or just 6% of GNP.

The long and protracted period of weakness which followed the strongest construction boom on record should not come as a surprise. A period of underbuilding is inevitable. The industry will recover in time but the painful transition is a necessary step in that process.

The foregoing analysis of the performance of the construction industry portrays an industry in an exceptionally weak phase. The positive factors which supported construction during the boom years are no longer present. The sector is facing many challenges, not least of which is the fragile economic environment which has adversely affected private sector investment. Difficulties accessing finance and the dearth of new orders have been responsible for the sharp decline in private construction activity. As a result confidence in the sector has been severely dented and employment levels have decreased sharply over the past five years. However, a survey of Quantity Surveyors suggest that activity levels in the industrial and commercial activity in particular are beginning to pick up, fuelled by expansion plans from companies in growth sectors, including the strong export market.

The difficulties in the sector are further compounded by the dearth of public sector investment. Public sector construction activity has been severely curtailed due to the fiscal deficit situation which has resulted in a range of austerity measures in successive Budgets since 2008, including reductions in public capital investment allocations. Austerity measures and reduced multi-annual Exchequer capital investment provisions have meant that Government departments, local authorities and semi-state agencies, are spending substantially less on buildings and infrastructure that they would otherwise, with adverse consequences for construction.

The five-year capital investment programme provides for a budget of €17.1 billion, of which €3.96 billion (23%) consists of the Exchequer provision for 2012. The total provision for the period 2012-2014 is €10.6 billion, a reduction of 9.4% on the corresponding provision published in 2011 for the same period. The immediate reduction in Exchequer capital spending this year is 12.2% on the outturn for 2011 or €350 million compared with the estimate provided in July 2011. The current plan projects a further 14% decline in 2013 followed by a 5% decline in 2014. Thus the public sector is not in a position to offset or counteract the effects of the severe contraction in construction output, a role which it has often played in the past. Nor is it likely to be in 2013 and 2014.

Residential construction, which accounted for 16% of overall economic activity, at the peak, resulted in the rate of housebuilding reaching almost 21 dwellings per 1,000 of the population in 2006 compared with an average of 8 dwellings in the 1990s and almost 15 in the 2000s. The severe drop in the overall demand for housing and associated consumer products and the decline in onsite construction employment have also adversely affected consumer expenditure. Both factors have been responsible for the lacklustre performance of the domestic economy in recent years.

Based on the total dwellings commenced for 2011 plus a lower estimate again for 2012, the number of new dwellings built this year is forecast at 5,000 compared with an estimate of 6,400 in 2011.

Thus, as the sector continues in its transition phase, the prospects for construction this year are for a further contraction in the total volume of output of 14.5% following an estimated decline of almost 21% last year. The preliminary assessment for 2013 suggests that the volume of output is expected to fall by a further 6.6%, the sixth year in a row in which the industry reduces in size.

Output in the construction industry will recover but it is likely to take a number of years. When it does it is considered that an economy the size of Ireland should be capable of sustaining a construction industry equivalent to around 12% of GNP (10% of GDP) over the medium-term, without the negative repercussions associated with periods of overbuilding and rampant construction inflation. This would imply an industry of around €15 billion. Given the cyclical nature of the construction industry, output may exceed this level over the long term but it is clear that output in the industry has been below this level since 2010 and will be just half this level in 2012.

The severe drop in construction output from 2007 was mirrored in the construction employment numbers, which began to tumble as the volume of work declined at a rapid pace. By Q4 2011, total direct employment in construction, at 107,600 was back to levels last seen in 1997. Including indirect employment, the industry currently employs around 150,000.

The situation now is that many skilled construction workers, professionals and trades persons have to emigrate to secure employment. The result is a substantial loss of the skills base and expertise in the construction sector, especially in design and building, which are essential to delivering the high quality infrastructure required to support a growing competitive economy focused on attracting foreign direct investment and competing in international markets. The challenge now is to ensure that the unemployed construction workers can be retrained to find employment in those sectors that are expected to expand in the next phase of Ireland's economic recovery.

The expectation is that the composition of the industry when it recovers will be more focused on ensuring the building stock is fit for purpose rather than on major new works. The main prospects are expected in the emerging Green Economy with its associated opportunities for the retrofitting of homes; the Energy sector, where the semi-State companies have encouraging capital investment plans; and the FDI and export sectors, where companies are proceeding with expansion plans. Finally the National Asset Management Agency (NAMA) is likely to create development opportunities as it releases finance and working capital to developers for the completion of selected unfinished estates or for the development of land.

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