



Annual **Construction Industry Review 2009**
and **Outlook 2010–2012**



Explanatory note

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Review of the construction industry
2009 and outlook 2010-2012

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Key statistics for the construction industry

	2006	2007	2008	2009	2010E
GNP (constant 2008 prices, €m.)	153,398	160,299	154,672	138,161	136,089
% volume change in GNP	+6.5	+4.5	-3.5	-10.7	-1.5
Gross domestic fixed capital formation (GDFCF) (Constant 2008 prices, €m.)	45,193	46,456	39,806	27,482	21,106
Volume Change in GDFCF (%)	+4.6	+2.8	-14.3	-31.0	-23.2

Total construction output

Value output (current prices €m.)	38,631	38,601	32,593	18,048	11,733
Change in value of construction output (%)	+14	+0	-16	-45	-35
Value output (constant 2008 prices €m.)	34,838	35,057	32,593	20,646	14,540
Change in volume of construction output (%)	+10	+1	-7	-37	-30
Construction output as % of GNP *	25.1	23.7	21.1	13.8	9.2

New construction output **

Public sector new construction output ***

Value of output (constant 2008 prices, €m.)	6,375	7,008	8,564	8,025	7,045
Change in volume of construction output (%)	+0	+10	+22	-6	-12
As % of total construction output *	17	19.6	26	40	50

Private sector new construction output **

Value of output (constant 2008 prices, €m.)	21,324	20,356	16,040	6,379	2,270
Change in volume of construction output (%)	+13	-5	-21	-60	-64
As % of total construction output *	64	60	49	28	13

	2006	2007	2008	2009	2010E
Direct employment in construction (000s Q4)	268	264	216	137	110
Direct plus indirect employment (000s Q4, est.)	376	369	303	191	154
Change in capital goods price index for building and construction (materials and wages) (%)	+6	+5	+3	-2	+1
Change in building and construction price index for all materials (%)	+8	+5	+3	-3	+3
Change in tender prices (est) (%)					
- New housing	+4	-2	-12	-22	-12
- New general contracting	+4	-1	-11	-17	-10
- New civil engineering	+4	+4	-6	-7	-7
Change in total construction price inflation	+4	-1	-9	-13	-8

Notes:

* Percentages derived using output measured in current prices.

** The balance, not shown in the table, is repair and maintenance output (32% of total output in 2009 and 37% in 2010).

*** The estimate for new public sector construction includes an estimate for private sector investment under education, energy and telecommunications (estimated at €0.9bn in 2009 and €0.6bn in 2010).

Summary

Operating conditions in the construction industry remain particularly tough

The review of construction activity for 2009 and 2010 makes for very bleak reading. It shows that the contraction in the construction industry, which commenced in 2008 gathered momentum in 2009 and continued into 2010. Having peaked at around one-quarter of economic activity in 2006, the crisis in the construction industry led to its share of GNP declining to 13.8% in 2009, with a further steep fall to just over 9% expected this year, the lowest share on record since 1970 and probably in the history of the State.

Economy suffers its worst performance on record in 2009

The Irish economy suffered its worst performance on record in 2009, with GDP contracting by 7.6% compared to 2008 and GNP falling by 10.7%. This contraction was predominantly led by **a very sharp decline in investment of 31%**. Underlying this was a significant reduction in housebuilding, which saw the total number of new house completions (i.e. electricity connections) fall to around half the number built in the previous year. Private consumption also experienced a significant contraction of 7%, as the fall in household incomes and the rapid increase in unemployment weighed heavily on consumer sentiment.

While Ireland's GNP rate of decline moderated in Q2 2010, significant challenges have still to be overcome. Economic growth remains subdued in 2010 – current forecasts suggest that GDP will be unchanged from its 2009 level, with **a further contraction in GNP projected for this year**. Export growth is expected to drive the recovery both in 2010 and into 2011, with no significant rebound in domestic activity or the labour market envisaged until at least 2012.

Construction sector crisis continues – all sectors without exception affected

Every sector of the construction industry, without exception, has been affected by the collapse of the construction bubble and by the challenging economic environment. All housing indicators are profoundly weak following a period of rapid contraction over almost four years. The fragile state of the private non-residential construction sector is evident from the exceptional drop in private new building activity over the past two years, which reflects a range of adverse issues impacting on this sector, such as continuing high debt levels, difficulties securing finance, excess capacity, uncertainties surrounding the impact of NAMA and a nervousness amongst consumers in regard to job losses, fears of further taxation increases in the forthcoming Budget and a more cautious view generally about the outlook for the economy.

The situation with respect to the public finances is taking its toll on public sector construction, where the picture is one of a number of large projects finishing up with few projects emerging to take their place. This trend has been exacerbated by the reduction in the public capital programme (PCP) over the past two years.

Housebuilding measure revised to take account of the unsold stock

The measure of new housebuilding completions has been revised in the CIRO to reflect 1) the likelihood that some of the new units connected for electricity in recent years were built in earlier years, and 2) some unsold new stock has yet to appear in the connections. The DEHLG is currently finalising a comprehensive national survey to quantify and categorise the scale and

distribution of unsold housing developments across the country. Until those figures are available, the unsold stock of new units is assumed to be 25,000, of which 15,000 remain to be connected to the electricity network and are assumed to have been built over the period 2006-2008.

Thus taking into account both factors above the estimates for new dwellings built are higher in 2006, 2007 and 2008 and lower in 2009 and 2010 than the published ESB connections. Thus **the number of units built at the peak is estimated at 97,219 in 2006 compared with 93,419 ESB connections**. The number of completions in 2007 is also revised upwards from 78,027 units to 87,027 units. Similarly, there is also an upward revision to the 2008 figure, from 51,724 units to 59,644 units. **Reflecting the severe contraction in housebuilding in 2009 and 2010, the estimate for new housebuilding is revised downwards, from 26,420 ESB connections to 22,000 units in 2009 and from an estimated 15,000 ESB connections to 8,500 units in 2010.**

The outturn for the value of residential construction output is based on these adjusted completions figures and suggest that the GNP figure in 2006, 2007 and 2008 would be higher and in 2009 would be lower than estimated by the CSO. The value of new residential construction is estimated at just €1.7 billion in 2010.

With housebuilding projected to remain low in 2012 (8,500), the annual average of 31,500 for completions for the period 2012-2016, (forecast by the ESRI), provides some comfort for prospects beyond 2012, as the level of housebuilding should begin to increase as the economy recovers. However, looking beyond strict demand/supply indicators to broader economic performance (projected growth and migration patterns, unemployment levels, possibilities of further income reductions and tax increases) would suggest that latent demand will be dampened considerably.

Construction employment back to 1998 levels

One key benefit of the construction boom was the substantial skills base and considerable expertise which were built up over a fifteen year period. As a result Ireland had developed a highly skilled construction workforce which was well placed to deliver the high quality building and infrastructure needs of a successful economy. **At its peak, employment in the industry reached unsustainable levels, with one in every 5 persons working in the economy employed in construction.**

However, the scarcity of new work is focusing attention on cost containment which is having an adverse impact on employment levels in the sector. As a result the total number of persons directly employed in construction fell to **127,300 in Q2 2010**, the lowest level since mid-1998. This represents a **loss of 145,300 direct jobs in just three years - 57% of all job losses in the economy.**

The full impact of the contraction in construction output on the economy reveals job losses more in the region of 200,000 since the peak (Q2 2007). This reflects the indirect job losses generated right across the construction supply chain as jobs were lost in firms that provided inputs to construction projects. Taking the **total job losses of over 200,000 (direct and indirect) over the three year period, this figure is equivalent to almost 80% of the reduction in total employment across the State over the same period (256,000).**

As a result the construction unemployment rate is likely to be significantly higher than the national average of rate of 13.2%, and in some regions of the country, is likely to be closer to 25%.

While the return of net outward migration over the past two years will reduce the construction unemployment rate, on the basis that a considerable proportion of emigrants are likely to be construction workers, the loss of design and construction skills is a key concern. The construction recession has also led to a lack of jobs for graduates while the reduced potential to attract school leavers into the construction professions could damage the sector's prospects over the longer term.

The very challenging situation in construction has led to an increase in corporate failures, with **construction firms accounting for four out of every ten business failures in the first six months of 2010.**

With **construction tender prices on average down by almost 27% and by almost 35% in some sub-sectors over the last three years**, the situation is becoming untenable for many construction companies intent on bidding aggressively for work. With little movement on input costs, this high-risk strategy is likely to increase the risk of insolvencies.

2009 Review

The value of output in the construction sector is estimated at €18 billion in 2009. This represents a decline in value terms of 44.6% on 2008 or 36.7% in volume terms, after allowance is made for the fall in construction tender prices over the year (-12.6%).

The outturn for construction output in 2009 represented **13.8% of GNP.**

Looking at the composition of construction output:

- The total volume of **residential construction** – both new and repair, maintenance and improvement (RM&I) – declined by 48.3%, after allowing for a double digit decline in residential tender price inflation (-15.5%). The value estimates are derived assuming **22,000 units** were built in 2009.
- The volume of construction activity in the **private non-residential construction** sector (new and RM&I) fell by a substantial 51.6%, driven by sharp falls in the volume of investment in commercial buildings (-50.5%), tourism buildings (-48.5%) and agricultural buildings (-74.4%).

- The overall investment in **productive infrastructure** (new and RM&I) projects was down by 3.3% in volume terms compared to 2008. There was continuing strong investment in airports/seaports (+20.4%) and water services (+17.8%) in 2009. These were offset by a decline in road (-13.7%) and public transport (-13.2%) investment. The volume of construction output from investment in communications also declined, by 28.4%.
- The volume of construction output associated with **social infrastructure** projects fell by 7.4% in 2009. The volume of investment in hospital buildings increased by 23.6%, but this was offset by a fall in investment in public buildings (-29.5%) and other public social buildings (-21.4%).

The overall figures suggest that the total volume of construction output associated with productive and social infrastructure projects¹ fell by 5.1% in 2009 compared with 2008. The public sector categories of investment include an estimated €0.9 billion of private sector investment under energy, telecommunications, health and education, thus reducing the total public capital spend on construction to around €8.3 billion (new and RM&I) in 2009.

Outlook 2010

The value of output in the construction industry is forecast to decline further to **€11.7 billion in 2010** or by 35%. The corresponding **volume reduction is 29.6%** compared with 2009, after a fall in construction tender price inflation (-7.7%) for the third year in a row.

The estimate for construction output this year represents **9.2% of GNP**.

The prospects for the individual sectors of construction in 2010 are as follows:

- The volume of **residential construction** output is expected to decline by 37.2% in 2010, with the volume of private housebuilding (new and RM&I) expected to decline by a much greater amount (-42.9%). The number of new dwellings built is forecasts at just 8,500 this year.
- The weak economic environment continues to impact on the volume of **private non-residential construction** output, which is expected to fall by as much as 67% this year. Should this materialise, the total decline in private non-residential construction output since the peak in 2007 would be a staggering 85%. Commercial building output is expected to fall significantly this year, by 71.4%, with sharp declines also expected in the volume of industrial building output (-71.2%) and tourism buildings (-75.9%).

¹ The public sector investment figures in the CIRO are derived from a survey of all Government departments, State agencies and other public sector bodies on estimated expenditure on construction projects. This figure includes direct Exchequer expenditure, expenditure by Government departments from their own resources and non-Exchequer expenditure from the resources of the semi-state agencies and local authorities. Private sector construction activity under energy, telecommunications, education and health is also included, where available, based on information obtained from private sector companies operating in these sectors.

- Overall investment in **productive infrastructure** projects is expected to register a decline of 12.3% in 2010, driven largely by a significant fall in the volume of investment in airport/seaports (-72.7%) and in roads (-18.8%). Investment in public transport projects is also forecast to decline (-14.2%), while investment in telecommunication is expected to record a modest increase (+2.9%).
- The volume of construction related investment in **social infrastructure** projects is expected to fall by just 0.1% this year. This segment is supported by a strong growth in investment in education (+25.2%) while the volume of investment in hospital buildings (-5.5%) and public buildings (-9.8%) is expected to be lower than 2009 levels.

The above forecasts suggest that the public sector will not make any positive contribution to overall construction activity in 2010. Excluding the estimated €0.6 billion of private sector investment under energy, telecommunications, health and education, the total public capital spend on construction is around €7 billion (new and RM&I) in 2010.

Medium-term prospects 2011-2012

The current contraction in construction output - an estimated 63% over the period 2007 to 2011 - is completely unsustainable for an economy focused on catering for the needs of the indigenous and multinational enterprise base that is expected to dominate the Smart Economy in the next phase of Ireland's economic development.

The value of construction output in current prices is projected to fall to around **€10.5 billion by 2011**, which indicates an industry in the depths of recession and a long way of its optimum size. In the context of an economy which continues to have an infrastructure deficit, the optimum level for the Irish construction industry should be equivalent to around 12% to 15% of GNP. An industry of this magnitude would allow continued improvements in Ireland's stock and quality of infrastructure, an improvement in competitiveness and in the productive potential of the economy.

Based on the estimate for GNP in 2010 (€127 billion), this would imply an industry with a value ranging between €15 billion and €19 billion. These levels are well above the estimates for construction output presented for the period 2010-2012.

Construction activity and employment levels expected to bottom out in 2011

The projections for the medium-term suggest that output will reach its lowest level in 2011 with a very slight pick-up in 2012 (+0.6%). Much of this recovery is dependent on an expected pick up in new residential construction in 2012, albeit from a very low base.

Similarly, the level of direct and indirect employment is projected to reach a floor of around 126,000 by end 2011, around one-third of the level reached at the peak.

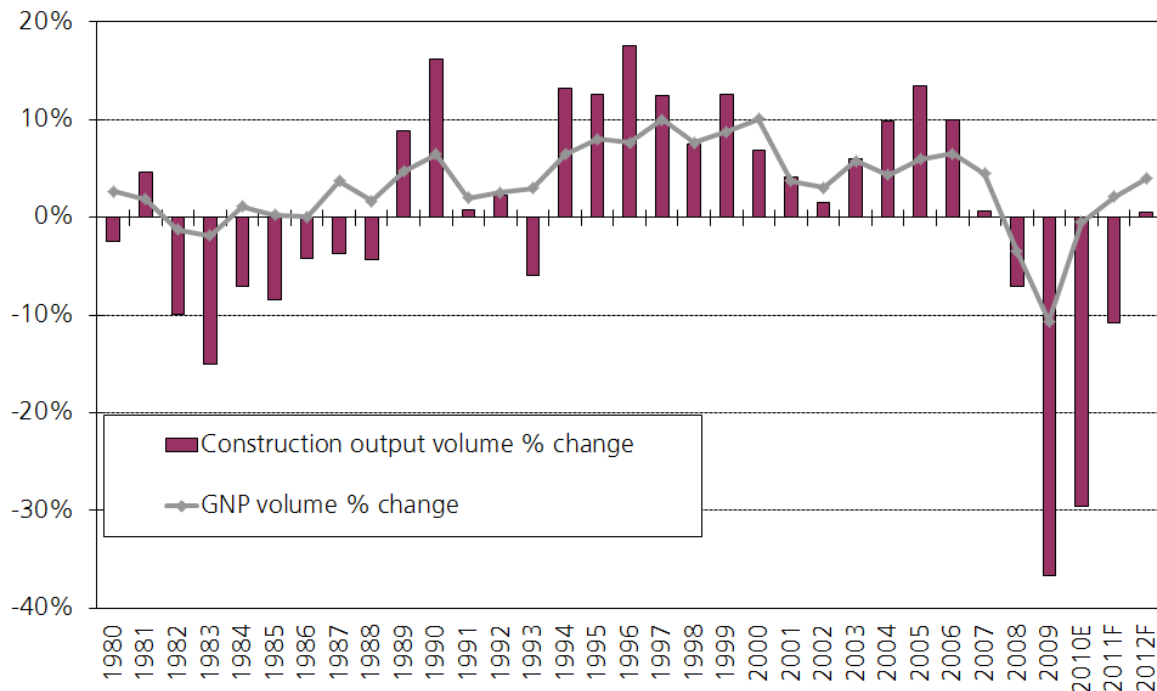
While the overall outlook is discouraging, the projection is for a moderation in the rate of decline in 2010 and 2011. Provided the correct conditions are in place in the wider domestic

economy from 2012 onwards, the prospects for the industry should begin to improve thereafter.

In the meantime there are **niche opportunities** in regard to the climate change/sustainability agenda such as improving the energy performance of the stock of buildings in the public and private sectors. There will need to be decisions taken in regard to the stock of partially built residential and non-residential buildings left over from the boom years. The latter will require some innovative solutions around change of use before the demolition option is considered.

While overall prospects for the repair, maintenance and improvement market remain weak, reflecting the difficult trading conditions for many companies, there are likely to be small scale opportunities in the home improvement and retro-fit market as property owners opt to repair and improve their homes rather than undertake larger, more costly projects.

Construction and GNP trends: 1980-2012F



Source: CSO, DEHLG, 2010-2012 DKM estimates.

But risks are mostly on the downside

The projections are based on the assumption that the Government's capital allocation of €5.5 billion per annum in Exchequer funds in 2011 and 2012 will be fully spent. Despite the capital underspend in the year to August, it is the norm that expenditure would tend to be back-ended. The Department of Finance anticipates full take up of the PCP investment this year.

An inability to spend the public capital provisions

However, with the level of Exchequer capital expenditure in the eight months to August 2010 already 24% behind the target for the same period last year, there are likely to be risks around the ability of the public sector to spend the full capital provisions over the next two years.

A related issue is that given the long lead in time to the construction phase for most large public sector projects, unless new orders emerge of significant value in 2010, it may not be possible to spend the full public capital allocation next year. It would therefore not be difficult to frame a scenario in which the value of construction output would be closer to €8.5 billion in 2011 compared with the €10.5 billion derived assuming the full public sector capital allocations are spent.

The fiscal correction plan may result in a lesser public capital spend

Given the urgent requirement for a fiscal consolidation plan, expected now from Government in November, there is a further risk that the capital programme will be reduced again over the medium-term. Restoring stability to the public finances over the coming years may necessitate further reductions in the Exchequer capital provisions or increases in taxation in the next series of budgets. A lesser public capital spend would have serious repercussions for the industry right across the supply chain.

The recovery in private sector investment is delayed

Should developments in the domestic economy in respect of the banking sector, NAMA, the public finances and forthcoming budgets damage confidence levels in the private sector further and/or make consumers more cautious, there is likely to be a delayed recovery in private residential and non-residential construction as well as in the housing market generally.

The necessity for full implementation of the Government's fiscal austerity programme to bring down the fiscal deficit to 3% of GDP by 2014 implies no room for fiscal stimulus in the Irish economy. That said, there remains an infrastructure deficit and a need for investment in public social and productive infrastructure projects. **Thus unless innovative funding mechanisms emerge to fund sensible projects in these areas, it is difficult to see where recovery in construction will come from in the short to medium-term.**

Section 1: Review of 2009 and outlook for 2010

Summary

The Irish economy has experienced a significant contraction in output since 2008. An over-heated property market, the related difficulties for the banking sector, the rapid deterioration in the public finances and a loss of competitiveness have all contributed significantly to the economic misfortunes of the last three years.

The Irish economy suffered its worst performance on record in 2009, with GDP contracting by 7.6% compared to 2008 and GNP falling by 10.7%. This contraction was predominantly led by a very sharp decline in investment of 31%. Underlying this was a significant reduction in housebuilding, which saw the total number of new house completions (i.e. electricity connections) fall to around half the number built in the previous year. Private consumption also experienced a significant contraction of 7%, as the fall in household incomes and the rapid increase in unemployment weighed heavily on consumer sentiment.

Economic growth is expected to be relatively flat in 2010 – current forecasts suggest that GDP will grow marginally, but a further modest contraction in GNP is projected. Export growth is expected to drive the recovery both in 2010 and into 2011, with no significant rebound in domestic activity or the labour market envisaged until 2012 at the earliest.

The severe contraction in the construction industry continued for the second year in a row in 2009. Having peaked at around one-quarter of economic activity in 2006, the crisis in the construction industry led to its share of GNP declining to 13.8% in 2009, with a further steep fall to just over 9% expected this year, the lowest share on record since 1970.

The value of output in the construction sector is estimated at €18 billion in 2009. This represents a decline in value terms of 44.6% on 2008 or 36.7% in volume terms, after allowance is made for the fall in construction prices over the year (-12.6%).

The value of output in the construction industry is forecast to decline further in 2010 to €11.7 billion or by 35%. The corresponding volume reduction is 29.6% compared with 2009, after a fall in construction tender price inflation (-7.7%) for the third year in a row.

Operating conditions in the industry remain particularly tough, with all of the main sectors contributing to the decline in output. Activity and confidence levels in the private sector have been most affected by the economic recession while the situation with respect to the public finances is taking its toll on public sector construction. The scarcity of new work is focusing attention on cost containment which is having an adverse impact on employment levels in the sector.

With construction tender prices on *average* down by almost 27% and by almost 35% in some sub-sectors over the last three years, the situation is becoming untenable for many construction companies intent on bidding aggressively for work. With little movement on input costs, this high-risk strategy is likely to increase the risk of insolvencies.

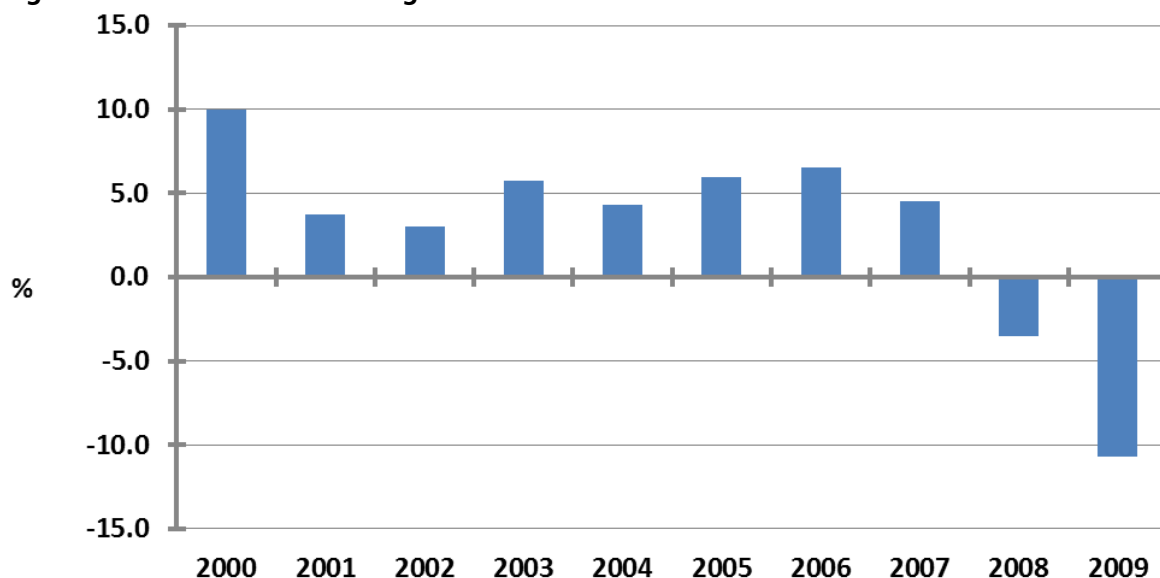
1.1: Economic review

Sharp contraction recorded in 2009

The Irish economy suffered its worst performance on record in 2009², with GDP contracting by 7.6% compared to 2008 and GNP falling by 10.7%. The difficulties that emerged in 2007 and 2008 worsened considerably throughout the course of 2009, resulting in a further weakening of the Irish economy. In particular, the situation in the housing market continued to deteriorate sharply. The volume of investment in new housing fell by almost 50%, while house prices nationally were 18.5% lower at the end of 2009 compared to a year previously³.

The global recession intensified throughout the course of the year, with severe implications for open economies like Ireland's. The volume of output in the OECD area fell by 3.3% in 2009, while world trade volumes were down by 13% on average compared to 2008.

Figure 1.1: GNP annual % change in volume



Source: National Accounts, CSO.

Banking sector difficulties compounding the crisis in the public finances

The public finances also deteriorated further in 2009 and the General Government Deficit rose to 14.3% of GDP. This deficit figure includes the payment of €4 billion in 2009 to recapitalise Anglo Irish Bank. The banking sector has been particularly badly affected during the current recession, largely due to the over-exposure of Irish credit institutions to the property market, but also due to the international credit crunch. The extent of the difficulties being experienced by the Irish banks became clearer throughout the course of 2009, resulting in the nationalisation

² The Central Statistics Office has published National Accounts data since the late 1930's.

³ Based on permanent-tsb/ESRI house price data.

of Anglo Irish Bank, and the commencement of a major programme of recapitalisation⁴.

Table 1.1: Composition of economic growth, year-on-year % changes

			Q1	Q2
	2008	2009	2010	2010
Personal Consumption	-1.5	-7.0	-1.2	-1.7
Public Consumption	2.2	-4.4	-5.0	-3.4
Gross Fixed Capital Formation	-14.3	-31.0	-31.5	-19.9
Exports	-0.8	-4.1	6.2	7.5
Imports	-2.9	-9.7	-0.5	6.2
GDP	-3.5	-7.6	-0.8	-1.8
GNP	-3.5	-10.7	-4.9	-4.1

Source: CSO National Accounts.

Fall in domestic demand driving the overall economic contraction

The severe contraction in the economy in 2009 was reflected across all sectors of expenditure, as shown in Table 1.1. The overall decline in economic activity was largely driven by the sharp contraction in investment (-31%), which in turn reflects the persistent difficulties in the housing market. The volume of consumer spending also fell sharply in 2009, as the rise in unemployment and the fall in household incomes weighed heavily on consumer sentiment. Exports performed reasonably well, despite recording a contraction of 4.1%. This represents a relatively modest pace of contraction, given the overall performance of the Irish economy in 2009 and considering the collapse in world trade volumes. Euro Area export volumes fell by 13.2% in 2009, while the contractions in the UK and the US were 10.6% and 9.6% respectively.

Restoration of competitiveness has commenced

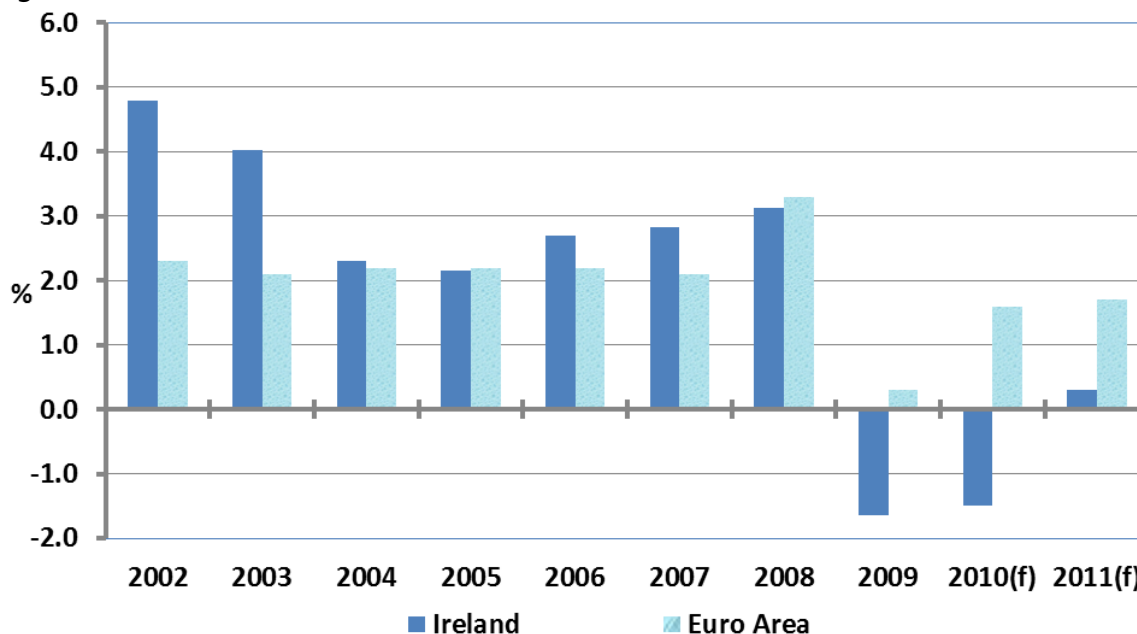
The restoration of lost competitiveness is a key challenge for the Irish economy. Ireland's future export performance depends on the extent to which we can regain competitiveness relative to other countries. Although substantial challenges still remain, some progress was achieved throughout 2009 and in the first quarter of 2010. Public sector workers have been subjected to significant wage reductions and while the evidence for the private sector is somewhat more inconclusive, the most recent figures from the CSO on Earnings show that average weekly earnings fell by 3.8% in Q1 2010 compared with the same period in 2009. The corresponding reduction in the private sector was reported at 2.8% versus 5.5% in the public sector.

In addition, Ireland experienced a significant reduction in consumer prices in 2009 (-4.5%). The latest figures for September show a further reduction of -1.5% over the first nine months of the year on the same period in 2009. The corresponding figure using the Harmonised Index of Consumer Prices (HICP) was -1.9%. If current forecasts prove accurate, inflation in Ireland

⁴ It is estimated that €13 billion will be transferred in 2010 to fund the recapitalisation of Anglo Irish Bank and Irish Nationwide Building Society. These monies are in the form of promissory notes and are likely to be included in the 2010 General Government Deficit. The Government has indicated that Anglo Irish Bank may require a further capital injection of €10 billion to cover future losses. It is unclear what the timing of these future transfers will be.

(measured by the HICP) will remain below the level of Euro Area inflation in both 2010 and 2011, having been consistently higher prior to 2008 (Figure 1.2).

Figure 1.2: Irish and Euro Area HICP inflation rates



Source: CSO and Eurostat (historic), ESRI and NIESR (forecasts).

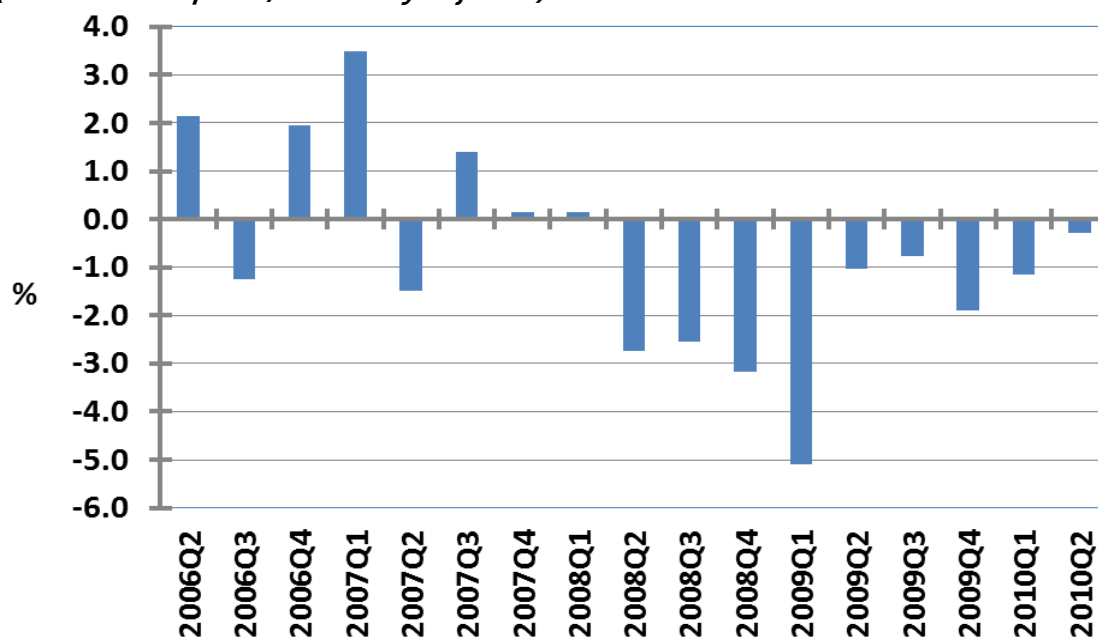
Economy remained sluggish in early 2010

The *Quarterly National Accounts* for the first two quarters of 2010 indicated that while there were some tentative signs of stabilisation in the economy, the overall performance in the first half of the year remained relatively sluggish (Figure 1.3).

The two-speed nature of the recovery thus far is confirmed by the data, which showed strong export growth in the first half of 2010. Exports surged by approximately 7%, relative to the first six months 2009, but GDP fell by 1.3% in the first six months of the year, compared to the same period last year, while GNP fell by 4.5%.

Personal consumption remains subdued and fell by 1.4% in the first six months of 2010, relative to the same period last year. The quarter-on-quarter figures, however, point to signs of stabilisation. Consumption fell by 0.5% in Q1 and by 0.2% in Q2 on a seasonally adjusted basis. Consumer sentiment has improved significantly since last year – the latest measure from the KBC Ireland/ESRI Consumer Sentiment Index is up 31% over the first nine months of 2010 relative to the same period in 2009. In addition, retail sales picked up in the first half of 2010. The most recent data show that the volume of retail sales in the first half of 2010 were up by 2% compared to the first half of 2009, while quarter-on-quarter growth in the second quarter of the year was a robust 7.2%.

Figure 1.3: Quarter-on-quarter % change in GNP
(constant 2008 prices, seasonally adjusted)



Source: Quarterly National Accounts, CSO.

By contrast, the situation in the labour market continues to deteriorate, although earlier 2010 forecasts suggesting that unemployment would reach 15% now seem pessimistic. According to the most recent data from the Quarterly National Household Survey, the official unemployment rate was 13.2% in Q2 this year. Estimates for the standardised unemployment rate published with the Live Register suggest that it was 13.8% in August. The pace of increase in unemployment has slowed in the first half of 2010. However, rather than resulting from any significant job creation, this is largely due a fall in labour force participation and an increase in outward migration – trends that are evident from the QNHS data. The weakness of the labour market is also evident in the latest Exchequer Returns, which show that income tax receipts in the nine months to September were down by 6.5% compared to the same period in 2009. Overall tax revenues were €42 million below Government's expectations for this point of the year.

2010 - GDP unchanged but further contraction in GNP

On balance, the latest indicators suggest that overall economic activity in 2010 will be lower compared with 2009. A review of recent forecasts for 2010 point to an unchanged level of GDP in real terms, but a further contraction in GNP (-1.5%). The projections in this report are based on these estimates. For 2011, a return to growth of approximately 1.5 to 2% is envisaged, although is likely to be driven predominantly by external demand, with only a modest contribution expected from domestic demand⁵.

⁵ The medium-term prospects to 2012 are presented in Section 4.

1.2: Construction review

The total value of GNP in the economy was €131.2 billion in 2009. The gross value of fixed investment in building and construction was estimated at €16 billion⁶, accounting for 12.2% of GNP (10% of GDP).

Depending on the measure used, construction accounted for between 13.8% and 6.2% of GNP in 2009. However, all three measures in the table below show a substantial contraction in the contribution of the construction industry to GNP.

Table 1.2: Different approaches to measuring building and construction output⁷ (current prices, € million)

	CIRO ¹ measure	Share of GNP (%)	Investment Measure	Share of GNP (%)	Value-added measure	Share of GNP (%)
2005	33,815	24.5%	33,215	24.1%	14,237	10.3%
2006	38,631	25.1%	37,790	24.5%	16,474	10.7%
2007	38,601	23.7%	38,215	23.5%	16,119	9.9%
2008	32,593	21.1%	29,701	19.2%	12,297	8.0%
2009	18,048	13.8%	16,586	12.6%	8,075	6.2%
2010E	11,733	9.2%	10,500	8.2%	5,200	4.1%

Source: CSO, DKM.

(1) CIRO = Construction Industry Review and Outlook

Taking the CIRO measure which is based on expenditure, construction peaked at around 25% of GNP in 2006, falling back to 13.8% in 2009. Based on the 2010 estimates presented in this CIRO, construction is expected to fall back to 9.2% of GNP (7.4% of GDP).

The investment measure valued building and construction output at a somewhat lower 24.5% in 2006, having fallen to 12.6% in 2009. The projected share of GNP in 2010 is 8.2%.

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, compared with agriculture, for example, which in terms of value added, accounted for 2.3% of GNP in 2009.

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 in 2009 declined by

- 36.7% using the CIRO measure,

⁶ The sum of residential and non-residential construction investment including the value of major repair and maintenance work excluding transfer costs (i.e. the costs associated with the transfer of land and buildings) as estimated by the CSO. When transfer costs are included construction accounts for 12.6% of GNP (10.4% of GDP) or €16.6 billion.

⁷ Details and definitions are given in Box 1.

- 33.3% using the investment measure,⁸ and
- 31.4% 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 (€576 million in 2009) which are normally included in the CSO measure for National Accounts purposes.
- (3) The **output** or value added measure,¹ 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.

As in our previous CIRO reports, we use the CIRO measure of construction output (based on expenditure, as outlined above), in the remainder of this report.

1.2.1 Construction sector overview: severe contraction continued into 2009⁹

Based on the CIRO measure of construction output, the value of construction output is estimated at €18 billion in 2009, compared with €32.6 billion in 2008. This represents a decline of 44.6% in the value of output, or a decline of 36.7% in volume terms, after allowance is made for the fall in construction prices over the year.¹⁰

The decline in overall construction over the last few years commenced with the fall in residential construction in 2007 but spread to the non-residential sector in 2008 and 2009. The number of house completions (i.e. ESB connections) in 2006 was just over 93,000. In 2009, it was 26,420 – a fall of 72%.

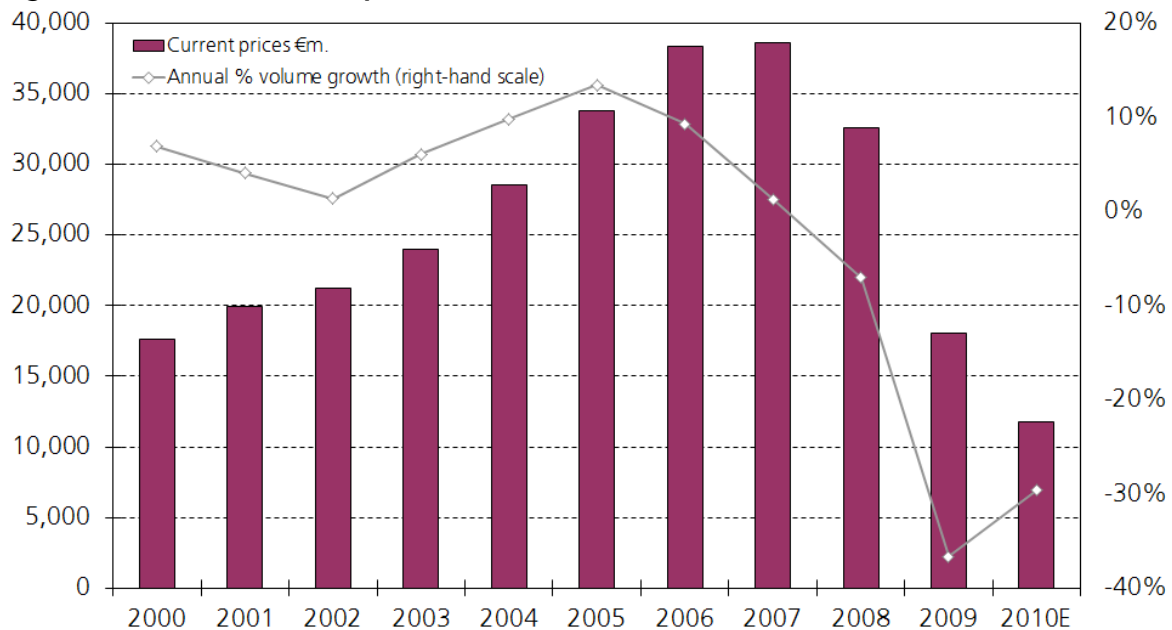
The total volume of non-residential construction also contracted in 2009, registering a fall of 23.2% relative to 2008.

⁸ Excluding transfer costs, or by 34.9% including transfer costs.

⁹ The detailed numbers underpinning the discussion in this section are contained in Tables 1.9 to 1.12.

¹⁰ See Section 1.4.

Figure 1.4: Construction output, 2000 - 2010E



Source: DEHLG, DKM

1.2.2: Composition of output ¹¹

The sharp contraction in the economy in 2009, combined with a reduction in demand, resulted in a severe weakening of private sector confidence. Output volumes in both the private residential and non-residential sectors fell significantly, resulting in a substantial decline in private construction output of 52.2%. Construction activity in the public sector also registered a decline, relative to 2008 volumes (-5.1%), as output from publicly funded productive and social infrastructure projects fell.

The outturn for 2009 is worse than was projected in last year's CIRO. At that time, the estimated change in the volume of construction output was forecast at -32.3%. The actual contraction was 36.7%. Total residential construction also fell by marginally more than anticipated, although the number of house completions surpassed expectations.¹² However, the outturns for public and private non-residential construction were worse than anticipated.

¹¹ The detailed numbers underpinning the discussion in this section are contained in Tables 1.9 to 1.12.

¹² The forecast for dwelling completions (i.e. ESB connections) in last year's CIRO was 17,000 compared with the outturn of 26,420, reported by the DEHLG. However the measure of housebuilding this year reflects the changed methodology which estimates total housebuilding in 2009 at 22,000. See Appendix 4.

- The total volume of **residential construction** – both new and repair, maintenance and improvement (RM&I) – declined by 48.3%, after allowing for a double digit decline in residential tender price inflation (-15.5%).
- The volume of construction activity in the **private non-residential construction** sector (new and RM&I) fell by a substantial 51.6%, driven by sharp falls in the volume of investment in commercial buildings (-50.5%), tourism buildings (-48.5%) and agricultural buildings (-74.4%).
- The overall construction spend on **productive infrastructure** (new and RM&I) was down by 3.3% in volume terms compared to 2008. There was continuing strong investment in airports/seaports (+20.4%) and water services (+17.8%) in 2009. These were offset by a decline in investment in road (-13.7%) and public transport (-13.2%) investment. The volume of construction output from investment in communications also declined, by 28.4%.
- The volume of **social infrastructure** construction fell by 7.4% in 2009. The volume of construction output associated with investment in hospital buildings increased by 23.6%, but this was offset by a fall in investment in public buildings (-29.5%) and other public social buildings (-21.4%).

The overall figures suggest that the total volume of publicly funded investment in building and construction¹³ fell by 5.1% in 2009 compared with 2008. The public sector categories of investment include an estimated €0.9 billion of private sector investment under energy, telecommunications, health and education, thus reducing the total public capital spend on construction to around €8.3 billion (new and RM&I) in 2009.

1.2.3: Repair, maintenance and improvement (RM&I)

We continue to collect data on new and repair and maintenance investment separately (a breakdown is presented in Appendix 2). However, there are still reservations as to the accuracy of the figures for non-residential repair and maintenance. We suspect that the figures for new investment also include some repair and maintenance expenditure. Thus, we continue to urge caution in relying on the RM&I figures.

Tables 1.9 to 1.12 combine estimates for investment in new projects as well as expenditure on the repair and maintenance of existing buildings and structures.

¹³ The public sector investment figures in the CIRO are derived from a survey of all Government departments, State agencies and other public sector bodies on estimated expenditure on construction projects. Private sector construction activity under energy, telecommunications, education and health is also included, where available, based on information obtained from private sector companies operating in these sectors.

1.3 Outlook for 2010¹⁴

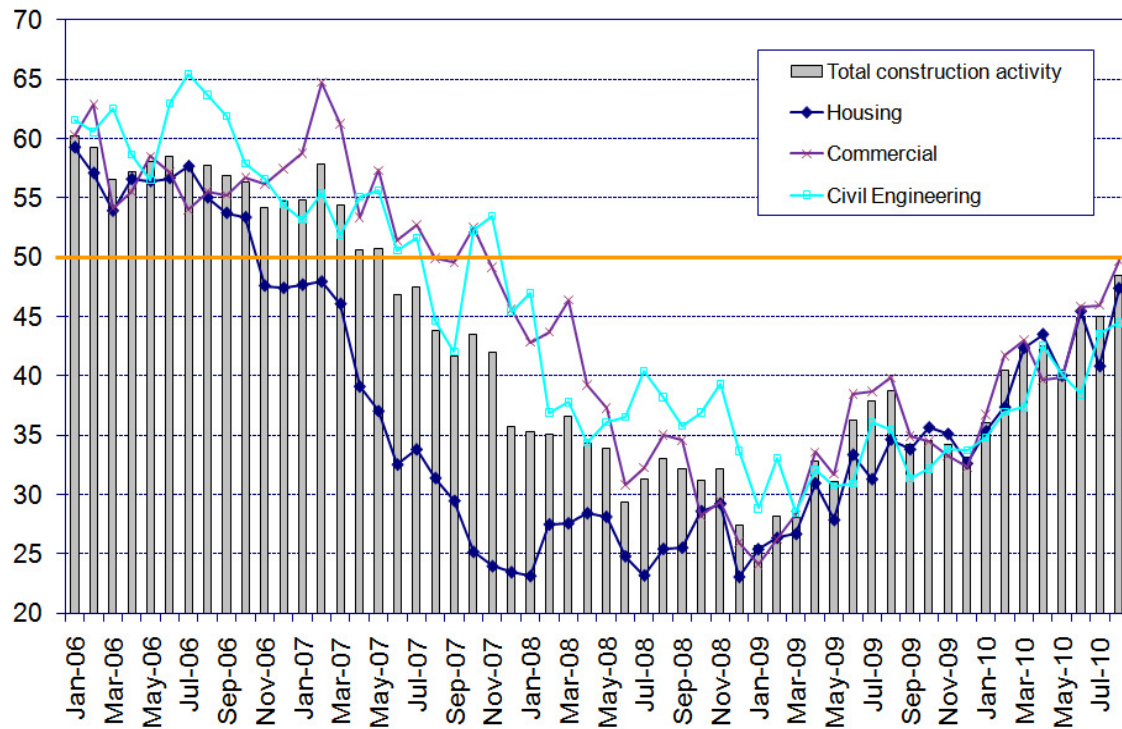
The value of output in the construction industry is forecast to decline to €11.7 billion in 2010 or by 35% in value terms. In volume terms, output is forecast to decline by 29.6% compared with 2009, after allowance is made for the change in tender price inflation this year (-7.7%).

The estimate for construction output this year represents 9.2% of GNP (7.4% of GDP).¹⁵

Conditions in construction industry remain tough, but the pace of contraction is slowing

The Ulster Bank Purchasing Managers' Index (PMI) measures confidence among construction companies in respect of output, new orders, employment and prices. The PMI began falling significantly in early 2007 and reached an all-time low in January 2009. Although it has been on a rising trend since, it has remained below 50 since June 2007 – indicating a sharp contraction in activity over the last three years.

Figure 1.5: Index of construction confidence



Source: Ulster Bank Construction Purchasing Managers' Index (PMI)

The latest PMI data, relating to August 2010, indicate that operating conditions in the industry remain particularly tough, with the index staying below 50 for the 39th successive month. The

¹⁴ The detailed numbers underpinning the discussion in this section are contained in Tables 1.9 to 1.12.

¹⁵ Using the expenditure measure of construction output in the CIRO discussed in Section 1.2.

seasonally adjusted index for total construction activity increased marginally during August to 48.4 from 45 in July. Although activity declined across the three broad sub-sectors of construction, the decline was at a slower pace, with the headline index figure back at May 2007 levels. Looking forward, there was a very marginal increase in new orders for the second month in a row. However with new work remaining scarce, the continuing focus on cost containment generated a further reduction in employment, for the 40th month in a row. On a more positive note, respondents expected activity to rise from the current very low levels after twelve months.

1.3.1 Prospects for individual sectors in 2010

Taking the aggregate picture for both new and repair, maintenance & improvement (RM&I) projects, the prospects for construction as a whole in 2010 reveal a further substantial decline in the volume of construction output for the third year in a row, as Table 1.12 shows:

- The volume of **residential construction** output is expected to decline by 37.2% in 2010, with the volume of private housebuilding (new and RM&I) expected to decline by a much greater amount (-42.9%). The number of new dwellings built is forecast at just 8,500 this year.
- The weak economic environment continues to impact on the volume of **private non-residential construction** output, which is expected to fall by as much as 67% this year. Should this materialise, the total decline in private non-residential construction output since the peak in 2007 would be a staggering 85%. The volume of construction output associated with commercial building is expected to fall significantly this year, by 71.4%, with sharp declines also expected in the volume of industrial building output (-71.2%) and tourism buildings (-75.9%).
- Overall investment in **productive infrastructure** projects is expected to register a decline of 12.3% in 2010, driven largely by a significant fall in the volume of investment in airport/seaports (-72.7%) and in roads (-18.8%). Investment in public transport projects is also forecast to decline (-14.2%), while investment in telecommunication is expected to record a modest increase (+2.9%).
- The volume of construction related investment in **social infrastructure** projects is expected to fall by just 0.1% this year. This segment is supported by a strong growth in investment in education (+25.2%) while the volume of construction output associated with investment in hospital buildings (-5.5%) and public buildings (-9.8%) is expected to be lower than 2009 levels.

The last two sectors mentioned are funded by the Public Capital Programme (PCP) and the forecasts suggest that the public sector will not make any positive contribution to overall construction activity in 2010. Overall public sector construction activity is forecast to fall by 8.7% in volume terms this year. This figure includes an estimated €0.6 billion of private sector

investment under energy, telecommunications, health and education, thus reducing the total public capital spend on construction to around €7 billion (new and RM&I) in 2010¹⁶.

The following table illustrates, in summary, the sharp rise and subsequent fall experienced by construction output over the recent cycle. It gives the value of output in 2000 and 2010 and also shows the average annual growth rates in the period during the building of the bubble. This contrasts markedly with the period after the bubble burst and activity crashed.

Table 1.3: Value of construction output 2000-2010E
Current prices and volume % changes

	2000 current prices €m.	2000-2007 Ave. annual volume growth	2007-2010E Ave. annual volume growth	2010E current prices €m.	Annual volume growth 2010E
Residential	9,496	6.7%	-35.2%	4,368	-37.2%
Private non-residential	3,820	6.9%	-46.6%	741	-67.0%
Productive infrastructure	3,063	4.7%	0.9%	4,868	-12.3%
Social infrastructure	1,207	6.4%	3.3%	1,756	-0.1%
Total output	17,586	6.4%	-25.2%	11,733	-29.6%
Share of GNP %	19.7%			9.2%	

Source: DEHGL, DKM

- Construction output has fallen from close to 20% of GNP in 2000 to an estimated 9.2% in 2010¹⁷.
- Annual average growth rates changed from +6.4% during the expansion period to an average annual fall of -25% during the contraction phase.

1.4: Construction inflation¹⁸

1.4.1: Trends in construction costs, earnings and tender prices

Construction costs fell for the first time in 2009 but at a modest rate

The wholesale price of building and construction materials increased at an annual average growth rate of 5.6% from 2004-2008 but a reversal in this growth came about in 2009 when average wholesale prices declined by 3.1%. Other measures of construction costs, notably from the DEHLG and the Society of Chartered Surveyors (SCS), also suggest that costs declined in

¹⁶ This figure includes direct Exchequer expenditure, expenditure by Government departments from their own resources and non-Exchequer expenditure from the resources of the semi-state agencies and local authorities. See Section 4 for a full discussion on public sector construction.

¹⁷ Although the peak years are not in this Table, construction output reached 25% of GNP in 2006.

¹⁸ For a detailed discussion on the range of construction cost and tender price indices see Appendix 1.

2009, by 1.0% and 1.6% respectively, following a very long period of consistent price increases.

Table 1.4: Trends in construction cost and tender price inflation

	2005	2006	2007	2008	2009	2010E
Construction cost inflation						
1 Wholesale price inflation of B&C materials	5.1%	7.9%	5.0%	3.4%	-3.1%	3.0%
2 Ave. earnings per week in construction	7.2%	1.7%	5.8%	1.2%	-0.7%	-4.0%
3 B&C capital goods price inflation	4.7%	5.8%	4.9%	3.4%	-1.5%	1.0%
4 DEHLG housebuilding cost inflation	3.0%	3.9%	3.9%	3.8%	-1.0%	0.5%
5 SCS construction cost inflation	3.4%	5.4%	3.5%	3.0%	-1.6%	N/A

Sources:

1, 2, 3 Central Statistics Office

2 Earnings data from 2009 based on the new CSO Earnings, Hours and Employment Costs Survey which replaced all other short term earnings inquiries.

4 Housing Statistics, Department of Environment, Heritage and Local Government

5 Society of Chartered Surveyors (SCS)

Average earnings in construction¹⁹

The latest data on average earnings in the construction sector comes from the CSO's 'Earnings, Hours and Employment Costs Survey'. It states that average earnings per week in construction started to decline by 4.5% on the previous quarter in Q1 2009. In year-on-year terms, the first annual decline was recorded in Q2 2009, of just 0.5%. The annual rate of decline gathered momentum during 2009 and by Q4 2009 had reached 4.4%. A further, albeit more moderate, reduction of 3.5% was recorded in Q1 2010. The corresponding average weekly earnings figure was €726.88 or €37,800 on an annual basis.

The average hourly earnings in construction remained just above €20 in Q1 2010. Average hourly labour costs fell by 5.5% in Q1 2010 on the same quarter in 2009.

Table 1.5: Recent trends in construction earnings

Construction	Q1 2009	Q1 2010	% change yoy
Average earnings per week (€)	753.33	726.88	-3.5%
Average hourly earnings (€)	21.00	20.46	-2.6%
Average weekly paid hours (hours)	35.90	35.50	-1.1%
Average hourly labour costs (€)	25.29	23.90	-5.5%

Source: CSO Survey on Earnings Hours and Employment Costs (EHECS)

Table 1.6 provides data on the average earnings for employees in Q1 2010 across a range of other economic sectors and a comparison with construction workers.

¹⁹ The data series in the table above comes from the old Earnings, Hours and Employment Costs which ceased in March 2009. There is a new CSO survey on Earnings Hours and Employment Costs (EHECS) covering all sectors of the economy other than Agriculture, Forestry and Fishing introduced from Q1 2008. These more up to date statistics are provided overleaf.

Table 1.6: The relative earnings position of construction workers vis à vis employees in other economic sectors, Q1 2010 (€)

	Q1 2010 Ave weekly earnings	Q1 2010 Ave. annual earnings	Relative to construction workers
Electricity, water supply and waste management	1,113.71	57,913	53.2%
Financial, insurance and real estate activities	1,013.59	52,707	39.4%
Public administration and defence	925.32	48,117	27.3%
Professional, scientific and technical activities	856.3	44,528	17.8%
Education	809.24	42,080	11.3%
Industry	800.16	41,608	10.1%
Manufacturing	772.77	40,184	6.3%
Construction	726.88	37,798	0.0%
Human health and social work activities	699.06	36,351	-3.8%
Transportation and storage	680.15	35,368	-6.4%
Wholesale and retail trade	483.59	25,147	-33.5%
Arts, entertainment, recreation	451.51	23,479	-37.9%
Accommodation and food service activities	316.91	16,479	-56.4%
All NACE economic sectors	682.91	35,511	-6.4%

Source: CSO Earnings Hours and Employment Costs Survey.

Average earnings for construction workers were 6.4% above the average for all economic sectors in Q1 2010 but were up to 53% below the average earnings of workers in the highest paid economic sectors, notably electricity, water supply and waste management, and financial, insurance and real estate.

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

Construction development has essentially ground to a halt with the result that tender prices have been under substantial downward pressure since 2008. 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 been falling rapidly in some sub-sectors. According to the three published tender indices that are available, tender prices on average fell by around 17% in 2009 compared with a decline of around 12% in 2008.

Table 1.7: Construction tender prices

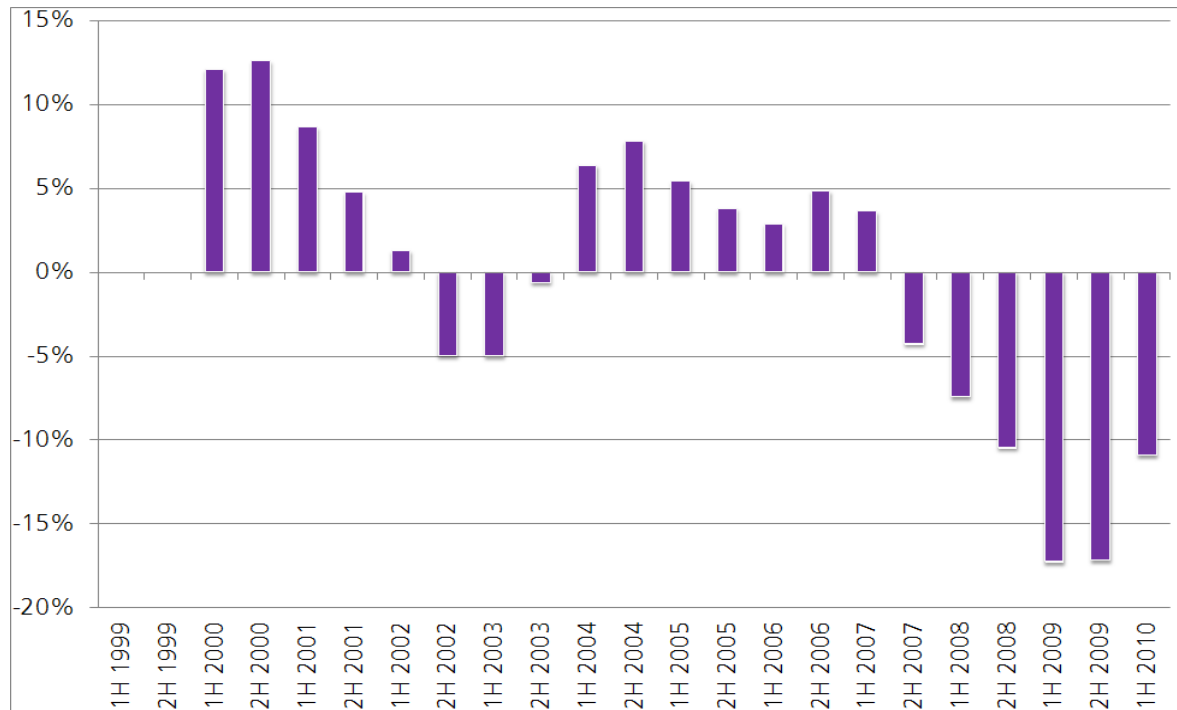
	2005	2006	2007	2008	2009	2010E
Construction tender price inflation						
Bruce Shaw	4.0%	3.0%	0.0%	-12.0%	-17.0%	-5.5%
Davis Langdon PKS	4.0%	4.0%	-1.0%	-13.5%	-16.0%	-10.0%
SCS	4.6%	3.9%	-0.4%	-10.5%	-17.3%	-5.5%

Sources:

Bruce Shaw, Davis Langdon PKS, and Society of Chartered Surveyors (SCS).

Figure 1.6 provides a clear view of the downward pressure tender prices have come under since 2007, according to the SCS tender price index.

Figure 1.6: Trends in tender price inflation – year-on-year % changes



Source: Society of Chartered Surveyors

Tender prices began falling in late 2007, according to the SCS index. The total decline from peak to the end of June 2010 was almost 32%. Bruce Shaw and the SCS expect a further decline of 5.5% in average tender prices in 2010 while Davis Langdon PKS are projecting a decline of 10%. Thus tender prices will have declined by between 30% and 35% in the last four years, bringing them back to levels seen in 1998. This situation is unsustainable, particularly when input costs are not falling by anything like as much as tender prices. It can only cause further difficulty for construction companies and sub-contractors intent on bidding below cost to retain turnover.

1.4.2: Construction inflation assumptions for 2010

A CIRO composite index has been derived for the industry as a whole²⁰ which suggests that construction tender prices declined by 12.6% on average in 2009, following a decline of 9.2% in 2008.

Average construction tender prices are expected to decline by a further 7.7% in 2010, bringing the total reduction in *average* tender prices to almost 27% since the industry peaked in 2007.

²⁰ See Appendix 1.

However, as the table shows, there have been projects tendered for, which have experienced reductions well in excess of the average reduction. The average tender price for general contracting projects, for example, is expected to be down by 31% over the three years to 2010.

Table 1.8: CIRO tender price inflation

	2005	2006	2007	2008	2009	2010E
Tender price inflation per CIRO (est):						
New housebuilding	3.7%	3.5%	-1.9%	-11.8%	-21.6%	-12.1%
New general contracting	4.0%	4.0%	-0.6%	-11.1%	-16.6%	-10.0%
New civil engineering	4.2%	3.7%	3.6%	-6.2%	-6.6%	-7.0%
All construction	4.6%	3.9%	-0.7%	-9.2%	-12.6%	-7.7%
General price inflation						
Consumer Price Inflation *	2.5%	4.0%	4.9%	4.1%	-4.5%	-0.5%

Sources: Construction Industry Review and Outlook (CIRO) DKM estimates for 2010.

* CSO.

All sectors are expected to experience reductions in tender prices this year:

- For *new housebuilding* projects the average decline is 12.1%.
- For *new general contracting* projects the average decline is 10%.
- For *new civil engineering* projects the average decline is 7%.
- For *RM&I projects*, the average decline is 9.5%.

We are confident that the deflators used provide a reasonable reflection of market conditions over the recent period of construction activity. The projections for 2010 express the unique market circumstances, all of which are contributing to an intensely competitive market namely:

- the marked decline in the volume of new work being put out to tender,
- unprecedented job losses, and
- the considerable underutilised capacity in the industry.

As a result many tenders are being submitted below cost, a trend which is not sustainable in the medium-term.

1.5: Overall construction output - summary

Trends in the value and volume of construction output by sector (new and repair and maintenance activity combined) over the period 2006 to 2010E are set out in the following Summary Tables 1.9 to 1.12.

Table 1.9: Value of construction output in current prices 2006 to 2010E (€m)

	2006	2007	2008	2009	2010E
Residential construction					
Private housing	23,862	22,024	15,910	6,378	3,306
Public housing	<u>1,351</u>	<u>1,368</u>	<u>1,583</u>	<u>1,273</u>	<u>1,062</u>
Sub total	25,213	23,392	17,492	7,651	4,368
Non-residential construction					
Private non-residential construction					
Industry	796	654	1,090	645	169
Commercial	4,356	4,714	2,860	1,185	305
Agricultural	312	668	1,298	301	150
Tourism	706	998	681	298	66
Worship	<u>76</u>	<u>82</u>	<u>76</u>	<u>35</u>	<u>51</u>
Sub total	6,247	7,116	6,005	2,463	741
Productive infrastructure					
Roads	2,083	2,417	2,862	2,365	1,779
Water Services	891	991	1,044	1,118	1,107
Airports/Seaports	182	308	438	490	124
Energy	1,484	1,097	1,152	1,170	1,140
Transport	334	586	705	568	453
Communications	<u>307</u>	<u>367</u>	<u>415</u>	<u>276</u>	<u>264</u>
Sub total	5,282	5,765	6,617	5,987	4,868
Social infrastructure					
Education	782	900	845	742	834
Health	328	367	439	456	388
Public buildings	401	557	603	363	297
Other social*	<u>379</u>	<u>503</u>	<u>591</u>	<u>387</u>	<u>237</u>
Sub total	1,889	2,327	2,478	1,948	1,756
Total all construction	38,631	38,601	32,593	18,048	11,733

The value of construction output includes repair and maintenance expenditure.

*Includes building output associated with capital investment in local authority services, public sports facilities and in the Gaeltacht.

Table 1.10: Change in construction output value in current prices, 2006 to 2010E (%)

	2006	2007	2008	2009	2010E
Residential construction					
Private housing	18.2	-7.7	-27.8	-59.9	-48.2
Public housing	<u>6.9</u>	<u>1.3</u>	<u>15.7</u>	<u>-19.6</u>	<u>-16.6</u>
Sub total	17.5	-7.2	-25.2	-56.3	-42.9
Non-residential construction					
Private non-residential construction					
Industry	-30.9	-17.9	66.7	-40.8	-73.8
Commercial	19.8	8.2	-39.3	-58.6	-74.2
Agriculture	3.0	114.1	94.3	-76.8	-50.1
Tourism	35.0	41.3	-31.8	-56.3	-77.8
Worship	<u>4.0</u>	<u>8.0</u>	<u>-7.3</u>	<u>-54.5</u>	<u>47.4</u>
Sub total	9.8	13.9	-15.6	-59.0	-69.9
Productive infrastructure					
Roads	11.8	16.0	18.4	-17.4	-24.8
Water services	16.0	11.2	5.4	7.0	-1.0
Airports/Seaports	14.9	69.0	42.1	12.0	-74.6
Energy	6.9	-26.1	5.1	1.5	-2.6
Transport	-8.5	75.4	20.2	-19.5	-20.2
Communications	<u>19.8</u>	<u>19.3</u>	<u>13.3</u>	<u>-33.6</u>	<u>-4.3</u>
Sub total	10.0	9.1	14.8	-9.5	-18.7
Social infrastructure					
Education	7.7	15.1	-6.1	-12.2	12.4
Health	-29.2	11.7	19.8	3.8	-14.9
Public buildings	8.1	39.2	8.2	-39.8	-18.2
Other social*	<u>22.6</u>	<u>32.7</u>	<u>17.5</u>	<u>-34.5</u>	<u>-38.9</u>
Sub total	1.1	23.2	6.5	-21.4	-9.9
Total all construction	14.2	-0.1	-15.6	-44.6	-35.0

The value of construction output includes repair and maintenance expenditure.

*Includes building output associated with capital investment in local authority services, public sports facilities and in the Gaeltacht.

Table 1.11: Construction output in constant (2008) prices, 2006 to 2010E (€m).

	2006	2007	2008	2009	2010E
Residential construction					
Private housing	21,044	19,799	15,910	7,585	4,332
Public housing	<u>1,291</u>	<u>1,308</u>	<u>1,583</u>	<u>1,465</u>	<u>1,347</u>
Sub total	22,335	21,106	17,492	9,049	5,679
Non-residential construction					
Private non-residential construction					
Industry	708	581	1,090	767	221
Commercial	3,879	4,197	2,860	1,416	405
Agriculture	312	668	1,298	333	184
Tourism	630	889	681	350	84
Worship	<u>70</u>	<u>76</u>	<u>76</u>	<u>39</u>	<u>64</u>
Sub Total	5,599	6,412	6,005	2,905	959
Productive infrastructure					
Roads	2,058	2,271	2,862	2,469	2,004
Water services	831	906	1,044	1,230	1,310
Airports/Seaports	184	299	438	527	144
Energy	1,497	1,064	1,152	1,260	1,321
Transport	337	569	705	612	525
Communications	<u>310</u>	<u>356</u>	<u>415</u>	<u>297</u>	<u>306</u>
Sub total	5,218	5,464	6,617	6,396	5,611
Social infrastructure					
Education	698	805	845	862	1,079
Health	294	327	439	543	513
Public buildings	359	497	603	425	384
Other social*	<u>336</u>	<u>445</u>	<u>591</u>	<u>464</u>	<u>315</u>
Sub total	1,686	2,074	2,478	2,295	2,292
Total all construction	34,838	35,057	32,593	20,646	14,540

The value of construction output includes repair and maintenance expenditure.

*Includes building output associated with capital investment in local authority services, public sports facilities and in the Gaeltacht.

Table 1.12: Change in volume of construction output, 2006 to 2010E (%)

	2006	2007	2008	2009	2010F
Residential construction					
Private housing	14.3	-5.9	-19.6	-52.3	-42.9
Public housing	-0.4	1.3	21.0	-7.5	-8.0
Sub total	13.3	-5.5	-17.1	-48.3	-37.2
Non-residential construction					
Industry	-33.9	-17.9	87.4	-29.6	-71.2
Commercial	15.1	8.2	-31.9	-50.5	-71.4
Agriculture	-0.9	114.1	94.3	-74.4	-44.5
Tourism	29.7	41.2	-23.4	-48.5	-75.9
Worship	0.0	8.0	0.2	-49.1	63.9
Sub total	5.4	14.5	-6.3	-51.6	-67.0
Productive infrastructure					
Roads	8.0	10.3	26.1	-13.7	-18.8
Water services	13.8	9.0	15.2	17.8	6.5
Airports/Seaports	10.5	62.5	46.5	20.4	-72.7
Energy	2.8	-28.9	8.3	9.4	4.8
Transport	-12.0	68.7	24.0	-13.2	-14.2
Communications	15.2	14.7	16.8	-28.4	2.9
Sub total	6.2	4.7	21.1	-3.3	-12.3
Social infrastructure					
Education	3.7	15.4	4.9	2.1	25.2
Health	-31.1	11.3	34.5	23.6	-5.5
Public buildings	3.8	38.6	21.3	-29.5	-9.8
Other social*	18.2	32.5	32.8	-21.4	-32.1
Sub total	-2.5	23.0	19.5	-7.4	-0.1
Total all construction	10.0	0.6	-7.0	-36.7	-29.6

The value of construction output includes repair and maintenance expenditure.

*Includes building output associated with capital investment in local authority services, public sports facilities and in the Gaeltacht.

Section 2: Sectoral review and outlook²¹

Summary

The review of construction activity by sector for 2009 and 2010 to date makes for very bleak reading. All sectors, without exception, have been affected by the collapse of the construction bubble and by the challenging economic environment. All housing indicators are profoundly weak following a period of rapid contraction over almost four years. The fragile state of the private non-residential construction sector is evident from the exceptional drop in new construction activity over the past two years, which reflects a range of issues impacting on this sector. In the public sector, the picture is one of a number of large projects finishing up with few projects emerging to take their place. This trend has been exacerbated by the reduction in the public capital programme (PCP) over the past two years.

A review of the measurement of housebuilding to take account of 1) the lag between the point of completion and the point of connection for electricity, and 2) the unsold new stock, suggests that actual housebuilding was higher than estimated over the period 2006-2008 and lower than estimated in 2009. The adjusted forecast for the number of new dwellings built in 2010 is 8,500 compared with 22,000 in 2009. The volume of new residential construction output is projected to decline for the fourth year in a row, by 51.5% in 2010. As a result, total new residential construction will be a staggering 87% below the level at the peak (2006). The value of new residential construction is estimated at just €1.7 billion in 2010.

The private non-residential construction sector is weak, with overall confidence amongst clients affected by employment losses, high debt, liquidity issues, uncertainties over NAMA and the exceptional oversupply situation.

The total Exchequer capital allocation is €6.43 billion in 2010, of which two-thirds was allocated to Transport, Environment and Education. With an estimated 75% of the total Exchequer provision going into construction and around 60% of other capital expenditure by semi-state agencies and local authorities, the estimated construction related spend on new and major projects is around €6.6 billion this year. CIRO estimates for the construction spend associated with new productive and social infrastructure projects in 2010 suggest that the volume of construction output is likely to decline by 13.5% and 3.7% respectively.

Activity in the repair, maintenance and improvement sector has slowed sharply from 2008, although the volume of projects in the housing market is reported to be up, the size and outlay on such projects is down by over 40% from pre-recession levels.

The total value of output in the construction industry is estimated at €11.7 billion this year, or 9.2% of GNP. The corresponding volume of construction output is expected to be down by 29.6%, following a record reduction of 36.7% in 2009. Overall output in the industry is expected to be down by almost 60% in volume terms in 2010 compared with the peak.

The 2010 assessment is predicated on the assumption that the full public capital provision is spent in the year. Should public investment be delayed or postponed, there is a risk that the total size of the construction industry could be closer to €11 billion. Every €1 billion reduction in the Exchequer PCP generates a reduction of around €750 million in construction output, which based on an industry valued at €11.7 billion, would represent a further reduction of 6.4%.

²¹ Appendix 2 contains detailed tables setting out construction output estimates by sector for the period 2006 to 2010E. The output figures in this Appendix are referred to throughout this Section.

2.1 Residential construction

2.1.2 Review of 2009

Virtually every indicator over last four years shows that housing contraction deepened

Based on the official data²³ available, the housing market is in the most pronounced downswing since 1970 and probably the worst in the history of the State. The industry has been undergoing a period of severe contraction for almost four years, with most indicators reporting record breaking new lows with each new observation. As a result, the industry in 2010 is in an exceptionally weak position. Table 2.1 sets out trends in a range of housing indicators.

The scale of the contraction is evident from the double digit rates of decline across all indicators (in the right hand column), with the exception of the number of first-time buyers taking out mortgages. All indicators are profoundly weak when compared with the boom years, when they had reached unsustainable levels. They show the effects of a combination of lack of demand and oversupply in the housing market. The most salient points from the above Table are as follows:

- 1) The number of dwellings granted planning permission in multi-unit developments (i.e. housing estates) was down by 71% in the first six months of 2010 on the same period in 2009.
- 2) Single units commenced accounted for 85% of total commencements in the first five months of 2010 compared with just 23% in 2006.
- 3) Total registrations have fallen to just 2,000 on an annualised basis in 2010 (1,382*(12/8)), possibly reflecting the demise of the housing estate development segment of the market.
- 4) As with commencements, single units dominate the number of completions, accounting for over one half (55%) of total completions in the first eight months of 2010.
- 5) Apartments appear to be less popular, falling to just 13% of total completions in the first six months of the year compared with 23% at the peak (2006).
- 6) In respect of loan advances, the number of loans advanced to FTBs was down by just 4% in the first half of 2010 on the same period in 2009, compared with declines of 33% for existing owners and 64% for residential investors.

²² Further analysis of the prospects for residential construction is contained in Section 4. Appendix 4 presents a revised methodology for the measurement of housebuilding output and should also be read in conjunction with this section.

²³ Data from 1970 is available under Housing Statistics at www.envron.ie

Table 2.1: Recent trends in housing indicators

	2006	2007	2008	2009	2010 (latest available) *	% change on same period in 2009
Planning permissions:	78,755	84,397	67,584	40,556	10,888	-60%
Houses	60,008	62,828	47,806	26,814	6,628	-63%
<i>of which</i>						
- Multi-unit developments	40,851	44,273	33,052	18,101	3,776	-71%
- One-off houses	19,157	18,555	14,754	8,713	2,852	-43%
Apartments	18,747	21,569	19,778	13,742	4,260	-53%
Total commencements:	75,602	48,876	22,852	8,604	2,990	-25%
<i>of which</i>						
Single units	17,412	15,757	10,856	6,525	2,554	-18%
Total registrations:	66,649	38,351	12,676	3,743	1,382	-48%
Total completions***:	88,219	78,027	51,724	26,420	9,513	-48%
<i>of which</i>						
- Individual houses	22,806	19,663	17,386	12,065	5,189	
- Scheme houses	50,267	39,273	21,127	9,207	3,085	
- Apartments	19,946	18,691	12,811	5,148	1,239	
Number of loans: #	110,790	84,194	53,616	25,097	9,171	-25%
<i>of which</i>						
- First-time buyer	37,064	30,469	19,946	12,684	5,300	-4%
- Mover purchaser	45,585	32,864	20,444	9,395	3,202	-33%
- Residential investor	28,141	20,861	13,226	3,018	669	-64%
Average house price (€)	301,865	300,482	273,123	235,819	203,097	-18%

* All 2010 data is for the first six months of 2010, with the exception of Commencements (5 months) and Registrations and Completions i.e. ESB connections (8 months). Last column shows % change on same period in 2009.

+ Average house price as per PTSB/ESRI house price index and last column shows % change in the average house price for the first six months of 2010 on the same period in 2009.

*** Individual components do not add to the total because: 1) the adjustment made to 2006 to reflect the backlog of electricity connections in 2005; and 2) the 400 conversions which are included in the total, but not in the breakdown by type.

Drawdowns only where a house purchase is involved. The figures exclude top-ups and re-mortgages.

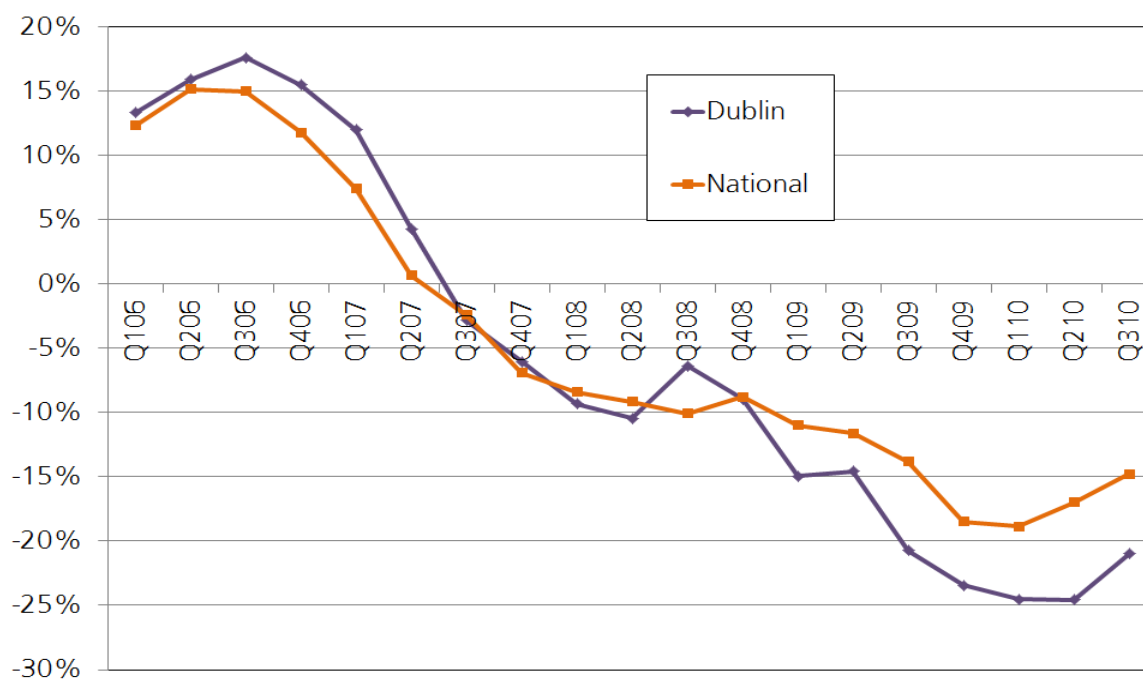
Source: CSO, DEHLG, IBF and PTSB/ESRI.

House prices on a downward trend for almost four years

As with other indicators in the housing market, average house prices have been through a rapid downward adjustment in a short space of time. Figure 2.1 illustrates the annual rate of decline each quarter, commencing in Q3 2007 (-2.4% nationally) and accelerating to a decline of almost 19% in Q1 2010. The annual rate of decline slowed to 14.8% by Q3 2010. However, the annual decline in average house prices in Dublin reached a record of 24.6% in Q2 2010, although it moderated to 21% by Q3 2010. Based on average prices in Q3 2010, according to the PTSB/ESRI data, average house prices, in nominal terms, were back to 2002/2003 levels, but

they are still 2.65 times higher (or 165%) than where they were at in March 1996, when the permanent tsb/ESRI house price series commenced.

Figure 2.1: House prices: annual percentage changes by quarter
Year-on-year



Source: permanent-tsb/ESRI quarterly house price data

There are of course some locations and property types where a sample of house prices would reveal reductions in excess of these declines since the peak. However, the published indices with the most reliable methodologies have stood the test of time, and provide the most consistent information on trends over long time periods.

The expectation is that average house prices will continue to decline over the remainder of 2010. Taking historic house price to earnings ratios of around 3.5 to 4 times average income levels, further reductions are likely.

Table 2.2 shows the peak to trough movements of house prices:

- Average new and second-hand house prices across the country were down 32% and 37% respectively in nominal terms from their peak levels in the first half of 2007.
- Average new and second-hand house prices in Dublin were down by 42% and 46% respectively from their peak levels in Q3 2006.

Table 2.2: House prices - *peak to latest available*

(€)	Latest published	Current price	Peak price	Peak quarter	% decline
National house prices					
DEHLG new	Q1 2010	226,245	331,947	Q2 2007	-32%
DEHLG second-hand	Q1 2010	247,534	389,871	Q3 2006	-37%
PTSB/ESRI all houses	Q3 2010	198,689	310,841	Q4 2006	-36%
Dublin house prices					
DEHLG new	Q1 2010	247,515	426,900	Q2 2007	-42%
DEHLG second-hand	Q1 2010	296,130	549,330	Q3 2006	-46%
PTSB/ESRI all houses	Q3 2010	238,986	431,006	Q1 2007	-44%

Source: www.environ.ie and Permanent-TSB/ESRI house price index.

House price data for other segments of the market are less reliable, due to the small number of transactions taking place in the current market. As a result the PTSB/ESRI stopped publishing average FTB house prices in July 2009. However, given the average differential since the peak (ca. 15%) between national house prices and FTB house prices up to July 2009, the average FTB house price is currently estimated at around €165,000 across the State.

Value of residential construction in 2009

The value of residential construction²⁴ up to the 2009 CIRO was based on valuing the number of dwelling completions, using the number of dwellings connected for electricity as a proxy for housebuilding. This worked well in the past on the basis that in periods of high demand, one would expect new units to be connected for electricity immediately on completion.

However, in the light of new market realities, an adjusted level of completions²⁵ is used to value new residential construction output in the CIRO this year, which takes account of the following:

- The likelihood that some of the new units connected for electricity in recent years were built in earlier years, and
- Some of the unsold new stock, already built, may have yet to appear in the connections²⁶.

Appendix 4 sets out the methodology used to determine this adjusted level of completions. It concludes that taking into account the above factors:

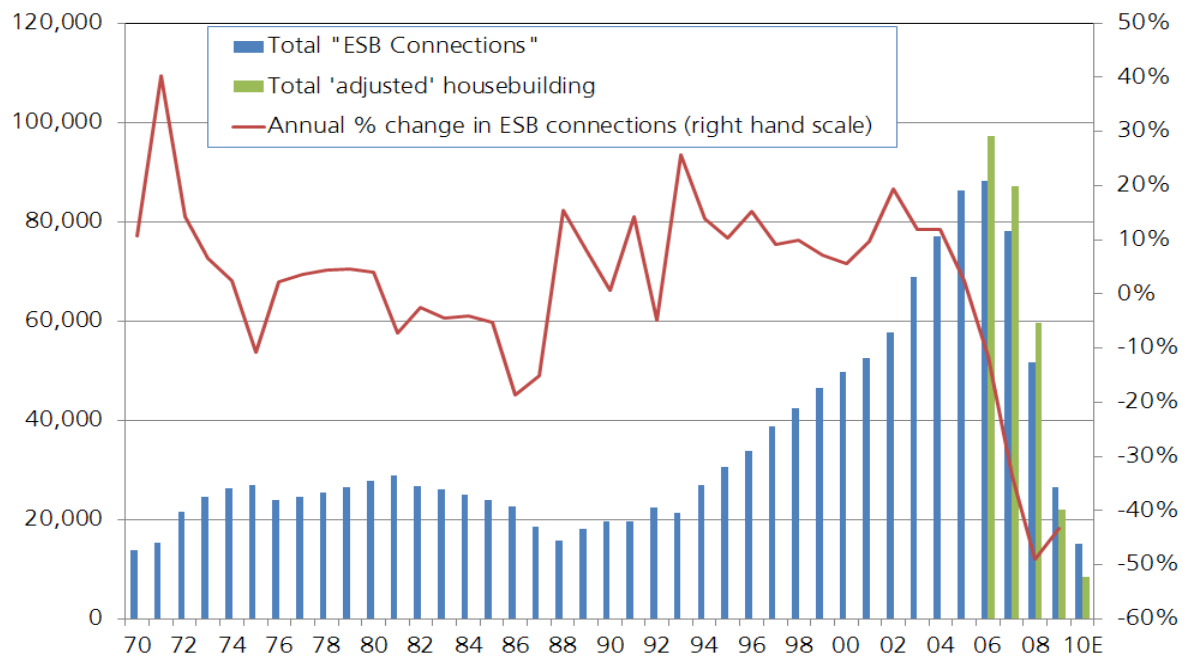
²⁴ The total volume is derived by multiplying the number of private completions by the average net sales price (excluding site costs) and adjusting for house price inflation.

²⁵ See Appendix 4.

²⁶ Under the revised Building Regulations (2008), it is possible that a number of the unsold units were 'airtight' houses (estimated at 10,000), which by implication would have necessitated a connection to the electricity network.

- The estimates for the number of new dwellings built are higher in 2006, 2007 and 2008 and lower in 2009 and 2010 than the published ESB connections figures.
- Thus the number of units built at the peak is estimated at 97,219 in 2006 compared with 93,419 electricity connections.
- The number of completions in 2007 is also revised upwards from 78,027 units to 87,027 units. Similarly, there is an upward revision to the 2008 figure, from 51,724 units to 59,644 units.
- Reflecting the severe contraction in housebuilding in 2009 and 2010, the estimate for new housebuilding is revised downwards, from 26,420 to 22,000 in 2009 and from an estimated 15,000 connections to 8,500 units in 2010 (see Figure 2.2).

Figure 2.2: Housing supply cycle 1970-2010E



Source: DEHLG, DKM

Thus, based on the adjusted level of completions derived in Appendix 4, the total value of residential output has also been revised back to 2006. The output estimates are presented in Appendix 2 and show that:

- In 2009 the total value of residential output was €7.7 billion, of which around a half (€3.9 billion)²⁷ represented new housebuilding activity. Total completions in 2009 are estimated at 22,000.
- The value of new private residential construction was just under €3 billion in 2009. New private residential output volumes declined by almost 65% in 2009 while the volume of new public residential construction (including regeneration) declined by 14%.
- The total volume of residential construction output declined by 48.3% in 2009 compared with 2008, the third year to record a decline in total output.
- The total estimate for residential construction output also includes an estimate for the value of housing *repair, maintenance and improvement* (RM&I) output in 2009 in the private and public sectors. According to the CSO RM&I monthly survey, the value of RM&I expenditure by private households was €3.7 billion in 2009²⁸, almost 31% in value terms (25% in volume terms) below the peak reached in 2008. The total volume of RM&I output was down by 22% in 2009 compared with 2008.

2.1.2 Prospects for 2010

Residential construction volumes decline for the fourth year in a row

The key medium-term issues, including the prospects for housing supply are discussed in detail in Section 4. With respect to the estimated value of residential construction in 2010, the output estimates in Appendix 2 suggest:

- The total value of new residential construction output is expected to fall sharply to €1.7 billion (current prices). In volume terms the reduction is 51.5%, after the decline in tender price inflation (-12.1%)²⁹. Total completions this year are estimated at just 8,500 units.
- The volume of construction output associated with residential RM&I projects is forecast to decline by 20% in 2010.
- The total value of residential construction is predicted to fall sharply to €4.4 billion (current prices), of which expenditure on RMI projects will amount to €2.7 billion. 2010 is the first year that RM&I output accounts for more than 50% of total residential construction output, based on data back to 1985.

²⁷ The total volume is derived by multiplying the number of private completions by the average net sales price (excluding site costs) and adjusting for house price inflation. The methodology used to ascertain average net sales prices is set out in Appendix 1.

²⁸ The RM&I survey (previously undertaken by the DEHLG and ESRI) specifically asks households about expenditure on household renovation and repairs covering major home improvements such as door or window replacement, extensions, major plumbing or electrical work, as well as expenditure by households on minor home repairs, such as decorating and minor electrical, plumbing and heating repairs or minor repairs to the structure of dwellings. This survey is now carried out by the Central Statistics Office (CSO).

²⁹ See Appendix 1.

- Thus the overall volume of residential construction is expected to decline for the fourth year in a row, by 37.2% this year, or by almost 75% since the peak.
- The share of residential construction output in the total construction market is expected to fall from 65% at the peak of the boom (2006) to 37% in 2010, the lowest share since 1985. The second lowest share was 42% over the period since 1985 and was recorded in 1998, 1990 and 2009.
- In terms of GNP, total residential construction will fall to around 3.4% of GNP in 2010 compared with 16.5% at the peak in 2006. These percentages compare with 4.6% of GDP in 2010 and 6% at the peak for the average across Western Europe³⁰.

2.2: Private non-residential construction

The private non-residential construction sector covers private sector building investment (new and RM&I) in the following sub-sectors: industrial, commercial, agriculture and tourism, including hotels, restaurants and conference centres as well as privately owned cultural buildings such as museums, art galleries, racecourses and marinas. There is other private sector construction activity such as investment in private sport and leisure facilities, and golf clubs. We separately identify public sector investment in sporting facilities under social infrastructure but there is no comprehensive data on the level of private sector investment in sporting facilities. As a result it is difficult to comprehensively measure the total volume of private non-residential building put in place.

Other private non-residential investment is captured under the productive and social infrastructure categories which includes investment by private companies in educational and hospital buildings as well as in energy and telecommunications infrastructure.

Dramatic decline in the pipeline of non-residential buildings with planning permission

An indication of the potential supply of non-residential buildings in the pipeline is available from the CSO's planning permissions data. The most recent data available is up to Q2 2010 and shows the total floor area granted planning permission for non-residential buildings declined by 37% to just 552,000 square metres compared with Q2 2009. This compares with quarterly figures of the order of between 2 and 3 million square metres just three years ago. Taking the first two quarters of 2010, the total floor area granted permission was 856,000 square metres, just less than half the corresponding figure in the first half of 2009 (1.74 m sq. m).

Taking the four quarters to Q2 2010 and comparing with the corresponding period in 2009, the total floor area granted planning permission is down by 47%. The total floor area granted planning permission peaked at 9.3 million square metres in 2007, almost 50% of which was for agricultural buildings. Excluding agricultural buildings, the total floor area is down by 49% to less than 2 million square metres in the year to Q2 2010.

³⁰ Source: Euroconstruct June 2010. www.euroconstruct.org

Planning permissions are a proxy for potential starts, and, if they proceed, albeit within a five-year period, such developments translate into completed buildings. It is the value of such work put in place on the construction of new non-residential buildings in a calendar year that is measured in the CIRO.

The following Table provides data on the total floor area for which planning permission was granted for a mix of new non-residential buildings over the period 2008 to the first half of 2010. The Table reveals the dramatic fall off in the total floor area across each building type. The largest segments are 'buildings for trade, administration and other economic activities' (438,000 square metres in year to Q2 2010), 'agricultural buildings' (359,000 square metres) and 'office development, finance and insurance' (339,000 square metres). The total floor area for new buildings under the category 'health and welfare' (167,000 square metres) declined by 72% in the year to Q2 2010. In sectors severely affected by the recession, notably retail and hotels and restaurants, volumes of new buildings granted planning permission were down by 60% and 41% respectively.

Table 2.3: Total floor area granted planning permission for new non-residential buildings

	2008	2009	2010 #	H1 2010	2008	2009	2010 +	**H1 2010
	<i>(000s sq. metres)</i>				<i>Annual % change in floor area</i>			
All non-residential buildings	5,156	3,063	2,178	856	-45%	-41%	-47%	-51%
Total excluding agriculture	4,291	2,612	1,819	707	-10%	-39%	-49%	-53%
Buildings for:								
Trade, administration	1,231	812	438	164	-15%	-34%	-60%	-70%
Agriculture, forestry	865	451	359	149	-81%	-48%	-32%	-38%
Office development, finance & insurance	685	501	339	102	19%	-27%	-37%	-61%
Transport	218	233	194	71	0%	7%	-5%	-35%
Entertainment & recreation	299	249	179	16	-22%	-17%	-24%	-81%
Health & welfare	954	234	167	88	-21%	-75%	-72%	-43%
Industry & manufacturing	155	125	153	99	-8%	-19%	3%	39%
Education, culture, science & research	322	228	148	79	-10%	-29%	-60%	-50%
Hotels, restaurants & cafes	274	146	143	62	3%	-47%	-41%	-5%
Crèches	82	49	26	12	0%	-40%	-65%	-66%
Mining, energy & water	46	11	11	6	12%	-76%	-78%	0%
Public administration & other public	13	13	11	3	-35%	0%	-21%	-40%
Other buildings	12	11	10	5	20%	-8%	11%	-17%

Four quarter total to Q2 2010.

+ Annual percentage change in four quarters to Q2 2010 on the same period in 2009.

** Annual percentage change between H1 2009 and H1 2010.

Source: CSO Planning Permissions.

Figures may understate the true rate of decline

The main implication of these trends is that the decline in the volume of new non-residential buildings put in place, which began around the end of 2007, gathered momentum in 2008 and has continued in 2009 and over the first half of 2010.

The impact on construction may even be greater than the figures suggest, as the granting of planning permission does not necessarily mean that buildings proceed to construction immediately. In the current climate there are additional factors (reported below) which are contributing to the fragile nature of the private construction sector.

Following a review of the methodology for ascertaining the value of commercial construction in the 2009 CIRO we continued this year to collect data on the quantum of completed commercial buildings from key agents in the property market. A central issue for the commercial building market is that there is no comprehensive measure of the quantum of commercial building put in place nationwide as there is with new housebuilding, for example. Thus it is necessary to make a number of assumptions in order to arrive at an estimate of the value of commercial building across the State in any calendar year³¹.

Estimates for the value of industrial building put in place are ascertained from the Census of Industrial Production, the CSO release on Capital Assets in Industry and from reports from estate agents.

Construction estimates reflect the very fragile state of the private construction market

The estimates for the volume of private non-residential building in 2009 and 2010 reflect the very fragile state of the private construction market. A number of key issues continue to impact on the market, including:

- The challenging economic environment which is affecting confidence levels amongst potential clients and thus the demand for new space.
- The combination of high debt levels and continued difficulties securing finance for projects are leading to the postponement or cancellation of some commercial developments.
- Uncertainties over NAMA and the prospects for developments transferred to NAMA.
- The excessive oversupply of commercial and industrial property left over from the boom period, which is being exacerbated by an increase in the supply of second-hand space. The latter has arisen due to the increase in consolidations, closures and a number of companies going into administration.³² Rising unemployment is also adding to the supply of vacant space.

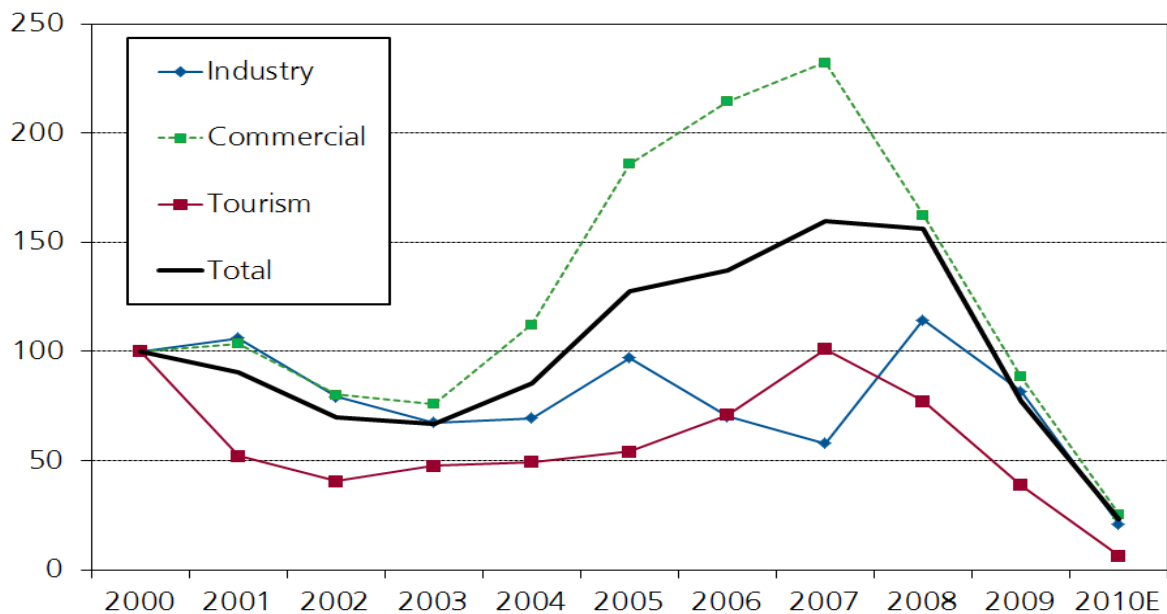
³¹ The value of commercial building is obtained based on assumptions about the volume of completions in Dublin, the timelag from start to completion, the cost of construction by building type, grossed up for professional fees, levies, VAT and an estimate for profit. The figures are then grossed up (assuming Dublin represents 80% of the total office building market and two-thirds of the retail market), to ascertain the total value of completed office and retail space put in place nationwide in each calendar year.

³² Dublin Office Market, DTZ Sherry FitzGerald, Q1 2010.

- All of the above have resulted in rising vacancy rates as a result, estimated at 19% in the Dublin industrial market and 22.5% in the Dublin office market.³³
- The challenges in the hotel sector caused by excess capacity, declining occupancy rates, liquidity issues and difficulties accessing working capital.
- The rise in unemployment, concerns about further job losses, reductions in disposable incomes and increased nervousness about the banking and budgetary situation are leading to negative expectations surrounding the 2010 Budget amongst consumers and retailers.
- The very sharp reduction in investment in farm buildings in 2009 which is expected to continue in 2010, following the unprecedented supply of building put in place in advance of the deadline for grant applications under the Farm Waste Management Scheme and the Farm Improvement Scheme (December 2008).

Figure 2.3 shows trends in the volume of private non-residential building output for the period 2000-2010E. The chart excludes the substantial investment in agricultural buildings, which distorts the chart.

Figure 2.3: New private non-residential construction, 2000-2010E
(constant 2008 prices, 2000 = 100)



Source: DEHLG, DKM

³³ ditto

Substantial fall off in volume of new private sector construction work³⁴

In respect of private *industrial buildings*, the CIRO estimate for new industrial building output in 2009 is €528 million, which represented a reduction (-27.7%) on the 2008 outturn. The CSO reported substantial additions to capital assets in the form of buildings and other construction work in 2008³⁵. Although the 2009 figure is not yet published, it is assumed that activity in regard to additions in the form of construction and other building work would have been much reduced in 2009.

The 2010 estimate for new industrial building output is just €100 million, reflecting current difficulties in the industrial property sector. The volume of new industrial building put in place this year is therefore expected to record a substantial decline (-79%) on the 2009 level. The total persons employed in the industrial sector³⁶ peaked in Q1 2007 at 304,200 persons but had declined by -21% to 240,700 by Q2 2010 – a loss of 63,500 jobs.

The volume of new investment in buildings by *semi-state agencies*, also included under non-residential construction, declined in 2009 (-39.5%), based on returns from semi-state agencies, such as IDA, Enterprise Ireland, Shannon Development, FÁS and Teagasc. All of this new investment is funded by the public sector but is included here with industrial building investment. A further decline is expected this year (-7.2%), reflecting lower allocations in the public capital programme for 2010.

The total value of *office building* output is estimated at €700 million in 2009. Adjusting for the decline in tender prices (-17%), the volume of construction output arising from office building declined by 35.1% in 2009. With an estimated half of the space completed in 2010 having commenced in 2009³⁷ and with very few new starts in 2010, the volume of construction output from office building is expected to fall sharply in 2010, by 68.3% after a further decline in tender prices this year (-10%).

In regard to *retail building activity*, it is estimated that in 2009 approximately 52,000 square metres of new shopping centres plus around 30,000 square metres of new retail parks (mostly IKEA), were built, generating a total of 82,000 square metres³⁸ of new retail building in 2009. There is no investment in retail parks in 2010 while the volume of completed shopping centre space is much reduced from 2009 levels.

Thus the total value of retail building put in place in 2009 is estimated at just €385 million, which implies a decline in the volume of retail construction of 57.8% compared with 2008.

³⁴ Details in Appendix 2

³⁵ Capital Assets in Industry Statistical Release, CSO.

³⁶ According to the CSO *Quarterly National Household Survey* seasonally adjusted data up to Q2, 2010.

³⁷ The timelag between start and completion is assumed to be 24 months for office building projects. Thus the sharp reduction in output in 2010 reflects the relatively high level of construction in 2009 (estimated at around 121,000 sq. m) - half of the development commenced in 2008 but completed in 2009 plus half of the development commenced in 2009 - compared with the estimate for construction in 2010 (45,000 sq. m) - half of the development commenced in 2009 but completed in 2010 and half of the development commenced in 2010, which is estimated at just 10,000 sq. m.

³⁸ These figures represent actual construction each year as opposed to completions. They are based on average estimates of completions each year from CBRE and DTZ Sherry Fitzgerald and assume a time lag of 24 months for shopping centres and 12 months for retail parks.

Reflecting the current market conditions and the excess supply of retail space, the volume of retail construction output is forecast to decline sharply by a further 77% in 2010, bringing the value of retail development activity back to 1993/1994 levels.

There is a substantial decline in the volume of agricultural building investment in 2009 and 2010. Based on the data for farm investment published by Teagasc, total planned investment in farm buildings is projected at just €90 million in 2010 compared with €210 million in 2009 and a record investment level of €1.2 billion in 2008. Adding the allocations for arterial drainage schemes funded by the Office of Public Works, the total estimate for construction output associated with agriculture is €235 million in 2009 and €115 million in 2010. In volume terms these figures translate into reductions of 78.3% and 45.6% respectively.

The vast bulk of private sector investment in tourism is accounted for by hotels, a sector which is currently in an extremely difficult situation. The estimated excess capacity is between 12,000 and 15,000 hotel bedrooms³⁹, which is equivalent to between 20% and 25% of the total hotel bedroom stock. The recent withdrawal of working capital facilities for an estimated 16% of hotels across the country by the end of 2010, following the exit of Bank of Scotland, combined with difficulties sourcing working capital elsewhere, will place hotel businesses in a precarious financial position. There are also concerns about the impact of NAMA and the prospects for large numbers of hotels which form part of extensive property portfolios owned by developers whose assets have been transferred to NAMA.

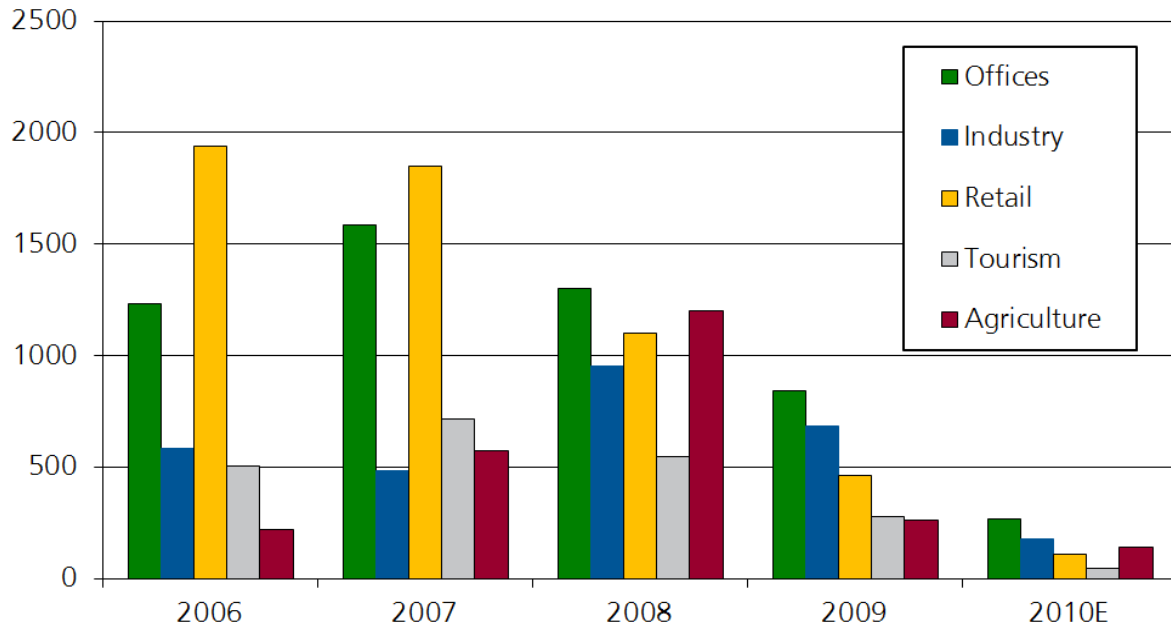
Thus with little prospect of any new hotel development in 2010, and with most other private tourism investment likely to be postponed due to the economic climate, the overall value of construction output associated with tourism investment is estimated at €228.5 million in 2009 and just €34.2 million in 2010. In volume terms, tourism building output is forecast to decline by 49.7% in 2009 and 83.4% in 2010.

2.2.1: Private non-residential summary

Based on the above estimates, it is clear that private non-residential construction has been severely hit by the construction crisis. The consequences for jobs have been similarly devastating in construction and across the economy as a whole (see Section 3). Combining the prospects for new building activity across each individual sector, the overall volume of new private non-residential output is forecast to decline by 70.1% in 2010, following a 50.4% decline in 2009. Based on these estimates the value of new private non-residential construction output will be just €575 million in 2010. In constant 2008 prices, the volume figure in 2010 is the lowest on record, based on data available back to 1985.

³⁹ Irish Hotels Federation data.

**Figure 2.4: New private non-residential construction output, 2006-2010E
(constant 2008 prices, €m)**



Source: DEHLG, DKM

2.3: Public capital investment

The primary source of funding for public sector construction is the public capital programme (PCP) which sets out the capital investment plans by the State, local authorities and semi-state companies funded from both Exchequer and non-Exchequer sources. There is additional investment in public private partnership (PPP) projects which comprise arrangements between the public and private sectors. These are funded by a mix of revenues, including user charges, road tolls and local authority own resources (e.g. in case of social housing). Estimates for private sector investment are included where such information can be ascertained, most notably under energy, telecommunications, education and health.

The public sector investment plans over the medium-term project Exchequer capital investment over six year periods. The most recent investment programme was published in the 'Infrastructure Investment Priorities' Report published by the Department of Finance in July 2010⁴⁰.

⁴⁰ This investment programme is reviewed in Section 4 which considers the medium-term prospects for construction.

Total of €6.4 billion Exchequer capital investment in 2010: 43% spent in eight months

In regard to public capital investment in 2010, the total capital allocation from the Exchequer is €6.4 billion (or €6 billion net)⁴¹, two-thirds of which is allocated to projects funded by the Departments of Transport, Environment and Education. Approximately 75% (€4.8 billion) of this total provision is estimated to go into construction; the balance represents investment in, for example, equipment and machinery, vehicles/rolling stock, information and communications, and science and technology programmes.

Table 2.4 presents an analysis of the total (net) Exchequer capital expenditure in the first eight months of 2010. The key points of note are the following:

- 1) The decline in the total Exchequer capital spend in the year to August 2010 compared with the same period in 2009 is 23.6%, €803 million behind the target for the same period, of which it is estimated that some €600 million would have gone into construction.
- 2) A total of 43% of the annual provision for 2010 was spent by end-August 2010. The proportion is substantial lower for key capital spending departments: Environment (36%), Education and Skills (29%) and Finance and the Office of Public Works (27%).

However it is the norm that expenditure would tend to be back-ended. The Department of Finance anticipates full take up of the PCP investment this year.

⁴¹ This figure of €6 billion is the 2010 figure quoted each month by the Department of Finance in their analysis of Exchequer expenditure by each Government department (as per Table 2.4 above) each month. It is a net figure in that it excludes investment from their own resources, referred to as 'Appropriations in Aid'. It is essentially funds from the Local Government Fund and is used to finance, for example, investment in the regional and local roads network. The total (gross) Exchequer capital provision in 2010 is €6.43 billion as published in the Infrastructure Investment Priorities Report 2010-2016 from the Department of Finance in July this year (see Table 4.3).

Table 2.4: Analysis of Exchequer capital expenditure by Government departments at end August 2010

Government Department	Main areas of Infrastructure Spending	2010 End Aug outturn	Variance against Profile for Jan-Aug 2010		2010 Annual Estimate	2010/2009 % change	% of 2010 provision spent by End-Aug
		€m	€m	%	€m		
Transport	Roads, Public Transport, Regional Airports,	815	-275	-25%	1,762	-11.3%	46%
Environment, Heritage & Local Government	Housing, Water Services, Heritage, Libraries, Fire Stations, Waste, Urban Regeneration	540	-244	-31%	1,509	-16.6%	36%
Education & Skills	Schools & third level buildings	204	-74	-27%	712	-6.4%	29%
Enterprise, Trade & Innovation	Industrial Buildings	211	-35	-14%	461	-7.4%	46%
Agriculture, Forestry & Fisheries	Agriculture, Forestry & Fisheries	327	-22	-6%	430	-21.2%	76%
Health & Children	Hospitals, childcare & PCCC facilities	223	-45	-17%	425	-14.5%	52%
Communications, Energy & Natural Resources	Communications, Sustainable Energy programmes	64	-26	-29%	172	68.6%	37%
Finance/Office of Public Works (OPW)	Public Buildings, Government offices, Garda Stations,	45	-38	-46%	164	-6.8%	27%
Tourism, Culture & Sport	Recreational & Sports facilities, Cultural infrastructure	56	-21	-27%	132	-2.2%	42%
Justice, Equality & Law Reform	Prisons, Courthouses, Garda Stations	59	-10	-15%	123	5.1%	48%
Community, Rural & Gaeltacht Affairs	Gaeltacht, Islands Infrastructure, Rural development scheme	42	-10	-20%	81	-27.0%	52%
Other Departments	Foreign Affairs, Defence & Taoiseach's department	12	-3	N/A	29	N/A	41%
Total Capital Expenditure*		2,598	-803	-24%	6,000	-11.4%	43%

Source: End-August Analysis of Net Voted Expenditure, Department of Finance, September 2010

* Note: The above figures include all capital expenditure, not just construction related.

Other public capital expenditure

Information on other capital expenditure funded from the resources of the semi-state agencies, local authorities and from external borrowings was published at the time of the 2010 Budget. Although these provisions are likely to be lower now, an indication of the amounts involved is provided in Table 2.5. The allocation for 2010 at the time of the Budget was €3.4 billion. This figure was the best estimate at the time but expenditure can vary depending on the resources available to the agencies. A proportion, estimated in the region of 60%, of this capital expenditure also makes its way into the construction sector. The largest allocation comprises investment by the semi-state electricity company (ESB, €1.1 billion) in power generating stations and the distribution network.

Table 2.5: Analysis of other public capital expenditure by semi-state agencies and local authorities in 2010

Company/Local Authority	2010 €m.	Main area of investment
Electricity Supply Board	1,081	Power generation and electricity distribution network
Local Authorities/housing	739	House purchase and improvement loans
Local Authorities/roads	314	National road improvements
Dublin Airport Authority	270	Investment in State airports
Bord Gáis - State gas company	264	Power generation, gas distribution and transmission
Eirgrid	138	Electricity transmission network
Local Authorities/Water & Sewerage	130	Water and sewerage projects
IDA Ireland	52	IDA Ireland Buildings
An Post -postal services company	50	Postal services
Sub-total	3,038	90% of total
Total non-Exchequer	3,376	

Source: Budget 2010, Public Capital Programme, 2010

Note: The above figures include all capital expenditure, not just construction related.

Thus based on the above, the total construction related public capital investment in 2010 should be of the order of around €6.6 billion in total⁴², assuming all of these provisions are spent. Taking the 43% of the 2010 provision spent by the end of August (Table 2.4), this would imply around 65% spent on an annualised basis. This is equivalent to just €4 billion, implying a shortfall of €2.6 billion on the total investment planned. However, the expectation is that the full capital expenditure provision will be spent by the end of the year.

2.4: Public sector construction

This section covers all publicly funded construction under two headings:

- Investment in **productive infrastructure**, which 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.
- Investment in **social infrastructure**, i.e. housing, educational buildings, hospitals, prisons, garda stations, public sporting facilities, libraries etc. There is, however, some private sector investment in health and education which is also included under this category.

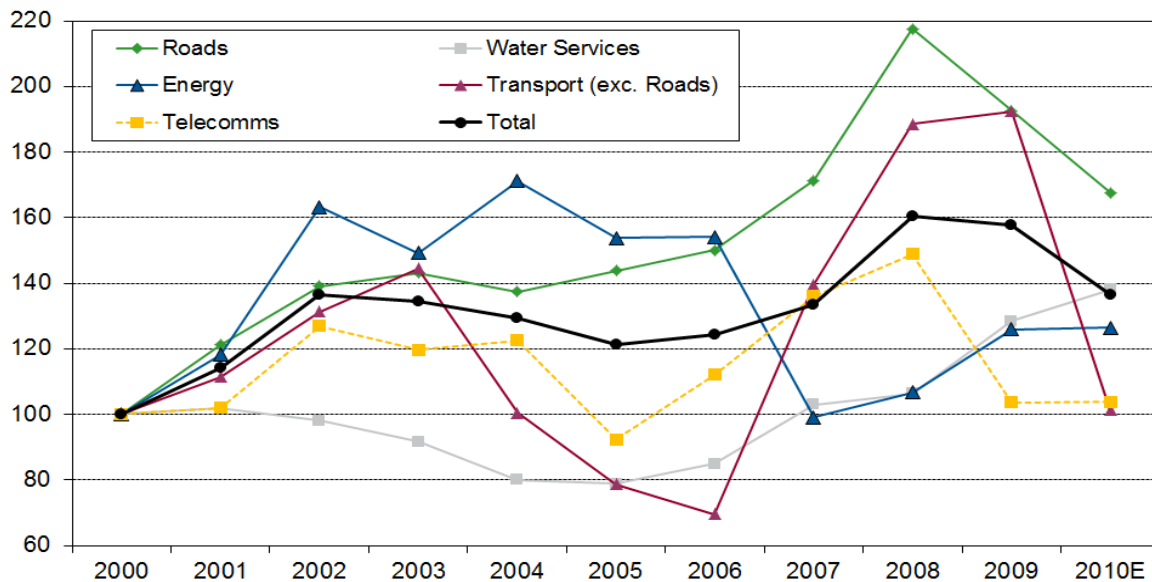
⁴² Based on 75% of €6.4 billion (the gross figure) and 60% of an estimated €3 billion of non-Exchequer expenditure.

2.4.1 Productive infrastructure

Based on returns received from the Government departments, semi-state companies and State agencies, the overall investment in construction related productive infrastructure projects amounted to €6 billion in 2009 of which €4.8 billion was on new projects and €1.2 billion on improvement works. Stripping out the estimated value of new private sector investment recorded by energy and telecommunications companies of €343 million, leaves €4.4 billion of new public sector investment.

There was a modest reduction in the volume of investment in new productive infrastructure projects in 2009, equivalent to -1.5% on the corresponding peak level in 2008. The largest element, accounting for almost 42% of the total, represented investment in the national and non-national roads network, which declined in volume terms by 11.5%. The volume of new investment in airports (10% of total) was up substantially (+33.5%), while investment in water and sanitary services (+20.7%) and energy (+18.1%) also recorded double digit growth.

Figure 2.5: New productive infrastructure, 2000-2010E
(constant 2008 prices, 2000 = 100)



Source: DEHLG, DKM

Taking the individual categories under productive infrastructure in turn:

- The total construction related investment in the *national and non-national road network* in 2010 is €1.6 billion, down 13% on 2009. This figure includes land costs and investment in signs, road-markings and lighting as well as investment in the actual construction of roads. It is this last element only which is captured in the CIRO. The lower spend reflects the completion of the national major interurban motorway (MIU) network this year.

As of January 1, 2010 approximately 319 km of new roads were under construction of which 292km of new roads are planned to be completed in 2010. The projects along with their current status are set out in Box 2.

Box 2: National road projects to be completed in 2010:

Route	Scheme	Road Type	Length (km)	Status
M3	Clonee to North of Kells	Motorway	49	Complete
N3	Kells – Carnaross (part of M3)	Dual Carriageway	10	Complete
N7	Castletown to Nenagh	Motorway	36	To open Q4 2010
N7	Nenagh to Limerick	Motorway	38	Complete
N7	Limerick Tunnel (PPP)	Motorway	10	Complete
M7/M8	Portlaoise to Cullahill / Castletown	Motorway	40	Complete
N9	Waterford to Knocktopher	Dual carriageway	24	Complete
N9	Carlow to Knocktopher	Dual Carriageway	40	Complete
N10	Kilkenny Link road (part of Carlow to Knocktopher)	Single Carriageway	7	Complete
M50	M50 Upgrade Scheme Phase 2 (PPP)	Motorway	25	Complete
N52	Kells Bypass (Part of M3)	Single Carriageway	4	Complete
N78	Arthy Link road (part of Kilcullen to Carlow)	Single Carriageway	9	Complete

Schemes continuing in construction in 2011 and planned to complete in 2011:

Route	Scheme	Road Type	Length (km)	Completion (est date)
N18	Gort to Crusheen	Motorway	22	Q1 2011
N21	Castleisland Bypass	Type 2 dual / Single	5	Q1 2011

Schemes at tender and planned to commence construction in 2011:

Route	Scheme	Road Type	Length (Km)	Start (est date)
Design & Build				
N3	Belturbet Bypass	Single carriageway	7	Qtr 2 2011
N5	Longford Bypass	Single carriageway	3	Qtr 2 2011
N22	Tralee Bypass	2 +2	13	Qtr 2 2011
N25	N25 Cork Southern Ring Road (Junction upgrades)			Qtr 2 2011
PPP				
N17/N18	Gort to Tuam	Motorway	54	Qtr 1 2011
N11	Arklow to Rathnew (incl Newlands Cross)	Motorway	16km mainline & Newlands Cross	Qtr 1 2011

Source: National Roads Authority

The NRA is also proposing to procure the M11 Enniscorthy Bypass including the N25 New Ross Bypass and the M20 Cork to Limerick Motorway as PPP schemes. The timeline for progressing these schemes will be determined later this year.

- The total national construction related investment in new water and sewerage services projects is €626 million in 2010, unchanged in value terms from 2009. This is one of the few areas where investment levels have not declined with the recession. The figure includes an estimated construction spend of €412 million from the Exchequer and the balance represents investment by local authorities and grants for group schemes. The volume of output from investment in water and sewerage services projects is expected to increase by 7.5% in 2010 following an increase of 20.7% in 2009. This reflects the significant reduction in construction tender prices for such projects, estimated at 10% in 2009 and 7% in 2010.

The total investment reflects the Government's *Water Services Investment Programme 2010-2012* which plans for the provision of crucial infrastructure over the next three years. The key Programme comprises:

- Just over 130 contracts and water conservation projects with a value of about €1bn,
 - Some 340 contracts to be progressed to construction over the three years with a value of €1.8bn, and
 - Some 190 schemes and water conservation projects on which planning work will continue, including some €320m in network rehabilitation projects.
- Significant investment is underway in airports, reflecting plans by the Dublin Airport Authority (DAA) to improve passenger services at Dublin Airport. Based on information received from the DAA, the total construction spend across the three airports is projected at around €250 million over the period 2010-2014. With the completion of the new €395 million passenger terminal, Terminal 2, investment levels are expected to decline significantly this year. There is also a very modest provision for capital development works at a number of regional airports.

Taking the overall investment picture into account, the total volume of construction output from new airport projects and major works is forecast to decline sharply in 2010 (-77%), following an strong output performance in 2009 (+3.5%).

- The total construction related investment in new and major works in seaports and commercial harbours is estimated at just €6.4 million in 2010, over 41% (in volume terms) below the corresponding figure in 2009.
- The energy sector receives the third largest allocation for infrastructure spending in the PCP, after transport and housing. Around 80% of the construction related investment in new energy infrastructure represents investment by the ESB and Bord Gáis Éireann in enhancing the State's electricity and gas distribution and transmission networks.

Like water services, energy is a sector which has been experiencing growth in the volume of construction output. Taking the estimate for construction related investment in new energy projects only and combining it with an estimate for the construction related investment by private sector companies, generates a total figure of €918 million for 2010.

This figure is marginally higher in volume terms (+0.4%) than the estimated outturn for 2009, after allowing for an estimated 7% decline in construction tender prices.

- Public transport projects are set out in the *Transport 21* (2006-2015) investment programme, albeit the level of funding is now lower than what was originally envisaged when the programme was launched in November 2005. The provision includes capital allocations for the CIE Group, the Railway Procurement Agency (RPA), which has responsibility for the procurement of new light rail and metro projects, and the Dublin Transportation Office (DTO), responsible for co-ordinating and implementing the agreed integrated transport strategy for the Greater Dublin Area.

The total public transport provision in 2010 is €615 million, the vast bulk of which goes into construction. While substantial progress has been made in *Transport 21* to date, there are no new projects being started in 2010 because of the substantial number currently under construction. Moreover, because of the changed economic circumstances, transport investment priorities have been reviewed.

Box 3: Future public transport priorities

- Increasing the long term capacity of public transport, particularly through the construction of Metro North. The Railway Procurement Agency (RPA) will continue to progress the PPP procurement process for Metro North. If an enforceable railway order is in place by the end of 2010 it is envisaged that enabling works on the project will commence in the early part of 2011.
- Planning work for Metro West and the Cross City Centre to Liffey Junction Luas Line will continue. The Railway Order Application for BXD has been lodged and the RPA plans to make a railway order application to An Bord Pleanála for Metro West in October 2010.
- The Luas Cherrywood Line, which is expected to be completed in October 2010. Work will continue on the Citywest Luas Line, which has a target construction completion date in mid-2011.
- In respect of the Lucan Luas Line, it has been decided that the line will be delivered in two phases and further consultation with the public and key stakeholders will continue.
- The Luas Bray / Fassaroe Line which is under review.

Taking construction related investment only, the estimate for new investment in 2010 is €348.6 million, which represents a reduction in volume terms of 16.4% on the corresponding volume of investment in 2009.

The *CIE share*, accounting for 75% of the total, represents construction related investment in the suburban and mainline rail network and the bus network in Dublin and the regions. The project types cover investment in the DART upgrade, track renewal, upgrading of

signalling, bridge renewal, level crossing improvements and improved safety management across the entire network. Projects under the Rural Transport Pilot Project scheme aimed at improving accessibility in public transport are also included.

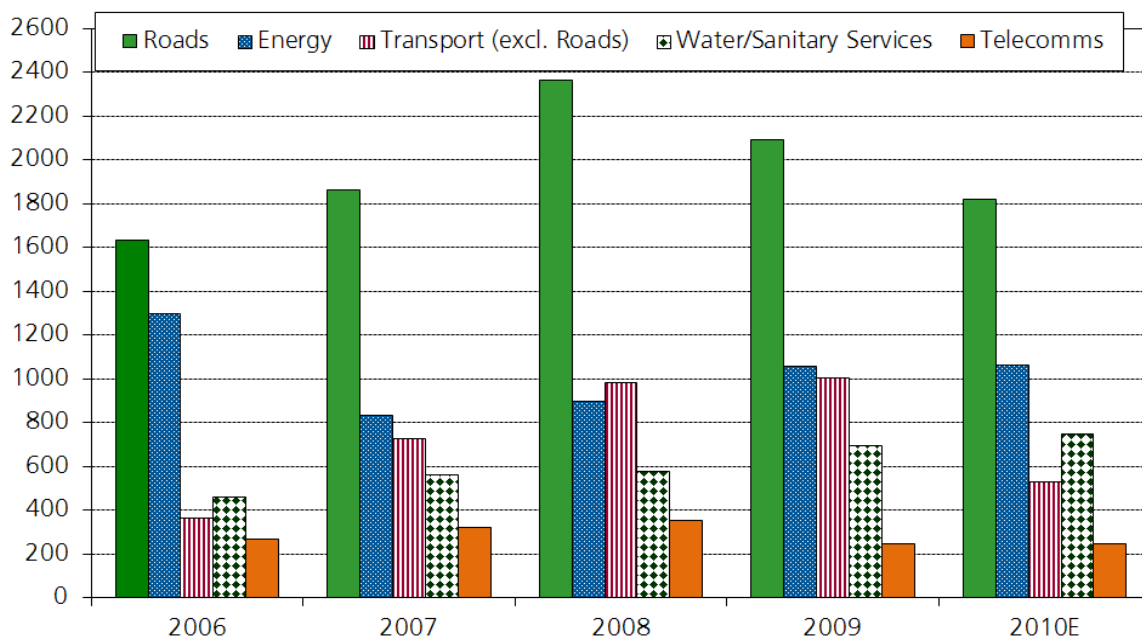
- The vast bulk of the investment classified under *telecommunications* represents the rollout of broadband infrastructure networks by private sector telecommunications companies. The total figure also includes the construction of new buildings to replace older delivery offices by An Post and construction related investment by the national television and radio broadcaster, RTE. The value of construction related investment by telecommunications companies is estimated at €212.3 million in 2010, and represented a marginal increase in volume terms on 2009 (+0.2%). The construction spend figure includes an estimate for investment by private telecommunications companies (c. € 152 million) such as Eircom, O2, Vodafone and Meteor.

Productive infrastructure summary

The total value of new construction related investment in *new productive infrastructure* in 2010 is estimated at €3.8 billion of which approximately €265 million is private sector investment. The total represents over one-half (52%) of all *new* construction activity. In volume terms the total investment is projected to decline by 13.5% compared with the 2009 outturn, which itself was down on the previous year (-1.5%).

Investment in construction related projects in both years has benefitted from the decline in construction tender prices for new productive infrastructure projects, estimated at -6.6% in 2009 on average and -7% in 2010.

**Figure 2.6: New productive infrastructure output 2006-2010E
(constant 2008 prices, €m)**

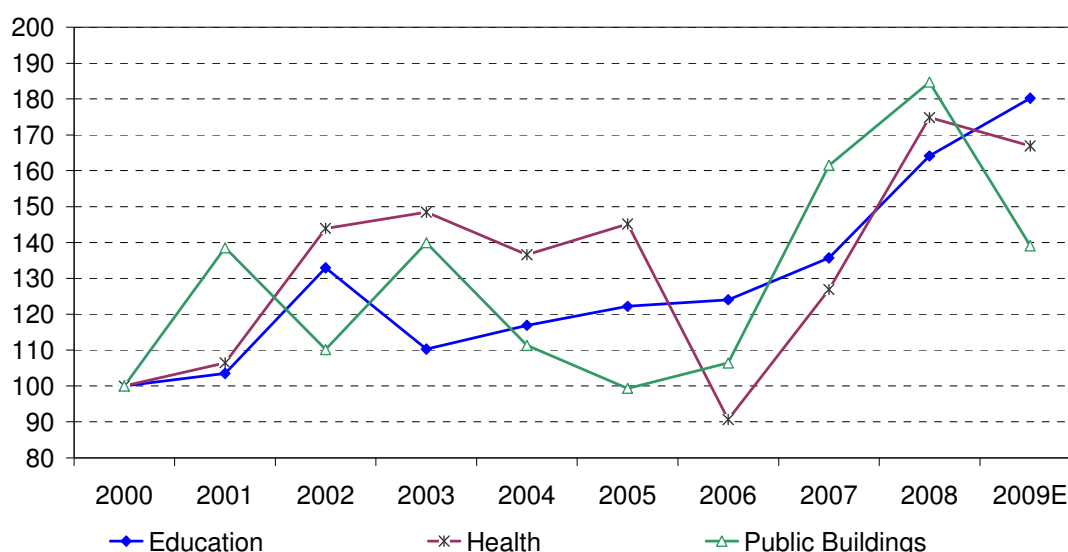


Source: DEHLG, DKM

2.4.2: Social infrastructure

The value of construction related output associated with all headings under new social infrastructure projects was €1.5 billion in 2009. Excluding an estimate for private spending of around €435 million, leaves €1.1 billion for the estimate of public sector funded projects. In volume terms, total output was down by 12.4%, led by a substantial reduction in the output from Local Authority services⁴³ (-49.6%), investment in Gaeltacht areas (-41.3%) and in public buildings (-29.3%). Investment in hospital buildings was up by 32%.

Figure 2.7: New social infrastructure 2000 – 2010E
(constant 2008 prices, 2000=100)



Source: DEHLG, DKM

Taking the individual categories under social infrastructure in turn:

- Public sector funds allocated to the *primary and secondary education* sector are used to improve accommodation and facilities and for the construction of new schools, extensions and associated equipment. The estimate for construction related investment in 2009 is €202 million but is projected to increase to €284 million in 2010.

The allocation at *third level* is to fund a number of projects identified as a high priority, such as projects in the health skills area, engineering, science and teacher training. Funds are also allocated for capital works in the Institutes of Technology and university sectors as well as for the capital element of the Programme for Research in Third Level Institutions (PRTL). The fifth PRTL cycle was announced in July this year and allocated €259 million for

⁴³ Construction output associated with local authority services covers work carried out by local authorities, or by private contractors on behalf of local authorities and includes construction work carried out on local authority offices, public libraries, special amenity projects etc. Grants for waste management, waste disposal infrastructure and urban renewal works are also included.

capital projects in third level institutions. The types of buildings funded at third level comprise sports buildings, engineering/informatics buildings, student accommodation, and research buildings.

The estimate for construction related investment at third level in 2009 is €230 million, including an estimate for private sector investment across the third-level university sector of €141 million. Adding investment procured under PPP projects, generates the total value of construction output from investment in education of €476 million in 2009. This is a decline in volume terms of 20.2% in 2009 on the corresponding output in 2008. The estimated investment across the sector in 2010 is €550 million, representing a volume increase of 28.4%, after taking the decline in tender price inflation into account (-10%).

- The total PCP capital provision for hospitals is around €425m in 2010, down 14.5% on the previous year. The construction related investment in hospitals and health facilities is estimated at €400 million in 2009⁴⁴, representing a strong increase in volume terms on 2008 (+32%). The allocation provides for the development of a range of facilities in the areas of acute hospitals, mental health, and services for the disabled, the elderly and for children requiring care and protection.
- In regard to private sector investment in health facilities, 18 Primary Care Centres will be opened across the country by the end of 2010. A further 30 will open in 2011.
- The value of investment in hospital and health facilities is projected to decline by 15.4% in 2010 to €339 million - a decline of just 6% in volume terms after adjusting for the estimated decline in construction tender price inflation (-10%) this year.

⁴⁴ The 2009 figure includes an estimated €128 million of construction output arising from investment in private health facilities.

Box 4: Key health projects in 2010:

- The new **Adult Mater Hospital** in Dublin commenced construction mid-2009, at a construction cost of around €150 million, and will be completed in Q1 2012.
- The **National Paediatric Hospital (NPH)** on the Mater Hospital site in Dublin is expected to cost in the region of €400 to €500 million. As a strategic development of national importance, an application to An Bord Pleanála will be made by the end of year. Construction will not now commence until the end of 2011. The project is expected to be completed in 2013.
- The **Cork University Hospital Cardiac Renal** project, at a cost of around €60 million, is now complete and partially operational.
- Phase 1 of the **National Radiation Oncology** project which is underway at Beaumont Hospital in Dublin, will be handed over to the HSE by the end of 2010. The construction of enabling works for similar projects in Cork and Galway is expected to commence in 2011.
- Phase 2 of **St. Vincent's Hospital** in Dublin (€20-25 million) where a contractor has been appointed and construction will commence by the end of 2010.
- The **Critical Care Block** at the Mid-West Regional Hospital Limerick where construction has commenced and completion is expected early 2012.
- A new Ward and Emergency Block at **Letterkenny Hospital** in Donegal where construction has commenced at a cost of €12 to €15 million and completion is expected late 2011.
- Other hospital facilities under construction include the following:
 - Ennis General Hospital Ward Block (50 bed, construction to commence Q4 2010)
 - Letterkenny Acute MH Unit (34 bed)
 - Clonmel Community Nursing Unit (40 bed)
 - St Mary's Mullingar Residential Unit (100 bed)
 - Inchicore Primary Care Centre
 - Kerry General Hospital A&E
 - Ballyfermot Primary Care Centre

- The public buildings allocation includes investment by the Office of Public Works (OPW) in accommodation for government services, maintenance of the State's property portfolio, decentralisation and garda stations. It also includes construction related investment by the Department of Justice, Equality and Law Reform on the refurbishment of prisons and courthouses as well as the commencement of work on new projects by the Department of Health under the childcare investment programme, which includes crèches. A range of building and engineering works carried out by the Department of Defence for the Defence Forces is also included.

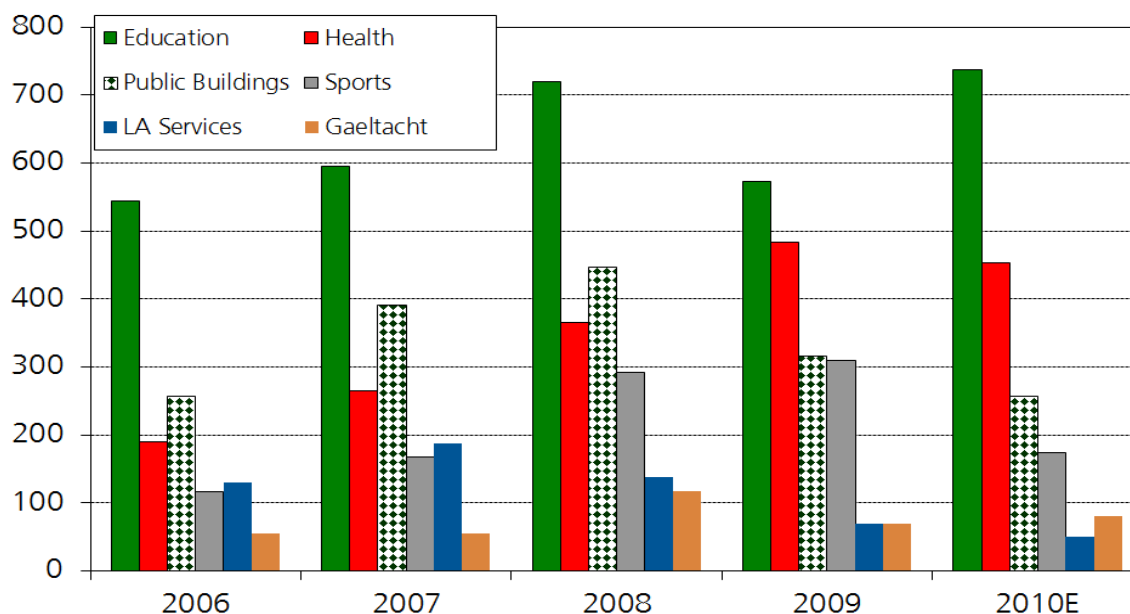
The combined construction related investment in public buildings was €262 million in 2009, down 29.3% in volume terms. A further reduction is projected in 2010 (-18.9%) when the corresponding value is estimated at €191 million.

- The remaining categories under social infrastructure comprise local authority services, investment in the Gaeltacht and investment in public sports facilities funded by the Department of Arts, Sports and Tourism. Between them the total construction related investment in 2009 was €371 million, of which an estimated €167 million represented private sector investment in sports facilities. The volume of construction output under all three categories declined by 18.1% in 2009 and is projected to decline by a further 31.7% in 2010. The corresponding value in 2010 is estimated at €228 million, of which €60 million represents private investment.

Social infrastructure summary

Overall the volume of construction output from new and major refurbishment of social infrastructure building projects is projected to decline in 2010 (-3.7%). The output from social infrastructure projects accounts for 23% of the total value of new construction output in non-residential buildings in 2010; the corresponding percentage was only 13% in 2000.

**Figure 2.8: New social infrastructure output, 2006-2010E
(constant 2008 prices, €m)**



Source: DEHLG, DKM

2.5: Repair, maintenance and improvement

Despite the improvements made each year to the methodology for ascertaining expenditure on repair, maintenance and improvement (RM&I) in the non-residential sector, there is still insufficient data available to accurately gauge investment levels in this sector. It is likely that the figures derived for new investment may include some RM&I expenditure and vice versa. However, separate figures for both new RM&I work are provided (Appendix 2), but the estimates are indicative only. Tables 1.9 to 1.12 (Section 1) include expenditure on RM&I with new investment in the construction output estimates.

As with new construction, the volume of expenditure on RM&I projects is down from levels reached at the peak. The RM&I market exists at two levels:

- I. Residential home improvements, refurbishments and repairs and house extensions, and
- II. Additions, alterations, repairs, refurbishment and improvement of the existing non-residential building and infrastructure stock.

Information on the level of expenditure on RM&I projects is obtained for the public and private sectors.

Size and outlay on private housing RM&I projects reported to be down by 40%

The value of the private residential RM&I market is determined from the CSO survey of private household expenditure on major and minor RM&I works. The 2009 survey estimate RM&I expenditure in the housing market at €3.4 billion, down almost 25% in volume terms on 2008.

The market is influenced by the challenging economic environment, rising unemployment and falling disposable incomes as well as an increase in the savings ratios amongst cautious consumers.

That said, a recent survey of the housing RM&I market⁴⁵ examined over 30,000 home improvement projects undertaken in the first half of 2010 on the same period in 2009. The survey reported a rise in activity in the home improvement and retro-fit market as property owners were reported to be repairing and improving their homes rather than undertaking larger, more costly projects.

Extensions were reported to be sized below the planning threshold of 40 square metres while expenditure on larger domestic extensions was reported to be down sharply. Areas of growth included attic conversions and other refurbishment. However the size and outlay on such projects was reported to be down by over 40% from the pre-recession levels.

The housing RM&I market is generally serviced by small builders, renovation contractors and trade professionals. Smaller home improvement projects or repairs may be undertaken by individuals themselves via the 'Do It Yourself' (DIY) option. However the employment data suggests that the number of self-employed and tradesmen in construction have been severely affected by the economic recession. With demand for larger projects reported to be down sharply, the volume of private housing RM&I is forecast to decline by 25% in 2010.

Private non-residential RM&I activity hardest hit by recession

There is limited data on the private non-residential RM&I market. The estimate for 2009 is just €339 million⁴⁶, representing a sharp volume decline of 58.5% on 2008 levels. There is little or no activity in this sector this year as companies strive to cut costs in the face of difficult trading conditions. Thus with 2010 expected to be another difficult year for businesses in the private non-residential sector, the volume of RM&I investment is expected to be down by 45.5%.

Public sector RM&I expenditure at €2bn in 2009 – 61% on productive infrastructure

The volume of public sector RM&I expenditure is collected from the survey of Government departments and State agencies and is separately quantified together with the volume of new investment. While it is possible that the figures for new investment may also include some RM&I expenditure, the 2009 survey estimates the value of public sector RM&I at €2 billion of which just €363 million (18%) represents expenditure by the DEHLG, voluntary bodies and local authorities on maintenance and remedial works associated with the public sector housing stock. While the overall allocation for social housing is down in 2010, the volume of public housing RM&I is expected to increase (+26%). This reflects the recent re-structuring of the social housing investment programme which has seen decreasing capital investment in the construction of new social housing as leasing and the Rental Accommodation Scheme become more central to social housing delivery, while a growing proportion of the remaining capital resources are targeted towards major regeneration and other programmes designed to improve

⁴⁵ The survey was undertaken by www.onlinetradesmen.ie and was reported on www.businessworld.ie on 22 July 2010.

⁴⁶ Including just €9 million for expenditure by semi-State industrial companies and enterprise agencies.

the energy performance of the residential housing stock in general, and of the social housing stock in particular.

The remainder of €1.7 billion is dominated by RM&I productive infrastructure projects (€1.2 billion or 61%) with the balance accounted for by RM&I social infrastructure projects (€439 million or 22% of the total). The survey estimate for public non-residential RM&I expenditure is €1.7 billion or 82% of total public sector RM&I. The level of RM&I expenditure on educational buildings was substantial in 2009 at €266 million.

The figures presented suggest that the overall pace of RM&I investment has slowed sharply from record levels reached in 2008. The overall volume of construction output from RM&I projects was down by 21.9% in 2009, following an increase of 3.8% in 2008. A further decline, albeit at a more moderate rate, is projected for 2010 (-16.3%).

2.6: Overall construction prospects for 2010

These estimates imply that the volume of construction output will contract by almost 30% in 2010, following the worst decline on record in 2009 (-36.7%), based on data available back to 1985⁴⁷.

The assessment of the outturn for 2010 suggests that the volume of output will have declined by almost 60% since the peak in 2007.

Thus overall the value of construction output is projected at €11.7 billion in 2010. This level of output is dependent on delivering the level of public sector construction investment, as ascertained from a survey of Government departments and agencies. Should this public investment be delayed or indeed put on hold until further notice, there is a risk that the volume of construction output this year could be closer €11 billion⁴⁸. We consider the prospects and key risks for the construction sector beyond 2010 in Section 4.

⁴⁷ While data on the expenditure measure calculated in this CIRO is only available back to 1985, there is National Accounts data on the investment measure back to 1970. Over the period 1970 to 1985, the volume of investment in building and construction (excluding transfer costs) never declined by more than 5.7% y-o-y (1975). Thus the contraction in 2009 is likely to be the most severe over a forty-year period.

⁴⁸ Total public capital expenditure for the January to August 2010 period was €2.6 billion which was 23.6% or €803 million behind the target for the same period. However the Department of Finance anticipates full take-up of the PCP investment this year.

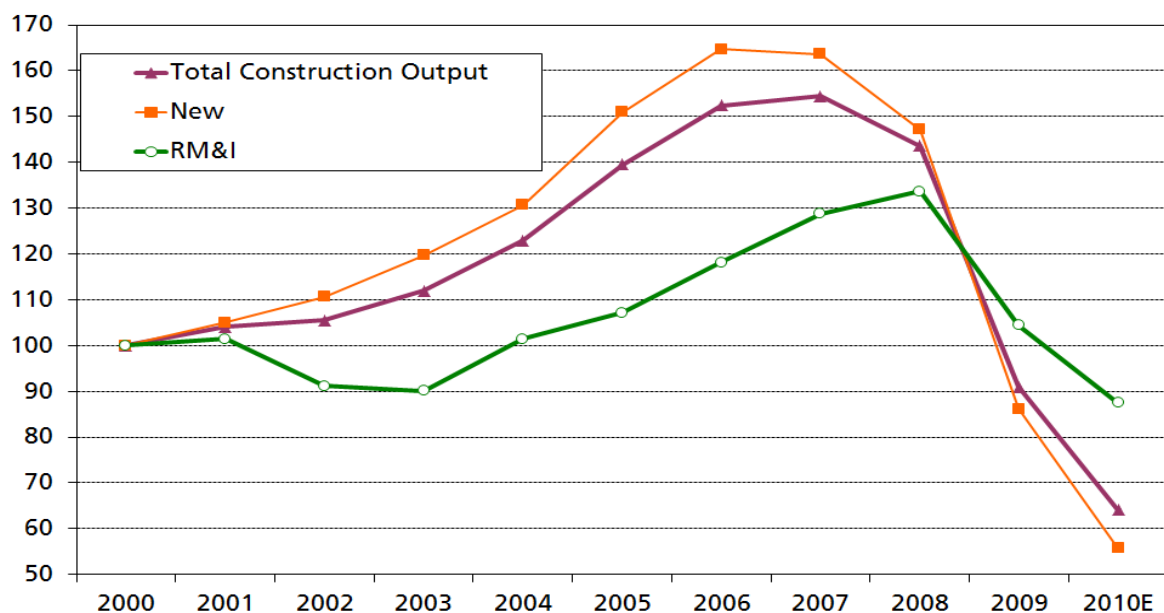
Table 2.6: Total building and construction output and annual percentage change 2006-2010E (%)

	Current prices	Constant prices	Annual % change			Total # dwelling completions	Total construction as % of GNP
	€m	€m	Current value	Constant volume	Tender prices		
2006	38,631	34,838	14.2	10.0	3.8	97,219	25.1
2007	38,601	35,057	-0.1	0.6	-0.07	87,027	23.7
2008	32,593	32,593	-15.6	-7.0	-9.2	59,644	21.1
2009	18,048	20,646	-44.6	-36.7	-12.6	22,000	13.8
2010E	11,733	14,540	-35.0	-29.6	-7.7	8,500	9.2

Source: DEHLG, DKM

As revised for the purposes of measuring the true extent of housebuilding (See Appendix 4.).

**Figure 2.9: Total construction output, 2000-2010E
(Constant 2008 prices, 2000=100)**



Source: DEHLG, DKM

Section 3: Employment in building and construction

Summary

Following the phenomenal acceleration in construction output in the period to 2007, employment in the sector reached unsustainable levels. Construction accounted for one in every five persons working in the economy.

One key benefit of the construction boom was the substantial skills base and considerable expertise which were built up over a fifteen year period. As a result Ireland had developed a highly skilled construction workforce which was well placed to deliver the high quality building and infrastructure needs of a successful economy.

However, the collapse of the property market and the changed economic fortunes rapidly led to a reversal in the employment situation. The serious repercussions for the construction sector were reflected in the loss of 145,300 direct jobs in just three years - 57% of all job losses in the economy. The total number of persons directly employed in construction fell to 127,300 in Q2 2010, the lowest level since mid-1998.

The full impact of the contraction in the construction sector on the economy reveals job losses more in the region of 200,000 since the peak (Q2 2007). This reflects the indirect job losses generated right across the construction supply chain as jobs were lost in firms that provided inputs to construction projects. Taking the total job losses of over 200,000 (direct and indirect) over a three year period, this figure is equivalent to almost 80% of the reduction in total employment across the State over the same period (256,000).

Having peaked at 48,600 (Q1 2008) in absolute term or 18% of the construction workforce (Q2 2007), the number of non-nationals working in construction had declined by 36,000 to 12,200 or just below 10% of the construction workforce by Q2 2010.

There is no separate data published for unemployment in construction but with construction accounting for 57% of all job losses, the construction unemployment rate is likely to be significantly higher than the national average of rate of 13.2%. In some regions of the country, it is likely to be closer to 25%. An analysis of the individual occupations in the construction sector reveals a considerable drop right across the board.

The return of net outward migration over the past two years, supports the anecdotal evidence that construction professionals and other construction workers have opted to emigrate. While this trend implies a loss of design and construction skills, other critical issues now for construction comprise the lack of jobs for graduates and the reduced potential to attract school leavers into the construction professions.

The very challenging situation in construction has led to an increase in corporate failures, with construction firms accounting for four out of every ten business failures in the first six months of 2010.

The construction employment prospects for the medium-term (presented in Section 4) assume further job losses with employment stabilising in 2011, albeit at levels last seen in the mid-1990s.

3.1 Construction employment

The construction sector has been the sector most severely hit by the economic recession. This reflects the repercussions of the property debacle over the past four years but also the over reliance on construction. In terms of which ever indicator is selected, it is acknowledged that the construction sector had reached unsustainable heights at the time, accounting for 25% of the overall economic activity (GNP), 27% of private sector lending (excluding residential mortgages)⁴⁹, 13% of the employed workforce and providing new dwellings at a rate of 20 per one thousand of the population, when the corresponding figure for the rest of Europe was an average of 5 units.

The phenomenal acceleration in construction output in the five years to 2007 resulted in employment in the industry reaching unsustainable levels, with one in every 5 persons working in the economy either directly or indirectly employed in construction. Aligned with the growth in output came higher standards and new methods of construction, a more rigorous regulatory environment and new areas of activity, which led to a demand for new skills and new occupations. As a result the industry built up a substantial skills base and considerable expertise which left it well placed to deliver the range of high quality building and infrastructure needs of a successful and expanding economy.

145,300 direct jobs lost in construction since the peak – 57% of total job losses

However, the ending of the property boom and the changes in the economy's fortunes, which commenced in 2008, rapidly led to a reversal in the growth in construction employment witnessed throughout the preceding decade. The number of persons directly employed in construction had peaked in Q2 2007 at 272,600. The severity of the contraction in construction output which ensued thereafter led to the loss of 145,300 direct jobs in the sector by Q2 2010. This total represented 57% of all job losses in the economy over the period. The next worst affected economic sector over the same period was the Industrial sector, which accounted for 23% (or 59,400) of total job losses. The Retail and Wholesale sector followed with 29,500 job losses, just 11.5% of the total.

Full impact on construction reveals over 200,000 job losses– almost 80% of the total

Employment has inevitably taken a hit across each of the three main sectors of activity: residential, general contracting and civil engineering. However, the full scale of the impact of the recession on construction employment can be ascertained by taking into account the job losses which materialised with respect to those persons both directly and indirectly employed in each sector. The latter captures the impact on employment right across the construction supply chain, including the jobs lost in firms that provide inputs to construction projects plus the jobs lost in those firms that supply the firms providing the inputs and so on.

⁴⁹ According to the Central Bank Quarterly Report (Q3 2008) the level of outstanding loans to the property and construction sector stood at €112 billion at end of June 2008, or 27% of total private sector loans outstanding at the time. This figure excludes residential mortgages which stood at €145 billion, 35% of the total at the time.

Table 3.1: Direct and indirect employment in construction
Seasonally adjusted ('000s)

Year Q2 (Apr-Jun)	Direct	Indirect	Total	% of total employment	y-o-y growth
2004	199.0	79.6	278.6	15.0%	
2005	229.1	91.6	320.7	16.4%	15.1%
2006	253.7	101.5	355.1	17.4%	10.7%
2007 *	272.6	109.1	381.7	18.0%	7.5%
2008	244.4	97.7	342.1	16.2%	-10.4%
2009	157.6	63.0	220.6	11.4%	-35.5%
2010	127.3	50.9	178.2	9.6%	-19.2%
Jobs lost from peak by:					
Q2 2010	145.3	58.1	203.4		

Source: QNHS *Peak quarter.

Trends in direct and indirect employment are set out in Table 3.1 and show:

- Construction employment reached its highest point in Q2 2007 with 381,700 persons directly and indirectly employed in the industry or 18% of the total persons employed.
- The year-on-year rate of decline started to accelerate sharply in the second half of 2008 and had reached 36.9% in Q4 2009 before moderating to 19.2% in Q2 2010. Agriculture was the only other economic sector to record year-on-year declines in employment of in excess of 20% in Q4 2009 and Q1 2010, albeit the decline moderated to 12.8% in Q2 2010.
- The implication of such a large fall off in direct employment from peak to Q2 2010 (145,300) is that over 58,000 indirect jobs were also lost throughout the economy in sectors dependent on construction. **Thus taking the total job losses of over 200,000 over a three year period, this figure is equivalent to almost 80% of the reduction in total employment over the same period (256,000).**

Construction employment back to levels in late 1990s

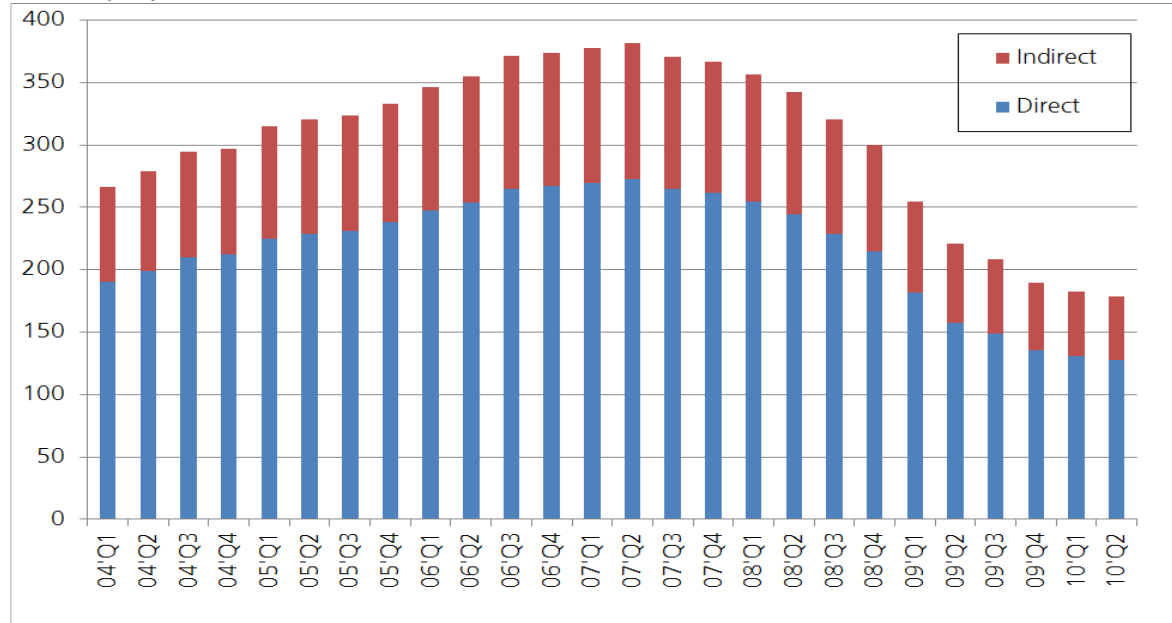
Figure 3.1 shows the total persons employed in construction at the end of each quarter over the period Q1 2004 – Q2 2010. The sharp rate of decline since Q2 2007 is evident from the chart. It is necessary to go back to Q2 1998⁵⁰ to find a quarter when total direct and indirect employment was close to the Q2 2010 figure, implying that the total jobs gained over the almost ten year period Q2 1998 to Q2 2007 was equivalent to the total jobs lost of around 200,000 over the three year period Q2 2007 to Q1 2010. Thus employment by Q2 2010 had fallen back to where it was in Q2 1998.

Based on the Q4 2010 employment estimate included in Table 4.6 (Section 4) of around 154,000, the last time direct and indirect employment in construction was at this level was in the mid-1990s, according to the QNHS.

⁵⁰ Not shown in the chart but based on the old QNHS calendar quarters when March-May corresponded to Q2.

Figure 3.1: Direct and indirect employment in construction Q1 2004 – Q2 2010

Seasonally adjusted ('000s)



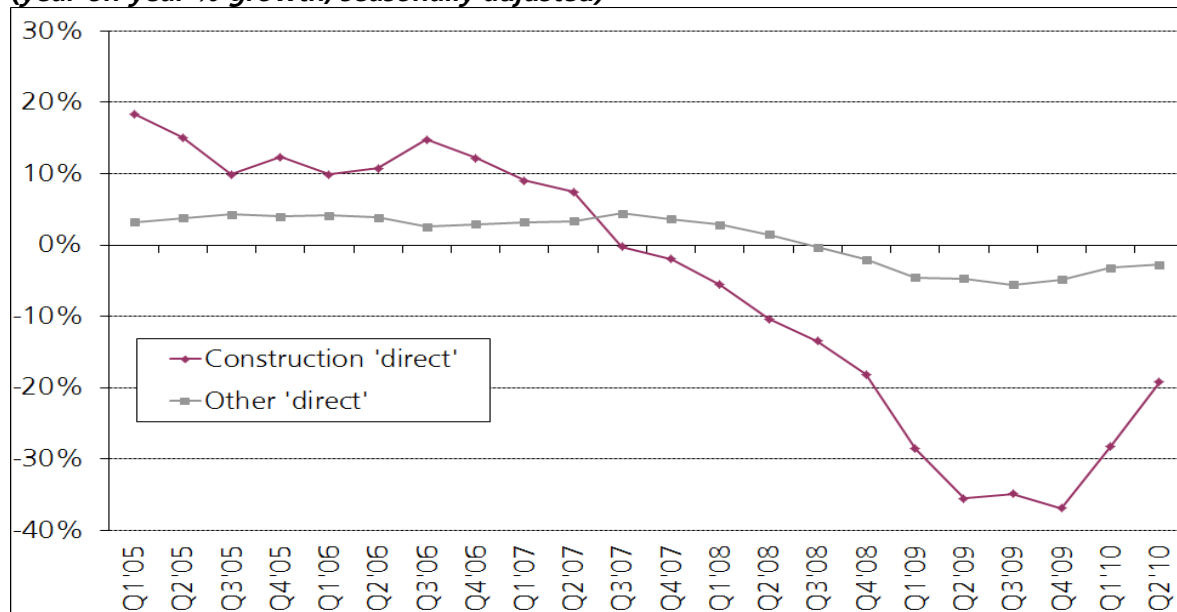
Source: CSO

Annual rate of decline in construction employment started to slow down in 2010

Figure 3.2 shows direct employment trends since Q1 2005 in the construction sector compared with 'all other sectors' in the economy. Construction employment began declining roughly one year prior to the decline in 'all other sectors' which began in the second half of 2008. The annual rate of construction employment growth went from 18.4% in Q1 2005 to a trough of -36.9% in Q4 2009. By Q2 2010, the annual rate of decline had slowed in the previous two quarters (to -19.2% in Q2 2010).

Over the same timeframe, the annual rate of employment growth in the rest of the economy rose from 3.2% to a peak of 4.4% in Q3 2007, before starting to decline in Q3 2008 (-0.3%) and reaching a trough in Q3 2009 (-5.5%) after which the rate of decline moderated to 2.8% in Q2 2010.

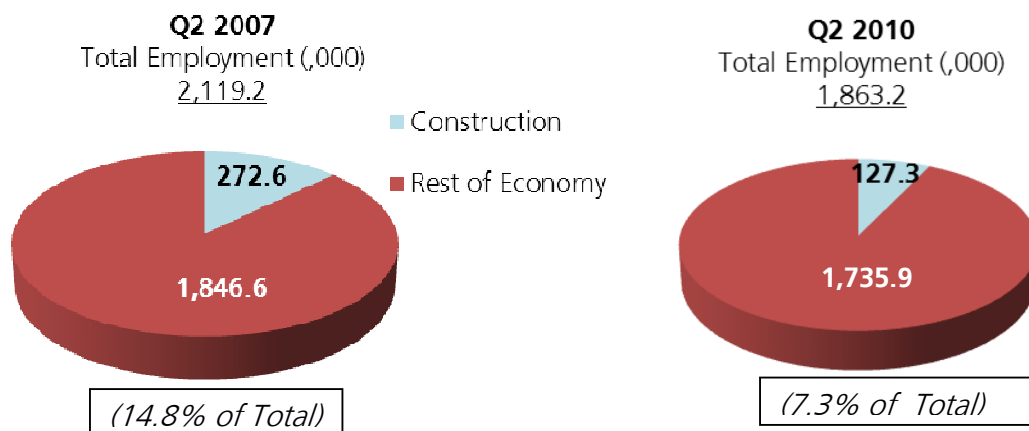
**Figure 3.2: Employment growth: construction 'direct' versus the rest of the economy
(year-on-year % growth, seasonally adjusted)**



Source: CSO

In respect of the structure of overall employment within the economy, Figure 3.3 below outlines the influence that construction has had on total employment levels both in terms of size and reduced share from the peak to Q2 2010.

**Fig 3.3: Construction direct employment as a proportion of total employment
In Q2 2007 and Q2 2010 (000s, seasonally adjusted)**

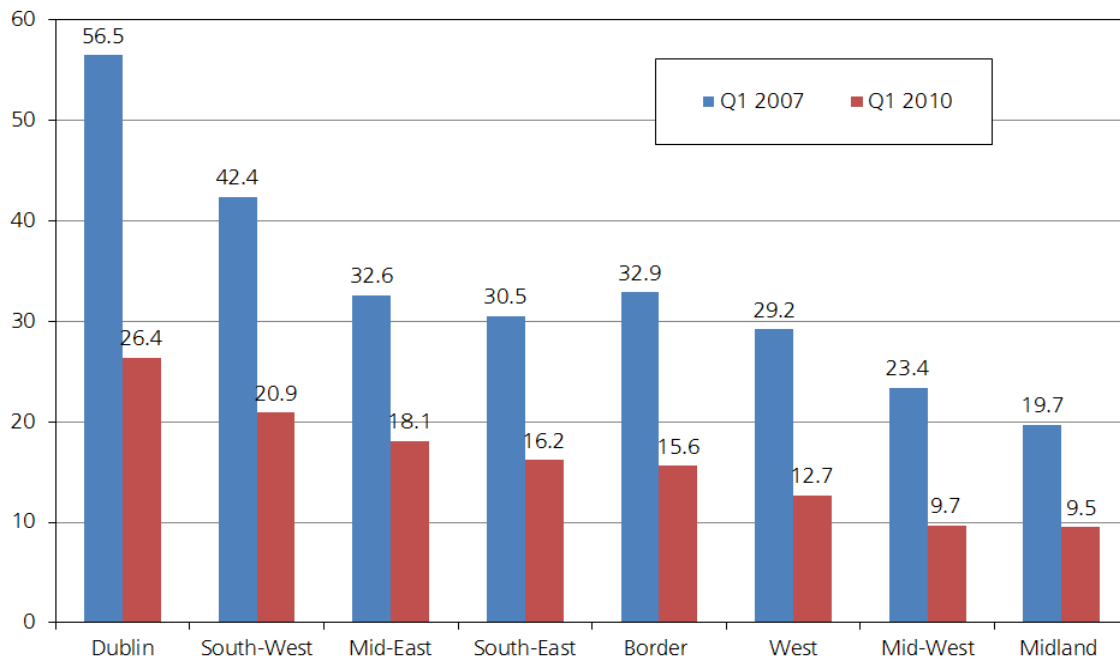


Source: CSO, QNHS

3.2 Regional construction employment

Data on construction employment has been obtained for Q1 2010, based on the total number employed at that time (130,600). Figure 3.4 reveals that all regions nationwide have been gravely affected by the construction crisis,

Fig 3.4: Regional breakdown of construction employment: Q1 2007 – Q1 2010 (Thousands)



Source: CSO

According to the Chart:

- Each region has experienced severe contractions in construction employment, with all but two regions (Mid-East/South-East) having had their workforce reduced by more than 50% in the three years to Q1 2010.
- In absolute terms, Dublin has been the worst affected region with the construction sector having shed approximately 30,100 jobs in the three years to Q1 2010.

3.3: Unemployment and the Live Register

3.3.1: QNHS measure of unemployment

Although we have ascertained job losses from looking at the employment numbers, it is not possible to establish whether those who lost their jobs have remained in the Irish workforce. The QNHS only provides an aggregate measure of unemployment for the economy as a whole

and does not measure unemployment in each economic sector. Table 3.2 shows the reduction in employment as already noted for construction and the rest of the economy and the corresponding increase in unemployment between the construction peak in Q2 2007 and Q2 2010.

Table 3.2: Job losses versus total unemployment
Between Q2 2007 and Q2 2010
(thousands, seasonally adjusted)

	Q2 2007	Q2 2010	Change (000's)
Employment:			
Construction Sector	272.6	127.3	-145.3 (57%)
Other Sectors	<u>1,846.6</u>	<u>1,735.9</u>	<u>-110.7 (43%)</u>
Total	2,119.2	1,863.2	-256.0 (100%)
Total Labour Force	2,216.2	2,147.9	- 68.4
Total Unemployment	100.0	284.5	+184.5
Unemployment rate	4.5%	13.2%	

Source: CSO

Note: The total change in employment plus unemployment (-68,400) does not sum to the total change in the labour force (-71,500) as each series is separately seasonally adjusted.

While some unemployed workers have left the labour force due to emigration or early retirement, for example, it is likely that the majority are being counted as unemployed. According to Table 3.2 the unemployment rate across the economy increased from 4.5% to 13.2% between Q2 2007 and Q2 2010, representing an increase of 184,500 persons. With construction accounting for 57% of total job losses, it is likely that the unemployment rate in construction is significantly higher than the national average of 13.2%. Indeed in some regions of the country it could be closer to 25% in the construction sector.

3.3.2: Live Register measure of unemployment

The Live Register also gives an indication as to the scale at which jobs are being lost in the economy on a monthly basis. Although the Live Register is not designed to measure unemployment, it provides a measure of the number of persons entitled to Jobseekers Benefit and Allowance and includes persons working part-time (up to three days a week) seasonal and casual workers.

Since the Q2 2010 QNHS figures were released there have been further increases in the numbers on the Live Register. The most recent Live Register total was 442,417 in August 2010 (unadjusted), up 22,563 in the previous twelve months. Males dominate the total accounting for two-thirds of persons on the Live Register (66%). Taking the total increase in the Live Register since May 2010⁵¹, a further almost 11,000 persons became unemployed over the period to September, of which 55% were males.

⁵¹ Assuming the QNHS relates to the mid-point of the second quarter.

Based on the 57% figure in Table 3.2, representing the proportion of job losses in construction, and applying that 57% to the increase in the Live Register, this would suggest that an additional 6,270 ($11,000 \times .57$) persons became unemployed in construction between May and September.

Thus the 'direct' employment in construction in Q3 2010 is estimated at the QNHS Q2 figure of 127,300 less 6,270 or approximately 121,000. The employment numbers may be lower as some workers who have lost their jobs may have left the labour force over the past five months and will thus not be on the Live Register.

3.4 Implications of job losses in construction

There are many repercussions for the construction sector and the economy as a result of the jobs crisis in construction. There is the knock on effect on the Live Register, unless persons are re-employed elsewhere in the economy, which costs the Exchequer an estimated average of €20,000 per person⁵² per annum, when all social welfare payments are taken into account. With anecdotal evidence suggesting that a number of construction workers including construction professionals have opted to emigrate, there is the loss of skills in design and construction, which are essential to the long-term success of the economy.

Many of those that have become unemployed in the construction sector will require new skills to find employment in other sectors. A programme of retraining individuals for work in sectors that are likely to demand employees is urgently required. Increased training helps remove any barriers to entry into other sectors/industries. This should therefore improve mobility and ultimately reduce the level of unemployment across the economy as a whole.

Other issues which may damage the sector's long term resource base are as follows:

- The lack of jobs for current and future graduates over the next two/three years across the wide range of disciplines associated with construction.
- The reduced potential to attract leaving certificate students into the construction professions, which will reduce the ability to replace workers as they retire over the long-term.
- The reduced opportunity to preserve a reasonable base of construction trades/craft workers in the industry. We understand that there were around 10,800 apprentices in training as of end September 2010, compared with around 30,000 at the peak. Approximately 8,000 are in construction related occupations⁵³. However, there are a further 7,700 apprentices, the majority of whom were in construction related occupations, who have been made redundant due to the economic recession and a lack of employers willing to sponsor them.

⁵² The figure is based on the average estimated figure in 2007 of €18,254 per person in the Construction Industry Council Submission to Government: Jobs and Infrastructure – A Plan for National Recovery, March 2009. The current estimate is rounded to €20,000.

⁵³ The 8,000 figure includes almost 4,000 apprentices in the electrical trades.

It is likely that the value of output in the construction industry will not reach €40 billion again over the medium-term and may well be closer to less than half this level⁵⁴ over this period. Thus the resource requirements of the sector are likely to be substantially below where they were at during the boom years. However any sustainable construction industry requires a solid base of skilled construction workers with the appropriate knowledge and expertise if it is to deliver the level of high quality building and infrastructure design to support a growing competitive economy focused on competing in international markets.

The real concern has to be that the above developments and risks exist at a time when the State can benefit from the exceptional value for money in respect of construction costs that is now available in the industry.

3.5 Non-nationals in the construction sector

Although it is over a decade ago, the construction industry of the mid to late 1990s was one characterised by a shortage of capacity and an excess demand for workers in a sector where the volume of activity was increasing a double digit rates of growth. At that time there were considerable efforts made by major stakeholders, many of them successful, to attract international firms and workers to the Irish construction sector in order to increase capacity in an industry, in which substantial public and private sector funds were being allocated to building and infrastructure projects.

In an effort to ascertain the number of non-nationals working in the economy the CSO produced tentative estimates of the labour force classified by nationality for the first time in Q3, 2004. That first survey reported that non-Irish nationals accounted for 8% (152,200 persons) of the total persons employed in the economy at that time and just 7.6% (16,300) of the total persons working in construction. Thus almost 11% of non-nationals were working in construction.

After the construction industry had reached its peak (Q2, 2007⁵⁵), the CSO estimated that the number of non-nationals working in construction reached an all-time high of 48,200 or 18.3% of the total persons employed in construction in Q4, 2007.

By Q2 2010, the effects of the construction crisis had emerged with 36,000 less non-nationals working in construction since the peak, representing more than one-quarter (26%) of all job losses in construction in over three years. Only 12,200 non-nationals remained working in the sector by Q2 2010, accounting for 9.7% of total persons employed in construction and around 5% of all non-nationals working in the economy at that time.

An interesting implication of the above statistics is that the proportion of non-nationals working in sectors other than construction was 12.5% compared with 9.7% in construction in Q2 2010.

⁵⁴ See Section 4.10.

⁵⁵ Based on seasonally adjusted data. The figures reported here for non-nationals are based on unadjusted data.

Table 3.3: Non-nationals in employment: construction versus total economy
(Unadjusted data, 000s)

	2004 Q3	2007 Q1	2007 Q4	2008 Q1	2010 Q2
Whole economy					
Total non-nationals	152.2	307.5	345.8	342.7	229.6
Total employment	1,902.3	2,088.5	2,138.8	2,124.1	1,859.1
Non-nationals as % of total	8.0%	14.7%	16.2%	16.1%	12.4%
Construction					
Total non-nationals	16.3	46.4	48.2	41.3	12.2
Total employment	213.4	267.2	263.7	252.1	125.3
Non-nationals as % of total	7.6%	17.4%	18.3%	16.4%	9.7%
<i>Non-nationals in construction as % of total in economy</i>	10.7%	15.1%	13.9%	12.1%	5.3%
Country of origin:					
UK	4.8	5.9	5.5	4.7	1.6
EU 15 exc Irl & UK	2.0	1.5	1.7	1.6	0.2
EU 15 to EU 27 States	5.4	31.7	35.5	29.9	9.3
Other	<u>4.0</u>	<u>7.3</u>	<u>5.5</u>	<u>5.2</u>	<u>1.1</u>
	16.3	46.4	48.2	41.3	12.2

Source: CSO QNHS.

Based on the nationality, the majority continue to come from the EU accession States, although numbers have fallen to 9,300 from a peak of 35,500. Similarly numbers from UK have fallen to just 1,600 from almost 6,400 in Q2 2005 (not in the Table).

Estimates for the population of non-nationals employed were initially considered as tentative by the CSO, given the large migration flows over the past decade. It is therefore possible that the published figures detailing the number of non-Irish nationals may have understated the true extent, partly due to the high probability of undocumented immigrants filling casual construction jobs and avoiding filling out surveys. The return of net outward migration in the year to April 2009, which gathered momentum in the year to April 2010, may result in more accurate QNHS estimates of non-nationals as opportunities for work, casual or otherwise, will have been much reduced during the recession.

3.6 Trends in construction related occupations

Job losses right across the board in the construction sector

The CSO have provided a breakdown of the numbers classified to construction in key craft/trade occupations in Q2 2010 compared with Q2 2007 (Table 3.4 and Figure 3.5). The difficulty is that figures are not provided for occupations where the numbers are less than 1,000 persons. Thus in the comparison with Q2 2007, many occupations were excluded from the Q1 2010 classification for this reason.

Table 3.4: Employment by construction trade Q2 2007 - Q2 2010

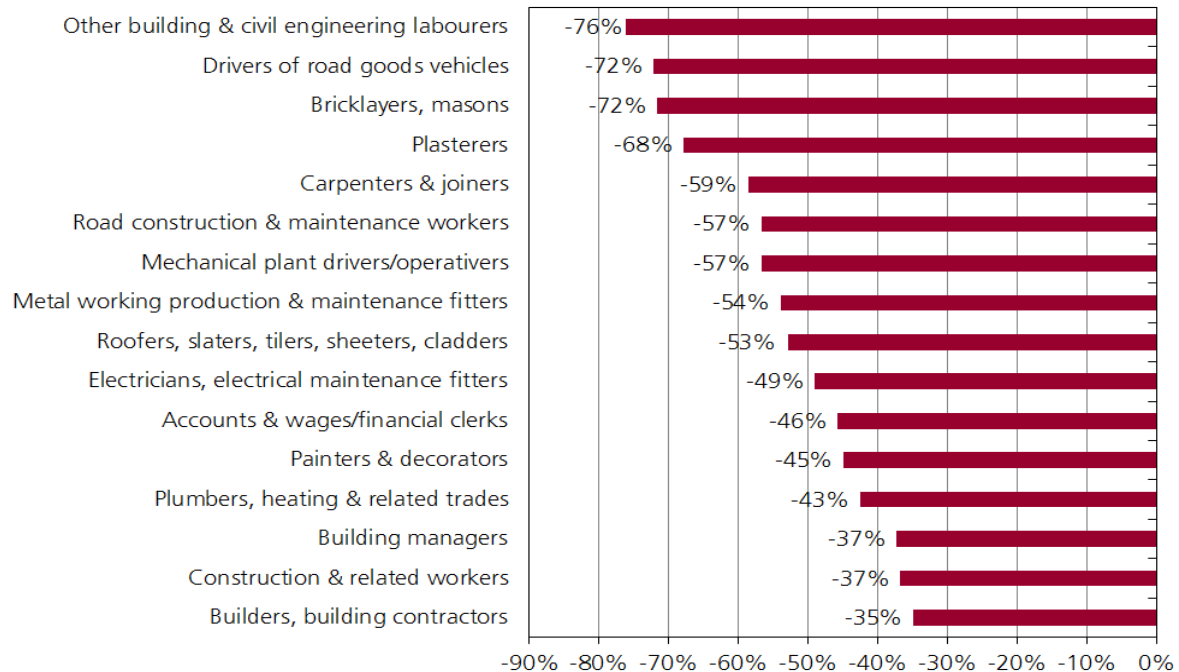
	Q2 2007	Q2 2010	%	Q2 2010
	('000)	('000)	change	% share
Builders, building contractors	19.8	12.9	-35%	10%
Construction & related workers	5.7	3.6	-37%	3%
Building managers	5.1	3.2	-37%	3%
Plumbers, heating & related trades	15.5	8.9	-43%	7%
Painters & decorators	12.9	7.1	-45%	6%
Accounts & wages/financial clerks	2.4	1.3	-46%	1%
Electricians, electrical maintenance fitters	22.8	11.6	-49%	9%
Roofers, slaters, tilers, sheeters, cladders	6.8	3.2	-53%	3%
Metal working production/maintenance fitters	3.9	1.8	-54%	1%
Mechanical plant drivers/operatives	7.6	3.3	-57%	3%
Road construction & maintenance workers	3.0	1.3	-57%	1%
Carpenters & joiners	39.3	16.3	-59%	13%
Plasterers	13.4	4.3	-68%	3%
Bricklayers, masons	15.5	4.4	-72%	4%
Drivers of road goods vehicles	7.9	2.2	-72%	2%
Other building & civil engineering labourers	34.4	8.2	-76%	7%
Other construction occupations	53.9	31.7	-41%	25%
Total construction employment (unadjusted)	269.9	125.3	-54%	100%

Source: CSO, QNHS seasonally unadjusted figures.

Table 3.4 sets out the occupations that accounted for 75% of the total numbers employed in Q2 2010 (125,300 is an unadjusted figure). The largest groups were carpenters and joiners (13%), building contractors (10%) and electricians (9%).

- The numbers with occupations classified under 'Other building and civil engineering labourers' fell by over three-quarters in the three years while the number of bricklayers and masons were down by over 70%. These occupation categories are likely to be more prone to unemployment, unless adequate retraining is provided.
- When compared to trends amongst their industry counterparts, 'painters & decorators' and 'plumbers, heating & related tradesmen' have been amongst the least affected in terms of jobs lost. These occupations are not wholly dependent on new construction but are more likely to be operating in the RM&I market.

**Figure 3.5: Change in numbers employed in construction related occupations
Q1 2007 to Q1 2010**



Source: CSO, QNHS

3.7: Corporate failures in construction

The economic turmoil together with the crisis in construction have resulted in an accelerating number of Irish businesses failures. Data published by Farrell Grants Sparks show that Construction and Engineering firms recorded the largest number of corporate failures (i.e. insolvent liquidations, receiverships and examinerships) over the past three years.

Table 3.5 below sets out the most recent data for the first six months of 2010. In that period there were a total of 912 corporate failures of which Construction and Engineering firms accounted for 360 or 40%. This is equivalent to four out of every ten business failures in the first 6 months of 2010. The next highest numbers were recorded by Bars, Restaurant and Hotels (122 or 13.4%) and Retail businesses (119 or 13%).

Table 3.5: Number of corporate failures 2008-2010

6 months to end of	Jun-08	Jun-09	Jun-10	2009-10 % change
Construction	130	253	360	+42%
Total Failures	312	733	912	+24%
<i>Construction % of total</i>	<i>42%</i>	<i>35%</i>	<i>40%</i>	

Source: Farrell Grant Sparks www.fgspartnership.com

A breakdown by location reveals that 43% of all corporate failures were of businesses based in Dublin. Cork, Galway and Limerick accounted for 9.4%, 5.9% and 4.1% of the total failures in the first six months of 2010.

Taking the year as a whole, construction and engineering firms are expected to account for more than 700 insolvencies. It is likely that the true number of insolvencies is much higher than the official figures above would suggest due to the fact that many firms will desperately struggle to consolidate their finances before being forced or having to resort to liquidation.

The failures in the construction sector, in the main, continue to be small to medium sized developers and or subcontractors. However, there is reported to be an increase in the size of the entities failing. The ongoing reduction in house prices, the sharp slowdown in new building volumes, uncertainty regarding the availability of credit for small to medium type developers and purchasers all indicate that much uncertainty is likely to prevail over the short term.

Many firms, accustomed to planning for future growth, are now strongly focused on surviving the current recession. The deepening recession in construction is generating less new orders from clients. The work that is put out to tender is resulting in persistently low tender prices, as contractors bid aggressively for the work that is put out to tender. This is a high-risk strategy as it increases the risk of insolvencies, firstly among those contractors who price responsibly and as a result fail to win work and then among those who win work with unsustainably low bids. Unless this trend in tender prices is matched by a similar decline in construction costs for firms, more and more construction companies and subcontractors are likely to go out of business.

Section 4: Medium-term prospects to 2011

Summary

Improved economic outlook, but challenges and uncertainties remain

The performance of many of the major economies in early 2010 has proved to be more robust than previously anticipated. As a result many of the international forecasters have revised their forecasts for 2010 upwards over the last six months, in light of the improved economic climate and stronger activity in the first half of the year. Yet the downside risks to the recovery are arguably greater now as growing market concern about long-term public debt sustainability threatens to derail the recovery in Europe and fears of a double-dip recession in the US and the wider global economy continue to weigh on financial market sentiment.

While Ireland's GNP rate of decline moderated in Q2 2010, significant challenges have still to be overcome. A number of measures have already been introduced to resolve the banking crisis and address the gap in the public finances but more are necessary. The growing problem of unemployment is perhaps the biggest challenge facing the Irish economy at present. There is a need for effective labour market policies if the legacy of unskilled long-term unemployment is to be avoided. Furthermore, a sustained improvement in competitiveness is required if the economy is to return to export-led growth and full employment in a reasonable time scale. Finally, the Government's fiscal austerity programme needs to be fully implemented, if there is to be a return to robust rates of growth.

Current forecasts expect GNP growth of 1.5 to 2% in 2011 with no improvement in the labour market until 2012. At the time of writing there would appear to be many downside risks which could see GNP growth next year closer to the lower end of this range. Few forecasts are available for 2012, apart from the ESRI, which forecasts that GNP growth could average 3% and 4.2% in their Low and High Growth Scenarios respectively. At the time of writing and given the current fiscal challenges over the medium-term, the former looks the more probable scenario.

Construction activity levels have virtually come to a stand-still

In the context of economic cycles, the current contraction in construction is the worst since records began in 1980. After an extraordinary period of output and employment growth, construction activity levels have virtually come to a standstill. Having peaked at 25% of GNP, the industry is expected to fall to 9.2% of GNP this year and just 7.9% by 2012, levels that are completely unsustainable for an economy focused on catering for the needs of the new indigenous and multinational enterprise base, that is expected to dominate the new Smart Economy in the next phase of Ireland's economic development.

The projections for the medium-term portray a continuing weak outlook for the private construction sector in 2011 and 2012. Activity levels have collapsed in response to a number of factors, including continuing high debt levels, difficulties securing finance, excess capacity, uncertainties surrounding the impact of NAMA and a nervousness amongst consumers in regard to job losses, fears of further taxation increases in the forthcoming Budget and a more cautious view generally about the outlook for the economy.

The projections for new housebuilding of just 8,500 units in 2010 and 7,500 units in 2011 suggest an average of around 37,000 completions over the period 2007-2011. With housebuilding projected to remain low in 2012 (8,500), the annual average of 31,500 for completions for the period 2012-2016, (forecast by the ESRI), provides some comfort for prospects beyond 2012, as the level of housebuilding should begin to increase as the economy recovers. Although looking beyond strict demand/supply indicators to broader economic performance (projected growth and migration patterns, unemployment levels, possibilities of further income reductions/tax increases etc.) would suggest that latent demand will be dampened considerably.

The medium-term forecast continues to portray an industry in the depths of recession with total output back to mid-1990s levels. The volume of construction output is forecast to decline by 10.8% in 2011 with a very slight pick-up in 2012 (+0.6%). Thus over the period 2007-2011 construction output volumes are forecast to decline by almost two-thirds or by an average of 18% per annum. Construction output volumes by 2011 are forecast to return to where they were at in the mid-1990s.

The value of construction output in current prices is projected to fall to around €10.5 billion by 2011, which indicates an industry in the depths of recession and a long way of its optimum size. The last time the industry was valued at this level was in 1990 (in constant prices).

The projections are based on the assumption that the Government's allocation of €5.5 billion per annum in Exchequer funds over the period 2010-2012 will be fully spent. A lesser spend would have serious repercussions for the industry right across the supply chain. The urgent requirement to restore the public finances to stability over the coming years may require further reductions in the Exchequer capital provisions or increases in taxation in the next series of budgets. Both would damage the medium-term prospects for construction.

A considerable proportion of the 2010 public capital provision is allocated to projects which were commenced in the boom times and are now reaching or coming close to completion. Given the long lead in time to the construction phase for most large public sector projects, unless new orders emerge of significant value in 2010, it may not be possible to spend the full public capital allocation next year. It would therefore not be difficult to frame a scenario in which the value of construction output would be closer to €8.5 billion in 2011 compared with the €10.5 billion derived assuming the full public sector capital allocations are spent.

The above scenarios imply a further shedding of labour not just in construction but in other areas dependant on construction. The level of direct and indirect employment is projected to reach a floor of around 126,000 by end 2011, around one-third of the level reached at the peak.

The necessity for full implementation of the Government's fiscal austerity programme to bring down the fiscal deficit to 3% of GDP by 2014 implies no room for fiscal stimulus in the Irish economy. That said, there remains an infrastructure deficit and a need for investment in sensible public social and productive infrastructure projects. Thus unless innovative funding mechanisms emerge to fund projects in these areas, it is difficult to see where recovery in construction will come from in the short to medium-term.

4.1: Medium-term economic prospects

The global economy emerged from recession in the second quarter of 2009, and since then the recovery has strengthened at a faster pace than previously anticipated by many. Nonetheless, the pace of recovery has been uneven, and while many of the emerging and developing economies have recorded buoyant rates of growth, the recovery among advanced economies has been more moderate. Economic activity in these countries remains dependent on highly accommodative macroeconomic policies, while domestic demand is still relatively stagnant.

The global financial and economic crisis, which began in 2007, has left a legacy of high unemployment rates, weak private and public sector balance sheets and a need for significant fiscal consolidation in a number of advanced economies. This has complicated the process of recovery, as a number of countries have had to introduce fiscal austerity measures at a time when stimulatory spending would be preferable. Although the performance of many of the major economies in the second half of 2009 and into 2010 has proved to be more robust than previously anticipated, the downside risks to the recovery are arguably greater now. Growing market concern about long-term public debt sustainability threatens to derail the recovery in Europe, while fears of a double-dip recession in the US and the wider global economy continue to weigh on financial market sentiment. These concerns will present challenges to the weaker and more vulnerable economies, including Ireland, and these challenges are already evident in the increasing premium demanded by investors to hold Irish government bonds.

Improved international outlook, but challenges and uncertainties remain⁵⁶

The vast majority of the international forecasters have revised their forecasts for 2010 upwards over the first six months of the year, in light of the improved economic climate and stronger activity during this period. However, they have all highlighted the ongoing high degree of uncertainty surrounding these projections and the significant downside risks. The consensus estimate of world growth in 2010 is approximately 4.5%, with a similar figure projected for 2011. However, as suggested above, the recovery thus far has had a multi-speed nature, and this is reflected in the more modest growth forecasts for the OECD area, where GDP is expected to increase by 2.7% in 2010 and by 2.8% in 2011⁵⁷.

- The US came out of recession in the third quarter of 2009 and has recorded relatively strong growth in recent quarters. The recovery so far has been largely driven by the extraordinary monetary and fiscal stimulus measures implemented by the authorities since the start of the crisis. Private demand has yet to fully take hold however, and in recent weeks a number of disappointing data releases have raised fresh concerns about the likelihood of a double-dip recession. In particular, consumer spending growth has been weak and the housing market is showing signs of slowing down once again.

⁵⁶ The economic forecasts quoted in this section are sourced from OECD Economic Outlook No. 87, May 2010, the NIESR (National Institute of Economic and Social Research) Economic Review No. 213, July 2010 and the IMF World Economic Outlook Update, July 2010.

⁵⁷ Projections made by the OECD for the 33 member OECD area in its Economic Outlook (No. 87, May 2010).

Nonetheless, the consensus estimate for GDP growth in 2010 is just over 3%, with a similar rate projected for 2011.

- The Euro Area has experienced a much slower return to growth and overall economic activity remains relatively subdued. The recovery continues to be supported by substantial macroeconomic and financial sector measures, as well as the coordinated assistance from European institutions and the IMF, designed to strengthen the position of some of the Euro Area's weakest economies. Growth in the second quarter of 2010 is estimated at 1% (seasonally adjusted quarter-on-quarter) although this was largely driven by strong performances by Germany and, to a lesser extent, France. The Euro Area economy is likely to remain relatively subdued over the forecast horizon, with GDP growth expected to be in the region of 1.2% this year, and remaining below 2% in 2011.
- The UK economy experienced a sharp contraction of close to 5% in 2009 but has since registered two consecutive quarters of growth. The new government has announced a cumulative £120 billion fiscal consolidation package for the period 2011-2015 in order to tackle its deficit. Current estimates suggest that the UK economy will grow by approximately 1.3% this year. For 2011 forecasts point to growth in the range 1.7 – 2.5%.

Restoring sustainability to public finances is an urgent priority for many economies including Ireland

The increasing market concern about public debt sustainability in a number of Euro Area countries is undoubtedly the biggest threat to the economic recovery in the currency union. These concerns have already caused severe disruption to European financial markets and led to the announcement of a series of coordinated remedial measures between EU member countries, the IMF and the ECB. In spite of these measures, government bond yields remain elevated in some of the Euro Area's peripheral economies, including Ireland. The need for fiscal consolidation in these countries has become increasingly urgent and any failure to implement credible medium-term austerity plans may result in a further loss of confidence and more widespread financial market instability.

Ireland - GNP rate of decline moderates but significant challenges still to be overcome

The Quarterly National Accounts (QNA) for the first two quarters of 2010 showed some very tentative signs of stabilisation in some areas of the Irish economy, however the overall performance remains relatively subdued. In the second quarter of the year, GNP fell by 0.3% relative to the first quarter, on a seasonally adjusted basis. This is the slowest quarter-on-quarter contraction in over two years. Exports have performed well in the first half of the year, and gross fixed capital formation registered growth of 11.5% in the second quarter of the year. While much of this was due to increased imports of planes, the data from the QNA show that the volume of output in building and construction grew by 1.2% in the second quarter, relative

to the first quarter, albeit from a very low base. The situation in the labour market shows little sign of improving and the most recent official estimate of the unemployment rate is 13.2%.⁵⁸

A number of measures to tackle the challenges facing the economy have already been introduced by the Government, but further action will be necessary:

- A range of measures has been implemented throughout 2009 and 2010 in order to stabilise the *public finances*. These measures have succeeded in halting the rapid deterioration in the General Government Deficit (excluding the cost of recapitalising the banks), but have also served to take much needed demand out of the economy. However, recent experience has clearly demonstrated the fragile nature of market sentiment in relation to Ireland's sovereign debt, with the spread on Irish government bonds relative to German bonds reaching record levels. With this in mind, it is imperative that the Government continues with its announced plans for further fiscal consolidation in 2011 and beyond.

The Government has also implemented a range of measures to resolve the *banking system*. Following the bank guarantee scheme, the Government established the National Asset Management Agency (NAMA) which will buy loans of around €80 billion from the covered banks at an appropriate discount and pay for them by the issue of Irish Government bonds. In 2010, new capital requirements have resulted in further injections into Anglo Irish Bank, Irish Nationwide and EBS. It is unclear at this point what the ultimate net cost to the State of supporting the banks will be, but

- The growing problem of *unemployment* is perhaps the biggest challenge facing the Irish economy at present. The most recent data from the Quarterly National Household Survey suggests that the problem is particularly acute among younger workers. The unemployment rate for those aged 15-19 is now 41%; for those aged 20-24 it is 26%. In addition, the rate of long-term unemployment has risen to 5.9% - that is, 5.9% of the labour force have been out of work for a year or more. These worrying statistics highlight the need for effective intervention by the Government in the area of labour market policy.

GNP growth of 1.5 to 2% forecast for 2011, no improvement in labour market before 2012

The recovery in the economy will be predominantly driven by an increase in exports, both in 2010 and 2011. The most recent forecast (Central Bank) suggests that GNP will increase by 1.9% in 2011, although the increase in both private consumption and investment is likely to be relatively modest. It is expected that external demand will be significantly stronger than domestic demand, as further fiscal austerity measures will continue to restrain growth in the domestic side of the economy. The current set of projections implies no significant improvement in the labour market in 2011. This reflects the view that the recovery will be driven, in the short-

⁵⁸ The Quarterly National Household Survey provides the official estimate of the unemployment rate. The most recent data relates to Q2 2010. Using the Live Register (which includes part-time, seasonal and casual workers), the rate of unemployment in September is estimated at 13.7%.

term at least, by an increase in exports, which are less employment-intensive than consumption for example.

Over the medium-term, the ESRI has predicted that GNP growth could average 4.2% in the years 2011-2015, in their *High Growth Scenario* or 3% in their *Low Growth Scenario*. At the time of writing and given the current fiscal challenges over the medium-term, the latter looks the more probable scenario. Under the *Low Growth* scenario the unemployment rate is projected to fall to 7.1% by end 2015 compared with 5% in the *High Growth Scenario*.

In order to tackle the challenges that face the economy there is a need, firstly, for effective labour market policies if the legacy of unskilled long-term unemployment is to be avoided. Failure to implement policies will impede the recovery process and add to the social costs of the crisis. Secondly, a sustained improvement in competitiveness is required if the economy is to return to export-led growth and full employment in a reasonable time scale. Finally, Government's fiscal austerity programme needs to be fully implemented, if there is to be a return to robust rates of growth.

Table 4.1: Irish economic prospects

Real Economic Growth %	2009	2010E	2011F	2012F	2011-2015F average
Real GNP %					
Central Bank	-10.7	-1.7	1.7	N/A	N/A
ESRI - QEC	-10.7	-1.4	1.9	N/A	N/A
ESRI - <i>High growth scenario</i>	-10.7	0.0	2.8	N/A	4.2
ESRI - <i>Low growth scenario</i>	-10.7	0.0	2.8	N/A	3.0
Department of Finance	-10.4	-1.7	3.0	4.1	N/A

Central Bank Quarterly Bulletin, October 2010

ESRI Quarterly Economic Commentary Autumn 2010

Department of Finance, Stability Programme Update, December 2009

OECD Economic Outlook No. 87, May 2010

4.2: Medium-term prospects for construction

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. These fluctuations tend generally to be measured using GNP but they can also be measured using output in the construction sector. They do not follow any predictable periodic pattern but will be influenced at any point in time by a number of factors, including Government policy, the state of the public finances, trends in interest rates, income and employment, demographics, the level of public and private sector investment and the level of confidence in an economy.

The Irish construction sector is no exception. The current estimates for construction output and the projections which follow reveal the dramatic fluctuations in construction activity. The most recent construction cycle commenced in the mid-1990s and culminated in the rapid acceleration in the growth in construction output until 2006/2007. This was quickly followed by

the most severe contraction since records began. That contraction has continued in 2009 and is expected to persist over the medium-term. All available indicators show almost a collapse in output, prices and employment. Activity levels in the industry have come to a virtual standstill. The cyclical nature of the Irish construction industry is evident from Figure 4.2.

The construction industry is in a period of unprecedented change

In this section we look ahead at the prospects for construction over the next two years: 2011 and 2012. The baseline position is the estimate for 2010 presented in this report.

While there are many uncertainties surrounding the prospects for construction, the one certainty is that the industry has been through its worst contraction since records began in 1980. Having peaked at 25% of GNP, the industry is expected to fall to just 9.2% of GNP this year, a level that is unsustainable in the medium-term. What a more sustainable level might be is discussed in Section 4.10 but the likelihood is that the industry, given the prognosis for public sector construction and the absence of any real recovery in private sector construction, will be well below its sustainable level over the next two years. The implications for employment, the skills base in the industry and the infrastructure deficit are already very serious. There is an urgent need to put in place measures that stem the contraction in construction output and begin to return the industry to a more sustainable level beyond 2012, allowing it to contribute to economic growth and employment.

A strong construction industry is essential

Construction is a vital sector in any economy with its immediate impacts on economic growth, competitiveness, jobs and productivity. A healthy construction industry requires strong private sector demand supported by a continuous pipeline of public sector infrastructure projects, sustaining jobs right across the sector, in small, medium and large construction firms. It is essential not just for the delivery of much needed physical infrastructure but is also an important driver of competitiveness. With government policy focused on restoring competitiveness, driving down costs and increasing exports, the quantity and quality of infrastructure will play an important role. High quality infrastructure improves the efficiency of the indigenous enterprise sector and also increases the attractiveness of Ireland as an investment location for foreign direct investment.

A strong construction industry is also required to deliver the high quality building and infrastructure needs of the new enterprises expected to comprise the Smart Economy. The creation of an R&D-intensive indigenous enterprise sector requires high levels of investment in infrastructure as well as in our educational institutions. The construction industry has the skills set and knowledge to provide the necessary infrastructure.

And requires infrastructure investment to be prioritised

In July 2010, the Department of Finance published a review of public capital investment for the years 2010-2016⁵⁹. This document sets out the Government's reappraisal of its investment priorities over the medium-term, in light of changes in the economy and the very challenging fiscal position.

⁵⁹ Infrastructure Investment Priorities 2010-2016 Department of Finance, July 2010

The revised programme for capital investment was framed against a very difficult economic climate. At the time the review was set against the backdrop of a need to secure €3 billion+ in adjustments to the 2011 Budget, a figure now which is likely to be much higher.

Despite the much deteriorated fiscal position, the report acknowledges the considerable benefits of investing in infrastructure:

“Provision of capital can assist in bolstering productivity; can contribute to the restoration of national competitiveness; can support sustainable employment; and can deliver much needed social infrastructure.”

Since the industry peaked in 2007, there has been a substantial improvement in the value for money available in the procurement of public infrastructure as a result of falling tender prices. The average decline in tender prices for new construction work is estimated at close to 30% since 2007 in this report. Thus there is a real opportunity to secure value for money by getting projects to the construction stage as quickly as possible. Thus a strong pipeline of replacement projects is urgently needed to replace those that are now close to completion and to sustain a viable construction sector.

Shifting priorities for capital expenditure

The Government’s review identifies the key priority areas for infrastructure investment while taking a long term view of capital provision in order to assess how the return on public investment can be maximised when growth reasserts itself.

The net effect of the revised capital investment programme in the years to 2016 is a refocused set of priorities which are expected to assist economic recovery and the transition to a low carbon economy. The key trends evident from the new direction set out for infrastructure investment are as follows:

- A move away from road transport in favour of public transport.
- A very significant increase in the focus on water services investment.
- A restructuring of the Social Housing Investment Programme.
- Increased investment directed at realising the goals of the Smart Economy and the need to return to sustainable employment creation.

A pipeline of projects is essential to ensure a positive contribution to economic growth

A construction industry needs a continuous pipeline of construction projects if it is to make a real contribution to economic growth and return to more sustainable levels. Aside from the benefits outlined above, the industry’s contribution is reflected in the jobs generated directly in construction firms right across the spectrum of occupations from managerial, professional, crafts/trades to unskilled occupations. Further jobs are generated by firms supplying inputs to construction projects and by their suppliers in turn, i.e. the indirect employment impacts. As all of those employed spend their wages and profits throughout the wider economy, generating consumer expenditure and further investment, additional jobs are created, i.e. the induced employment impacts. The direct and indirect employment intensity of public construction

projects has been estimated at between 8 and 13 jobs (work years) per €1 million invested⁶⁰, before measuring the induced employment effects.

The contraction in both residential and non-residential investment since 2007 has led to substantial job losses in firms directly employed in construction plus in other industries linked to construction. The lack of housing transactions, for example, has meant that families who would have moved into new homes have not been spending money on fitting out their homes. Increasing numbers of unemployed also lead to cuts in spending across a range of goods and services, triggering further production and employment losses. As a result of reduced economic activity, the State and local authorities collect less in taxes, planning and other levies.

An important issue, where there is always room for improvement, is the pace of procurement and the elimination of planning and procurement bottlenecks. A more effective, efficient and integrated planning system would facilitate new projects coming to the construction stage more rapidly, thereby reducing costs and increasing employment.

Identify new growth areas and niche opportunities

As the economy gears up to meet the challenges presented by the climate change, sustainability and green agendas, it is important to identify new growth areas and niche opportunities which will not just sustain employment but provide re-training opportunities.

While some progress had begun to be made in the development of 'greener' buildings towards the end of the boom period, the adjustment now underway should re-focus spare capacity towards investment in energy efficiency improvements in the existing built stock and the development of green building technologies.

The Government's *National Energy Efficiency Action Plan 2009-2020* (NEEAP) recognises that there are substantial gains to be made in the energy performance of the built stock, both residential and non-residential. This is being confirmed by research undertaken in Ireland and overseas.

The extension of the Building Energy Ratings (BER) system to second-hand buildings being sold or rented should highlight the shortcomings of the stock, and encourage improvements, especially as these buildings must compete with new buildings that are completed to a much higher energy efficiency standard. The proposed new carbon tax will have a reinforcing impact in this regard.

Given the substantial spare capacity in the construction sector at the moment, there is a strong argument for Government intervention to incentivise energy efficiency improvements in the built stock, and indeed continue its programme of investment to tackle the energy efficiency of its own extensive estate of buildings.

⁶⁰ According to estimates produced in the Infrastructure Investment Priorities 2010-2016 Report from the Department of Finance (July 2010) and the Construction Industry Council Submission to Government, Jobs and Infrastructure – A Plan for National Recovery, March 2009.

4.3: Residential construction

Severe adjustment underway now for close to four years

The boom years in the Irish housing market corresponded with a lengthy period of record housebuilding levels, rising house prices and historically low interest rates, all of which attracted higher level of speculative investment each year. The other development in the market at that time was the substantial rise in debt levels (by private households, businesses and banks) to sustain the exceptional level of investment activity. It is this legacy of debt amongst households and the development fraternity which is now a key factor delaying the next economic recovery phase.

Such exceptional periods of demand and overbuilding tend to precede the transition to the phase of the housing cycle which is characterised by a period of weak demand and underbuilding. The housing market has been in this exceptionally weak phase since end 2006, having experienced:

- A rapid decline in demand as potential house buyers have opted to postpone purchases.
- Mounting unsold and unfinished stock levels.
- Falling house prices with increased expectations of further reductions.
- Weak confidence amongst house builders, who have responded by cutting production to all time low levels.
- A significant increase in the supply of properties for rent and reduced demand in conjunction with the rise in unemployment.
- A withdrawal of investors in response to falling capital values and falling rents over recent years.

Thus the housing market has been going through a severe adjustment now for close to four years.

Section 2.1 provides a review of the adjustment to date. The emphasis here is on the prospects for residential construction over the next two years.

Housing demand forecasts imply a much reduced level of housebuilding to 2012

The demand for new dwellings over the housing cycle reflects changes in the population, headship rates⁶¹ and migration as well as demand arising from the obsolescence of dwellings and/or changes in the number of vacant dwellings. All of the aforementioned factors contributed significantly to housing demand over the past decade as the population expanded and net inward migration led to higher household formation, supported also by an increasing demand for second homes.

⁶¹ The tendency for persons in specific age groups to become heads of new households.

The last Census of Population (2006) reported an average increase of 45,400 private households per year between 2002 and 2006 compared with 27,500 between 1996 and 2002. Provisional figures from the CSO Quarterly National Household Survey suggest that the number of private households increased by an annual average of 37,400 between Q1 2006 and Q1 2010. However over the most recent 12 month period to Q1 2010, the annual increase was just half this level, at 18,500.

Moreover, the return to a period of net outward migration in the year to April 2009 (7,800) which gathered momentum in 2010 (34,500)⁶² suggests that the population is likely to increase more slowly or possibly decline over the next few years, implying a lower rate of household formation going forward.

Thus medium-term housing forecasts need to take account of the following:

- Recent trends in household formation rates.
- The return of net outward migration and its impact on the projected population.
- The age composition of the population.
Ireland has a relatively young population when compared with its EU-15 counterparts, which should support housing demand over the medium-term, provided the market conditions are favourable to house purchase.
- The existing surplus stock of vacant dwellings.
The supply overhang of vacant stock has received much attention over recent years with various estimates published. The 2009 CIRO estimated the excess supply overhang at 136,000 (new and existing dwellings), which at the time was equivalent to around four years of average annual demand. This figure is likely to be lower now, reflecting the dramatic reduction in new build and the pick-up in housing transactions as the gap between asking prices and sales prices has narrowed⁶³.
- Short-term factors, which are likely to be critical over the next two to three years include:
 - The tendency for potential buyers to postpone their purchases due to the economic recession and the expectation that prices may fall further.
 - Difficulties securing mortgage funding for some potential house buyers due to reductions in incomes.
 - Unemployment and concerns amongst potential buyers about job losses.

⁶² Population estimates for the year to April 2010 were published by the CSO in September 2010.

⁶³ As mentioned in Appendix 4, the DEHLG is expected to publish its findings from a comprehensive national survey on the scale and distribution of unfinished housing development across the country in early Autumn 2010.

- The increasing numbers of home owners facing payment challenges due to pay reductions and job losses. Estimates from the Financial Regulator suggest that the total cases of mortgages in arrears for more than 90 days at the end of Q2 2010 was around 36,500 (5% of mortgage accounts), excluding households who had renegotiated repayment schedules with their banks. The figure represented an increase of 12.7% on Q1 2010 and 38.7% since the data was first collected in Q3 2009. Although lenders are working to assist borrowers via more flexible loan arrangements, there are real pressures for borrowers as mortgage rates have already been increased by some lenders and further increases are expected. The risk is that mortgage arrears could increase further over the next twelve months.
 - Uncertainties surrounding NAMA and how it intends to deal with completed and unfinished developments underpinning the loans transferred.
- The one positive factor which has emerged has been the significant improvement in housing affordability since early 2007. With house prices continuing to decline, albeit at more modest rates, affordability issues are likely to be less of a problem for potential house buyers in secure employment.
 - Falling house prices, however, creates negative equity problems for existing households. Bank of Ireland estimate as many as 170,000 people are in negative equity; the ESRI⁶⁴ suggest that the number will rise to over 196,000 by end of 2010 while one property analyst⁶⁵ suggests the negative equity is a problem for one in five households, which is equivalent to more in the region of 340,000 households.
 - The ongoing restructuring of the social housing investment programme away from construction and acquisition towards long term leasing and the Rental Accommodation Scheme will have implications for the future level of new public housebuilding.

Taking into account the above factors impacting on the market, new housebuilding is expected to reach its lowest level in 2011 at just 7,500 units following which it picks up slightly in 2012 (8,500 units).

Combining the projection for 2011 with the expected outturn for new housebuilding over the period 2007-2010 (based on the revised methodology set out in Appendix 4), the annual average housing supply projected in this report is 36,934 units over the period 2007-2011.

⁶⁴ <http://www.esri.ie/UserFiles/publications/20091012160331/WP319.pdf>

⁶⁵ <http://www.ronanlyons.com/2009/05/01/how-many-irish-homes-are-in-negative-equity/>

Table 4.2: Projected housing supply to 2012 (number of dwellings)

	2010 CIRO (based on adjusted completions) #	DEHLG completions (i.e. ESB connections)
2007	87,027	78,027
2008	59,644	51,274
2009	22,000	26,420
2010E	8,500	15,000
2011F	7,500	N/A
2012F	8,500	N/A
Total 2007-2009	168,671	155,721
Total 2010-2012F	24,500	N/A
Ave 2007-2011F	36,934	
ESRI	Completions Forecast	Housing Demand Forecast
2007-2011	36,400	46,300
2012-2016	31,500	40,200

Based on adjusted completions derived in Appendix 4 and used to ascertain the value of residential construction output in this report.

Source: CIRO: DKM; DEHLG and ESRI Recovery Scenarios for Ireland, May 2009 (Page 36).

The most recent projection from the ESRI under their *World Recovery Scenario* is that the number of dwellings completed is expected to average 36,400 per annum between 2007 and 2011⁶⁶ and 31,500 over the period 2012-2106. These compare with the ESRI's annual average forecast for housing demand of 46,300 and 40,200 respectively.

The projections of 8,500 in 2010 and 7,500 units in 2011 are consistent with the ESRI's average supply figure of 36,400 for 2007-2011, which would imply a much reduced level of building in 2010 and 2011, after taking account of the outturn for 2007-2009. With housebuilding projected to remain low in 2012 at 8,500, the annual average of 31,500 completions forecast by the ESRI provides some comfort for prospects beyond 2012, as the level of housebuilding should begin to increase as the economy recovers. Although looking beyond strict demand/supply indicators to broader economic performance (projected growth and migration patterns, unemployment levels, possibilities of further income reductions/tax increases etc.) would suggest that latent demand will be dampened considerably.

Any recovery in housebuilding unlikely before 2013

Thus any recovery in the volume of new residential construction is unlikely before 2013. The annual projections for 2010-2012 represent the lowest level of housebuilding since records began in 1970. They reflect weak consumer and business sentiment, the protracted economic situation, the uncertainty over NAMA and a lack of clarity regarding the availability of finance and future capital values.

⁶⁶ Recovery Scenarios for Ireland, ESRI, May 2009.

In regard to public sector housebuilding, the constrained fiscal environment suggest that funding for the construction of new social housing units will be much reduced over the next few years. The last comprehensive statement on Government housing policy⁶⁷ called for a more flexible response to the delivery of housing need. As a result the focus on social housing provision is moving away from just the provision of new build to an approach which involves a range of alternative options for meeting social housing need. Among these are Leasing and the Rental Accommodation and Rent Supplement schemes. Thus the level of new social housing units built, which until 2009 would have accounted for between 5,000 and 7,000 units per annum, is expected to be substantially lower over the next few years. The estimate is 1,000 new units per annum in 2011 and 2012.

Although housing supply is expected to decline to a record low in 2011, the supply projections are consistent with the likelihood of a recovery in house transactions (i.e. sales) over this period, as lower house prices and the improvement in affordability attract potential first-time buyers into the market, subject to being able to raise the necessary mortgage finance. Thus the recorded number of completions, i.e. units connected for electricity, is likely to be closer to 15,000 units per annum in 2010 and 2011, while the actual new supply each year is expected to be around half this level.

4.4: Private non-residential construction

The private non-residential construction sector has also been severely affected by the economic recession. The current situation is further exacerbated by oversupply in recent years. The value of new commercial building put in place increased from €1.4 billion at the beginning of the decade to €3.9 billion in 2007 which corresponded to an average annual volume increase of almost 13%.

Although estate agents are reporting some pick up in transactions activity, difficulties persist in the sector, most notably:

- 1) The combination of high debt levels and continued difficulties securing finance are leading to the postponement or cancellation of some commercial developments.
- 2) The challenges in the hotel sector caused by excess capacity, declining occupancy rates, liquidity issues and difficulties accessing working capital.
- 3) A nervousness amongst consumers in regard to job losses, fears of further taxation increases in the forthcoming Budget and a more cautious view generally about the outlook for the economy, resulting in weak spending prospects for the retail sector.
- 4) Uncertainties surrounding the impact of NAMA.

⁶⁷ Delivering Homes and Sustaining Communities, Department of the Environment, Heritage and Local Government, 2007.

- 5) In terms of the property market generally, falling capital values, high vacancy rates, rental pressures and rising unemployment are all factors damaging any prospects for a recovery in the short-term.

However, recent estate agent reports⁶⁸ suggest that there is an encouraging level of activity in core city centre locations, notably in Dublin, prime rents for new office buildings are stabilising in those locations and Irish investment yields are beginning to stabilise. However, while activity levels in respect of property transactions may be encouraging, the prospects for an early commencement of any substantial volumes of new building work are less likely any time soon.

The volume of new private sector construction work expected to bottom out in 2012

As reported in Table 2.3, CSO data on planning permissions for non-residential buildings reveal a dearth of new projects. A selection of the typical buildings in Table 2.3 which would represent private non-residential building activity⁶⁹ suggests that the total floor area was down by close to 60%.

Furthermore, the vast majority of the space under construction is expected to be completed in 2010 with no new projects emerging to take their place.

The projections for the medium-term (Table 4.4) portray a continuing weak outlook for private sector construction in 2011 and 2012, with output expected to level out in 2012. The volume of new private non-residential construction is projected to decline by around 25% in 2011 before stabilising somewhat in 2012. The exception is tourism investment, where a further volume decline of 5% is projected in 2012. When combined with the projections for commercial, industrial and agricultural buildings, the overall reduction in private non-residential construction output volumes is 0.3% in 2012.

The total value of construction output from private non-residential construction projects is forecast at just €571 million (2008 prices) in 2012, down from the peak of €5.2 billion in 2007 – an annual average decline of almost 36% over the five years.

4.5: Public sector construction

The primary source of funding for public sector construction is the public capital programme (PCP). It is made up of two main elements:

- 1) The direct Exchequer capital investment allocations for Government departments. The most recent allocations were published by the Department of Finance in the July 2010 review of infrastructure investment priorities for the period to 2016; and
- 2) Non-Exchequer capital provisions for commercial State bodies, semi-state agencies and local authorities, which are funded by external borrowings and from own resources. The

⁶⁸ CBRE Bi-Monthly Research Report, September 2010, CB Richard Ellis.

⁶⁹ For example, buildings for Trade activities, Office development, Finance and Insurance, Industrial buildings, Hotels and Restaurants, Entertainment and Recreation and Crèches.

level of non-Exchequer capital investment in the 2010 Budget was €3.4 billion, of which it is estimated that around 60% is construction related expenditure⁷⁰.

There is additional investment in public private partnership (PPP) projects. These are funded by a mix of revenues, including user charges, road tolls and local authorities' own resources.

Exchequer capital provision of €5.5 billion per annum in 2011 and 2012....

In respect of the Exchequer capital provision for the medium-term, Table 4.3 provides a detailed breakdown of the Government's allocations across each spending department. The total allocation is set at €5.5 billion per annum over the period 2011 to 2016 compared with an Exchequer provision of €6.43 billion in 2010.

The total Exchequer provision for the seven years 2010-2016 is €39.4 billion. The Government's review did not include provisions for non-Exchequer or PPP investments.

Table 4.3: Multi-annual Exchequer capital investment priorities 2011-2016 (€million)

Department	2010	2011	2012	2013	2014	2015	2016	2010 - 2016	% of total allocated
Transport	2,081	1,740	1,550	1,765	1,745	1,645	1,645	12,171	32.3%
DEHLG	1,509	1,253	1,250	1,250	1,100	1,100	1,100	8,562	22.7%
Education and Skills	706	594	585	575	570	580	615	4,225	11.2%
Enterprise, Trade & Innovation	481	523	557	567	572	562	527	3,789	10.0%
Health & Children	491	400	400	400	400	400	400	2,891	7.7%
Agriculture, Fisheries and Food	430	350	170	170	170	170	170	1,630	4.3%
CENR	172	170	186	186	186	186	186	1,272	3.4%
OPW	158	140	140	140	140	140	140	998	2.6%
Tourism, Culture, & Sport	132	120	120	120	110	110	110	822	2.2%
Justice & Law Reform	123	90	90	90	90	90	90	663	1.8%
Community, Equality & GA	105	86	86	86	40	30	30	463	1.2%
Other*	42	29	30	30	29	29	29	218	0.6%
Capital Reserve Fund	-	5	336	121	348	458	458	1,726	
Total	6,430	5,500	5,500	5,500	5,500	5,500	5,500	39,430	100%

* Defence, Finance, Foreign Affairs, Social Protection.

Source: Infrastructure Investment Priorities 2010-2016, Department of Finance, July 2010.

Note: The above figures cover all capital investment, not just construction.

The main elements of the Exchequer capital investment programme are as follows:

- The largest allocations are for **Transport** and **Environment** which between them account for 55% of the total or approximately €21 billion.

⁷⁰ A breakdown of this allocation is provided in Table 2.5.

- Within the **Transport** allocation, approximately 14% of the total investment or €5.8 billion is for a range of public transport projects, including provisions for the Metro North⁷¹, Dart Underground and associated projects⁷².
- The **Environment** allocation is mostly split between the provision for Social Housing programmes (€4.5 billion) and upgrading and expanding the national water services infrastructure (€3.5 billion).
- **Education and Skills** receives the third largest allocation (€4.2 billion), almost €3.1 billion of which is for upgrading, expanding and maintaining primary and second-level school buildings.
- **Enterprise, Trade and Innovation** has been allocated €2.4 billion for investment in research to develop the economy's natural scientific, technological and innovation capacity.
- **Health** receives the fifth largest allocation (€2.9 billion) of which €1.6 billion is for upgrading, expanding and maintaining hospital buildings and €781 million is for primary care investment in the community.
- The allocation for **Justice and Law Reform** (€90 million per annum) covers investment in detention facilities, courthouses, Garda IT projects, pathology and forensic science infrastructure. The development of new detention facilities at Thornton Hall and at the Munster prison in Kilworth are high priorities for the medium-term. Work is proceeding on essential basic works required at Thornton Hall with the project expected to be put out to tender early next year. A three phased approach is being adopted with Phase 1 expected to be completed in 2014.
- A number of areas are allocated in the region of €400 to €500 million over the seven years, notably Flood Management (€482m), Office of Public Works (OPW) capital works (€432m) and capital investment programmes by the Department of Community Equality and Gaeltacht Affairs (€463m).

The above allocations represent the provisions for capital expenditure across each government department. It is important to note that the capital expenditure provisions cover all capital investment and not just construction⁷³.

The construction related element is estimated at around 75% of the total direct Exchequer provision. In respect of the non-Exchequer funded capital projects, the construction related element is estimated at around 60%.

⁷¹ Although the Metro North is a PPP project there are enabling works which will be funded by the Exchequer in 2011.

⁷² Section 2.4.1 provides details on future public transport priorities.

⁷³ For example the capital provisions cover expenditure on equipment, machinery, rolling stock, grants and science and technology programmes.

Public sector projections for the medium-term

In considering the prospects for public sector construction investment in 2011 and 2012, the percentage changes in the annual allocations for each category of investment⁷⁴ (e.g. roads, public transport, hospitals) in 2011 are applied to the 2010 estimated outturn and similarly for 2012. For the few areas where categories are not separately identified (e.g. Ports and Harbours), the medium-term projection assumes that investment declines in line with the total Exchequer provision: by 14.5% in 2010 and by 0% in 2011.

There are exceptions, notably airport investment, where new investment at the three main airports is in line with Dublin Airport Authority's 5 Year Strategic Plan. It is also assumed that investment in new energy infrastructure is maintained at 2010 levels in 2011 and increases by 5% in 2012.

Thus taking the projections for new investment in public housing, social and productive infrastructure projects by Government departments, semi-state agencies and local authorities, overall public investment in new construction is projected to decline by 14% in 2011 and by 3.9% in 2012.

4.6: Repair, maintenance and improvement expenditure

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 projected to decline by 10% in 2011 and remain unchanged in 2012. Residential RM&I expenditure is expected to perform somewhat better: -5% in 2011 and +2.5% in 2012. Thus the overall decline in expenditure on RM&I projects is expected to moderate in 2011 to around 7%, from 16.3% in 2010, before recovering slightly in 2012 (+1.6%).

4.7: Overall prospects for construction output

Forecast continues to portray an industry in the depths of recession – output back to mid-1990s levels

Taking the assumptions for each of the sub-sectors of construction over the period to 2012, the forecasts which materialise are presented in Table 4.4. The main elements of the projection are as follows:

- The volume of construction output is forecast to decline by 10.8% in 2011 with a very slight pick-up in 2012 (+0.6%). **Thus over the period 2007-2011 construction output volumes are forecast to decline by 63% or by an average of 18% per annum.** Construction output volumes by 2011 are forecast to return to where they were at in the mid-1990s.

⁷⁴ The Government's review provides details on the annual Exchequer capital provisions at a programme level (e.g. Public Transport, Roads, Housing, Water, Hospitals etc.) in Appendix B (Page 112).

- Total construction output declines sharply over the period, resulting in its **share of GNP falling to 7.9% by 2012** from 13.8% in 2009 and 25.1% in 2006 (peak).
- All sub-sectors perform poorly over the period reflecting low confidence amongst both clients and construction firms, credit difficulties and the weak pipeline of new orders. The sector is also struggling from the over-supply of residential and non-residential vacant space in the market.
- The value of construction output in current prices is projected to fall to around **€10.5 billion by 2011**, which indicates an industry in the depths of recession. The last time the industry was valued at this level was in 1990 (in constant prices).

**Table 4.4: Medium-term projection for construction output
volume % changes 2009 – 2012F**

	2009	2009	2009	2010E	2011F	2012F
		Share %	Constant prices, volume % change			
Construction drops to 7.9% of GNP by 2012						
Construction as % of GNP #	13.8%		13.8%	9.2%	8.1%	7.9%
Total dwellings completed (units)	Current		22,000	8,500	7,500	8,500
New housing	Prices (€m.)					
Private sector	2,977	16%	-64.7%	-60.0%	-3.2%	15.4%
Public sector	909	5%	-14.0%	-20.5%	-27.4%	8.3%
Total new housing	3,886	22%	-59.5%	-51.5%	-11.8%	13.3%
RM&I housing	3,765	21%	-22.0%	-20.0%	-5.0%	2.5%
Total housing	7,651	42%	-48.3%	-37.2%	-7.9%	6.9%
New non-residential construction						
Private sector	2,086	12%	-50.6%	-71.3%	-25.0%	-0.3%
Public sector **	1,546	9%	-13.4%	-3.8%	-16.6%	-1.2%
Total new non-residential construction	3,632	20%	-39.5%	-42.4%	-19.0%	-0.9%
RM&I non-residential construction	778	4%	-34.5%	-12.3%	-10.0%	0.0%
Total non-residential construction	4,410	24%	-38.7%	-37.5%	-16.9%	-0.7%
Sub-total building new	7,519	42%	-52.1%	-47.2%	-15.4%	6.3%
Sub-total building RM&I	4,543	25%	-24.5%	-18.7%	-5.9%	2.1%
Total building	12,062	67%	-45.1%	-37.3%	-11.2%	4.3%
Productive infrastructure						
New productive infrastructure	4,756	26%	-1.5%	-13.5%	-10.4%	-6.8%
RM&I productive infrastructure	1,230	7%	-9.9%	-7.4%	-10.0%	0.0%
Total productive infrastructure	5,986	33%	-3.3%	-12.3%	-10.3%	-5.3%
Total RM&I output	5,773	32%	-21.9%	-16.3%	-6.9%	1.6%
Total construction output	18,048	100%	-36.7%	-29.6%	-10.8%	0.6%
of which						
Public sector **	9,253	51%	-5.1%	-8.7%	-12.8%	-2.7%
Private sector	8,795	49%	-52.2%	-50.0%	-7.4%	6.1%
Total new construction	12,275	68%	-41.5%	-35.3%	-13.0%	-0.1%
of which						
Public sector new **	7,212	40%	-6.3%	-12.2%	-14.0%	-3.9%
Private sector new	5,063	28%	-60.2%	-64.4%	-10.1%	11.3%

Source: DEHLG, DKM

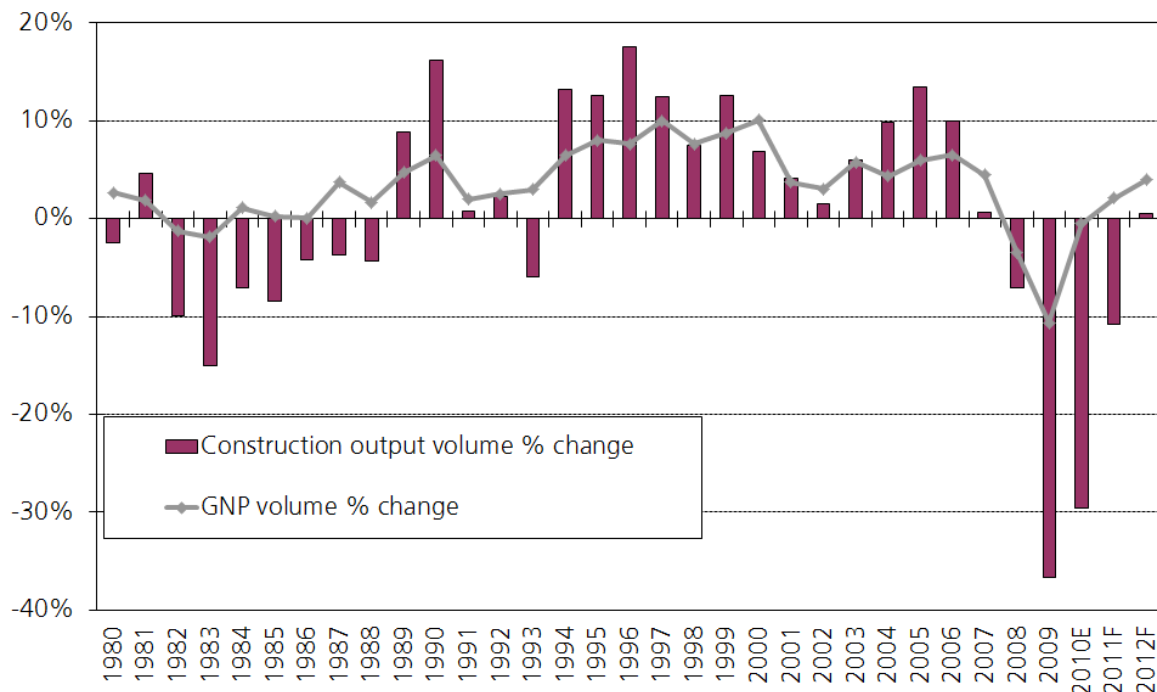
Derived using current price estimates.

** New public sector construction includes an estimate for private sector investment under education, health, energy and telecommunications (estimated at €0.8 million in 2009).

Probably the most severe contraction in the history of the State

Based on the extent of the contraction forecast, output in the industry looks set to decline by almost two-thirds between 2007 and 2011. In terms of the construction cycle, the current contraction in such a short time period is the most severe since records began in 1980, but may well be the most severe in the history of the State.

Figure 4.1: Construction and GNP trends: 1980-2012F



Source: CSO, DEHLG, 2010-2012 DKM estimates.

4.8: Risks to the forecast

Based on the forecasts presented in Table 4.5, the total value of construction output in current prices is projected to fall to around **€10.5 billion by 2011** (or €13 billion in constant 2008 prices). The last time the industry was valued close to €10 billion was in 1990. Despite this unsustainable low level, there remain downside risks to the forecast which could result in total construction output being substantially below €10 billion by 2011. These are set out below.

(i) Inability to spend the full public capital provisions

The projection assumes that the full Exchequer provisions allocated are spent in 2011 and 2012. Clearly a lesser spend by the public sector would generate an even greater reduction each year, with even more serious repercussions for the industry right across the supply chain. With the level of capital expenditure in the eight months to August 2010 already 24% behind the target for the same period, there must be real risks around the ability of the public sector to spend the capital provisions over the period 2010-2012.

(ii) Lack of new orders suggests output could be closer to €8 billion in 2011

A considerable proportion of the 2010 public capital provision is allocated to projects which were commenced in the boom times and are now reaching or coming close to completion. Given the long lead in time to the construction phase for most large public sector projects, unless new orders emerge of significant value in 2010, it may not be possible to spend the full capital allocation in 2011. Thus assuming, for example, that only half of the €5.5 billion allocation is spent, this would reduce the contribution of the public sector to construction by €2 billion, based on the assumption that 75% would have been allocated to public construction projects. The impact on the sector would be detrimental as companies right across the supply chain would be affected, giving rise to direct and indirect job losses. **It would therefore not be difficult to frame a scenario in which the value of construction output would be closer to €8.5 billion in 2011 compared with the €10.5 billion derived assuming the full public sector capital allocations are spent.**

(iii) A further reduced Exchequer capital programme in 2011 and 2012

The Government's actions to restore the public finances to stability over the coming years have required a range of austerity measures which are to continue in the forthcoming Budget in December and until 2014. The projections for the budget deficit to 2014 are based on the premise that growth will return to the Irish economy, giving rise to a recovery in tax revenues. Should the pace of economic recovery and thus tax revenues be less than expected, the efforts to reduce the fiscal deficit may require further reductions in the Exchequer capital provisions or increases in taxation in the 2011 Budget. Both would damage the prospects for construction.

(iv) Uncertainties surrounding the impact of NAMA

As essentially a development finance agency, NAMA is likely to be the only source of working capital for developers over the medium-term. The main banks, as a result of their loans being transferred to NAMA and legacy issues from the boom years, are unlikely to be open for development business for the medium-term at least. As NAMA inevitably has to act under the spotlight of public sector scrutiny, it is likely to be highly risk averse, implying that it will be difficult to provide working capital under the terms of risk to developers, most of whom will already be clients of NAMA. As a result of the knock on impact on construction companies, who themselves already have difficulties accessing credit, it is difficult to see how NAMA will be a source of development activity over the medium-term. However, it is not possible to fully analyse the projected impact of NAMA in detail until information underpinning the loans they have acquired and on how they propose to deal with unfinished developments is available. Suffice it to conclude, at this point, that there remain uncertainties around the impact of NAMA, which may delay any recovery in construction activity over the medium-term.

Risk for the economy - a lost opportunity to address the restoration of competitiveness

The projection presented represents a dramatic decline in construction output over a short space of time. The reduced volume of infrastructure now expected to be put in place as a result of the lower capital provisions will reduce the productive potential of the economy and damage our competitiveness, at a time when there is a real requirement to improve competitiveness. Thus the projects which can have the greatest impact on our competitiveness need to be fast tracked.

4.9: Medium-term prospects for construction employment

Up to 80% of the total increase in unemployment since 2007 accounted for by construction workers

The impact of the current crisis on construction employment levels has been set out in Section 3. Based on the latest data available (Q2 2010), the numbers directly employed in construction have fallen by 145,300 since the peak (Q2 2007). This total represents 57% of the total reduction in the number of persons employed (256,000) in the economy over the same period. The increase in total unemployment over the same period was 184,500, of which up to 80% represented construction workers, assuming they remained unemployed and in the country.

However, by Q2 2010 almost 30% of all persons who were no longer employed by Q2 2010 had left the workforce, for whatever reason. This 30% is based on the reduction in total employment of 256,000 over the period since construction peaked (Q2 2007) and the increase in total unemployment of 184,500 over the same period, implying that 71,500 persons or almost 30% of those persons no longer in employment in the economy had left the labour force.

If the same proportion was applied to construction, an estimated 43,600 persons (direct jobs only = $145,300 \times 0.3$) would have left the construction labour force over a three year period. However, given the higher proportion of job losses in construction relative to other sectors, the numbers who have left the labour force are likely to be substantially higher.

Of the total reduction of 145,300 since the peak in construction employment, non-nationals accounted for 33,000. Just 12,200 non-national were employed in construction in Q2 2010 (9.7% of total) compared with 45,200 (16.7% of the total) at the peak (Q2 2007).

With construction already accounting for almost 60% of total job losses across the economy since the peak, it is likely that the current unemployment rate in construction is likely to be significantly higher than the national average of 13.2%, given the scale of job losses⁷⁵.

Total employment in construction to fall back to mid-1990 levels

Job losses have taken place right across the sector with all occupations affected. The concern now is that as the industry continues to suffer from weak sentiment, the downturn in new orders, and the uncertainties surrounding NAMA, further job losses are inevitable. Based on the medium-term projections presented here, total employment in construction is expected to fall back to where it was in the mid-1990s.

The output projections set out in Table 4.4 imply a serious shedding of labour not just directly in construction but in other areas dependent on construction.

They suggest that some 230,000 direct and indirect jobs⁷⁶ will be lost by Q4 2010 compared with the peak (Q2 2007), with a further 28,000 lost by 2011. Direct employment is expected to

⁷⁵ It is suggested in Section 3 that the unemployment rate in some regions of the country could be closer to 25%.

⁷⁶ Indirect employment is estimated at 40% of direct employment: $164,000 \times 1.4 = 229,600$.

account for around 6% of total employment in 2010, compared with 12.9% at the peak. Employment is expected to stabilise after 2011. The only factors likely to alleviate the employment position with regard to job losses are as follows:

- If more construction workers opt to leave the labour force through outward migration.
- If construction workers are retrained and become employed in other sectors of the economy (although the job losses reported in construction would be unchanged).
- If participation rates were to fall for other reasons.

Table 4.5: Medium-term projections for construction employment

	Direct employment in construction	Indirect employment in construction	Total construction employment
<i>(Thousands, seasonally adjusted)</i>			
Q2 2007 (Apr-Jun, Peak)	273.6	109.5	383.1
Q2 2009	157.6	63.0	220.6
Q2 2010	127.3	50.9	178.2
Forecasts:			
year-end 2010	110	44	154
year-end 2011	90	36	126
year-end 2012	90	36	126
Estimated jobs lost relative to peak:			
By Q2 2010	-146	-58	-203
By end 2010	-164	-66	-230
By end 2011	-184	-74	-258
By end 2012	-184	-74	-258

Source: CSO QNHS and DKM

The level of direct and indirect employment is projected to reach a floor of around 126,000 by end 2011, around one-third of the level reached at the peak.

4.10 What size should the construction industry be?

The concept of what a sustainable level of construction output might be over the medium-term was examined in the 2009 CIRO. The overreliance on housebuilding and other construction in the overall economy over the period 2000-2007 resulted in the industry reaching 22% on average of total economic activity (GNP) over this period and 25% in 2006. Total investment in the economy⁷⁷ reached in excess of 31% in 2005 and 2006. These proportions were unsustainable. However, the current projection has output in the industry falling to around

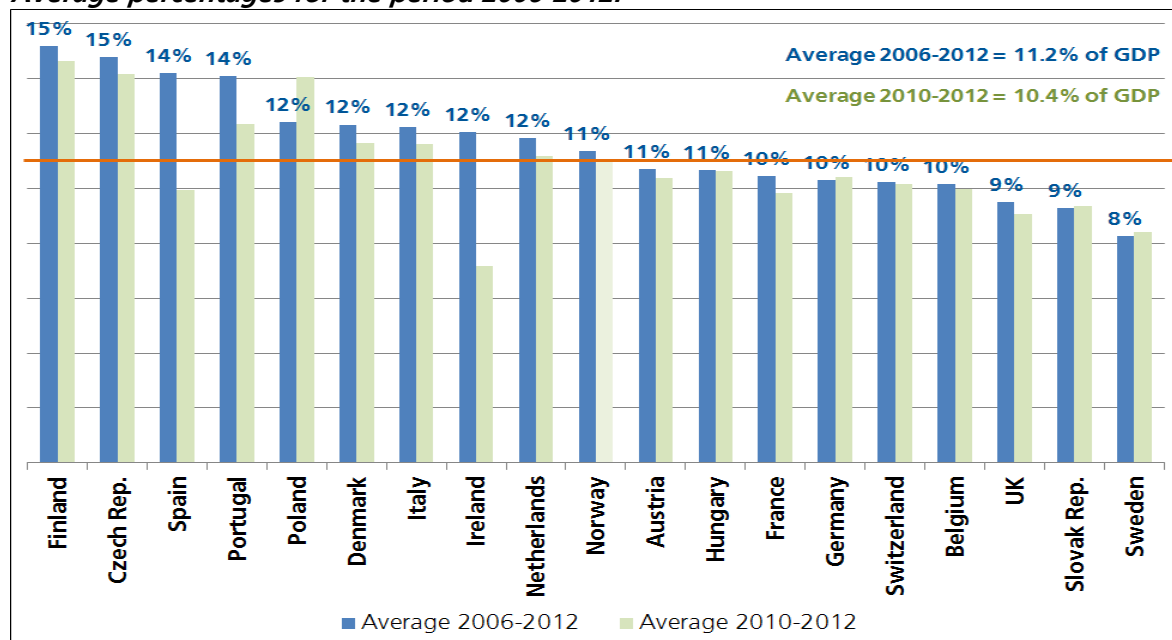
⁷⁷ Total gross fixed capital formation in building and construction and machinery and equipment as a percentage of total GNP.

7.6% of GNP in 2012. These proportions are similarly unsustainable in the context of a viable construction industry in an economy which continues to have an infrastructure deficit. It is therefore reasonable to question what size of construction industry is sustainable over the medium-term.

An industry equivalent to around 12 to 15% of GNP is more sustainable

Looking at the historical and projected shares of construction in other countries over the period 2006-2012 across the Euroconstruct region⁷⁸, construction, on average, is expected to represent 11% of GDP⁷⁹, ranging from 15.2% in Finland to 8.3% in Sweden. The corresponding percentage in Ireland over the same period is 12% (14.6% of GNP), but is projected to fall to 7% over the period 2010-2012.

Figure 4.2: Construction as % of GDP across Euroconstruct Area *
Average percentages for the period 2006-2012F



Source: Euroconstruct June 2010.

There is an argument that Ireland should have a construction industry which is larger than the average across the Euroconstruct Area because it continues to have an infrastructure deficit, notwithstanding the substantial investments made in building and construction during the boom period.

⁷⁸ The Euroconstruct region comprises 15 countries in Western Europe and 4 Central and Eastern European countries - 19 countries in total. The construction output and GDP data for the period 2006-2012 is taken from the most recent projections for the Euroconstruct Area published in June 2010.

⁷⁹ The declining construction sector across the Euroconstruct Area has seen this percentage decline from 12% of GDP in the 2009 CIRO to 11% of GDP this year.

The conclusion reached in the 2009 CIRO is unchanged this year. The optimum level for the Irish construction industry should be equivalent to around 12% to 15% of GNP. An industry of this magnitude would allow continued improvements in Ireland's stock and quality of infrastructure, an improvement in competitiveness and in the productive potential of the economy.

Based on the estimate for GNP in 2010 (€127 billion), this would imply an industry with a value ranging between €15 billion and €19 billion. These levels are well above the estimates for construction output presented for the period 2010-2012.

Based on employment intensities of 10.5 jobs per €1 million spent⁸⁰ on construction, an industry equivalent to around 12% of GNP should be able to sustain total employment at around 160,000. The total employment figure would increase to 200,000 in the event that construction accounted for 15% of GNP.

Based on the above projection of just 126,000 persons employed by 2011, the industry is a long way off its optimum size. Thus it urgently requires a pipeline of new orders which can support the direct, indirect and induced employment and help maintain the highly skilled productive resources in the industry that were built up over the past decade.

However, the necessity for full implementation of the Government's fiscal austerity programme to bring down the fiscal deficit to 3% of GDP by 2014, implies no room for fiscal stimulus in the Irish economy. That said, there remains an infrastructure deficit and a need for investment in sensible public social and productive infrastructure projects. Thus unless innovative funding mechanisms emerge to fund projects in these areas, it is difficult to see where recovery in construction will come from in the short to medium-term.

⁸⁰ This figure of 10.5 jobs is the average of employment intensities in the range 8 to 13 jobs per €1 million spent quoted in the Infrastructure Investment Priorities 2010-2016 Report from the Department of Finance (July 2010) and in the Construction Industry Council Submission to Government, Jobs and Infrastructure – A Plan for National Recovery, March 2009.

Appendix 1: Derivation of construction price indices

This Appendix sets out the price deflators used for calculating output in constant prices since 2006⁸¹. Price deflators are used to deflate the current price estimates of the value of output in each sector into constant prices. For the purposes of calculating output in constant prices, the base year used this year is 2008, which is consistent with the base year used for National Accounts purposes.

While every effort is made to reflect a realistic view on the level of tender price inflation in the construction industry, by paying attention to published tender price indices available from Bruce Shaw, Davis Langdon PKS (DLPKS) and the Society of Chartered Surveyors (SCS), and consulting with the various government departments, State agencies and the industry, there is no regular tender price index published by sub-sector of activity for the industry.

The variation in tender price inflation across the various sub-sectors in the CIRO indicates the importance of calculating an individual tender price index for each segment of the industry, where activity levels and project types can vary significantly in any given year. The CIRO produces an overall tender price index for the industry based on inflation trends in each sub-sector of the industry and consultation with the relevant Government departments and State agencies. The methodology applied for the most recent five year period is explained below.

It is important to stress that tender price trends only are used to ascertain volume changes. In order to gauge a more accurate picture of the trend in output volumes, it would be better to use a measure of project outturn costs. In the current very competitive climate, with very keen pricing on some projects, contractors are bidding prices down in an effort to win work. The contractors in turn may attempt to seek additional costs on completion of the project to take account of factors such as variations, delays, latent conditions etc., resulting in the final outturn cost of a project being substantially higher than the tender price. The implication for clients is that accepting the lowest tender may not deliver the best value for money.

However, a key impact of the improved forms of contract is the greater use of Design and Build which transfers greater risks to the contractor and secures greater certainty of outturn costs for the client. Thus the new forms of contract should significantly reduce the likelihood of such claims and variations, making the tender price a truer estimate of the outturn cost. In any case there is not sufficient data on project outturn costs and it is necessary to rely on tender prices to gauge the volume changes in construction output.

⁸¹ See previous CIRO documents for tender price indices used before 2006.

The key message to emerge from this review of tender prices is that:

- 1) Based on the estimated tender price inflation factors used to ascertain estimates for construction output, construction tender prices for new work have declined by almost 30% on average since the peak (2006) to unsustainable levels.
- 2) There has not been anything like a corresponding reduction in input cost, most notably for building and construction materials or labour. Building materials prices and average earnings only started to decline in 2009 and by very modest amounts. This suggests that tender prices may be close to bottoming out unless there is a major adjustment likely in terms of input costs, and there is no evidence to suggest that this will materialise.

A1.1 Construction cost indicators

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. In respect of the construction cost inflation measures which are available, they predominantly focus on material and labour costs while other overheads are not included.

The pricing of individual projects can also vary considerably depending on their complexity, location and timescale. While tender prices will reflect changes in construction materials and labour costs, they are also subject to a range of other factors including competitiveness and the capacity of firms to bid for work, the demand for construction, business confidence, different contract forms and general economic conditions. In the current market, which is characterised by a substantial decline in the volume of new projects, considerable underutilised resources and weak sentiment levels, construction tender price levels have been falling since 2007. However, there must ultimately be a reversal of the decline in construction tender prices, unless construction costs adjust significantly downwards or productivity increases are achieved, otherwise firms go out of business. In the current difficult market, a number of firms have already gone out of business.

The main construction cost indices are reviewed below.

Wholesale Price of Building and Construction Materials

The CSO Wholesale Price index for building and construction materials provides an indication of price trends for both home produced building materials and imports. The index measures the actual prices paid for materials purchased by construction and civil engineering companies throughout the country. Thus prices subject to long and short term contracts as well as for high and low volume civil engineering works are also included. As a result long-term high volume fixed contracts for major works may dilute the impact of price changes notified by building and material suppliers. Thus the series provides only a general indication of building material price trends in the construction sector.

The average decrease in the prices of building materials was 3.1% in 2009, compared with an increase of 3.3% in 2008. Although prices overall declined, on average in 2009, there were increases reported for some building materials, including Sand and Gravel (+9.2%), Cement (+8.1%), Lighting Equipment (+5.2%) and Heating, Ventilation and Insulation materials (+4%).

The products which recorded the largest declines in 2009 were Structural Steel and Reinforcing Metal (-16.5%), Paints, Oils and Varnishes (-14.2%) and Bituminous Emulsions (-9.7%).

The latest figures from the CSO show the price index for building materials peaked in September 2008 and by June 2009 had declined by 4.6%. Prices started to decline in year-on-year terms in February 2009 but the rate of change had moved back into positive territory by February 2010. In the first eight months of 2010 average prices rose by 1.9% on the same period in 2009. The substantial slowdown in construction activity is continuing to result in price reductions for many products over the first eight months of 2010, notably Glass (-5.8%) and Paints, Oils and Varnishes (-3.7%) and Ready Mixed Mortar and Concrete (-3.4%) compared with the same period in 2008. However the prices for some other products rose by over 10% in the same period: Bituminous Emulsions (22.2%) and Copper (14.2%). Overall building materials are forecast to increase by around 3% on average this year.

Building and Construction Capital Goods Price Inflation

The other traditional measure used to gauge the cost of building and construction is the CSO Capital Goods Price Index for building and construction materials and wages. This index is derived by combining a special hourly wage rate index for employees in the building and construction sector with the price index for building and construction materials. As it is a composite index, it tends to increase at rates somewhere between the building materials index and average earnings. It would include labour cost increases awarded following each review of rates of pay in the construction industry.

The Capital Goods Price index declined by 1.5% on average in 2009. Over the first eight months of 2010, capital goods prices for building and construction rose by 0.8% compared with the average for the same period in 2009. The forecast for the change in the composite index for the full year is +1%.

DOE Housebuilding Cost Inflation

This index is produced by Dublin City Council for the Department of the Environment, Heritage and Local Government (DEHLG). It measures labour and material costs only and does not include items such as overheads, profit, interest charges, land development etc. The HCI declined by only 1% in 2009, following an increase of 3.8% in 2008, despite the reduction in average house prices last year (-13.7%). The most recent figures for the HCI show the cost of housebuilding was up by 0.6% on average in the first seven months of 2010 on the same period in 2009 compared with an average decline of 6.4% in average house prices over the same period (based on permanent tsb/ESRI index for the first six months).

SCS Construction Cost Inflation

The SCS construction cost index is compiled from, and reflects actual changes in, the cost of labour, materials and other construction inputs for building projects. It does not include items such as profit, interest charges or land development. In this respect, it is similar to the HCI and only relates to construction costs. The cost index has been prepared by Dublin City Council in the past and is based on approximately 30 items that would typically be found in bills of quantities. These items are priced from current bills of quantities from a sample of chartered surveyors. Change in costs between two periods is applied to the previous index value to derive the index figure.

Construction costs as measured by the SCS declined by 1.6% in 2009 following an increase of 3% in 2008. According to the SCS index, construction costs were almost unchanged in Q1 2010 compared with Q1 2009.

A1.2 Construction tender price indicators

The three tender price indices available are derived from projects in the general contracting sector of the industry only – based on a sample of projects in excess of circa €550 million worth of Irish construction projects in the case of the Bruce Shaw Tender index. As such none of the three independent tender price inflation measures available (Table 1.7) can be used for the purposes of estimating the real volume of output for housebuilding and civil engineering projects.

Thus for the purposes of estimating volume changes in construction output in the CIRO, we need an output price index or a measure of tender price inflation, for all categories of work, as opposed to construction cost inflation. We derive an overall estimate of the value of work put in place, which is based on the prices charged to clients for construction work. Thus, to properly measure changes in the volume of output, we need to deflate the value series by a tender or output price index. Accordingly, we need data on tender or output prices for the various types of building and infrastructure put in place.

Bruce Shaw Tender Price index

The Bruce Shaw Tender Price index reflects changes in prices charged for construction. It is compiled from a large database of tenders, circa €550 million of diverse construction (excluding civil engineering) projects.

The very weak market has resulted in contractors and sub-contractors bidding aggressively for work, with the result that many tenders are being submitted at well below cost. Average tender prices for general contracting work fell on average by 17% in 2009, although in some case falls of over 20% were recorded. The falling trend has continued in 2010 to date with tender prices expected to fall by 5.5% on average this year, according to Bruce Shaw.

The DLPKS Tender Price index

Tender price inflation trends according to the DLPKS tender price index are based on a smaller sample of tenders in the general contracting area than for the Bruce Shaw Index. According to this index, average tender prices for general building work fell by 16% in 2009 and are projected to fall by a further 10% in 2010.

SCS Tender Price index

The SCS publish a Tender Price Index twice a year. The two figures published relate to the first and second halves of each year. The index is based on new build projects, excluding housing, with tender values in excess of €0.5m. The projects are a mixture of Government and private sector contracts. The size of sample used to derive the index relates to the number of completed forms returned from SCS members. Typically, around 50 completed forms are returned in a half-year period.

According to the SCS index, average tender prices in 2009 fell by 17.2%. The latest index value is for the first half of 2010 and shows tender prices fell by 3.7% in the first six months of 2010 compared with the last six months of 2009.

It is important to stress, however, that these published indices predominantly relate to projects in the general contracting sector as opposed to civil engineering work, where separate approaches are adopted for the purposes of the CIRO.

Following consultation with the relevant government departments and State agencies, we derive separate deflators for each category of work where possible to ascertain volume changes in the amount of new work, and to demonstrate the varying levels of competition and activity in each sector. We also distinguish between private and public sector projects. Thus, the individual categories of new work are each assigned a different tender price deflator, based on the analysis of construction cost and tender price indices and based on discussions with key players in each sector.

A1.3: Construction price deflators by category of work

The measure of construction output in value terms is a proxy for the *value* of contracts. The value of construction output is defined as the value of work put in place on the construction of buildings and structures and on civil engineering and land improvement projects. *Output is valued inclusive of VAT at the building services rate where this is chargeable or, in the case of output of non-VAT registered bodies including direct labour units and individuals, output is valued inclusive of VAT on material inputs.* Data which would allow the exclusion of deductible VAT is not readily available. Professional fees, expenses and site supervisory costs are included in the value of output.

Separate deflators are used to deflate the current price estimate of the value of output in each sector into constant prices, to ascertain the volume changes in output. The overall construction price deflator reflects the composition of construction output.

Each deflator is discussed in turn below. We believe that the improved deflator methodology provides a true reflection of current market conditions and reflects the current very competitive market in construction contracts.

A1.4: New residential construction output

Two different price deflators are used to estimate the value of output in constant prices for the residential sector, one for new private housing output and one for new social housing output.

A1.4.1 New private housing output

The methodology employed is based on adjusting the average new house price (as published in the Annual Housing Statistics Bulletin of the Department of the Environment, Heritage and Local Government) for land acquisition costs and for the change in the size of dwellings completed. The adjustment for size of dwellings is based on the assumption that size is a reasonable proxy for all the quality factors that affect the price of a house.

The average new house price supplied to the Department of the Environment, Heritage and Local Government by the main lending agencies is based on new house purchase loans approved by them. Average house prices are adjusted for site acquisition costs, as undeveloped site costs are not considered part of building output. The estimated site acquisition costs are extremely tentative.

Land acquisition costs were assumed to rise to 33% of the average house price in 2007 from 23% over the period 2001 to 2004. We have assumed that site costs declined as a proportion of the average house price from 33% in 2008 to 25% in 2009 and 2010. These figures have been revised since the 2009 CIRO based on discussions with industry representatives.

The impact of changes in the size of dwelling is determined by calculating the average size index from information on the average size of each category of dwelling, using planning permission data, and the weight for each category in the mix, based on a breakdown of house completions by type, using DEHLG data. In 2009 the average size of dwelling increased by 12.5% following an increase of 16.5% in 2008, reflecting changes in the mix of dwellings.

In the 2009 CIRO a number of factors were taken into account which generated upward pressure on tender prices in 2008, most notably:

- The qualitative changes arising from the impact of the DEHLG's new design guidance document, *Quality Housing for Sustainable Communities*⁸²;
- Revised apartment floor area standards applying to the Dublin City Council area; and
- The introduction of higher thermal performance standards under the Building Regulations.

The above factors at the time were estimated to increase tender prices by an average of 5% in 2008.

Based on the estimated decline of 13.8% in average house prices (excluding land costs) in 2009, the price deflator is calculated by adjusting the net sales price index for the change in the size of dwellings (+12.5%) and adjusting for the impact of the Building Regulations. Thus the deflator in 2009 is estimated at -23.4%⁸³.

Applying the same methodology for 2010, based on assuming a further 12% decline in average house prices (excluding land costs), a 4% increase in the average size of dwellings and adjusting for the impact of the Building Regulations, the tender price inflation for new housing output is forecast to decline by a further 15.4% in 2010.

⁸² Quality Housing for Sustainable Communities, Department of the Environment, Heritage and Local Government, March 2007.

⁸³ This figure is derived as follows: The Net (of land costs) Sales Price Index of 86.180 in 2009 is adjusted for the index reflecting changes in the size of dwellings ($86.180/112.534 = 76.6$). This figure is further adjusted for the impact of the Building Regulations ($76.6/105 = 80.410$). Taking 80.410 and dividing it by the corresponding index value derived for 2008 (105) gives the annual percentage change in the deflator for 2009 of 23.4%.

Table A1.1: Calculation of tender price deflator for new private housing output

	2006	2007	2008	2009	2010E
Average new house price (€)	305,637	322,634	305,269	242,033	212,989
% change	10.6%	5.6%	-5.4%	-18.5%	-12.0%
Land as % of house price	27%	33%	31%	25%	25%
Land cost (€)	82,522	106,469	94,633	60,508	53,247
Net sales price (€)	223,115	216,165	210,636	181,525	159,742
Net sales price index (2008=100)	105.9	102.6	100.0	86.2	75.8
% change	7.7%	-3.1%	-2.6%	-13.8%	-12.0%
Estimated average size of dwelling (m²):					
- Estate dwellings	108	111	115	115	115
- Single dwellings	147	155	165	165	165
- Apartments	73	74	75	75	75
Estimated weight in mix (%):					
- Estate dwellings	54%	51%	30%	15%	7.5%
- Single dwellings	25%	25%	50%	75.0%	85%
- Apartments	21%	24%	20%	10%	7.5%
Average dwelling size (m ²)	110.0	113.2	131.9	148.5	154.5
Average dwelling size index (2008=100)	83.4	85.8	100.0	112.5	117.1
% change	0.2%	3.0%	16.5%	12.5%	4.0%
Derived house price deflator index: (price/size)	121.9	119.6	100.0	76.6	64.8
Other factors impacting on tender prices (1)	100	100	105	105	105
Adjusted tender price deflator Index 2008 = 100	121.86	119.58	105.00	80.41	68.01
	116.05	113.88	100.00	76.58	64.77
Deflator % change	3.1%	-1.9%	-12.2%	-23.4%	-15.4%

(1) Other factors include those highlighted on the previous page.

Source: DEHLG, DKM

A1.4.2: New social housing output

Following improvements to its database on tender levels for new local authority housing, the DEHLG provides data on deflators for public sector housing, which are based on an analysis of tender prices for the respective programmes in each year.

According to the DEHLG, the slowdown in construction activity began to have an impact on tender prices from the middle of 2007. Thus tender price inflation for public sector housing was flat in 2007 but declined by an average of 5% in 2008. Tender levels declined by a further 15% in 2009. The latter reflects the more competitive tendering climate due to the reduced volume of new work as well as the impact of the qualitative factors above, including the impact of the new public works contracts.

Although there were relatively few tenders in 2010 (due to a shift in social housing policy towards leasing arrangements), DEHLG personnel suggest that tender levels for public housing will decline by an average of 10% in 2010.

A comparison of tender sums on social housing contracts by the DEHLG suggests the following trends in tender price inflation since 2006.

Table A1.2: Tender price deflator for new social housing output

	Index value (2008=1.0)	% change
2006	1.053	8.0%
2007	1.053	0.0%
2008	1.000	-5.0%
2009	0.850	-15.0%
2010E	0.765	-10.0%

A1.5: General contracting output

The price deflator derived for general contracting output is applied to the current price estimates of output for all categories of new private non-residential output, to calculate the value of output in constant (2008) prices. It is important to note that tender prices can vary depending on the type or building (.e.g. office, school, hospital) and whether classified as public or private sector work.

We estimate that tender levels for private sector non-residential building projects, based on published tender price indices available from Bruce Shaw, PKS and the SCS, declined by 17% on average in 2009 compared with 2008, although some tenders fell by substantially more than this these reductions. As the downturn in the industry gathered momentum in 2010, construction tender prices have fallen further.

Tender prices for private non-residential building projects have already declined by an average of 26 % over the period 2007-2009. For the purposes of the CIRO tender prices are projected to decline by a further 10% on average this year, generating an estimated total decline in tender prices for private non-residential building projects of almost 35% over the period 2007-2010.

Agricultural building work is also included under general contracting. We estimate tender price inflation for agricultural building work was in line with the inflation recorded for other private non-residential work over the period 2004 to 2007. However given the exceptional amount of investment underway in the agricultural building sector, which had to be completed by the end of 2008 for grant purposes, tender price inflation in 2008 was assumed to be unchanged compared with 2007. However, the substantial decline in agricultural building work post December 2008 combined with the slowdown in construction orders are expected to give rise

to the same reduction in tender prices as that assumed for general contracting work: -17% in 2009 and an estimated -10% in 2010.

We continue this year to use a separate price deflator for *social infrastructure* projects in the public sector.

- Generally, tenders for *hospital projects* do not necessarily follow the overall industry trend reflecting the complexity of health infrastructure projects and the limited number of contractors with the appropriate resources and particular expertise. Moreover, different market forces can affect tenders for hospital buildings compared with other sectors of the industry. However given the current very weak market conditions and following discussions with the Health Service Executive we have assumed that tender levels for new hospitals building projects declined in line with those for private non-residential building projects: -17% in 2009, with a further decline of 10% expected in 2010.
- In regard to *educational buildings* we have been advised by the Department of Education and Science that tender levels for educational building projects also fell by 17% on average in 2009 and will fall by a further 10% in 2010. However, some tenders have fallen well in excess of these amounts.
- Similar reductions are assumed for all other social infrastructure projects.

Thus based on the available information on tender prices, and trends in building material prices and the cost of labour, tender levels for all new general contracting work declined by 17% on average in 2009 and are expected to decline by a further 10% in 2010. This deflator is a weighted average of all of the individual components under new general contracting work, namely private industrial, commercial, tourism and agricultural building work as well as public sector projects covering educational, hospital and public building projects. The figures reflect the very competitive nature of the building market as well as a much reduced workload.

Thus by the end of 2010 overall tender prices for general contracting work will have fallen by almost 35% since the peak construction year in 2007.

Table A1.3: Tender price deflator for new general contracting output

	General contracting Overall index Index 2008=1.0	% change	Private non- residential construction <i>Tender price inflation %</i>	Public social infrastructure
2006	1.132	4.0%	4.1%	3.7%
2007	1.125	-0.6%	-0.7%	-0.1%
2008	1.000	-11.1%	-10.9%	-12.0%
2009	0.830	-17.0%	-17.0%	-17.0%
2010E	0.747	-10.0%	-10.0%	-10.0%

Source: DEHLG, DES, DHC, DKM

A1.6: Productive infrastructure output

Productive infrastructure projects cover a range of infrastructure including roads, water services, airports, seaports, public transport, energy and telecommunications. The difficulty with this segment of the industry is that, apart from road projects, construction projects of a similar nature do not occur with sufficient regularity to allow direct comparison of construction rates to determine inflation, plus the projects which do occur tend to be complex and too diverse to make direct comparisons.

In the absence of any published tender price indices for each category of work, we have contacted all of the relevant agencies responsible for productive infrastructure projects such as the National Roads Authority (for national roads), the Department of the Environment, Heritage and Local Government (non-national roads), the ESB and Bórd Gáis (energy projects). We have also consulted with the Department of Transport and the relevant agencies (e.g. Railway Procurement Agency) in relation to public transport projects.

Accordingly, this year we estimate tender price inflation for *productive infrastructure* projects as follows:

- Based on information from the National Roads Authority (NRA) concerning *national road* projects, the NRA indicated that tenders submitted by contractors in 2009 were of the order of 5% less than prices submitted in 2008. The outturn costs would be a more appropriate indicator of the investment that would have been made on these projects. However, the NRA has indicated that all contracts tendered or awarded in 2009 are still under construction and their outturn costs will only be known when their final accounts are agreed and settled. There are not sufficient projects completed to work out the trend in final outturn costs. Tender prices for road construction projects have been declining since 2008. For the purposes of the CIRO, we assume tender levels for all new road (national and non-national) projects declined by 5% on average in 2009 and will decline by 7% in 2010.
- Although tender price inflation for *water services* projects has been reasonably stable at around 0% to 1% per annum between 2004 and 2007, the Water Services Section of the DEHLG have indicated that tender prices fell by 10% per annum on average in 2008 and 2009 and are expected to fall by 7% in 2010.
- Following consultation in regard to *public transport* projects with the Department of Transport, Irish Rail, Dublin Bus and the RPA, and given the difficulties referred to earlier (regularity of projects, small samples, diversity of projects), the general views expressed were that tender levels for projects awarded declined by, on average, around 7% in 2009. A similar reduction is projected for 2010.
- For *energy* projects, tender prices vary depending on the nature of the project. Average tender prices for construction projects across the energy sector are estimated to have declined by 7% in 2009 and are projected to decline by a similar amount in 2010.

- For other *productive infrastructure* work, notably airports, seaports and telecommunications, we have also assumed that tender levels declined by 7% in 2009 with a further 7% reduction projected for 2010.

Thus overall tender levels for new productive infrastructure projects declined by 6.6% in 2009, and are projected to fall by 7% this year.

Table A1.4: Overall tender price deflator for new productive infrastructure output

	Index Value (2008 = 1.0)	Change (%)
2006	1.029	3.7%
2007	1.066	3.6%
2008	1.000	-6.2%
2009	0.934	-6.6%
2010E	0.868	-7.0%

Source NRA, DEHLG, Dept. of Transport, RPA, ESB, BGE, DKM

A1.7: Repair and maintenance construction output

Since 2004, it has been assumed that tender price inflation for maintenance projects tends to be in line with inflation for new projects. However, the smaller nature of projects in the repair and maintenance (R&M) sector suggests that the R&M market is unlikely to be as competitive as the market for new work. Accordingly the deflators assumed for repair and maintenance construction projects are as follows:

- **General contracting:** private and public non-residential repair and maintenance work - tender levels down 8% in 2009 and by a further 10% in 2010.
- **Productive infrastructure:** -8% per annum in 2009 and -7% in 2010.
- **Private and public housing:** tender levels 8% lower in 2009 and a further 10% lower in 2009.

A1.8: Conclusions

Overall construction tender prices fell by 12.6% on average in 2009 and are projected to fall by a further 7.7% in 2010, giving rise to over a 26% reduction over the period 2006-2010. The latter figures reflect *average* changes in tender levels across the various sub-sectors covered in the CIRO and indicate the importance of calculating an individual tender price index for each segment of the industry, where activity levels and project types can vary significantly in any given year. The main producers of tender price indices have suggested that in some case tenders for general contracting work have been submitted at levels significantly below the average.

Falling tender prices have now been a key feature of the construction sector since 2007, reflecting the severe downturn in the volume of new work, the very competitive market for the limited work that is put out to tender and the decline in the prices for building materials and labour during 2009. The decline in tender prices is an unsustainable trend and with building material prices starting to creep up again during 2010, the expectation is that the scope for further cost reductions has to very limited. Thus tender price inflation should begin to level out next year.

Tables A1.5 and A1.6 show the output price deflators and the corresponding percentage changes for each sector over the period 2006 to 2010E.

Table A1.5: Construction output price deflators 2006 to 2010E (2008 = 1.000)

	2006	2007	2008	2009	2010E
Residential construction					
New private	1.161	1.139	1.000	0.766	0.648
New public	<u>1.053</u>	<u>1.053</u>	<u>1.000</u>	<u>0.850</u>	<u>0.765</u>
Sub-total	1.154	1.133	1.000	0.784	0.689
RM&I private	1.026	1.026	1.000	0.920	0.828
RM&I public	<u>1.026</u>	<u>1.026</u>	<u>1.000</u>	<u>0.920</u>	<u>0.828</u>
Sub-total	1.026	1.026	1.000	0.920	0.828
Total residential	1.129	1.108	1.000	0.845	0.769
New non-residential construction					
New private non-residential construction					
Industry	1.136	1.136	1.000	0.830	0.747
Semi-state industry	1.136	1.136	1.000	0.830	0.747
Commercial					
Office development	1.136	1.136	1.000	0.830	0.747
Retail, wholesale	<u>1.136</u>	<u>1.136</u>	<u>1.000</u>	<u>0.830</u>	<u>0.747</u>
Total commercial	1.136	1.136	1.000	0.830	0.747
Agriculture	1.000	1.000	1.000	0.900	0.810
Tourism	1.136	1.136	1.000	0.830	0.747
Worship	<u>1.136</u>	<u>1.136</u>	<u>1.000</u>	<u>0.830</u>	<u>0.747</u>
Sub-total	1.130	1.121	1.000	0.837	0.759
New productive infrastructure					
Roads	1.050	1.087	1.000	0.950	0.884
Water and sanitary services	1.111	1.111	1.000	0.900	0.837
Airport development	0.991	1.031	1.000	0.930	0.865
Ports and harbours	0.991	1.031	1.000	0.930	0.865
Energy including new power stations	0.991	1.031	1.000	0.930	0.865
Transport	0.991	1.031	1.000	0.930	0.865
Telecommunications	<u>0.991</u>	<u>1.031</u>	<u>1.000</u>	<u>0.930</u>	<u>0.865</u>
Sub-total	1.029	1.066	1.000	0.934	0.868
New social infrastructure					
Education	1.136	1.136	1.000	0.830	0.747
Health	1.148	1.136	1.000	0.830	0.747
Public buildings	1.136	1.136	1.000	0.830	0.747
Local authority services	1.136	1.136	1.000	0.830	0.747
Sport	1.136	1.136	1.000	0.830	0.747
Gaeltacht	<u>1.136</u>	<u>1.136</u>	<u>1.000</u>	<u>0.830</u>	<u>0.747</u>
Sub-total	1.138	1.136	1.000	0.830	0.747
Total new non-residential	1.090	1.102	1.000	0.888	0.825

Table A1.5: Construction output price deflators 2006 to 2010E (2008 = 100)
continued...

	2006	2007	2008	2009	2010E
Non-residential repair and maintenance					
Private non-residential					
Industry	1.064	1.064	1.000	0.920	0.828
Semi-state industry	1.064	1.064	1.000	0.920	0.828
Commercial					
Office development	1.064	1.064	1.000	0.920	0.828
Retail, wholesale	<u>1.064</u>	<u>1.064</u>	<u>1.000</u>	<u>0.920</u>	<u>0.828</u>
Total commercial	1.064	1.064	1.000	0.920	0.828
Agriculture	1.000	1.000	1.000	0.920	0.828
Tourism	1.064	1.064	1.000	0.920	0.828
Worship	<u>1.064</u>	<u>1.064</u>	<u>1.000</u>	<u>0.920</u>	<u>0.828</u>
Sub-total	1.059	1.059	1.000	0.920	0.828
Productive infrastructure					
Roads	0.866	0.962	1.000	1.000	0.930
Water and sanitary services	1.023	1.064	1.000	0.920	0.856
Airport development	0.991	1.031	1.000	0.920	0.856
Ports and harbours	0.991	1.031	1.000	0.920	0.856
Energy	0.991	1.031	1.000	0.920	0.856
Transport	0.991	1.031	1.000	0.920	0.856
Telecommunications	<u>0.991</u>	<u>1.031</u>	<u>1.000</u>	<u>0.920</u>	<u>0.856</u>
Sub-total	0.957	1.016	1.000	0.943	0.867
Social Infrastructure					
Education	1.064	1.064	1.000	0.920	0.828
Health	1.064	1.064	1.000	0.920	0.828
Public buildings	1.064	1.064	1.000	0.920	0.828
Local authority services	1.064	1.064	1.000	0.920	0.828
Sport	<u>1.064</u>	<u>1.064</u>	<u>1.000</u>	<u>0.920</u>	<u>0.828</u>
Sub-total	1.064	1.064	1.000	0.920	0.828
Total RM&I non-residential	1.014	1.042	1.000	0.934	0.852
Total construction output					
New construction output	1.131	1.121	1.000	0.852	0.790
Repair and maintenance	<u>1.021</u>	<u>1.032</u>	<u>1.000</u>	<u>0.925</u>	<u>0.837</u>
Total construction output	1.109	1.101	1.000	0.874	0.807

**Table A1.6: Construction output price deflators 2006 to 2010E
(annual change, %)**

	2006	2007	2008	2009	2010E	% change since 2007
Residential construction						
New private	3.1%	-1.9%	-12.2%	-23.4%	-15.4%	-43.1%
New public	8.0%	0.0%	-5.0%	-15.0%	-10.0%	-27.3%
Sub-total	3.5%	-1.8%	-11.8%	-21.6%	-12.1%	-39.2%
RM&I private	5.0%	0.0%	-2.5%	-8.0%	-10.0%	-19.3%
RM&I public	<u>5.0%</u>	<u>0.0%</u>	<u>-2.5%</u>	<u>-8.0%</u>	<u>-10.0%</u>	<u>-19.3%</u>
Sub-total	5.0%	0.0%	-2.5%	-8.0%	-10.0%	-19.3%
Total residential	3.7%	-1.8%	-9.8%	-15.5%	-9.0%	-30.6%
New non-residential construction						
New private non-residential construction						
Industry	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Semi-state industry	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Commercial						
Office development	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Retail, wholesale	<u>4.0%</u>	<u>0.0%</u>	<u>-12.0%</u>	<u>-17.0%</u>	<u>-10.0%</u>	<u>-34.3%</u>
Total commercial	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Agriculture	4.0%	0.0%	0.0%	-17.0%	-10.0%	-19.0%
Tourism	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Worship	<u>4.0%</u>	<u>0.0%</u>	<u>-12.0%</u>	<u>-17.0%</u>	<u>-10.0%</u>	<u>-34.3%</u>
Sub-total	4.0%	-0.7%	-10.8%	-16.3%	-9.4%	-32.3%
New productive infrastructure						
Roads	4.0%	3.5%	-8.0%	-5.0%	-7.0%	-18.7%
Water and sanitary services	1.0%	0.0%	-10.0%	-10.0%	-7.0%	-24.7%
Airport development	4.0%	4.0%	-3.0%	-7.0%	-7.0%	-16.1%
Ports and harbours	4.0%	4.0%	-3.0%	-7.0%	-7.0%	-16.1%
Energy	4.0%	4.0%	-3.0%	-7.0%	-7.0%	-16.1%
Transport	4.0%	4.0%	-3.0%	-7.0%	-7.0%	-16.1%
Telecommunications	<u>4.0%</u>	<u>4.0%</u>	<u>-3.0%</u>	<u>-7.0%</u>	<u>-7.0%</u>	<u>-16.1%</u>
Sub-total	3.7%	3.6%	-6.2%	-6.6%	-7.0%	-18.6%
New social infrastructure						
Education	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Health	3.0%	-1.0%	-12.0%	-17.0%	-10.0%	-34.3%
Public buildings	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Local authority services	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Sport	4.0%	0.0%	-12.0%	-17.0%	-10.0%	-34.3%
Gaeltacht	<u>4.0%</u>	<u>0.0%</u>	<u>-12.0%</u>	<u>-17.0%</u>	<u>-10.0%</u>	<u>-34.3%</u>
Sub-total	3.7%	-0.1%	-12.0%	-17.0%	-10.0%	-34.3%
Total new non-residential	3.9%	1.2%	-9.3%	-11.2%	-7.1%	-25.1%

**Table A1.6: Construction output price deflators 2006 to 2010E
(annual % change) - continued**

	2006	2007	2008	2009	2010E	% change since 2007
Non-residential repair and maintenance						
Private non-residential						
Industry	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Semi-state industry	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Commercial						
Office development	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Retail, wholesale	<u>4.0%</u>	<u>0.0%</u>	<u>-6.0%</u>	<u>-8.0%</u>	<u>-10.0%</u>	<u>-22.2%</u>
Total commercial	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Agriculture	4.0%	0.0%	0.0%	-8.0%	-10.0%	-17.2%
Tourism	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Worship	<u>4.0%</u>	<u>0.0%</u>	<u>-6.0%</u>	<u>-8.0%</u>	<u>-10.0%</u>	<u>-22.2%</u>
Sub-total	4.0%	0.0%	-5.5%	-8.0%	-10.0%	-21.8%
Productive infrastructure						
Roads	4.0%	11.0%	4.0%	0.0%	-7.0%	-3.3%
Water and sanitary services	4.0%	4.0%	-6.0%	-8.0%	-7.0%	-19.6%
Airport development	4.0%	4.0%	-3.0%	-8.0%	-7.0%	-17.0%
Ports and harbours	4.0%	4.0%	-3.0%	-8.0%	-7.0%	-17.0%
Energy	4.0%	4.0%	-3.0%	-8.0%	-7.0%	-17.0%
Transport	4.0%	4.0%	-3.0%	-8.0%	-7.0%	-17.0%
Telecommunications	<u>4.0%</u>	<u>4.0%</u>	<u>-3.0%</u>	<u>-8.0%</u>	<u>-7.0%</u>	<u>-17.0%</u>
Sub-total	4.0%	6.2%	-1.6%	-5.7%	-8.1%	-14.7%
Social Infrastructure						
Education	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Health	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Public buildings	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Local authority services	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Sport	<u>4.0%</u>	<u>0.0%</u>	<u>-6.0%</u>	<u>-8.0%</u>	<u>-10.0%</u>	<u>-22.2%</u>
Sub-total	4.0%	0.0%	-6.0%	-8.0%	-10.0%	-22.2%
Total RM&I non-residential	3.4%	2.7%	-4.0%	-6.6%	-8.8%	-18.2%
Total construction output						
<i>Annual construction price inflation</i>						
New construction output	3.7%	-1.0%	-10.8%	-14.8%	-7.3%	-29.5%
Repair and maintenance	<u>4.4%</u>	<u>1.0%</u>	<u>-3.0%</u>	<u>-7.5%</u>	<u>-9.5%</u>	<u>-18.8%</u>
Total construction inflation	3.8%	-0.7%	-9.2%	-12.6%	-7.7%	-26.7%

Appendix 2. Construction output by sector, 2006-2010E

The following tables present information on the value of construction industry output in current and constant (2008) prices.

Table A2.1: Value of construction output in current prices, 2006-2010E (€m)

	2006	2007	2008	2009	2010E
Residential construction					
New private housing	19,599.8	17,283.7	10,998.3	2,977.0	1,006.4
New public housing					
New local authority	882.7	782.6	845.5	657.8	428.4
New voluntary	<u>185.5</u>	<u>275.7</u>	<u>399.1</u>	<u>251.5</u>	<u>222.0</u>
Total new public housing	1,068.2	1,058.3	1,244.7	909.4	650.4
Sub-total	20,668.0	18,341.9	12,243.0	3,886.4	1,656.8
RM&I private	4,262.3	4,740.2	4,911.2	3,401.4	2,300.0
RM&I public	<u>283.0</u>	<u>310.1</u>	<u>338.2</u>	<u>363.3</u>	<u>411.5</u>
Sub-total	4,545.3	5,050.3	5,249.4	3,764.7	2,711.5
Total residential	25,213.3	23,392.3	17,492.4	7,651.0	4,368.2
New non-residential construction					
New private non-residential construction					
Industry	600.0	500.0	880.0	528.0	100.0
Semi-state industry	64.5	49.0	74.4	37.4	31.2
Commercial					
Office development	1,400.0	1,800.0	1,300.0	700.0	200.0
Retail, wholesale	<u>2,200.0</u>	<u>2,100.0</u>	<u>1,100.0</u>	<u>385.0</u>	<u>80.0</u>
Total commercial	3,600.0	3,900.0	2,400.0	1,085.0	280.0
Agriculture	220.0	573.1	1202.0	235.0	115.0
Tourism	570.6	814.0	547.7	228.5	34.2
Worship	<u>19.1</u>	<u>20.6</u>	<u>12.1</u>	<u>9.7</u>	<u>14.7</u>
Sub-total	5,074.2	5,856.8	5,116.2	2,123.6	575.7
New productive infrastructure					
Roads	1,712.7	2,023.2	2,364.1	1,988.1	1,608.5
Water and sanitary services	511.1	620.4	576.9	626.6	626.6
Airport development	132.7	253.3	378.9	470.4	100.5
Ports and harbours	33.8	30.0	30.9	11.8	6.4
Energy	1,282.7	857.4	895.2	982.9	917.7
Transport	192.0	465.6	571.3	448.6	348.6
Telecommunications	<u>262.5</u>	<u>331.6</u>	<u>351.6</u>	<u>227.7</u>	<u>212.3</u>
Sub-total	4,127.6	4,581.4	5,168.8	4,756.1	3,820.7
New social infrastructure					
Education	617.4	675.4	718.8	475.9	550.0
Health	217.5	301.4	365.5	400.5	338.8
Public buildings	292.4	443.7	446.4	262.0	191.2
Local authority services	147.8	213.1	137.6	57.5	37.3
Sport	132.6	189.6	291.2	256.3	130.1
Gaeltacht	<u>63.1</u>	<u>63.0</u>	<u>116.6</u>	<u>56.8</u>	<u>60.4</u>
Sub-total	1,470.9	1,886.1	2,076.0	1,509.1	1,307.7
Total new non-residential	10,672.7	12,324.3	12,361.0	8,388.8	5,703.5

Table A2.1: Value of construction output in current prices, 2006-2010E (€m)
..continued

	2006	2007	2008	2009	2010E
Non-residential repair and maintenance					
Private non-residential					
Industry	122.8	98.6	125.6	70.7	13.4
Semi-state industry	8.6	6.0	9.6	8.6	24.2
Commercial					
Office development	294.0	375.7	249.26	64.6	25.2
Retail, wholesale	<u>462.0</u>	<u>438.3</u>	<u>210.9</u>	<u>35.5</u>	<u>0.0</u>
Total commercial	756.1	813.9	460.2	100.1	25.2
Agriculture	92.2	95.2	96.2	65.7	35.1
Tourism	135.6	183.9	133.2	69.1	25.1
Worship	<u>57.2</u>	<u>61.7</u>	<u>64.2</u>	<u>25.0</u>	<u>36.4</u>
Sub-total	1,172.4	1,259.3	889.1	339.2	166.3
Productive infrastructure					
Roads	370.2	393.4	498.1	376.7	170.9
Water and sanitary services	379.9	370.4	467.5	491.3	480.4
Airport development	11.4	19.2	22.3	4.3	9.8
Ports and harbours	4.2	5.4	5.6	3.7	7.6
Energy	201.5	239.4	257.1	187.0	222.4
Transport	142.3	120.9	133.9	119.2	104.4
Telecommunications	<u>44.7</u>	<u>35.0</u>	<u>63.9</u>	<u>48.3</u>	<u>51.8</u>
Sub-total	1,154.3	1,183.8	1,448.4	1,230.5	1,047.4
Social infrastructure					
Education	164.1	224.4	125.8	265.9	284.1
Health	110.8	65.4	73.8	55.4	49.3
Public buildings	108.2	113.8	156.8	101.0	105.8
Local authority services	24.1	25.2	33.6	10.0	5.0
Sport	<u>11.4</u>	<u>12.2</u>	<u>11.8</u>	<u>6.4</u>	<u>3.7</u>
Sub-total	418.6	440.9	401.8	438.6	448.0
Total RM&I non-residential	2,745.3	2,884.0	2,739.3	2,008.4	1,661.6
Total construction output					
New construction output	31,340.7	30,666.2	24,604.0	12,275.2	7,360.2
Repair and maintenance	<u>7,290.6</u>	<u>7,934.3</u>	<u>7,988.7</u>	<u>5,773.0</u>	<u>4,373.1</u>
Total construction output	38,631.3	38,600.5	32,592.7	18,048.2	11,733.3

**Table A2.2: Value of construction output in constant prices, 2006-2010E
(constant 2008 prices, €m)**

	2006	2007	2008	2009	2010E
Residential construction					
New private housing	16,888.7	15,176.9	10,998.3	3,887.4	1,553.8
New public housing					
New local authority	838.6	743.5	845.5	773.9	560.0
New voluntary	176.3	261.9	399.1	295.9	290.2
Total new public housing	1,014.8	1,005.4	1,244.7	1,069.8	850.2
Sub-total	17,903.5	16,182.2	12,243.0	4,957.3	2,403.9
RM&I private	4,155.7	4,519.9	5,054.0	4,061.3	2,777.8
RM&I public	275.9	302.4	338.2	394.8	496.9
Sub-total	4,431.6	4,924.1	5,249.4	4,092.0	3,274.7
Total residential	22,335.1	22,106.3	17,492.4	9,049.3	5,678.7
New non-residential construction					
New private non-residential construction					
Industry	528.0	440.0	880.0	636.1	133.9
Semi-state industry	56.8	43.2	74.4	45.0	41.8
Commercial					
Office development	1,232.0	1,584.0	1,300.0	843.4	267.7
Retail, wholesale	1,936.0	1,848.0	1,100.0	463.9	107.1
Total commercial	3,168.0	3,432.0	2,400.0	1,307.2	374.8
Agriculture	220.0	573.1	1,202.0	261.1	142.0
Tourism	502.2	716.3	547.7	275.3	45.8
Worship	16.8	18.1	12.1	11.7	19.7
Sub-total	4,491.7	5,222.7	5,116.2	2,536.5	764.4
New productive infrastructure					
Roads	1,630.9	1,861.4	2,364.1	2,092.7	1,820.6
Water and sanitary services	459.9	558.4	576.9	696.2	748.6
Airport Development	133.9	245.7	378.9	505.9	116.3
Ports and harbours	34.1	29.1	30.9	12.7	7.5
Energy including new power stations	1,294.0	831.6	895.2	1,056.9	1,061.1
Transport	193.7	451.6	571.3	482.4	403.1
Telecommunications	264.8	321.6	351.6	244.9	245.4
Sub-total	4,011.4	4,299.4	5,168.8	5,091.6	4,402.4
New social infrastructure					
Education	543.4	594.3	718.8	573.4	736.2
Health	189.5	265.2	365.5	572.7	453.5
Public buildings	257.3	390.5	446.4	315.7	256.0
Local authority services	130.0	187.5	137.6	69.3	63.3
Sports	116.7	166.8	291.2	308.8	174.2
Gaeltacht	55.6	55.4	116.6	68.54	80.9
Sub-total	1,292.4	1,659.7	2,076.0	1,818.2	1,750.6
Total new non-residential	9,795.5	11,181.9	12,361.0	9,446.3	6,911.0

**Table A2.2: Value of construction output in constant prices, 2006-2010E
(constant 2008 prices, €m) – continued**

	2006	2007	2008	2009	2010E
Non-residential repair and maintenance					
Private non-residential					
Industry	115.4	92.7	125.6	76.8	16.1
Semi-state industry	8.1	5.6	9.6	9.4	29.2
Commercial					
Office development	276.4	353.1	249.3	70.2	30.4
Retail, wholesale	434.3	412.0	210.9	38.6	0.0
Total commercial	710.7	765.1	460.2	108.8	30.4
Agriculture	92.2	95.2	96.2	71.4	42.4
Tourism	127.5	172.9	133.2	75.1	38.6
Worship	53.7	58.0	64.2	27.2	44.0
Sub-total	1,107.6	1,189.4	889.1	368.7	200.8
Productive infrastructure					
Roads	427.3	409.2	498.1	376.7	183.8
Water and sanitary services	371.4	348.1	467.5	534.0	561.5
Airport development	11.5	18.7	22.3	4.6	11.5
Ports and harbours	4.3	5.3	5.6	4.0	8.9
Energy	203.3	232.2	257.1	203.3	259.9
Transport	143.6	117.2	133.9	129.6	122.0
Telecommunications	45.1	34.0	63.9	52.5	60.5
Sub-total	1,206.5	1,164.7	1,448.4	1,304.7	1,208.1
Social infrastructure					
Education	154.2	210.9	125.8	289.0	343.2
Health	104.2	61.5	73.8	60.2	59.5
Public buildings	101.7	107.0	156.8	109.8	127.8
Local authority services	22.7	23.7	33.6	10.9	6.0
Sport	10.7	11.4	11.8	6.9	4.5
Sub-total	393.5	414.5	401.8	476.8	541.0
Total RM&I non-residential	2,707.6	2,768.6	2,739.3	2,150.2	1,950.0
Total construction output					
New construction output	27,699.0	28,671.2	24,938.7	14,365.2	9,342.4
Repair and maintenance	7,139.2	7,692.7	7,988.7	6,242.3	5,224.7
Total construction output	34,838.2	35,056.8	32,592.7	20,645.8	14,539.6

Table A2.3: Change in the volume of construction output, 2006-2010E (%)

	2006	2007	2008	2009	2010E
Residential construction					
New private housing	14.5%	-10.1%	-27.5%	-64.7%	-60.0%
New public housing					
New local authority	-6.2%	-11.3%	13.7%	-8.5%	-27.6%
New voluntary	<u>1.8%</u>	<u>48.6%</u>	<u>52.4%</u>	<u>-25.9%</u>	<u>-1.9%</u>
Total new public housing	-4.9%	-0.9%	23.8%	-14.0%	-20.5%
Sub-total	13.2%	-9.6%	-24.3%	-59.5%	-51.5%
RM&I private	13.4%	11.2%	6.3%	-24.7%	-24.9%
RM&I public	<u>20.3%</u>	<u>9.6%</u>	<u>11.8%</u>	<u>16.8%</u>	<u>25.9%</u>
Sub-total	13.8%	11.1%	6.6%	-22.0%	-20.0%
Total residential	13.3%	-5.5%	-17.1%	-48.3%	-37.2%
New non-residential construction					
New private non-residential construction					
Industry	-27.9%	-16.7%	100.0%	-27.7%	-79.0%
Semi-state industry	-26.3%	-24.0%	72.4%	-39.5%	-7.2%
Commercial					
Office development	34.6%	28.6%	-17.9%	-35.1%	-68.3%
Retail, wholesale	<u>5.8%</u>	<u>-4.5%</u>	<u>-40.5%</u>	<u>-57.8%</u>	<u>-76.9%</u>
Total commercial	15.4%	8.3%	-30.1%	-45.5%	-71.3%
Agriculture	-2.1%	160.5%	109.7%	-78.3%	-45.6%
Tourism	30.6%	42.7%	-23.5%	-49.7%	-83.4%
Worship	<u>0.0%</u>	<u>8.0%</u>	<u>-33.3%</u>	<u>-3.3%</u>	<u>124.3%</u>
Sub-total	7.4%	16.3%	-2.0%	-50.4%	-70.1%
New productive infrastructure					
Roads	4.4%	14.1%	27.0%	-11.5%	-13.0%
Water and sanitary services	7.6%	21.4%	3.3%	20.7%	7.5%
Airport Development	35.6%	83.5%	54.2%	33.5%	-77.0%
Ports and harbours	5.9%	-14.5%	6.0%	-58.9%	-41.3%
Energy including new power stations	0.3%	-35.7%	7.6%	18.1%	0.4%
Transport	-30.4%	133.2%	26.5%	-15.6%	-16.4%
Telecommunications	<u>21.5%</u>	<u>21.4%</u>	<u>9.3%</u>	<u>-30.4%</u>	<u>0.2%</u>
Sub-total	2.7%	7.2%	20.2%	-1.5%	-13.5%
New social infrastructure					
Education	1.5%	9.4%	20.9%	-20.2%	28.4%
Health	-37.6%	40.0%	37.8%	32.0%	-6.0%
Public buildings	7.1%	51.7%	14.3%	-29.3%	-18.9%
Local authority services	-8.7%	44.2%	-26.6%	-49.6%	-28.0%
Sports	35.1%	42.9%	74.5%	6.1%	-43.6%
Gaeltacht	<u>35.0%</u>	<u>-0.3%</u>	<u>110.5%</u>	<u>-41.3%</u>	<u>18.1%</u>
Sub-total	-4.2%	28.4%	25.1%	-12.4%	-3.7%
New non-residential construction	3.8%	14.2%	10.5%	-23.6%	-26.8%

Table A2.3: Change in the volume of construction output, 2006-2010E (%) – continued

	2006	2007	2008	2009	2010E
Non-residential repair and maintenance					
Private non-residential					
Industry	-53.3%	-19.7%	35.6%	-38.9%	-79.0%
Semi-state industry	-46.6%	-30.2%	71.0%	-2.5%	211.2%
Commercial					
Office development	33.1%	27.8%	-29.4%	-71.8%	-56.7%
Retail, wholesale	<u>4.5%</u>	<u>-5.1%</u>	<u>-48.8%</u>	<u>-81.7%</u>	<u>-100.0%</u>
Total commercial	14.0%	7.7%	-39.9%	-76.3%	-72.0%
Agriculture	2.1%	3.3%	1.1%	-25.7%	-40.6%
Tourism	26.5%	35.6%	-22.9%	-43.6%	-48.3%
Worship	<u>0.0%</u>	<u>8.0%</u>	<u>10.6%</u>	<u>-57.7%</u>	<u>62.1%</u>
Sub-total	-2.0%	7.4%	-25.3%	-58.5%	-45.5%
Productive infrastructure					
Roads	24.6%	-4.2%	21.7%	-24.4%	-51.2%
Water and sanitary services	22.6%	-6.3%	34.3%	14.2%	5.2%
Airport development	-62.4%	61.8%	19.7%	-79.2%	147.0%
Ports and harbours	-10.5%	23.0%	6.8%	-28.2%	120.3%
Energy	22.1%	14.2%	10.7%	-20.9%	27.9%
Transport	37.0%	-18.4%	14.2%	-3.2%	-5.8%
Telecommunications	<u>-11.7%</u>	<u>-24.7%</u>	<u>88.0%</u>	<u>-17.8%</u>	<u>15.3%</u>
Sub-total	20.2%	-3.5%	24.4%	-9.9%	-7.4%
Social infrastructure					
Education	12.0%	36.7%	-40.4%	129.8%	18.7%
Health	-15.2%	-41.0%	20.0%	-18.5%	-1.1%
Public buildings	-3.9%	5.2%	46.6%	-30.0%	16.4%
Local authority services	577.6%	4.6%	41.9%	-67.7%	-44.4%
Sport	<u>0.3%</u>	<u>6.4%</u>	<u>3.4%</u>	<u>-41.5%</u>	<u>-35.4%</u>
Sub-total	3.5%	5.3%	-3.1%	18.6%	13.5%
Total RM&I non-residential	7.7%	2.3%	-1.1%	-21.5%	-9.3%
Total construction output					
New construction output	9.7%	-1.2%	-10.1%	-41.5%	-35.3%
Repair and maintenance	<u>11.4%</u>	<u>7.8%</u>	<u>3.8%</u>	<u>-21.91%</u>	<u>-16.3%</u>
Total construction output	10.0%	0.6%	-7.0%	-36.7%	-29.6%

Appendix 3: Review of construction output by region, 2009

We continue this year with our presentation of regional estimates for construction output for 2009⁸⁴. The regional breakdown is provided to facilitate the CSO in the production of Gross Domestic Product (or Gross Value Added) at regional level. The CSO also uses the data in the Annual CIRO for compiling estimates of gross fixed capital investment for the National Accounts.

The regional breakdown of construction output in 2009 is very similar to the CSO's estimate of the regional population distribution in 2009.

The breakdown in 2009 suggests that the Southern & Eastern region accounted for 73% of total construction output in 2009, while the Border, Midlands and West region accounted for the balance of 27%. The ratio for construction output between both regions was mirrored by the population breakdown which saw 73% of people placed in the S&E region and the remainder in the BMW region.

The average construction output per capita for the State as a whole was much reduced in 2009 at just €4,460. There was almost no difference between output per capita in both the S&E region and the BMW region, with output per capita of approximately €4,055 and €4,026 respectively in both regions. While activity levels are much reduced, this is an indication of a very balanced spread across the both regions.

Dublin generated approximately 29% of total output in 2009, while the Greater Dublin Area (Dublin and the Mid-East) accounted for 42% of the total (39% of total population).

With regard to overall output levels, *residential construction* is still quite dominant while *productive infrastructure* is clearly important also. In fact, during 2009 in the Border region, productive infrastructure (45%) actually contributed more to total output than residential construction (42%). Residential construction had its highest share in the Border region, accounting for half of total output. This sector accounted for less than half of total output in each other region – while residential construction contributed to just 40% of output in Dublin and the Mid-East.

Private non-residential construction accounted for just 14% of total output across the State in 2009. This sector is most dominant in the Dublin and South-West regions, having accounted for 19% and 17% of total output respectively.

⁸⁴ Estimates of the composition of construction output by region were first presented in 1995. The methodology used to derive the regional estimates is being constantly improved. However, these estimates should be considered tentative and we urge caution in interpreting the figures and particularly, in making year-on-year comparisons.

A3.1: Definition of regions

The relevant regions used to breakdown construction output for 2009 are the eight planning regions as follows:

- Border: Cavan, Donegal, Leitrim, Louth, Monaghan, Sligo;
- Dublin: Dublin City, Dun Laoghaire - Rathdown, South Dublin and Fingal;
- Mid-East: Kildare, Meath and Wicklow;
- Midland: Laois, Longford, Offaly and Westmeath;
- Mid-West: Clare, Limerick and North Tipperary;
- South-East: Carlow, Kilkenny, South Tipperary, Waterford and Wexford;
- South-West: Cork City, Cork County and Kerry;
- West: Galway, Mayo and Roscommon.

In addition we present estimates of construction output for the two regions⁸⁵ negotiated by Ireland in the context of the Agenda 2000 Agreement for Structural Fund purposes:

- (a) the Border, Midlands and Western (BMW) Region; and
- (b) the Southern and Eastern (S&E) Region.

A3.2: Regional breakdown of construction output/population

The total value of construction output in 2009 has been estimated at €18 billion. Table A3.1 provides estimates for the regional composition of total output including repair, maintenance and improvement expenditure in 2009. The estimated regional breakdown of the total population in 2009 is shown for comparison⁸⁶.

Comparing the regional breakdown of construction output with the regional population distribution for the country as a whole, the shares are broadly similar for all regions. Dublin and Midland are the only two regions to have higher shares of construction output than their population shares. The opposite is the case for the Border (10% of output and 11% of population), Mid-west (7% vs. 8%) and the South-west (14% vs. 15%) regions.

Figure A3.1 illustrates the regional split showing the Dublin construction market more than four times larger than the smallest market (Mid-west) in 2009. Other trends evident suggest that:

- 73% of total output was generated in the Southern and Eastern (S&E) region compared with 27% generated in the Border, Midlands and West (BMW) region.

⁸⁵ For a comparative regional analysis of the BMW and S&E regions see the *National Development Plan 2000-2006*.

⁸⁶ Estimated population classified by region from Population and Migration Estimates, CSO, April 2009.

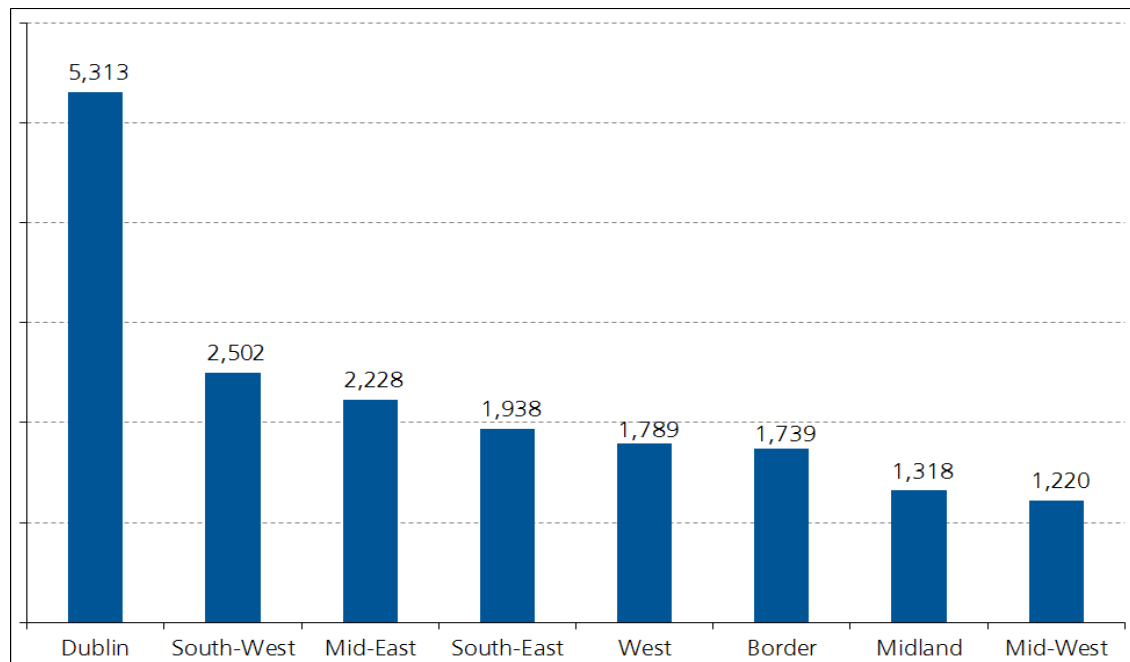
- 29% of total output was generated in the Dublin region in 2009 while the Greater Dublin area (Dublin and Mid-east) had a combined share of 41% of the total (39% of total population).
- The smallest construction market is in the Mid-west region, which accounts for 7% of total output and 8% of total population.

Table A3.1: Value of construction output by region, 2009

	Output (€m)	Share (%) of output	Share (%) of population
Border	1,739	10%	11%
Dublin	5,313	29%	27%
Mid-east	2,228	12%	12%
Midland	1,318	7%	6%
Mid-west	1,220	7%	8%
South-east	1,938	11%	11%
South-west	2,502	14%	15%
West	<u>1,789</u>	<u>10%</u>	<u>10%</u>
Total output	18,048	100%	100%
S&E	13,201	73%	73%
BMW	4,847	27%	27%

Source: DEHLG, DKM, CSO

Figure A3.1: Value of construction output by region, 2009 (€m)

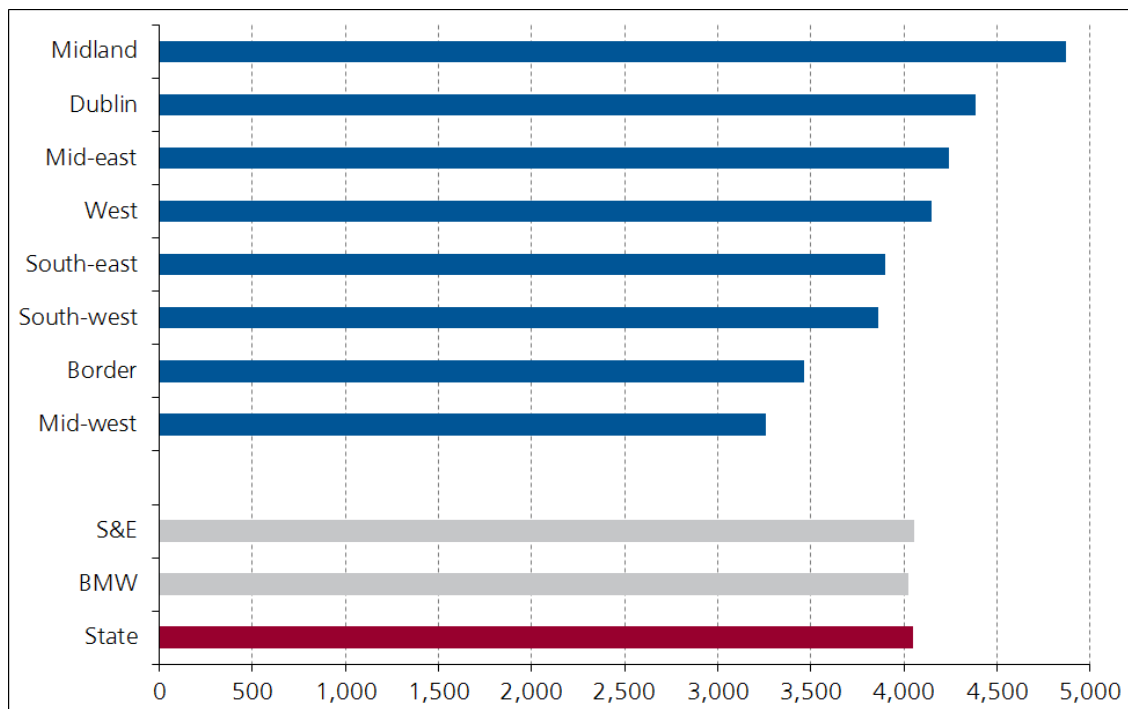


Source DEHLG, DKM.

A3.3: Construction output per capita

Figure A3.2 illustrates the level of construction output per capita in 2009 by region for the State as a whole.

Figure A3.2: Construction output per capita by region, 2009 (€m)



Source: DEHLG, DKM, CSO

The average construction output per capita for the State as a whole was €4,047 in 2009. Output per capita in the S&E region was only marginally higher than that for the BMW region.

Output in the S&E region was 2.7 times the value of output in the BMW region in 2009 with an almost identical difference between both estimates of population.

Construction output per capita levels were lowest in the Mid-west (€3,261) and highest in the Midland (€4,871). All other six regions had per capita levels between €3,400 and €4,400.

A3.4: Composition of regional construction output

The composition of regional output in 2009 is set out in Table A3.2 together with the percentage shares for each category of work.

The following points are noted in respect of the composition of regional construction output in 2009:

- The continued dominance of *residential construction* output in 2009, representing 42% (€7.7 billion) of total construction output. The sector accounted for exactly half of total construction output in the Border region in 2009.
- *Private non-residential* output contributed €2.5 billion to total output in 2009, with the contribution from the Dublin region equivalent to approximately €1 billion or 41% of nationwide private non-residential output. The South-west region had the second highest level of output at just €434 million, less than half the contribution from the Dublin Region. The Midland region accounted for less than 2% of the total or just €48 million.
- The value of *productive infrastructure* in 2009 was almost €6.0 billion or 33% of total output. In absolute terms, Dublin represented the largest market with almost €1.5 billion coming from the region, followed by the South-east (€712 million) and South-west (€705 million) regions. The smallest output from productive infrastructure projects arose in the Mid-west region (€447 million). In terms of shares of total output, 45% of total construction output in the Midlands region came from productive infrastructure projects, while the corresponding proportion in Dublin was only 27%.
- The remaining category of output, *social infrastructure*, accounted for 11% of overall construction output in 2009, and with the exception Dublin (14% share) and the Mid-east and South-east (8% each), this category accounted for between 9% and 11% of regional construction output in all other regions.

73% of total construction output arose in the S&E region. This proportion increases to 87% of the total output arising from private non-residential construction projects. 30% of productive infrastructure output and 29% of residential construction output arose in the BMW region but the same region accounted for only 13% of private non-residential output.

Table A3.2: Composition of total output by region in 2009, €m.

	Residential Construction	Private Non-Residential	Productive Infrastructure	Social Infrastructure	Regional Output
Border	878	146	555	161	1,739
Dublin	2,126	1006	1460	721	5,313
Mid-East	882	310	853	183	2,228
Midland	553	48	590	127	1,318
Mid-West	496	160	447	116	1,220
South-East	838	231	712	158	1,938
South-West	1,085	434	705	278	2,502
West	<u>793</u>	<u>126</u>	<u>666</u>	<u>204</u>	<u>1,789</u>
Total Output	7,651	2,463	5,987	1,948	18,048
S&E	5,427	2,143	4,176	1,456	13,201
BMW	2,224	320	1,811	492	4,847
Border	50%	8%	32%	9%	100%
Dublin	40%	19%	27%	14%	100%
Mid-East	40%	14%	38%	8%	100%
Midland	42%	4%	45%	10%	100%
Mid-West	41%	13%	37%	10%	100%
South-East	43%	12%	37%	8%	100%
South-West	43%	17%	28%	11%	100%
West	44%	7%	37%	11%	100%
Total Output	42%	14%	33%	11%	100%
S&E share	71%	87%	70%	75%	73%
BMW share	29%	13%	30%	25%	27%

Note: The value of construction *includes* repair and maintenance expenditure.

Source: DEHLG, DKM

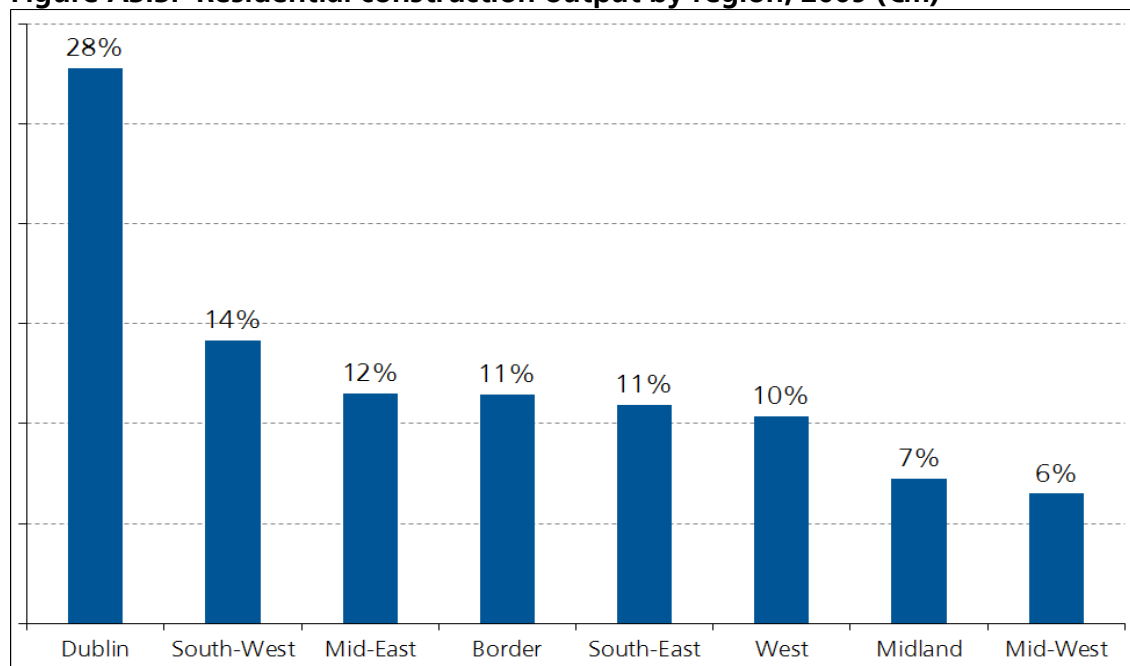
A3.5: Categories of construction work by region

Figures A3.3 to A3.6 illustrate how the broad categories of work split by region in 2009, using residential, private non-residential, productive infrastructure and social infrastructure as the four main categories of construction work.

A3.5.1: Residential construction

A total of 26,420 dwellings were built nationwide in 2009⁸⁷. The corresponding value of residential construction output was €7.7 billion (including repair and maintenance). The shares of residential construction output by region are not too dissimilar from the shares of overall dwellings completed by region in 2009: Border – 11% of residential output (16% of dwelling completions), Dublin 28% (20%), Mid-east 12% (10%), Midland 7% (7%), Mid-west 6% (8%), South-east 11% (11%), South-west 14% (16%), West 10% (11%). The Dublin and Mid-east regions (a proxy for the Greater Dublin Area [GDA]) represented 39% of the total value of residential construction output in 2009 compared with 30% of total completions.

Figure A3.3: Residential construction output by region, 2009 (€m)



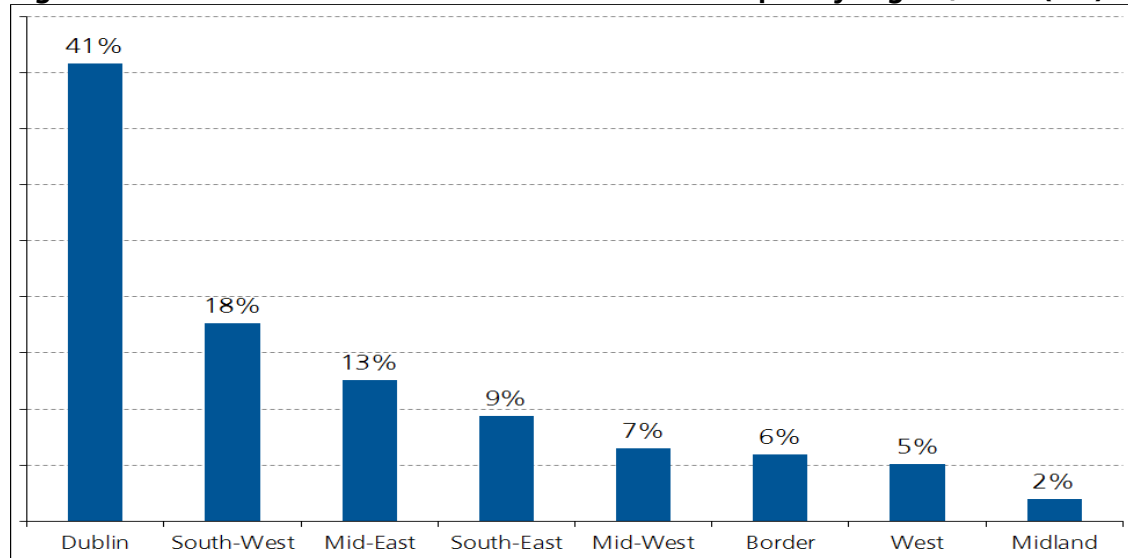
Source: DEHLG, DKM

A3.5.2: Private non-residential construction

The GDA accounted for 53% of the total private non-residential construction output in 2009 followed by the South-west region (18%) and the South-east region (9%).

⁸⁷ Based on the number of dwellings connected for electricity, the proxy used for measuring the number of dwellings built.

Figure A3.4: Private non-residential construction output by region, 2009 (€m)

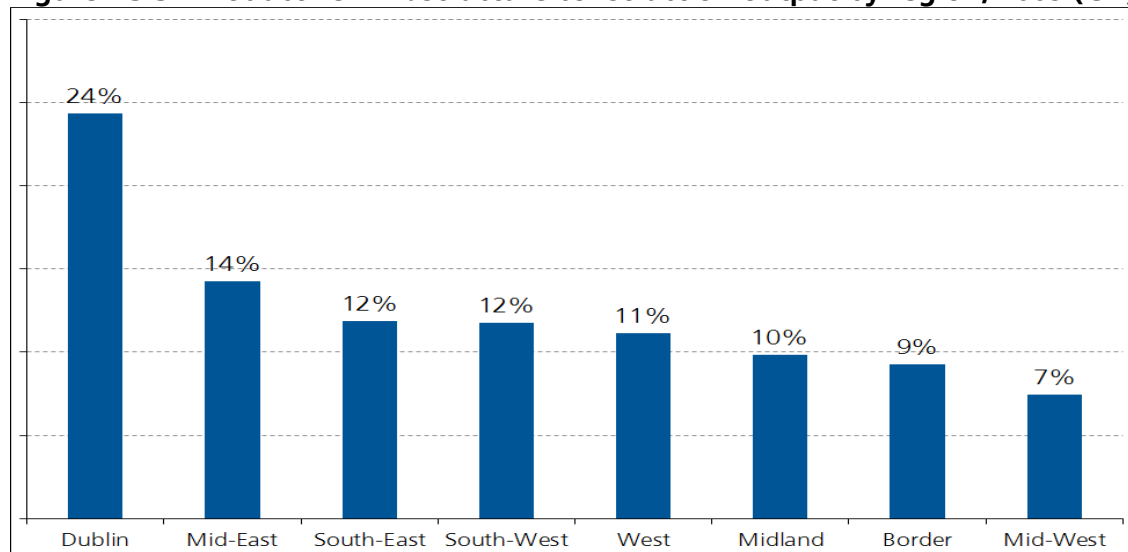


Source: DEHLG, DKM

A3.5.3: Productive infrastructure

Dublin accounted for 24% of total productive infrastructure output due to the high level of investment underway at Dublin airport (90% of total airport investment), communications (44% of total) energy and water services (22% of total in each) and public transport (35% of total). Including the Mid-east region, 38% of the total investment took place in the GDA. The highest investment in roads was in the South-east (19% of total) and Mid-east (17%) regions. The lowest overall shares were represented by the Mid-west (7%) and Border (9%) regions. Around 30% of the total investment in productive infrastructure took place in the BMW region.

Figure A3.5: Productive infrastructure construction output by region, 2009 (€m)

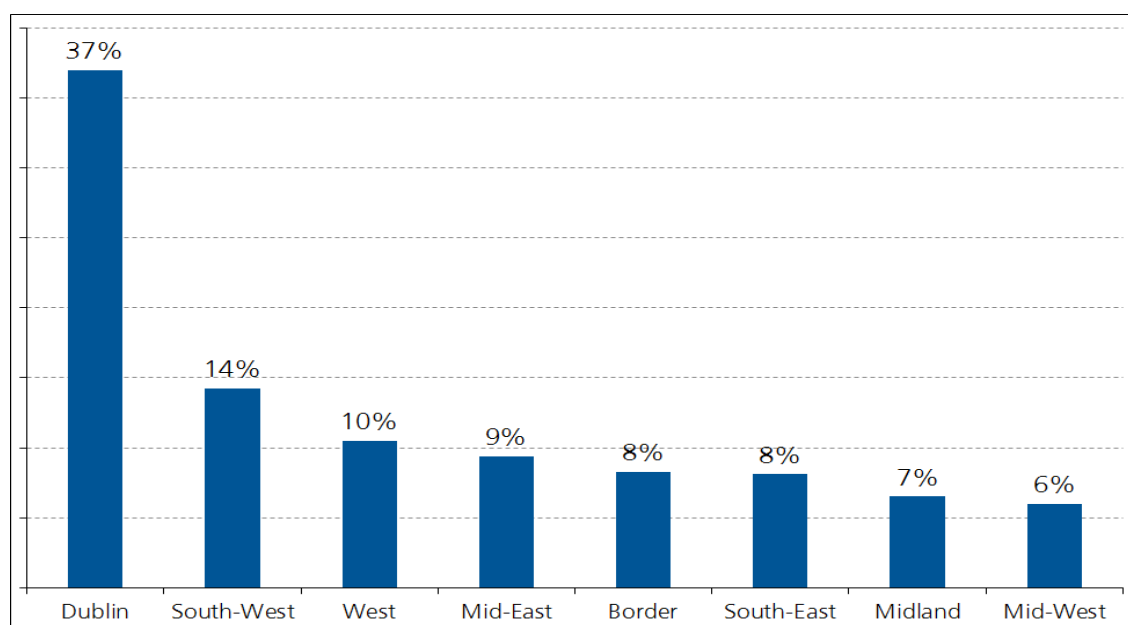


Source: DEHLG, DKM

A3.5.4: Social infrastructure

Dublin also had the dominant position in regard to the construction output associated with social infrastructure projects, accounting for 37% of total output. This reflects the largest output from health projects (52% of total health construction output) and public buildings output (33% of the total). Including the Mid-east region, the GDA in total accounted for 51% of total construction output from social infrastructure projects. Over half (55%) of the total investment in social infrastructure projects in the Mid-west region was in educational building projects.

Figure A3.6: Social infrastructure by region, 2009 (€m)



Source: DEHLG, DKM

Table A3.3: Construction output by region, 2009 (current prices, €m)

	Border	Dublin	Mid-east	Midland	Mid-west	South-east	South-west	West	Total
Residential construction									
Private housing	727	1,746	770	465	376	717	885	693	6,378
Public housing	<u>151</u>	<u>381</u>	<u>112</u>	<u>88</u>	<u>121</u>	<u>121</u>	<u>200</u>	<u>100</u>	<u>1,273</u>
Sub-total	878	2,126	882	553	496	838	1,085	793	7,651
	50%	40%	40%	42%	41%	43%	43%	44%	42%
Non-residential construction									
Private non-residential construction									
Industry	40	172	142	3	47	25	173	42	645
Commercial	26	774	31	15	25	97	192	25	1,185
Agricultural	48	20	26	25	38	55	54	34	301
Tourism	29	28	109	2	47	51	11	21	298
Worship	<u>4</u>	<u>11</u>	<u>3</u>	<u>2</u>	<u>4</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>35</u>
Sub-total	146	1,006	310	48	160	231	434	126	2,463
Productive infrastructure									
Roads	152	189	400	383	201	451	192	397	2,365
Water services	151	250	160	108	88	108	118	134	1,118
Airports and seaports	1	439	0	0	30	1	11	8	490
Energy	200	259	131	53	52	92	303	79	1,170
Transport	22	201	139	29	54	41	53	29	568
Communications	<u>29</u>	<u>121</u>	<u>23</u>	<u>17</u>	<u>21</u>	<u>19</u>	<u>27</u>	<u>20</u>	<u>276</u>
Sub-total	555	1,460	853	590	447	712	705	666	5,987
	32%	27%	38%	45%	37%	37%	28%	37%	33%
Social infrastructure									
Education	65	184	86	80	65	47	144	73	742
Health	28	239	30	9	4	23	74	49	456
Public buildings	40	120	52	19	22	45	35	32	363
Other social	<u>29</u>	<u>179</u>	<u>16</u>	<u>18</u>	<u>26</u>	<u>43</u>	<u>25</u>	<u>51</u>	<u>387</u>
Sub-total	161	721	183	127	116	158	278	204	1,948
Total construction	1,739	5,313	2,228	1,318	1,220	1,938	2,502	1,789	18,048

Note: The value of construction *includes* repair and maintenance expenditure.

Table A3.4: Construction output by region, 2009 (%)

	Border	Dublin	Mid-east	Midland	Mid-west	South-east	South-west	West	Total
Residential construction									
Private housing	41.8	32.9	34.5	35.3	30.8	37.0	35.4	38.7	35.3
Public housing	<u>8.7</u>	<u>7.2</u>	<u>5.0</u>	<u>6.6</u>	<u>9.9</u>	<u>6.2</u>	<u>8.0</u>	<u>5.6</u>	<u>7.1</u>
Sub-total	50.5	40.0	39.6	42.0	40.7	43.2	43.4	44.3	42.4
Non-residential construction									
Private non-residential construction									
Industry	2.3	3.2	6.4	0.3	3.9	1.3	6.9	2.3	3.6
Commercial	1.5	14.6	1.4	1.2	2.0	5.0	7.7	1.4	6.6
Agricultural	2.8	0.4	1.2	1.9	3.1	2.9	2.2	1.9	1.7
Tourism	1.6	0.5	4.9	0.2	3.8	2.6	0.5	1.2	1.6
Worship	<u>0.2</u>	<u>0.2</u>	<u>0.1</u>	<u>0.2</u>	<u>0.3</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>
Sub-total	8.4	18.9	13.9	3.7	13.2	11.9	17.4	7.0	13.6
Productive infrastructure									
Roads	8.7	3.6	17.9	29.1	16.4	23.3	7.7	22.2	13.1
Water services	8.7	4.7	7.2	8.2	7.2	5.6	4.7	7.5	6.2
Airports and seaports	0.1	8.3	0.0	0.0	2.5	0.0	0.4	0.4	2.7
Energy	11.5	4.9	5.9	4.0	4.3	4.8	12.1	4.4	6.5
Transport	1.3	3.8	6.2	2.2	4.4	2.1	2.1	1.6	3.1
Communications	<u>1.7</u>	<u>2.3</u>	<u>1.1</u>	<u>1.3</u>	<u>1.7</u>	<u>1.0</u>	<u>1.1</u>	<u>1.1</u>	<u>1.5</u>
Sub-total	31.9	27.5	38.3	44.8	36.6	36.7	28.2	37.2	33.2
Social infrastructure									
Education	3.7	3.5	3.9	6.1	5.3	2.4	5.7	4.1	4.1
Health	1.6	4.5	1.3	0.7	0.4	1.2	3.0	2.7	2.5
Public buildings	2.3	2.3	2.3	1.4	1.8	2.3	1.4	1.8	2.0
Other social	<u>1.6</u>	<u>3.4</u>	<u>0.7</u>	<u>1.4</u>	<u>2.1</u>	<u>2.2</u>	<u>1.0</u>	<u>2.9</u>	<u>2.1</u>
Sub-total	9.2	13.6	8.2	9.6	9.5	8.1	11.1	11.4	10.8
Total construction	100	100	100	100	100	100	100	100	100

Note: The value of construction *includes* repair and maintenance expenditure.

Table A3.5: Regional construction output by category of work (%)

	Border	Dublin	Mid-east	Midland	Mid-west	South-east	South-west	West	Total
Residential construction									
Private housing	11.4	27.4	12.1	7.3	5.9	11.2	13.9	10.9	100
Public housing	<u>11.8</u>	<u>29.9</u>	<u>8.8</u>	<u>6.9</u>	<u>9.5</u>	<u>9.5</u>	<u>15.7</u>	<u>7.9</u>	<u>100</u>
Sub-total	11.5	27.8	11.5	7.2	6.5	10.9	14.2	10.4	100
Non-residential construction									
Private non-residential construction									
Industry	6.2	26.7	22.0	0.5	7.3	3.9	26.9	6.5	100
Commercial	2.2	65.3	2.6	1.3	2.1	8.2	16.2	2.1	100
Agricultural	15.9	6.8	8.5	8.3	12.7	18.4	18.0	11.4	100
Tourism	9.6	9.5	36.6	0.8	15.6	17.0	3.8	7.0	100
Worship	<u>10.5</u>	<u>31.9</u>	<u>7.7</u>	<u>5.8</u>	<u>11.5</u>	<u>9.6</u>	<u>11.5</u>	<u>11.5</u>	<u>100</u>
Sub-total	5.9	40.9	12.6	2.0	6.5	9.4	17.6	5.1	100
Productive infrastructure									
Roads	6.4	8.0	16.9	16.2	8.5	19.1	8.1	16.8	100
Water services	13.5	22.4	14.3	9.6	7.9	9.7	10.6	12.0	100
Airports and seaports	0.2	89.6	0.1	0.0	6.1	0.1	2.2	1.6	100
Energy	17.1	22.2	11.2	4.6	4.5	7.9	25.9	6.7	100
Transport	3.9	35.4	24.5	5.1	9.5	7.2	9.4	5.0	100
Communications	<u>10.4</u>	<u>43.9</u>	<u>8.5</u>	<u>6.1</u>	<u>7.6</u>	<u>6.7</u>	<u>9.7</u>	<u>7.1</u>	<u>100</u>
Sub-total	9.3	24.4	14.3	9.9	7.5	11.9	11.8	11.1	100
Social infrastructure									
Education	8.7	24.7	11.6	10.8	8.7	6.3	19.4	9.8	100
Health	6.1	52.3	6.5	2.1	0.9	5.0	16.3	10.7	100
Public buildings	11.0	33.1	14.2	5.1	5.9	12.3	9.5	8.8	100
Other social	<u>7.4</u>	<u>46.2</u>	<u>4.0</u>	<u>4.7</u>	<u>6.7</u>	<u>11.2</u>	<u>6.5</u>	<u>13.2</u>	<u>100</u>
Sub-total	8.3	37.0	9.4	6.5	6.0	8.1	14.3	10.5	100
Total construction	9.6	29.4	12.3	7.3	6.8	10.7	13.9	9.9	100

Note: The value of construction *includes* repair and maintenance expenditure.

Table A3.6: Construction output in the S&E and BMW regions, 2009 (€m)

	Total	S&E	BMW	S&E (%)	BMW (%)
Residential construction					
Private housing	6,378	4,493	1,885	34.0	38.9
Public housing	<u>1,273</u>	<u>934</u>	<u>339</u>	<u>7.1</u>	<u>7.0</u>
Sub-total	7,651	5,427	2,224	41.1	45.9
Non-residential construction					
Private non-residential construction					
Industry	645	559	85	4.2	1.8
Commercial	1,185	1,119	66	8.5	1.4
Agricultural	301	194	107	1.5	2.2
Tourism	298	246	52	1.9	1.1
Worship	<u>35</u>	<u>25</u>	<u>10</u>	<u>0.2</u>	<u>0.2</u>
Sub-total	2,463	2,143	320	16.2	6.6
Productive infrastructure					
Roads	2,365	1,432	932	10.9	19.2
Water services	1,118	725	393	5.5	8.1
Airports and seaports	490	481	9	3.6	0.2
Energy	1,170	838	332	6.3	6.8
Transport	568	488	79	3.7	1.6
Communications	<u>276</u>	<u>211</u>	<u>65</u>	<u>1.6</u>	<u>1.3</u>
Sub-total	5,987	4,176	1,811	31.6	37.4
Social infrastructure					
Education	742	524	217	4.0	4.5
Health	456	370	86	2.8	1.8
Public buildings	363	272	91	2.1	1.9
Other social	<u>387</u>	<u>289</u>	<u>98</u>	<u>2.2</u>	<u>2.0</u>
Sub-total	1,948	1,456	492	11.0	10.1
Total: all construction	18,048	13,201	4,847	100.0	100.0

Note: The value of construction *includes* repair and maintenance expenditure.

Appendix 4: The measurement of housebuilding output

This Appendix presents an alternative measure of new housebuilding for the period 2006-2010 which is used to estimate the value of new residential construction in the CIRO this year. The basis for this Appendix is the extreme contraction in the volume of housebuilding since 2006, which has raised some question around whether the measure used for the purposes of estimating residential construction output each year, is representative of actual housebuilding put in place in a given year.

The measure of residential construction provides a basis for the estimation of the level of fixed investment in housing by the CSO in the calculation of GNP each year. At the peak of the construction boom, fixed investment in building and construction accounted for 25% of total GNP and 88,219 dwellings were connected for electricity⁸⁸.

To date, the practice has been to use the number of dwellings connected for electricity as a proxy for actual new housebuilding each year. However, given the unique circumstances in the housing market, which have culminated since the peak year (2006), it is now questionable whether the link between 'electricity connections' and completed units still holds up to the same degree⁸⁹.

An alternative measure of actual housebuilding is presented in this CIRO which argues that using the number of electricity connections each year has led to an overestimation of the number of actual new dwellings constructed in 2009 and an underestimation over the period 2006-2008. Moreover, it argues that the number of dwellings constructed at the peak was in excess of 97,000 compared with the 88,219 connections reported in 2006.

A4.1: Housing indicators – housebuilding captured at four stages

In terms of the lifecycle of a dwelling, data on housebuilding is captured at four different stages, which culminate in the drawdown of a mortgage:

- At the granting of planning permission
- At the point of commencement
- At the point of registration

⁸⁸ The total figure published on the DEHLG website www.environ.ie is 93,419. However the ESB suggested at the time that there was a backlog of connections at the end of 2005 which were not connected until 2006. Hence some 5,200 dwellings were deducted from the total connection in 2006 and added back to the total connections for 2005.

⁸⁹ The 2007 Construction Industry Review and Outlook included an Appendix highlighting this issue. <http://www.dkm.ie/uploads/pdf/reports/DKM%20CIRO%202008%20Report%20FINAL.pdf>

- At the point of connection for electricity, and
- At the point of transactions, i.e. when funds are drawn down for a mortgage.

Briefly these points are described below.

Residential planning permissions

Information on the number of planning permissions granted, the number of units granted planning permission and the corresponding floor areas for multi-development houses, one-off houses and apartments are returned by local authorities to the CSO each quarter.

At present, the planning permission series is perhaps the most comprehensive measure of housing activity for the Republic. However, planning permissions granted are not tracked through to completion. Moreover, as permissions can have up to a five year life, it is difficult to establish the relationship between permissions, registrations and completions, and hence it is not possible to rely on planning permissions as an indicator of supply in any twelve month period. It is also the case that local authority housebuilding is exempt in the case where construction takes place in the Authorities' own area.

Residential commencements

Data is collected on residential commencement notices under the building control regulations by Building Control authorities since January 2004. This survey provides details of the number of residential units started for 37 Building Control authorities, with the number of single units identified separately. However, local authorities or builders carrying out work on behalf of a local authority are not required to submit commencement notices provided that the work is being carried out in the Authorities' own area. Thus, as with planning permissions, public sector units are not counted in the commencement series.

In regard to the commencement data, we understand that the commencement stage generally refers to the commencement of preliminary and other site works by the builder in advance of proceeding to construction of units. As such they comprise a proxy for 'housing starts'.

Residential registrations

All homebuilders and developers who are registered under the national insurance Homebond and Premier Guarantee schemes must register their dwellings with either organisation before construction can proceed. Registrations are made after commencements and are inspected on two occasions:

- Generally direct employees/ engineers and /or consulting engineers in private practice inspect each site on behalf of both guarantee company/insurance providers by visiting each site at the foundations stage. Once dwellings are inspected a Final Notice certificate is issued.
- An inspection is carried out when the dwelling is structurally complete. A minimum of 14 days notice before the dwelling is structurally complete is required for inspection.

Registrations comprise an important leading indicator of supply in the pipeline. However, the data published on registrations is very incomplete and relies on data from homebuilders and

developers who are registered with the national guarantee/insurance Homebond and Premier Guarantee schemes. Thus the data excludes housebuilders and developers who are not affiliated to either scheme, as well as some one-off housing units that are built directly by the owner and units completed by the public sector. In the current climate, it is also likely that the number of housebuilding firms affiliated to both insurance providers, may now be less, given the severe contraction in housebuilding over recent years. The timing can also be an issue as registrations are not always built in the year in which they are registered.

At present the published data on registrations does not differentiate between one-off houses and scheme houses.

Residential completions (i.e. electricity connections)

The most quoted measure of housebuilding is that provided by ESB Networks to the DEHLG, notably the number of 'electricity connections', the proxy used to date for measuring the number of dwellings completed. Data is provided monthly by ESB Networks to the DEHLG by county and by house type. The data is very timely - the latest monthly completions data on the DEHLG website at the time of writing (17/8/2010) are for July.

Mortgage based transactions

Data on total housing transactions does not currently exist in the Irish housing market⁹⁰. Transactions can be financed with a mortgage or with cash. The number of properties financed with a mortgage is available from Irish Bankers' Federation (IBF) data but there is no data available on non-mortgage based transactions. Similar data is reported for mortgage based transactions of new and second-hand dwellings by the DEHLG. The source in each case is the financial institutions. The latest IBF available data on the total value and number of mortgages is Q2 2010.

A4.2: Trends in housing indicators

The next Table shows the annual number of units published from each source since 2000, with the exception of the Planning Permissions series, which introduced a new methodology in 2001, and the Commencements series, which only began in January 2004.

The Table below suggests, that the number of new dwellings granted planning permission peaked at 101,653 in 2004, twelve months before commencements peaked (77,709 in 2005) and two years before registrations (66,649), completions (88,219) and mortgage drawdown (55,737) peaked in 2006. The independent collection of each series, and the lack of any tracking or follow through of units from planning permission to completion stage, possibly explains why the figures differ so much.

⁹⁰ The Government announced its intention in August 2010 to establish a new property transactions database which will report total sales and house prices, responsibility for which is to be allocated to the Property Services Regulatory Authority.

Table A4.1: Housing Indicators from 2000

	Planning Permissions	Commencements	Registrations	Completions (connections)	Mortgage Drawdowns New dwellings
2000	N/A	N/A	34,613	49,812	31,533
2001	78,446	N/A	28,845	52,602	29,431
2002	69,314	N/A	51,017	57,695	32,298
2003	78,354	N/A	56,859	68,819	35,292
2004	101,653	77,691	60,782	76,954	44,231
2005	99,352	77,709	62,284	86,157	53,758
2006	78,755	75,602	66,649	88,219	55,737
2007	84,397	48,876	38,351	78,027	46,588
2008	67,584	22,852	12,676	51,724	24,467
2009	40,556	8,604	3,743	26,420	9,832
2010 *	10,888	2,990	1,382	9,513	N/A

Source: Planning permissions www.cso.ie.

* 2010 data: [Planning permissions \(6 months\)](#), Commencements (5 months), Registrations and Completions (8 months) and Mortgage Drawdowns for new dwellings: www.environ.ie

While all of the 101,653 units granted planning permission in 2004 would not have been expected to be built out in the following year or indeed in the following five years, the figures suggest that the corresponding maximum number of units 'connected for electricity' was 88,219 (or 87% of permissions at the peak). Adjusting the 2005 commencements figure for the number of local authority units completed in 2006 (5,200), would imply total commencements of 82,909 in 2005.

Perhaps the most startling figure from the above Table is the difference between completions and mortgage drawdowns, implying that large numbers of dwellings were financed without a mortgage up to the peak, assuming all were sold at the time. However, it is clear now that not all new dwellings built were sold, given the position with respect to unsold stock, which is addressed below.

Taking the two series which appear to be the most comprehensive, i.e. commencements and connections, the relationship between them is examined more closely. Accordingly, the data for each are presented in the next Chart based on a running twelve month total for both completions and commencements, with commencements lagged by 12 months. A third line is presented for 'adjusted commencements lagged 12 months' which shows total commencements lagged 12 months plus public sector completions, as local authority units are not included in commencements. The latter should be a more comprehensive indicator of total completions in the pipeline in a given year. Thus (where t denotes year t)

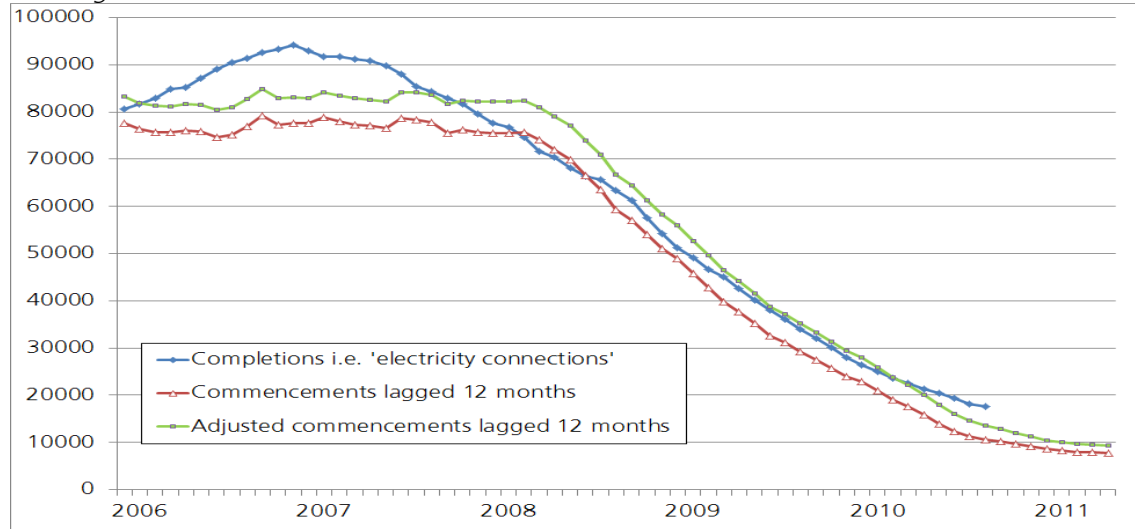
$$\text{Completions}_t = \text{Commencements}_{t-1} \text{ and,}$$

$$\text{Adjusted completions}_t = \text{Commencements}_{t-1} + \text{public sector completions}_t \text{ (on the basis of the adjustment discussed above)}$$

The lag of one year is a reasonable assumption, but there is no guarantee that commencements are built out within a year and can often take two or more years to be completed. Based on Figure A4.1 the adjusted commencements series provides a reasonable good fit for completions (i.e. 'connections') over the period March 2009 to April 2010, while the measure appears to have substantially underestimated completions in the year to May 2007, but overestimated them in the first half of 2008. This may be related to the time lag assumed.

Figure A4.1: Completions versus Commencements 2006 – 2011F

Running twelve month total



Source: Housing Statistics on www.environ.ie

The lagged adjusted commencements figure implies that total commencements in the year to December 2010 are projected at around 10,000 units, including an estimate for public sector completions and assuming all are completed within the year. Based on discussions with the industry and allowing for the fact that some commencements may not proceed in the year, the number of completions is estimated at 8,500 (including an estimated 1,800 public sector completions) in 2010. A substantial proportion of these are expected to be single units, approximately 6,000. The total number of single units commenced as a percentage of total commencements was 76% in 2009 compared with 25% during the boom.

A4.3: Completed units versus connections

When is the connection recorded?

The current proxy for housing completions is 'electricity connections'. According to ESB Networks, the point at which the electricity connection is made tends to be when the buyer moves into the house, although not in all cases. Generally, a developer/housebuilder will apply for a connection during construction at which point the main infrastructure is provided, including the service cables to the meter cabinet. When the customer moves in the meter is installed and the customer is 'energised'. At this point the electricity connection is recorded as a connection and would appear in the DEHLG figures.

There will be exceptions to this rule. For example, showhouses will be energised in advance of purchase and one-off houses will be energised at the point of completion, assuming the owner moves in straight away. In the case of apartments, the common areas will be 'energised' as one connection⁹¹ while the individual apartments will be connected separately when the buyer moves in. Under the revamped Building Regulations in 2008, which introduced higher standards for airtight homes, it is possible that a number of such units, albeit still unsold, would already have been connected for electricity. However it is impossible to quantify how many such buildings were connected as a result of the changes to the Building Regulations.

Thus generally it is the case that the electricity connection tends to be recorded when the buyer moves in.

This raises other issues as follows for the true measurement of housebuilding completions.

Housing cycle – periods of overbuilding and underbuilding?

In periods of high demand and high levels of housebuilding, one would expect new units to be connected immediately on completion. That said, an issue arose in 2006 when, due to a backlog of electricity connections in 2005, approximately 5,200 units had to be deducted from the 2006 completions figure and added back to the 2005 figure to get the true estimate of completions in 2005 (86,157). However, it may be reasonable to assume that as the market begins to turn, developers continue building, but the drop off in demand results in a build-up of unsold stock, which continues to increase until developers stop building. It is interesting that in October 2008, almost two years after the market started to turn, the Construction Industry Federation (CIF) estimated that there were 35,000 unsold new completed units in the market. This estimate was equivalent to just over two-thirds of the total estimated completions (i.e. connections) in 2008.

Similarly, in a weak market or in a period of underbuilding, as is currently being experienced, electricity connections can overestimate the true level of housebuilding in a particular year, and therefore, the true level of fixed investment in building and construction and hence the annual level of GNP.

In the current depressed market, with almost 9,523 units connected for electricity in the first eight months of the year (and only 8,500 new units expected to be built in 2010), it is likely that some of these represent the overhang of unsold stock from previous years. Similarly, the slowdown in demand from 2007 onwards, suggests that some of the connections recorded in 2009 and possibly 2008 represented dwellings built over previous years.

There is also the issue of work-in-progress which can be significant in a weak/declining market. There is some level of uncompleted units in the market at present which have not yet been included in the estimate of housing output but would have represented housebuilding activity in the year in which they were commenced.

⁹¹ If this separate electricity connection for the apartment management company is included in the DEHLG figures, the latter will overstate the level of new building.

A4.4: Estimating the true level of housebuilding

Based on the above issues, some adjustment is required to the connections figures over recent years to measure the true volume of new residential construction each year. This adjustment needs to take account of the following:

- Some of the new units connected for electricity in recent years were built in earlier years, and
- Some unsold new stock, has yet to appear in the connections⁹².

Adjusting for building in earlier years

Adjustments are made to the connections figures in 2009 and 2010 only, on the basis that some of the units connected in those years were built over the period 2006 to 2010. Thus of the 26,420 connections in 2009, it is assumed that 18,000 were built in 2009, with the balance constructed in 2006, 2007 and 2008.

Similarly in 2010, the estimated 15,000 connections (based on annualising the figure of 9,523 for the first eight months) are distributed over the period 2006 to 2010, with an estimated 8,500 units constructed in 2010.

The retrospective distribution of connections over previous years is based on best estimates following industry consultations and is derived on the basis that significant overbuilding took place in 2006 and 2007. There is no adjustment made to the 2008 connections figure, although it could be argued that a similar adjustment should also be made.

Taking account of the unsold stock

In respect of the unsold new stock the only estimate available is from the CIF. The most recent estimate for the unsold stock, according to the CIF, is 25,000 completed units. As previously acknowledged, it is likely that a proportion of these units are already connected for electricity, reflecting the revised Building Regulations for airtight houses. As it is impossible to quantify how many dwellings are in this category, it is assumed that 10,000 are already included in the connections figures, leaving 15,000 to be distributed over previous years. Thus 15,000 finished units which remain to be connected are assumed to have accumulated over the period 2006-2008 as follows: 4,000 per annum in 2006, 2007 and 2008, and 3,000 in 2009.

The DEHLG is currently finalising a comprehensive national survey to quantify and categorise the scale and distribution of unfinished housing developments (of two or more housing units) across the country, including the level of new completed but vacant housing within those developments. The survey will, for the first time, establish an evidence basis for further action at local authority and national levels.

⁹² Under the revised Building Regulations (2008), it is possible that a number of the unsold units were 'airtight' houses, which by implication would have necessitated a connection to the electricity network.

The survey was conducted by way of site visits by Departmental housing inspectors to every housing development commenced at the time of survey (Summer 2010) but not complete and by carrying out a physical count and categorisation of the different stages of completion of all housing commenced within the developments.

Publication of the results of the survey is expected in early Autumn 2010, to be followed by co-ordinated action at national and local levels in addressing the practical and policy issues in managing and resolving issues created by unfinished housing developments.

This current review of vacant stock by the DEHLG will produce a more comprehensive estimate of the unsold new and unfinished stock around the country.

Based on the above assumptions, the figures in Table A4.2 present an alternative view of the number of dwellings built for the period 2006 to 2010. While a number of assumptions have had to be made to arrive at these adjusted figures, it is nonetheless necessary to take into account the current severe downturn in housebuilding activity, the weak market and the current overhang of unsold new units. Without some adjustment the level of investment in new residential construction would be overestimated in the weak years and underestimated in earlier years. Moreover as the production of new dwellings is unlikely to recover until the majority of the overhang is sold, the projected level of new housebuilding in 2011 is 7,500 units.

Table A4.2: New dwelling completions – adjusted for slowdown and unsold stock

	2005	2006	2007	2008	2009	2010E	2011E	
1. Total 'connections' per DEHLG	80,957	93,419	78,027	51,724	26,420	15,000		
2. Adjustment to connections per ESB	5,200	-5,200						
3. Estimated completions (*)	86,157	88,219	78,027	51,724				
Adjusted completions:								TOTAL
4. Connections in 2009								
by year of construction (est)		3,000	3,000	2,420	18,000	0		26,420
5. Connections in 2010								
by year of construction (est)		2,000	2,000	1,500	1,000	8,500		15,000
6. Unsold new stock (**)		4,000	4,000	4,000	3,000	0		15,000
7. Adjusted completions #	86,157	97,219	87,027	59,644	22,000	8,500	7,500	
8. difference (7-3)	0	9,000	9,000	7,920	-4,420	-6,500		15,000

* Based on using connections as a proxy for completions. 2010 figure of 15,000 is DKM estimate.

** Based on the CIF current estimate of 25,000 units for the unsold new stock and assuming that 15,000 units remain to be connected for electricity while 10,000 units are already connected, on the basis that they are 'airtight' houses.

The sum of 3, 4, 5 and 6.

Implications of the adjustments for completions

The main implication of taking both factors - the slowdown in housebuilding and the unsold stock - into account is that the estimates for the number of new units built are higher in 2006, 2007 and 2008 and lower in 2009 and 2010 than the published connections figures. Thus the number of units built at the peak is estimated at 97,219 in 2006 compared with 93,419 electricity connections. The number of completions in 2007 is also revised upwards from 78,027 units to 87,027 units. Similarly, there is also an upward revision to the 2008 figure, from 51,724 units to 59,644 units. Reflecting the severe contraction in housebuilding in 2009 and 2010, the estimate for new housebuilding is revised downwards, from 26,420 to 22,000 in 2009 and from an estimated 15,000 connections to 8,500 units in 2010.

Thus connections over the period 2005-2010E have underestimated the level of dwellings built by 15,000 units.

Table A4.3: Total connections versus housebuilding 2005-2010E

	2005-2010
Total 'connections' 2005-2010E	345,547
Total dwellings built 2005-2010E	360,547
Difference: yet to be connected for electricity	15,000

A4.5: Summary

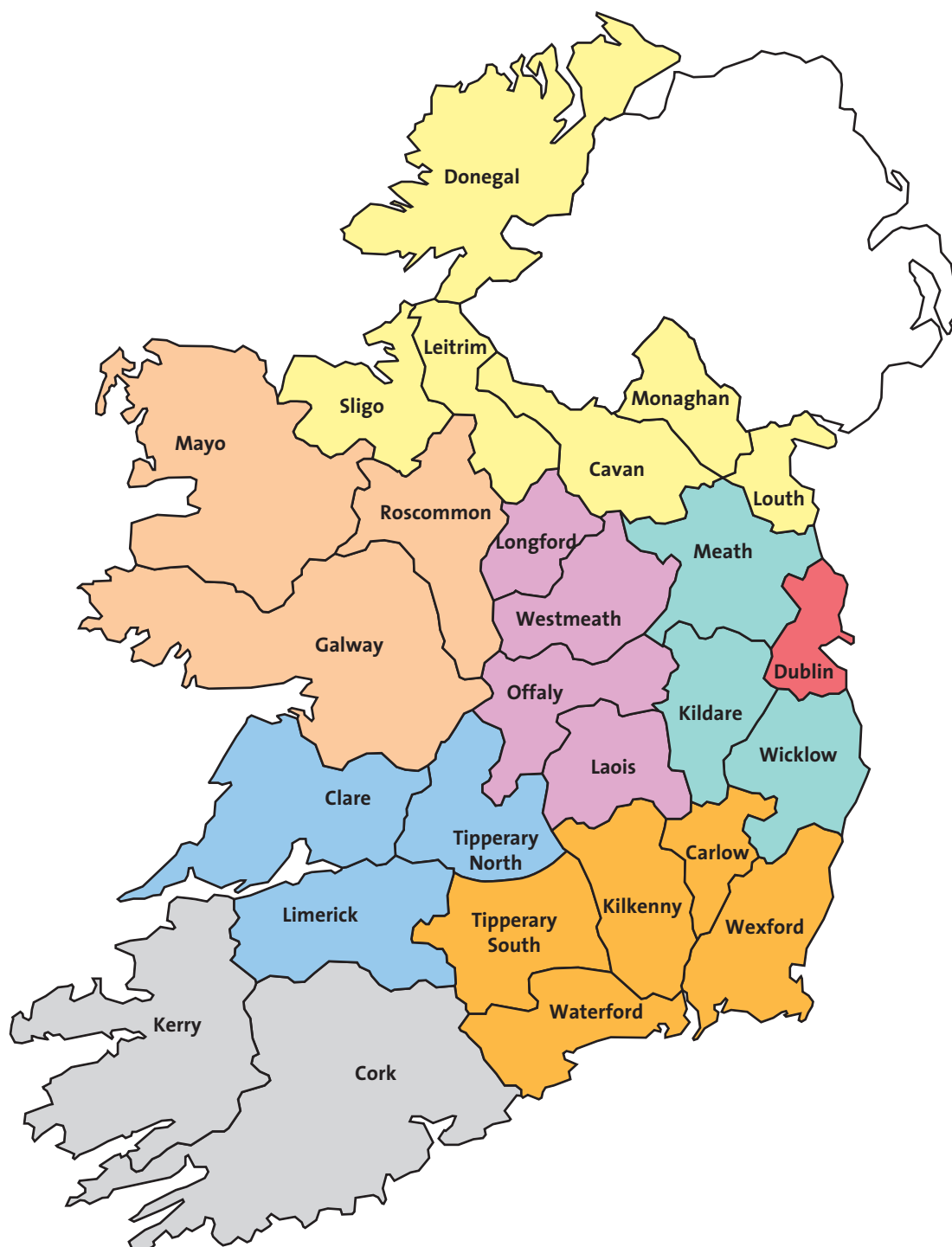
Thus, based on the preceding analysis, the outturn for the value of residential construction output needs to be revised upwards in 2006, 2007 and 2008 compared with estimates in the 2009 CIRO. From a national accounts perspective, this would imply a higher GNP figure in 2006, 2007 and 2008, but a lower figure in 2009 than currently estimated by the CSO.

This exercise is intended to illustrate the difficulties with the current dataset and suggests that more accurate measures of completed units and sales/transactions need to be developed which take into account the impact of the sharp contraction in housebuilding, while the market is adjusting to more normal supply levels⁹³.

The above adjusted measures of housebuilding output over the period 2006-2010 are used to estimate the value of new residential construction in the CIRO this year on the basis that they represents a more accurate measure of what actually transpired over the past four years.

⁹³ This raises an issue about what should be the definition of a completed dwelling? Is it when a house is structurally complete or when it is finally completed and ready for occupation, or is it when the house is first occupied? It would greatly assist the measurement of housebuilding if it was possible to trace the relationship between completions and the other housing indicators in the stages of the building lifecycle back to their corresponding permits, commencements and registrations.

Construction output by region, 2009



	Output (€m)	Share (%) of output	Share of population (%)
 Border	1,739	10%	11%
 Dublin	5,313	29%	27%
 Mid-east	2,228	12%	12%
 Midland	1,318	7%	6%
 Mid-west	1,220	7%	8%
 South-east	1,938	11%	11%
 South-west	2,502	14%	15%
 West	1,789	10%	10%
Total output	18,048	100%	100%
S&E	13,201	73%	73%
BMW	4,847	27%	27%

Note: Percentages may not add to 100 due to rounding.



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