Irish Congress of Trade Unions

Revised and Updated

Delivering Growth & Jobs

Funding a major new investment programme for Ireland





Summer 2012

Contents

1

Executive Summary	2
Introduction	3
1 The Case for Investment in Jobs & Infrastructure	6
2 Where Will the Money Come From?	9
3 Proposals for Investment in Particular Projects	16
4 Impact on Employment and the Economy	21
Conclusion	24
References	25
Appendices	28

Executive Summary

2

Congress is proposing a targeted, frontloaded, strategic investment of upwards of an average of €3bn each year over the next three years, in addition to the committed public capital programme; an annual boost worth almost 2% as a share of GDP to the Irish economy. Our objective is to deliver much needed strategic infrastructure at a fair cost that, where possible, would be kept off the State's balance sheet. This would expect to generate in the order of 30,000 jobs per annum.

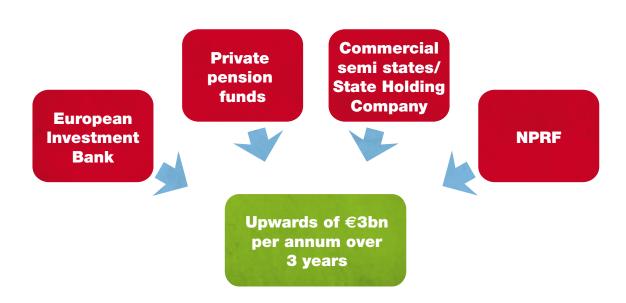
It would begin to offset the deflationary impact of fiscal austerity, which has already taken €24.4bn out of the economy over the past four years.

While this economic initiative would not solve the problem of unemployment immediately or secure full economic recovery, it would:

- (a) Help to restart domestic economic activity;
- (b) Meet vital long-term infrastructure needs and reduce the deficit;
- (c) Boosting private investors' confidence and giving people greater hope;
- (d) Reduce long-term, structural unemployment, and;
- (e) Boost long-term growth and competitiveness.

We set out where the funds for such a stimulus could be sourced. It would be from a mix of public, private and European/ international sources and in turn it would mean a reduction in the public sector deficit because of higher revenues and lower payments as unemployment falls (see Figure 1).

Figure 1: The proposed sources of funding



Introduction

At last the political winds have begun to shift direction. Recent events in France, Italy and the Netherlands have awakened EU leaders to the reality that one sided austerity policies can no longer feature as the sole course of action in this economic crisis. It is now recognised that Europe needs a coordinated fiscal stimulus if it is to have any chance of emerging from this double-dip recession. Tentative signs of this are already beginning to emerge and we are seeing a more accommodating stance on the part of those pushing the fiscal retrenchment agenda in the EU. In Germany, the deeply conservative Finance Minister Mr. Schauble has spoken of the desirability of wage increases for German workers. The German metalworkers union has negotiated an increase of 4.4% over 13 months. In addition, some two million public sector workers have secured an increase of 6.3% over two years, with the deal front-loaded to deliver an initial rise of 3.5%. Meanwhile over 50.000 chemical workers have won an increase of 4.1%. The Bundesbank has also softened its stance on inflation.

For Ireland, these are very significant developments. We can hope to benefit from any increases in funding for infrastructure and human capital and from innovations in how this funding is delivered. For thousands of Irish businesses and jobs which depend on the EU single market to sell their goods and services, any boost to EU GDP will also bring a positive spillover to export demand in Ireland. This country depends on intra EU trade for 58.2% of its goods exports and an even higher share of 61.3% for its services exports.¹ These developments alone, however, will not be sufficient to lift Ireland onto a sustainable growth path. The challenge faced by our Government is on a scale few others have ever experienced. By the end of this year, Ireland will have recorded the largest loss of jobs of any economy across the advanced industrialised world since the Great Depression, with a drop in employment by end 2012 of close to 17% over just five years.

The Irish domestic economy is set to enter its sixth successive year of contraction in 2013, weighed down by a burgeoning unemployment problem and persistent fear and uncertainty regarding the future of both the Irish and European economies. The numbers on the Live Register may have peaked, but this masks a growing problem of structural long-term unemployment and forced migration. Without investment in skills and training, in the country's infrastructural capacity and in businesses, there will be no growth with any real impact on employment or demand.

In their review of the capital investment needs of the Irish economy 2012-2016, the Government argued that "while there may be advantages to continuing with high levels of capital expenditure in order to give stimulus to the economy, the need to reduce public expenditure and close the fiscal deficit is a more compelling policy goal at present."

On the contrary, we don't believe this trade-off is necessary. A type of fatalism has crept into certain quarters of the Government with a view taking hold that with Irish General Government debt and

¹ Faes Cannitto F. et al (2010).



the General Government deficit at such a high level, very few initiatives of significant scale can be undertaken.

Instead, we argue that an imaginative and innovative approach to promoting investment in the country may actually have the potential to reduce both the deficit and the national debt. According to current Government forecasts, Ireland will record primary surpluses by 2014 – this is where the gap between current income and expenditure, less interest payments will be effectively closed.

However, the scale of our debt servicing payments, relative to our rate of economic growth, means that Ireland will be grappling with structural budget deficits for a long number of years. Indeed, Ireland has no choice but to put in place a sustainable growth strategy.

The ESRI² has argued that any stimulus programme would be futile; that the openness of the Irish economy would imply high leakage of any fiscal boost and that access to funding would prove too difficult. Yet compared with other sectors, construction has a relatively low import content at 20%³ and while this will vary according to different civil engineering and building projects, the important point is that the rolling out of much needed infrastructure projects can be prioritised according to their import content and labour intensity.

For the ESRI and others, it is simply not good enough to dismiss any attempt to kick start to the domestic economy by fleeting reference to previous chapters in Ireland's economic history. There are important lessons to be taken from the experiences of the 1950's, 1970's and 1980's, but abandoning any hope of reviving the economy is certainly not one of them. The 1950's marked a period when protectionism ran out of steam, indigenous companies failed to adapt to changing economic circumstances, rising consumerism saw imports increase and a balance of payments crisis ensued. The lessons for today's Ireland is that the Irish domestic sector must remain competitive and we have seen a 16% improvement in the harmonised competitiveness indicators (deflated by whole economy unit labour costs) over the 3 years since Q3 2008,⁴ domestic consumption has remained in a slump thereby depressing import demand, wages have remained relatively flat, with the result that balance of payments surpluses have been recorded since 2010 and this is expected to continue for future years. Fears of a future balance of payments crisis as a result of stimulus appear unfounded.

The late 1970's saw a fiscal expansion engineered to stimulate the economy and reduce the exchequer deficit, but paying for this coincided with a time where inflation was high and rising, there had been a jump in global interest rates and a slowdown in the UK economy. The mistake made then was to pursue a policy where spending effectively chased inflation and the national debt ballooned. On the contrary, Irish fiscal policy during this current crisis has

² ESRI (2012).

³ Source: CSO Input- Output tables, 2005.

⁴ Source: Central Bank Quarterly Bulletin April 2012.



been pro-cyclical, in that efforts to reduce the deficit have further exacerbated the decline in the domestic economy. With interest rates at an all-time low, there is little prospect of inflationary pressures taking off in today's economy.

The current Government has recognised the need for a strategy to deliver jobs and growth for the country and while the initiatives taken to date must be acknowledged, ultimately they are but one very small step. Their success will be measured only in terms of the quantum and the speed in reviving domestic demand, boosting confidence to spend and invest and returning the large numbers currently out of work, back into sustainable and high quality jobs. More must be done and more can be done. The Government itself concedes that there are alternative sources of funding.⁵ The scale and timing of any new strategy will be key.





5 Dept. of Public Expenditure and Reform (2011).



The Case for Investment in Jobs & Infrastructure

6

Investment is the key to future economic growth. It would generate its own multiplier effect in terms of jobs created and increased purchasing power. More importantly it would tackle the medium term infrastructural deficiencies in the Irish economy that have such a bearing on the long term growth potential of the country.

In 2008 and 2009 at the start of this global crisis, a large number of Governments across the world responded to the series of financial and macroeconomic shocks with stimulus packages to bolster domestic demand over the short term. In terms of financial weight, investment into infrastructure, education and green technologies received the largest allocation of funding, above tax cuts and cash transfers⁶. We propose a significant investment worth almost 2% as a share of GDP each year over a three year period in addition to the committed Public Capital Programme. Forfás identify a number of key infrastructure projects and we discuss them in greater detail in Section 4. Ultimately, a comprehensive stimulus package needs to incorporate investment into physical economic and social infrastructure as well as human capital.

Further Infrastructural Development

Ireland's investment record over the eleven years until the Crash averaged a very strong 5.7% of GNP. This was one of the highest levels of public investment in the world, although with the exception of our inter-city road network, few in this country would argue that we now enjoy 'superior' levels of education, health and telecommunications facilities⁷.

However, it is incorrect - as some have argued- to assert that Ireland's infrastructure has now attained continental European standards. Children are still being taught in prefabs located on school grounds, large queues exist for public health facilities and public transport linkages, particularly on the Western seaboard, remain inadequate. We were on the road to catching up with Europe, but we were stopped short.

Nor is it the view of business that we attained European levels of public infrastructure from the eleven year investment boost. In a World Economic Forum Study (2011), business executives ranked Ireland a low 24 out of 28 countries for our quality of infrastructure and significantly below the OECD average.

⁷ White R. (2010). The paper makes the argument that much of the capital investment between 2000-2008 was misallocated.

The National Competitiveness Council (2011) has said "deficiencies remain."

It says there is improved value for money to be had now:

"Notwithstanding the challenges for the State in raising external finance, infrastructural investments offer a potentially attractive investment opportunity for private sector finance" e.g. far above what pension funds have generated (a mere 0.7% over a decade to 2011).

Stimulating Job Creation

With a permanent contraction in the construction, retail, hotel and some traditional manufacturing industries the challenge now is to mitigate, in the ESRI's words "the painful permanent scar" that has been left on the Irish economy. This will involve massive efforts to stave off a hysteresis effect among highly qualified workers and will require adequate facilities to upskill those who are not. Unless serious inroads are made into reducing the level of unemployment, the long term costs associated with entrenched social and economic problems will far exceed the short term gains accrued by cuts in current expenditure under a fiscal adjustment programme. Already, some 43% of those jobless or on part time hours are signing on the Live Register for 12 months or longer.

The true extent of unemployment is understated by the 'standardised unemployment rate' of 14.8% in March 2012. The total level of under-employment in the Republic is currently estimated by the CSO at 25% of the 'wide' Labour Force in the final quarter of 2011. The most recent forecasts of the IMF project an unemployment rate which is still above 10% in 2017 indicating a continuing high level of long-term 'structural' unemployment.⁸

The biggest single obstacle to creating employment is the depressed state of domestic demand in the Irish economy. The way to tackle this problem is through economic growth, investment and job creation which can generate new revenue and save on spending by getting people back to work. There is, therefore, an urgent need to redress the deficit in demand for work through a balanced investment stimulus that is driven by the Government, but which mobilises investment from private sources.

The investment stimulus proposed here, is only one part of a long-term strategy to achieve economic recovery, sustainable development and greater equality. The timing of an investment stimulus is crucial. It will take time to put in place additional investment. A lead-in is required to secure additional funds, make necessary changes to legislation where such is required and evaluate the benefits of any proposal, in terms of its social, economic and environmental impact.

⁸ IMF (2012).

8

Spare Capacity and Lower Prices

Currently two out of every five persons signing on the Live Register were previously employed in the craft trades or as plant and machine operatives⁹. Many, but not all of these individuals would have originated from the construction or constructionrelated sectors.

At a time when very significant spare capacity exists in terms of available skills and where competition in the sector has reduced tender prices back to 1998 price levels¹⁰, there is considerable potential to procure infrastructural works at pre Boom prices. The range of projects is set out in Section 4. An injection of a given amount of capital investment has a short-term impact on employment and outlook. It would be necessary to phase out the stimulus gradually over time.

It should be noted this recommendation is less ambitious than that from the Construction Industry Council in its submission to Government in 2009¹¹, as well as the proposals made by one of the Government parties in 2010¹².



Source: CSO (2012). Live Register data for April.
DKM and RICS (2012).

CIC (2009).
Fine Gael (2009).

Where Will the Money Come From?



In the context of a general government debt set to peak close to 120% by 2014, the constraints to additional government borrowing are very clear. With Irish 10 year sovereign bond yields now trading in excess of 7% on the secondary bond markets, the Republic remains effectively shut out of international capital markets. The Public Capital Programme 2012-2016 has been stripped back to just €3.9bn, with a number of key investment projects mothballed and the budget for other significant sectors reduced to maintenance of existing facilities.

Imaginative ways must be found to leverage in additional investment into the Irish economy. Our plan for jobs and growth, which would be largely 'off balance sheet' is based on four main pillars;

- (i) Direct investment by the National Pension Reserve Fund.
- (ii) Incentivised investment by Irish private pension funds through exemption from the pension fund levy.
- (iii) Co-financing with the European Bank
- (iv) Co-financing with the Commercial Semi states.

There is also a suggestion that Nama could play a role in developing commercial and office space to attract in foreign direct investment.

(i) The National Pension Reserve Fund

The establishment of the Strategic Investment Fund in September 2011 is to be welcomed, and places the NPRF as the cornerstone investor in key strategic infrastructure investments and which in time will attract in other investors. However, two obstacles must be overcome to ensure that the Fund's resources are maximised in a strategy for growth and jobs in this country.

The Fund's mandate for infrastructural investment is limited to 5% of the value of the Fund. At the end of December 2011, there was €5.4bn in the discretionary portfolio of the National Pension Reserve Fund (NPRF). We call for this limit to be raised and propose that half of the current value of the discretionary fund be allocated to domestic infrastructure projects.

To date, interest by private and the State's own pension fund in investing in infrastructure in Ireland appears limited to the taking of equity stakes in particular utilities. This has to be overcome. New ways will have to be established to ensure the Fund invests in both so called 'greenfield' (new) as well as 'brownfield' (existing) projects.

(ii) Occupational Private Pension Funds

With upwards of €80bn held in Irish occupational pension funds and the vast majority invested abroad, there is now a real opportunity to attract some of this funding into Irish projects and assets. Across the Irish Sea, the Greater Manchester pension fund is a prime example of how the pension funds of ordinary workers in local authorities, academies and housing trusts can be put to use by investing in the local area on a commercial basis.



Furthermore, the CBI and the British Chamber of Commerce have hailed local councils for investing locally, during their call for greater investment in Britain¹³. Here in Ireland, pension funds have already signalled a willingness to invest some €300m-€400m in Ireland through the Irish Infrastructure fund¹⁴. This qualifying investment fund is a joint venture between the NPRF, Irish Life Investment Managers and AMP capital - a world leading Australian infrastructure investment fund, which will focus on purchasing state assets, when and if they become available for sale.

The challenge must be to go beyond this and incentivise pension funds to invest in projects and schemes with a commercial return that will add to the productive capacity of the economy, either through new infrastructure or upgrading existing facilities, and not just reduce the overall debt levels of existing semi state companies or privatise them. The Irish Infrastructure Trust confirms that it is not opposed to venturing into greenfield investment, but the challenge remains to identify projects which these funds could be attracted into.

Although Congress supports the Government's Jobs Initiative, it is opposed to the pension fund levy as a tax on occupational pension funds. We believe the pension fund levy can be used to incentivise investment by the pension funds, into the domestic economy in Ireland. The first payments of the pension fund levy were made in September 2011 and we are proposing that this payment be rebated at a future date, on condition of investment in specific Government approved projects or qualifying funds.

In order to qualify for a rebate, pension funds would have to invest a fixed multiple of the levy which amounts to 2.4% over four years. If the fixed multiple is set at 5% over the three years, the net cost to the pension fund of the investment amounts to only 2.6%. In value terms, this has the potential to inject upwards of €4bn into the Irish economy over the next 3years. Alternatively, a tax credit could be issued to pension funds for investment into specific projects located here.

In effect, the levy would constitute a short term loan for the Government to ensure cash flow for the jobs initiatives, whereas for pension funds, the rebate would be an incentive to invest that would add to the total value of the assets of the pension fund.

With regard to the minimum funding standard for pension funds, the levy would be rebated over a period of years and as such it appears that it could not be classified as an actual asset of the pension fund until it is paid. However, a legislative provision could be put in place to ensure that in the event of a winding up of a pension scheme, the rebate would be payable immediately and in full by the Government.

¹³ Financial Times, April 10th, 2012.

¹⁴ Shields Richard (2012).



(iii) New & Innovative Financing: Working With the EIB

The call for greater investment in strategic infrastructure and the difficulties associated with funding it are not just confined to Ireland.

The EU Commission estimates that infrastructure investment across the EU of between €1.5tr-€2tr - in the areas of energy, transport and ICT - will be required by 2020¹⁵, yet a number of factors have combined to result in a massive funding gap¹⁶.

By way of response, the European Commission established the Connecting Europe Facility to accelerate infrastructure development across the EU and in October 2011 it unveiled proposals for a Project Bond Scheme.

If successful, the participation of the EIB in a Project Bond Scheme will attract in additional private sector investment. The first project bonds are due to be piloted during 2012 and 2013. Added to this, it is also expected that EIB resources will be further bolstered during the June summit of EU leaders as part of the shift towards the new Growth agenda at the EU level. Ireland should hope to benefit from these developments. To date, take up by Ireland of EIB loans has been low. In 2010, only €241 million or 0.96% of all EIB loans were for projects in the Republic and Forfás in its 2012 report on Infrastructure¹⁷ has pointed to the scope for greater take-up of these loans on the part of the Irish authorities.

Existing EIB investments in Ireland range from a combined-cycle gas turbine power plant in Co. Cork (\in 197m), construction of 23 post-primary and four primary schools in the Republic (\in 44.2m) and the demolition, upgrading, refurbishment and construction of social housing in the Republic (\in 105m).

As part of the proposal for growth and jobs, additional exchequer-funded projects could be matched with funds from the EIB and the Council of Europe Bank (CEB) to invest in infrastructure. The EIB and CEB, together, could match a total of €5 billion (including funds via NPRF and CCSCs).

(iv) Commercial Semi-State Company (CCSC) Borrowing

Already, the commercial semi state companies are engaged in the reinvestment of earnings back into their own capital investment. There is also a precedent for some of the larger semi state companies to co-finance projects in the areas of telecommunications with the State having previously collaborated with the ESB, Bord Gais Éireann and the local authorities to roll out broadband networks.

In the context of the state's asset disposal programme, the Congress concept of the State holding company is more relevant

¹⁵ European Commission (2011).

¹⁶ The constraints in the public finances of individual member states is the most obvious reason, alongside a lack of appetite in capital markets for bonds of very long maturity to the contrary we have seen a flight to shorter maturities. Added to that, there was the collapse of the monoline industry, which in its time was an effective substitute for investor expertise and the need for due diligence when investing in a particular project.

¹⁷ Forfás (2012).





12

than ever. The establishment of NewEra goes some way towards this but it falls short in that the government intends to sell off, on an individual basis, key strategic parts of various semi state companies. The State Holding Company concept differs from this in that it provides the potential for the assets of existing and new semi state companies to be pooled together in common ownership, and with better governance, from which additional capital could be leveraged.

A minority passive stake could be taken in this State Holding Company, by private investors that yields a regular income without impacting on the strategic direction of the companies themselves. Conditions have been set down in the bailout agreement for once-off revenue-raising measures and it seems that such revenue raising could be undertaken though the sale of a minority of corporate bonds in a State Holding Company.

(v) Sale of State Assets

Although the Government has made an agreement with the Troika to allocate upwards of 50% of the proceeds from the sale towards a jobs and investment strategy, we do not consider this as part of our funding model.

Congress remains opposed to the planned disposal of state assets. There is no economic or strategic justification for the sale other than to raise money for the State and in a depressed market the assets would only command bargain basement prices.

The Government has committed to proceeding with the disposals only when market conditions recover. Based on current market prices for utilities and state owned infrastructure, it is far from clear that such sales will be completed.

Bringing the funding together

Since 1999, there has been a growing dependence by successive Irish Governments on private sources of capital to deliver the public capital programme¹⁸.

Although significant budget surpluses were recorded in the pre-recession period, Government policy was effectively following the growing trend set by other countries in the English speaking world which had outsourced the construction and the maintenance of vital infrastructure to the private sector. In a period of very high economic growth, this policy shift was justified on the grounds that Ireland needed to speedily ramp up infrastructural development¹⁹. Greater value for money and timely completion of projects were promised on the basis that the private sector had superior scale and technical efficiencies.

However, recent evaluations of these projects have suggested otherwise, thereby confirming traditional trade union concerns about the excessive profiteering of the private sector operators and the sponsoring banks, at a major cost to the State.

The current fiscal circumstances now demand that new and innovative ways are considered to draw in sources of private capital at a fair cost to the State.

18 Reeves E. (2011).

¹⁹ Ibid.



In order to minimise the impact on the General Government balance sheet and to avoid up front capital costs, two models for investment must be considered:

- (a) Use existing commercial semi state enterprises to channel funding from the EIB and other funding sources.
- (b) New form of Public Private Partnership that would see private pension funds replace the banks as one of the chief sponsoring agencies. O' Rourke and Barrett (2011)²⁰ adapt the traditional PPP to a model based on 60% senior debt, 20% subordinated debt and 20% equity.

The appropriateness of either model will be determined by each sector.

The severe tightening of the banking sector's liquidity along with the collapse of the monoline industry means that the traditional PPP model is now in abeyance.

The need to replace banks as the traditional main source of finance is now causing a rethink on how to harness other forms of private capital and the creation of the European Infrastructure Bond is one such response.

Here in Ireland, we propose that the private pension funds can play a major role in filling that funding gap and if appropriately structured, we believe that capital can be made available for the roll out of a significant number of key infrastructural projects along with funds flowing into venture capital and SMEs. There appear to be four main issues in terms of drawing in occupational pension funds into infrastructural investment.

(i) Commerciality of Return

There are a number of economic infrastructure projects which would deliver returns which should satisfy the commerciality criteria.

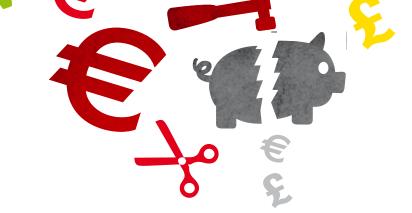
(ii) Liquidity of Investment

While infrastructural investment offers a good fit in meeting pension funds need for long dated maturities, the relatively illiquid nature of a physical building, infrastructure etc creates difficulties in terms of compliance with the minimum funding standard. It is proposed that a Special Purpose Vehicle (SPV) or qualifying investment fund would be established which would pool a number of projects or investments, thereby minimising exposure to any one project. Investment into this SPV by the private pension funds would be by way of a securitised Project bond.

(iii) Risk sharing

While there appears to be a degree of willingness on the part of Irish pension funds to participate in this plan, this comes at a high cost in terms of state guarantees and demands for excessively high returns. Co-investment by the EIB could go a long way towards overcoming these demands. Under the EU project bond proposal, private pension funds would invest the bulk of the debt but that this would stand senior to the EIB subordinated debt. In effect, the EIB would be underwriting the private pension fund investment. Investment by other sources of capital such as commercial semi states or the NPRF would have to stand parri passu with the private pension funds.

²⁰ O'Rourke C. and Barrett R. (2011).



(iv) Credit rating

The credit rating of the Irish State currently stands at BBB+ and in effect, this largely extends to the commercial semi state companies and other entities established by the State. Depending on the structure of the investment, participation by the EIB would have the effect of enhancing the credit rating²¹ up to a level ranging from A to AAA, therefore making the project bonds eligible for consideration by pension funds and other institutional investors, who must comply with funding standard criteria.

(v) Capacity to undertake due diligence

With the exception of very large pension schemes, few occupational pension schemes rely on their own due diligence procedures for their investment strategy. Participation of the EIB in the scheme overcomes this issue in two principal ways. Firstly, it will complete its own assessment of the scheme and thereby will draw in additional private investors due to reputational effect.

Secondly, it will usually underwrite the scheme as subordinated investors thereby placing private pension schemes as senior creditors. The only major exception to the EIB participation may be in social infrastructure. The EIB has already invested in schools projects here in Ireland, but under the EU project bond proposal, investment will be confined to energy, telecommunications and transport.

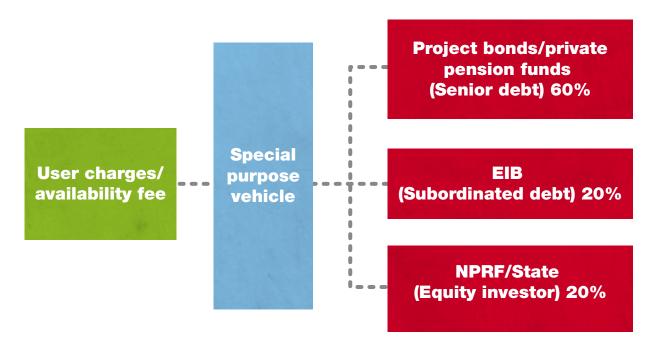


Figure 2: Suggested SPV model for investment

14



The proposed composition of debt to equity follows from Barrett and O'Rourke's (2011) adaption of the traditional PPP model to developing infrastructure in the current economic circumstances.

Under the conventional PPP model, the project sponsor, usually the construction company, would hold 10% of the project. But in current market circumstances, it is believed this would need to be closer to 20%.

Traditionally, banks provided debt worth up to 90% of the costs of the project. Barrett and O' Rourke (2011) estimate that securing senior debt worth 60% of the cost of the project is now the maximum in current market conditions. Some 20% of the costs of the projects would then need to be secured from the EIB as subordinated debt.

Keeping Projects 'off Balance Sheet'

Although Eurostat determines on a case by case basis whether a project should be allowed off balance sheet, there are a number of guiding criteria contained within national accounting rules ESA 1995. Construction risk, demand risk and market control appear to be the key factors in designing a model for the delivery of an infrastructural or other public project that aims to minimise the impact on the Government's balance sheet.

In general, in cases where the state controls and owns less than 49% of the scheme and user charges are charged at a commercial rate and recover more than 50% of the total cost of operations, the scheme can remain off balance sheet. Alternatively, when the State is the sole procurer of a service or user of a facility, but where the operating lease stipulates that that the construction and demand risk is borne by the contractor, this project is also likely to be kept off balance sheet. This is perhaps best illustrated in the case of a school in that the Department of Education is locked into a contract for use of the school facilities insofar as those facilities fulfil the Department's needs in terms of adequacy of space to handle a particular number of pupils, fully functioning facility etc.

In cases where the State bears a portion of the demand risk and availability fees are paid by the State above or below a certain demand threshold, this too also appears to be possibly compatible with off balance sheet status.

However, where the State is the sole procurer of services or user of a facility and where it bears the majority of demand risk in terms of ensuring that it is open and fit for purpose, such as in the case of a hospital, the State's share of the project has to go on the State's balance sheet.

Proposals for Investment in Particular Projects



There are four core objectives to our plan to deliver economic growth and generate jobs; (i) leverage additional funding for the commercial semi states, (ii) draw in private, non governmental sources of capital, (iii) deliver infrastructure in a cost effective way and (iv) where possible, keep the projects 'off balance sheet'.

Following on the infrastructure needs assessment in chapter 2, it is important to identify the delivery model for those projects and the possibility of keeping them off balance sheet.

i) Investing in Broadband

Forfás and the National Competitiveness Council have identified the roll out of advanced broadband as the number one infrastructural priority to enhance the productive capacity and competitiveness of this country.

To date, the overwhelming dependence on the private sector to invest in broadband with the State only stepping in to address locations of market failure - has meant that Ireland severely lags behind other competitor countries, in terms of upgrading the local broadband access network to fibre and offering very fast broadband speeds over fibre. In Ireland only 0.5% of connections are over fibre compared to an OECD average of 12% and 55% in Japan. Of the 28 OECD countries, Ireland ranks 14th in this area²².

While the perception may be that broadband access in remote areas and locations on the Western Seaboard is the only deficiency in this sector, in reality a much larger issue exists in upgrading existing high speed broadband in the main urban areas.

Resolving these issues requires not only financial investment, but also enhanced co-ordination at planning level between the various utilities and local authorities. In terms of investment, there are currently two developments which have the potential to radically improve broadband in this country. The unveiling of the European Commission's €50bn Connecting Europe Facility in October 2011 should have a significant impact on this sector. The second development will be the publication of the National Broadband Plan by the Department of Communications, in July of this year.

Delivery

The Government must maximise the potential benefit from the Connecting Europe Facility by leveraging as much nongovernmental capital as possible for the roll out of broadband projects. To do this, it will first need to set down concrete targets for fibre roll out. Failure by the private sector operators to step forward with a plan to address the shortfall over a short period, should mean that the Government would look to the existing commercial semi states to co-fund the project. As user fees charged to the market for broadband should cover more than 50% of the operating costs of the scheme, this scheme should stay off balance sheet.

ii) Retrofitting & Energy Efficiency

In the 2009, the Government's National Energy Strategy committed to achieving a reduction of 20% in energy demand through energy efficiency measures across the whole economy by 2020. Residential

²² Forfás, (2011).

stock is expected to contribute 35% to meeting this target and retrofitting will play a significant part in improving energy efficiency. While retrofitting needs are not confined to residential housing, it is arguably the most difficult sector to reach in adequate numbers and to fund.

The Better Energy National Upgrade Programme was launched in May 2011, replacing previous energy efficiency and renewable energy programmes and it set out an ambitious target of upgrading one million homes, businesses and public buildings.

Yet, just €76.1m was allocated under the public capital programme for energy efficiency measures in private residential, low income households and public and commercial buildings for 2011.²³ Furthermore, the Government is committed to moving to a system of non exchequer funded energy efficiency schemes by 2014. While ambitious targets for retrofitting and energy efficiency upgrade works have been set down, there is much less certainty about the sources of funding of this work.

Estimates of the number of energyinefficient homes in both jurisdictions vary with some estimates putting the number at over one million in the Republic²⁴.

Notwithstanding the fact that a number of homes have already availed of the State's grant schemes to improve one or more parts of the house, there remains a large variation in the improvement to a house's energy efficiency depending on the works undertaken.

Curtin (2009) suggests - based on the grants allowed under the previous schemes and total investment levels - that it would take 85 years for the entire housing stock to reach a minimum C1 level.

To ensure that energy efficiency savings accrue across all the population and that fuel poverty rates are reduced in a uniform manner, a strong economic case can be made for a deep retrofitting strategy for Ireland. The funding requirement would be up to €1b-€1.5bn per annum, to cover 100,000 households each year over the next 10 years and would generate 23,000-32,000 direct new, green jobs²⁵.

Delivery

The commercial semi states in the energy sector already play a key role in this area and will be even more crucial to the roll out of retrofitting post 2014, when the State exits the financing of retrofitting. In this regard, any funding initiative will remain off balance sheet.

iii) Public Transport

Over the past decade Ireland's road and rail network has received significant investment leading to a transformation in journey times, quality and capacity, particularly in the main inter-city routes.

However there remains a significant job of work to be undertaken in a number of primary road projects. A number of

²⁴ Curtin J. (2009).

²⁵ Curtin J. (2009).

18

these projects is listed in Appendix 1 along with their estimated total costs and associated employment.

Furthermore, a large amount of public monies has already gone into the planning and design of key rail and light rail projects, particularly in the Dublin area. Where projects have already passed the planning stage and have a proven potential (a positive net present value for the excess of benefits over costs for the lifetime of the project) stimulus funding should be allocated and the projects undertaken. In the case of other projects, economic evaluation work should proceed for these projects ideally so that they can commence from 2015 onwards, if they are demonstrated to be worthwhile (benefits exceed costs).

Road

- The Government must bring forward its financial commitment to the A5. Already the Northern Ireland Executive has decided to forge ahead with plans to commence in 2012/2013, notwithstanding the significant scaling back by the government in the Republic of its share in the project.
- The N11 Arklow/Gorey and the N7 Newlands Cross Interchange projects have been bundled but have been delayed to date due to financing issues. The EIB recently confirmed loan approval for this bundle along with the N17 Gort-Tuam road. All three projects should be commenced as soon as is possible.
- The New Ross-Enniscorthy road, the Galway city outer bypass (N6) and the Ballaghadereen bypass have been identified for delivery, but are subject to

delays. The introduction of new forms of capital, such as from the private pension funds, should help to overcome a number of these problems.

 Investment in the cycling network is important, including tourism routes such the Green Way in Mayo (on a defunct train line to Achill). The Dublin Bay cycleway - Bray to Howth - should be started now.

Rail, Light Rail and Bus

- Congress proposes that the BDX connecting Luas line be given the go ahead immediately (its Liffey bridge is being constructed now).
- Additional work needs to be undertaken to speed up rail including passing loops for single tracks, improved signalling which will also increase speed and frequency.
- Priority should be given to bus priority schemes including Bus Rapid Transit and high frequency bus lines with special vehicles with multiple doors for fast delivery, for all the major cities of Ireland – Dublin, Cork, Limerick, Waterford and Galway.
- In order to improve the customer service, there should be investment in smart transport including building on the phone apps for timetable for buses and trams and the National Journey Planner. Much could be done to integrate the various modes in the public transport system using new smart applications.
- The rehabilitation of the Limerick to Foynes railway line for freight traffic is a viable project. This would connect

the most important deep water port on the west coast with the national railway network. This proposal is supported by the Shannon port company, and the cost is estimated at €10- €12m down from an original estimate of €24m. The National Transport Authority is believed to be sympathetic to this proposal. Freight is profitable division within Irish Rail, accounting for 1% of train mileage and 10% of revenue.

Delivery

There is a long history of PPPs and concessions in the delivery of road projects in Ireland and for future projects it should be possible to keep the bulk of those discussed above off the State balance sheet. While availability payments will have to be paid in the case of the N11 and N7 projects²⁶ it appears that the State will not bear the full demand risk and so the projects should be eligible to remain off balance sheet. In the case of investment in bus and rail, an issue does present in attempting to keep these off the State's balance sheet. However innovative mechanisms could potentially be found to get around this.

iv) Water & Waste Water Treatment

Over the past decade, significant investment has gone into the upgrade of water and water treatment facilities in this country. But with leakage rates averaging 43% across the country²⁷, particularly around the Dublin area and spare capacity levels at crisis point, the scale of the remaining remedial works and work on new sources of water supply is enormous. Irish water was established in 2011 and work is currently underway to transfer the water investment maintenance programmes across from the 34 local authorities. Congress disagrees with the approach currently being adopted.

The public capital programme has allocated over €1.4bn to water services investment over the period 2012-2016, with €165m going to the rural water programme. Water metering is an additional component of this plan and will be funded by loans/project bonds from the NPRF and the user charges payable over a 20 year period.

In the context of our plan to deliver jobs and growth, water and waste water investment will be a key pillar but the sector presents two challenges in terms of (i) generating sustainable and decent employment that represents value for money for the State and (ii) the status of the investment projects on the State's balance sheet.

Delivery

To date, all PPP projects in the water sector over the last decade have been on the Government's balance sheet. With over 80% of operational costs of water supply and treatment typically attributable to capital costs, it would be impossible to generate water charges of the scale necessary to cover these costs²⁸.

v) Health & Education

Demographic change will continue to place pressure on public services like education and health. In the education sector, the

28 Ibid

²⁶ Dept. of Public Expenditure and Reform (2011).

²⁷ Forfás (2008).

Government has already initiated the construction of a new bundle of primary and secondary schools. This will be the first of two bundles to be delivered by 2017, along with upgrade works in another 180 existing schools.

To date, school construction projects have been delivered by PPP and it is expected that this will be the case in future bundles.

The medium term capital investment plan (2012-2016) has also committed to delivering two very large infrastructure projects in the areas of both health and education. Yet the delivery dates of these projects remain far from clear.

The Grangegorman development agency was established in 2006, planning permission has been secured for the site, but construction has been delayed due to a lack of funding. Upon completion, it will concentrate all DIT teaching activities, its 22,000 students and 2000 staff into a single location, bringing with it a major positive spill over effect to the north inner city of the Dublin. Some 450 full time construction jobs will be created each year over a 10 year period and it is expected that an additional 1161 jobs will be created when DIT is fully functional from the site. The total construction cost is expected to be of the order of €220m.

Development of the National Children's Hospital awaits agreement on the preferred site and planning permission. The Government expects to allocate funds from the auction of the National Lottery licence. Although construction cost will depend on the final design, it is estimated to be in the range of €250m, with the potential for 2750 jobs to be created during the construction phase.

The Government has also committed to the roll out primary health care centres. If commenced, an estimated 2671 jobs could be created from the construction, design and 'off site' works associated with the delivery of 30 primary health care centres.

Delivery

To date, it appears that all publicly funded health construction projects have been carried on the State's balance sheet. While the National Children's Hospital may benefit from non exchequer sourced money, the project is likely to be on the State's balance sheet. In contrast, most of the PPP funded school construction projects in recent years have remained 'off balance sheet' and it envisaged that such an arrangement will continue for future projects.

Impact on Employment and the Economy

Work has been undertaken by Nevin Economic Research Institute²⁹ (NERI) who have used the HERMIN model to project the short-run impact of an investment stimulus on employment and GDP³⁰. The model uses a series of equations to estimate the impact of changes in underlying conditions and outcomes (for further discussion of HERMIN refer to Bradley, Whelan and Wright, 1995). The model makes use of historical data over a long period to estimate relationships. Due to uncertainty and volatility in underlying relationships especially since the onset of recession in 2007 all models are subject to qualifications in the short-run.

NERI calculated the economic and employment impact based on a €15bn stimulus over 5 years (see table overleaf). The Congress plan targets upwards of €10bn over a 3 year period and is conscious that estimates produced by a partial equilibrium model cannot account for the deflationary impact of other budgetary measures.

	2013	2014	2015	2016	2017	
Additional Employment						
Additional numbers	46,052	64,353	54,451	55,040	43,127	
% increase	2.4	3.4	2.8	2.9	2.3	
Lower Unemployment						
Fall in unemployment %	-2.1	-2.3	-1.8	-1.2	-1.1	
Additional GDP						
Additional € billion	4.639	7.219	7.084	7.830	7.203	
% increase	3.0	4.5	4.3	4.6	4.1	
Source: Calculated using HERMIN macroeconomic model. See O'Farrell forthcoming (2012)						
Notes: The additional investment is based on €	3bn in 2013, €4bn	in 2014, €3bn in 2	015 and €3bn in :	2016 and €2bn in :	2017.	

Table 1: NERI; Estimated impact of a combined public, private and European investment stimulus of €15bn over five years

The additional investment is based on €3bn in 2013, €4bn in 2014, €3bn in 2015 and €3bn in 2016 and €2bn in 2017. The additional GDP calculations are in constant price terms.

²⁹ NERI (2012).

³⁰ The HERMIN macro model of the Irish economy is part of the Cohesion System of HERMIN models currently used by DG Regional Policy for the purposes of analysis of the impacts of Structural Funds on long-term development.

Multiplier Effects

It is frequently assumed that the GDP and jobs 'multiplier' effect of additional investment in capital is low in Ireland as it is a small open economy. However the import content associated with various sectors varies greatly across the economy. A number of studies undertaken here in Ireland suggest a significant multiplier effect associated with successive national development plans and public capital programmes, (Lane and Benetrix, 2009).

It is worth noting that a number of these studies were undertaken when the Irish economy was on average recording growth rates above trend. In the context of Ireland's current growth trend with major excess labour and productive capacity in the economy, it is reasonable to assume that multipliers estimated in the past covering a long-period of time may underestimate the short-term positive impacts of a stimulus today.

Job Creation

Estimates vary as to the number of jobs that would be potentially created in different construction projects. The Construction Industry Council estimate that for every €1m invested into a construction project, an average of 11 direct and direct jobs are created – see appendix 1. In 2009, the Department of Finance surveyed other Government departments to establish the employment intensity of particular capital investment projects- see table 2.





Table 2 Estimated Labour Intensity of the Construction Phase of
an Infrastructure Investment

Based on the projects identified in section 4 and the potential costs of these projects, we estimate that somewhere in the region of 30,000 direct and indirect construction jobs could be generated per annum over the lifetime of the programme.

Investment Sector	Jobs per €1 million invested
Health capital	12.0
Regional and local roads	11.5
National roads	10.0
Prisons	10.0
Schools	9.3
Housing	8.0
Public transport	8.0
Water services	8.0
Small-scare refurbishments, fit-outs etc	Above average
Source: Department of Finance (2009:14-15).	· · · · · · · · · · · · · · · · · · ·

Return to the Exchequer from a Stimulus Programme

The returns to the Exchequer would be over the short term and in the medium to longer term. Over the period of project itself, there is a direct and indirect gain to the Exchequer in terms of the income and construction related revenues and the savings accruing to the Social welfare fund from numbers exiting the Live Register. For every €1 spent on an infrastructure project, it is estimated that close to 51% of this accrues back to the State, representing a very significant return to the Exchequer.

Over the longer term, Exchequer savings are accrued in terms of delivering infrastructure in a period of cheaper input prices and there is a gain arising from a permanent increase in the long term productive capacity of the economy.

We have set out additional information on the type of projects identified in Section 4 in the Appendices.

Appendix 1 provides estimates of the labour intensity associated with different types of construction projects as estimated by the Construction Industry Council.

Appendix 2 provides a list of road projects which have passed through the planning process but have been delayed due to financial and other difficulties.

Appendix 3 lists other infrastructural projects that have been costed in terms of both design and construction costs.

Conclusion

24

Since the Crash of 2008, Congress has advocated an inclusive approach to dealing with the downturn. Our 10 Point Plan for National Recovery (November 2009) was the first major initiative with detailed proposals on how to deal with the crisis.

Our Pre-Budget Submission of March 2009 had many innovative ideas on job retention and maintenance.

For over three years, Congress has argued that while it is essential to get the public finances back on track, doing so within too short a period would exacerbate the domestic recession. This, sadly, has proven to be correct. €24.4bn has been extracted from the Irish economy over five budgets with a major deflationary impact. The economy may be technically out of recession but this is relatively meaningless when the domestic economy remains in recession.

That is why a growth initiative is now required. Investment is the key to future economic growth in this country. Not only does the investment itself generate its own multiplier effect in terms of jobs created and increased purchasing power, more importantly it would tackle the medium term infrastructural deficiencies in the Irish economy that have such a bearing on the long term growth potential of the country.

Ireland must have its own major targeted investment programme. The time for action is now.



References

Bénétrix, Augustin and Philip Lane (2009). 'The Impact of Fiscal Shocks on the Irish Economy,' *The Economic and Social Review*, 40: 407-434.

Bergin, Adele, Thomas Conefrey, John FitzGerald and Ide Kearney (2010). 'The behaviour of the irish economy: Insights from the hermes macro-economic model', *ESRI Working Paper* No. 287.

Bradley, John, Karl Whelan, and Jonathan Wright (1995). 'HERMIN Ireland,' *Economic Modelling*, 12: 249-274.

Construction Industry Council (2009) Submission to the Government by the Construction Industry Council, Jobs and Infrastructure – A Plan for National Recovery. Dublin: Construction Industry Council.

Curtin, Joseph (2009). *'Jobs, Growth* and Reduced Energy Costs: Greenprint for a National Energy Efficiency Retrofit Programme,' Dublin: Institute of International and European Affairs.

Curtin, Joseph and Josephine Maguire (2011). '*Thinking Deeper: Financing Options for Home Retrofit*,' Dublin: The Institute of International and European Affairs.

Delaney, Liam, Michael Egan and Nicola O'Connell (2011). 'The Experience of Unemployment in Ireland: A Thematic Analysis,' *Working Paper 2011/16, UCD Geary Institute,* University College Dublin.

Department of Finance (2011) *Medium-Term Fiscal Statement*. Dublin: Stationery Office. Department of Public Expenditure and Reform (2011) *Infrastructure and Capital Investment 2012-16: Medium-Term Exchequer Framework*. November. Dublin: Stationery Office.

Department of Finance (2009). Infrastructure Investment Priorities 2010-2016. Dublin: Stationery Office.

DKM and RICS (2012). *The Irish Construction Industry in 2012.* Dublin: RICS.

EIB (2011). "Presentation to the Europe 2020 Project Bond Initiative", Consultation Conference. Brussels, April 2011.

European Investment Bank (2011). Annual Report 2010 (Vol. Statistical Report). Luxembourg: European Investment Bank.

European Commission (2011). Impact Assessment of the Pilot for Europe 2012 Project Bond Initiative. EC: Brussels.

Faes Cannitto F. et al (2010). "External Trade" in *Statistics in Focus*. Eurostat: Luxembourg.

Financial Times April 10th, 2012, "Council Pension Pool Wins Backing".

Fine Gael (2009) New Era. Dublin: FG.

Forfás (2012). Overview of the Main Infrastructure Issues for Enterprise. Dublin: Forfás.

Forfás (2011). *Ireland's Competitiveness Scorecard 2011*. Dublin: National Competitiveness Council. Forfás (2011). *Ireland's Advanced Broadband Performance and Policy Priorites*. Dublin: National Competitiveness Council.

Forfás (2011). *Infrastructure Priorities for Enterprise*. Dublin: National Competitiveness Council.

Forfás (2008). Assessment of Water and Waste Water Services for Enterprises. Dublin: National Competitiveness Council.

Hall, David (2009). "Infrastructure, the crisis, and pension funds", PSIRU, Greenwich University London.

ICTU (2011). *Pre-Budget Submission 2012*. Dublin: ICTU.

ICTU (2012). *Response to Budget 2012.* Dublin: ICTU.

ICTU (2012). "Youth Unemployment," Submisison to the Oirechtas Committee on Social Protection and Education.

ICTU (2012). *Study of the Irish Water Sector*. Dublin: ICTU.

ICTU(2010). *Pre-Budget Submission, 2011.* Dublin: ICTU.

ICTU (2005). A New Governace Structure for State Companies. Dublin: ICTU.

IMF (2012). Fifth Review under the Extended Arrangement, Ireland. Country Report No. 12/48. IMF: Washington.

Irish Acadamy of Engineers with Forfás (2011)., *"The Cost Effective Delivery of Essential Infrastructure.* Dublin: Forfás.

Morgenroth, Edgar and John FitzGerald (2006) *Ex-ante Evaluation of the Investment Priorities for the National Development Plan* 2007-2013, ESRI Policy Research Series, No 59, Report by ESRI in association with DKM Economic Consultants. Dublin: ESRI.

Morgenroth, Edgar (2009). 'Irish Public Capital Spending in a Recession', *ESRI Working Paper No 298*. Dublin: ESRI.

National Economic and Social Forum (2005). *Early Childhood Care and Education. Report 31.* (July, 2005). Dublin: National Economic and Social Forum.

NERI (2012). Quarterly Economic Observer No. 1. Dublin: NERI.

OECD (2011). Pension funds investment in infrastructure: a survey. Paris: OECD.

OECD (2009). "Responding to the Economic Crisis, Fostering Industrial Restructuring and Renewal". Paris: OECD.

O'Farrell, Rory (2012). 'The effects of an increase in investment on the Irish Economy: A HERMIN model analysis,' forthcoming *NERI Working Paper*. Dublin: NERI.

O'Rourke, Cormac & Barrett Rory (2011). Submission to the Department of Finance on Infrastructure Bonds.

Pereira, Alfredo Marvao and Maria de Fatima Pinho (2011). 'Public Investment, Economic Performance and Budgetary Consolidation: VAR evidence for the first 12 Euro countries', *Journal of Economic Development*, Vol. 36, No 1, March. Reeves E. (2011). "The only game in Town: Public Private Partnerships in the Irish Water Services Sector". *Economic and Social Review* (42:1).

Shields Richard (2012). "Irish Infrastructure Fund" in *www.europeanpensions.net*

Singer, Hal J. and Jeffrey D. West (2010). 'Economic Effects of Broadband Infrastructure Deployment and Tax Incentives for Broadband Deployment,' Chicago: Navigant Economics.

White, Rossa (2010). 'Irish macro comment: Years of high income largely wasted', Dublin: Davy Research.



Appendices

Projects which can boost employment and productivity.

Appendix 1

Estimates of jobs created from an investment of \in 1m depends on the type of project in which the capital is invested. The Construction Industry Council estimates that an investment of \in Im generates 11 direct and indirect jobs. It also has estimated that the net cost to the Exchequer is less because of the return in taxation and it estimates the net cost of a spend by the state of \in 1m has a net cost of \in 610,000.

The CIC estimates the Employment intensity of projects ranges as follows:

- 8 jobs per €Im invested in civil engineering projects (waste water treatment, sewerage schemes, inter-urban road)
- 10 jobs per €Im invested in a hospital,
- 12 jobs per €Im invested in a school, and
- 13 jobs per €lm invested in an office block.

Appendix 2

It is understood that the following road schemes have planning approval and could be built **immediately**. The to-go costs include archaeology (partial), accommodation works, design, construction, supervision, testing, and VAT (which returns to the state).

N11 Gorey to Enniscorthy bypasses

Enniscorthy; 30km of motorway plus side roads. Cost to go approx. €200-220 million.

N25 New Ross bypass. 14 km dual carriageway and a big bridge. Cost to go approx. €170 – 200 million.

N 56 Mountcharles to Inver. 5km single carriageway . Cost to go approx. €35-40 million.

The **N17/18 Gort to Tuam** (includes Tuam bypass) is 57 km , mainly motorway, the **N11 Arklow-Rathnew** is about 14km motorway, and the **Newlands Cross upgrade** is a major junction These would cost over €500 million in total.

There are a large number of small improvements in road planning targeted at bottlenecks and safety hazards with a total cost of approximately €100 million that could be built immediately and would give local employment around the country.

Appendix 3

List of investments in roads, health, education, security regeneration etc. which are ready to be built (at a total cost of under €2bn, including design costs) generating total direct employment of almost 16,000 man year

29

Capital Projects	Construction Costs	Design Costs	Labour in Man Years (Including Construction, Design & Off site)
N17/N18 Gort to Tuam motorway project (57 km)	€250m	€10m	2,080
M20 Cork to Limerick motorway (80 km)	€388m	€21.340m	3,275
Second & Third Level			
Third level Tranche 1	€47.258m	€3.805m	613
Third level Tranche 2	€65.945m	€3.997m	839
Secondary level Schools bundle 4 (Assumed 6 buildings)	€76.005m	€5.14m	974
St. Patricks College Dublin	€26m	€2.6m	343
DIT campus in Grangegorman	€200m	€20m	2,640
Healthcare			
National Children's hospital	€250m	€25m	2,750
Primary Care Centres (30 centre-€6m each)	€180m	€10.8m	2,671
Beaumont Hospital Psychiatric Unit.	€50m	€5m	550
Garda Stations			
Kevin Street Divisional Headquarters	€20m	€2m	286
Mill Street. (Galway)	€20m	€2m	286
Regeneration Projects			
Limerick Regeneration	€100m	€8m	1,080
Prisons			
Thornton Hall	€150m	€12m	1,620
Oberstown	€50m	€4m	540
Shelton Abbey	€40m	€3.2m	432
Others			
National Forensic Labs Backweston	€20m	€2.6m	281
Totals	€1.93bn	€140.48m	15,905

www.ictu.ie

31/32 Parnell Square Dublin 1 Ireland

Phone: +353 1 8897777 Fax: +353 1 8872012 E-mail: congress@ictu.ie www.ictu.ie Carlin House 4 - 6 Donegall Street Place Belfast BT1 2FN Northern Ireland

Phone: +02890 247940 Fax: +02890 246898 E-mail: info@ictuni.org www.ictuni.org