Centre for ECONOMIC EMPOWERMENT

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A Commentary on Economic Data in Northern Ireland

Centre for
Economic Empowerment
Research Report: six

Report prepared by

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A Commentary on Economic Data in Northern Ireland

'Greater transparency across Government is at the heart of our shared commitment to enable the public to hold politicians and public bodies to account; to reduce the deficit and deliver better value for money in public spending; and to realise significant economic benefits by enabling businesses and non-profit organisations to build innovative applications and websites using public data.'

David Cameron (2010) Letter to Government Departments on Opening up Data

'The primary aim of National Statistics is to provide an accurate, up-to-date, comprehensive and meaningful picture of the economy and society and to support the formulation and monitoring of economic and social policies by government at all levels.'

Office for National Statistics (2000) Framework for National Statistics

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FOREWORD

Individuals, businesses and government all require information on the economy. Data facilitates analysis, provides insight into the operation of the economy, and creates an evidence base for decision-making. It allows performance to be monitored, and enables citizens to scrutinise public policy and hold government to account. Good data – that is data that is timely, of high quality, open and accessible - is therefore at the very heart of good governance.

In this context NICVA's Centre for Economic Empowerment (CEE) commissioned Michael Burke to comment on the data available on the Northern Ireland economy. This report represents a first step. It does not examine all the economic data collected, nor does it apply all the criteria by which 'good' data could be measured. Rather, it discusses some key data needs, and highlights potential areas of improvement. I would like to place on record my thanks to Michael Burke for producing such a stimulating report and to the peer reviewers who commented on an earlier draft.

Seamus McAleavey

NICVA Chief Executive

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Executive Summary

1 Introduction

This paper considers the availability of economic data in Northern Ireland. It explores whether official data sources are sufficient to facilitate the development and monitoring of economic policy, and proposes ways in which existing datasets could be enhanced. It is not possible to provide a complete analysis of the benefits and limitations of the official and privately-generated economic data. Instead, the approach is to review some key data sources and to highlight areas for improvement.

2 The Need for Regional Economic Data

Economic activity is inherently complex and variable. Monitoring economic activity is a major challenge, especially in regional economies where resources are fewer and activity is more variable. However the need for robust economic data in Northern Ireland is pressing given its background of long-term economic decline. Devolution adds further impetus to the need for regionalised data.

3 Discussion of Economic Data in Northern Ireland

An examination of the data available for Northern Ireland reveals significant shortcomings and time-lags, enough to harm or impinge on evidence-based decision making.

The Executive's ***Northern Ireland Economic Strategy*** seeks to increase the level of exports but the export data is not disaggregated by component or destination. There is therefore little information to suggest ways in which to diversify or further trade links. The Strategy also aims to bring about private sector growth but the absence of data relating to Gross Domestic Product and Gross Fixed Capital Formation, makes it difficult to ascertain the scope of activity of all key sectors of the economy, households, government and business. Another objective is to improve competitiveness, but the absence of a reliable measure of Gross Domestic Product limits the scope to compare the competitiveness of Northern Ireland against other economies.

There are significant omissions in ***public finance*** data. Much of the spending allocated to Northern Ireland is simply a convention of UK Treasury accounting rather than the ***actual*** level of spending. Concrete data of revenues generated in Northern Ireland are almost entirely absent.

The ***Northern Ireland Composite Economic Index*** is based solely on estimates of output (plus some data on employment), not on the trio of output, income and expenditure required for Gross Domestic Product data. Both foreign trade and net factor income from abroad are missing.

The ***Annual Business Survey*** could be usefully expanded to facilitate geographical analysis. Such information would be invaluable in attracting inward investment and stimulating growth.

Summary publications such as ***Regional Economic Indicators*** are limited by the absence of data on Gross Domestic Product, inflation, Gross Fixed Capital Formation, and expenditure. It would be useful if the information on business births and deaths was disaggregated by enterprise size and sector. The lack of Input-Output tables is a key omission.

In summary, the following areas are either absent or could be improved:

- Input-output.
- Retail sales.
- Gross Value Added output, income and expenditure.
- Inflation.
- Capital stock.
- Gross Fixed Capital Formation.
- Proportion of value-added in exports.
- Exports disaggregated by component or destination.
- Import data on the same basis.
- Compensation of Employees.
- Tax receipts and public expenditures.
- Composition of household consumption.

4 A Benchmark for Northern Ireland

The above omissions warrant a comprehensive review. Northern Ireland should seek to move towards a National Account framework. Scotland provides a useful comparator; the statistics gathered in respect of GDP, exports, Input-Output tables are more advanced in Scotland than in Northern Ireland.

Northern Ireland differs from Scotland in that it is geographically separated from Britain and shares a land border with the Republic of Ireland. In this context it is important to consider the scope for co-ordinating economic data gathering and dissemination in Northern Ireland and the Republic of Ireland.

5 Recommendations

1. The Executive should produce a detailed and coherent strategy for the development, collection and publication of accurate and appropriate economic data for Northern Ireland which supports both the development of, and the evaluation of the success or otherwise of local economic strategies. This strategy should also support systematic and holistic analysis of the local economy.

2. The Scottish Government has provided a template for the fullness of economic data that could be produced in Northern Ireland. The Executive should adopt a similar approach.

3. The Executive, with input from and the support of the relevant UK agencies, should develop a mechanism through which to illustrate Gross Fixed Capital Formation, Gross National Product and Gross Domestic Product at the Northern Ireland Level.

4. The Executive, together with the relevant UK agencies, should provide income-output data at a level that allows a detailed understanding of the import and export relationships that exist between Northern Ireland and other areas.

5. Consideration should be given to mechanisms to address the information gaps relating to public expenditure and revenue in Northern Ireland.

6. The sample size for the Annual Business Inquiry needs to be increased. In the case of Northern Ireland this could mean it becomes a census. At present it is not possible to explore the data geographically, meaning it is not possible to understand which sectors are successful in which areas. This information is extremely important in the context of understanding how to attract and grow investment.

1 Introduction

This paper considers the availability of economic data in Northern Ireland. It explores whether official data sources are sufficient to facilitate the development and monitoring of economic policy, and proposes ways in which existing datasets could be enhanced.

The questions relating to economic data have previously been regarded as significant. For example, in his 2008 ***Review of the Competitiveness of Northern Ireland*** David Varney noted:

"[T]he comprehensive nature of the Annual Competitiveness reports prepared in [the Republic of] Ireland by the National Competitive Council, which supply thorough, up-to-date and comparative data and analysis to Irish Ministers on the competitiveness of the Irish economy."[1]

Varney recommended the establishment of a Competition Analysis Board for Northern Ireland which would emulate the work of the National Competitiveness Council. To date this has not been established. D'Elia's subsequent attempt to produce indicators with which to bench mark the competitiveness of the Northern Ireland economy were hampered by the absence of information pertaining to Gross Domestic Product (GDP) and Gross Fixed Capital Formation (GFCF), which had to be estimated.[2]

Key reports, such as the Treasury's 2011 paper Rebalancing the Economy in Northern Ireland appear to be based on limited regional economic data beyond Gross Value Added (GVA), employment rates and private sector productivity. Further to this, Bradley and Best expressed disappointment with how their analysis of the potential for Cross-Border Economic Renewal in 2012 was "heavily constrained by the availability of published data",[3] particularly on the northern side of the border.

These earlier reports create the backdrop for this paper. It is not possible here to provide a complete analysis of the benefits and limitations of the official and privately-generated economic data for Northern Ireland. Instead, the approach is to review some key data sources and to highlight areas for improvement. First though, it is helpful to explain why regional data is important.

1 D Varney (2008) *Review of the Competitiveness of Northern Ireland* page 25.
2 JLE D'Elia (2008) *Benchmarking Northern Ireland's International Competitiveness* page 24.
3 J Bradley and M Best (2012) *Cross-Border Economic Renewal: Rethinking Regional Policy in Ireland* page 95.

2 The Need for Regional Economic Data

The Challenge

Modern economies are increasingly complex. Economic data and indicators provide a mechanism through which to understand the function and outputs of the economy. In particular, the emphasis placed by politicians globally on economic growth creates a requirement for good quality indicators that can explore the processes associated with economic growth, the dynamic behind any persistent economic underperformance or imbalance, and the effectiveness of government policies. Economic data is employed in a variety of settings by a series of economic agents, including businesses, government and elected representatives, the non-profit sector and households as well as by researchers on behalf of numerous bodies including charities, trade unions, lobbyists, local, national and supranational agencies and others. At the international level, public bodies such as the various arms of the EU institutions as well as multinational firms require basic, accurate economic data on which to base their investment decisions.

Economic activity is inherently variable and monitoring it is a major challenge, especially in regional economies where resources are fewer. Sovereign states are under binding requirements to produce high quality data to international standards. A variety of economic data is drawn together at the level of National Accounts. National Accounts continue to hold pre-eminence and are the highest point of economic analysis of a given economic area, used widely in economic reports, discussions and debates. In abstract terms, the published Accounts are comprehensive, coherent (the tripartite system of accounts - income, expenditure and output - must be aligned, within the limit of statistical error) and the definitions, classifications and procedures adopted reflect international agreements. In practice, of course, the Accounts are estimates based on statistically significant surveys – subject to important revision and occasional structural review.

In federal states (like Germany or the USA), regional economic data tends to be gathered and published to a high standard, very similar to the overarching national data. But in the case of the UK where levels of regional self-governance are much less developed than in a federal state, the quality of regional data can be very mixed. This mixed situation is further exacerbated when responsibility for the preparation and publication of regional data rests with a national statistical agency. In the case of Northern Ireland this is the Office of National Statistics (ONS), which sets itself the twin tasks of regional comparative assessment and analysis.

There is little incentive for the local administration in Northern Ireland to accept full responsibility for the internal preparation and publication of its own data. Instead it plays a relatively minor role as that of a regional agent for the ONS. The situation then becomes further complicated through the wide range of local organisations who have responsibility for local data gathering and publication. As a result Northern Ireland faces greater challenges in the production of local economic data than Scotland for example.

Economic Performance

The need for robust economic data is however pressing in Northern Ireland given its background of long-term relative economic decline, which has been only partly ameliorated by the effects of the peace process. A Department of Enterprise, Trade and Investment (DETI) report suggested that relative productivity in Northern Ireland's private sector fell by 50% in the 30 years to 2004, which was the main factor in the relative decline in per capita GVA in Northern Ireland over the period.[4] This illustrated in the chart overleaf.

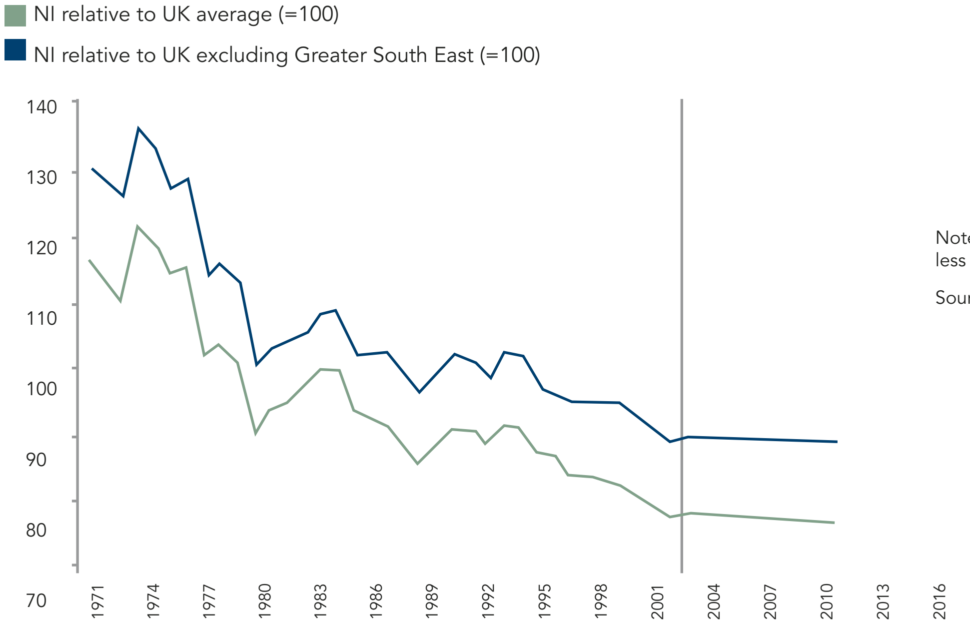
Contributors to the report recommended that:

"[Improving labour productivity and the employment rate] will require sustained improvement in the private sector export performance; innovation/R&D; business growth; value added inward investment and the necessary developments to the economic and physical infrastructure that make the region fit for global competition in the 21st century."[5]

There is the related question of the dynamic explaining the long-term underperformance of the Northern Ireland economy. A 2003 paper assessed the relatively very low impact of EU Structural Funds in Northern Ireland ('low multipliers' from investment).[6] Using the comparative data the authors suggest that the variability of the impact of EU investment across regions may be associated with the degree of openness to the world economy (proportion of imports and exports in GDP). This is a key question, bearing further examination.

[4] DETI (2007) *Northern Ireland Economic Overview* page 17.
[5] Ibid page 18.
[6] J Bradley, E Morgenroth and G Untiedt (2003) *Macro-regional Evaluation of the Structural Funds using the HERMIN Modelling Framework.*

These questions can and should be scrutinised, but it can only be properly done while fully informed by economic data which reveals the categories cited and other key economic data and trends. There is a need to understand economic evolution within Northern Ireland, to identify strengths and weaknesses and to consider ways to promote economic development. The availability of economic data and the ability to grow the economy are clearly inter-related.



Note: GVA Data Pre-1980's will be less reliable than recent data

Source: Regional Forecasts Ltd

Devolution

The importance of regional economic data has been raised to a new height by the programme of devolution and constitutional change in the UK since 1997. Devolution has generated a series of necessary and useful, yet complex and unclear inter-relationships between Westminster and the devolved administrations. The geographically differentiated institutional and political legacy was effectively built upon by further but highly uneven democratic decentralisation, creating a multi-level, polycentric state working across several geographical scales and representing a more distributed landscape of political power.[7] The 'varieties of devolution' have been categorised as 'visionary' in Scotland, 'precautionary' in Wales and 'constrained' in Northern Ireland, as evident in different approaches, strategies, policy programmes and institutional arrangements.[8]

Although there remains an attachment to measurement frameworks which are largely focused upon England's economy,[9] devolution requires greater regional ownership of statistical systems. As Allsopp commented in his ***Review of Statistics for Economic Policymaking:***

Devolution of policy responsibility requires changes in the statistical system to go with it – there should be no economic policy responsibility without statistical provision. Devolution of economic policy also requires the devolution of budgetary resources – which, if the resources involved were to increase, would be likely to pose an increasing challenge to the statistical services to make sure that the data to underpin that process are fully credible.[10]

This point is underlined by the prospect of the devolved administrations assuming enhanced fiscal powers. Economic arguments infuse the reports of the Commissions Chaired by Richard,[11] Calman,[12] Holtham[13] and Silk[14] which examine the decentralisation of greater powers and resources in Wales and Scotland, reinforcing the evolutionary process of institutional change and its relationship to economic development. No comparable Commission has been established in Northern Ireland. However the Executive and the British Government have committed to undertaking a review of fiscal powers in Northern Ireland, which will report in autumn 2014.

7 K Morgan (2007) 'The Polycentric State: New Spaces of Empowerment and Engagement' in *Regional Studies* 41(9).
8 M Goodwin et al (2002) Devolution and Economic Governance in the UK: Uneven Geographies, Uneven Capacities? in *Local Economy* 17(3).
9 R Adams (2003) *Perceptions of Innovations: Exploring and Deepening Innovation Classification* (PhD thesis).
10 C Allsopp (2004) *Review of Statistics for Economic Policymaking: Final Report to the Chancellor of the Exchequer, the Governor of the Bank of England and the National Statistician.*
11 Commission on the Powers and Electoral Arrangements of the National Assembly for Wales (2004) *Report of the Richard Commission.*
12 Commission on Scottish Devolution (2009) *Serving Scotland Better: Scotland and the United Kingdom in the 21st Century.*
13 Independent Commission on Funding & Finance for Wales (2009) *Fairness and Accountability: A New Funding Settlement for Wales.*
14 Commission on Devolution in Wales (2012) *Empowerment and Responsibility: Financial Powers to Strengthen Wales.*

3 Discussion of Economic Data in Northern Ireland

This chapter discusses three main areas of data provision. First, it examines the data underpinning the ***Northern Ireland Economic Strategy.*** Secondly it raises some issues in relation to data on public finances. Finally it highlights a number of shortcomings in some key economic data sources, including the ***Regional Economic Indicators*** publication.

The Northern Ireland Economic Strategy

The overarching goal of the Executive's ***Northern Ireland Economic Strategy***[15] is to improve competitiveness through a focus on export-led economic growth. Priorities include deepening and diversifying the export base, increasing employment and wealth, driving innovation, enhancing Research and Development (R&D), and enhancing the skills of the workforce. A particular emphasis has been placed upon rebalancing the economy towards private sector activity, and the need to undertake a more immediate rebuilding phase to address the impact of the global downturn on the local economy and labour market. From the author's perspective there is no paradox here that it is public bodies which are required to lead this process.

The Strategy documentation is very detailed but there are limitations as to how its impact can be measured or understood. With respect to rebalancing the economy the following key priorities are outlined:[16]

- stimulate innovation, R&D and creativity so that we widen and deepen our export base;
- improve the skills and employability of the entire workforce so that people can progress up the skills ladder, thereby delivering higher productivity and increased social inclusion;
- compete effectively within the global economy and be internationally regarded as a good place to live and do business;
- encourage business growth and increase the potential of our local companies, including within the social and rural economies;
- develop a modern and sustainable economic infrastructure that supports economic growth.

There is little indication given within the report as to how economic growth or the health of the economy can or will be measured. There are numerous actions contained in the report including lists of investments. However there is no emphasis on how the success or indeed failure of the actions outlined in the report are to be measured or understood beyond ***Programme for Government*** targets. This effectively creates a situation in which resources are being targeted towards stimulating economic growth in the absence of the necessary tools through which to measure the effectiveness or otherwise of adopted approaches.

The strategy does emphasise the importance of measuring targets but there is little information within the report as to how this will be achieved. The report states that the following indicators will be used in order to measure economic performance:

- increase the level of exports and external sales as a proportion of output;
- increase the proportion of the working age population in employment;
- private sector output growth to exceed the UK average; and
- economic competitiveness to improve relative to other developed economies.

There are limitations associated with the ways in which the economic data which is readily available for use within Northern Ireland could address the above objectives. As a result, there is an element of 'flying blind' in both the efficient allocation of resources and the evaluation of their effectiveness.

[15] NI Executive (2012) *Northern Ireland Economic Strategy: Priorities for Sustainable Growth and Prosperity, Building a Better Future.*

[16] Ibid page 10.

Exports

Data available on exports could be enhanced as there are limitations in relation to the geographical location of export bases. The most recent data is available for 2012/13[17] which represents a considerable time lag on the data. This creates a challenge in terms of exploring the effectiveness of the Executive's interventions in the medium term. The data which is available is also not disaggregated by component or destination. There is therefore little information to suggest ways in which to diversify or further develop trade links.

Employment

Figures are available regarding employment and unemployment. It is worth noting however that the strategy does not quantify the level of improvement sought.

Private Sector Growth

Current information available would illustrate only top level findings. It is difficult to measure private sector activity or the contribution of the private sector to wider economic growth in the absence of data relating to GDP and GFCF. As above, timely data is required on output by economic sector. This needs to be supplemented by the same on an incomes and expenditure basis. Elsewhere, ONS identifies 10 categories of output and weights them accordingly. The European Union's NACE system further subdivides these into more than 70 categories. Ultimately, without this detail it is impossible to know the relative weight of each sector in the economy or their evolution. The NACE system creates the building-blocks of data on how these sectors are specifically inter-related.

Economic Competitiveness

It is difficult to benchmark the economic competitiveness of Northern Ireland within Britain or internationally. There is not a reliable measure of GDP for Northern Ireland and any estimates which are currently available are out of date and pre-date the DETI strategy. There is also no available data on GFCF.

The overall approach to economic development outlined in the Economic Strategy appears aspirational and is as not yet fully developed or fully measurable. This presents key challenges with respect to identifying the level of strategic support or investment required to grow the economy and to measure the effectiveness of both the overall economy and Executive interventions. Progress tends to be measured through the list of initiatives developed or proposed, rather than by reference to generally accepted economic indicators. The Strategy[18] outlines the range of the initiatives adopted in order to redress the global economic downturn which include:

- Establishing an accelerated support fund to assist businesses affected by the downturn.
- Delivering a series of 'Challenges and Opportunities' seminars for businesses.
- Introducing a Short Term Aid Scheme to provide businesses with support in maintaining significant employment and retaining key staff as they planned and restructured for the future.
- Rolling out a 'Pathways to Work' initiative to engage or re-engage those inactive due to health conditions and/or disabilities.
- A Business Improvement Technique programme delivered by Further Education colleges to assist businesses increase their productivity.
- Introducing an 'Employment and Support Allowance' to create a gateway to work for participants.
- An Apprenticeship Scheme allowing redundant apprentices to complete their training.
- The Graduate Internship Programme and Graduate Acceleration Programmes which provided over 300 graduates with valuable work experience and additional training opportunities.
- The Intro Programme provides 100 places a year for graduates to develop their management skills with Northern Ireland companies (89% of these graduates have been employed at the end of the programme).
- The Young Persons Employment Initiative offered 50 unemployed young people opportunities to gain valuable work experience in a local government setting.
- Launching initiatives on neighbourhood renewal to help target those communities suffering most from deprivation.
- Delivering increases in professional and technical enrolments and higher education enrolments across the Further Education sector.

[17] DETI (2013) *Results from the Northern Ireland Manufacturing Sales & Exports Survey 2012/13.*
[18] NI Executive (2012) *Northern Ireland Economic Strategy: Priorities for Sustainable Growth and Prosperity, Building a Better Future* page 82.

There is a section within the economic strategy which focuses upon indicators and targets. Within this section the Executive recognises:

[T]he importance of monitoring the progress of this Economic Strategy to ensure that the Executive's actions are contributing towards a more competitive economy and achieving the ultimate Economic Vision of this Strategy.[19]

The reality is that the data which is currently available does not readily facilitate the measurement of the performance or competitiveness of the Northern Ireland economy. This is discussed in more detail in the following section of this report. The Strategy proposes to measure economic growth, performance and competitiveness utilising information pertaining to exports and GVA. However the information relating to exports from Northern Ireland is high level with little room for analysis as highlighted above. It is also two years out of date. This would suggest that the data is not produced within an appropriate time frame either to act as a benchmark or measure the effectiveness of the Strategy. GVA will provide some insight into economic performance but cannot alone provide the full picture. GVA provides some information regarding economic output but is limited to nominal levels of activity, and information pertaining to GFCF and other expenditure components is absent, as well as sectoral output. GVA also provides an income distribution, between broad Gross Operating Surplus of firms and Compensation of Employees which are extremely important and frequently neglected. But the latter does not separate managerial and wage incomes, while the former is simply the residual amount, once Compensation is deducted. It cannot illuminate anything about other business costs.

The Strategy document acknowledges the limitations of the data on exports. It also indicates that DETI is taking steps to address both the limitations and timeliness of the data:

Currently, the data collected on the level of exports from the local economy is largely restricted to the manufacturing sector, with limited information collated from the services sector. To ensure the appropriate measurement of exports, we are taking the necessary steps to improve the coverage and, where possible, the timeliness of our current surveys on export performance.[20]

Provisional results for exports and imports based on the ABI are scheduled for spring 2014.

The figure overleaf, which is drawn from the Strategy,[21] illustrates the reliance on measuring economic growth through the level and degree of interventions as opposed to economic data. The figure is labelled economic performance indicators but tends to focus on noting a particular initiative or programme as opposed to considering which indicators would be most useful in the context of understanding the health of the overall economy, exploring economic growth or directly assessing the impact of the Strategy. The outcome, improved economic competitiveness, could only be an assumption about absolute levels. Without key data it cannot be what it suggests, a relative measure.

[19] Ibid page 85.
[20] Ibid page 86.
[21] Ibid page 88.

Improved Economic Competitiveness in NI

Increase the level of Exports / external sales as proportion of GVA

Rebuilding (by 2014/15)

- Promote £225m of investment and 6,300 jobs, (4,000 created by March 2014) through the Jobs Fund
- Move 114,000 working age benefit clients into employment
- To support the construction sector by delivering key road and rail projects and 8,000 social and affordable homes over the budget period
- Deliver 6,000 work experience and training opportunities for young people by 2015

Private sector GVA growth to exceed UK average

Rebalancing (by 2014/15)

- Support £300m investment by businesses in R&D
- Deliver 210,000 qualifications at Levels 2, 3, 4 and above through Higher Education, Further Education, Essential Skills and Training encouraging people to move up the skills ladder
- Promote £400m of investment and 6,300 jobs in locally owned companies (50% paying salaries above the PSM)
- Promote 5,900 jobs from inward investors (75% paying salaries above PSM)
- Promote 60 new start ups exporting outside the UK and a further 440 selling to GB

Increase the proportion of the working age population in employment

Rebalancing (by 2030)

- Increase in Business Expenditure on Research & Development (BERD) as a percentage of Gross Value Added (GVA)
- Increase the proportion of innovation active firms
- Increase the proportion of young people leaving school having achieved at least 5 GCSEs at A*-C (or equivalent) including GCSE English and Maths
- Increase the proportion of those in employment with qualifications at Levels 2, 3, 4 and above closing the skills gap with the top performing OECD countries
- Strengthen the value added nature of FDI
- Significantly increase the value of exports / external sales
- Significantly increase visitor revenue
- Improve average journey times on key transport corridors

Data on Public Finances

UK Treasury has itself identified a series of problems with its own regional accounting of public finances, in terms of what it describes as practical difficulties, conceptual difficulties and data collection issues. The Treasury also describes its own 'Country and Regional Analysis' (CRA) as a purely statistical exercise.

The CRA are in turn described by the Treasury as being subject to imprecision because:

- the concept of who benefits is open to interpretation;
- simplifying assumptions are made in order to reduce the reporting burden for government bodies;
- the robustness of allocation methods varies according to the availability of data. Public service pension spending can be allocated on the basis of the postcodes of recipients, giving a very accurate regional allocation. Other apportionments require a higher degree of estimation; and
- the Treasury asks the largest departments to allocate their spending by country and region, whereas spending for the remaining departments (de minimis) are pro-rated using the total expenditure of the larger departments.[22]

[22] UK Treasury (2012) *Public Expenditure Statistical Analysis 2012.*

Since the Treasury is the sole ultimate source of all data relating to public finances, greater clarity or reliability cannot be sought from other sources such as departmental studies nor the Fiscal Balance Report.

One of the key decisions made when devolution was being introduced was that the major part of the funding for the devolved administrations should be provided through a block grant from Westminster - and that the same mechanism for determining the size of the block grant, the Barnett formula, should be applied as had been used to calculate pre-devolution block grants.

The Barnett formula had originally been introduced in 1978. Barnett embodied the principle that those services within the control of, say, the Secretary of State for Northern Ireland should receive the same per capita increase in planned funding each year as the aggregate of corresponding services in England. This approach meant that the Secretary of State for Northern Ireland did not need to become involved in each of the annual bilateral funding negotiations between the Treasury and individual Whitehall Ministers. It also reflected the Secretary of State's discretion to allocate funding as he or she saw fit within his or her area of responsibility.

The operation of the Barnett formula in its early years was marked by a number of features. First of all, the way the formula was applied was largely covert - detailed calculations showing how the Northern Ireland block was calculated each year were not published. Moreover, it emerged in due course that there were a number of get-outs and exceptions to the way in which the formula was applied. For example, major pay awards were, on occasion, exempt. The effect was that, while in principle Barnett should have resulted in convergence in per capita spending levels between Northern Ireland and England, in the early years of its operation per capita spending in Northern Ireland was maintained, or even increased, relative to England. One could characterise the operation of the Barnett system in its early years by saying that, while it was apparently formulaic, in effect there was sufficient freedom for manoeuvre so that in many respects the outcome was more akin to that of a negotiation, reflecting priorities and the balance of power within the Cabinet. This became much less true after the early 1990s, when the rules for the operation of Barnett were greatly tightened up: but one feature which did carry over to the later years was that the detail of the Barnett calculations remained largely covert.

Devolution fundamentally changed the context within which Barnett was required to operate. It put in place powerful political entities (both in the shape of the devolved administrations, and individuals like the Mayor of London) who are not bound by collective Cabinet responsibility and who have a direct vested interest in the outcome of the funding decisions. The Barnett formula has not however altered in the context of these new arrangements.

While there is some discussion about the block grant and the effects of the Barnett Formula, the data on the totality of government finances as they apply to Northern Ireland is largely absent. As shown below, such data that is provided is largely on the basis of extrapolation and deduction, without regard to firm evidence.

There are two flows in government finances; receipts and outlays. These are usually sub-divided into current and capital items. In the case of Northern Ireland, the UK Treasury provides certain data on expenditure. But this has two key shortcomings. In the first instance, much of the departmental spending allocated to Northern Ireland in public sector accounts is simply a convention of UK Treasury accounting. No data is actually provided to identify the actual level of departmental spending. In addition, the UK Treasury says that a proportion of locally-financed expenditure is actually classified as central government spending.[23] This appears to be a unique status for public finances data. At the same time there is a degree of centralisation over expenditure in Northern Ireland which ought, in principle, to make full disclosure of expenditure less problematic rather than more. Yet the UK Treasury repeatedly points out that "local government expenditure in Northern Ireland appears lower than for Great Britain because spending that is usually undertaken by local government is undertaken by Northern Ireland departments."[24]

The UK Treasury categorises spending as identifiable and non-identifiable. However, it is clear that, at least for some departments, and perhaps all, these may be 'identifiable' expenditures but they are not identified, that is to say not necessarily actually expended in Northern Ireland. So, for example, the UK Treasury argues that the level of

[23] "Other AME includes locally financed expenditure in Northern Ireland that by convention is classified as central government spending". HM Treasury (2012) *Public Expenditure Statistical Analyses 2012* page 81.

[24] Ibid pages 91, 146 and 147.

detail required to identify health spending in Northern Ireland is not yet available.[25] The situation is even less satisfactory with regard to the allocation of 'non-identifiable' expenditure, where the general rule-of-thumb seems to be simply to allocate all other expenditure on a per capita basis, irrespective of where it is spent.

Research conducted in 2002-03 for Whitehall departments by Iain McLean confirmed that Whitehall departments generally had no means of disaggregating what they spend on a region-by-region basis.[26] Highlighting the insufficient administrative adaptation in Whitehall to regional policy agendas, and though changes have been introduced, there is still considerable doubt cast on how effectively Whitehall spending levers can be used for regional economic ends.

Almost the entire focus of UK Treasury presentations is on current expenditure in its analyses of public spending. However, as noted above, investment (GFCF) plays a distinctive role in the underperformance of the economy in Northern Ireland. According to UK Treasury, Northern Ireland "does not have an equivalent concept [to Supported Capital Expenditure in Scotland] as their local government sector is much smaller".[27] It is unclear whether this means here either the entire local government sector or specifically its capital expenditure component. In either event, it is unhelpful with regard to provision of data in a key area of economic activity.

Comparability of expenditure accounts would also be aided by identifying differences in the structure of public sector activity. Notably, for example, Northern Ireland continues to maintain public ownership in the provision of water services. This may or may not be more effective or efficient than private ownership in most of Britain, but the costs and revenues associated with it should be excluded in comparisons.

While severe problems arise in the accurate allocation of components of government spending, concrete data on the revenues generated in Northern Ireland are almost entirely absent. A characteristic document is the Treasury's ***Rebalancing the Northern Ireland Economy*** (2011). This discussion of the merits or otherwise of the transfer of fiscal powers, and specifically the merits or otherwise of cutting the corporation tax rate suffers from the important deficit that nowhere in the document is the level of corporation tax actually generated in Northern Ireland identified. Without this, it is impossible to confidently estimate the influence of various factors, the likely impact of any change in the rate of corporation tax, its relationship to other taxes and tax-deductible items, its sensitivity to changes in economic activity or even its evolution over time.

The current UK government has embarked on a programme of cutting the rate of corporation tax and other changes to business taxation. There is no data publicly provided on these (and other businesses taxes) for Northern Ireland. This might have allowed an evidence-based assessment of the impact of lower taxes for public finances in Northern Ireland.

The same is true for the gamut of taxes in Northern Ireland.

Under Treasury policy all tax revenues and analogous receipts which are set by the UK Government but which are collected in England, Scotland and Wales and Northern Ireland are all passed to the UK Government and contained in the United Kingdom Consolidated Fund. Ascertaining exactly the level of revenue generated within Northern Ireland is not straightforward. The majority of public sector revenue is in the form of receipts raised from taxation. Northern Ireland does not collect its own taxes and there is no Executive Department which is directly responsible for accounting for the amount of taxation revenue raised within Northern Ireland. Revenue and Customs collects taxes and produces statements on the overall amount of each tax collected in a given financial year. The Treasury assert that they do not report at a level which allows for an exploration of revenue at the level of Northern Ireland (or indeed any other devolved administration). This creates challenges when attempting to clearly outline the level of revenue generated within Northern Ireland. Where statements relating to the Northern Ireland are available, they have usually been calculated on an ad hoc basis, such as when a new policy is being discussed and they tend to be estimates which employ variable methodologies. There is therefore no regular or accurate reporting of revenue generated within Northern Ireland or indeed within the other devolved administrations.

The HMRC has attempted to produce a regional disaggregation of its tax receipts[28] but these account for only 80% of all revenues[29] and are estimates based on a series of assumptions and data constraints. The most important of these include Corporation Tax and Capital Gains Tax for companies, as the data is based on the postcode of the head office where there is little or no breakdown of employment by region available.

[25] Ibid page 159.

[26] I McLean and A McMillan (2003) The Distribution of Public Expenditure across the UK Regions in *Fiscal Studies* 24(1).

[27] HM Treasury (2012) ***Public Expenditure Statistical Analyses 2012*** page 209. Supported capital investment refers to fiscal transfers/allocations for the purposes of investment.

[28] HMRC (2013) ***A Disaggregation of HMRC Tax Receipts between England, Wales, Scotland & Northern Ireland.***

[29] S Adam and H Miller (2013) ***Tax Revenue in England, Scotland, Wales and Northern Ireland.*** Available at: http://www.ifs.org.uk/publications/6881

This leads to a series of anomalies and discrepancies. So Northern Ireland's proportion of National Insurance Contributions (2.1% of the total) is 50% greater than its share of Corporation Tax (1.4%) even though the profit share of national income is broadly the same in Northern Ireland as in the UK (39%).

The Department for Finance and Personnel (DFP) has, in recent years, sought to provide an analysis of public finance in Northern Ireland through the publication of a Fiscal Balance report, which is to be produced on a yearly basis. The ***Net Fiscal Balance Report*** represents an attempt towards an analysis of the public finances. It attempts to provide estimates of revenue generated, of the amount of money spent on public services, and of expenditure (based on the Treasury processes outlined above), within Northern Ireland. The DFP clearly states that the figures within are it estimates.

The figures within this report are estimates and should therefore be viewed as such. Variations in methodologies or the subsequent provision of more actual data could produce a more accurate reflection of the true fiscal balance. Particular caution should be used in relation to individual components of the fiscal balance as many revenue streams have been estimated and are not true values.[30]

For example, information on net income tax receipts is published by Revenue and Customs in a UK-wide manner which does not promote any exploration of the data at a disaggregated level. Northern Ireland's share of income tax receipts is estimated based upon the UK figure for income tax which is taken from the PSAT2 database published by ONS, and is presented net of tax credits. The share of income tax attributed to Northern Ireland is then derived from the Survey of Personal Incomes (SPI). This share is then applied to the UK figure published by the Treasury.

This use of the SPI is open to question. In general, the main function of the SPI is to cost proposed changes to tax rates, personal allowances and other tax reliefs at Westminster level. It is also used to assist in the making of policy decisions. It has not been designed for the purpose of estimating income tax collected within particular areas. It is however employed for this purpose and it is unlikely to give a fully accurate estimate of income tax. Revenue and Customs state clearly in page one of ***Income Tax Liabilities Statistics 2009-10 to 2012-13*** that:

The reliability of these projections by country and region is under review, particularly those for additional rate taxpayers, with the possibility that they be withdrawn from future releases.

The fact that these estimations may be withdrawn from later releases raises questions regarding their appropriateness. Income tax is a major revenue stream within Northern Ireland and an accurate figure would provide useful information regarding the health of the economy and facilitate more informed economic policy.

The distribution of income tax liability may be different from the distribution of net income tax receipts. In page 5 of the same publication Revenue and Customs themselves assert that:

"[I]ncome tax liabilities and receipts in any year can differ appreciably, due to lags in the payment and collection of tax particularly under SA [Self-Assessment], or when over or underpayments occur which are repaid or recovered in a later year. Data sources and methods underpinning the statistics also differ. Receipts statistics are based on aggregate administrative data sources whereas liability statistics are compiled using a sample of individuals' tax records".

For the purposes of ***Value Added Tax*** (VAT) a business normally pays VAT at a single geographical location. This location is normally the locus of their main accounting functions, and may not be the same as the place(s) at which their sales are made and VAT paid by their customers. It is therefore not possible to tell from business's VAT returns how much VAT has been paid by consumers in any one area. The allocation of VAT to different areas is thus necessarily a statistical exercise. Any estimation of VAT will not truly reflect the level of VAT generated from consumers in Northern Ireland. In addition VAT receipts will be weighted towards London as VAT generated via companies such as Tesco will be paid to Westminster.

[30] DFP (2012) *Northern Ireland Net Fiscal Balance Report 2009-10 and 2010-11* page 7.

In principle VAT is a tax on consumption by end users of goods and services. The DFP Net Fiscal Balance Report allocates a share of the UK total to Northern Ireland on the basis of consumers' expenditure as recorded by the Family Spending Survey. This survey includes responses from 147 households from Northern Ireland. It is unlikely that this would present an accurate estimation of VAT generated within Northern Ireland. At the very least the survey could be increased to provide a more accurate estimate.

Taking all of this into account public sector finances remain somewhat opaque and their relationship with economic activity something of a mystery.

Key Data Sources

The NICEI

The Northern Ireland Composite Economic Index (NICEI) is of course to be welcomed. However, the composite indicator tells us little, largely because it is based on pre-existing and patchy data. It certainly does not live up to the billing of 'Northern Ireland's GDP', as it has been described by some (for its part, the Northern Ireland Statistics and Research Agency (NISRA) has always made it clear that the NICEI is not a measure of GDP).[31] GDP is the key economic metric used to measure all economic activity within a geographical area over a given period, and is used extensively to compare different national economies on a consistent basis. In the UK, ONS produces estimates of GDP on an internationally consistent basis.

GDP can be calculated using one or more of three possible approaches. In principle, these three approaches should correspond. One is based on the ***incomes*** in the economy (in the form of wages and rents, for example). The output approach measures the value of what is produced within the economy (such as the manufacturing, service and agriculture sectors). The ***expenditure*** approach considers how money is spent in an economy (for instance on private and public consumption, investment, exports and imports). As the DETI statistical bulletin itself says, the NICEI is based solely on estimates of output (plus some data on employment), not on the trio of output, income and expenditure required for GDP data.

An illustration of why the trio of GDP measures is important can be done in the following way: a firm may produce a million widgets (output). But if the expenditure on widgets is unknown, it is impossible to know whether 1 million widgets were sold or none, with the output left as unsold inventories. Without knowing the incomes of widget-buyers, their ongoing capacity and willingness to buy must also remain an unknown. Without data on foreign trade, it is impossible to know whether 1 million (or more or less) are being bought and what proportion are imports, or what proportion of domestic output is for overseas markets.

In addition the categorisation between private sector and public sector leaves no room for any assessment of the non-profit sector. Both foreign trade and net factor income from abroad are missing.

NISRA recognises that there are severe limitations in the NICEI data and its methodology[32] and argues that these could be improved with the development of input/output tables, discussed below.

The Annual Business Inquiry

There is also the Annual Business Inquiry (ABI). The ABI was formerly conducted by DETI but from April 2011 it has been surveyed by NISRA. The most recent ABI (2012) is the third such report that NISRA has taken on. The survey covers around two-thirds of the economy in Northern Ireland – this is because, for the large part, it excludes the public sector, which interacts with the private sector, not least as its single largest purchaser of goods and services.

The 2012 report contains an improvement in the sample size of the survey. There would be both costs and benefits to increasing the scope of the survey so that it became a business census. If done in a considered fashion it might be possible to reduce the compliance burden of business in other ways.

Financial and employed information is collected from businesses in the production, construction, distribution and service industries. The information collected from the private sector is confined to turnover and employment and does not include data on sales, inventories, input costs, output, investment, and pay.

[31] BBC News (31/01/2013) ***New Figures Measure NI's GDP Output for First Time.*** Available at: http://www.bbc.co.uk/news/uk-northern-ireland-21275948 [accessed 13/05/2013]. A more recent BBC article also stated that the NICEI "is roughly equivalent to GDP" BBC News (29/01/2014) ***NICEI: NI economy grew by 1.6% in third quarter of 2013.*** Available at: http://www.bbc.co.uk/news/uk-northern-ireland-25944171 [accessed 26/02/2014]. Also the NICEI was recently equated with GDP in ONS (2013) ***Monitoring Report: Official Statistics in the Context of the Referendum on Scottish Independence*** page 17.

[32] O Johnston (2013) ***Methodology for the production of a quarterly Northern Ireland Composite Economic Index*** page 8. Available at: http://www.detini.gov.uk/ni_composite_economic_index_paper_-_q3_2012.pdf.

In 2010 the response rate was 79.6% from an overall sample size of around 5,000 businesses. This is deemed too small to facilitate geographical analysis, and the sample size has increased. It is therefore not possible to examine which sectors are successful in which locations. Such information would be invaluable in terms of attracting inward investment and stimulating growth. The sample size of the survey has been recently increased for precision. A small amount of resources could transform this from a survey to a census which could facilitate the geographical exploration of the data by sector.

NISRA also publishes a series of more detailed surveys of business activity (Annual Business Inquiry, Research & Development & Annual Survey of Hours and Earnings).

Regional Economic Indicators

The most comprehensive publication and associated data is from the ONS Regional Economic Indicators. This provides commentary and data under the following headings:

- Output;
- Productivity;
- Labour Market;
- Residents' Income;
- Innovation;
- Enterprise;
- International Competiveness; and
- Skills.

However the comprehensiveness of the data is more apparent than real. There is a very broad array of economic data which is either unavailable and does not appear on this list, or available only in a very partial manner, sometimes with a long time lag. For a fully rounded view of economic activity all of these datasets would be necessary. There is justified concern at their absence. The specific shortcomings in certain key areas are addressed below.

The GVA data is only provided using the output and incomes approaches. Aside from the distribution of income between Gross Operating Surplus and Compensation of Employees, all other data on income and expenditure is absent. The nominal GVA data is now current to 2012. Real GVA to 2011 has been introduced by ONS on an experimental basis. This is very welcome and valuable. It has therefore arrived at a position of regional implicit price deflators. This should be developed in order to ascertain whether different regions are unevenly affected by changes in the price level, which would affect the level of real activity recorded. Prices could vary at a regional level for a number of reasons, including variability of output or consumption; differences in trend growth and/or regional productive capacity; and the degree of import penetration and global prices. Other factors, such as regional trends in ***asset prices and monetary conditions*** (availability and price of credit) could also play a significant role. It is conceivable that price changes could vary between regions for a period or even on a trend basis.

Crucially, the data on which GVA is based is provided with a time lag of 12 months. GVA data is now only provided for both output and incomes, but not yet expenditure. The value-added provided in domestic final consumption would be useful data in understanding how local demand is served by local output. Similarly, the provision of value-added in the export sectors would indicate the degree of success of local firms in penetrating international markets, and their shortcomings. ***Expenditure data,*** whether by households, firms or the public sector is not provided. To highlight just one omission from the category of household spending, there is no accurate or timely data on retail sales in Northern Ireland. In Britain these account for about 40 per cent of household consumption and about a quarter of all economic activity.

Similar shortcomings can be found with the data on ***Gross Domestic Household Incomes*** (GDHI) in terms of the absence of real (inflation-adjusted) data.[33] In addition Department for Social Development has published the Family Resources Survey from 2002/03. But the most recent survey (published November 2013) is only current up to 2011/12. The household consumption data from the Living Costs and Food Survey is of too limited a sample size to be relied on.

Furthermore, the income-only approach omits any assessment of the difference with expenditures (that is, it provides no data on household savings rates).

Business births and deaths data has been improved with publication of NISRA's ***VAT and/or PAYE Registered Businesses in Northern Ireland (2014).***

Data for ***exports*** is only provided to 2011/12.[34] They are not disaggregated either by component or destination. In the absence of import data it is impossible to ascertain a net trade balance. More importantly it is not possible to establish the proportion of value-added in exports. This relates to a key omission (discussed below) in terms of detailed Input-Output tables. Success or failure in the area of exports requires the provision of timely data in this area which is disaggregated by component and export destination.

Data on ***workforce skills and qualifications*** is only current up to 2011/12.

Sectoral activity data is very useful in gauging the changing composition of an economy. The main shortcoming of the ONS data[35] in this regard is that it currently suffers a two-year time lag. The most recent data is for 2011.

By contrast, the ***labour market*** data (which includes the Census of Employment, the Labour Force Quarterly Supplement, the Quarterly Employment Survey and the Monthly Labour Market Report) is useful and much more timely than in many other categories. However, within the detailed data about the composition of the workforce and its various sub-categories (employed, unemployed, economically in/active, reasons for inactivity, full and part-time, and so on) there are some omissions and time lags.

In one source from the ONS there is a broad range of regional labour market indicators and claimant count data at the regional and sub-regional level for England, Wales and Scotland.[36] It is not clear why Northern Ireland is absent from this detailed data provision. That data itself combines the array of nationally available data broken down by region, unitary and local authority as well as NUTS 3 levels.[37] It is provided on a timely basis (e.g. July-September data is published in mid-November). NISRA provides the same range of data[38] but this is not produced at the lower sub-regional levels. It would also be useful to have much more comprehensive data on earnings and employment by sector.

There is an absence of data comprising Input-Output tables, which exist elsewhere and are, for example, provided by the Scottish Government. Input-Output tables provide the detailed data showing the relationship of the output of all sectors of the economy and the inputs these require from other sectors. Most production in any advanced economy is not for final consumption but for intermediate consumption by other firms ('the production of things to produce other things'). Therefore, inputs are far greater than final aggregates of economic activity. So, for example, the construction of a new factory (depending on the product) may require inputs in certain proportions of water, sewage, electricity, transport, education and other inputs. Knowledge of these relationships is vital in understanding how changes in the output of each economic sector depend on all others.

NISRA statisticians, working in DETI, were closely involved in a project to assess the economic impact of tourism in Northern Ireland and a draft set of Input-Output tables were prepared for this purpose.[39] In addition, the Agri-Food and Biosciences Institute (AFBI) for Northern Ireland has been involved in the development of Input-Output tables for Northern Ireland, primarily focused on the agricultural sector.[40]

[33] ONS (2013) ***Statistical Bulletin: Regional Gross Disposable Household Income 2011.***

[34] DETI (2012) ***Results from the Northern Ireland Manufacturing Sales & Exports Survey 2011/12.***

[35] ONS (2012) ***Regional Gross Value Added (Income Approach) December 2012.***

[36] ONS (2013) ***Regional Labour Market Statistics, November 2013.***

[37] NUTS refers to Nomenclature of territorial units for statistics. It is a system for classifying territories in the EU.

[38] NISRA (2013) ***Statistical Press Release. Labour Market Statistics – November 2013.*** Available at: http://www.detini.gov.uk/labour_market_press_release_-_november_2013__final_.pdf

[39] See NITB and DETI (2007) ***Tourism in the Northern Ireland Economy Volume 1 and DETI (2007) The Northern Ireland Economic Bulletin.***

[40] See http://www.agresearch.teagasc.ie/rerc/downloads/workshopsandseminars/IOCGE_workshop_06_02_07/RERC07.pdf.

Reference to its Corporate (2012-15) and Business (2013-14) plans also make it clear that a NISRA milestone for 2013-14 is to assess the feasibility of developing Input-Output Tables for Northern Ireland and, if possible, to prepare a prototype set. NISRA is currently working with an ONS consultant on such a project to ensure consistency with ONS's Regional and National Accounts methods. NISRA and AFBI are also co-ordinating their activities as part of this project. An undertaking was also given to consult users on the development of such tables and a user group meeting was held in November 2013 for this purpose.[41] Should the development of Supply-Use and/or Input-Output Tables for Northern Ireland proceed, a scoping exercise will be published in spring 2014.

GFCF is historically the most volatile component of GDP and therefore the most important determinant of the business cycle as a whole. It is also the main determinant of economic capacity over the medium-term and therefore of long-run prosperity. GFCF data was discontinued in 2000.[42] This is probably the most important single deficiency of the entire dataset relating to the economy in Northern Ireland.

Capital stock data is also absent. In effect, the stock of capital is the accumulated flow of GFCF, after taking into the deduction necessary for capital consumption. Without data in this area, the basic building blocks of all large-scale investment decisions (public and private) have no foundation.

Import data could be provided as both part of Input-Output data and on a timely high-frequency basis. The import component of various categories of goods (capital, intermediate and consumption goods) can aid in identifying key areas for economic development and ultimately where the Northern Ireland economy fits in the global division of labour.

Credit availability is a largely neglected area, not really identified at the Northern Ireland level in the Bank of England data. It is possible this may be an important factor in the current economic situation.

Data on the ***Compensation of Employees*** are provided as part of GVA data.[43] But these are only in nominal terms, before the effects of inflation are considered. Elsewhere, notably in Scotland, there is further breakdown into self-employed earnings and wages. These are important for a variety of reasons, for example, because changes in the earnings of self-employed professional may have a very different economic impact to changes in wages. There is no comprehensive data on ***household incomes*** (and their composition) nor ***household consumption*** (and their composition), which is much larger than the sub-category of retail sales. The large proportion of final demand that is devoted to household consumption means that these are important deficiencies.

Commentary on Regional Economic Performance Indicators

In the annual publication ***Commentary on Regional Economic Performance Indicators*** from the Department of Business, Innovation & Skills (BIS) is a summary of the highest quality data available for each of the regions. It sets out to provide summary data in the following 11 areas

A – Productivity

B – Investment

C – Innovation (Research & Development)

D – Skills (Qualifications)

E – Enterprise

F – Competition (Exports of Goods & Services)

G – Labour Market

H – Earnings

I – Deprivation (Income Support Claimants)

J – Transport

K – Land Use

[41] http://www.detini.gov.uk/deti-stats-index/stats-national-statistics/user-consultation-and-information.htm
[42] http://data.gov.uk/dataset/regional_gross_fixed_capital_formation_gfcf [accessed 13/05/2013].
[43] ONS (2012) *Regional Gross Value Added (Income Approach).*

There are a number of omissions and shortcomings. Productivity is measured only in terms of GVA per worker and (elsewhere) per hour worked, not capital employed (capital stock). This can only render the productivity of labour, not of capital. The omission here is compounded by the absence of data on regional GFCF. An alternate measure, Net Capital Expenditure is used which provides no breakdown between building and construction on the one hand and investment in plant, equipment and machinery on the other. Further, without providing detail on both GFCF and Capital consumption (capital consumed in the production of goods), it is difficult to see how a Net Capital Expenditure total is derived.

Key Gaps

In summary, the following areas are either absent or could be improved:

- Input-output.
- Retail sales.
- GVA output, income and expenditure
- Inflation
- Capital stock
- Gross Fixed Capital Formation
- Proportion of value-added in exports
- Exports disaggregated by component or destination
- Import data on the same basis
- Compensation of Employees
- Tax receipts
- Public expenditures
- Composition of household consumption.

4 A Benchmark for Northern Ireland

The omissions flagged in the previous chapter are numerous enough and serious enough to warrant a comprehensive review of economic data in Northern Ireland. A sensible way to proceed would be to systematically compare the Northern Ireland data with that of a relevant benchmark. But what represents an appropriate comparator?

The European Commission's ***Eurostat*** is one possible benchmark. Interestingly it is able to provide an aggregate GDP total for Northern Ireland; albeit only to 2010 currently (GVA removes the effects of both taxes and subsidies from GDP totals). But it is in the composition of economic activity that Northern Ireland's omissions become more stark. The Eurostat database contains data for NUTS 2 regions across the EU[44] (Level 2 regions are administrative units of between 800,000 and 3 million inhabitants). These datasets include (by NUTS 2 region) GFCF, Compensation of Employees (from which may be deduced the Gross Operating Surplus of enterprises) as well as more detailed information on household incomes and expenditure. The latter are subdivided into resources and uses (primary income, current transfers and social contributions, etc).

However, Northern Ireland is not included in these datasets whereas many EU regions (but not all) are included. This may be an impediment to effective policy making, both in the public and private sectors.

There is also an evolved system of provision of statistical data relating to the economy in the EU under the ***Statistical classification of economic activities in the European Community*** system (known as NACE) which is itself a product of the work of the UN's statistical agency. Northern Ireland could aim to produce timely data which, as a minimum, meets the NACE criteria. Practically this means both identifying errors and omissions in the current provision of data, as well as building on and codifying the current variety of sources of information and data that are provided by a number of different agencies who publish various forms of economic information. There is currently an absence of a detailed coherent strategy for the collection and publication of economic data in Northern Ireland.

But perhaps the most relevant reference point is Scotland, another devolved region of the UK. Both the Scottish Government and the ONS publish a range of macroeconomic statistics for Scotland, many of which are classified as National Statistics. Proportionately, the cost of adopting the Scottish benchmark as a reference point would be greater in Northern Ireland, partly offset by smaller sampling and other factors. But the potential benefits to policy makers and all economic actors should not be underestimated either.

Key economic statistics currently available for Scotland include:

- Quarterly GDP Growth;
- Exports of Goods and Services (Global Connections Survey);
- Labour Market;
- Business and energy statistics;
- Input Output Tables and Multipliers;
- National Accounts (Experimental);
- Public Sector Accounts (Government Expenditure and Revenue Scotland).

Alongside this, a range of organisations such as Scottish Engineering, Scottish Chambers of Commerce and Bank of Scotland/Lloyds Banking Group, publish a variety of short-term indicators including monthly business surveys.

The Scottish Government has devoted considerable resources to the production of a far more comprehensive array of economic data. Crucially these datasets include GDP data produced by using the trio of income, expenditure and output data which are benchmarked to annual Input-Output tables. This provides a rounded view of overall economic activity and its evolution.

[44] http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/regional_statistics/data/database

This is supplemented by a set of key economic data on precisely the lines that are required to inform private sector decisions and public sector policy formulation. These include more robust data on exports, including their composition and destinations. There is an improvement in government finances, although these too are still to a large extent based on estimates of revenues generated in Scotland rather than identified receipts. There is also thorough and comprehensive data on the composition of household consumption, which varies between 60% and 70% of all economic activity. In relation to the business sector, there is more timely data provided on both business demography and expenditure on R&D. The main shortcoming still relates to the area of business investment, which is often the most volatile component of GDP and therefore a determinant of the business cycle.

A very significant advance is made with the production of Input-Output tables for the Scottish economy. The production of these is a major advance in the production of economic data. As noted above, Input-Output tables provide a comprehensive source on the structure of the economy, and help in understanding its inner workings and its evolution over time, as well as in assessing the impact of public or private investment decisions.

In conjunction with this data on national accounts, there is timely data on retail sales.

In addition, the Scottish Government is taking forward a programme of development in economic statistics to help improve the knowledge and understanding of the Scottish economy. This work is developmental in nature but has resulted in improvements with respect to the nature and scope of information which is available within the Scottish context. The Scottish Government has taken forward a scoping exercise to explore potential methodologies to expand the range of statistics produced for Scotland with the recognition that this work is vital to improving the understanding of the Scottish economy. This work is considering the potential opportunities to produce the following economic statistics for Scotland:

- Gross National Income;
- Balance of Payments Current Account;
- North Sea output and economic flows; and,
- Offshore Input-Output Satellite Account

There are however, important gaps in the economic statistics available at the distinctly Scottish level. Whilst the coverage for Scotland is more comprehensive than that for Northern Ireland, the data coverage for Scotland is more limited than for independent nations of a comparable size. In many cases this reflects the fact that companies' economic activities are not reported at a sub-UK level. The same is true of Northern Ireland. Nevertheless, taken together the new economic data available in Scotland provides a qualitatively higher level of information for decision makers in all categories of the economy.

In using Scotland as a comparator it should also be noted that the position of the Northern Ireland economy is unique in being geographically separated from Britain and sharing a single land border with the Republic of Ireland. This affects the structure of the Northern Ireland economy in a number of ways. To give just two examples, the normal pattern for exporting companies in Britain is that around 90% of them export to outside the EU (as they dominated by small exporters) and approximately 35% export to within the EU.[45] The position is reversed in Northern Ireland, with 80% of exporting firms exporting to the EU and 40% exporting to countries outside the EU. This is accounted for by the links to the Republic of Ireland. Similarly, the distinction between the workforce and the population related working patterns uniquely includes cross-border working, with different jurisdictions, labour laws and currencies. The same issues relate to incomes, expenditure and output between Northern Ireland and the Republic of Ireland which do not apply in the same way to Britain's economy.

Therefore some attention is required to the co-ordination of economic data gathering and its dissemination. At the very least, double-counting is to be avoided. A minimum aim should be to ensure reciprocal co-ordination of key data and where appropriate joint publications.

[45] ONS (2013) *Regional Economic Indicators – March 2013* page 17.

5 Recommendations

It is clearly very difficult to understand the dynamic of the Northern Ireland Economy in the absence of the relevant information. There is a need to have access to data which facilitates a detailed understanding of the health of the Northern Ireland Economy and allows for the evaluation of economic policy and strategy. This data should be of a level that enables comparisons between Northern Ireland and England, Scotland and Wales, and that reveals how Northern Ireland is located within international markets. Regional data supplied at the UK level is currently not sufficient to fully inform economic policy and strategy. Consequently, it is difficult to formulate any evidence-based response to the questions of how to deliver:

"[S]ustained improvement in the private sector export performance; innovation/R&D; business growth; value added inward investment and the necessary developments to the economic and physical infrastructure that make the region fit for global competition in the 21st century". [46]

In order to help answer these and other questions relating to the operation and performance of the Northern Ireland economy, the following actions are recommended:

1. The Executive should produce a detailed and coherent strategy for the development, collection and publication of accurate and appropriate economic data for Northern Ireland which supports both the development of and the evaluation of the success or otherwise of local economic strategies. This strategy should also support systematic and holistic analysis of the local economy.
2. The Scottish Government has provided a template for the fullness of economic data that could be produced in Northern Ireland. The Executive should adopt a similar approach.
3. The Executive, with input from and the support of the relevant UK agencies, should develop a mechanism through which to illustrate GFCF, GNP and GDP at the Northern Ireland Level.
4. The Executive together with the relevant UK agencies should provide income-output data at a level that allows a detailed understanding of the import and export relationships that exist between Northern Ireland and other areas.
5. Consideration should be given to mechanisms to address the information gaps relating to public expenditure and revenue in Northern Ireland.
6. The sample size for the Annual Business Inquiry needs to be increased. In the case of Northern Ireland this could mean that it becomes a census. At present it is not possible to explore the data geographically, meaning that it is not possible to understand which sectors are successful in which areas. This information is extremely important in the context of understanding how to attract and grow investment.

[46] DETI (2007) *Northern Ireland Economic Overview* page 18.

Appendix A: Glossary

The glossary briefly covers the terms used within the paper. For more detail see the glossary contained in the United Kingdom Blue Book.

Annual Business Inquiry	This is an annual ONS survey of businesses covering employment and financial information such as turnover, gross fixed capital formation, inventories, purchases of goods and services, taxes and subsidies, employment costs, and trade in services.
Basic prices	This price is the preferred method of valuing output and value added. This reflects the amount received by the producer for a unit of goods or services excluding any taxes on products and including any subsidies on products. This price includes only taxes on production (for example, business rates) and excludes any subsidies on production (for example, agricultural set-aside). It excludes any transport charges invoiced separately by the producer.
Compensation of Employees	This is the total remuneration, in cash or kind, payable by enterprises to employees for work done. This covers all wages and salaries including certain forms of payments made-in-kind and the pay and allowances in cash and kind of HM Forces. It also includes payments by employers regarded as supplements to wages and salaries, such as contributions to the National Insurance Scheme, employers' contributions to other pension schemes together with redundancy payments and compensation payments covering, for example, injury. It excludes certain specific expenses of employment such as travel expenses or cost of special clothing needed exclusively for work.
Deflation	This is the technique used to change values from nominal terms (current prices) into real terms (constant prices or volume), expressing the production (or consumption) of goods and services in the prices of a common year.
European System of Accounts 1995 (ESA 95)	The European System of National and Regional Accounts is the integrated system of economic accounts, which is the European version of the United Nations System of National Accounts 1993 (SNA 93).
Exports of goods and services	These are sales of both goods and services to the rest of the world by UK corporations and households as measured on a balance of payments basis. Rent, dividends and interest received from abroad are excluded.
General government final consumption expenditure (GGFCe)	This is the final consumption expenditure by central government and local government including direct payment for goods and services and payment for the services of government employees. The figures exclude expenditure on grants, subsidies, interest payments and other transfers; expenditure on non-military fixed capital assets and inventories; loans and loan repayments. Expenditure on military weapons and equipment used to deliver them are included in this section and are not part of capital formation.
Gross fixed capital formation	This consists of resident producers' acquisitions less disposals on fixed (tangible and intangible) capital assets, for example: new buildings, vehicles, ships, aircraft and plant and machinery, either for replacing or adding to the stock of existing fixed assets. Expenditure on repairs and maintenance is excluded but improvements to land are included.
Gross profits and other income	This comprises the gross trading profits of companies, gross trading surplus of public corporations, self-employment income and rental income (excluding any rent earned from any land and sub-soil assets). These incomes are measured before providing for depreciation but after deducting holding gains.

Gross Value Added	Gross Value Added (GVA) is the contribution of each individual producer, industry or sector to the economy. It is produced as a summary by the ONS as a measure of the complex interactions of the economy.
Imports of goods and services	These are purchases by UK residents of both merchandise and services from abroad. Rent, dividends and interest paid abroad are excluded.
Intermediate consumption	This represents industries' purchases of goods and services to be used up in the production process (excluding any goods purchased for resale without any further processing), and adjusted for changes in inventories of materials and fuels. Intermediate consumption excludes fixed assets whose consumption is recorded as consumption of fixed capital.
Inventories	Previously known as stocks, inventories consist of holdings of materials and fuels, work-in-progress, finished goods and goods bought for resale without any further processing.
Market prices	Those prices which purchasers pay for the goods and services they acquire or use, excluding deductible VAT. The term is usually used in the context of aggregates such as GDP
Mixed income	This is income of persons from unincorporated businesses, mainly farmers, professional people, shopkeepers and other sole traders, and can be either a surplus or a deficit. It thus covers compensation of employees and profits which may or may not be withdrawn from the business. It excludes the operating surplus coming from owner-occupied dwellings.
Nomenclature of Units for Territorial Statistics (NUTS) regions	The Nomenclature of Units for Territorial Statistics (NUTS) provides a single uniform breakdown for the production of regional statistics for the European Union. There are three levels of NUTS in the UK: **NUTS1:** Government Office Regions and Wales, Scotland, Northern Ireland. **NUTS2:** 37 areas – mainly groups of counties and unitary authorities; can be referred to as sub regions (please note that in some cases these do not correspond exactly to the sub regions in the Regional Economic Strategies produced by RDAs). **NUTS3:** 133 areas – principally individual counties and unitary authorities; also known as local areas.
Non-profit institutions serving households (NPISH)	Non-profit institutions serving households include organisations such as charities, religious societies, trade unions and members' clubs.
Operating surplus (or deficit)	This measures the surplus or deficit accruing from production before taking into account any transfer payments or receipts. For example operating surplus excludes interest, rent or similar charges payable on financial or tangible non-produced assets borrowed or rented by the enterprise.
Output	This consists of those goods or services that are produced within an establishment that become available for use outside that establishment, plus any goods and services produced for own final use.
Subsidies	These are current unrequited payments made by central government, local government or the European Union to a producer or trader having the effect of reducing the selling price below the factor cost of production. They include the financing of deficits on public trading services deliberately run at a loss. There are two types, see subsidies on production and subsidies on products.

Subsidies on production	These are subsidies other than subsidies on products and are based on the levels of productive activity, for example numbers employed.
Subsidies on products	Subsidies are payments made from the government to producers per unit of a good or service produced. The objective of paying subsidies is to influence the amount of goods or services produced, or, the prices of the goods and services produced. The inevitable consequence of subsidies is to distort the market for a product. An example of subsidies on products is the agricultural subsidies paid to farmers prior to 2005. Prior to 2005, farmers were paid a subsidy on production (per tonne of grain or litre of milk produced) which allowed them to sell their products at a price which was typically below the cost to produce the product (grain/milk etc).
Taxes	These are compulsory unrequited payments to central government, local government or the European Union. Taxes on income and wealth such as income tax and corporation tax, and capital taxes like capital gains tax and inheritance tax are not included.
Taxes on production and imports	Taxes paid by producers, for example, business rates, motor vehicle duties and regulatory fees, and are levied according to production, and do not depend on the profitability or otherwise of a company.
Taxes on products	Taxes on products are taxes paid per unit of some good or unit produced or sold. An example of taxes on products is Value Added Tax (VAT). VAT is only paid when a service or good is transacted. For example, VAT is added at the end of the production process as a consequence of the statutory requirement to pay VAT on a product(s), it is not created by the business selling or producing the goods. Central government sets tax policy and collects revenues for the areas they govern. The government as an entity which governs a geographical area receives the VAT, it can therefore only be assigned to the area governed, not a specific geographical location within it.

Appendix B: Compendium of Economic Data

The Treasury published a consultation on regional economic data in 2011, this resulted in the publication of a compendium of economic data, the content of which is outlined below.

Annex A – Regional Indicators provided in 'Regional Economic Performance Indicators' annual compendium and the "dynamic" version

Regional Indicator	Data supplier for the regional indicator	Table number(s)	National Statistic status
Workplace based gross value added	Office for National Statistics	A(1)	Yes
Residence based gross value added	Office for National Statistics	A(2)(i), A(2)(ii)	Yes
Gross disposable income per head	Office for National Statistics	A(4)	Yes
Labour productivity	Office for National Statistics	A(2)(i), A(2)(ii), A(3)	Mixed
Investment and output by UK and foreign-owned companies	Office for National Statistics	B(1), B(2), B(3)	No
Research and development	Office for National Statistics and Department for Business, Innovation and Skills	C(1), C(2)	Mixed
Employment in high and medium-high technology industries	Office for National Statistics	C(3)	No
Educational and vocational attainment	Deparment for Business, Innovation and Skills, Department of Education	D(1), D(2), D(3)	Yes
Business registrations and survival rates	Office for National Statistics	E(1), E(2)	Mixed
Entrepreneurial activity	Global Entrepreneurship Monitor	E(3)	No
Export of goods and services	HM Revenue and Customs, Department for Business, Innovation and Skills, Office for National Statistics	F(1), F(2), F(3), F(4)	Yes
Employment	Office for National Statistics	G(1)	Yes
Unemployment	Office for National Statistics	G(2)(i)	Yes
Claimant Count	Office for National Statistics	G(2)(ii), G(2)(iii)	Yes
Earnings	Office for National Statistics	H(1), H(2), H(3)	Yes
Income support	Department for Work and Pensions	I(1)	Yes
Income deprivation	Department for Communities and Local Government	I(2)	No
Transport	Office for National Statistics, Department for Tansport	J(1), J(2), J(3)	Yes
Re-use of vacant and derelict land	Department for Communities and Local Government	K(1)	No

NOTES