

Experimental Results

Date: 26 May 2016
Geographical Area: Northern Ireland
Theme: Economy Statistics
Frequency: Ad hoc

In December 2015 NISRA developed for the first time a balanced estimate of Northern Ireland Gross Domestic Product¹ (GDP) and its component parts using an international standard approach. This publication includes a number of revisions to the previously published GDP estimates for 2012 and the Supply and Use Tables (SUTs) on which they are based. In addition NISRA has developed a set of Input-Output Tables (IOTs) and multipliers which are used for a wide range of macroeconomic modelling and economic impact purposes.

The resultant statistics are designated as “experimental” to reflect the fact that they are under development. Users should also adopt a cautious approach to the use of the multipliers which are prototype in nature.

Revised results as well as further information on the SUT/IOT framework and multipliers are provided in the subsequent sections.

Key Results

- The project has facilitated the calculation of GDP for NI using three distinct approaches – the income approach, the expenditure approach and the output approach.
- Revised results show that in 2012, GDP for NI was £37.7bn.
- In 2012, the total value of “Final Use” in NI was estimated to be worth £62.8bn. This represents the total value of expenditure by Consumers and Government plus the value of Investment and Net Trade:
 - Expenditure by the household sector (including non-profit organisations) was estimated to be £27.9bn or 44% of Final Use, showing the importance of the local consumption of goods and services to the economy.

¹ Please see the [“Structure of the NI Economy 2012”](#) publication for background information and initial results

- Central & Local Government Expenditure accounted for 19% of Final Use, (compared to 16% in the UK), showing the relatively greater role government plays in NI (in addition to public sector wages and salaries)².
- Capital Investment (£3.8bn) accounted for 6% of NI Final Use, which is considerably lower than the UK as a whole (12%) and Scotland (11%).
- “External sales” including exports³ and sales to customers in Great Britain (GB) accounted for 30% of NI Final Use. This was just below the value of Scottish exports and sales to GB (31% of Scottish Final Use). In contrast, exports accounted for 23% of UK Final Use.
- Local “imports” (including purchases from Great Britain) exceeded external sales resulting in a “net trade deficit” of £6.1bn in 2012.

² Government expenditure in this framework excludes social transfers. This is the main difference between these figures and those produced in the Public Expenditure Statistical Analyses (PESA) publication.

³ Exports in this framework exclude any taxes or duties due from GB residents

Introduction

This release provides a combination of newly available and revised results from the NISRA project to develop key elements of a system of Economic Accounts for Northern Ireland (NI). It is hoped that this will provide users with a number of new indicators relating to the structure and inter-industry relationships of the NI economy to aid economic analysis and decision making.

A modern open economy like that of Northern Ireland engages in four basic economic activities:

- **Production** involves industries producing goods and services;
- **Consumption** represents purchases of goods and services by both industries and domestic final users comprising mainly households, and Central and Local Government;
- **Investment** includes the accumulation all capital transactions such as fixed investment expenditure and changes in the level of stocks; and
- **Trade** is the total value of external sales minus imports.

Measurement of these four activities is captured in the framework of the Supply and Use Tables (SUTs) which NISRA has produced for the first time for Northern Ireland for the reference year 2012. The resulting tables serve a number of purposes (discussed later), all of which contribute in different ways to understanding the Northern Ireland economy.

One of the key outputs from the Supply and Use framework is the calculation of Gross Domestic Product (GDP) for Northern Ireland as measured using the income, expenditure and output approaches in line with international standards. The SUTs provide detailed data on the supply and use of commodities, inter-industry flows and the structure of the economy; they are also the foundation from which Input-Output Tables are derived. The IOTs provide a framework for modelling the impacts of changes to the domestic economy and are the pre-requisite for calculating a range of derived data such as multipliers used for economic planning, analysis and forecasting.

The following sections provide further details on the SUT and IOT framework along with key results emerging from the SUTs. A [glossary](#) of National Accounting terms used throughout this paper is presented at the end of this document.

Experimental Statistics

This publication provides the first official statistics from the SUTs, many of which have never been available at the Northern Ireland level before. They are experimental statistics (see section 6) which are still undergoing evaluation and are subject to revision. Given that these are the first such official economic statistics produced for NI, users should adopt a cautious approach on their use. NISRA is therefore seeking feedback from users to inform the development of the statistics. Users should also consider the issues raised in the [Bean](#) independent review of UK economic statistics and any implications there may be for the NISRA economic accounts project.

Contents

This publication contains the following sections.

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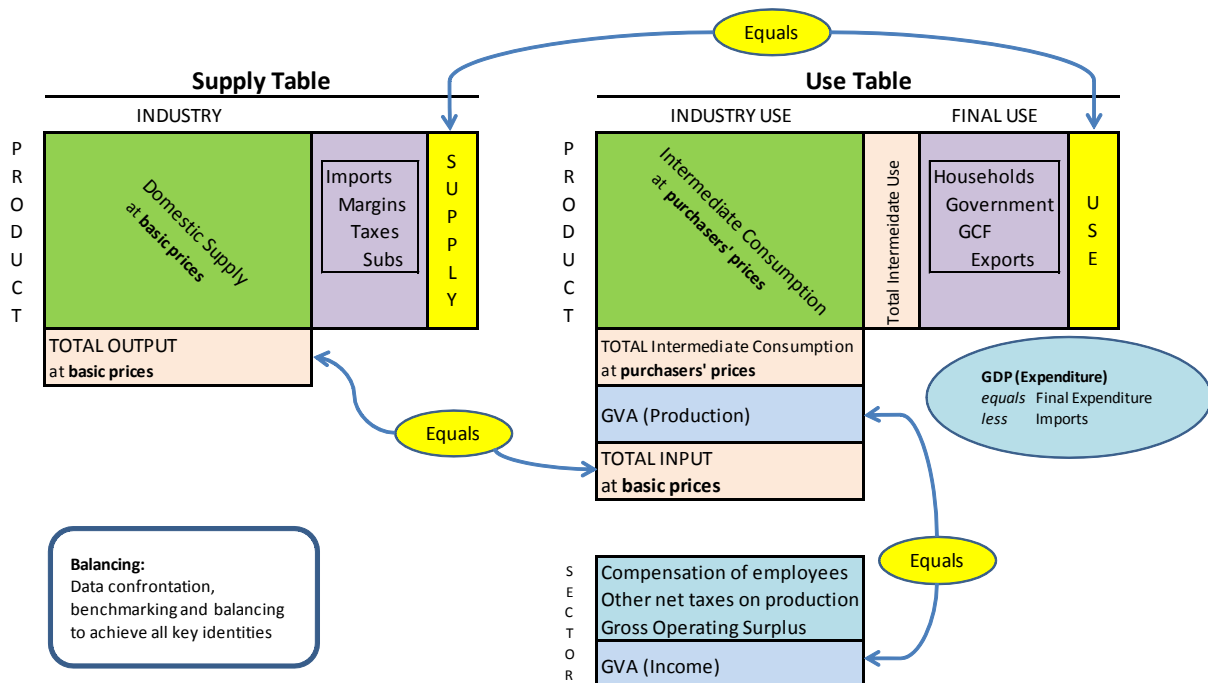
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Overview of the Supply and Use framework

The SUTs provide a picture of the flows of products and services in the economy for a single year and are used to set the level of annual current price Gross Domestic Product (GDP). They show the composition of uses and resources across institutional sectors and the inter-dependence of industries in order to reconcile the production, income and expenditure approaches to the measurement of GDP.

The diagram below⁴ provides an overview of the SUTs showing how the framework provides a coherent picture of the economy. The methodology used and further information on how to interpret the tables can be accessed [here](#).

Figure 1: Framework for a coherent picture of the economy



The Supply table shows the output of each product by each industry. The value of industry output is based on NI official statistics surveys. As producers are classified according to their principal product, most domestic production lies on the diagonal. However, there are some off-diagonal elements in this table. These represent secondary production and by-products classified to Input-Output groupings (IOGs) other than the principal product of the industry. The profile of products within a category is currently based on the UK supply patterns. The Supply table is relatively sparse because most producers make a limited range of products.

The columns on the right of the Supply table show imports of products, distributors' trade margins on products and taxes on products (e.g. VAT) less subsidies on products. Summing across these columns and those in the main body gives the total supply of

⁴ Provided by Sanjiv Mahajan, ONS

products at purchasers' prices i.e. the value paid by purchasers excluding any refundable VAT.

The main body of the Use table shows, for each industry classification, the intermediate consumption of products. That is, the value of products used-up or altered by the production process. These estimates are currently based on UK purchasing patterns pending the completion of a NI Purchases survey. The columns to the right of the main table give the components of final use for products. Both final use and intermediate use are valued at purchasers' prices and cover domestically produced and imported products.

The rows underneath the main body of the Use table give the income components of Gross Value Added (GVA) for each industry grouping. These components are labour costs (wages and salaries plus associated employers' contributions e.g. national insurance and pension contributions), taxes on production (e.g. business rates) less subsidies on production, profits, etc⁵.

Each of the components of the SUTs are based on detailed analysis of a wide range data sources covering the whole of the Northern Ireland economy. Behind each element there are a series of matrices which collate the analysis of the available data into the National Accounts framework which then feeds into the respective section of the tables above.

For further information on National Accounts and Supply and Use Tables the interested reader is referred to:

- [Eurostat Manual of Supply, Use and Input-Output Tables](#)
- [A Short Guide to the UK National Accounts](#)
- [Commentary on Supply and Use balanced estimates of annual GDP, 1997-2013](#)

⁵ [United Kingdom Input-Output Analytical Tables, 2010](#)

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Supply and Use tables for NI 2012

The SUTs for NI for 2012 are presented below in summary format.

Table 1: Summary Supply Table for NI, 2012

NI Supply Table 2012 £'m															
Industry Supply (at basic prices)															
Product	Agriculture	Production	Construction	Distribution, transport, hotels & restaurants	Information & communication	Financial and insurance	Real estate	Professional & support activities	Government, health and education	Other services	Total Domestic Supply	Imports of goods & services	Distributors' Trading Margins	Taxes (less subs) on products	Total Supply at purchasers' prices
Agriculture [1-3]	1,673	*	*	*	*	*	*	*	*	*	1,673	267	321	19	2,280
Production [5-39]	*	15,925	*	67	*	*	*	*	*	*	15,998	19,808	8,401	3,636	47,843
Construction [41-43]	*	58	4,910	107	*	*	*	51	*	*	5,182	7	-	166	5,354
Distribution, transport, hotels & restaurants [45-56]	*	754	*	12,927	*	*	*	*	*	70	13,851	2,683	(8,835)	519	8,218
Information & communication [58-63]	*	75	*	78	1,260	68	*	65	*	119	1,696	803	113	98	2,711
Financial & insurance [64-66]	*	*	*	*	*	2,842	*	*	*	*	2,850	54	-	202	3,106
Real estate [68.1-2-68.3]	*	*	*	*	*	142	3,662	*	*	*	3,914	48	-	23	3,985
Professional & support activities [69.1-82]	*	408	*	186	148	*	*	3,443	259	58	4,607	1,226	-	165	5,998
Government, health & education [84-88]	*	*	*	*	*	*	*	*	11,977	*	11,993	28	-	23	12,044
Other services [90-97]	*	*	*	54	*	*	*	*	*	4,211	4,303	179	-	143	4,625
Total Supply at basic prices	1,772	17,237	4,955	13,449	1,487	3,109	3,696	3,610	12,262	4,490	66,067	25,103	0	4,994	96,164

More detailed SUTs can be downloaded [here](#).

Table 2: Summary Use Table for NI, 2012

NI Use Table 2012
£'m

Product	Industry Use (at purchasers' prices)											Final Use (at purchasers' prices)						
	Agriculture	Production	Construction	Distribution, transport, hotels & restaurants	Information & communication	Financial and insurance	Real estate	Professional & support activities	Government, health and education	Other services	Total Intermediate Use	HH FCE	NPISH FCE	CG FCE	LG FCE	GCF	Exports	Total Use
Agriculture [1-3]	375	1,011	8	81	1	-	-	1	3	2	1,481	500	-	-	-	95	204	2,280
Production [5-39]	715	8,792	1,710	4,654	375	100	257	693	1,745	479	19,520	13,449	-	421	189	918	13,347	47,843
Construction [41-43]	61	144	886	167	5	53	99	10	114	43	1,583	24	-	450	-	2,140	1,157	5,354
Distribution, transport, hotels & restaurants [45-56]	31	390	85	1,216	63	216	37	81	284	71	2,474	4,470	-	-	-	(29)	1,303	8,218
Information & communication [58-63]	7	207	37	153	46	208	12	53	184	123	1,029	861	-	-	-	290	531	2,711
Financial & insurance [64-66]	27	447	60	130	23	385	105	40	116	73	1,405	1,322	-	-	-	1	378	3,106
Real estate [68.1-2-68.3]	2	41	32	112	2	53	5	7	101	13	369	3,253	5	-	-	50	309	3,985
Professional & support activities [69.1-82]	172	587	352	531	49	432	38	398	680	372	3,611	574	61	-	-	321	1,431	5,998
Government, health & education [84-88]	1	41	16	65	3	29	26	33	650	13	875	806	227	9,837	199	1	98	12,044
Other services [90-97]	1	15	1	19	23	19	0	11	323	620	1,034	1,660	649	827	222	(8)	242	4,625
Total Intermediate Consumption at purchasers' prices	1,392	11,674	3,187	7,127	589	1,495	579	1,327	4,200	1,810	33,380	26,919	942	11,536	610	3,778	18,999⁶	96,164
Taxes less subsidies on production	3	(148)	34	349	15	13	19	50	10	(337)	9							
Compensation of employees	128	3,238	1,017	3,384	746	743	127	1,173	7,251	578	18,386							
Gross operating surplus and mixed income	250	2,473	717	2,589	396	600	2,971	1,059	2,323	916	14,293							
GVA (at basic prices)	380	5,563	1,768	6,322	1,156	1,356	3,117	2,283	9,584	1,158	32,687							
TOTAL OUTPUT (INPUTS) at basic prices	1,772	17,237	4,955	13,449	1,745	2,851	3,696	3,610	13,784	2,968	66,067							

It can be seen that the Supply and Use Tables are balanced so that total supply equals total use for each product and industry, and at the national level. Balanced SUTs are the prerequisite for calculating GDP using the three different methods as discussed in subsequent sections.

⁶ Exports in this framework exclude any taxes or duties due from GB residents.

3

Gross Domestic Product for NI 2012

The Supply and Use framework allows GDP to be measured using three distinct approaches:

- the sum of all income generated by production within the economy (the **income** approach);
- the sum of all final expenditures within the economy (the **expenditure** approach); and
- the sum of all output within the economy (the **production** approach);

In order to maintain consistency with other official statistics, the NISRA SUT estimates of Gross Value Added (GVA) have been constrained to the latest 2012 GVA estimates for NI published by the Office for National Statistics.

The headline results are presented below with further analysis presented in the following sections.

NI GDP 2012 £37.7 bn	NI GVA 2012 £32.7 bn
NI GDP per head 2012 £20,663	NI GVA per head 2012 £17,924
GDP per head is equivalent to 79% of the UK figure	

An overview of how the three GDP approaches are calculated is presented overleaf alongside comparisons with the UK and Scotland.

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Comparison of GDP in NI, UK and Scotland 2012

The tables below show how GDP is calculated for NI, the UK and Scotland using the three different approaches as previously mentioned.

Table 3: Calculation of GDP(I) for NI, UK and Scotland, 2012

GDP Income approach 2012 (£bn)			
	NI	UK	Scotland
Compensation of Employees (a)	18.4	850.1	66.2
Taxes, less subsidies, on production (b)	0.0	22.3	1.5
Gross Operating Surplus (c)	14.3	613.4	46.2
Gross Value Added at current basic prices (a+b+c)	32.7	1,485.8	113.9
Taxes less subsidies on products (d)	5.0	179.4	15.3
Gross Domestic Product at current market prices (a+b+c+d)	37.7	1,665.2	129.2

Table 4: Calculation of GDP(E) for NI, UK and Scotland, 2012

GDP Expenditure approach 2012 (£bn)			
	NI	UK	Scotland
Household Final Consumption (including NPISH)	27.9	1,082.6	85.2
Government final consumption (GGFCE)	12.1	346.0	31.3
Gross Capital Formation (GCF)	3.8	270.6	21.9
External sales (including sales to GB)	19.0	501.7	61.9
Total final Use (a)	62.8	2,201	200.3
Total Imports (B) (including purchases from GB)	25.1	535.6	71.1
Gross Domestic Product at current market prices (a-b)	37.7	1,665.2	129.2

Table 5: Calculation of GDP(O) for NI, UK and Scotland, 2012

GDP Production approach 2012 (£bn)			
	NI	UK	Scotland
Total output at basic prices (a)	66.1	2,939.0	218.1
Total intermediate inputs at purchasers' prices (b)	33.4	1,453.2	104.2
Gross Value Added at current basic prices (a-b)	32.7	1,485.8	113.9
Taxes less subsidies on products (c)	5.0	179.4	15.3
Gross Domestic Product at current market prices (a-b+c)	37.7	1,665.2	129.2

GVA/GDP per head of population is a useful way of comparing regions of different sizes and is an important indicator for both domestic and European policy purposes. It is calculated using the entire population (including the economically inactive). The table below compares the GVA and GDP per head for NI, Scotland and the UK.

Table 6: GDP and GVA per head, 2012

2012	NI	UK	Scotland
GVA per head (£)	17,924	23,323	21,444
GDP per head (£)	20,663	26,139	24,317

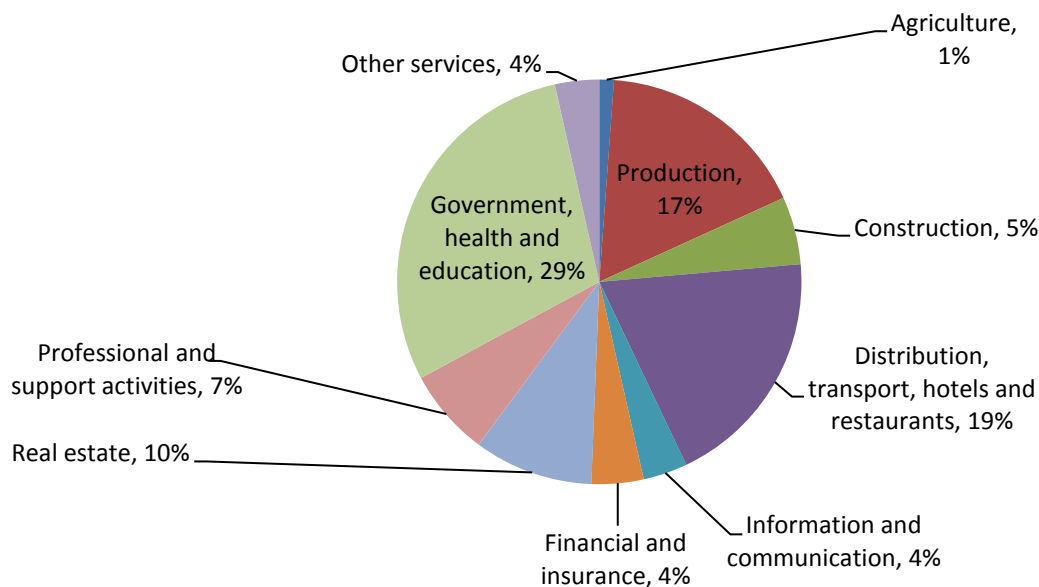
The GDP per head figures are based on analysis of the NI Supply-Use tables, the [UK Supply-Use tables](#) and the [Scottish Supply-Use tables](#).

Northern Ireland's GDP per head for 2012 is 79% of the corresponding UK total. Scotland's GDP is 93% of the UK total.

Gross Value Added

As mentioned previously the total value of GVA for Northern Ireland for 2012 equated to £32.7 bn. A breakdown of the broad industry shares of GVA is presented below.

Figure 2: Split of GVA by industry



At a more disaggregated level the top and bottom 5 contributing industries to NI GVA are presented below.

Top 5 industries contributing to NI GVA	Bottom 5 industries contributing to NI GVA ⁷
1. Public Administration And Defence; Compulsory Social Security	1. Manufacture of dyestuffs, agro-chemicals
2. Education	2. Manufacture of vegetable and animal oils and fats
3. Retail Trade, Except Of Motor Vehicles And Motorcycles	3. Mining Of Coal And Lignite
4. Human Health Activities	4. Mining Support Service Activities
5. Owner-Occupiers' Housing	5. Extraction Of Crude Petroleum And Natural Gas & Mining Of Metal Ores

⁷ The industry with the lowest contribution to GVA was the Manufacture of dyestuffs, agrochemicals
Economics Accounts Project for Northern Ireland 2012 - Experimental results

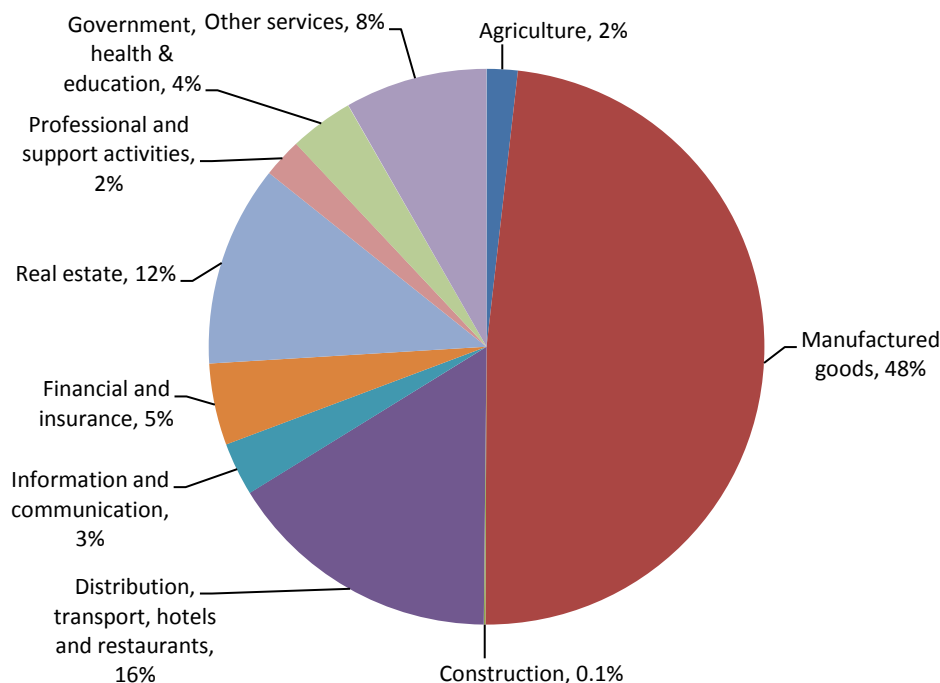
Household Final Consumption Expenditure

HHFCE comprises all the goods and services purchased and consumed by households in Northern Ireland. This includes expenditure on food, alcohol, clothing, cars, rental on houses and holidays, amongst others. It does not include the purchase of houses or payment of interest on loans, which are expenditure on assets and property income respectively, and not consumption expenditure. HHFCE is important because it represents the biggest driver of economic growth. Lower consumption can be influenced by a variety of factors including lower levels of income, increased savings or lower costs.

Key points:

- Household consumption (by households, and the not for profit sector) was worth £27.9 bn;
- This accounted for the largest proportion (44%) of Final Use (Figure 3), showing the importance of the local consumption of goods and services to the economy;
- The largest component of HHFCE was expenditure on goods and services from the manufacturing sector (48%) – this includes purchases of goods such as food, clothing, coke and refined petroleum products, and alcoholic beverages;
- Expenditure on the distribution, transport, hotels and restaurants sector accounts for the second largest element of HHFCE (16%);
- The next largest component of HHFCE is expenditure on real estate goods and services (12%) the greatest element of which is owner-occupiers' housing services⁸.

Figure 3: NI HHFCE disaggregated by broad product categories, 2012



⁸ This is the amount an owner occupier would need to pay to rent their own property.
Economics Accounts Project for Northern Ireland 2012 - Experimental results

Gross Capital Formation

Gross Capital Formation (including capital investment as its largest element) is made up of three parts:

- Gross Fixed Capital Formation (GFCF), which relates to the purchase (and disposal) of fixed assets (investment) e.g. buildings, plant and machinery, computer systems and aircraft;
- Changes in inventories, which is made up of materials and fuel, work in progress and unsold finished goods; and
- Acquisitions less disposals of valuables (e.g. jewellery, precious metals, works of art and antiques).

The table below provides an overview of the composition of GCF for NI in 2012.

Table 8: Gross Capital Formation, 2012

GCF calculation for NI 2012 (£bn)	
Gross fixed capital formation	3.9
Acquisitions less disposals of valuables ⁹	-
Changes in inventories	(0.1)
Total GCF	3.8

- In Northern Ireland GCF accounts for 6% of final use, this proportion is lower than in the UK, where GCF accounts for around 12% of final use¹⁰.
- Capital Investment (£3.8 bn) accounted for 6% of NI Final Use, which was much lower than in Scotland (11%) or for the UK as a whole (12%). This represented £2,072 per head of the NI population in 2012 compared to £4,119 for Scotland and £4,247 for the UK as a whole.

Balance of trade

Producing a balanced set of Supply and Use Tables, and specifically the calculation of GDP(E) provides detailed information on the value of imports and external sales (including sales to GB) for Northern Ireland at an industry and product level.

Table 9: Overview of NI Imports by origin and External sales by destination, 2012

Origin of Imports / Destination of external sales	Imports (including purchases from GB) (£bn)	External sales (including sales to GB) (£bn)	Trade Surplus / (Deficit) (£bn)
Great Britain (GB)	18.7	9.6	(9.0)
Republic of Ireland (ROI)	2.4	3.6	1.2
Rest of the World (ROW)	4.1	5.8	1.8
Total Imports / External sales	25.1	19.0	(6.1)

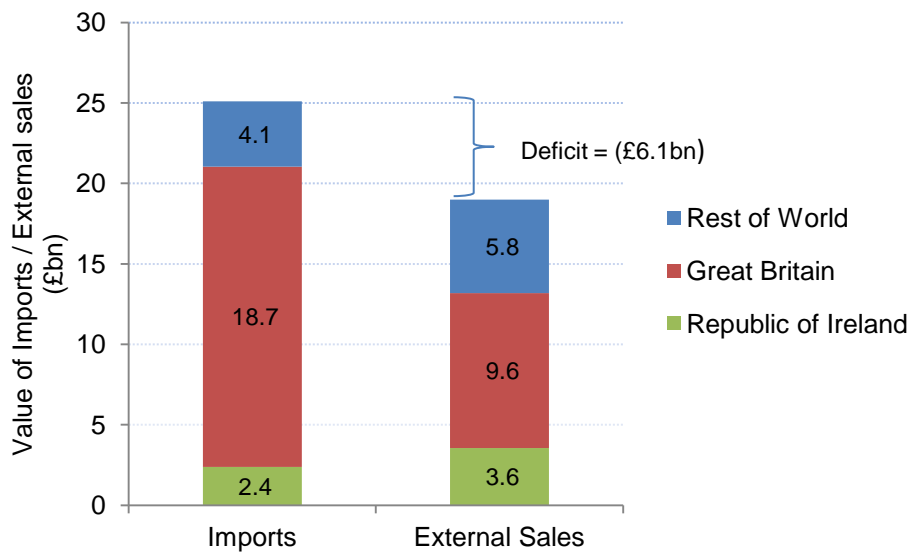
⁹ It is noted that theoretically acquisitions less disposals of valuables should also be included in the calculation of GCF however there is no available data for this for NI. It is a small component of GCF.

¹⁰ 2012 UK SUT tables

- In 2012, NI sold goods and services to the value of £19.0bn to customers outside of NI with the majority sold to customers in Great Britain;
- NI imported goods and services (including purchases from GB) to the value of £25.1bn;
- The total of external sales (including sales to GB) minus imports is known as the balance of trade. In 2012, NI imports exceeded external sales resulting in a **trade deficit of around £6.1bn**.

The split of trade by origin/destination is presented below.

Figure 4: Overview of NI Imports by origin and External sales (including sales to GB) by destination, 2012



Please note that the external sales figures presented in this document differ to those reported by the NISRA Broad Economy Sales and Exports (BESES) measure due to the SUT framework excluding taxes or duties due from GB residents. In addition, the BESES measure has several known limitations including some coverage issues relating to the finance sector and the export of live animals.

6

Multipliers derived from Input-Output tables

The SUTs serve not only statistical but also analytical purposes, especially when they are transformed into symmetric Input-Output Tables (IOTs). Product based IOTS have been calculated for Northern Ireland for the reference year 2012 and one of the key outputs from the IOT analysis is the production of multipliers which help to analyse relationships within the economy. The methodology used to derive IOTs and corresponding multipliers can be accessed [here](#).

The GVA and Output multipliers are known as **Type 1 multipliers** which estimate the impact on the supply chain resulting from a producer of a certain product increasing their output to meet additional demand. In order to meet the additional demand the producer must in turn increase the goods and/or services they purchase from their suppliers to produce the product in question. These suppliers in turn increase their demands for goods and services and so on down the supply chain. These Type 1 multipliers are also referred to as direct and indirect effects:

- **Direct:** This is the immediate effect caused directly by the change in final demand e.g. if there is an increase in **final demand** for a particular product, we can assume that there will be an increase in the output of that product as producers react to meet the increased demand.
- **Indirect:** This is the subsequent effect caused by the consequent changes in intermediate demand i.e. as producers increase their output; there will also be an increase in demand on their suppliers and so on down the supply chain.
- **Induced:** This is the effect attributable to the ensuing change in compensation of employees and other incomes, which may cause further spending and hence further changes in final demand e.g. as a result of the direct and indirect effects the level of household income throughout the economy will increase as a result of increased employment. A proportion of this increased income will be re-spent on final goods and services and this is the **induced effect**.

It is noted that **Type I multipliers** cover direct and indirect effects only, and therefore underestimate the effect on the economy. **Type II** multipliers cover induced effects as well, under the implicit assumption that final consumers do not change their final consumption patterns in response to changes in income. There is also a lack of consistent employment numbers so it has not been possible to produce robust Type II multipliers at this stage.

Note that the **multipliers produced through this project relate to products**. They demonstrate the effect on total GVA and Output caused by a one pound change in the demand for a specific product. They refer to the impacts associated with additional purchases of inputs from suppliers in Northern Ireland required to meet a given increase in the demand of a specific product. These multipliers ***underestimate the effect on the economy as they do not estimate induced effects.***

Product based Output multipliers and Product based GVA multipliers have been calculated and can be accessed [here](#). Given that these are the first such official economic statistics produced for NI, users should adopt a cautious approach on their use. Users should also check equivalent multipliers from other sources.

Please note that the IOTs provide the basis for calculating a range of other multipliers and effects. More detailed multipliers are also available on request. However, given that the tables are experimental NISRA has not published these additional multipliers as the system is still under development. NISRA is seeking feedback on the utility of the material provided to inform future development

Experimental statistics

The statistics will remain classified as experimental statistics until user feedback indicates that they are useful and credible. The quality of the current statistics is restricted because of the lack of up to date information on purchases made by businesses for use as part of their production process. It is hoped that new purchases data will be available in 2017.

NISRA is making these experimental statistics available so that users and stakeholders can be involved in their development. NISRA has engaged extensively throughout the project with expert users of NI economic statistics whose views have helped shape the development of the SUTs. Users include DETI, DFP and DARD economists, the Ulster University Economic Policy Centre and a number of NI economic commentators and consultants.

NISRA hope to receive informed feedback which will improve the quality and value of the statistics. In addition, this release is to help users become aware of the work undertaken by NISRA in the development of the Supply and Use framework for Northern Ireland.

NISRA plan to publish the SUTS for the 2013 reference year in September 2016 and the corresponding IOTS by the end of 2016. This release of IOTs focuses on Product by Product IOTs, however further work will be undertaken to investigate the production of IOTs on an Industry by Industry basis to allow multipliers to also be produced on this basis. In addition, there will be further investigation of the potential to develop consistent employment numbers to enable the development of employment multipliers

NISRA plans to have these statistics assessed against the Code of Practice for Official Statistics which is required to gain National Statistics status. It is likely that the statistics will not be put forward for assessment until the new purchasing data is incorporated.

Acknowledgments

NISRA would like to express thanks to the Office for National Statistics for the provision of data and for helpful advice received throughout the project. We also would like to express our appreciation to the Scottish Government for the use of documentation and for advice given.

A glossary of key elements discussed in this paper is presented below. Further information on National Accounts concepts can be found in "[A Short Guide to the UK National Accounts](#)" paper published by the ONS.

- **Basic prices** are the preferred method of valuing gross value added and output. They reflect the amount received by the producer for a unit of goods or services minus any taxes payable plus any subsidy receivable on that unit as a consequence of production or sale (that is the cost of production including subsidies). As a result the only taxes included in the basic price are taxes on the production process – such as business rates and any vehicle excise duty paid by businesses – which are not specifically levied on the production of a unit of output. Basic prices exclude any transport charges invoiced separately by the producer.
- **Compensation of employees (COE)** is the sum of all employment income, including wages and salaries, employers' pension and National Insurance contributions, bonuses and benefits in kind.
- **Exports** are goods and services produced in NI purchased by units in the rest of the world (including external sales to GB); conversely **imports** are goods and services produced in the rest of the world and purchased by NI residents. These do not include financial flows which form part of the balance of payments, which is discussed in a later chapter. The total of **exports minus imports** is known as the **balance of trade**.
- **Government final consumption expenditure** Includes local authorities and central government. This covers pay of employees, procurement of goods and services and capital consumption.
- **Gross capital formation** (which can be thought of as investment) is made up of three parts.
 - i. The first (and largest) is **gross fixed capital formation (GFCF)**, which relates to the purchase (and disposal) of fixed assets. Fixed assets are items which contribute to a productive process for more than a year and are not used up in the process of production. Examples of such assets are buildings (including dwellings), vehicles, plant and machinery, computer systems and aircraft.
 - ii. The second component is **changes in inventories**, which is made up of materials and fuel, work in progress and unsold finished goods.
 - iii. The third component is **acquisitions less disposals of valuables**. Valuables are defined as goods which do not contribute to a process of production but are a store of value for the owners. These include jewellery, precious metals, works of art and antiques.
- **Gross operating surplus** is officially defined as the balance between GVA and labour costs paid by producers. In effect, it is equal to the sum of gross trading profits and income earned through the ownership of buildings (rental income).
- **Household final consumption expenditure** comprises all the goods and services purchased and consumed by households. This will include food, alcohol, clothing, cars, rental on houses and holidays, to name but a few items. It does not include the

purchase of houses or payment of interest on loans, which are expenditure on assets and property income respectively, and not consumption expenditure).

- **Intermediate consumption** is defined as all goods and services used up or transformed in a process of production. This includes raw materials, power and fuel, rental on buildings and business services such as advertising, recruitment consultancy and cleaning. It specifically excludes staff costs and capital investment which are handled elsewhere in the accounts.
- **Mixed income** is the income from self-employment. It recognises that the income of the self-employed is a combination of wages (COE) and profits (GOS), but it is not realistic or appropriate to split it into these two components
- **NPISH Final Consumption Expenditure** is all consumption by institutions which provide goods and services; either free or below the market price.
- **Purchasers' prices** are the prices paid by purchasers. They include transport costs, trade margins and taxes (unless the taxes are deductible by the purchaser from their own tax liabilities).

Additional Reading

Further information on the background to the NISRA project to develop the Supply-Use Tables can be found on our [website](#).

Other useful sources of information relating to National Accounts and the Supply-Use framework include:

- [European System of National and Economic Accounts \(ESA 2010\)](#)
- [ONS Series of National Accounts articles](#)
- [Scottish Government Input-Output Methodology Guide](#)