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# CROSS-BORDER TRADE IN SERVICES

MARTINA LAWLESS



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## ABBREVIATIONS

ABSEI	Annual Business Survey of Economic Impact
BESES	Broad Economy Sales and Exports Survey
BMW	Border, Midlands and West
CDS	Credit Demand Survey
CSO	Central Statistics Office
GATS	General Agreement on Trade in Services
GB	Great Britain
IT	Information Technology
OLS	Ordinary Least Squares
NI	Northern Ireland
NISRA	Northern Ireland Statistics and Research Agency
NTB	Non-tariff Barriers
RoW	Rest of World
SME	Small and Medium Enterprises
UK	United Kingdom
UN	United Nations
WTO	World Trade Organization



## EXECUTIVE SUMMARY

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This report examines the extent of cross-border trade in services on the island of Ireland and the characteristics of the firms participating in this trade. Although services make up a substantial and growing portion of economic activities in both Ireland and Northern Ireland, data limitations have resulted in less focus being placed on services flows when compared to goods trade.

Given the strong links established between exporting and economic growth, an understanding of the structure and composition of trade is necessary to provide evidence for a supportive policy environment for firms and to enhance further all-island economic links.

A key contribution of the report is a stocktake of the various data sources available on cross-border services trade. This draws attention to some of the differences in data collected in Ireland and Northern Ireland and where there are data gaps that could be addressed in the future. Given the differences in data sources, some caveats are made throughout the report on direct comparisons and a recommendation is made for the benefits of collection of more systematically comparable data on an all-island basis.

We find that cross-border services trade is quite considerably lower than cross-border trade in goods. Services make up 26 per cent of the total trade going from Northern Ireland to Ireland and 16 per cent of the trade going from Ireland to Northern Ireland. This suggests considerable scope for greater development of all-island services links.

The low share of services in trade flows from Ireland to Northern Ireland contrasts with the high overall services content of Ireland's exports. Total exports from Ireland are almost equally divided between goods and services, associated largely with multinational firms. Aggregate trade from Northern Ireland is dominated by goods, with services contributing under 20 per cent to total external sales (exports plus sales to Great Britain).

Ireland is one of the main markets for services trade from Northern Ireland. Sales to Ireland account for 17 per cent of services outflows from Northern Ireland. Ireland also accounts for 11 per cent of services inflows to Northern Ireland. For trade from Ireland, Northern Ireland accounts for slightly less than 1 per cent of total services exports from Ireland. This reflects the relatively small size of the

Northern Ireland economy and the highly export-orientated and FDI-dominated structure of Ireland's services sector. In terms of the balance of trade, we find that services flows from Northern Ireland to Ireland are considerably higher than those from Ireland to Northern Ireland.

The largest services activity reported from Northern Ireland to Ireland is in transportation and storage which accounts for more than one-third of total services exports. In the other direction, business services make up over 40 per cent of services going from Ireland to Northern Ireland followed by computer consultancy at another 20 per cent.

The report uses data from a range of firm-level surveys to examine some of the characteristics of services firms that engage in cross-border trade. These firms are compared both to non-exporting services firms and to firms exporting goods. One consistent pattern that we identify is that the chances that a services firm exports increases systematically with firm size, as is also the case for goods firms. However, for all size groups, services firms are less likely to export compared to goods firms. In addition, when services firms do export, the average values of their export sales are consistently lower than those of goods exporters.

Previous research on cross-border goods trade found that almost all firms in Northern Ireland that had sales outside of Northern Ireland included Ireland as one of their destination markets. In this report we find that this is not the case for services firms in Northern Ireland, with many selling into the British market that do not export to Ireland. Likewise, firm survey sources for Ireland show that there are more firms exporting to Great Britain than to Northern Ireland. In both cases, this is potentially explained by the much larger size of the British market. However, it does suggest that there is considerable scope for the expansion of cross-border services trade. This is particularly the case given that geographic proximity, which is important in the delivery of many services, should imply low entry costs to such trade.

A key reason for a policy objective of encouraging firm entry into exporting is the strong association between exporting activity and broader firm performance. In line with much international evidence, this report finds that exporting firms in services are systemically stronger than non-exporters. This is the case across a range of performance indicators, including employment and productivity. We estimate that services firms in Northern Ireland that export to Ireland are almost one-third larger in terms of employment and on average 7 per cent more productive than non-exporters. Similarly, for services firms in Ireland, there is also a positive and significant gap found between exporters to Northern Ireland and non-exporters.

Much of the data analysed in this report relies on firm-level data drawn from a range of survey sources. One potential gap in using this type of data for understanding services trade is that it could result in an under-representation of service types where the consumer travels to avail of the service. The report notes the extensive nature of cross-border travel and expenditure in this regard. However, a lack of data distinguishing spending into goods and services categories by cross-border visitors limits our ability to go any deeper into the extent of the contribution of cross-border travel to overall services trade.

While much of the data analysed in the report were collected prior to the COVID-19 pandemic that has impacted the economies of both Ireland and Northern Ireland, we can get insight into the relative exposure of cross-border trading firms from some timely survey data from InterTradeIreland. This information indicates that the performance throughout the pandemic was somewhat better amongst cross-border traders than amongst locally focused firms. This is due to differences in the composition of two groups of firms with cross-border services traders more concentrated in activities such as professional and business services that were less severely impacted by the economic restrictions.

Another risk to cross-border economic flows examined in the report is the impact of Brexit. The report finds there have been limited changes to cross-border market access in services between the EU and UK since Brexit occurred in January 2021. However, it emphasises that the Northern Ireland Protocol relates to goods trade only and it therefore remains possible that changes to cross-border services trade could emerge unless the current temporary arrangements become more permanently established. Previous research on the exposure of services trade to Brexit suggests that courier services and professional services such as accountancy and legal services are most at risk of changes in market access regulations. At the same time, the continuation of the Common Travel Area means that estimates for the impact of any new restrictions on services trade from Brexit would be expected to be lower for trade between Northern Ireland and Ireland relative to the potential impacts on Northern Ireland's trade with the rest of the EU.

Taken together, the patterns identified in this report suggest that there is considerable scope for expansion of cross-border trade in services. Policies to support this expansion could include a continued focus on the coherence of regulatory frameworks and potential co-ordination in terms of the structure of supports to the internationalisation of services firms, enhancement of digital delivery of services and development of associated skills.



## CHAPTER 1

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### Introduction

#### 1.1 MOTIVATION

A Shared Island initiative was launched by the Irish Government in October 2020 with the objective of supporting and deepening the current and potential linkages across the island of Ireland in a range of economic, social and environmental domains. One of the key objectives of the initiative relates to the enhancement of the all-island economy and increased linkages across the island as described in the Programme for Government (2020). This report focuses on one particular facet of the all-island economy. It aims to examine and deepen understanding of the structure and composition of cross-border trade in services on the island of Ireland.

As exporting is a key driver of overall economic growth, information on export participation, structure and performance is a necessary input into providing a supportive policy environment for firms. Although services make up a substantial and growing portion of economic activities in both Ireland and Northern Ireland, data limitations have resulted in this sector being less thoroughly investigated than manufacturing and goods trade. While some services are difficult to trade across borders, the expansion of international trade in services shows that this is not the case for all aspects of services. Furthermore, in the case of cross-border trade on the island of Ireland, the relatively short distance involved means that the need for in-person contact for services is not necessarily the impediment that it would be for broader international services trade.

The EU-UK Trade and Cooperation Agreement signed in December 2020 and the specific provisions in the Northern Ireland Protocol to the earlier Withdrawal Agreement were designed to prevent the requirement for any checks on cross-border goods trade that might otherwise have resulted from the exit of the UK from the EU. However, the Protocol does not apply to services trade and, hence, there remains a possibility of changes to market access regulations that could impact on cross-border trade in services. To date, changes impacting cross-border services trades between the EU and UK have been limited with a range of temporary recognition arrangements put in place. The potential risk of market access changes makes having a clear benchmark of the size and structure of cross-border trade in services important to aid in the assessment of the impact of any proposed changes.



Compared to the depth of information and analysis undertaken on the export patterns of goods trade, there are several gaps in our knowledge base on the extent and composition of cross-border services trade. A key building block of the report is therefore to draw together a range of different sources of available data, including official statistics on trade flows, firm-level surveys and household travel information. Taken all together, these data sources are used to develop a detailed profile across service types and firm characteristics. It also helps to identify where gaps remain in the data infrastructure. This draws together information on the types of services traded and the associated firm characteristics where available. This profile can then be used to assist in future work to identify areas where there is potential for cross-border synergies in services trade and promotion.

The key questions addressed in the report are as follows:

- What data are available on cross-border trade in services? How comprehensive are the data and what gaps remain?
- What is the current level of cross-border trade in services and how does it compare to goods trade?
- What kind of activities make up the main components of cross-border services trade and how do these compare to aggregate services trade for Ireland and Northern Ireland?
- What are the key characteristics of firms engaging in cross-border services trade? Are these the same in Ireland and Northern Ireland?
- Are there systematic differences between services firms that trade across the border compared to those that do not? Does this differ for firms with broader international exporting activities?
- What are the current challenges facing cross-border trading firms?
- What potential future risks might Brexit entail?
- How does consumer travel and spending contribute to cross-border trade?

### **1.2 STRUCTURE OF THE REPORT**

The report is structured as follows: Chapter 2 provides the context for the research by giving an overview of existing research on services trade and a brief description of the broad structure of economic activity in Ireland and Northern Ireland particularly with regard to the share of services. Chapter 3 outlines the various data sources used in the report. Chapter 4 presents the information on aggregate cross-border flows in services and how these compare to trade in goods. Chapter 5 examines the firms participating in cross-border services trade, looking at the levels of activity by firm size groups, location and the average sales. Chapter 6 examines if there are systematic differences in performance between

firms active in cross-border trade in services and local firms. Chapter 7 examines some of the more recent challenges faced by firms across the island as a result of the COVID-19 pandemic and potential future obstacles to services trade arising from Brexit. Chapter 8 takes a closer look at tourism data as a type of services export flow perhaps underestimated by the firm-level data used as the basis of several of the other chapters in the report. Chapter 9 draws together the key findings of the report and concludes.



## CHAPTER 2

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### International services trade and economic context

#### 2.1 OVERVIEW

This section provides an overview of some of the existing research on services trade, the evidence on firms active in exporting services, and the broader economic context in terms of the role of services in economic activity in Ireland and Northern Ireland.

Measurement of services trade has some greater challenges than that of goods trade given the intangible nature and different modes by which services can be delivered. These are introduced in Section 2.2. In Section 2.3, some international patterns of services exports and the composition of exporting firms are discussed. The existing evidence on services exporters in Ireland and Northern Ireland is summarised in Section 2.4. Section 2.5 provides some further context in terms of the differences in the broad economic structure of Ireland and Northern Ireland and particularly on the relative sizes of the services sectors in the two jurisdictions. Section 2.6 concludes.

#### 2.2 DATA DEFINITIONS AND TYPES OF SERVICE DELIVERY

Interest in services exports has expanded in line with the increasing share of total international trade that services account for. Growth in services trade has been continuing at a strong pace for many years with average annual growth rates of over 5 per cent between 2005 and 2017 (World Trade Organization, 2019). This growth rate sustained over time has resulted in services trade now accounting for almost half of international trade when all modes of delivery are measured according to the World Trade Organization (WTO). In Northern Ireland, total services exports grew by an average of 4 per cent per year over the period from 2011 to 2019<sup>1</sup> while services exports from Ireland have been growing at an annual average rate of 14 per cent over the same period primarily driven by a more than tripling of exports of computer services.<sup>2</sup>

Services trade poses a number of measurement challenges due to the intangible nature of most services. International statistics on trade in services measures three different ways in which services can be delivered across borders; entirely remotely (via internet for example), or by the movement of people in one direction or the other to provide or avail of the particular service. These

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<sup>1</sup> Based on estimates from BESES data described further in the next chapter.

<sup>2</sup> CSO Balance of Payments data (Table BPA03 – Exports and Imports of Services).

represent three of the four modes that the General Agreement on Trade in Services (GATS) identifies as ways in which services may be traded. The four modes classified in GATS are:

- Mode 1: Cross-border supply – the supplier in one country delivers a service to a customer in another country remotely (e.g. via e-mail, telephone) without either supplier or customer moving location;
- Mode 2: Consumption abroad – the customer travels to the country where the supplier is located to avail of the service (e.g. tourism exports);
- Mode 3: Commercial presence – firms supply services in another country through the presence of an affiliate in that country (this mode is not included as cross-border trade in official statistics);
- Mode 4: Presence of natural persons – the supplier travels to the country in which the customer is located to supply the service (e.g. business consultancy).

Commercial presence (Mode 3) in the GATS classification is however excluded from the standard statistics collected on international trade in services given that it is included on the basis of the ownership of the service provider rather than on the basis of the service itself being delivered across a border. The main definition used by statistical agencies is that of the International Monetary Fund's Balance of Payments Manual.<sup>3</sup>

In this report much of the data will be obtained from surveys of firms, asking them about their export activity. These sources will be described individually in Chapter 4, but it is worth mentioning a caveat at this point as to how firm surveys in general might be likely to somewhat underestimate services exports. Services supplied via Modes 1 and 4 are likely to be clearly recorded and therefore well reported by firms as they will be aware of where they are delivering the service to. However, it may be much more difficult for firms in some services sectors to record services provided to customers that come to the service provider's premises as being exports. Mode 2 exports that are categorised by where the customer is from may not always be known to the firm. This may lead us to underestimate some types of services trade, particularly in the case of hospitality or personal services where individuals cross the border to avail of the service. Additional evidence on this type of services trade can be uncovered from household surveys on travel and tourism expenditure which we will discuss in Chapter 8.

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<sup>3</sup> See description of the methodology used by the CSO on this basis summarised here: <http://www.cso.ie/en/media/csoie/surveysandmethodologies/surveyforms/documents/balancepayments/pdfdocs/intertradeinservicesbacgroundnotes.pdf>.

### 2.3 INTERNATIONAL EVIDENCE ON SERVICES EXPORTERS

While international trade in services has been growing strongly in recent years as referenced in the previous section, the in-person nature of delivery for many services activities means that services firms are considerably less likely to engage in exporting than manufacturing firms. This pattern has been documented extensively across countries and points to greater barriers to exporting services compared to goods exporting (Ariu, 2016).

Although the data available on services exporters tend to be much less detailed relative to the information available for goods exporters, a number of consistent patterns across countries on the composition and performance of exporting and importing firms has emerged. The first key finding is the lower rate of participation in exporting for services firms compared to manufacturing firms. For example, the participation rate of services firms in international trade activities has been estimated to range from 0.14 per cent for exports of services in Germany (Kelle and Kleinert, 2010) up to 8.1 per cent for the UK (Breinlich and Criscuolo, 2011). To place these figures in context, the share of manufacturing firms that are exporters has been estimated to be approximately 65 per cent in Germany and 28 per cent in the UK (Mayer and Ottoviano, 2007). The nature of the service itself and the size profile of firms are important however, with export participation rates of up to 16 per cent found for business services activities in research on Germany (Vogel and Wagner, 2010). The corollary to the relatively low share of firms participating in services exports is that total services trade tends to be quite concentrated, with a relatively small number of firms accounting for the bulk of export activity.

For services firms that engage in exporting, there is evidence that their trade intensity (defined as the share of exports in total sales) can be relatively low with most of their sales still within the home market. For example, Grublješič and Damijan (2011) found that average export intensity in Slovenia is between 26 per cent for new, and 36 per cent for established, exporters. Kelle and Kleinert (2010) found that average export intensity in Germany is 4.9 per cent. In a cross-country study of four countries including Ireland, Haller et al. (2012) found average export intensities for services firms of 3.6 per cent for France, 5.6 per cent for Slovenia, 7.3 per cent for Finland and 21.9 per cent for Ireland (using data from 2001 to 2007).

An important finding that first emerged in the research on exporting firms in manufacturing is that a relatively substantial export 'premium' exists across a range of firm performance indicators. This means that firms engaged in international trade are consistently found to be larger, more capital-intensive, more skills-intensive, more productive and pay higher wages than firms that do

not export. Subsequent research on services exporters have documented a similar pattern of differences between exporting and non-exporting firms. Work by Damijan et al. (2015) examined services exporters in Finland, France, Ireland and Slovenia and found that exporters are generally larger and more productive than non-exporters. However, the size of the productivity premium was smaller for the Irish data included than it was for the other countries.

## **2.4 PREVIOUS RESEARCH ON SERVICES EXPORTERS IN IRELAND AND NORTHERN IRELAND**

This section reviews some of the existing research on the activities of services exporters located in Ireland that did not include cross-border trade as a focus of the analysis. In keeping with the international patterns described above, Lawless and Studnicka (2017) examined the export activities of services firms in Ireland using the CSO Annual Services Inquiry and found low participation rates of firms. Just 2.2 per cent of firms in the services sector were found to export. The participation rate was even lower when foreign-owned multinationals were excluded, with the share of Irish-owned firms exporting found to be on average 1.5 per cent of firms in the services sector.

Also consistent with the international evidence, the exporting firms were statistically significantly found to be larger than non-exporters. Lawless and Studnicka (2017) estimated that Irish-owned exporters had on average 26 per cent higher employment and were 8 per cent more productive than non-exporters. This work focused on firms located in Ireland and did not include any cross-border dimension. The subsequent chapters of this report expand this research to fill in some of the comparability gaps between the work on Ireland and Northern Ireland relating to services trade. Furthermore, this research did not examine if the identified differences between exporters and non-exporters varied by destination or extent of exporting activity. In this report, we will examine the extent to which performance differences are evident in cross-border services by comparing exporters both to non-exporting services firms and to firms that export beyond the island. The differential performance of exporting firms could also be seen in terms of their overall contribution to employment in the services sector. Although exporters made up 2.2 per cent of firms in services, they accounted for approximately 17 per cent of total services employment. Export intensity among exporting firms in services was not found to be particularly high, accounting for on average 6 per cent of sales for Irish-owned exporters but substantially greater at 50 per cent for foreign-owned firms.

Lawless and Studnicka (2017) find a considerable degree of concentration within services exports with overall sales highly concentrated in a relatively small number of firms. Haller et al. (2012) examined the extent of concentration within

services exports in more detail. They found that the least diversified exporters (exporting one service type to one market) accounted for slightly more than 30 per cent of services exporters but contributed 4.5 per cent of the value of exports. The most diversified firms were those that exported two services to more than four countries. Fewer than 20 per cent of firms fall into this most-diversified category but they accounted for more than 70 per cent of services exports value.

In relation to cross-border trade activity, InterTradelreland (2018) found that almost all exporting firms in Northern Ireland included Ireland as one of their destination markets. Over 80 per cent of all exporters (both of goods and services) amongst small firms in Northern Ireland had all their export sales in Ireland and close to half of large exporters also sold only into Ireland. This research also found a substantial export premium for Northern Ireland services exporters in terms of higher productivity (value-added per employee) relative to firms with all their sales in the local market. This gap between exporters and non-exporters was also found for goods firms but was more marked for services firms. The exposure of cross-border services trade to changes in the trading environment that might arise in the aftermath of Brexit was examined by Shepard et al. (2019) noting a number of areas where the smooth flows of cross-border services could be impacted by cost increases. This work will be examined further in Chapter 7.

The research carried out by InterTradelreland (2018) on export participation and performance compared manufacturing firms in both Ireland and Northern Ireland. However, data limitations meant the sections on cross-border services trade related only to firms from Northern Ireland. This is an example of the research gaps that this report aims to fill, and the following chapters expand on this further.

## **2.5 ECONOMIES OF IRELAND AND NORTHERN IRELAND**

Before turning to patterns of cross-border services trade in the remainder of the report, it is worth placing the size of the services sector in context in both economies. Table 2.1 shows that there are reasonably substantial differences in the broad economic structure between Ireland and Northern Ireland. Services account for quite different shares of total output and exports in the two economies, which may impact on the patterns and composition of cross-border services trade. In Northern Ireland, goods output accounts for over 70 per cent of total turnover with the remaining 30 per cent in services. In contrast, Ireland is much more services-orientated, with a services sector share of around 46 per cent of total output (which includes the activities of multinational exporters). Factors contributing to these differences in levels of multinational activity,



focusing on high value areas of both manufacturing and services, are examined by Siedschlag et al. (2021). Policy interventions that would further increase the attractiveness of the island as a whole to high value FDI are recommended as investment in skills, R&D support and cross-border co-ordination in a number of policy areas.

InterTradeIreland (2018b) shows that the composition of domestic sales is reasonably similar in both Ireland and Northern Ireland. This suggests that it is the greater export orientation of the services sector that is a contributing factor behind the differences in the structure of the two economies. The role of multinational activity in Ireland is important in this regard given that the bulk of total services exports from Ireland originate from multinationals.

**TABLE 2.1 BROAD SECTORAL STRUCTURE OF NORTHERN IRELAND AND IRELAND**

	Turnover %	Total Exports (Ireland) and External Sales (NI) %
<b>Northern Ireland</b>		
Goods	72	82
Services	28	18
Total	100	100
<b>Ireland</b>		
Goods	54	48
Services	46	52
Total	100	100

*Source:* Author's calculations from NISRA BESES 2018 for Northern Ireland and for Ireland from the CSO Balance of Payments and External Trade statistics for trade patterns, CIP and ASI data for total turnover of manufacturing and services firms (CSO Statbank). For Northern Ireland, external sales include sales to Great Britain.

Linked to this is a similar pattern in total exports; the services sector has a much greater export orientation in Ireland compared to that of services in Northern Ireland, with multinational activity playing a central role in the difference between the two economies. Goldrick-Kelly and Mac Flynn (2018) make a three-way distinction in their comparative analysis of productivity across the island – between Northern Ireland, FDI-dominated sectors in Ireland, and domestic sectors in Ireland. The services sector in Ireland exports 62 per cent of its output and services account for slightly over half of total exports. The vast majority, over 90 per cent, of services exports are accounted for by foreign-owned firms (Lawless and Studnicka, 2017). In Northern Ireland, on the other hand, just over a quarter of services output is sold externally (i.e. including sales to Great Britain as well as exports).

In comparing the productivity performance of the Northern Ireland economy to other regions in the UK, Mac Flynn (2016) found that the lower services share in

total output contributed to the differences in relative performance. However, he also found that the overall gap in productivity could not be explained purely by different industrial structure but also existed within sectors. While manufacturing productivity for Northern Ireland performed well in relative terms, services sectors were found to be notably less productive than in other regions of the UK.

## 2.6 SUMMARY

This chapter provides background context to the report by outlining some of the stylised facts from existing international research on services trade. It also discusses the broad sectoral composition of economic activity in Ireland and Northern Ireland against which the patterns of cross-border trade in services are interpreted.

The key findings of the existing research on services exports are consistent across countries, that services are less likely to be traded across borders than goods are, and that – when such trade does occur – measuring it accurately poses a number of challenges. These measurement challenges arise partially from the number of different ways in which services can be delivered with different methods of data collection required for services delivered remotely (e.g. online) compared to those where the customer travels to the service provider.

A related pattern in the international literature is that services firms are considerably less likely to engage in exporting when compared to manufacturing firms and their trade intensity is frequently low with most of their sales still within the home market. Those services firms that do export are systematically found to be larger, more capital-intensive, more skills-intensive, more productive and pay higher wages than firms that do not export. This idea that a premium in firm performance is attached to exporting activity will be examined in detail in Chapter 6.

When interpreting the patterns of cross-border trade in services on the island of Ireland, these international findings provide a useful benchmark. It is also important to consider the findings in the context of the overall economic structure of the two economies. This chapter shows that there are reasonably substantial differences in this broad economic structure with services accounting for a much more substantial share of total output and exports in Ireland compared to Northern Ireland.

In Northern Ireland, goods account for over 80 per cent of external sales (i.e. exports and sales to Great Britain) and services contributing under 20 per cent. In contrast, exports from Ireland are almost equally divided between goods and services.



## CHAPTER 3

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### Sources of data

#### 3.1 OVERVIEW OF DATA SOURCES

A key motivation for this report is that less comprehensive data are available, and hence comparatively less is known about cross-border services trade relative to trade in goods. The availability of less detailed data on services flows is, as noted in Chapter 2, an issue that is common at an international level and is not therefore exclusively an issue of gaps in data provision from providers in Ireland and Northern Ireland.

That said, there are a number of areas where the data provided differ in scope or definition between those available for Ireland and for Northern Ireland; this limits our ability in several respects to make direct comparisons of the composition and participation in services trade. The data limitations are particularly marked for Ireland as services trade with Northern Ireland is not currently distinguished from the United Kingdom overall in official statistics.

Much of the information presented on the patterns of services trade from Ireland to Northern Ireland is therefore reliant on survey sources which, although very rich in information, were not specifically designed for this purpose and have some caveats relating to coverage that need to be borne in mind. This section describes the official and survey data sources used in the report and identifies where limitations may arise.<sup>4</sup>

#### 3.2 BROAD ECONOMY SALES AND EXPORT STATISTICS

The main source of data on firms in Northern Ireland comes from the Broad Economy Sales and Exports Statistics (BESES) collected by the Northern Ireland Statistics and Research Agency (NISRA). This forms part of the Northern Ireland Annual Business Inquiry which collects information on an annual basis relating to the activities of the business sector in Northern Ireland. This includes turnover, value added, expenditure and exports across both manufacturing and services sectors. It identifies trade with Ireland both for exports and imports. The BESES data are structured to feed into the overall UK Annual Business Survey and UK National Accounts produced by the Office of National Statistics.

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<sup>4</sup> Appendix 1 gives a summary comparison of the firm-level surveys described in this chapter.

The BESES data cover most sectors in the economy but exclude the public sector, financial services and most of agriculture. The exclusion of financial services is important in the context of using the data to examine services trade flows and we are therefore likely to be underestimating the overall level of services trade. The collection of the data is stratified by industry sector and size of business, with all large businesses being surveyed each year. The sample size varies slightly from year to year and was approximately 9,500 businesses in 2019. It has been collected in this format since 2011 and is currently being assessed by the Office for Statistics Regulation to become officially accredited as National Statistics.<sup>5</sup>

### 3.3 SME CREDIT DEMAND SURVEY

As there is no comparable official source of data collected in Ireland that includes cross-border services trade, a number of survey sources are examined. The first of these is the SME Credit Demand Survey collected under the aegis of the Department of Finance.<sup>6</sup> This survey was established in 2011 with a focus on measuring credit constraints being encountered by small and medium enterprises in the period following the financial crisis. The survey has been maintained and expanded to collect information on a twice-yearly basis on SME performance, credit access and investment.

The survey targets SMEs which are defined as having employment of below 250 employees and also either turnover of less than €50 million per annum or a balance sheet of below €43 million. The sample is constructed to include micro, small and medium-sized enterprises and to have a proportional representation of a number of main business sectors, including manufacturing, construction and services.<sup>7</sup> The sectors exclude financial intermediation and speculative real estate activities. On average, the sample size is approximately 1,500 firms.

The data collected in this survey give a detailed picture of SME financial structure, performance and credit access. In the context of this report, the questions of most relevance are those on exporting activity: firms are asked if they export outside of Ireland and, if yes, the percentage of their exports going to Northern Ireland, Great Britain, the EU (excluding UK), other European countries, the United States or the rest of the world. Note however that this structure of questions does not ask specifically the value of trade going to Northern Ireland, so

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<sup>5</sup> BESES Development Plan 2021 (nisra.gov.uk).

<sup>6</sup> Most recent survey report on gov.ie – SME Credit Demand Survey – March to October 2020 (www.gov.ie).

<sup>7</sup> Where micro firms are defined as having fewer than ten employees and small firms as having between ten and 50 employees.

this report uses this source mainly for characteristics of firms active in export participation and not to estimate overall export flows.<sup>8</sup>

### **3.4 ANNUAL BUSINESS SURVEY OF ECONOMIC IMPACT**

The next survey source is the Annual Business Survey of Economic Impact (ABSEI) collected by the Department of Enterprise, Trade and Employment.<sup>9</sup> This survey covers approximately 4,200 client companies of Enterprise Ireland, IDA Ireland and Údarás na Gaeltachta. The survey is used extensively by the Department and agencies to monitor export activity and to provide evidence for strategy development and policymaking.

The survey collects information on a range of key firm characteristics, including sales, exports, employment, costs and training. It also tracks the inputs used by firms that are sourced within Ireland. The survey covers firms employing ten or more employees in Ireland in the manufacturing, information and communication and other internationally traded services sectors. Although the core elements of the questionnaire are consistent for the client companies of each agency, the most detailed breakdown of export destinations to include Northern Ireland separately from Great Britain is asked only of the Enterprise Ireland clients. The details on exporting activity include the value of exports to each destination which, combined with the detailed firm characteristics, gives an informative picture of the cross-border export activity of a broad set of firms in Ireland, including larger firms not covered by the CDS described above. At the same time, the focus on internationally traded services in the sampling frame and the lack of equivalent detail on IDA client firms are likely to exclude some elements of cross-border export activity.

### **3.5 INTERTRADEIRELAND QUARTERLY ALL-ISLAND BUSINESS MONITOR**

The only source that covers firms from both Northern Ireland and Ireland is the quarterly All-Island Business Monitor collected by InterTradeIreland. Unlike the previous surveys described, this is more qualitative in nature, asking firms about the current performance of their business and obstacles faced. It includes around 750 telephone interviews each quarter covering SMEs across a range of sectors. The survey has a lengthy time series running since 2010 and tracks all-island economic indicators such as sales, employment, and exports. The questionnaire contains a set of regular 'core' questions for monitoring of performance trends. This is supplemented each quarter with questions on specific themes.

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<sup>8</sup> It is planned to ask firms about the share of exports in their total sales in future waves of the CDS which will give further insight on the values as well as trade participation for these SMEs.

<sup>9</sup> Reports available at this link: Annual Business Survey of Economic Impact 2019 – DETE ([enterprise.gov.ie](http://enterprise.gov.ie)).

To ensure representativeness, the sample is stratified by number of employees, sector and region (Ireland/Northern Ireland) and the data weighted at the overall reporting level to reflect the profile of businesses.<sup>10</sup> This survey will mainly be used in Chapter 7 to give a snapshot of the most up to date information available on cross-border services trade activities and discussion of some of the current challenges.

### 3.6 ANNUAL SERVICES INQUIRY

Although there are currently no data available on cross-border services trade from the CSO, a change has recently been made to one of the key sources of services data and, from 2018, the Annual Services Inquiry questionnaire has separately asked participating firms about exports to Northern Ireland.<sup>11</sup> The Annual Services Inquiry provides grossed estimates of key performance measures such as sales and costs for enterprises in most services sectors including the retail, wholesale, transport and storage, accommodation and food, information and communication, real estate, professional, technical administrative and other selected services sectors. This will be a substantial increase in information on cross-border trade for the total services sector. However, it is unclear when information from this source will become available, as the most recently published data from the Annual Services Inquiry relate to 2014.<sup>12</sup>

### 3.7 TOURISM STATISTICS FROM CSO AND NISRA

Unlike the data described in the other sources, the tourism data are derived from household surveys, undertaken by the CSO in Ireland and NISRA in Northern Ireland. These relate only to one particular aspect of cross-border trade and are limited in this context as the expenditure information collected is not disaggregated by goods and services. This means that it very much represents an upper-bound on cross-border services purchased by households travelling to the location of the service provider. Because of this, we look at the information these travel surveys provide separately from the other sources in Chapter 8. Despite the limitations, they are useful to consider as examples of the variety and complexity of services trade and to provide as full a picture as possible even if not all gaps can be entirely filled.

The data for Ireland are collected by the CSO under the quarterly Household Travel Survey.<sup>13</sup> The aim of this survey is to measure domestic and outbound

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<sup>10</sup> The methodology is described in detail in this early report: [Business-Monitor-Survey-2010-Q4-Full-Report.pdf](#) ([intertradeireland.com](http://intertradeireland.com)).

<sup>11</sup> Link to all survey forms here: [ASI Form B 2018 Base Form and B overlay](#) ([cso.ie](http://cso.ie)).

<sup>12</sup> At the time of writing in July 2021.

<sup>13</sup> Link to survey detail: [Household Travel Survey Quarter 4 and Year 2018 – CSO – Central Statistics Office](#).

travel patterns involving overnight stays by residents of Ireland. It also includes information on length and purpose of the trip as well as expenditure. The survey frame includes all private households and around 4,600 are collected each month. The survey includes information on the respondent's characteristics (age, gender and employment status) as well as information on the trip itself. The survey covers overnight trips and same-day trips taken in Ireland or Northern Ireland. The expenditure data collected for each trip include direct costs of the travel as well as expenditure on goods and services while on the trip itself.

The tourism statistics collected in Northern Ireland by NISRA are similar in structure to those of the CSO, also being collected on a quarterly basis via household survey.<sup>14</sup> Data on trips and length of stay are collected for residents of Northern Ireland travelling to Ireland but expenditure is not available for this group.

### **3.8 DATA SUMMARY AND LIMITATIONS**

This chapter outlines the key data sources that will be drawn on this report. As we shall see in the subsequent chapters, these sources give a great deal of insight into the patterns of cross-border trade in services, and allow us to link this trade to a number of firm characteristics. However, it is important to emphasise the areas where data gaps remain.

In terms of the overall level and composition of cross-border trade in services, most of the information relies on the reporting by firms in Northern Ireland of their cross-border activities. We therefore use reported imports from Ireland by Northern Ireland firms rather than having access to a comprehensive source from firms in Ireland on their cross-border sales. Greater information should be available on this once the new questions on Northern Ireland trade recently added to the Annual Services Inquiry are released. Both surveys used to examine the patterns of trade to Northern Ireland from firms in Ireland have limits to their scope as measurement of cross-border trade is not their primary objective. For example, the CDS concentrates on SMEs and hence excludes larger firms, while the ABSEI is targeting agency-supported exporters and may therefore underestimate smaller firms that trade exclusively with Northern Ireland but do not export more broadly. Overall, comparisons between firm activities in Ireland and Northern Ireland are hampered by a lack of comparable data collected on an all-island basis.

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<sup>14</sup> Full description here: Annual and quarterly tourism statistics publications | Northern Ireland Statistics and Research Agency (nisra.gov.uk).



In terms of sectoral coverage, the financial sector is largely excluded from most of the sources available as are many public sector services. The reliance on firm-level data may also underestimate the extent of cross-border services being accessed directly by customers moving directly to the service provider. We try to address this to some extent by also drawing on data from tourism surveys, but the questions these include on expenditures do not provide breakdowns of spending into goods and services categories. Greater detail from these sources or from additional questions on spending locations in household expenditure surveys would be extremely helpful in filling this knowledge gap.

## CHAPTER 4

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### Extent and composition of cross-border services trade

#### 4.1 CHAPTER OUTLINE

This chapter presents the available information on aggregate cross-border flows in services and how these compare to trade in goods. It also examines the balance of trade between the two economies and the relative shares of each in the other's total services trade. Finally, we drill deeper into the types of services being traded and the extent to which these are similar to or differ on a cross-border basis to the patterns of overall services exports from each economy.

#### 4.2 TOTAL CROSS-BORDER TRADE FLOWS

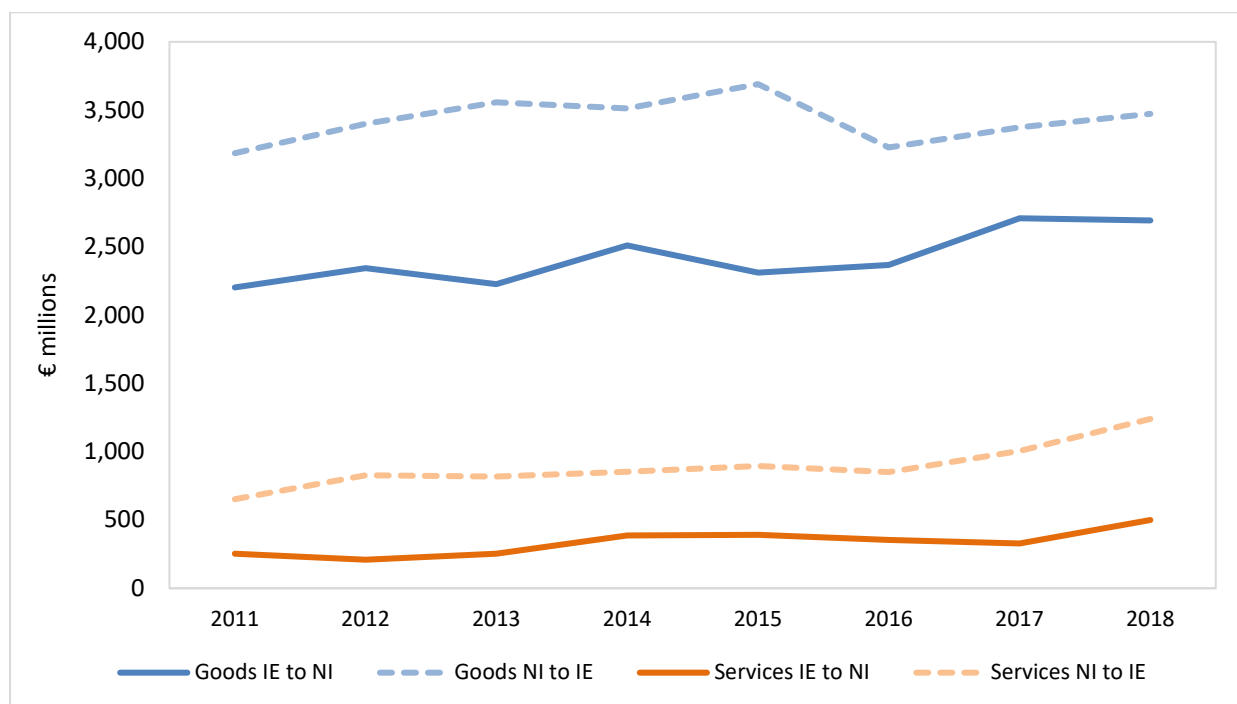
We first look at the level of services trade flows across the border and how this has evolved over time. Figure 4.1 uses data from NISRA to graph total services trade in each direction from 2011 to 2018 and compares this to goods trade.<sup>15</sup> As noted in the data descriptions in the previous chapter, the CSO does not separate Northern Ireland as a services trade destination, so the measurement of services exported from Ireland to Northern Ireland is taken as being the reported imports from the Northern Ireland perspective.<sup>16</sup>

Figure 4.1 shows that **services trade in both directions is quite considerably lower than cross-border trade in goods**, accounting for 26 per cent of trade going from Northern Ireland to Ireland and for 16 per cent of the trade going from Ireland to Northern Ireland. Over time, cross-border trade in both goods and services shows a relatively flat profile with fairly modest growth rates. The **low relative share of services from Ireland to Northern Ireland is in contrast to the high overall services content of Ireland's exports** noted in the previous chapter and gives some initial indications that cross-border services trade differs from the overall structure. How much this is the case will be examined further in the remainder of the report.

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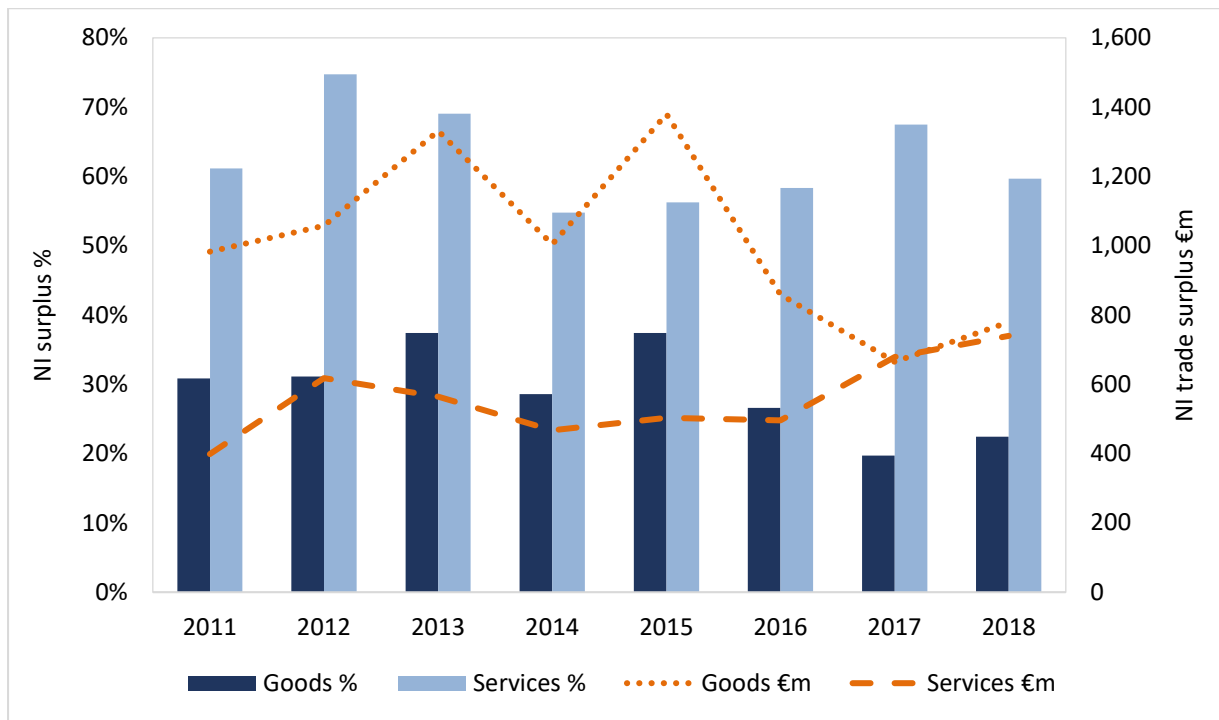
<sup>15</sup> Where relevant, pound Sterling amounts are converted to euros throughout the report using average annual exchange rates from the Central Bank of Ireland here: [Euro Exchange Rates | Central Bank of Ireland](#).

<sup>16</sup> CSO data on trade in goods show a substantial increase in cross-border trade in 2021 following Brexit but no data on services trade are available for this period as yet.

**FIGURE 4.1** CROSS-BORDER TRADE IN GOODS AND SERVICES

Source: NISRA BESES 2020.

In addition to the lower values of overall services trade flows relative to cross-border trade in goods, the other striking pattern in the aggregate data presented in Figure 4.1 is the **persistent trade surplus for Northern Ireland for both goods and services**. Given the generally greater export-orientation of Ireland, this is perhaps slightly surprising. The extent of the Northern Ireland trade surplus is documented further in Figure 4.2 which shows the percentage difference in trade going from Northern Ireland to Ireland compared to that going from Ireland to Northern Ireland (represented by the bars to be read on the right-hand scale) and the euro value that this represents (represented by the lines on the left-hand scale). Although the surplus is larger as a share of trade in services than in goods, the actual value has converged over time to a very similar amount, although this is driven mainly by the narrowing of Northern Ireland's trade surplus in goods while the trade surplus in services has increased by a smaller amount.

**FIGURE 4.2** NORTHERN IRELAND TRADE SURPLUS WITH IRELAND, GOODS AND SERVICES

Source: Author's calculations from NISRA BESES 2020.

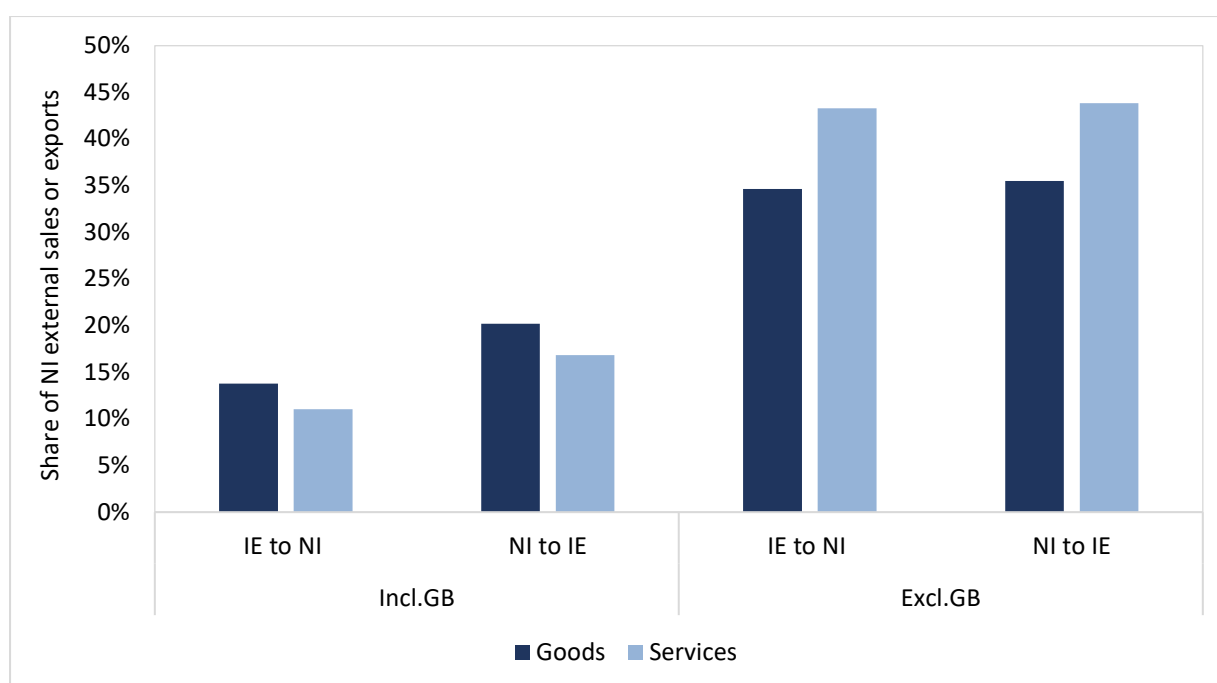
### 4.3 SHARE OF CROSS-BORDER FLOWS IN TOTAL TRADE

Having documented the level of trade flows in the previous section, we next look at how large a share cross-border flows represent in overall trade. Looking first at trade from Northern Ireland using the same BESES data source, Figure 4.3 compares trade with Ireland to the total exports and total external sales of Northern Ireland. The difference between the two measures relates to the inclusion of sales beyond Northern Ireland to Great Britain in the external sales measure whereas these sales are excluded from the measure of exports which relates only to sales outside of the UK as a whole. While exports from Northern Ireland exclude sales to Great Britain, the practice by the Northern Ireland Statistics and Research Agency (NISRA) is to collect information on all trade flows in and out of Northern Ireland as 'external' activity in addition to collecting information on imports and exports. This gives a useful indication of the extent to which economic activity within Northern Ireland remains local or is part of broader economic zones. As Great Britain is a large market for Northern Ireland sales, including or excluding it in the base makes a substantial difference to how large the share represented by cross-border trade is measured.

If we consider all sales made by Northern Ireland business outside of Northern Ireland itself (i.e. use the external sales concept which includes sales to Great Britain) then Ireland accounts for 17 per cent of services outflows and 11 per cent of services inflows to Northern Ireland. These are slightly lower than the comparable shares of goods trade (which are 20 per cent and 14 per cent

respectively) but not substantially so. If we exclude trade with Great Britain to get a measure of more narrowly defined exports from Northern Ireland, the share of trade with Ireland is a much larger segment of this smaller base. Imports from Ireland account for 43 per cent of all international services imports to Northern Ireland and exports to Ireland account for 44 per cent of total services exports. When we examine exports and imports rather than external sales and purchases, we find that the share represented by Ireland is larger for services than for goods (which is 35 per cent for both imports and exports of Northern Ireland). This is due to a smaller level of services being traded from Northern Ireland beyond the two neighbouring markets of Great Britain and Ireland whereas there is somewhat greater diversification to other markets for goods trade.

**FIGURE 4.3** CROSS-BORDER TRADE AS SHARE OF TOTAL NI EXPORTS AND EXTERNAL SALES

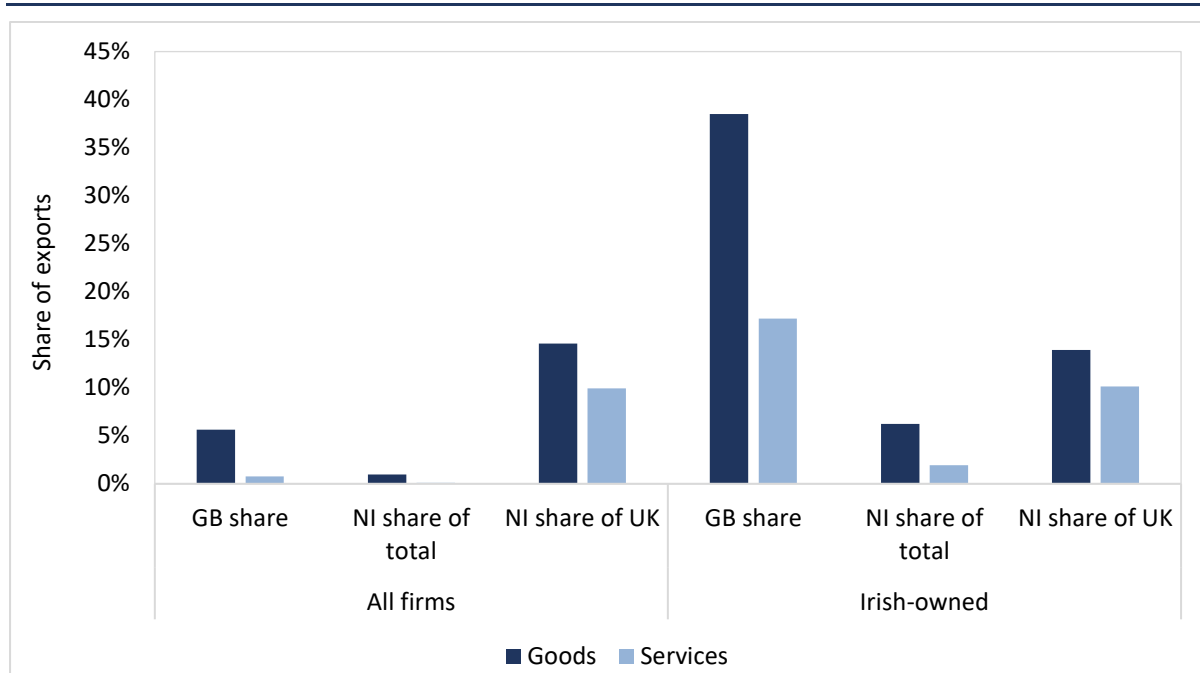


Source: Author's calculations from NISRA BESES 2020.

We next turn to the share that Northern Ireland accounts for in total exports and imports of services for Ireland, again comparing these to goods to give context to the patterns. Figure 4.4 uses data from the ABSEI survey of firms in Ireland, which focus primarily on exporters. This shows that **Northern Ireland accounts for slightly less than 1 per cent of total exports from Ireland in both goods and services**. Given the relatively small size of the Northern Ireland economy and the highly export-orientated structure of Ireland's output, these low shares are not surprising. If we compare these shares to the profile of cross-border trade over time in Figure 4.1, it suggests that the share of trade from Ireland accounted for by Northern Ireland has gradually declined, given total exports in both goods and services grew considerably over the comparable period. **If we exclude the foreign-owned multinational firms that dominate total exports from Ireland,**

and focus on domestically-owned firms, then we find that the shares of exports accounted for by Northern Ireland increases to around 6 per cent of goods exports and 2 per cent of services exports. This difference in export diversification of domestically-owned firms in Ireland is most stark when comparing with the importance of the British market for these firms to the total share although this share is larger for goods than for services.

**FIGURE 4.4** CROSS-BORDER TRADE AS SHARE OF IRELAND'S TOTAL EXPORTS AND EXPORTS TO UK



Source: Author's calculations from ABSEI 2020.

#### 4.4 COMPOSITION OF CROSS-BORDER SERVICES TRADE

This chapter has so far looked at the aggregate level of cross-border services trade. This section decomposes services trade into a number of subsectors to examine the composition of the cross-border flows and to compare them to the overall structure of services trade for Northern Ireland and Ireland. As the data sources and subsectors are not identical, we first present the evidence for Northern Ireland in Table 4.1 and then for Ireland in Table 4.2.

The largest services activity reported from Northern Ireland to Ireland is in transportation and storage which accounts for more than one-third of total services exports. This is broadly similar to the share of this service in total external sales from Northern Ireland but much larger than the sector share of overall exports, suggesting that geographic proximity is extremely important for this type of service. Professional, scientific and technical services then make up another one-quarter of services going from Northern Ireland to Ireland with

administrative and support services and information and communication making up most of the remaining exports.

**TABLE 4.1 SERVICES COMPONENTS OF NI EXPORTS TO IRELAND AND TOTAL NI TRADE**

	Share of NI exports to Ireland %	Share of NI external sales %	Share of NI exports %
<b>Transportation and Storage</b>	35.3	34.6	21.5
<b>Information and Communication</b>	14.6	24.3	33.5
<b>Real Estate Activities</b>	1.1	1.4	0.5
<b>Professional, Scientific and Technical</b>	25.4	19.9	23.8
<b>Administrative and Support Services</b>	19.4	17.7	18.3
<b>Other services</b>	4.2	2.2	2.3
<b>Total services</b>	100	100	100

Source: Author's calculations from NISRA BESES 2020.

**TABLE 4.2 SERVICES COMPONENTS OF IRELAND'S EXPORTS TO NI, GB AND TOTAL**

	Share of Ireland's exports to NI %	Share of Ireland's exports to GB %	Share of total services exports %
<b>Business Services</b>	41.3	27.6	3.0
<b>Computer Consultancy</b>	19.8	29.9	26.8
<b>Computer Facilities Management</b>	0.0	0.1	4.5
<b>Computer Programming</b>	0.6	2.6	36.3
<b>Education</b>	1.5	2.5	0.4
<b>Financial Services</b>	4.2	11.8	3.1
<b>Other IT and Computer Services</b>	3.6	9.9	22.9
<b>Other Services</b>	16.6	7.2	2.4
<b>Publishing, Broadcasting and Telecoms</b>	12.4	8.5	0.5
<b>Total Services</b>	100	100	100

Source: Author's calculations from ABSEI 2020.

Notes: The total shares may differ from CSO aggregates due to survey composition.

The main areas where the structure of services being exported to Ireland differ from the broader export structure are in the higher share accounted for by transportation and storage and the lower share accounted for by information and communication services. This latter category makes up one-third of total services exports from Northern Ireland but accounts for a smaller 14.6 per cent share of services going to Ireland.

While the differences in services components for Northern Ireland in terms of what it exports to Ireland relative to its overall export structure are relatively minor, there is more substantial deviation in the structure of the services that Ireland sells to Northern Ireland compared to the composition of total services

exports. This is mainly driven by the high shares of computer programming and other IT and computer services in total exports from Ireland that play a small role in exports to Northern Ireland. These are sectors within Ireland that are largely dominated by multinational firms. This underpins the importance of FDI flows into Ireland, particularly in services, as one of the key contributors towards differences in the overall economic structure and export orientation between the two countries. The differing levels of high-value FDI in Ireland and Northern Ireland and factors that may impact multinational location decisions are examined in detail in Siedschlag et al. (2021). In contrast, **business services play a more dominant role accounting for over 40 per cent of services going to Northern Ireland followed by computer consultancy at another 20 per cent.**

#### 4.5 CHAPTER CONCLUSION

This chapter examined the extent and broad composition of cross-border flows in services. While it is important to bear in mind the data limitations discussed in the previous chapter, the key finding of the analysis is that cross-border services trade is quite considerably lower than trade in goods. It is particularly striking how low the share of services is in trade from Ireland to Northern Ireland, which differs substantially from the much higher services content of Ireland's aggregate exports. In terms of the balance of trade, the available data show a trade surplus for Northern Ireland for both goods and services.

This perhaps reflects the difference in the size of the markets, and evidence on the contribution of cross-border trade to total exports shows that Ireland is a large export destination for Northern Ireland as a share of overall trade whereas Northern Ireland accounts for a small share of total exports from Ireland. Much of this difference reflects the broad export orientation of the multinational-dominated export sector in Ireland.





## CHAPTER 5

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### Firm participation in cross-border services trade

#### 5.1 INTRODUCTION

In this chapter, we examine the firms that underlie the cross-border services trades described in the previous chapter. We begin by examining participation and contributions to the level of activity by firm size groups and then look at variation by region within Ireland and Northern Ireland. The final section of the chapter compares the average amount of cross-border services trade to those of goods exporters and to firms with services exports to other destinations.

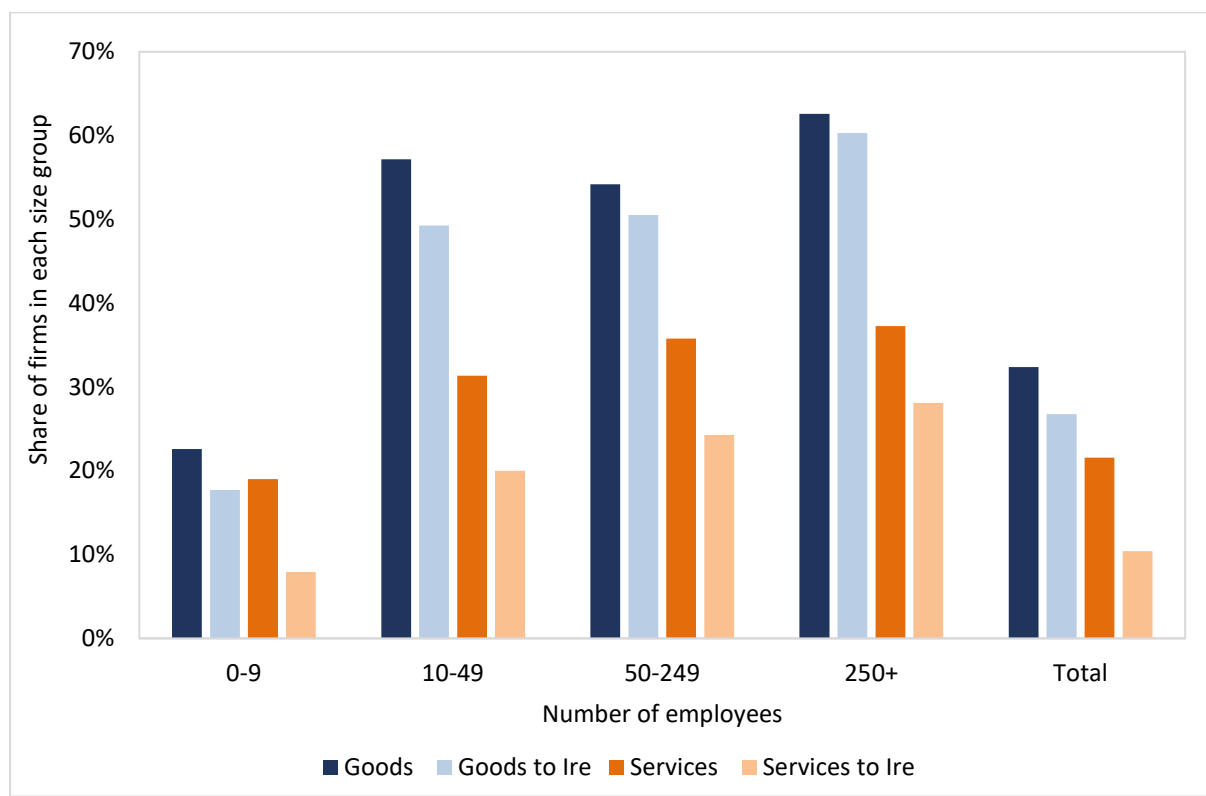
#### 5.2 FIRM SIZE

One consistent feature of the research on cross-border trade in goods is the role played by relatively small firms, which is much greater than would generally be found for exporting activity internationally (InterTradeIreland, 2018). In this section, we look at whether the same patterns are also apparent for services trade. Starting with the patterns for Northern Ireland, firms are divided into four size categories – micro firms (up to nine employees), small firms (between ten and 49 employees), medium firms (50 to 249 employees) and large firms (250 or more employees). For each size group, the share of firms active in external sales or exports of either goods or services is calculated both for overall trade and for trade with Ireland.<sup>17</sup> The rates for external sales (which include sales to Great Britain) are shown in Figure 5.1 and the participation in exporting is shown in Figure 5.2.

External sales participation rates are shown in Figure 5.1 to increase steadily with firm size for services firms. However, these rates remain considerably lower than the participation observed for goods firms across all size categories. Another striking feature of these data is that, in almost all size groups, there is a larger gap for services between the share of firms that have external sales and the share exporting to Ireland than exists for goods firms. Firms with external sales of goods almost all include Ireland as a destination market for some of these sales. This is shown by the gap between goods firms with external sales and goods firms exporting to Ireland which generally shows between 2 to 4 per cent of firms in each size category have external sales activity that does not include Ireland.

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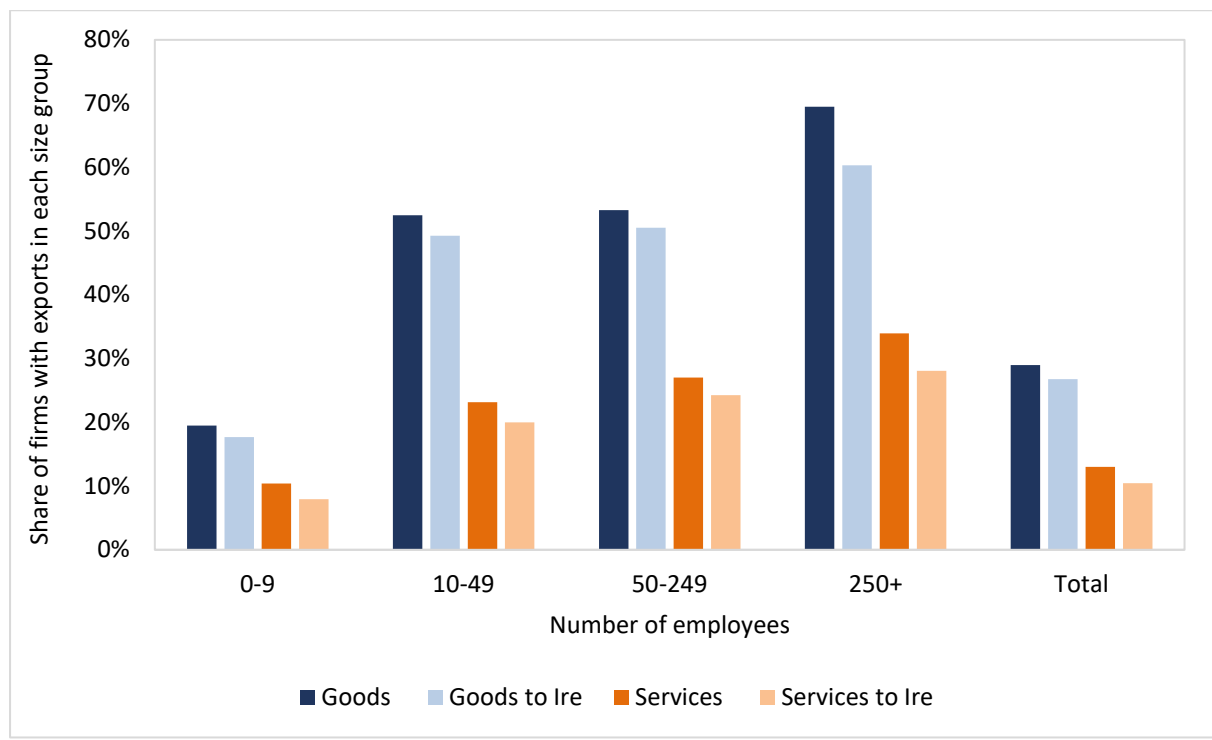
<sup>17</sup> Firms trading both goods and services are not included in these calculations.

**FIGURE 5.1 FIRM SIZE AND PARTICIPATION IN EXTERNAL SALES FOR NORTHERN IRELAND**

Source: Author's calculations from NISRA BESES data (2015).

**For services firms, it appears more common to have external sales while not having exports to Ireland.** For example, 19 per cent of micro firms in services report having some external sales, which is close to the participation rate for external sales of goods firms (23 per cent). However, while 18 per cent of the goods micro firms report sales to Ireland, this is the case for 8 per cent of services micro firms. A similar pattern exists along the size distribution with the difference between the external sales participation rate and participation in selling to Ireland coming in at around 10 per cent.

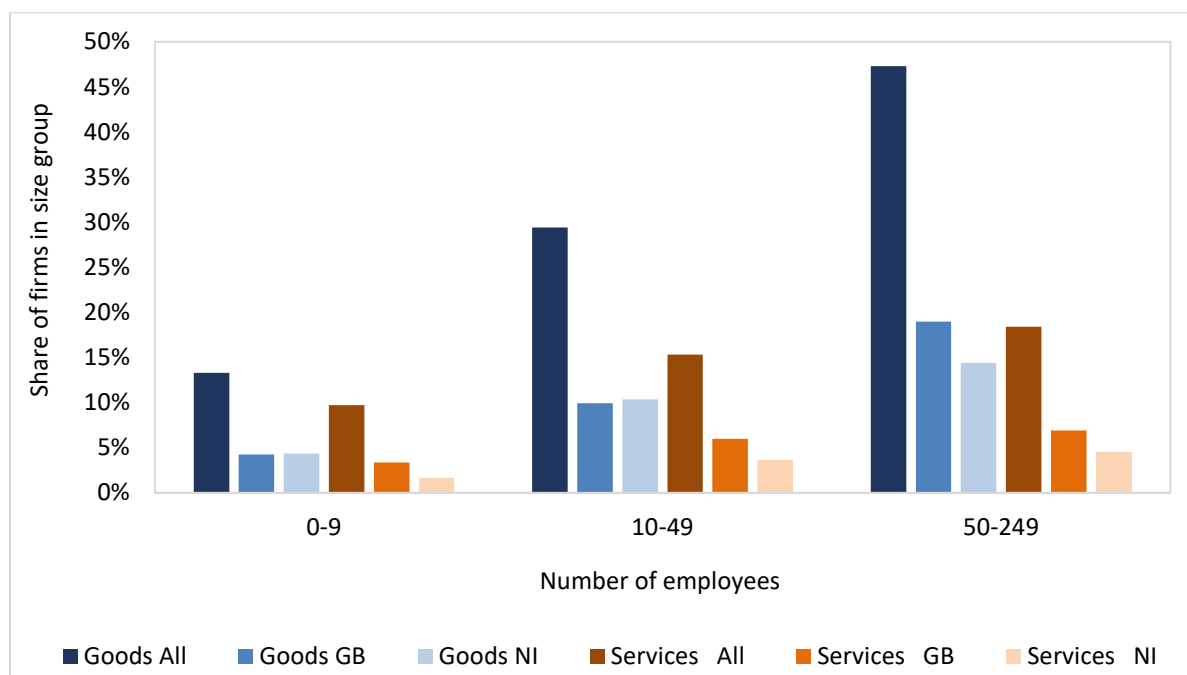
When we look at the participation rates for exporting in Figure 5.2, the lower export participation of services compared to goods remains as a key feature of the data. However, the gap between the proportion of firms exporting and the proportion exporting to Ireland has almost disappeared when compared to the patterns in Figure 5.1. This **suggests that there is somewhat greater orientation towards the British market for services firms in Northern Ireland which sell beyond the Northern Ireland market itself than for goods firms.** This however comes with a caveat that some services exports that arise from the customer travelling to the location of the service provider (i.e. Mode 2 exports) may be underestimated in data reported by the firm. This element of cross-border trade will be examined further using information from the customer side in Chapter 8.

**FIGURE 5.2 FIRM SIZE AND EXPORT PARTICIPATION FOR NORTHERN IRELAND**

Source: Author's calculations from NISRA BESES data (2015).

We next examine how export participation and cross-border trade varies across the firm size distribution for Ireland. In Figure 5.3 we use the CDS survey of SMEs which asks about overall export activity and exporting to Northern Ireland and Great Britain. Recall that this survey does not include large firms so there are three size categories shown rather than four as in the comparable Northern Ireland figures.

The most immediately obvious similarities between the export participation patterns in Ireland and Northern Ireland are the increasing probability of exporting as firm size increases, and the persistently lower export orientation of services firms compared to manufacturing firms. Export participation rates for services firms vary from 10 per cent for micro firms up to 18 per cent for medium sized firms. The comparable rates for Northern Ireland are identical at 10 per cent for the micro firms but increase more rapidly across the size distribution up to participation rate of 27 per cent for the medium-sized firms.

**FIGURE 5.3 FIRM SIZE AND EXPORT PARTICIPATION FOR IRELAND**

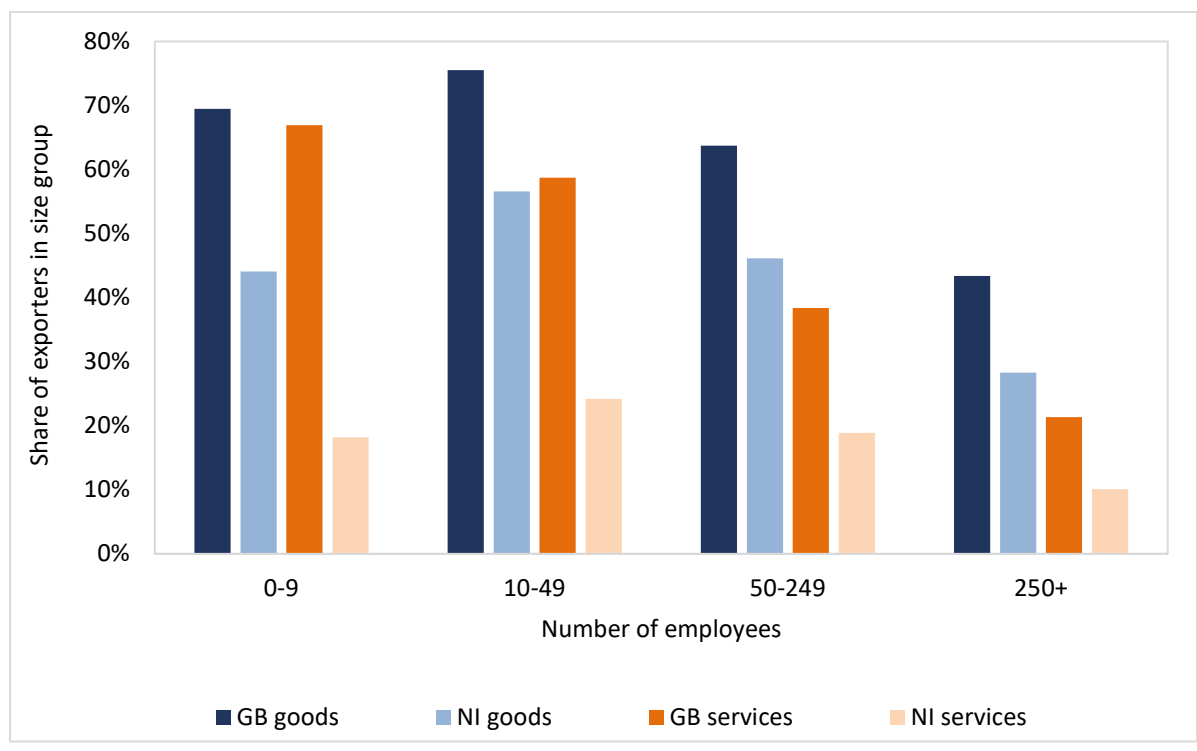
Source: Author's calculations from CDS data (2019).

However, there is a much more substitutional difference between the share of firms that export and the percentages that report a share of their exports destined for either Northern Ireland or Great Britain than was evident for **Northern Ireland firms that were much more likely to include Ireland as one of their destinations if they exported at all**. We can compare the destination pattern of exporters against alternative estimates from the ABSEI survey which are presented in Figure 5.4. As the ABSEI is primarily focused on export activities, it contains relatively few non-exporters, so we do not use it to estimate export participation. However, it does contain detailed information on the destinations for firms that do export.

Across size groups, we estimate the share of exporting firms that include Great Britain or Northern Ireland as one of their destinations. These data show a higher share of exporting firms including Great Britain as one of their destination markets than the previous CDS data. In the CDS survey, 15 per cent of small firms in services export and 6 per cent export to Great Britain, equivalent to 40 per cent of exporters having Great Britain as a destination. In the ABSEI data, the equivalent calculation shows that Great Britain is included as a market for closer to 60 per cent of exporters. Despite this difference in the two surveys in the reporting of services exports to Great Britain, both surveys give quite closely comparable estimates of the share of services exporters that have Northern Ireland as a destination. To make the figures comparable, we convert the shares of firms selling to Northern Ireland as a percentage of total firms shown in Figure 5.3 into shares of exporters instead. This tells us that **20 per cent of micro**

services firms that export have Northern Ireland as one of their destinations, as do 27 per cent of small firms and 22 per cent of medium firms. The ABSEI survey reported in Figure 5.4 has the equivalents as 18 per cent of micro firms, 24 per cent of small firms and 19 per cent of medium firms that include Northern Ireland as a market for their services if they are exporters. Both sources are therefore quite consistent in their estimates of cross-border services export participation. Despite differences in the precise share of firms including Great Britain as an export destination, both sources show **more firms exporting to Great Britain than to Northern Ireland across both manufacturing and services and across all size groups. This is potentially explained by the much larger size of the British market but does also suggest considerable scope for expansion of cross-border trade given that proximity should imply low entry costs to such trade.**

**FIGURE 5.4 FIRM SIZE AND EXPORT ACTIVITY TO NORTHERN IRELAND AND GREAT BRITAIN – EXPORTING FIRMS IN IRELAND**



Source: Author's calculations from ABSEI data (2020).

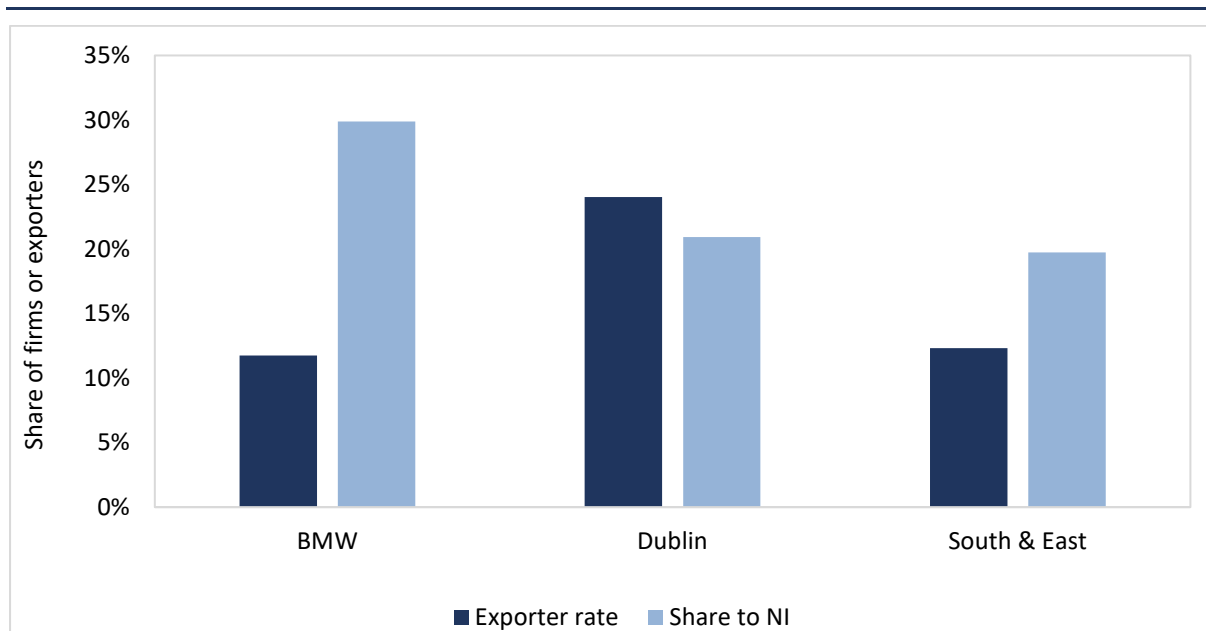
### 5.3 FIRM LOCATION

The previous section mentioned proximity as a facilitator of cross-border trade in services. In the economic literature on international trade, distance is regarded as a key driver of trade relationships. In this section, we therefore take a look within the two countries to examine where services exporters are located. For Ireland, we can use the CDS survey to examine the export participation rates of firms located in different regions and how many of these export to Northern Ireland. This relates to SMEs only. We then use the ABSEI survey which covers larger exporters as well to examine the shares of exports to Northern Ireland originating

from different regions. For Northern Ireland, we can compare the overall pattern of cross-border exports by location but are unable to divide these into goods and services.<sup>18</sup>

Figure 5.5 shows the participation rate of SMEs in services both in overall exporting and in the share of exporters that sell into Northern Ireland. The firms are grouped across three different regions in Ireland (BMW which is the Border, Midlands and West region, Dublin and the South and East). Exporting activity in general is less common amongst the firms located in the BMW and South and East regions, where approximately 12 per cent of firms report exporting, compared to firms in Dublin which have an export participation rate of double this rate at 24 per cent. The incidence of cross-border exporting as a share of exporters is however considerably more common in the BMW region, where 30 per cent of exporters report export sales to Northern Ireland. The share of exporters in Dublin and the South and East region exporting to Northern Ireland is around 20 per cent.

**FIGURE 5.5 EXPORT ACTIVITY TO NORTHERN IRELAND BY REGION OF EXPORTING FIRMS IN IRELAND**



Source: Author's calculations from CDS data.

Turning from the measure of number of firms in Figure 5.5 to the values of trade, Table 5.1 calculates the shares of trade allocated across the same three regions. In terms of aggregate services trade, the BMW region is the least trade intensive with the vast majority of services exports originating in the Dublin region (recall that not all multinational exporters are covered by this survey however).

<sup>18</sup> Maps of the geographic subdivisions used in this section are shown in Appendix B.

For exports to Great Britain, there is a greater spread of export contributions between Dublin and the South and East regions, but the BMW region continues to account for a small minority of these exports. The share of services exports to Northern Ireland shows an increase in the share originating in the BMW region – up from 2 per cent of total exports to 7 per cent of exports to Northern Ireland. Comparing this to the pattern for goods exports shows less concentration in Dublin and more overall exports accounted for by the South and East region. The BMW pattern of a minority of overall exports but a much greater role in exports to Northern Ireland is comparable to the pattern in the services sector but with considerably higher magnitudes.

**TABLE 5.1 IRELAND'S EXPORTS TO NI, GB AND TOTAL BY REGION OF ORIGIN**

Services				
	BMW Area %	Dublin %	South and East %	All %
Total exports	2	91	7	100
GB exports	4	64	32	100
NI exports	7	65	28	100
Manufacturing				
	BMW Area %	Dublin %	South and East %	All %
Total exports	16	9	76	100
GB exports	32	19	49	100
NI exports	40	13	48	100

Source: Author's calculations from ABSEI data.

We cannot provide a precisely comparable breakdown of location for Northern Ireland as the region detail is available only at an overall exporting level and not separately for goods and services. However, these overall figures may still be useful for context. Table 5.2 shows the shares of total exports and external sales as a share of each District Council Area's total turnover along with the shares of sales accounted for by Ireland and Great Britain. **Four areas account for half of all Northern Ireland's exports to Ireland: Armagh City, Banbridge and Craigavon; Belfast; Mid-Ulster; and Newry, Mourne and Down.**

Table 5.3 examines the importance of Ireland as a destination market for each region in Northern Ireland. It shows exports to Ireland as a share of the total exports and total external sales of each region. On average, exports to Ireland account for around 38 per cent of total exports but this can range as high as 70 per cent in the case of the Fermanagh and Omagh area. Overall, there is not strong evidence of a close link between distance to the border and trade intensity apparent in these patterns. This may be as a result of the overall distances involved, as none of the district council areas are particularly far from the border.



**TABLE 5.2 CONTRIBUTION TO TOTAL EXPORTS AND EXTERNAL SALES ACROSS NORTHERN IRELAND REGIONS**

District Council Area	Sales to GB %	Exports to Ireland %	External Sales %	Exports %
Antrim and Newtownabbey	7	9	8	8
Ards and North Down	2	3	2	2
Armagh City, Banbridge and Craigavon	15	14	15	15
Belfast	18	12	20	21
Causeway Coast and Glens	3	7	5	6
Derry City and Strabane	2	5	3	4
Fermanagh and Omagh	6	9	5	5
Lisburn and Castlereagh	8	8	7	5
Mid and East Antrim	4	3	3	3
Mid Ulster	11	13	11	11
Newry, Mourne and Down	10	11	12	14
Unassigned	12	6	9	7
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Author's calculations from BESES data.

Note: Trade labelled as 'Unassigned' indicates that it was not possible to link the business to a postcode.

**TABLE 5.3 SHARE OF SALES TO IRELAND IN TOTAL EXPORTS AND EXTERNAL SALES FOR EACH NORTHERN IRELAND REGION**

District Council Area	Ireland / External Sales %	Ireland / Total exports %
Antrim and Newtownabbey	24	45
Ards and North Down	26	47
Armagh City, Banbridge and Craigavon	18	35
Belfast	12	23
Causeway Coast and Glens	29	45
Derry City and Strabane	32	47
Fermanagh and Omagh	31	72
Lisburn and Castlereagh	24	62
Mid and East Antrim	19	48
Mid Ulster	23	46
Newry, Mourne and Down	17	30
Unassigned	13	35
<b>Total</b>	<b>20</b>	<b>38</b>

Source: Author's calculations from BESES data.

Note: Trade labelled as 'Unassigned' indicates that it was not possible to link the business to a postcode.

## 5.4 AVERAGE EXPORT VALUES

This section examines the average values of export sales by different firm size groups for cross-border trade. Comparing goods and services exporters by size, the average values for Northern Ireland firms are presented in Table 5.4 and for Ireland in Table 5.5. The structure of the Northern Ireland data allows for a category of firms exporting both goods and services.

Although the magnitudes differ, some broad similarities are apparent. The main differences are concentrated within the larger size category which tends to have much higher average export values for Ireland in keeping with the greater services export intensity of the economy discussed in Chapter 4.

For firms in other size groups, we find that average values of services exports are always lower than those of goods firms. This is consistent with the greater difficulties of trading services across borders already highlighted earlier in the report. We also find that average values are lower for exports into the neighbouring markets where less scale is perhaps required. It is noteworthy that the average services exports reported by firms in Northern Ireland to Ireland are substantially larger than the average values of sales for Ireland to Northern Ireland exports which is likely to be a reflection of the different relative sizes of the two markets.

**TABLE 5.4 AVERAGE VALUE OF EXPORT SALES BY FIRM SIZE: NORTHERN IRELAND (€'000)**

	Micro	Small	Medium	Large	All
Export goods only	277	793	7,936	59,761	1,720
Export services only	153	499	3,836	15,692	603
Export goods and services	240	929	5,309	118,643	3,204
Extern goods only	398	1,286	14,300	216,497	3,783
Extern services only	199	957	8,823	46,264	1,051
Extern both goods and services	528	2,124	11,421	162,892	4,746
Ireland average goods	227	538	4,843	11,143	772
Ireland average services	96	308	2,185	3,700	311
Ireland both goods and services	176	739	1,958	12,846	794

Source: Author's calculations from BESES data.

**TABLE 5.5 AVERAGE VALUE OF EXPORT SALES BY FIRM SIZE: IRELAND (€'000)**

Services				
	Micro	Small	Medium	Large
Total export firms	371	8,328	42,226	1,251,064
GB exporters	118	361	901	2,355
NI exporters	7	35	144	184
Manufacturing				
	Micro	Small	Medium	Large
Total export firms	755	3,089	19,353	591,102
GB exporters	203	686	3,908	19,688
NI exporters	27	231	754	2,560

Source: Author's calculations from ABSEI data.

## 5.5 CHAPTER CONCLUSION

This chapter takes a more granular look at cross-border services trade by examining some of the characteristics of the firms participating in this activity. As is common in the international literature on services trade, we find that the rates of firm participation in exporting for services firms are considerably lower than the rates observed for goods firms. This finding holds across all firm size categories although export participation does become more likely in larger sized firms.

For firms in Northern Ireland, previous research on goods firms had noted that almost all firms with external sales (i.e. exports or sales to Great Britain) included Ireland as a destination market for some of these sales. This is less true for services firms, where we observe a larger share of firms that have external sales while not having exports to Ireland. This appears to be mainly driven by a somewhat greater orientation towards the British market for services firms in Northern Ireland than for goods firms. For firms in Ireland, we also find that there are more firms exporting to Great Britain than to Northern Ireland. In both cases, this is potentially explained by the much larger size of the British market but can also be interpreted as pointing towards a growth opportunity for further cross-border trade in services that could be developed further.

## CHAPTER 6

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### Cross-border exporting and firm performance

#### 6.1 INTRODUCTION

In this chapter, we examine if there are systematic differences between services firms engaged in cross-border trade and those that are not. As discussed in Chapter 2, the international research has documented returns to a variety of firm performance characteristics when firms are active in exporting. This research typically finds that firms engaged in international trade are larger, more capital-intensive, more skills-intensive, more productive and pay higher wages than locally-focused firms (Bernard et al., 2009a and 2009b; Wagner, 2016). Given that services firms trading across the border between Ireland and Northern Ireland are smaller than those exporting more broadly, as shown in the previous chapter, it will be interesting to investigate if performance premia associated with cross-border trade are observed for these firms as well or if they are indistinguishable from local trading firms. We focus on firms that we can identify as primarily services exporters rather than firms undertaking a mix of services and goods activities given the lack of information about the relative contributions of each type of trade within the firm.

Previous work on cross-border goods firms found significant differences in performance in terms of employment and productivity for firms engaged in exporting (InterTradeIreland, 2018). Data on services firms in Ireland were not available in that research so this chapter expands the analysis to include services firms in Ireland using the CDS of SMEs which identifies exporters to Northern Ireland.<sup>19</sup> As before, the BESES survey is the basis for the Northern Ireland estimates. The first section of the chapter examines the extent to which export premia can be identified for services traders. It asks the question of whether, and by how much, trade-related export premia for services firms differ from the comparable estimates for goods firms. The question is then expanded further in the second section which examines if these export premia differ according to how diversified the export activity is. In this section we distinguish not just between exporters and non-exporters, but also compare firms that engage in cross-border trade to those with local sales only, to those exporting to the British market, and to firms exporting more broadly. This gives us a finer degree of differentiation between the scale of activity beyond local sales and how this correlates with firm performance.

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<sup>19</sup> The CDS is more suitable for this comparison of exporters to non-exporters than the ABSEI data as the latter are targeted towards exporters and therefore underrepresent firms that undertake no export activity.

## 6.2 ESTIMATES OF EXPORT PREMIA ACROSS FIRMS

This section examines the extent to which exporting firms differ from non-exporters. To do this, we use a range of performance indicators at the firm level; these are employment, turnover, average wages and productivity. For Northern Ireland firms, we have a productivity measure which is measured as value added per employee. For Ireland, the earlier waves of the CDS had limited expenditure data so we can only calculate value added per employee for one year (2019). Likewise, average wages are not available until the most recent waves of the survey, so the sample size is smaller for these two characteristics when looking at the firms in Ireland. To counter this somewhat, we include an additional measure to proxy productivity for Ireland (output per employee) across the longer time span but note that this is a less precise measure than value added.

Rather than comparing simple averages across firm types, we use the econometric method in Damijan et al. (2015) where the log of each of the performance indicators is regressed on the trading status of the firm. In this section the trading status is a dummy variable for whether the firm sells beyond its local market (Ireland or Northern Ireland as applicable). In the next section, we broaden the export indicator to examine differences by extent of diversification. The reason to prefer this method is that it allows us to also add sector and time effects which help to control for differences in scale or capital intensity that might lead to inaccurate conclusions being drawn from comparing average performance. Formally, the model estimated is as follows:

$$\ln Y_{it} = \alpha + \beta \text{Status}_{it} + \mu_s + \mu_t + \varepsilon_{it}$$

where  $Y$  is one of the performance indicators and  $Status$  is a dummy variable taking value 1 when firm is an exporter or services exporter. Sector and year controls are indicated by  $\mu_s + \mu_t$ , with  $\varepsilon_{it}$  representing the error term. The coefficients from our regressions can be interpreted as conditional differences in each of the performance indicators between exporters and non-exporters.

Table 6.1 presents the export premia results for firms in Northern Ireland with the results for services firms in the top panel and effects for manufacturing firms in the lower panel for comparison. Table 6.2 presents the equivalent results for Ireland.<sup>20</sup> These tables compare the gap between exporters and non-exporters for each of the performance measures described above. Across the two tables, we find positive exporter premia for almost all of the performance indicators confirming the findings by Damijan et al. (2015); exporting firms are systemically stronger performers than non-exporters. The only exception for services firms is

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<sup>20</sup> Due to restrictions on access to the confidential firm microdata, the surveys could not be merged so the analysis was carried out separately on the datasets for Ireland and Northern Ireland.

the statistically insignificant coefficient on average wages for the sample of Irish firms but, as noted above, this is based on a much smaller sample size than the other estimates which may be a factor affecting this result. The magnitude of the effects is typically larger for services firms in Ireland than in Northern Ireland. This may be due to them having a broader set of export markets, an issue which we examine in the next section. The issue of access to alternative markets is also of relevance when considering the impact of Brexit and potential restriction of access to EU markets for exports from Northern Ireland. This could increase the divergence already apparent in these estimates and is discussed further in Chapter 7. We also note that for Northern Ireland, the return to exporting is consistently lower for services firms than for manufacturing firms, which is in keeping with the analysis of sectoral productivity by Mac Flynn (2016). In contrast, the results for Ireland show slightly higher returns to exporting for services firms than for manufacturing firms.

**TABLE 6.1 EXPORTING AND FIRM PERFORMANCE: NORTHERN IRELAND**

Services firms				
	Employment	Turnover	Wages	Productivity
Exporter	0.455*** (0.032)	0.921*** (0.038)	0.260*** (0.014)	0.188*** (0.02)
Observations	14,116	15,328	13,912	12,737
R <sup>2</sup>	0.249	0.264	0.212	0.19
Manufacturing firms				
	Employment	Turnover	Wages	Productivity
Exporter	1.003*** (0.04)	1.684*** (0.05)	0.298*** (0.017)	0.213*** (0.024)
Observations	4,610	4,802	4,585	4,473
R <sup>2</sup>	0.196	0.276	0.143	0.096

Source: Author's estimates using BESES data.

Looking at the magnitudes of the effects, Northern Irish services firms that export have turnover that is close to double that of non-exporters (92 per cent higher) and employment that is 45 per cent higher than non-exporters. They are also close to 20 per cent more productive. For firms in Ireland, the turnover coefficient is slightly higher than that of Northern Ireland firms with services exporters reporting sales that are 116 per cent higher than non-exporters. The other characteristics show larger gaps between exporters and non-exporters of services in Ireland compared to the premia estimated for Northern Ireland services firms. This is potentially due to the composition of the services sector in Ireland, given the large contribution of high-skilled IT services in services exports. For example, the employment in exporting firms is estimated to be over 70 per cent higher and productivity is 56 per cent higher (although again the sample size

on the latter estimate is quite small). All of these results show better performance for exporters compared to non-exporting services firms in both regions. In terms of magnitude, the gap between exporters and non-exporters is greater in Ireland than in Northern Ireland. In the next section, we examine the extent to which this might be due to the degree of diversification and if firms that are cross-border traders differ from those exporting more broadly.

**TABLE 6.2 EXPORTING AND FIRM PERFORMANCE: IRELAND**

Services firms					
	Employment	Turnover	Wages	Output/Employee	Productivity
Exporter	0.733***	1.160***	0.252	0.382***	0.561**
	(0.043)	(0.084)	(0.165)	(0.056)	(0.199)
Observations	8,810	3,986	578	3,976	478
R <sup>2</sup>	0.143	0.111	0.099	0.089	0.106
Manufacturing firms					
	Employment	Turnover	Wages	Output/Employee	Productivity
Exporter	0.667***	0.923***	0.311***	0.215***	0.206
	(0.03)	(0.062)	(0.139)	(0.044)	(0.145)
Observations	10,783	5,081	624	5,074	536
R <sup>2</sup>	0.119	0.117	0.055	0.053	0.043

Source: Author's estimates using CDS data.

### 6.3 VARIATION IN EXPORT PREMIA BY EXTENT OF DIVERSIFICATION

The previous section established a range of consistent differences between exporting and non-exporting firms. As the focus of this report is on cross-border trading activity, this leads to a question of whether cross-border trading firms are similar or different to those that export to a broad range of markets or if they are more similar to locally focused firms. This section therefore divides the firms into different levels of international activity, distinguishing between four categories of firm: non-exporters (which act as the reference category), firms with sales to Great Britain (but no other external sales or exports), cross-border exporters and firms with exports to anywhere else in the world. This is the same approach taken in InterTradeIreland (2018) but with the additional data sources allowing us to apply the method to services firms in both regions as well as to goods firms.

The performance metrics used are the same as in the previous section that compared exporters to non-exporters – employment, turnover, wages, and productivity, with output per employee also used for firms in the Ireland sample due to the relatively smaller number of observations available for the value-added measure of productivity. The results for Northern Ireland are presented in Table 6.3 and those for Ireland in Table 6.4.

We look first at the differentials in firm size as measured by employment and turnover. Our results suggest that services firms in Northern Ireland that export to Ireland are almost one-third larger in terms of employment and sell 70 per cent more than firms with no external sales. These are larger returns to export activity to Ireland than found for firms selling to the British market only, which are around 18 per cent larger than firms with only local sales and have turnover that is 37 per cent higher. Further employment and turnover premia are associated with exporting more broadly. However, in all cases, the differences between exporting firms and non-exporting firms are narrower in services than for manufacturing firms regardless of the extent of their export activity.

**For firms in Ireland, we find a similar pattern although with a higher magnitude estimated for the returns to cross-border trade for services firms.** These are found to be 74 per cent larger than non-exporting firms and have more than twice the level of turnover. In contrast to the pattern of results for Northern Ireland firms, these returns to cross-border exporting for firms in Ireland are substantially larger than those for goods firms. It should however be recalled that goods firms may be larger in all categories.

For wages, we find that firms that trade beyond the local Northern Ireland market tend to consistently pay higher wages but here the ordering of magnitudes is slightly different with a slightly greater premium associated with firms selling into the British market, although again the largest return is associated with broader exporting activity. Unlike the findings in relation to firm size, the wage differentials between exporting and non-exporting firms are reasonably similar between firms in services and in manufacturing. In contrast to the findings for Northern Ireland firms, the results on wages find no statistically significant difference between the levels of export diversification for firms in Ireland that export services and non-exporting firms. A caveat applies however as the wage data are available for a much shorter period than the other measures, so the sample size is rather small.



**TABLE 6.3 EXPORT PREMIA BY DESTINATION: NORTHERN IRELAND**

<b>Services firms</b>				
	<b>Employment</b>	<b>Turnover</b>	<b>Wages</b>	<b>Productivity</b>
<b>Exports Ireland only</b>	0.328***	0.700***	0.181***	0.071**
	(0.037)	(0.044)	(0.017)	(0.024)
<b>GB sales only</b>	0.184***	0.374***	0.150***	0.169***
	(0.036)	(0.042)	(0.016)	(0.023)
<b>Exports to RoW</b>	0.478***	0.925***	0.238***	0.216***
	(0.048)	(0.057)	(0.022)	(0.023)
<b>Observations</b>	14,116	15,328	13,912	12,737
<b>R<sup>2</sup></b>	0.251	0.269	0.218	0.197
<b>Manufacturing firms</b>				
	<b>Employment</b>	<b>Turnover</b>	<b>Wages</b>	<b>Productivity</b>
<b>Exports Ireland only</b>	0.462***	0.932***	0.166***	0.090**
	(0.043)	(0.055)	(0.019)	(0.027)
<b>GB sales only</b>	0.678***	0.901***	0.163***	0.042
	(0.042)	(0.054)	(0.018)	(0.027)
<b>Exports to RoW</b>	1.043***	1.778***	0.310***	0.359***
	(0.055)	(0.07)	(0.024)	(0.035)
<b>Observations</b>	4,610	4,802	4,585	4,473
<b>R<sup>2</sup></b>	0.289	0.366	0.177	0.116

Source: Author's estimates using BESES data.

Turning to productivity differences, we find that services firms in Northern Ireland exporting to Ireland are on average 7 per cent more productive than non-exporters. Firms with external sales into the British market tend to be close to 17 per cent more productive than local firms while those with broader exporting activity are more productive again – around 22 per cent higher value added per employee than non-exporting firms. For services firms in Ireland, there is a positive and significant gap found between exporters to Northern Ireland and non-exporters in terms of output per employee of close to 70 per cent. This is not mirrored in the estimates using value-added per employee as the indicator of productivity, but as with wages the sample size for this latter measure is much smaller and should therefore be interpreted with some caution.

**TABLE 6.4 EXPORT PREMIA BY DESTINATION: IRELAND**

Services firms					
	Employment	Turnover	Wages	Output/Employee	Productivity
Exports NI only	0.741***	1.269**	-0.048	0.691*	0.637
	(0.211)	(0.571)	(0.486)	(0.382)	(0.522)
Exports GB only	0.304***	0.537	0.679	-0.014	-0.117
	(0.161)	(0.371)	(0.488)	(0.249)	(0.518)
Exports to RoW	0.757***	1.175***	0.234	0.393***	0.660***
	(0.045)	(0.085)	(0.177)	(0.057)	(0.219)
Observations	8,810	3,986	578	3,976	478
R <sup>2</sup>	0.144	0.111	0.101	0.09	0.109
Manufacturing firms					
	Employment	Turnover	Wages	Output/Employee	Productivity
Exports NI only	0.308***	0.653***	0.644***	0.351***	0.639**
	(0.081)	(0.187)	(0.239)	(0.131)	(0.267)
Exports GB only	0.495***	1.056***	0.771*	0.368**	-0.025
	(0.106)	(0.228)	(0.399)	(0.159)	(0.437)
Exports to RoW	0.717***	0.936***	0.139	0.196***	0.109
	(0.032)	(0.065)	(0.157)	(0.046)	(0.162)
Observations	10,783	5,081	624	5,074	536
R <sup>2</sup>	0.121	0.117	0.063	0.053	0.049

Source: Author's estimates using CDS data.

## 6.4 CHAPTER CONCLUSION

This section shows that **exporters consistently outperform non-exporters across a range of different indicators. It also shows that cross-border export activity is correlated with these higher performance outcomes** and that the differences between cross-border services exporters and broader exporting activity is narrower than found for goods firms who benefit from greater returns when they export to a broader set of markets. This **lends support to the policy objective of encouraging firm entry into exporting as a route to growth.**



## CHAPTER 7

### Impacts of COVID-19 and Brexit

#### 7.1 INTRODUCTION

The preceding chapters examined the overall structure and performance of cross-border services activity under what may be termed reasonably normal broader economic conditions. This chapter looks at some of the challenges being faced by firms in the context of the current COVID-19 pandemic and how this varies somewhat depending on the nature of the business. We also look at potential longer-term changes in the costs of cross-border services trade flows that could emerge in the post-Brexit environment.

#### 7.2 COVID-19 AND CURRENT BUSINESS CHALLENGES

The most timely of data sources on business performance across the island of Ireland is the quarterly InterTradeIreland All-Island Business Monitor which, as described in Chapter 3, is the only source of data that covers firms in both Ireland and Northern Ireland using a common survey instrument. This section discusses some of the most recent outputs of that survey, from the first quarter of 2021, when a number of questions on the impact of the COVID-19 pandemic and early experience of Brexit were put to firms.

**TABLE 7.1 EXPERIENCE OF COVID-19 RESTRICTIONS BY SECTOR AND EXPORT ACTIVITY**

	Fully operational %	Reduced service %	Temporarily closed %
Professional services	72	27	0
Leisure and hotels	12	19	70
Retail and other services	59	31	10
Cross-border	66	31	3
No cross-border	53	29	18
Exports	68	30	2
No exports	52	29	19

Source: Author's calculations from InterTradeIreland survey data (2021 Quarter 1).

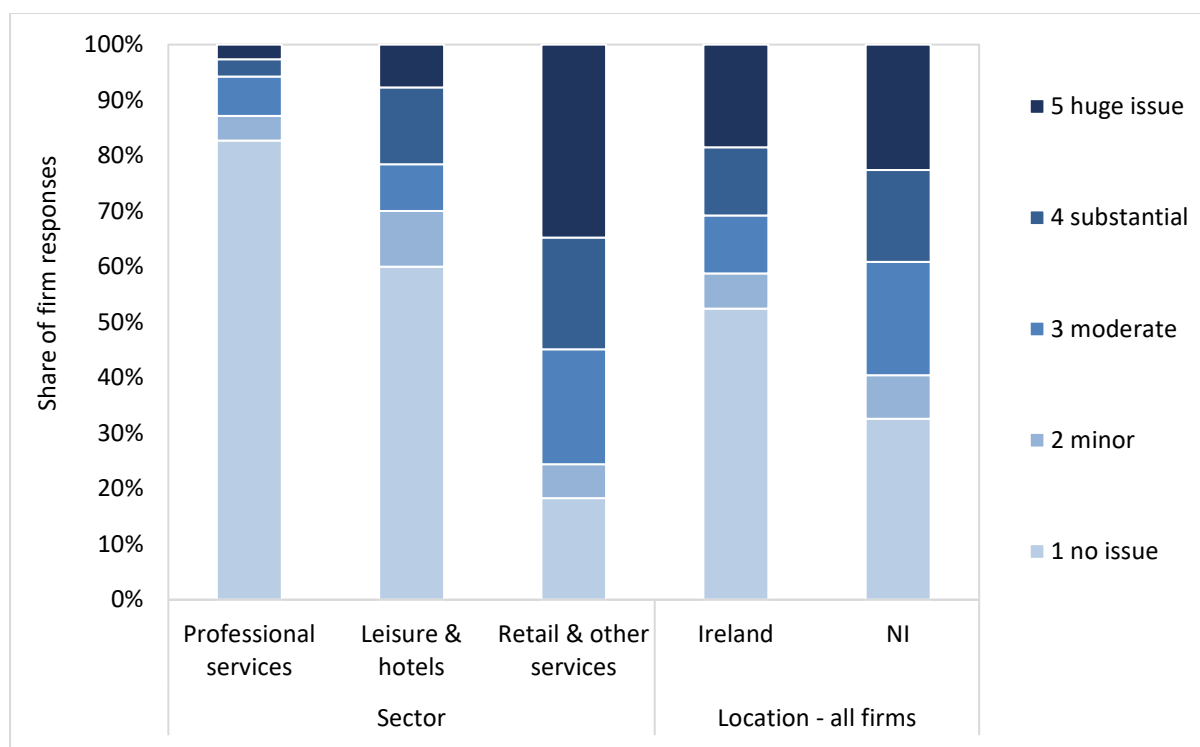
In Table 7.1, we see that the impact of the pandemic on services activities across the island were not evenly spread across the components of the services sector. This is in keeping with the evidence on the uneven impact of the pandemic on firms in Ireland detailed in Kren et al. (2021) which showed a strong distinction between face-to-face consumer services which were heavily impacted by public health restrictions and many business services where remote delivery remained possible. This pattern is also evident in the InterTradeIreland responses across

both areas, with 70 per cent of leisure and hotel services temporarily closed but essentially no closures in professional services.

Due to the composition of cross-border trade, as described throughout the report, being more concentrated in tradable services activities such as professional and business services, the performance throughout the pandemic has been somewhat better amongst cross-border traders than amongst locally focused firms. This can be seen in the higher share of fully operational firms in the cross-border trading and exporting groups in Table 7.1 and the much smaller shares of these firms that faced temporary closures.

Similar evidence can be seen in Figure 7.1 where firms were asked to rank the severity of the impact on their business activities of both COVID-19 and Brexit. Professional services placed the lowest rank on the extent of impact while retail had the highest. The severity of the combined impacts was ranked rather higher in Northern Ireland than in Ireland (although this latter question combines both goods and services firms so is not directly comparable to the sector bars).

**FIGURE 7.1 SEVERITY RANKING OF COVID-19 AND BREXIT ON BUSINESS ACTIVITY**



Source: Author's calculations from InterTradeIreland survey data (2021 Quarter 1).

Alongside the question on the impact of the pandemic, firms were asked to specify where the main business challenges they were facing were concentrated. Here we also see evidence of better performance in cross-border firms consistent

with the export premia results from Chapter 6. Although both cross-border traders and those with local-only sales both reported cash flow, demand reductions and confidence as the main current challenges in the pandemic environment, the percentages of firms reporting these as being of moderate or major importance to the firms were considerably lower for those with cross-border sales as shown in Table 7.2.

**TABLE 7.2 MAIN BUSINESS CHALLENGES**

	Cross-border Sales %	No Cross-border Sales %
<b>Cash flow</b>	43	60
<b>Reduction of demand</b>	46	61
<b>Business and consumer confidence</b>	47	59

Source: InterTradeIreland survey data (2021 Quarter 1).

### 7.3 POTENTIAL IMPACTS OF BREXIT ON SERVICES TRADE

The EU-UK Trade and Cooperation Agreement signed in December 2020 and the specific provisions in the Northern Ireland Protocol to the earlier Withdrawal Agreement were designed to prevent the requirement for any checks on cross-border goods trade that might otherwise have resulted from the exit of the UK from the EU. Neither contained extensive coverage of services trade. Thus far there have been limited changes to cross-border market access in services between the EU and UK as a range of temporary recognition arrangements have been established, most notably in the areas of financial services and data transfer. However, it remains possible that changes to services trade between the UK and EU, and hence to some cross-border services trade on the island of Ireland, could emerge unless the current temporary arrangements become more permanently established. Examining the risks of Brexit to overall UK services exports, Lowe (2021) identifies financial services, insurance and transport services as the largest sectors where relocation to the EU may become increasingly attractive to firms currently located in the UK if EU market access becomes more costly. These sectors are traditionally amongst the most tightly regulated in most countries.

More immediately, while the Northern Ireland Protocol provisions mean that firms in Northern Ireland continue to operate within the EU VAT area for goods, this is not the case for services. This means some changes to how VAT is charged on services for cross-border trade.<sup>21</sup> For services the applicable VAT rate depends on whether the customer is a business or a consumer. If selling to a business, the

<sup>21</sup> <https://www.revenue.ie/en/customs-traders-and-agents/brexit/information-for-businesses-trading-with-ni/vat-trade-with-ni-after-transition/trade-in-services-with-northern-ireland.aspx>.

location of the purchaser is designated as the place of supply and this is where the VAT will be due. If selling to a consumer, on the other hand, the place of supply is where the supplier is based.

**TABLE 7.3 AVERAGE TARIFF EQUIVALENTS (PER CENT) FOR CROSS-BORDER TRADE**

	NI exporters to EU	NI importers from EU	NI exporters to Ireland	NI importers from Ireland
Accounting services	7	4	4	4
Air transport	13	13	12	13
Architecture services	4	3	2	3
Broadcasting	5	7	4	7
Commercial banking	7	4	5	4
Computer services	6	2	0	2
Construction	5	2	2	2
Courier services	18	28	11	28
Distribution services	6	9	6	9
Engineering services	3	1	0	1
Insurance	3	0	0	0
Legal services	7	8	8	8
Logistics customs brokerage	3	4	0	4
Logistics storage and warehouse	5	7	3	7
Maritime transport	3	4	2	4
Road freight transport	3	7	1	7
Telecommunication	7	7	5	7

Source: Shepard et al. (2019, technical update document): <https://www.economy-ni.gov.uk/publications/eu-exit-and-impacts-northern-irelands-services-trade>.

Notes: These estimates relate to the scenario of Northern Ireland staying in Single Market when Great Britain does not.

In terms of where any such restrictions would be most likely to have an impact, research by Shepard et al. (2019) estimated a scenario similar to the agreed post-Brexit trading arrangements. Table 7.2 summarises the results of potential percentage cost increases that could arise from restrictions on services trade using international evidence on costs of services trade and sectors where restrictions on international activities are most liable to be binding. This found considerable variation in the degree to which different parts of the services sector might be affected by a range of restrictions. Courier services and professional services such as accountancy and legal services were amongst the most exposed to changes in market access regulations, as is air transport. However, the research also highlighted the important role of the continuation of the Common Travel Area, which means that many important underpinnings of services trade remain in place between the UK – including Northern Ireland – and Ireland. The estimates for the impact of any new restrictions on services trade were therefore found to be lower for trade between Northern Ireland and Ireland, relative to potential impacts on Northern Ireland’s trade with the rest of the EU.

## 7.4 CHAPTER CONCLUSIONS

This chapter looks at recent survey findings regarding how cross-border services firms have been affected by the COVID-19 pandemic. The impact of the pandemic has varied quite considerably across the services sector with high levels of temporary closures due to public health restrictions in the leisure and hotel services in both Ireland and Northern Ireland which had much more limited impact on other areas such as professional services. As cross-border services trade is largely dominated by these latter components of services trade in professional and business services, the impact of the pandemic has been less severe on the cross-border trading firms than amongst locally focused firms. Comparing Ireland and Northern Ireland, the survey evidence suggests that the restrictions had a greater impact on firm activities in Northern Ireland than in Ireland although this may also be a result of the different composition of the services activities.

The chapter also looks forward at some potential risks that could arise for cross-border services following the exit of the UK from the EU. The Northern Ireland Protocol to the Withdrawal Agreement between the EU and UK relates only to the continuation of cross-border trade in goods. It therefore remains possible that changes to services trade between the UK and EU, and hence to some cross-border services trade on the island of Ireland, could emerge over time. Financial services and insurance have been identified as the sectors most at risk of potential disruption. Unfortunately, for this report, financial services is amongst the sectors with the least amount of information available given that it is excluded from most of the survey sources. Courier services and professional services are also potentially exposed to changes in market access regulations. However, the Common Travel Area means that the impact of any new restrictions on services trade should be lower for trade between Northern Ireland, Great Britain and Ireland relative to potential impacts on Northern Ireland's trade with the rest of the EU.





## CHAPTER 8

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### Household evidence on cross-border spending

#### 8.1 INTRODUCTION

The majority of the granular information presented in the report so far has been drawn from sources based on firm responses to surveys. In terms of the technical definition of services trade, this could lead to an under-representation of some service types where the consumer travels to avail of the service as, in this mode of delivery, the service firm will not always be aware of the customer's origin. As a result of this, aggregate statistics on services trade at a country level combine data from firm sources with information on spending by visitors to the country to provide a fuller picture of services exports and spending by the country's residents abroad to build up the total of services imports. Although the information on the components of cross-border spending is limited, it is important to include and to gauge the extent of this type of trade to make this report as comprehensive as possible.

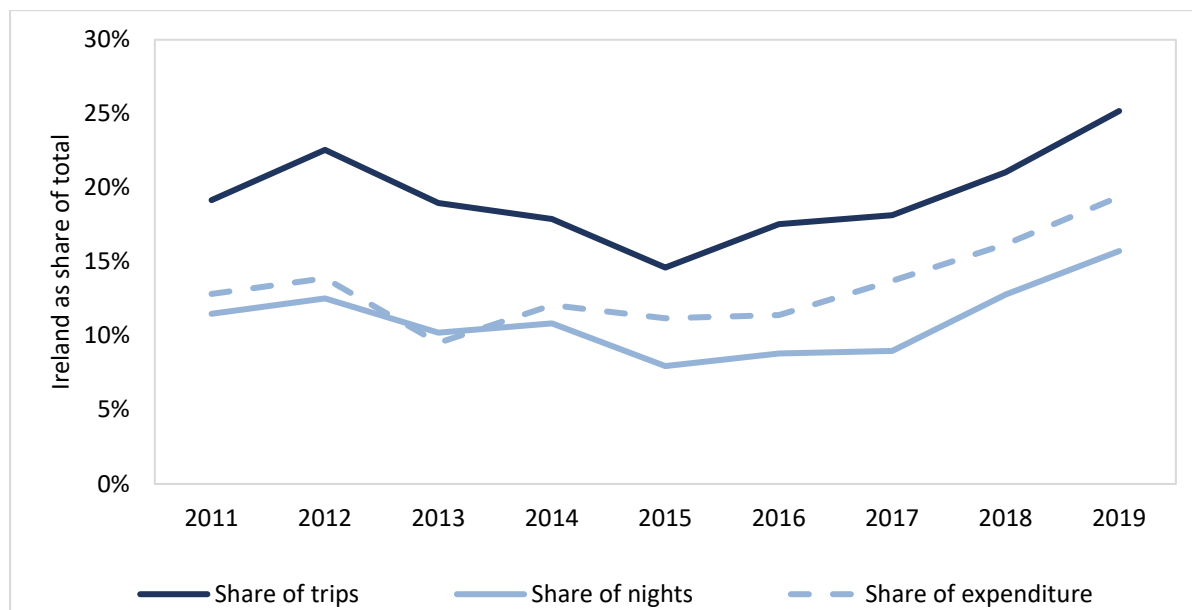
#### 8.2 CROSS-BORDER TRAVEL AND AVERAGE EXPENDITURE

In this section, we examine the frequency of cross-border travel and the level of expenditure associated with it. To do this, we use information collected through household level surveys by the CSO for Ireland (Household Travel Survey) and by NISRA for Northern Ireland (the tourism module of the Continuous Household Survey) as described in Chapter 3.

In our first two figures (8.1 and 8.2) we look at the shares of total visits and number of nights accounted for by visitors from Ireland to Northern Ireland and from Northern Ireland to Ireland respectively. These figures relate to the period prior to the COVID-19 pandemic which brought a range of temporary travel restrictions all across the island. In Figure 8.1, we can also include the share of total expenditure by inbound visitors in Northern Ireland that comes from Ireland. Unfortunately, this expenditure information is not available for the travel of Northern Ireland residents in Ireland. On average over the 2011 to 2019 time period covered by the data, residents of Ireland accounted for 19 per cent of all trips to Northern Ireland by people resident elsewhere (i.e. excluding internal trips in Northern Ireland) and this was trending upwards in recent years to reach a high of 25 per cent in 2019. The share of total nights and expenditure by residents of Ireland as a total of visitors to Northern Ireland was also trending upwards over recent years but remain lower than the number of trips.

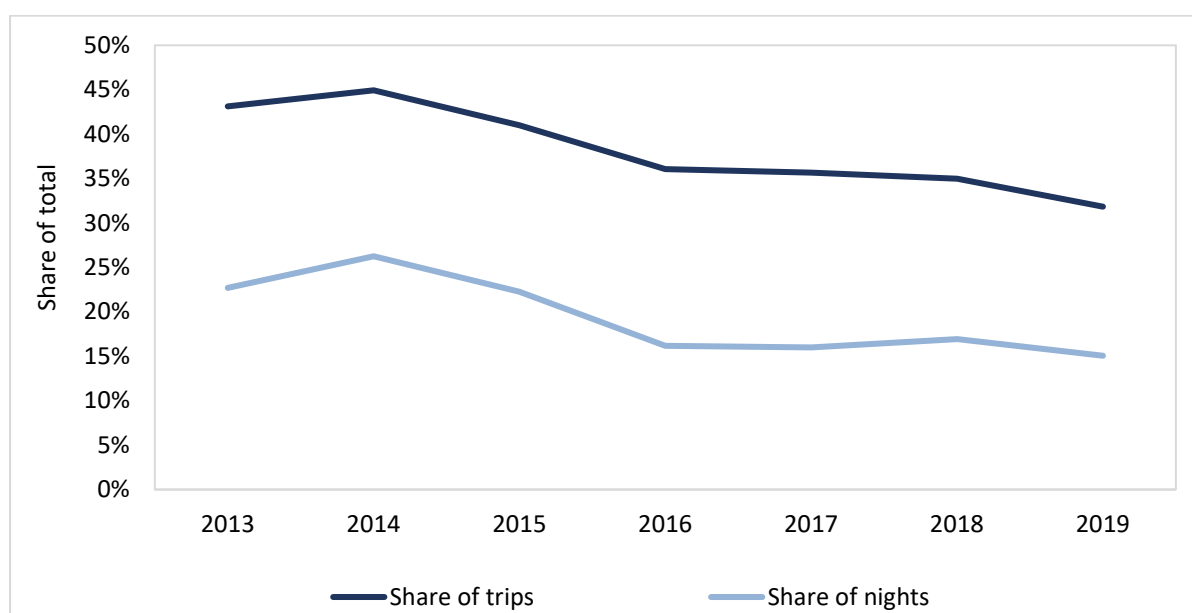
A large share of both trips and nights spent away by the residents of Northern Ireland were destined for Ireland, although, in contrast to travel in the opposite direction, these have trended downwards slightly in recent years. The substantial gap between the share of trips and share of nights in both Figure 8.1 and Figure 8.2 suggests that a large portion of cross-border movement (not for commuting purposes) by households relates to day-trips.

**FIGURE 8.1 VISITS AND EXPENDITURE IN NORTHERN IRELAND BY RESIDENTS OF IRELAND**



Source: Author's estimates using NISRA Tourism Statistics.

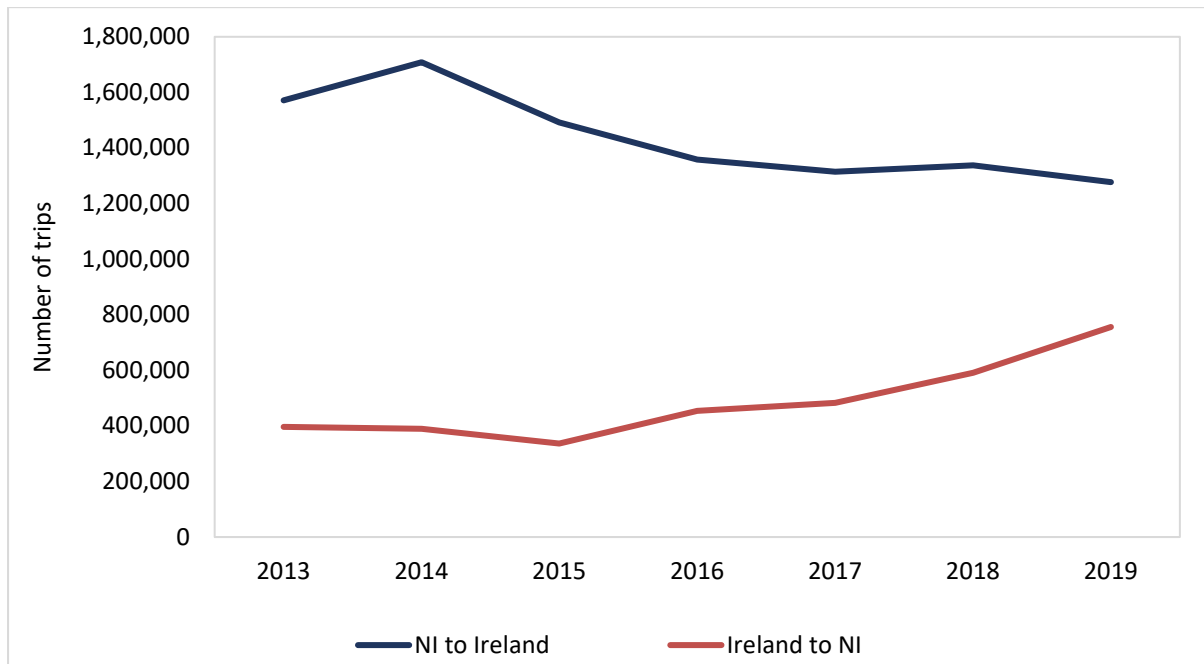
**FIGURE 8.2 VISITS TO IRELAND BY RESIDENTS OF NORTHERN IRELAND**



Source: Author's estimates using NISRA Tourism Statistics.

Figure 8.3 shows the absolute number of trips in both directions on an annual basis. This indicates **considerably higher numbers travelling from Northern Ireland to Ireland than *vice versa*, although with some strong convergence in numbers over time.**

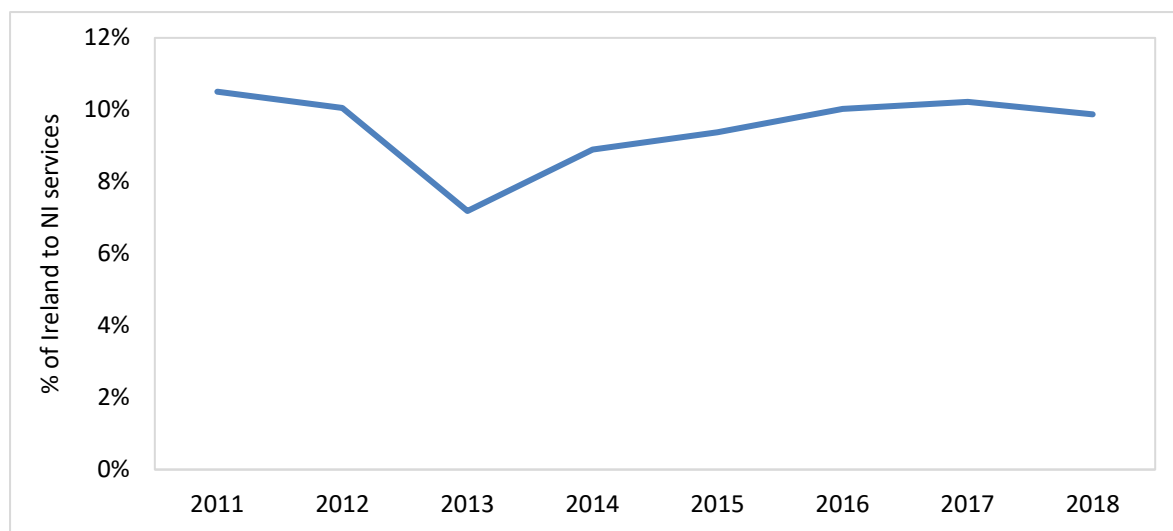
**FIGURE 8.3** NUMBER OF CROSS-BORDER TRIPS BY DIRECTION OF TRAVEL



Source: Author's estimates using NISRA Tourism Statistics.

As noted in the description of the tourism data in Chapter 3, the expenditure measure collected is a total of all costs of the trip and is not decomposed into goods and services. With this very considerable caveat in mind, Figure 8.4 compares the total cross-border expenditure reported by visitors from Ireland to Northern Ireland to the aggregate level of services trade. Although the data definitions make this an overestimate of the importance of household service acquisition as we do not know how much expenditure might be on goods, the substantial potential share is interesting and indicates that the collection of greater statistical detail on cross-border expenditure by households and the components of such expenditure would be valuable.

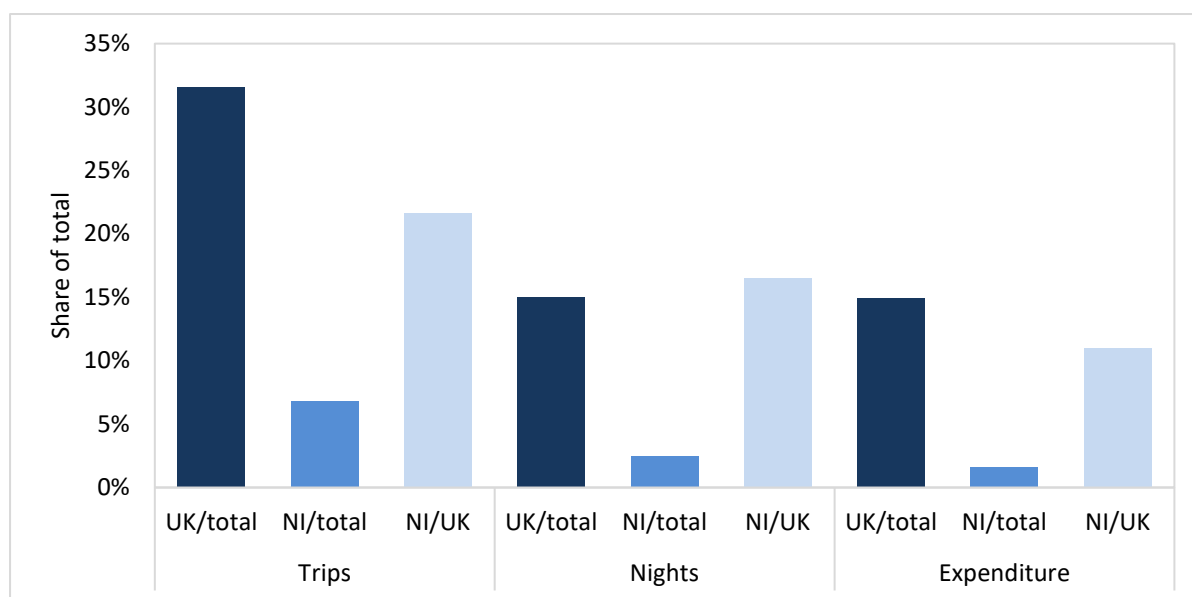
**FIGURE 8.4 SHARE OF SPENDING IN NORTHERN IRELAND BY IRELAND RESIDENTS AS SHARE OF CROSS-BORDER SERVICES TOTAL**



Source: Author’s estimates using NISRA Tourism Statistics and Trade data. Note that the tourism expenditure may also contain spending on goods, so this represents an upper-bound estimate.

In Figure 8.1, we found that visitors from Ireland make up a substantial percentage of total visitors to Northern Ireland. In Figure 8.5, we calculate how this compares to total outbound trips from Ireland. Three measures are used to provide comparisons; the first is the share of total visits from Ireland that go anywhere in the UK, the second is trips to Northern Ireland as a share of total trips, and the final measure is the share of UK-wide trips that are to Northern Ireland.

**FIGURE 8.5 SHARE OF NORTHERN IRELAND IN OUTWARD TOURISM TOTAL OF IRELAND RESIDENTS**



Source: Author’s estimates using CSO Household Tourism Statistics.

The patterns in Figure 8.5 show that the total share of Northern Ireland in outbound visits – whether as trip counts or measured in terms of the number of nights – is lower as a share of the total for Ireland than was the case for visits from Ireland as a share of the Northern Ireland total. Northern Ireland does however make up a substantial share of the visits to the UK, much greater than its share of the UK population. These **patterns suggest that proximity makes both destinations attractive, particularly for day trips, with the relative sizes perhaps being the key driver of the asymmetry.**

**TABLE 8.1 VISITS AND EXPENDITURE FROM IRELAND TO NORTHERN IRELAND BY REASON**

Visits from Ireland	Nights %	Trips %	Expenditure %
Visiting friends/relatives	37	36	20
Holiday	47	43	58
Business	6	9	10
Other	10	13	12
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
All visitors	Nights %	Trips %	Expenditure %
Visiting friends/relatives	55	43	34
Holiday	29	39	41
Business	10	13	20
Other	6	5	6
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Author's estimates using NISRA Tourism Statistics.

Table 8.1 provides some further insight into the pattern of visits from Ireland to Northern Ireland by comparing the main reasons for the visit to those given by all travellers. Holiday and business reasons are much more prevalent reasons for visitors from Ireland relative to the total, whereas the dominant reason for all visitors involves visiting family and friends. Most expenditure is associated with holiday visitors.

As the tourism data are collected on an annual basis, it is difficult to examine the impact that shorter-term movements in the exchange rate might have in attracting consumers to cross the border for shopping or leisure purposes. Previous work on the influence of changes in the exchange rate on cross-border shopping activity has shown that this does have a reasonably strong impact on cross-border activity. This was estimated by Agnew (2018) using high frequency traffic counts and daily movements in the exchange rate. She found that when the euro appreciates by 1 per cent, car flows on the average border crossing during the day (9am-3pm) increased by 2 per cent. Whether these additional customers, attracted to cross the border by changes in the exchange rate, would then spend more than average to maximise the value of their journey would be an interesting topic of future research.

### 8.3 CHAPTER CONCLUSIONS

This chapter **provides suggestive evidence that travel and spending by households plays an important role in cross-border trade in services.** The data are limited so the chapter can provide only indicative patterns rather than precise estimates. It is beyond the scope of this report to comment in detail on cross-border tourism potential and it should be recalled that this is an area where considerable cross-border cooperation under Tourism Ireland is already in place. It does however suggest a potentially fruitful avenue for future research to explore further the intersection of tourism and trade.

## CHAPTER 9

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### Conclusions

This report examines the extent of cross-border trade in services on the island of Ireland and the characteristics of the firms participating in this trade. Although services make up a substantial and growing portion of economic activities in both Ireland and Northern Ireland, data limitations have resulted in less focus being placed on services flows compared to the extensive research undertaken on manufacturing and goods trade. However, international evidence shows that many of the same performance benefits associated with exporting in the goods sector also apply to services firms although with the caveat that export participation rates in services are generally quite considerably lower, suggesting that engaging in exporting is more difficult for services firms. Given the strong links established between exporting and economic growth, an understanding of the structure and composition of trade is necessary to provide evidence for a supportive policy environment for firms. The aim of this report is to provide as detailed a description of cross-border services trade as the current data allow to feed into the continued development of all-island economic links.

In order to provide as comprehensive a picture as possible of cross-border services activities, a number of different data sources are drawn on. For Northern Ireland, the majority of the data come from the BESES survey carried out by NISRA which contained quite detailed information on firm performance and exporting activities across both manufacturing and services. For firms in Ireland, however, the data available are less comprehensive for our purposes in this report as the official statistics collected by the CSO on services trade do not currently distinguish Northern Ireland from the UK as a whole (although they do collect data separately for Northern Ireland for goods trade). This means that we rely on Northern Ireland reports of imports from Ireland for these flows rather than measures of exports collected from firms within Ireland. While a decomposition of services exports between those destined for Northern Ireland and for Great Britain has been introduced in the CSO's main survey instrument for services trade participation (the Annual Services Inquiry), data on this topic are not yet available.

For this report, therefore, the information presented on the patterns of services trade from Ireland to Northern Ireland is drawn from a number of survey sources. In particular, extensive use is made of the ABSEI survey of Enterprise Ireland clients made available by the Department of Enterprise, Trade and Employment and the SME Credit Demand Survey from the Department of Finance. These both provide very rich information on firm characteristics and identify Northern



Ireland as a distinct export destination for firms in Ireland. They are targeted rather differently in terms of coverage, however, which necessitates some caveats on direct comparisons between the patterns described for firms in Ireland and Northern Ireland. More systematically comparable data collected on an all-island basis would be of considerable benefit in this regard. An all-island survey of firms is carried out by InterTradeIreland on a quarterly basis, and this is also used in the report to gain insight into the current challenges facing firms in the light of the COVID-19 pandemic and early months of Brexit.

The report begins by laying out the context of the broad economic structure in Ireland and Northern Ireland. This highlights that the services sector accounts for a substantially greater share of economic output in Ireland relative to Northern Ireland. Furthermore, there is a greater export orientation of the overall services sector in Ireland associated largely with multinational firms. Despite this, **we find that the share of services in total trade from Ireland to Northern Ireland is relatively low compared to the overall services content of Ireland's exports. In both directions, cross-border trade in services is quite considerably lower than that in goods**, accounting for 26 per cent of trade going from Northern Ireland to Ireland and for 16 per cent of the trade going from Ireland to Northern Ireland. Although services are frequently less tradable than goods, **the information available does not give any clear indication as to why this share is so low and suggests considerable scope for greater development of all-island services links to mirror those in goods.**

One of the most striking patterns in the aggregate data is that services flows from Northern Ireland to Ireland are substantially higher than those from Ireland to Northern Ireland. This is despite the overall greater services orientation of Ireland's economy and suggests that the composition of trade from Ireland to Northern Ireland is quite different in substance than the highly multinational dominated structure of aggregate services exports from Ireland.

The report then estimates the share of each country's overall trade that is accounted for by cross-border activity. Ireland accounts for 17 per cent of services outflows and 11 per cent of services inflows to Northern Ireland (including services trade with Great Britain). This is slightly lower than the comparable share of goods trade. With Ireland's larger economy and greater export diversification, the share accounted for by Northern Ireland in total exports from Ireland is much smaller, accounting for approximately 1 per cent in both goods and services. However, when we exclude the foreign-owned multinational firms that dominate total exports from Ireland and focus on domestically-owned firms, we find that the shares of exports accounted for by Northern Ireland increases to around 6 per cent of goods exports and 2 per cent of services exports.

The largest services activity reported from Northern Ireland to Ireland is in transportation and storage, followed by professional, scientific and technical services and then administrative and support services and information and communication. The shares of these component sectors in exports to Ireland are relatively similar to the overall export structure. In contrast, there are more substantial differences in the structure of the services that Ireland sells to Northern Ireland compared to the composition of total services exports, driven largely by the high shares of computer programming and other IT and computer services in total exports from Ireland which account for quite small shares of exports to Northern Ireland.

The structure of trade participation at the firm level shows increasing likelihood of exporting as firms get larger, but also shows that this remains lower than in manufacturing at all firm sizes. We also find that average values of services exports across firms are systematically found to be lower than those of goods firms. These patterns are extremely similar for Northern Ireland and when we look at SMEs in Ireland. For Northern Ireland, the share of firms that have external sales and the share exporting to Ireland is much larger for services than for goods firms. **Almost all goods firms that sell outside of Northern Ireland include Ireland as one of their destination markets. For services firms, on the other hand, a notable proportion have some external sales (i.e. sell into the British market) but do not have exports to Ireland. Likewise, for Ireland, both survey sources show more firms exporting to Great Britain than to Northern Ireland across both manufacturing and services and across all size groups.** This is potentially explained by the much larger size of the British market but does also **suggest considerable scope for expansion of cross-border trade given that proximity should imply low entry costs to such trade.** Greater depth of information on the activities of these groups of firms would be a useful focus of more in-depth research in the future. We note that there is an important caveat that also may need further investigation in future research, as exports that arise from the customer travelling to the location of the service provider may be underestimated in data reported by firms.

This report also examines differences in performance between exporting and non-exporting services firms, extending the work in InterTradeIreland (2018) which did not contain information on services firms in Ireland. **Across a range of performance indicators, including employment and productivity, we find that exporting firms are systemically stronger than non-exporters.** The size of the effects is slightly different however, with the return to exporting for firms in Northern Ireland found to be consistently lower for services firms than for manufacturing firms, while the results for Ireland show the opposite pattern with slightly higher returns to exporting for services firms than for manufacturing firms.

The magnitudes of the effects are also typically larger for services firms in Ireland than in Northern Ireland, but this could be due to them having a broader set of export markets, so the report further examines if the performance differentials hold by export diversification. **These results suggest that services firms in Northern Ireland that export to Ireland are almost one-third larger in terms of employment and sell 70 per cent more than firms with no external sales. For firms in Ireland, we find a similar pattern.** In terms of productivity differences, we find that firms in Northern Ireland exporting to Ireland are on average 7 per cent more productive than non-exporters. Firms with external sales into the British market tend to be close to 17 per cent more productive than local firms while those with broader exporting activity are more productive again – around 22 per cent higher value added per employee than non-exporting firms. For services firms in Ireland, there is a positive and significant gap found between exporters to Northern Ireland and non-exporters of close to 70 per cent in terms of output per employee. These findings that exporting firms consistently outperform non-exporters can be taken as lending support to policy objectives of encouraging firm entry into exporting as a route to broader firm growth.

Looking at non-business sources of data shows **suggestive evidence that travel and spending by households plays an important role in cross-border trade in services** although further research would be required to get a better sense of the scale and potential of this activity.

As cross-border services trade tends to be mainly concentrated in activities such as professional and business services, the performance throughout the COVID-19 pandemic has been somewhat better amongst cross-border traders than amongst locally focused firms. The other potentially significant challenge facing cross-border services exporters is the risk of changes in trading requirements coming from Brexit. Although this has so far involved limited changes to cross-border market access in services, it is important to bear in mind that the Northern Ireland Protocol relates to goods trade only. **There remains some degree of risk that changes in requirements for services trade between the EU and UK as a result of Brexit could emerge when the current temporary mutual recognition arrangements expire.** However, cross-border services trade on the island is rather less exposed to potential changes in regulation as the continuation of the Common Travel Area means any new restrictions on services trade would be lower for trade between Ireland and both Northern Ireland and Great Britain, particularly as it relates to freedom of movement and recognition of qualifications.

An overall key finding of this report is that the all-island economy in services appears relatively less developed compared to that of goods. Given that services trade can be sensitive to distance, these patterns suggest considerable scope for

expansion of cross-border trade in services given the degree of proximity. Some of the lower levels of trade in services relative to goods may be accounted for by the different economic structures, particularly with the much more diversified FDI-dominated services sector in Ireland. Policies to support the attraction of FDI across the island, as discussed in Siedschlag et al. (2021), would therefore be highly complementary to policies directly focused on cross-border services trade.

As is evident throughout the report, and is commonly found in the international literature, services tend to be less tradable than goods, and services firms less likely to participate in trade across borders. In the case of Ireland and Northern Ireland, proximity might be expected to reduce many of the usual barriers to the provision of services trade. Ease of access and coherence of regulatory frameworks are important policy contributors to international trade in services and maintaining and enhancing these on the island will be particularly important in the coming years to avoid regulatory divergence between the UK and EU in services impacting the functioning of cross-border activities. Policy co-ordination in terms of the structure of supports to the internationalisation of services firms, for example in the area of common approaches to the enhancement of digital delivery of services and development of associated skills, would promote both greater cross-border services trade and develop this as a stepping stone to broader exporting activity for services firms.



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## APPENDIX A

### Overview of data sources

Data source	Collected by	Reference country	Sample size	Frequency	Data type	Coverage	Primary objectives
<b>BESES*</b>	NISRA	Northern Ireland	~ 9,500	Annual	Quantitative	Manufacturing and services firms, all sizes. Excludes public sector, financial services and most of agriculture.	To generate statistics on business activities in NI including trade with Ireland and Great Britain.
<b>Credit Demand Survey (CDS)</b>	Department of Finance	Ireland	~ 1,500	Biannual	Quantitative and some qualitative	SMEs in manufacturing and services. Excludes public sector, speculative real estate, some finance	To monitor SME performance, investment and credit access.
<b>ABSEI^</b>	Department of Enterprise, Trade and Employment	Ireland	~ 4,200	Annual	Quantitative and some qualitative	Firms in manufacturing and internationally traded services sectors.	Monitoring of international trade activity of firms supported by enterprise agencies.
<b>All-Island Business Monitor</b>	InterTradeIreland	Ireland and Northern Ireland	~ 750	Quarterly	Mainly qualitative	Firms in manufacturing and services sectors, stratified by country and size group.	High frequency indicator of business confidence, cross-border trade and business activity/challenges

Notes: \* Broad Economy Sales and Exports Statistics.  
^ Annual Business Survey of Economic Impact.





## APPENDIX B

### Maps of NUTS regions and district council areas

FIGURE A.1 NUTS 2 DIVISIONS OF IRELAND



Source: MacFeely (2016). Dublin is identified separately from the rest of the Southern and Eastern NUTS 2 region in the data discussed in the report.

**FIGURE A.2** DISTRICT COUNCIL AREAS OF NORTHERN IRELAND



Source: InvestNI.

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