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IMPROVING NORTHERN IRELAND'S AVIATION CONNECTIVITY

AN EVIDENCE-BASED, STRATEGIC
APPROACH

JULY 2019

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To discuss the report further please contact:

Henry Worthington: hworthington@oxfordeconomics.com

Oxford Economics

Broadwall House, 21 Broadwall, London, SE1 9PL, UK

Tel: +44 203 910 8061

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EXECUTIVE SUMMARY

Aviation connectivity directly facilitates the international movement of people and goods (via air freight). However, by enabling connections between individuals and firms, it can also help to drive the spread of ideas, and hence to spur innovation and technological development.

Given these channels, it is unsurprising that a considerable body of evidence has developed which demonstrates a link between aviation connectivity and enhanced supply-side economic performance.

For example, the International Air Transport Association (IATA) has estimated that a 10 percent increase in the level of aviation connectivity, relative to GDP, can generate a long-term increase in productivity of 0.07 percent per annum.¹

Northern Ireland's Executive has articulated its medium- and long-term policy strategy in two recent major policy documents: *Economy 2030: A Draft Industrial Strategy for Northern Ireland*; and the *Draft Programme for Government Framework 2016-2021*. These offer ideas to spur inclusive economic growth and set out targets such as increasing tourism export revenues to £1 billion by 2025. Both documents place emphasis on boosting Northern Ireland's external competitiveness, and its attractiveness as a destination for inward investment.

In this context, the Department for the Economy (DfE) for Northern Ireland commissioned this independent analysis to inform its strategic approach for the development of aviation connectivity. The research has two major objectives:

- To identify a set of strategic routes which will help drive inbound tourism and business growth in line with Northern Ireland's overarching policy objectives, as set out in the Northern Ireland Executive's draft Programme for Government (PfG) and Industrial Strategy.
- To identify potential policy levers available to the DfE to enhance the connectivity of Northern Ireland's airports, and then to assess their applicability, given the prevailing context of the aviation market.

This research has been undertaken jointly by Oxford Economics (OE) and Northpoint Aviation. Although OE has had final editorial control over this report, the analysis and judgments relating to policy evaluation and recommendations reflect the views of the Northpoint team.

THE CURRENT STATE OF PLAY

Our analysis highlights the importance of proximity and language in influencing the strength of Northern Ireland's economic relationships with its international partners. Our research has quantified the composition of Northern Ireland's exports, inward investment, and inbound tourism by partner economy. According to these measures, Great Britain remains—by a distance—Northern Ireland's most important economic partner, accounting for over half of total inbound visitor expenditure and export sales. Other English-

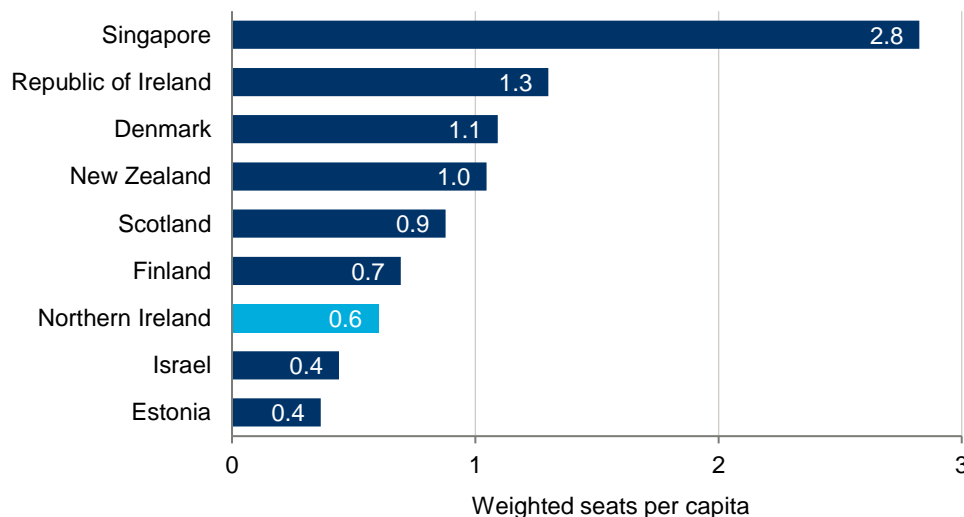
¹ IATA, "Aviation Economic Benefits: Measuring the economic rate of return on investment in the aviation industry," 2007

speaking economies, such as the Republic of Ireland, the United States, Canada, and Australia, also feature strongly in these country rankings. Across Europe, Germany and France are the two most important markets for Northern Ireland, whereas economic linkages with non-English speaking markets outside the EU are limited. A full breakdown of the results from this research is presented in [Chapter 2](#).

According to Oxford Economics' forecasts, global GDP growth over the next 20 years is set to be concentrated in markets where Northern Ireland's current linkages are relatively weak. For example, our baseline projections expect Asia Pacific's share of global GDP to increase by 7.4 percentage points over the next 20 years. Much of this increase will come at the expense of Europe (down by 5.4 percentage points), where demographic pressures are expected to put further downward pressure on already weak growth rates.

Compared to a set of eight benchmark markets identified by the Industrial Strategy, aviation connectivity in Northern Ireland is currently relatively low. Using a measure of weighted seats per capita, we estimate that aviation connectivity in Northern Ireland in 2017 was, for example, less than half that enjoyed by residents of the Republic of Ireland. Based on this measure, aviation connectivity in Northern Ireland was higher than in just two of the other eight benchmark economies: Israel and Estonia (Fig. 1).

Fig. 1. Connectivity in Northern Ireland and eight other benchmark countries, 2017



Source: Dii, ACI, Oxford Economics

Northern Ireland's aviation connectivity, adjusted for changes in market size, has grown relatively slowly compared to most of these benchmark economies. We have traced Northern Ireland's aviation connectivity back to 2004 and compared its trajectory to the other markets highlighted in the Industrial Strategy.² This reveals that aviation connectivity growth since 2004

² To assess change over time, we have used a measure of connectivity which calculates weighted seats per £ of GDP, rather than weighted seats per capita. We think that a point-in-time estimate is more appropriately framed by a per-capita measure, which provides an absolute comparison of options enjoyed by residents and visitors.

in Northern Ireland has been slower than in all its peer markets except Scotland and the Republic of Ireland.

CHOICE OF PRIORITY ROUTES

Based on a combination of our economic analysis and stakeholder consultations, we initially identified three categories of routes to provide a framework for our subsequent analysis. These categories are:

- **North American East Coast:** increasing connections to leverage “visiting friends and relatives” (VFR) and other opportunities associated with the North American diaspora.
- **Middle Eastern hub:** the most effective and practical mechanism to achieve improved connections to fast-growing Asian markets and Australasia would be a direct route to one of the Middle Eastern hubs.
- **Enhanced short-haul connections:** within Europe, stakeholders often focused on Northern European markets—notably Germany, Scandinavia, and Switzerland—from a business travel perspective. In addition, increased flights to some of the major European hub airports, such as Madrid, Paris, and Frankfurt, would be beneficial in terms of boosting onward connectivity. Given the very strong economic connections between Northern Ireland and Great Britain, we have also included domestic connections within this category.

To further narrow down options within these categories, we used a combination of analytical techniques. These included quantitative estimates of the current level of demand of residents of Northern Ireland served by Dublin International airport (DUB), by route. This is closely linked to the potential commercial viability of a new route, since it reflects the potential scale of the market that could be served by new flights out of Northern Ireland. This was supplemented by stakeholder consultation work with both airports and airlines, which was used to gauge the scope of commercial interest in route development, should policy support become available. The final choice of priority routes for each airport is summarised in Fig. 2, segmented by our three agreed route categories.

Fig. 2. Overview of our chosen priority routes, by airport

BFS	BHD	LDY
Middle East hub		
Doha		
North American East coast		
New York (JFK)		
Toronto (Pearson)		
Boston (Massport)		
Short-haul		
Frankfurt/Dusseldorf		Dublin
Copenhagen/Stockholm/Oslo		Manchester
Brussels		Birmingham
Madrid		
Zurich		
Munich		
Budapest		
Bucharest		
Riga		

POLICY EVALUATION

Chapter 5 discusses potential policy levers that are available to the Northern Ireland Executive to support the development of our chosen priority routes. The major policy options reviewed as part of this exercise include: discounted Air Passenger Duty (APD); Public Service Obligations (PSOs); co-operative marketing agreements; and Route Development Funds (RDFs).

We have carefully considered the applicability of these different levers given the existing structure of Northern Ireland’s aviation market—including its proximity to DUB, value for money, and potential compliance issues with state aid legislation. Below, we provide a short summary of our major conclusions for each policy option.

APD discounting can be an effective means to improved airlines’ yield on routes increasing commercial viability and route development. This is particularly the case for Low Cost Carriers (LCCs) where the discount is likely to represent a higher proportion of the average fare.

Northern Ireland currently operates with zero APD on Band B (long-haul) routes. The recent withdrawal of United Airlines and Norwegian from the long-haul market in NI has inevitably raised questions over the efficacy of the policy. However, our view is that maintaining the discount is likely to be an important component of securing the long-haul priority routes identified in this report.

With further devolution of fiscal powers from Westminster, Northern Ireland could have the option of extending this to all Band A (short-haul) routes but such a generic measure would be unlikely to offer value for money given that it will subsidise existing routes which do not require financial support and will likely result in a reduction in the value of Northern Ireland’s block grant from HMT.

In the report we have assessed potential options which would help to ameliorate concerns over value for money by making the discount route-specific. However, such amendments would mean that the policy would become subject to State Aid requirements, which would have to comply with either the airport and airlines guidelines or the PSO rules. In the case of potential changes to the existing structure and rate of APD, HMT would have the ultimate responsibility for policy approval but DfT is also likely to be an interested party.

PSOs are likely to be one of the most effective of available options to support domestic connectivity routes identified in this paper. They would provide an effective, targeted and easily-administered form of route intervention. Moreover, based on our consultation work, we think that PSOs would have the support of airports, some airlines and many key local stakeholders.

The majority of PSOs currently in operation across the EU cover domestic rather than international routes. However, there is no reason, in theory, why they cannot be used on international routes—indeed, a PSO was recently in operation on a route between City of Derry Airport (LDY) and DUB. However, such a scheme would require the support of DfT as well as the recipient country and airport authority.

DfT is currently consulting on appropriate UK PSO Guidelines going forward in its Aviation 2050 Green Paper, but it is noticeably silent on the issue of international PSOs. Notwithstanding this, the document recognises the considerable benefits derived from connections to hub airports and states a preference for proposals which do not rely on central government funding:

“the government proposes that it should update its current interpretation of EU regulations to ... expand the scope of PSOs to support routes into airports, such as Manchester or Edinburgh, where this is justified through evidence of onward connectivity benefits that open up long-haul opportunities for international trade and tourism. These will be assessed on an ‘airport to airport’ basis, with a preference for routes without a government funding requirement.”³

A locally funded PSO that connected an underserved UK region to a European hub airport could conceivably meet these criteria. However, it is also important to note that any such initiative would also be likely to attract scrutiny from DG-MOVE.

The application of an **RDF** in Northern Ireland would be significantly constrained by the characteristics of its airports given current State Aid legislation. BFS would be ineligible for financial support from an RDF as it currently operates with a passenger flow of over 5 million per year. Moreover, allocating funding to BHD would also be extremely problematic given its proximity to BFS. Therefore, we do not think that an RDF would be a suitable mechanism to deliver policy support in Northern Ireland.

Northern Ireland's airports currently enjoy **marketing support** via the operations of Tourism Ireland (TI) whose mandate also covers the Republic of Ireland. Co-operative marketing is a useful tool that has been used successfully

³ HM Government, "Aviation 2050: The future of UK aviation" (Green Paper, Department for Transport, December 2018), paragraph 4.25.

in Scotland, Wales and by many other countries, to support route development. The scale of financial support could be extended as part of an effort to enhance international connectivity and need not necessarily be facilitated through TI. In order to comply with State Aid legislation, an appropriate matched funding structure would need to be agreed with airports and airlines either collectively or on a route-by-route basis before third-party financial support could be committed.

Finally, there may be an option of considering a route support package that combines more than one of these mechanisms; in such a case, in addition to the individual criteria that would need to be met for each mechanism, the issue of cumulative aid and proportionality would also need to be examined based on the specifics of each case.

POLICY RECOMMENDATIONS

As part of the research, Northpoint Aviation has developed a detailed set of policy recommendations—summarised in section 5.8 of this report. These recommendations are divided into policy mechanisms that could be applied to support the development of our chosen priority routes, and more general recommendations related to the aviation sector. Fig. 3, below, maps the former set against each priority route, and provides an indicative cost projection on a non-numeric scale. As a guide these descriptors can be expected to translate to the following approximate financial bands: low (up to £300,000); medium (£300,000 - £1 million); and high (over £1 million).

Long-haul routes (to either a Middle East or US East Coast hub) would best be supported by a combination of zero APD and co-operative marketing assistance and would likely entail the highest costs of any of the options considered in this report. However, the economic value of establishing any of these could be significant, with each offering substantial benefits in terms of onward connectivity. We also consider that continuing to operate zero APD on band B flights would be an essential component of the package of incentives required for priority route development.

Short-haul international routes would be best supported by co-operative marketing support and/or a PSO. For Western European routes, either co-operative marketing assistance or a PSO could be optimal, depending on the specific characteristics of each airport. Larger destination airports where passenger flow is likely to be more business-oriented, such as Frankfurt or Munich, would likely be best suited to marketing assistance. A new route to Scandinavia, Brussels, or Zurich is more likely to be optimally supported by a PSO, if viable. Routes to Eastern Europe could be supported by co-operative marketing and are likely to require a relatively low level of financial support.

Recommended routes out of LDY are best suited to PSO support. Given LDY's size (less than 200,000 passengers in 2017) routes are likely to be thin consistent with the requirements of a PSO.

Although we do think that the generic discounting of APD on Band A flights by Northern Ireland would be beneficial to supporting route development it is unlikely to deliver Value for Money (VFM). Extending the current discounting of APD to Band A flights would likely be relatively effective as a means of increasing Northern Ireland's aviation connectivity. However,

such a policy is unlikely to deliver VFM given the likely loss of revenue through the block grant and the implicit subsidy that will be delivered to a large number of already commercially viable routes. A more targeted discount strategy could help to ameliorate these issues but would face much greater issues with State Aid compliance.

Fig. 3. Overview of recommended policy levers, and indicative cost projections, by priority route

Destination	Financial requirement	Recommended policy lever
Long Haul International (YR: 5-6x weekly in summer, 3x weekly in winter)*		
Doha	High	Co-operative marketing
New York	High	Co-operative marketing
Toronto	High	Co-operative marketing
Boston	High	Co-operative marketing
Short Haul international - Hubs (YR: 4-7x weekly summer; 3-6 weekly winter)**		
Frankfurt/Dusseldorf	Low	PSO/Co-operative marketing
Zurich	Medium	PSO/Co-operative marketing
Scandinavian hub	Medium	PSO/Co-operative marketing
Brussels	Medium	PSO/Co-operative marketing
Madrid	Medium	PSO/Co-operative marketing
Munich	Low	PSO/Co-operative marketing
Short Haul International - Other (YR: x3-4 weekly summer; x2 weekly winter)**		
Budapest	Low	Co-operative marketing
Bucharest	Low	Co-operative marketing
Riga	Low	Co-operative marketing
Short Haul (LDY) - 12 per week (x2 weekdays, x1 weekends)		
Dublin	Medium	PSO
Manchester	Low	PSO
Birmingham	Medium	PSO

Source: Northpoint analysis and estimates

* Assumes Band B APD discount continues to apply

** Discounting Band A APD for new routes/frequencies only could also be considered

Finally, given the current state of play in NI's long-haul market it may be sensible to conduct a review of current APD policy. This report has not sought to evaluate the effectiveness of the current decision to impose zero APD on Band B routes. Nevertheless, given that the policy is currently supporting routes which would primarily serve outbound leisure tourism there are grounds to review the operation of the current policy. As described above, these concerns could be addressed by restricting the derogation of the subsidy to selected routes. However, such an adaptation would face issues with State Aid compliance.

1. INTRODUCTION

1.1 CONTEXT AND OBJECTIVES

Aviation connectivity directly facilitates the international movement of people and goods (via air freight). Furthermore, by enabling connections between individuals and firms, it can also help to drive the spread of ideas and hence to spur innovation and technological development.

Given these channels, it is unsurprising that a considerable body of evidence has developed which has demonstrated a link between aviation connectivity and enhanced supply-side economic performance. For example, the International Air Transport Association (IATA) has estimated that a 10% increase in the level of aviation connectivity, relative to GDP, can generate a long-term increase in productivity of 0.07 percent per annum.⁴

Northern Ireland's Executive has articulated its medium- and long-term policy strategy in two recent major policy documents: *Economy 2030: A Draft Industrial Strategy for Northern Ireland*; and the *Draft Programme for Government Framework 2016-2021*. They offer ideas to spur inclusive economic growth and set out targets such as increasing tourism export revenues to £1 billion by 2025. Across both documents, a keen emphasis was placed on boosting Northern Ireland's external competitiveness and attractiveness as a destination for inward investment.

In this context, the Department for the Economy (DfE) for Northern Ireland commissioned Oxford Economics to carry out an independent analysis, in order to inform its strategic approach for the development of aviation connectivity. The research has two major objectives:

- To identify a set of strategic routes which will help drive inbound tourism and business growth in line with Northern Ireland's overarching policy objectives, as set out in the Northern Ireland Executive's draft Programme for Government (PfG) and Industrial Strategy.
- To identify potential policy levers available to the DfE to enhance the connectivity of Northern Ireland airports—and to assess each one's applicability, given the prevailing context of the aviation market.

As part of this work, we have also undertaken research to understand the strength of Northern Ireland's economic relationships with other markets. This focused on factors which support aggregate demand in Northern Ireland: inbound tourism; exports; and inward investment flows.

In addition, we have measured and compared the current level of aviation connectivity in Northern Ireland against a set of benchmark economies identified in the Industrial Strategy document. This evidence base informed the study's identification of a shortlist of priority strategic routes.

⁴ IATA, "Aviation Economic Benefits: Measuring the economic rate of return on investment in the aviation industry," 2007

1.2 THE AVIATION MARKET IN NORTHERN IRELAND

As part of our analysis, we have assessed potential for route development across three airports in Northern Ireland, as follows:

- **Belfast International** (BFS) is Northern Ireland's largest airport and provides the majority of international routes.
- **George Best City** (BHD) is the country's second-largest airport, with a stronger focus on domestic routes and business passengers.
- **The City of Derry Airport** (LDY) is currently operated by Regional City Airports, under a management contract from the City Council.

In 2017, you could fly direct from Northern Ireland to 69 locations in Europe, the United States, and Central America (see Fig. 4).⁵ Of these 69 direct destinations, 22 were other UK airports, and 41 were in the rest of Europe. There were only a handful of long-haul destinations: Las Vegas, Newark, Orlando, Cancun, Barbados, and Rhode Island.⁶⁷

In total, there were 78,400 flights to or from Northern Ireland in 2017, with a total capacity of 10.4 million seats. The average route offered 429 flights during the year, while 26 routes provided more than 1,000 flights during the year.

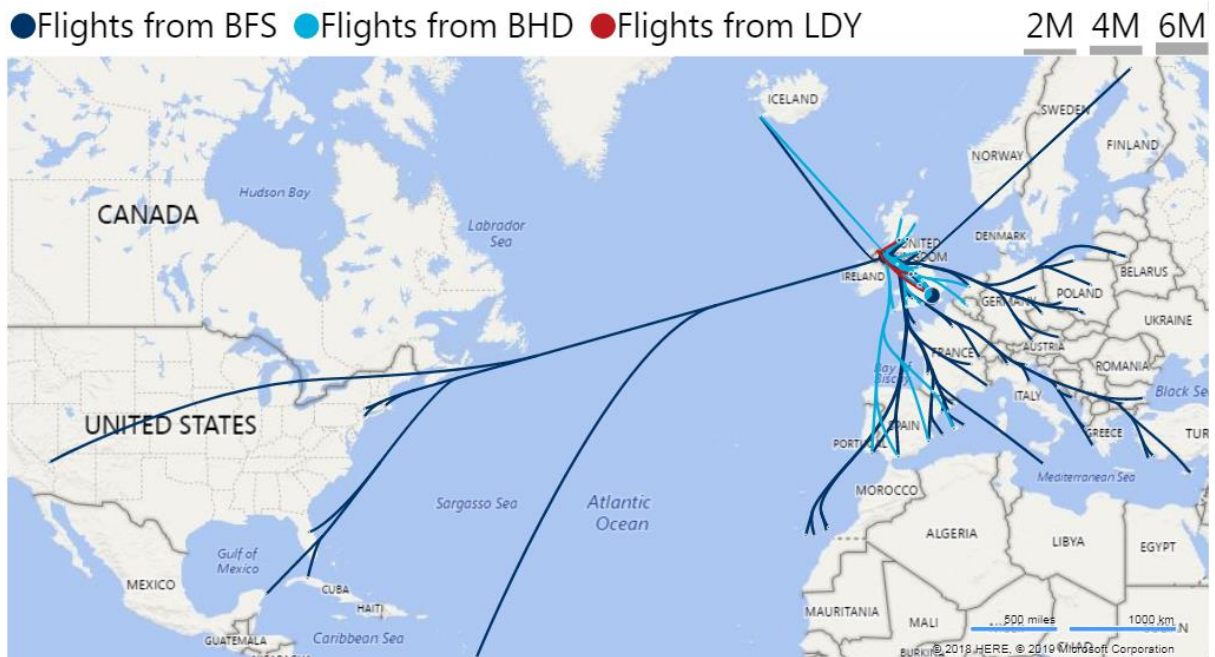
For the purpose of this analysis we have focussed on policies which could incentivise priority routes for the three airports which dominate the commercial market: BFS; BHD; and LDY. As part of our consultation work we have met with representatives from ENK—details of these discussions are provided in appendix one of this document.

⁵ This routing was designed to match the period of the economic linkages analysis presented in the following chapters. During this period no long-haul flights regularly operated out of Northern Ireland—United Airline's route between Belfast and New York was suspended on January 9 2017.

⁶ Diio, "SRS Analyzer," 2018.

⁷ Some of the destinations shown in the map were either experimental or charter flights rather than frequently served routes. For example, there were only two flights between Northern Ireland and Las Vegas, another two involving Veradero (Cuba), eight between Northern Ireland and Cancun (Mexico), eight between Northern Ireland and Barbados, and 19 between Northern Ireland and Newark (USA).

Fig. 4. Direct connections to the world from Northern Ireland airports, 2017



Source: Diio

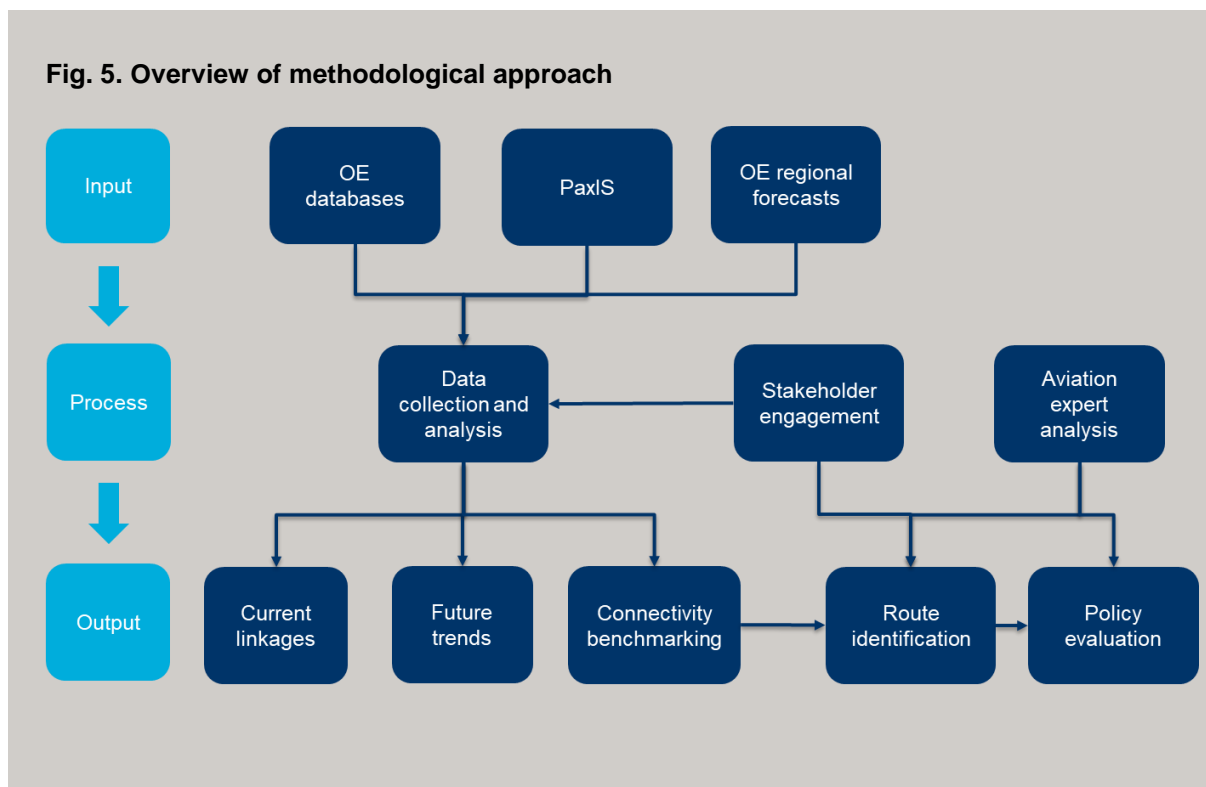
OUR METHODOLOGICAL APPROACH

For this research, we have pursued a “mixed methods” approach to support our choice of a set of priority aviation routes. Fig. 5 illustrates this approach, and the interconnections between different stages of the work, which has encompassed three broad strands:

- **Quantitative analysis of current and future economic trends.** Leveraging a wide set of data sources and our own in-house forecasts, we have developed a quantitative measure of the economic value of markets served by partner airports.
- **Quantitative analysis of the current market structure and demand.** Using historic data and a passenger demand model, we have identified a set of routes that are potentially underserved.
- **Stakeholder engagement.** Throughout, our analysis has been supported and enhanced by interviews with key stakeholders, which helped to ensure that our work is appropriately couched within a local market context.⁸ Stakeholder work was separated into three phases, as follows:
 - **Phase one:** discussions with providers of statistical data to ensure that our analysis of Northern Ireland’s existing economic linkages was informed by the most detailed and comprehensive data.
 - **Phase two:** discussions with stakeholders to assist with route identification. These were concentrated in industry (representatives of airports), but also included interviews with individuals from non-commercial bodies.
 - **Phase three:** discussions with relevant stakeholders to assist with the final choice of priority routes, and the evaluation of policy options.

⁸ A full list of stakeholders can be found in Appendix 4 of this report.

Fig. 5. Overview of methodological approach



1.3 REPORT STRUCTURE

The remainder of this report is structured to provide a chronological guide to the analytical work which underpins our central conclusions. The content of each chapter is briefly summarised below:

- [Chapter 2](#) describes Northern Ireland's current economic linkages (inbound tourism, inward investment, and exports) with other countries, and benchmarks its aviation connectivity.
- [Chapter 3](#) summarises findings from our economic analysis and stage two consultation work, which contributed to the identification of a shortlist of routes.
- [Chapter 4](#) outlines the major implications of our route-level demand analysis and stage three consultation work and explains how this contributed to our final choice of routes.
- [Chapter 5](#) summarises the major points that emerged from our policy evaluation work when applied to the routes identified in Chapter 4.
- [Chapter 6](#) provides a final set of recommendations based on this evidence.

Material provided in these chapters reflects the central findings, conclusions and recommendations from our analytical work. Further methodological detail in connection with the research can be found in a set of appendices at the end of this report.

1.4 ORGANISATIONAL ROLES

This research has been undertaken jointly by Oxford Economics (OE) and Northpoint Aviation. The work was segmented to match the capabilities and experience of members of the project team from these respective

organisations. Although OE has assumed final editorial control over this report, the content in Chapters 5 and 6 largely reflects the views, judgments and analysis of the Northpoint team.

KEY TERMS AND DEFINITIONS USED IN THIS REPORT

Connectivity is measured in this report as the sum of seats available to various destinations, weighted by the importance of those destinations, where importance is defined by the number of passengers flowing through an airport.

Currency values are given constant prices (i.e., adjusted for inflation) and exchange rates, unless otherwise stated.

Exports are sales from Northern Ireland to any country outside of the United Kingdom. Exports are a subset of *external sales* (see below).

External sales are sales from Northern Ireland to England, Scotland, Wales, and any country outside of the United Kingdom. External sales is the broader category into which *exports* falls.

fDi Markets is a database maintained by The Financial Times Ltd to track cross-border investment flows.

Foreign direct investment (FDI) is discussed in this document according to fDi Markets' definition, because that is the best-known source of FDI data for Northern Ireland. fDi Markets defines foreign direct investment as cross-border investment in a new physical project or expansion of an existing investment, which creates new jobs and capital investment. Joint ventures are only included where they lead to a new physical operation. Mergers & acquisitions (M&A) and other equity investments are not tracked. There is no minimum size for FDI.

Gross domestic product (GDP) is the most commonly used summary indicator of an economy's size. References to an economy entering or exiting a recession are typically made using GDP.

Gross value added (GVA) is the contribution of an economic sector to a country's GDP. Gross value added summed across all firms and sectors equals GDP, after minor adjustments for taxes and subsidies.

Input-output tables are snapshots in time that show the purchases that every sector in an economy made from every other sector to produce final outputs for consumers, governments, and investors.

2. THE CURRENT STATE OF PLAY

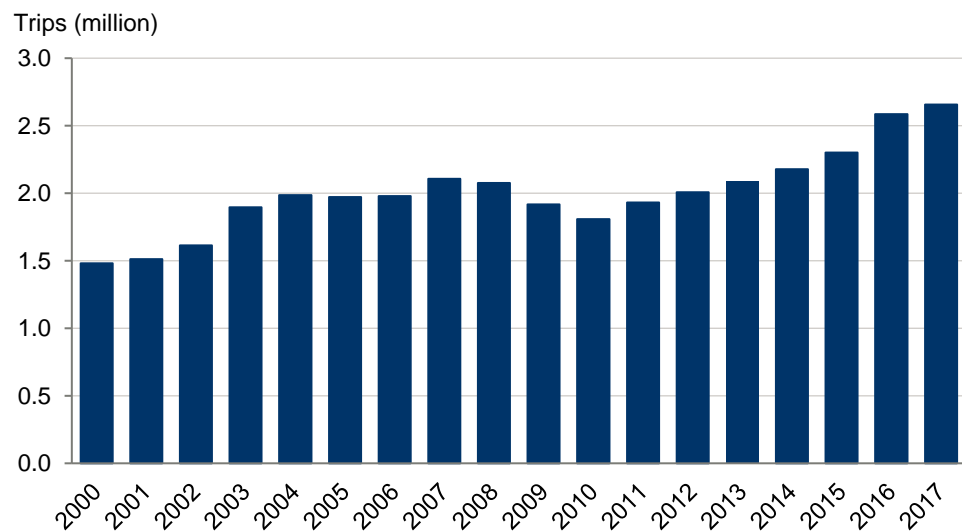
This chapter provides an overview of the current state of Northern Ireland's aviation connectivity, and its economic linkages to the rest of the world—in terms of inbound tourism, foreign direct investment, and external sales and exports. This evidence base was collected during the initial phase of our research.

2.1 EXISTING LINKAGES

2.1.1 Inbound tourism

Inbound air travel is important for Northern Ireland's economy. In 2017, there were nearly 2.7 million visitors to the country—about 80 percent of whom arrived by air.⁹ The number of visits to Northern Ireland has recovered strongly since a downturn triggered by the Global Financial Crisis. Between 2010 and 2017, the number of trips climbed from 1.8 million to nearly 2.7 million per annum, an increase of 47 percent—equivalent to average annual growth of 5.7 percent (Fig. 6).

Fig. 6. Trips to Northern Ireland, 2000-2017



Source: NISRA

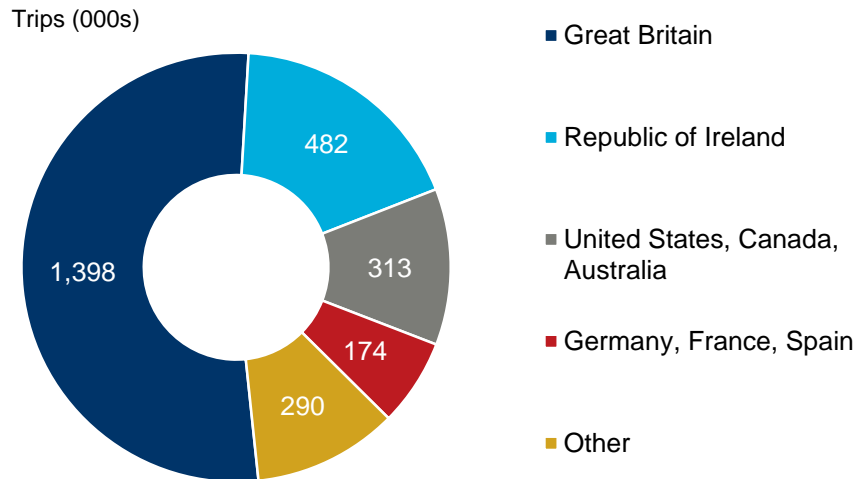
The majority of current foreign visitor inflows originate from places that are geographically and culturally close to Northern Ireland. Over half the trips to Northern Ireland in 2017 (1.4 million) were made by residents of Great Britain (see Fig. 7, overleaf). A further 480,000 trips were made by residents of the Republic of Ireland.

Residents of the United States, Canada, and Australia, all of which host a relatively large Northern Ireland diaspora and share a common language, were responsible for 310,000 trips. Meanwhile, those from Germany, France, and

⁹ NISRA, "External Overnight Trips to Northern Ireland," 2017 and CSO and NISRA, "Visitors to Ireland and Northern Ireland 2014;," 2016.

Spain, all within relatively easy geographical reach, were responsible for 170,000 trips. In total, these eight countries accounted for close to 90 percent of inbound trips to Northern Ireland in 2017.

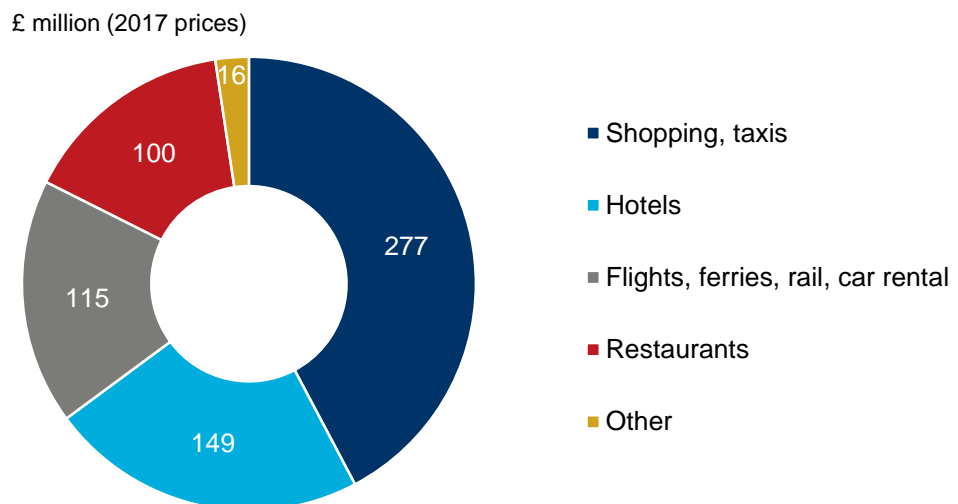
Fig. 7. Trips made to Northern Ireland by origin, 2017



Source: NISRA

Visitors to Northern Ireland in 2017 spent £656 million in the domestic economy, providing a particularly important source of demand for the transport, hospitality, and retail sectors.¹⁰ This spending equates to £1 in every £106 of turnover generated in Northern Ireland that year. External visitors' spending supports local retailers, hoteliers, airlines, car rental companies, rail networks, restaurateurs, and other businesses in Northern Ireland (Fig. 8). Together, expenditure in hotels and restaurants by foreign visitors amounted to nearly £250 million, almost a quarter of the sector's gross value added (GVA) in 2017.

Fig. 8. Spending by external visitors by service, 2017

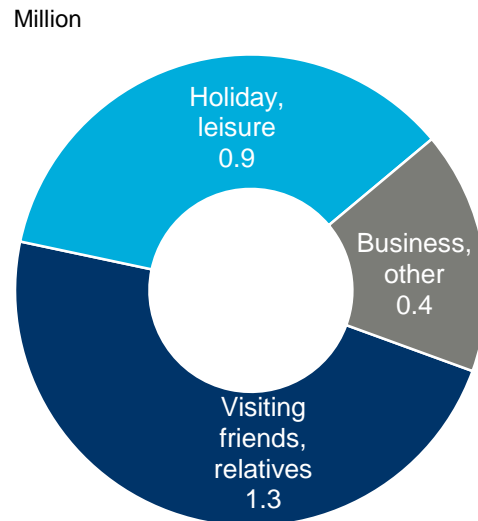


Source: ONS, NISRA

¹⁰ Unless otherwise specified, all currency values in this report are stated in 2017 prices (i.e. they have been adjusted for inflation) and exchange rates.

Almost half of Northern Ireland's inbound tourists cited visiting friends and relatives (VFR) as the primary motivation for their trip, underlining the importance of the Northern Irish diaspora as a current source of demand. Of the remaining trips, approximately 70 percent (0.9 million) were by tourists who cited leisure as their primary motivation (Fig. 9).

Fig. 9. Trips to Northern Ireland by reason, 2017



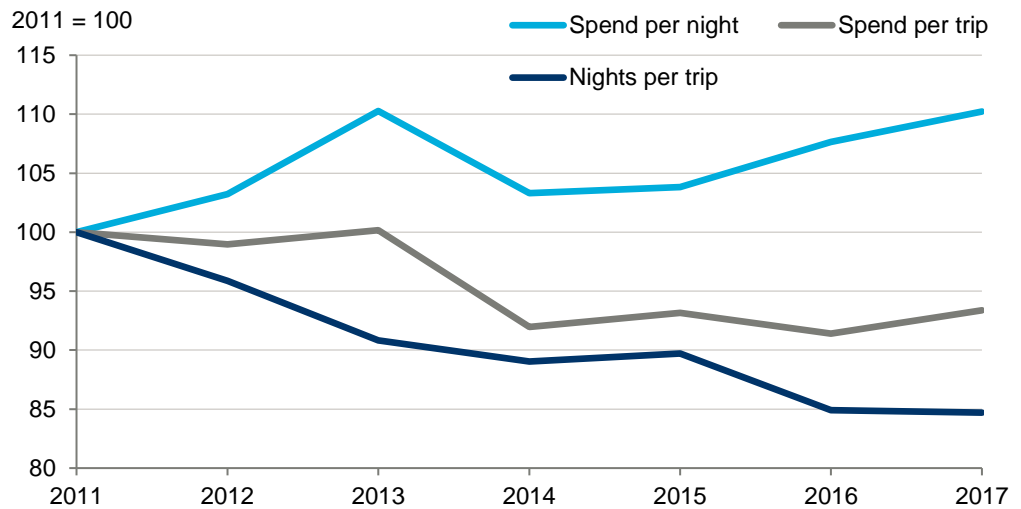
Source: NISRA

Despite the overall increase in trips, Northern Ireland could arguably be doing better to attract people on business visits. The share of visitors coming for business reasons fell from 16 percent to 13 percent between 2011 and 2017. Attracting more visitors on business will be critical to increasing Northern Ireland's exports and foreign direct investment, in addition to raising the yield from each visitor during their stay.

This decline in the share of trips made for business purposes is reflected in the average spend per trip to Northern Ireland, which has been mostly declining since 2011. Visitors spent £265 per trip in 2011, on average, but this figure fell to £247 in 2017 in inflation-adjusted terms.

In addition to the decline in business visitors, there has been a drop in the average number of nights spent in Northern Ireland per trip, which has also contributed to the overall fall in spend per trip. In 2011, people stayed an average of 5.2 nights per trip, whereas they stayed 4.4 nights per trip in 2017 (see Fig. 10, overleaf).

Fig. 10. Spend per trip, spend per night, and nights per trip, 2011-2017



Source: NISRA

2.1.2 Foreign direct investment

In the 15 years between 2003 and 2017, Northern Ireland received inflows of foreign direct investment (FDI) worth a total of £12.6 billion.¹¹ To give a sense of the magnitude of this investment, it is equivalent to a third of Northern Ireland's GDP in 2017. Furthermore, it is important to note that this figure excludes investments from firms located in Great Britain and is therefore likely to be conservative.

According to Invest NI, one research project suggested that companies in Great Britain accounted for 35 percent of all the investment in Northern Ireland by external companies during 2016/17. Assuming this trend applied, on average, throughout 2003-2017, implies that total inward investment from Great Britain during this period was worth £6.8 billion. In turn this would imply that total investment inflows were in fact worth £19.4 billion during 2003 -2017 (i.e. £12.6 billion + £6.8 billion = £19.4 billion).

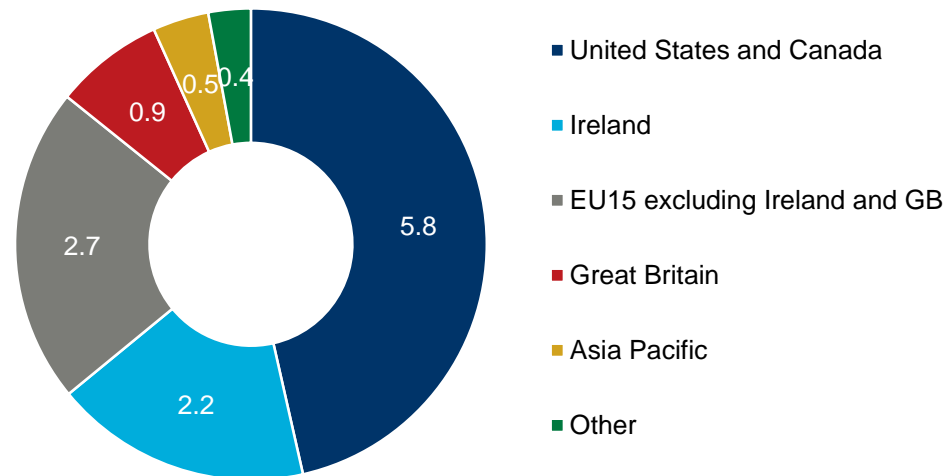
As with visitor inflows, foreign direct investment inflows arrive largely from geographically- and culturally-close locations. Of the £12.6 billion total FDI, nearly half (£5.8 billion) was invested by companies in the United States and Canada.¹² Another £2.2 billion in investment came from Irish companies, while £2.7 billion was invested by EU15 countries excluding Great Britain and Ireland (see Fig. 11, overleaf).

¹¹ fDi Intelligence via Invest NI, "NI Inward Investments," 2018. Figures have been inflated to 2017 prices in this report.

¹² Some 69 percent of this amount was from companies located in the United States, with the remainder from Canadian companies.

Fig. 11. Cumulative foreign direct investment in Northern Ireland by origin country, 2003-2017

£ billion (2017 prices)



Source: Invest NI, fDi Intelligence

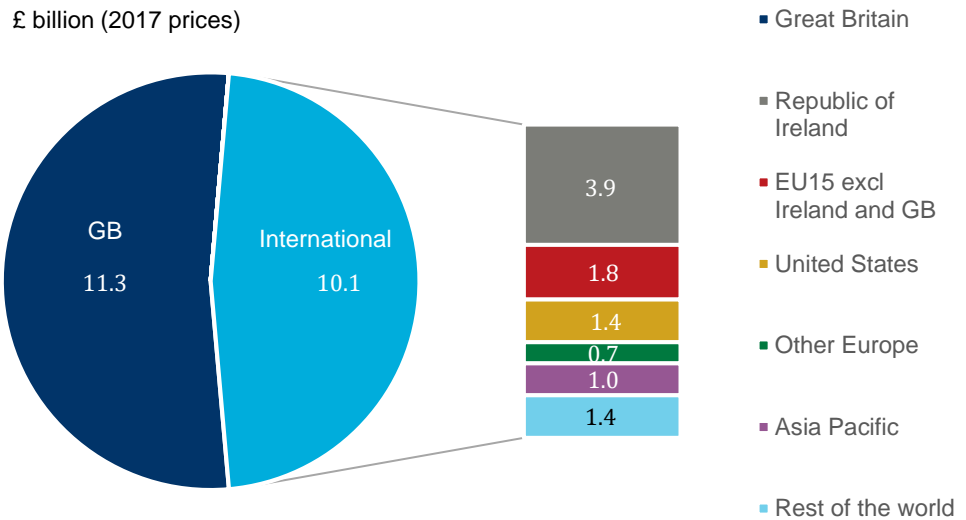
2.1.3 External sales and exports

In 2017, companies in Northern Ireland sold £21.4 billion worth of goods and services to people and companies outside Northern Ireland. Much of this trade was with Great Britain, which bought £11.3 billion worth of goods and services from Northern Ireland that year (see Fig. 12, overleaf). The Republic of Ireland was the second most important source of demand, with purchases worth £3.9 billion, while the rest of the EU15 accounted for £1.8 billion that year.

Together, these countries accounted for 79 percent of Northern Ireland's external sales in 2017. Sales to remaining countries around the world were worth £4.5 billion, around a third of which went to the United States.¹³

¹³ NISRA, "Northern Ireland Broad Economy Sales & Exports Data 2011 - 2017," 2018, HMRC, "Regional Trade in Goods Statistics dis-aggregated by smaller geographical areas," 2017, and Oxford Economics calculations. External sales data are quoted in 2016 prices and exchange rates.

Fig. 12. Northern Ireland's external sales, 2017

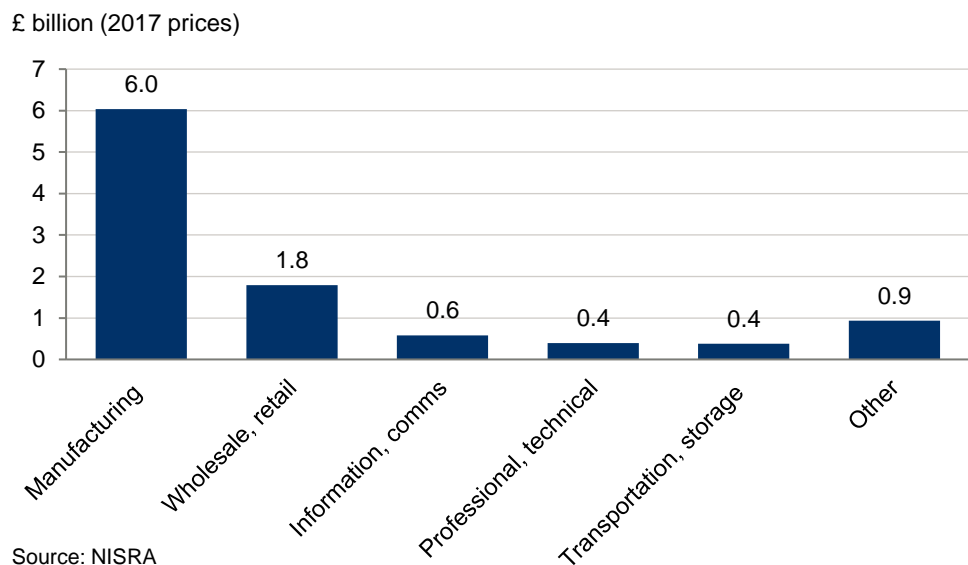


Source: NISRA, HMRC, Oxford Economics

While good data for the industrial composition of all external sales (that is, sales to everywhere outside Northern Ireland, including Great Britain) do not exist, the Northern Ireland Statistics and Research Agency (NISRA) does provide insight into the types of things that Northern Ireland exports—that is, everything Northern Ireland sells outside the UK.

Northern Ireland sold £10.1 billion worth of goods and services to other countries in 2017. Among these exports, manufactured items were the most common, accounting for £6 billion worth of sales, followed by wholesale & retail goods, which accounted for £1.8 billion worth of sales (Fig. 13).¹⁴

Fig. 13. Goods and services exports from Northern Ireland, 2017



¹⁴ NISRA, "Northern Ireland Broad Economy Sales & Exports Data 2011 - 2016," 2018

2.1.4 Exports at sub-national level

Export data are often not detailed enough to indicate trade patterns at the sub-national level. To help identify locations at a sub-national level that are likely to be particularly receptive to Northern Ireland's exports, we developed a measure of "export compatibility" with Northern Ireland.

This meant dividing each region's estimated share of national exports by its share of national gross value added. We then matched the composition of Northern Ireland's exports by producer sector with regional input-output tables to estimate which sectors of the economy demand what Northern Ireland has to offer.

The regions that scored highest by this measure are likely to have industries that are relatively intensive consumers of the goods and services that Northern Ireland exports most. Our analysis found that, within Western Europe but outside the UK, South Holland, the Paris Basin and Eastern Switzerland emerged as highly compatible regions for trade with Northern Ireland (Fig. 14).

Fig. 14. Estimate of top 10 European sub-regions with greatest compatibility for Northern Ireland exports

Region	NI Export Compatibility Ratio
South Holland	1.3
East Midlands	1.2
Eastern Switzerland	1.2
West Midlands	1.2
Wales	1.2
North East	1.2
North Eastern Spain	1.2
North West	1.2
Paris Basin	1.2
Eastern France	1.2
Other	1.0

Source: Oxford Economics estimates

And in North America, Quebec, Indiana, New Brunswick, and Prince Edward Island emerge as states and provinces that are highly compatible for trade with Northern Ireland (Fig. 15).

Fig. 15. Estimate of top 10 North American sub-regions with greatest compatibility for Northern Ireland exports

State	NI Export Compatibility Ratio
Québec	1.4
Indiana	1.4
New Brunswick	1.3
Prince Edward Island	1.3
Ontario	1.3

Nova Scotia	1.2
Manitoba	1.2
Michigan	1.2
Wisconsin	1.2
Mississippi	1.2
Other	1.0

Source: Oxford Economics estimates

2.1.5 Common markets across all three categories

Across all three linkage categories—tourist spend, foreign direct investment, and external sales—there is a relatively consistent hierarchy, as shown in Fig. 16. Because they are so close in terms of distance and culture, Great Britain and the Republic of Ireland are consistently the most important, followed by the United States, Canada, and Australia, which have substantial diaspora from Northern Ireland.

The major EU countries, Germany and France, come next in Northern Ireland's connectivity hierarchy. Finally, there is a range of other European countries, including Spain, Italy, Belgium, Netherlands, and Switzerland. It is clear from these results that language, proximity, and market size have a large influence on connectivity—which is consistent with what an economic “gravity model” would predict.¹⁵

Fig. 16. Ranking of common markets for FDI, exports, and tourism, 2017

Economic partner	Inbound tourism	FDI	Exports
Great Britain	1	4	1
Republic of Ireland	2	2	2
United States	3	1	3
Canada	5	3	5
Australia	4	22	13
Germany	6	5	4
France	7	7	8
Spain	8	6	11
Netherlands	9	15	7
Switzerland	10	19	6
Italy	11	8	15
Sweden	14	10	22
Norway	16		33
Poland	20		26
Denmark	18	14	21
United Arab Emirates	13		17

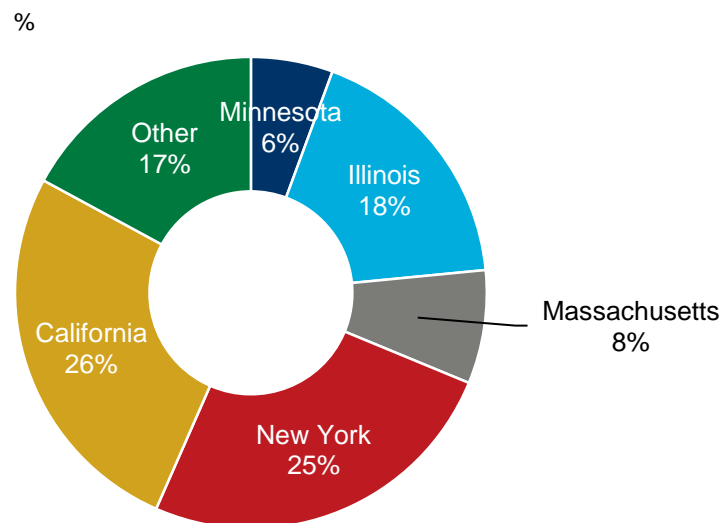
¹⁵ Gravity models of trade are conceptually based on physics equations that predict gravitational pull between objects based on size and proximity. In economics, the ‘pull’ variables are things like physical distance, shared language, any shared colonial history, similarity or compatibility of legal systems, etc.

China	12		10
Belgium	19	17	12
Romania	21		51
New Zealand	24		22

Source: Oxford Economics, NISRA, ONS, Invest NI, fDi Intelligence

Northern Ireland’s compatibility with the United States regarding FDI linkages can also be seen in research undertaken by DfE¹⁶. DfE recognise the United States as Northern Ireland’s largest contributor of international FDI, and a key component to Northern Ireland’s success in attracting FDI. Investment from the United States is provided to a diverse range of industries in Northern Ireland, spanning 130 companies and 190 projects across the country. Companies from the United States that have invested in Northern Ireland are concentrated in a few East-coast states and California as shown in Fig. 17.

Fig. 17. Breakdown of FDI jobs in Northern Ireland by origin of US investment, 2003 to 2017



Source: DfE, fDi Intelligence

2.2 NORTHERN IRELAND’S AVIATION CONNECTIVITY

2.2.1 Current connectivity and how this has evolved over time

Northern Ireland currently has three commercial airports which had a combined passenger flow of 8.6 million in 2017. Just over two-thirds of this traffic went through the country’s major international airport – Belfast International (BFS) – with the majority of the remainder being serviced by George Best Belfast City Airport (BHD) which focuses more on business traffic.

Each of the three commercial airports serve a variety of routes globally. BFS had a throughput of almost 6 million passengers in 2017 of which over 2 million

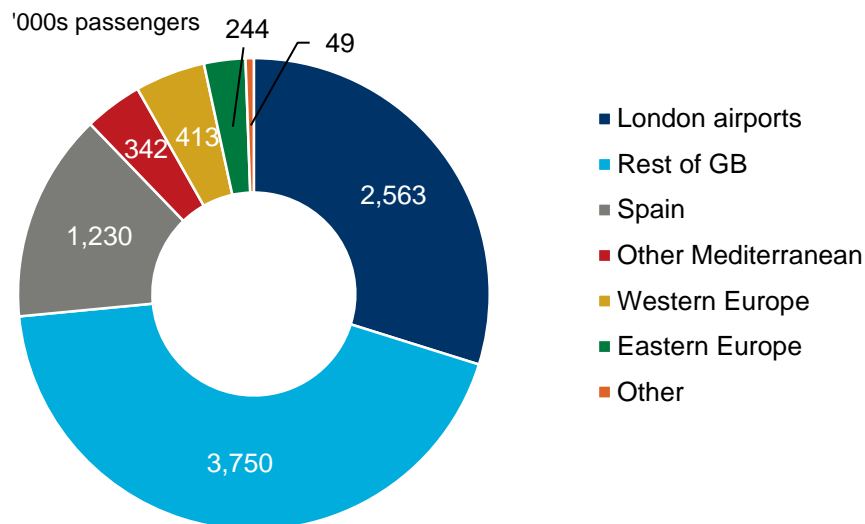
¹⁶ DfE, “Understanding the Drivers of Foreign Direct Investment from The United States- Implications for Northern Ireland,” 2017

passengers travelled to destinations across the UK. Over 2.5 million passengers flew from BHD in 2017. The main routes travelled by these passengers were to Heathrow, Manchester, and Birmingham.

In 2017, around 70 percent of Northern Ireland's air traffic was to Great Britain. Just under half of this was with airports servicing London with routes to both London Heathrow and London Gatwick offering key benefits in terms of onward connectivity. Northern Ireland also currently has substantial linkages with Great Britain's other major cities, most notably Manchester, Liverpool, Birmingham, Edinburgh and Glasgow. The City of Derry airport, situated in the North West of Ireland, provided air services for almost 200,000 passengers in 2017 to several key destinations including Glasgow, Stansted, Liverpool and Palma De Mallorca, in Spain.

Outside of the UK, Northern Ireland currently has strongest aviation links with the Spanish market with a total passenger flow of just over 1.2 million in 2017 – approximately 15 percent of the total. The remaining passenger flow was overwhelmingly linked to other European destinations.

Fig. 18. Breakdown of passenger flow from Northern Ireland's airports in 2017 by partner location



Source: NISRA

A number of methods have been used to generate quantitative estimates of aviation connectivity. For this study, we used the International Air Transport Association (IATA) method: the number of seats available from an origin (in this case Northern Ireland), weighted by the onward connecting options of destination airports. The latter point is gauged based on the passenger flow of the destination airport.

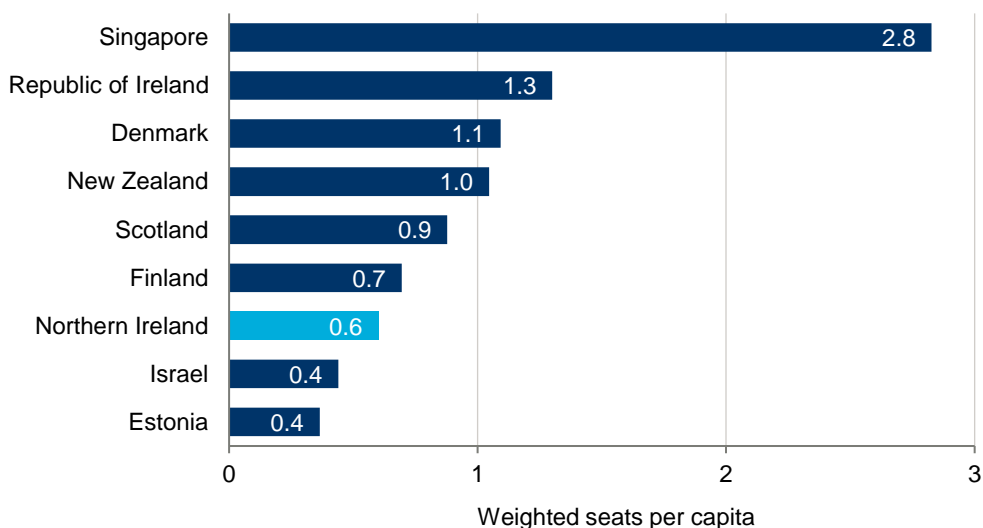
We then divided this figure by the country's population to generate a per capita measure. This single figure therefore summarises the quantity, frequency, and

importance of connections that business people and others in Northern Ireland can take advantage of.¹⁷

In 2017, Northern Ireland's airports provided 0.6 weighted seats per capita. This compares unfavourably to the majority of markets identified as benchmark economies in the Industrial Strategy (Fig. 19).¹⁸ Significantly ahead among these nine countries, including NI, is Singapore (2.8 weighted seats per capita), consistent with it being the home of a major international hub.

The Republic of Ireland currently enjoys a level of aviation connectivity over twice that for residents north of the border. Of the economies targeted, Northern Ireland ranks ahead of only Israel and Estonia in terms of its aviation connectivity.

Fig. 19. Connectivity in Northern Ireland and eight benchmark countries, 2017



Source: Dii, ACI, Oxford Economics

¹⁷ This technique was originally developed in IATA, "Aviation Economic Benefits: Measuring the economic rate of return on investment in the aviation industry," 2007. To give an example: because Atlanta's Hartsfield–Jackson airport has the most passengers in the world, as measured by the number of passengers moving through it, seats from Northern Ireland to Atlanta carry the highest weight possible: 100 percent. London, Beijing, and Hong Kong also carry large weights for the same reason. The number of weighted seats can be calculated for a single year, or across a series of years to get a picture of how connectivity has evolved over time. The weighted sum will always be less than the unweighted sum, since the weights mean seats count for between 0 and 100% of their original number, depending on the destination (i.e. a seat to Atlanta counts as one seat, but a seat to any other airport counts as less than one seat). For the purpose of this analysis, we have divided by population rather than GDP, as we think the former is more appropriate to assess Northern Ireland's aviation connectivity against a set of benchmark economies.

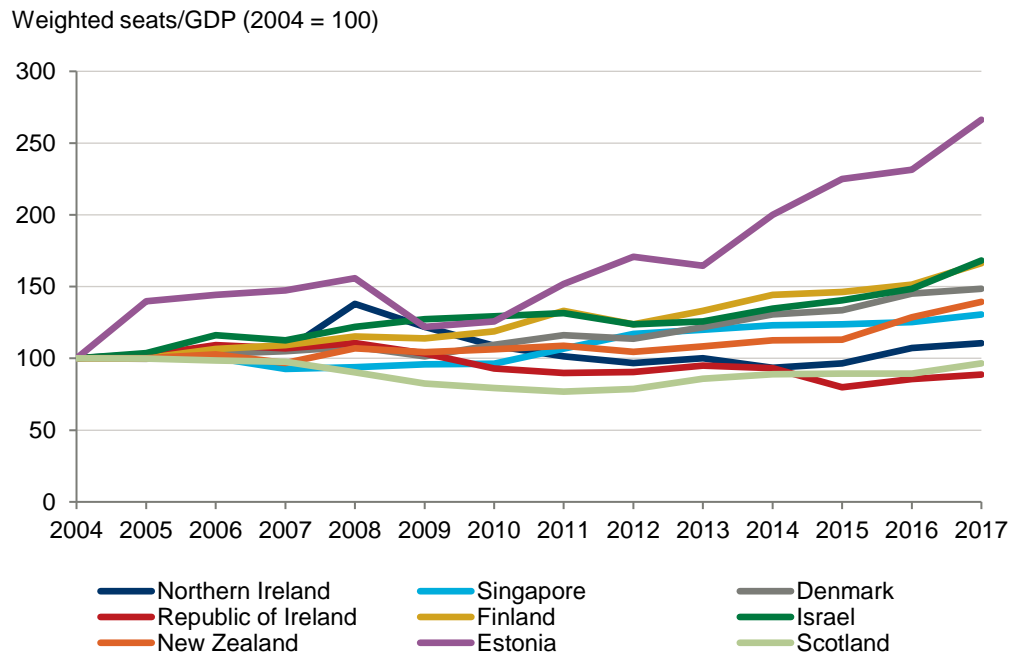
¹⁸ Northern Ireland Department for the Economy, "Economy 2030: A consultation on an Industrial Strategy for Northern Ireland," 2017. The selected benchmark countries are Denmark, Estonia, Finland, Israel, New Zealand, Republic of Ireland, Scotland, and Singapore.

2.2.2 How has this changed over time?

Routes are not static. Airlines regularly experiment with new routes that show promise, and close old routes that can no longer sustain themselves. In addition, the frequency with which routes are served is constantly evolving.

Northern Ireland's aviation connectivity increased by 11 percent between 2004 and 2017 (see Fig. 20).¹⁹ This is better than the Republic of Ireland and Scotland, which both saw their connectivity decline over the same period because their economies grew faster than the number of weighted seats available from their airports. However, the evolution of Northern Ireland's connectivity has been less favourable compared to Singapore (31 percent), New Zealand (39 percent), Denmark (49 percent), Finland and Israel (68 percent), and Estonia (167 percent).²⁰

Fig. 20. Weighted seats available from Northern Ireland and eight benchmark countries, 2004-2017



Source: Diio, ACI, Oxford Economics

2.2.3 The economic value of aviation connectivity

Improving Northern Ireland's connectivity over time is important. Connections to the rest of the world facilitate business meetings, foreign direct investment, knowledge sharing, and cultural exchange. Such benefits make it likely that

¹⁹ As of the time of our analysis, the seat data available from Diio ran from 2004 to 2017.

²⁰ These countries are identified in Northern Ireland Department for the Economy, "Economy 2030: A consultation on an Industrial Strategy for Northern Ireland," 2017 as countries that Northern Ireland should be benchmarked against. They share similar challenges and opportunities because they have small domestic markets and are geographically peripheral.

sustained increases in aviation connectivity will raise productivity over time, and therefore stimulate a larger economy and more jobs.

To give a sense of the magnitude of these benefits, IATA has estimated that a 10 percent increase in the level of connectivity to the global air transport network, relative to GDP, can generate a long-term increase in productivity of 0.07 percent per annum.²¹ Holding constant the number of people in work, this will lead to the same increase in GDP.

Using this framework, we estimate that Northern Ireland's GDP was 0.5 percent higher in 2017 than it would have been if connectivity had stayed at its 2004 level.²² In other words, the increased potential for business meetings, knowledge sharing, foreign direct investment, etc. increased the productivity of Northern Ireland's workforce over time—and by doing so, boosted Northern Ireland's GDP in 2017 by £200 million, the equivalent of £106 per resident.

²¹ IATA, "Aviation Economic Benefits: Measuring the economic rate of return on investment in the aviation industry," 2007

²² The number of weighted seats available from Northern Ireland airports as a share of the economy increased by 10.7 percent between 2004 and 2017 (Oxford Economics calculations based on Diio seats database). This metric is a measure of 'connectivity'. IATA has estimated that a 1 percent change in connectivity is associated with a 0.054 percent increase in GDP per capita. Putting the two together, a 10.7 percent change in connectivity suggests that Northern Ireland's GDP per capita was 0.5 percent higher in 2017 compared to 2004 (more specifically, given the natural logarithm structure of the equation that IATA estimated: $((1+10.7/100)^{0.054}-1)*100 = 0.548$). That corresponds to £106 per person.

3. IDENTIFYING PRIORITY ROUTES: MAJOR CONSIDERATIONS

This chapter summarises key aspects of our economic linkages analysis and conversations with stakeholders. Together, these lay the groundwork for our priority route recommendations in Chapter 4.

First, we identify a set of key themes which emerged from our economic analysis and discuss how they relate to our route identification process. This is then complemented by a summary of stage-two stakeholder consultations. Both streams of research fed into our selection of a group of route categories, which in turn provided a framework for our subsequent work.

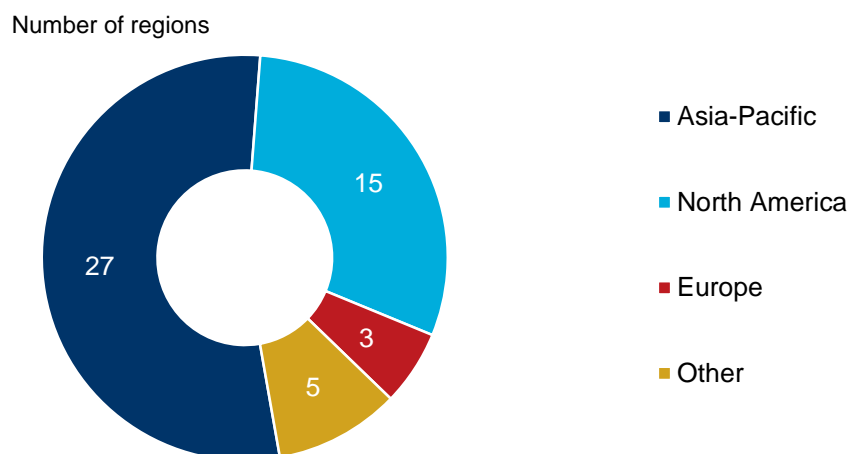
3.1 ECONOMIC LINKAGES ANALYSIS

3.1.1 The continued shift of economic activity to the East

Oxford Economics' baseline forecasts predict a continued shift in the composition of global economic activity towards Asia, which is expected to be home to some of the fastest-growing markets in the world—most notably India and China. In the previous chapter, we saw that a relatively low share of Northern Ireland's tourism, trade and FDI is linked to Asia. Some of the major factors which currently inhibit a stronger economic relationship (distance, language, etc.) are unlikely to diminish. Nonetheless, improving the existing level of aviation connectivity to these markets will facilitate greater access.

The size of the opportunity depends on the growth of economies in absolute terms. Fig. 21 shows the breakdown by continent of the 50 sub-regions that are expected to enjoy the largest absolute increase in real GDP between 2016 and 2036, according to Oxford Economics' baseline forecasts at the time of writing. Over half of these sub-regions are in Asia-Pacific, with the majority of the remainder in North America. In contrast, just three of the top 50 fastest growing markets are in Europe.

Fig. 21. Location of 50 sub-regions with largest forecast increase in real GDP, by continent: 2016-2036



Source: Oxford Economics

3.1.2 The diaspora of Northern Ireland

Northern Ireland's diaspora is likely to be an important indicator of route viability. In part, this is because "Visiting Friends and Relatives" (VFR) is the most common reason visitors say they travel to Northern Ireland, accounting for half of all trips. In addition, connections through shared heritage are likely to stimulate both business and leisure trips.

North America boasts a large population of people who say they are of "Irish heritage". In Canada, 13 percent of the population identified as Irish in 2016, while in the United States, 10 percent of the population identified as Irish in the 2017 census.²³ Australia also has a significant Irish population, with 9.7 percent of people reporting Irish ancestry.²⁴

While the data are not precise enough to pinpoint the number of people who say they are specifically from Northern Ireland (indeed, many may be descendants of those who migrated before Ireland was partitioned), this is still a reasonably good indicator that North America and Australia have strong connections to Northern Ireland through both modern-day and historical migration. This suggests a natural source of travel demand which could be supported by enhanced aviation connectivity to these markets.

3.1.3 Links with Europe

Our analysis of inward visitor patterns, trade, and investment also highlights Europe's importance for Northern Ireland. A number of European countries—including Germany, France, Spain, the Netherlands, Switzerland, Italy, and Sweden—consistently ranked highly as economic partners.

At the regional level, we identified that South Holland and Eastern Switzerland were particularly strong matches, in terms of the composition of their economy and what Northern Ireland is capable of exporting.

3.1.4 The value of onward connectivity

Not all routes are equal in terms of the onward aviation connectivity that will be created for passengers travelling to and from Northern Ireland. This is likely to be particularly relevant to a market such as Northern Ireland, whose relatively limited population constrains the commercial viability of many potential direct routes.

The airport with the greatest volume of connecting traffic from Northern Ireland is by some margin Heathrow, followed by Gatwick and Manchester. Dublin is also an important connecting airport for residents of Northern Ireland, but their access is via ground not air. At present, interline traffic over Amsterdam is limited as are connections over other international airports to which Northern Ireland's airports are connected, because the great majority of those flights are provided by low cost not network carriers and many of them do not provide through ticketing. Adding additional European hubs and long-haul gateways with good onward connectivity in the Middle East and North America, would

²³ Statistics Canada, "2016 Census: Immigration and Ethnocultural Diversity Highlight Tables," 2016 and US Government, "2017 American Community Survey," 2017

²⁴ Australian Bureau of Statistics, "2011 Census data shows more than 300 ancestries," 2012

transform the range of destinations that could then be reached 'one-stop' from Northern Ireland's airports and thus the current dependence upon, and leakage to, Dublin. Prime candidates include Frankfurt, Paris, Munich, Madrid and Copenhagen in Europe; Doha and Dubai in the Middle East and New York, Philadelphia, Boston, Chicago and Toronto in North America.

3.2 STAKEHOLDER CONSULTATION: PHASE TWO

Mirroring the concepts explored in the data in Chapter 2, Oxford Economics and Northpoint Aviation Services engaged with key stakeholders across the public and private sectors to ascertain their views on:

- the current economic linkages that Northern Ireland has with external markets in relation to inward investment, inbound visitors, and external sales;
- the markets where future growth in inward investment, inbound visits, and export sales is likely to be concentrated;
- the current levels of aviation connectivity in Northern Ireland, and how this supports or constrains inward investment, inbound visitors, and external sales from key growth markets;
- the potential policy levers available to the Northern Ireland Executive to support the enhancement of aviation connectivity.

A full list of consultees during this phase of the project can be found in Appendix 3.

3.2.1 Invest NI

Consultees from Invest NI noted a number of key areas from where future inward investment and export opportunities for NI are likely to come. These included East and South Asia, Africa, and Northern Europe. In particular, consultees felt that establishing a gateway into Asia would offer significant future benefits to Northern Ireland. This could be through a Middle Eastern hub, with Qatar viewed as a viable option.

Within Northern Europe, Germany and Scandinavia were identified as areas of major commercial interest that could support future growth in exports and be future sources of inward investment. Flights into Düsseldorf were highlighted as particularly useful, as Invest NI has offices there, and the region is the key location for trade shows in Europe.

A number of sectors were identified as being important for exports and inward investment. These included the material handling sector, aerospace, software engineering, cybersecurity, and the food and drink sector. It was felt that improved aviation connectivity into markets in Europe and North America, could help to support exports and inward investment among all these sectors.

3.2.2 Tourism public bodies

A number of countries were identified that these stakeholders felt offered future growth opportunities for tourism. These included Canada and the USA, given the sizeable Northern Irish diaspora in both countries. It was noted that enhanced connections could help to leverage the potential for stronger inflows via VFR.

Australia and New Zealand were also identified as emerging markets for inbound tourism into Northern Ireland. Stakeholders recognised that, while direct links are prohibited by distance and the size of the markets, their emergence underlines the potential value of maintaining or enhancing connectivity with Heathrow and enhancing flight options via a route to a Middle Eastern hub.

Finally, China and India were identified as important markets for Northern Ireland to develop, given the size and projected growth rates of the middle-class population in each of these markets.

Stakeholders also noted that it was important not to neglect domestic tourism in this study. The potential market has been buoyed by the recent depreciation of sterling against most other major currencies, which has raised the cost of holidaying abroad for UK residents, all else being equal.

Day visitors from Dublin were viewed as both an opportunity and a threat. The majority of current inflows of tourists to the island of Ireland use Dublin as the primary base, and only undertake a short (often day-trip) expedition to Northern Ireland. Encouraging these visitors to increase their average length of stay within Northern Ireland could, therefore, yield a significant increase in total inbound spending.

3.2.3 The airports

From an aspirational point of view, our airport consultees stated that Northern Ireland's tourism, inward investment, and exports would benefit from having:

- enhanced connections to Northern Europe (Dusseldorf and Frankfurt were identified most frequently by these stakeholders);
- enhanced connections to North America to better exploit economic value linked to the diaspora (Boston, JFK, and Toronto were universally regarded as the most economically beneficial—and commercially realistic—routes); and
- a direct route to a Middle Eastern hub, to act as a gateway to Asia.

It was also noted that increasing the frequency of some currently-served routes could also deliver significant benefits to Northern Ireland. Routes mentioned in this context included Amsterdam, Paris, Barcelona, Berlin, and Milan.

These consultees stressed that the establishment of any new routes (either through increasing the frequency of a currently-served route, or by establishing a new route to an unserved market) had to be commercially viable in the long run. The “bread and butter” of Northern Ireland's aviation market, with the exception of business travel into London, is currently servicing outbound leisure demand. Interviewees stressed that routes which do not conform to that model are likely to be loss-making initially and would be likely to require financial support for the first three years of operation. In subsequent chapters we evaluate the potential role of alternative policy support mechanisms drawing upon insights from stakeholders including the airports together with the expert analysis by Northpoint.

3.3 ROUTE CATEGORISATION

Together, our quantitative and qualitative analysis identified some consistent themes which we then used to establish a set of priority route categories, described in the bullet points below:

- **North American East Coast:** increasing connections to leverage VFR and other opportunities associated with the North American diaspora was consistently highlighted. This would be best achieved via establishing a direct route to a North American East Coast hub airport.
- **Middle Eastern hub:** establishing improved connections to markets in Asia was noted by a variety of stakeholders as likely to be of significant economic value. This chimed with our own analysis of regional growth prospects, as summarised in section 2.2. The most effective and practical mechanism to achieve this would be to establish a direct route to one of the Middle Eastern hubs, which would offer substantial benefits via onward connectivity to Asia.
- **Enhanced short-haul connections:** our analysis of economic linkages highlighted the primacy of European markets as sources of external demand and inward investment for Northern Ireland. Within the continent, stakeholders often focused on Northern European markets—notably Germany, Scandinavia, and Switzerland, from a business travel perspective. In addition, increased flights to some of the major European hub airports, such as Madrid, Paris, Frankfurt, and Amsterdam, would be beneficial in terms of boosting onward connectivity, particularly if Northern Ireland is unable to secure increased connections to Heathrow. Given the very strong economic connections between Northern Ireland and Great Britain, we have also included domestic connections within this category.

4. THE FINAL CHOICE OF PRIORITY AVIATION ROUTES

In this chapter, we describe the analysis used to narrow down route options from within the three broad categories identified in the previous chapter, to our final selection of priority routes. This included an assessment of underlying demand, based on analysis of Civil Aviation Authority (CAA) data for Northern Ireland's airports, and our discussions with airlines as part of the phase-three stakeholder consultation. This chapter concludes by mapping our selected priority routes to the most appropriate of Northern Ireland's three airports.

4.1 STAKEHOLDER CONSULTATION: THE AIRPORTS

BFS is Northern Ireland's largest airport by passenger flow. From our discussions with the airport's management, it was clear that BFS felt its commercial performance was being adversely affected by the expansion of Dublin airport (DUB), which had been supported by aggressive marketing and differentials in air passenger duty (APD) and corporation tax. BFS felt well protected only on certain outbound leisure and domestic routes, which are serviced by low-cost carriers and which draw heavily from the north and west of Northern Ireland.

However, BFS felt that with the right interventions, there is scope to expand both its long-haul and low-cost short-haul routes. Co-operative marketing support, to share risk on the up-front costs of marketing a route, including those being incurred by the airline as part of its overall route development budget to secure route profitability, was identified as being the key to the former, and APD to the latter.

BHD's route network is dominated by domestic and short-haul international destinations, reflecting runway length and its proximity to the centre of the city, which helps to attract predominantly business-orientated traffic. Its largest and most important existing airport partners include Heathrow, Amsterdam, Manchester, and Birmingham. In terms of future route development, the following major priorities were identified:

- increased capacity and frequency on the Heathrow route, perhaps associated with attracting another airline to add competition on the route serving Northern Ireland's most import hub connection;
- enhanced frequency or seat capacity to Amsterdam;
- new daily or double-daily services to other EU hubs—most notably in Germany (Frankfurt, Dusseldorf or Munich), France (Paris), and Scandinavia (Copenhagen);
- the filling-in of under/unserved domestic markets, e.g. Norwich, Cardiff.

It was felt that in general current obstacles to these routes were largely demand side rather than supply side. The quality of Northern Ireland's infrastructure and noise constraints were not factors which currently inhibited route development. However, attracting airline operators can be problematic given the size of the domestic outbound market and the competition provided by DUB. This is

particularly the case on routes which do not serve the core outbound leisure tourism market.

The City of Derry Airport (LDY) is currently operated by Regional City Airports, under a management contract from the City Council. The airport has struggled in recent years, with Ryanair progressively drawing down its services— overtly due to increases in air passenger duty, but also due to operational concerns about runway length. LDY identified a number of opportunities to re-introduce former services with established markets that are currently unserved (e.g., Manchester, Birmingham and Dundee), and eventually to upgrade the Stansted link to Heathrow, assuming a third runway is built.

4.2 ROUTE VIABILITY ANALYSIS

To supplement these qualitative insights, we have also undertaken quantitative analysis to assess the level of latent demand in Northern Ireland. This speaks directly to the potential market that could be captured if Northern Ireland were to support the introduction of a new route (or increased flight frequencies on an existing route).

To do so we have relied on two sets of data. First are estimates developed by Northpoint based on publicly available passenger and survey data (described in more detail below). The second is a set of experimental statistics published by NISRA which estimate the distribution of Northern Ireland-resident passengers using DUB by ultimate destination.²⁵ It is important to note that these figures are not strictly comparable for two reasons:

- The NISRA data represents estimates of passenger flow by *ultimate* destination. Therefore, they could significantly underestimate latent demand for hub airport routes which act as gateways to further destinations. This is likely to be particularly relevant for a Middle Eastern route which, if operational from Northern Ireland, could be used by residents to access a range of final destinations across Asia.
- The NISRA data only refers to residents' (of Northern Ireland) travel. However, latent demand for routes will also be derived from inbound travel demand. It is likely that inbound and outbound demand are not symmetric—for example, Northern Ireland's residents who use DUB to access popular tourist destinations in the Mediterranean such as Spain and Portugal are unlikely to be matched by an equivalent inbound passenger flow.

Northpoint estimates of passenger leakage via DUB

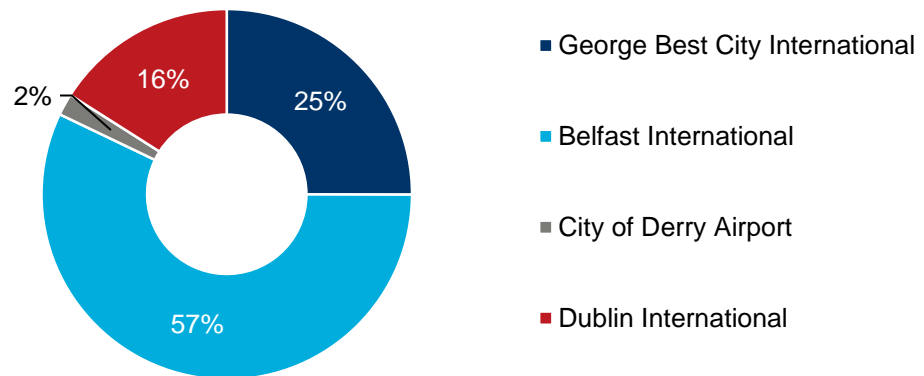
The first step in Northpoint's analysis was to gather publicly available data on passenger and freight activity at Northern Ireland's airports and its principal competitor—DUB. This was used to develop an overview of the current market, by airport, supplemented by a 2017 household survey, which identified which parts of Northern Ireland make the greatest use of the various commercial airports north and south of the border.

²⁵ Experimental statistics are a subset of newly developed or innovative official statistics that are undergoing evaluation.

The estimated breakdown of passenger flow by airport is illustrated in Fig. 22. This implies that leakage to DUB is currently material at approximately one-sixth (16 percent) of the market. This is similar to the 2017 share published by NISRA using a survey-based methodology in their airport residency statistics. NISRA’s estimates for 2017 imply absolute leakage to DUB of 950,000 passengers with a further 20,000 Northern Irish resident passengers travelling via other airports in the Republic of Ireland. This equated to 16 percent of all outbound air trips by Northern Irish residents in 2017.²⁶

Fig. 22. Outbound Northern Ireland-resident air passenger flow by airport, 2017

Share of PAX in 2017



Source: Northpoint estimates

A propensity to fly (PTF) methodology (see Appendix 3 for more details) was used to estimate the scale of market (number of passengers) that should be supportable by Northern Ireland’s share of originating passengers. The objective was to identify routes where the current distribution of demand between airports in Northern Ireland and the Republic of Ireland suggests that there may offer opportunities to attract incumbent or new airlines to serve Northern Ireland markets directly, rather than having to rely on DUB by surface mode, or Heathrow by air, to offer connectivity to the requisite end-destination.

This task was complicated by the lack of timely and disaggregated data, which meant a number of simplifying assumptions were required. A full description of our methodological approach, and detailed reporting of the results, can be found in Appendix 3

For the three non-domestic geographic regions identified in section 3.3, Fig. 23 summarises the results of our analysis. Destinations are ranked by the scale of the estimated leakage of Northern Irish passengers via DUB in 2017, which is an indicator of the strength of latent demand within Northern Ireland that could be captured by a new route.²⁷

The table identifies the top 10 international short-haul markets by this measure, the top five US East Coast markets, and the four major Middle Eastern hub airports. For the latter, it is worth noting that if much of the existing demand is

²⁶ In comparison, leakage of ROI nationals north of the border was estimated to be 400,000 or 2.6 percent of total passenger flow in 2017.

²⁷ Figures in the final column have been rounded to the nearest 100.

derived via onward connectivity (using these airports as a gateway to Asia), then this demand is likely to be highly substitutable. In this context, the relatively thin latent market to Doha would not necessarily be commercially prohibitive, since it could be expected to capture a significant share of the Northern Ireland market currently using DUB to access other Middle Eastern hubs.

Fig. 23. Overview of latent annual market demand by route

City	Airport code	Current NI PAX via UK airports	Estimated leakage via DUB
Short-haul			
Madrid	MAD	5,180	89,100
Frankfurt	FRA	10,480	81,300
Brussels	BRU	5,850	70,400
Munich	MUC	3,490	66,400
Lisbon	LIS	140	49,000
Copenhagen	CPH	920	48,800
Rome	CIA	480	44,500
Zurich	ZRH	5,530	34,500
Prague	PRG	0	34,300
Dusseldorf	DUS	2,270	34,000
North American East Coast			
New York	JFK	7,630	95,300
Chicago	ORD	5,400	68,400
Boston	BOS	3,800	64,200
Newark	EWR	2,920	63,000
Toronto	YYZ	4,050	53,400
Middle East hub			
Abu Dhabi	AUH	4,730	43,900
Dubai	DXB	42,980	40,700
Istanbul	IST	3,570	26,300
Doha	DOH	9,300	10,600

Source: Northpoint analysis

NISRA estimates of Northern Ireland-resident use of DUB by ultimate destination

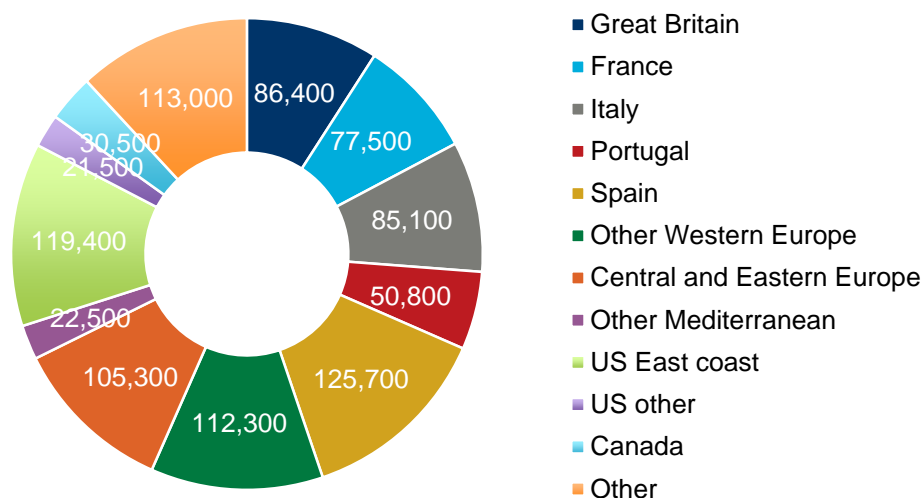
Outside of Great Britain, the most popular final European destinations were Mediterranean countries including Spain, Italy, Portugal and France. According to NISRA's estimates, in 2017, almost 340,000 Northern Ireland residents used DUB to travel to these four countries.²⁸ A further 140,000 residents were estimated to have travelled to the USA via DUB with 30,000 journeying to Canada. Among other ultimate destinations, Australia was the most popular followed by the UAE and South Africa.

²⁸ The data can be found at <https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/NI-air-passenger-flow-to-End-March-2017-additional-tables.XLSX>

Overall, NISRA's estimates are most useful for assessing the potential viability of a new route to either a Middle Eastern or North American East Coast hub. In this context, the estimated volume of leakage of Northern Ireland residents to the US East coast and Canada (close to 150,000) via DUB is consistent with there being a potentially commercially sustainable market if assisted by the right package of policy incentives. For a Middle East hub the evidence is less clear but the majority of ultimate destinations grouped as part of the 'other' category (113,000) in Fig. 24 are countries in Asia Pacific which would be well served by a direct route into a Middle Eastern hub which could provide onward connectivity.

Fig. 24. Estimated distribution of Northern Ireland's residents using DUB by ultimate destination in 2017

Share of Northern Ireland residents travelling via DUB by ultimate destination



Source: NISRA experimental statistics

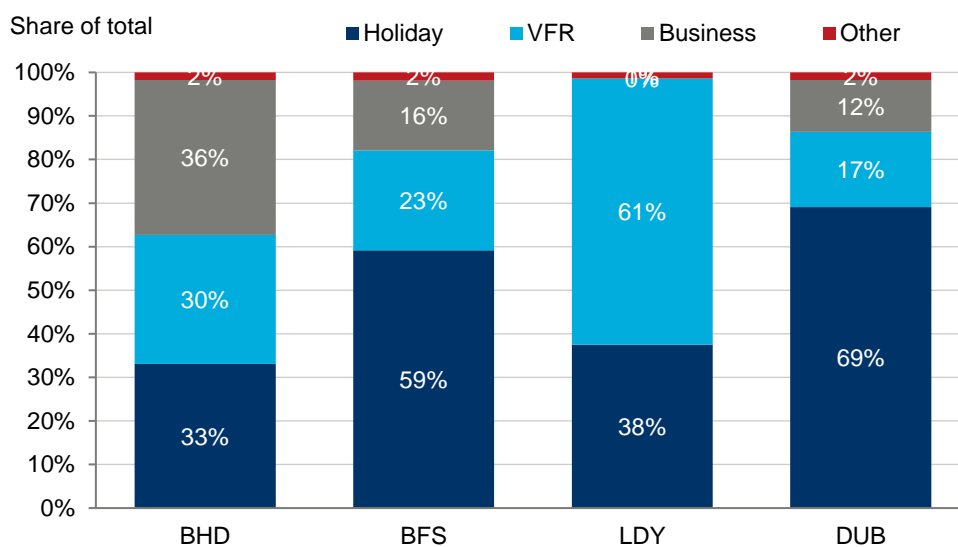
The above analysis and discussion are useful for assessing the potential viability of new or expanded routes. However, from an economic development perspective, passenger composition is also paramount. The economic value of facilitating an outbound leisure trip that would previously have been routed through London or DUB is clearly much lower than if enhanced connectivity attracts a new inbound tourist to visit or lengthen their stay in Northern Ireland.²⁹

Unfortunately, existing data sources make it very difficult to derive insights into the current distribution of outbound traffic by purpose. Fig. 25 illustrates the distribution of Northern Ireland-resident passenger flow by trip purpose and airport based on experimental statistics from NISRA. Unsurprisingly, the share of outbound residents who are travelling for business is significantly higher at BHD than either BFS or DUB (with outbound business traffic from LDY estimated to be negligible). Unfortunately, the data does not break this traffic down further by destination market and we consider that estimating this

²⁹ Within this discussion, it is important to acknowledge that such outbound leisure traffic is often essential to ensure the overall commercial viability of a route and, therefore, often acts as an important 'means to an end'.

distribution using the split of destinations at each airport would not be robust given reported sample sizes.

Fig. 25. Distribution of Northern-Ireland resident air passenger flow by trip purpose



4.3 CHOICE OF PRIORITY ROUTES

Our final set of priority aviation routes, mapped to the relevant Northern Ireland airport, is outlined overleaf in Fig. 26. These were used as the basis for our policy evaluation work, outlined in the next chapter.

The priority routes are classified under the three major categories that were identified in section 3.3. In cases where we have grouped airports together, we consider them to be direct substitutes—for example, Frankfurt or Dusseldorf (both of which offer a network of onward connections as well as point to point access to the German economic mega-region focussed on the Rhine) as a new route for BHD or BFS. The most salient criteria for our final choice of international routes are as follows:

- Routes where there was judged to be a sufficient latent market to be commercially sustainable, based on the quantitative analysis outlined in section 4.2.
- Destinations where discussions with the airlines and/or airports indicated a potential willingness to operate, conditional on the package of policy support.
- Consistency with the major findings on economic value and stakeholder consultation, as summarised in Chapter 3. While this is most visible due to our use of the route categorisation framework, other themes described in Chapter 3 are also reflected in the choice of routes. For example, within the short-haul international group, there is a strong emphasis on Northern European destinations, airports which offer strong onward connections, and/or those where past migration flows were likely to support demand via VFR tourism.

In addition, we have identified three short-haul routes which could be viable to LDY with some form of public sector intervention: Dublin; Manchester; and Birmingham. These routes were identified based on stakeholder consultation.³⁰

Fig. 26. Overview of final set of priority routes, by airport

BFS	BHD	LDY
Middle East hub		
Doha		
North American East coast		
New York (JFK)		
Toronto (Pearson)		
Boston (Massport)		
Short-haul		
Frankfurt/Dusseldorf		Dublin
Copenhagen/Stockholm/Oslo		Manchester
Brussels		Birmingham
Madrid		
Zurich		
Munich		
Budapest		
Bucharest		
Riga		

³⁰ We also considered an LHR route for LDY given the potential for third runway slots to become available in the medium- to long-term. We opted against including it given the extended time horizon.

5. EVALUATION OF POLICY OPTIONS

This chapter reviews potential policy options that could be pursued by Northern Ireland to incentivise increased activity on the routes identified in the previous chapter. In each case, the policy's viability is discussed with reference to value for money considerations and compatibility with state aid legislation. The content reflects the expert views and judgements of Northpoint Aviation informed by stakeholder engagement (a full list of phase three consultees can be found in Appendix 4 of this report).

5.1 THE STATE AID FRAMEWORK FOR SUPPORTING AIR ROUTE DEVELOPMENT

Northern Ireland currently works within the EU's general State Aid and Competition regulations and principles; EU State Aid to Aviation Guidelines (2014); Regulation (EC) No 1008/2008 on Public Service Obligations (PSOs), and a range of other relevant regulation relating to matters such as:

- Services of General Economic Interest (SGEI) that public authorities of the EU member countries classify as being of general interest and, therefore, subject to PSOs. This includes public transport;³¹
- General Block Exemption Regulations (GBER) which is an umbrella measure which covers a range of measures which do not require the approval of the Commission;³²
- de-minimis aid thresholds which allows member states to provide financial support in small levels for almost any purpose without prior notification;³³ and
- the Market Economy Operator (MEO) principle which tests for the existence of state aid in agreements which are made between airlines and airports.

5.2 THE ROLE OF DFT

Following the principle of subsidiarity, EU member states have been given substantive responsibility for policing these principles and regulations, with DG-MOVE or DG-COMP only becoming involved under clearly defined circumstances.³⁴

³¹ Referred to as in Article 106(2) of the Treaty on the Functioning of the EU. For an activity to be considered as an SGEI, it should exhibit special characteristics as compared with ordinary economic activities, and that the general interest objective pursued by public authorities cannot simply be that of the development of certain economic activities or economic areas provided for in Article 107(3)(c) of the Treaty.

³² BIS, "The State Aid Manual" (Report by the Department for Business Innovation and Skills, July 2015), p.21, paragraph 5.1.

³³ Ibid, paragraph 4.1

³⁴ Officially these organisations are obliged to intervene only if they consider at least one of three conditions are met: (a) the member state is not upholding the relevant EU regulation or published guidance, setting out details of how the commission will interpret statute or case law; (b) the member state is deliberately promoting or aligning itself with a strategy which adopts a different approach or interpretation than under (a); or (c) there are credible complaints in relation to specific examples of aid that appear to set precedents, have wider resonance for the

As such, the UK Department for Transport (DfT)³⁵ has an important role in overseeing the use of state aid in the aviation sector.³⁶ Policy concerning related matters such as airport charging, traffic distribution and slot rules (particularly at congested airports) continues to be reserved unless, and until, it is explicitly devolved by the DfT. Meanwhile, Air Passenger Duty (APD) is a matter over which the Her Majesty's Treasury (HMT) retains the policy lead.

The UK Government's reserved powers, and their interpretation and application of relevant EU regulations, are therefore likely to be an important material consideration influencing the form and structure of any air route support package for Northern Ireland. For instance, the DfT published updated "policy guidance" on how it would assess applications for PSOs to London (but not between other UK airports).³⁷ It also developed a UK-wide national Route Development Fund (RDF) scheme, referred to as the Regional Air Connectivity Fund (RACF).³⁸ Following formal approval by DG-MOVE in 2014, this scheme was subsequently used to help support selected regional PSOs to London (from Newquay to Gatwick and, prospectively, Heathrow; Dundee to Stansted; and City of Derry to Stansted), and to provide start-up funding for a number of other routes from UK airports of less than three million passengers per annum (ppa).

On 17 December 2018, DfT published a Green Paper on Aviation.³⁹ It includes, as an issue for consultation, a review of policy measures open to the Government to achieve objectives relating to the enhancement of regional connectivity by air. This section of the Green Paper references a number of supporting documents that were published concurrently, and also form part of the consultation. A detailed analysis of these documents is outside the scope of this report, which was developed based on extant policy up to (but not including) December 2018. However, a recent International Transport Forum (ITF) publication offers useful insights into the potential direction of travel of new policy.⁴⁰ It aligns closely with other feedback we have received from DfT during the course of other recent work within the same policy envelope and is summarised overleaf.

These themes and conclusions do not have the status of settled policy. Nor have they been subjected to scrutiny by the industry or the wider stakeholder community. However, DfT have indicated that the proposals in the paper do

Commission's position (both positive and negative), or could potentially result in substantive impact on the functioning of the single market.

³⁵ It is worth noting that DfT delegates some duties where appropriate to the CAA (operating under concurrent powers with the Competition and Markets Authority granted by the Competition Act 1998)

³⁶ Chapter II of the Competition Act 1998 refers to: "Any conduct on the part of one or more undertakings which amounts to the abuse of a dominant position in a market if it may affect trade within the UK. And to powers to enforce the equivalent provisions relating to competition in the Treaty on the Functioning of the European Union (Articles 101 and 102 respectively) where the relevant behaviour may affect trade between Member States". (www.caa.co.uk/Commercial-industry/Airports/Economic-regulation/Competition-policy/Competition-powers/).

³⁷ DfT: Public service obligation: regional air access to London (Dec 2013).

³⁸ DfT: <https://www.gov.uk/government/publications/airports-with-fewer-than-5-million-passengers-per-year-start-up-aid> (Jan 2015).

³⁹ DfT: Aviation 2050 (Dec 2018).

⁴⁰ ITF: Government Support Measures for Domestic Air Connectivity—OECD (Dec 2018).

provide a guide to how aviation strategy may be developed. If implemented, we acknowledge that the form and scope of financial support measures under existing policy frameworks could be materially affected.

In particular, the proposals seem to point to restricting PSOs on routes to London airports and a new category of 'national' airport, which seems to include only Manchester and London. There is opacity about their use for services between other UK cities and from UK regional cities to international hubs. In addition, they appear to suggest that the potential impact on aircraft allocation, surface modes (including use of the car for the same journey) and tax revenues, should now be taken into account, although the basis and methodology for doing so is not stated. The compatibility of these measures with the extant EU regulations is also not confirmed. However, what is clear is the final shape of any new policy could materially affect the scope for PSOs to be offered as a form of route support from Northern Ireland's airports. This is a topic on which DfE may wish to engage with DfT in the context of the Green Paper consultation.

SUMMARY OF DFT FEEDBACK

Establish explicit domestic transport connectivity objectives: governments need to be clear about their domestic connectivity objectives and consider the country's connectivity needs across all modes including road, rail and maritime transport. Connectivity should be considered in the context of how improved connectivity can support local, regional, and national socio-economic strategies.

Assess the impacts of potential intervention in the aviation market: the effect of any potential government interventions on existing air connections, both domestic and international, should be carefully considered with a view to understanding whether subsidised routes have the potential to cannibalise other connections in the air services network or adversely impact other transport modes.

Monitor and evaluate the effectiveness of support for domestic air connectivity: all support measures should also be periodically evaluated against objectives and intended outcomes. This could include sunset clauses for support measures.⁴¹

Make the award of subsidies transparent: when tendering contracts for services supported by subsidy, governments should conduct transparent selection and award processes and publish the results and criteria for award, working in collaboration with local authorities and other stakeholders.

Keep support programmes simple: governments should keep the complexity of support programmes to manageable levels and employ only a small number of the most effective measures.

Provide incentives to create value for money: local communities should have "skin in the game". Ideally, they should contribute financially to the support measures, to avoid perverse incentives to ask for support for non-essential connections. Local government involvement in securing and demonstrating interest from local businesses and airlines for a route can also increase the likelihood of successful operation of the route and deliver better value for money.

⁴¹ A sunset clause is a provision of law which automatically terminates (ceases to apply) after a fixed date.

Weigh the benefits of safeguarding slots at congested airports against the costs of denying them to more profitable services: to improve domestic connectivity at congested slot-coordinated airports, policy-makers may consider safeguarding a proportion of slots for domestic connections. At congested airports, this could mean the safeguarded slots may not be available for use by other, more profitable connections, and hence the overall economic efficiency and connectivity from such airports might be reduced. These potentially negative consequences need to be considered alongside the benefits of establishing domestic connections.

5.3 IMPLICATIONS OF STATE AID LEGISLATIVE FRAMEWORK FOR NORTHERN IRELAND'S AIRPORTS

The current State Aid legislative framework has important direct implications for the applicability of different policy levers to Northern Ireland's airports, which we have summarised in Fig. 28. We have separated these implications in terms of four categories as follows:

Airport size restrictions: the existing State Aid framework clearly differentiates between airports based on size as measured by passenger flow. Fig. 27 summarises airport size of the three main Northern Ireland airports based on 2017 data.⁴²

- APD discounting, as a generic measure, would apply to all routes and therefore can be used to support all airports, irrespective of size.
- Co-operative marketing agreements which can exist between airlines and airports or with wider stakeholders do not suffer from airport size restrictions.
- PSOs are designed for scheduled services between any airport and an airport serving a peripheral region within its territory or on a thin route, including cross-border routes. Therefore, there are no necessarily binding restrictions by airport size although in the context of the priority routes identified in this study they are likely to be of most use for LDY.
- Support from an RDF is restricted to airports with a passenger flow of 3 million per annum or less, although in exceptional circumstances this threshold can be lifted to 5 million ppa.⁴³
- Smaller airports with a passenger flow of less than 3 million ppa can receive operating aid for a transitional period. This can cover up to 50 percent of the operational funding gap for airports with between 1 million and 3 million ppa (BHD) and up to 75 percent of the operational funding gap for airports with less than 1 million ppa (LDY). The transitional period is due to expire in 2024 after which no operating aid will be permissible.
- Financial support for investments in airport infrastructure and equipment are permissible for loss-making airports with less than 3

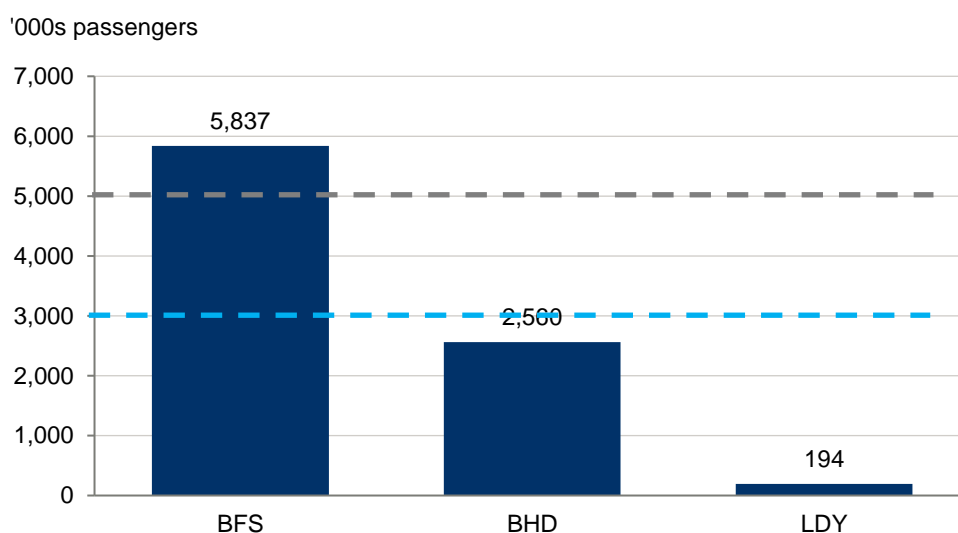
⁴² In the application of State Aid legislation, size is measured by air passenger traffic during the two financial years preceding that in which the aid is notified or actually granted or paid in the case of non-notified aid.

⁴³ Start-up aid for routes linking an airport with more than 3 million passengers per annum and less than 5 million passengers per annum not located in remote regions can be considered compatible with the internal market only in duly substantiated exceptional cases (2014 State Aid Guidelines).

million ppa. For airports with a throughput of less than 1 million (LDY) these can cover up to 75 percent of the costs and for airports with a throughput of between 1 million – 3 million ppa (BHD) up to 50 percent. BFS would only qualify for this type of support under very exceptional circumstances which would be characterised by a clear market failure e.g. if it was not possible to finance the investment on capital markets.

- Airlines departing from airports with fewer than 3 million ppa can receive start-up aid for up to three years for increasing the connectivity of a region by launching a new route. The aid may cover maximum 50 percent of the airport charges. An ex ante business plan should show that the route will become profitable after the start-up period. In the absence of a business plan for a route, the airline must provide an irrevocable commitment to continue operating the route for at least the same period as the one during which it received start-up aid.⁴⁴

Fig. 27. Northern Ireland's airports passenger traffic in 2017



Source: NISRA

Airports proximity considerations: a related consideration for Northern Ireland's airports is whether the implementation of policy support will raise issues with competition policy. Airports are judged to be direct competitors based on proximity—being within 100 km or 60 minutes-drive-time of each other. On this basis, BHD and BFS would be judged to be direct competitors which could raise issues if it were judged that policies implemented benefit one airport disproportionately.⁴⁵

Control of the Northern Ireland Executive: not all policy options are within the direct remit of Northern Ireland's Executive and would require the approval and support of the UK government. Among policies evaluated, support via co-operative marketing and an operating subsidy could be delivered by Northern Ireland's Executive subject to compliance with relevant State Aid legislation. Discounting of APD has also been devolved although, as highlighted, HMT

⁴⁴ <https://www.eubusiness.com/topics/airlines/state-aid/>, point 28

⁴⁵ Appendix 3 of this report details findings from NorthPoint's catchment area research.

retains a policy lead in terms of determining the standard (undiscounted) rates applied on UK flights.

The UK published their own interpretation of the use of PSOs, particularly concerned with routes to London Airports, in 2013. DfT retains responsibility for approving applications for PSOs, particularly where they cross territorial boundaries into the UK (and hence potentially attract DfT funding). When PSO routes are entirely within the territory of an individual Devolved Administration, responsibility for the details and funding are delegated.⁴⁶ However, this would not apply to any of the priority routes identified in this report. DfT also retains competence for approving any international PSO proposals.⁴⁷ The implementation of an RDF would also require the approval of DfT.

Current status in Northern Ireland: as things stand Northern Ireland operates a number of different types of policy support for its aviation sector as follows:

- Full discounting of APD on Band B flights (routes over 2,000 miles) for all flights departing from Northern Ireland's airports;
- A PSO service is in operation between London Stansted and LDY⁴⁸;
- Co-operative marketing support is provided to Northern Ireland's airports through Tourism Ireland; and
- LDY currently benefits from an operational subsidy.

Fig. 28. Implications of State Aid legislation for NI's airports

Policy lever	Airport size restriction?	Airport proximity considerations?	Does the NI Executive have governing authority?	Currently in operation in NI?
Air passenger duty discount	None	No	Yes****	Yes (long-haul)
PSO	None*	Yes	No*****	Yes
RDF	3 million ppa**	Yes	No	No
Co-operative marketing	None	No	Yes	Yes
Operating subsidy	200,000***	Yes	Yes	No

*There is no explicit limitation, but State Aid limits the application of PSOs to airports serving either peripheral, development regions in its territory or thin routes whilst any such route should be considered vital for the economic and social development of the region which the airport serves. This effectively rules out certain airport pairs.

**In exceptional circumstances this can be lifted to 5 million ppa

***This would be 1,000,000 ppa if the airport is notified under SGEI rules

****It is worth noting that HMT retains the policy lead but has devolved powers for rate setting

*****If the PSO is entirely within the territory of a Devolved Administration responsibility is delegated

⁴⁶ As in the specification, tendering and funding of intra-Scottish and intra-Welsh PSOs.

⁴⁷ The full choreography of the previously Dublin-Derry PSO is not known to this study, but it is understood that it was applied for and funded by the RoI. Currently an Alderney – Southampton PSO is being tendered by the States of Guernsey, and a previously tendered Czech PSO into Stansted was not followed through on, because of lack of applicants.

⁴⁸ On 22 February 2019 it was announced that Loganair had secured this contract following the insolvency of previous operator flybmi.

5.4 COMPETITION WITH DUB

Northern Ireland's aviation sector and current level of connectivity is influenced and shaped by the activities of DUB. As described in chapter four, just under a million Northern Ireland residents are estimated to have flown via DUB in 2017, equivalent to 16 percent of total outbound trips. Although there is some movement in the opposite direction, net movement across the border has proved to be a significant competitive drain on Northern Ireland's airports.

DUB has grown rapidly in recent years with passenger flow increasing by over 10 percent a year on average since 2013 to almost 30 million in 2017.⁴⁹ The commercial success of DUB is likely to have been driven by a number of factors, among them a favourable policy environment. Two features of DUB's operational model which we consider to be particularly relevant for this report are as follows:

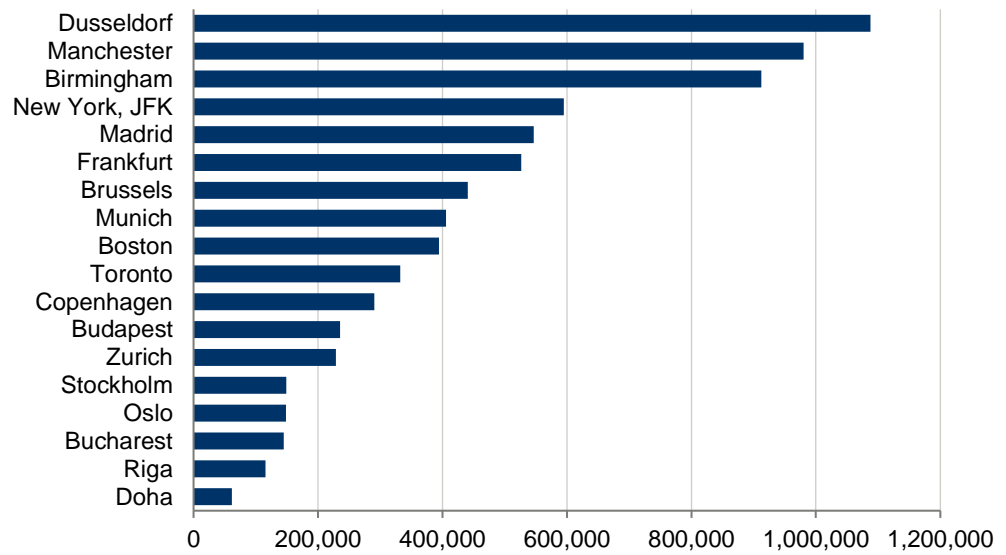
- DUB operates zero APD on all routes; and
- DUB is one of only two airports in Europe (the other is Shannon also in RoI) that has border preclearance services with the USA allowing passengers to clear customs quicker.

DUB currently operates material services on all of the priority routes identified in chapter four. As shown in Fig. 29 the thinnest routes were with Doha which was the only airport pair with a passenger flow of less than 100,000 in 2017. In our view the existence of DUB has the following main implications for priority route development:

- It would be useful to develop more robust insights into the scale of leakage to DUB by ultimate destination. This will help to inform airlines as to the existence and scale of the latent market for Northern Ireland residents which, in turn, can inform operational decisions.
- The existence of DUB may make the price of route development higher in certain cases which would raise Value for Money (VFM) concerns. This is likely to be particularly the case where routes operated out of DUB enjoy other forms of competitive advantage other than the general cost advantage conferred by economies of scale.
- In general, we do not think that the existence of DUB has material implications for the relative effectiveness of alternative *types* of policy support evaluated in this chapter. For example, an APD discount in Northern Ireland would create a similar improvement in the commercial incentive for airlines irrespective of DUB's policy on this issue. Whether such a generic approach would achieve an optimal use of resources given that it would subsidise a significant level of outbound leisure demand is of course a separate issue that needs to be carefully evaluated by policymakers.

⁴⁹ Analysis based on NISRA aviation statistics.

Fig. 29. DUB passenger flow by priority route in 2017



Source: NISRA

Passenger flow in 2017

The purpose of this report is to assess the applicability of different policies which could boost Northern Ireland's aviation connectivity via the development of a set of priority routes. However, we acknowledge that the current arrangement does raise wider questions with regard to how the value of any policy which cannibalises demand from DUB is assessed. This point is discussed in more detail in a recent paper by the University of Ulster.⁵⁰

5.5 DISCOUNTED AIR PASSENGER DUTY

5.5.1 Long haul (Band B)

Recent market developments

Northern Ireland currently offers a full discount of the duty for passengers using long-haul flights departing its airports. Despite this, in 2017, United (formerly Continental) Airlines withdrew from its long-standing route to Newark, New Jersey. Moreover, flights to the US East Coast by Norwegian during the 2018 summer season finished in October of that year. At the time of writing, the only operation programmed to fly from Northern Ireland to a Band B destination in 2019 (hence qualifying for the discount) is Virgin Atlantic's seasonal service to Orlando in Florida.

This is clearly not the outcome that was hoped for when the decision was taken to underwrite the discount scheme. United's explanation of its decision to withdraw provided during the industry stakeholder engagement phase of this study, which repeated the rationale set out at the time of its decision is illuminating:

⁵⁰ <https://www.economy-ni.gov.uk/sites/default/files/publications/deti/economic-impact-assessment-of-air-passenger-duty.pdf>

- First, it was felt that the removal of APD had not supported growth in passenger demand or additional yield capture on a scale to offset factors such as increased competition on routes via DUB and LHR. It was also noted that the continued weakening of sterling against the US\$ had made the route less commercially viable;
- Second, higher oil prices had pushed up operating costs and therefore breakeven fares; and
- Third, a stronger US domestic market offered a compelling alternative use for the aircraft previously serving Northern Ireland.

Taken together, this meant that the operating equipment and business model of a network carrier such as United were no longer likely to be competitive, and therefore suitable for transatlantic services to smaller regional markets in Europe such as Northern Ireland—at least in the short-to-medium term.

At first glance, the withdrawal of Norwegian from the Northern Ireland market, despite existing policy support, is of even greater concern, because it suggests the low-cost long-haul (LCLH) business model may also not work from Northern Ireland. However, we consider that such a conclusion is unwarranted given a range of mitigating factors which help to explain Norwegian's decision that need not apply to other airlines. These include:

- the absence of any feed traffic at either end of the route;
- the inability to exploit any cargo potential because of the type of aircraft in operation;
- the airline's commitment to DUB, which was almost certainly cannibalising some of its potential demand from north of the border; and
- financial pressures on the airline, forcing it to focus available capacity on higher-yield markets.

Further considerations

Our analysis suggests that a latent commercially viable market for a transatlantic route from Northern Ireland exists (see [section 4.2](#)). This is supported by historic data on passenger numbers carried by United/Continental on its route between BFS and Newark. Therefore, we think there are reasonable grounds to expect that an airline with the requisite business model, equipment and market presence e.g., a hub base at the destination airport should be able to operate the route on a long-term basis. In terms of an initial incentive package, we consider that the continuation of the discounting of Band B APD is likely to remain an important factor in sustaining local outbound demand for such services, especially in view of the zero tariff APD environment which operates at DUB, the closest and largest competitor of Northern Ireland's airports.

This would certainly be the case for low-cost operators and also potentially for network carriers who have invested in new narrow-bodied aircraft capable of operating on routes of over 3,000 miles, such as the A321Neo LR, A220-300, and the B737-800 Max. In the case of Transatlantic destinations, this would imply targeting LCLH operators such as Jet Blue (which has bases in Boston and New York), and West Jet or Air Transat from Toronto or expanding network carriers such as Delta from New York or Air Canada from Toronto. The A220-

300 is also capable of flying over 3000 miles non-stop and has fewer seats than either of the aforementioned aircraft. This should facilitate operating services on thinner routes all else being equal, making the option of a year-round service to Belfast more viable. Air Canada, Delta and Jet Blue have all recently placed major orders for the aircraft.⁵¹

On the other hand, for a Middle Eastern hub (also identified as a priority route in chapter four), the most promising opportunity seems to be Qatar Airways flying to Doha. We expect that other options in this context are unlikely to be viable for a variety of reasons. Emirates' aircraft are too large for the Northern Ireland market whilst Etihad is currently undergoing a period of consolidation. Finally, Turkish and Pegasus Airlines' principal base is Istanbul, which is a Band A airport and thus potentially may still be subject to APD (albeit outbound only and on a much more modest scale).

For many of these operators, the long-haul APD discount could amount to 20 percent⁵² of the average economy ticket price—and in some cases, as much as 40 percent.⁵³ This is likely to make a material difference on what otherwise might be expected to be a marginal route, certainly when compared with other markets.

It is also important to highlight that one disadvantage of this policy is that the discount would also apply to long-haul charter flights to outbound leisure destinations in addition to Florida e.g. Las Vegas. This would dilute the economic benefits generated per pound invested in the form of block grant rebated to HM Treasury.

Concluding remarks

Although the recent withdrawal of both Norwegian and United Airlines from North American routes is disappointing, we think that the continuation of APD discounting for Band B long-haul routes is likely to be a key component of a policy package that will be required to support a long-haul priority route identified in [chapter four](#). This is particularly the case for a LCLH carrier where the discount will likely represent a higher proportion of the average fare.

This report has not sought to provide a VFM assessment of the current decision to impose zero APD on Band B routes. However, given that the policy is currently supporting routes which would primarily serve outbound leisure tourism there are grounds to review the net benefits being derived from the operation of the current policy. Such services are likely to sustain some economic activity in Northern Ireland since a proportion of the cost of the outbound trips will be spent on flights and bookings made through UK

⁵¹ Data on recent orders of Airbus models can be found at <https://www.airbus.com/aircraft/market/orders-deliveries.html> via the Order and Delivery download file.

⁵² This was calculated based on an assumed overall ticket price of £390 for outbound leg of a long-haul departure from the UK if reduced Band B rate of APD is £78, and £780 for a standard rate seat (e.g. premium economy). Return fares are likely to be double these figures which puts them comfortably in the price range for non-flexible tickets on network carriers across the Atlantic and to the Middle East booked at least a month in advance.

⁵³ This represents the comparative APD figure as a percentage of out of season lead in prices on similar sectors by long-haul, low-cost carriers like Norwegian and Westjet, or on indirect routings using airlines like Wizz and WOW, equating to indicative outbound fares as low as £195 in economy and £390 in Premium, and return fares of double that.

companies. However, it may be that a derogation which restricted the use of zero APD on some kinds of Band B routes could improve VFM, assuming such a qualifying exemption could be identified and remain consistent with State Aid rules.

5.5.2 Short-haul and domestic (Band A)

The UK Government recently consulted on APD including whether responsibility for setting Band A rates should be devolved to Northern Ireland. The Chancellor of the Exchequer announced in his October 2018 budget that, based on the responses received, further analysis would be taken of the potential effects of discounting Band A on short-haul international and domestic flights, and the VFM of investing in such a measure. A working group has been established on this topic.

The impact of APD discounting on route development

The effect of changing passenger taxes on both new route development and traffic growth on established services has been extensively studied. There is also a body of empirical evidence from countries where such taxes have been introduced or removed. A recent study focused on Scotland took account the extent to which airlines might retain savings associated with APD to improve their own yields, rather than passing them all on to passengers.⁵⁴ This evidence suggests that the benefits arising from discounting APD to connectivity are derived from two channels:

- a reduction in air fares, and its impact on passenger demand; and
- a consolidation and potential expansion of seat capacity by airlines, reflecting improved net revenues from improved operating economics, and lower risk assessments associated with adding new routes and frequency.

In some countries APD discounting has had a material impact on the aviation market e.g. Republic of Ireland or the Netherlands.^{55 56} In both cases, the policy boosted demand on qualifying routes (especially otherwise marginal ones) and encouraged a modest increase in the range of destinations served, or the capacity on existing routes. However, there is some evidence which points to these effects being limited to the first two years after the reduction or removal of APD.⁵⁷

We see no reason why there would not be a positive effect in Northern Ireland were short-haul (or Band A) APD to be reduced or removed. The aviation market is dominated by domestic routes that have lower average fares compared to flights to international destinations. The former are typically more

⁵⁴ York Aviation, "The Impact of Air Passenger Duty in Scotland" (A report for the consortium of Scottish airports, October 2012).

⁵⁵ H and Kolkman, J Gordijn, "Effects of the Air Passenger Tax: behavioural responses of passengers, airports and airlines" (Report for KiM Netherlands Institute for Transport Policy Analysis, 2011).

⁵⁶ SEO Economic Research, "The Implications of the Irish Air Travel Tax" (report commissioned by AerLingus, Ryanair and CityJet, 2009).

⁵⁷ A Graham, *Managing Airports: an international perspective*, 4th ed. (London: Routledge, October 2013), 281-85.

price elastic because of greater competition from alternative surface modes and the greater proportion of more discretionary VFR traffic.⁵⁸ All else being equal, this suggests that a reduction (or removal) of Band A APD in Northern Ireland may have a relatively large impact on passenger demand although not without some associated costs.⁵⁹

Furthermore, the range of international destinations served directly is probably not fully representative of the market size and propensity to fly in Northern Ireland, given the scale of leakage to DUB. This suggests that a reduction of APD is likely to offer a positive stimulus to efforts to attract new routes to serve these markets. These effects could be reinforced if agreements were reached beforehand with key airlines about investment in new seat capacity and destinations, as was the case when the Republic of Ireland removed APD.

VFM considerations

Unfortunately, APD discounting of Band A routes also has a number of less desirable features from a VFM perspective. In its generic form it would apply to all routes including those which do not require an operational stimulus. Moreover, precedent suggests that the Northern Ireland Executive would be required to compensate HMT for any loss of revenue through its block grant. Therefore, the policy's cost is likely to be high and it would need to be weighed against the commensurate benefits (in terms of the economic value of enhanced connectivity).

Can these be ameliorated?

In our view it may be possible to introduce adaptations to a generic discounting scheme which would help to improve the policy's VFM. However, such amendments would mean that the policy would become subject to State Aid requirements, which would have to comply with either the airport and airlines guidelines or the PSO rules. Such a policy would also need to be approved by HMT who retain the policy lead on ADP.

In view of current single market considerations, the Azores ruling, and the three important requirements this imposes in terms of any tax dispensation,⁶⁰ our view is a reduction of APD targeted at specific types of routes may be possible in Northern Ireland because:

- it is further from Europe than the UK mainland;
- France already applies its taxes on air passengers at different rates for different airports,⁶¹ and
- it may be possible to argue that there are exceptional circumstances in Northern Ireland because of the land border with the Republic of Ireland.

⁵⁸ DfT: UK Aviation Forecasts 2013 – Table 2.1, P18.

⁵⁹ <https://www.economy-ni.gov.uk/sites/default/files/publications/deti/economic-impact-assessment-of-air-passenger-duty.pdf>

⁶⁰ Portugal v Commission (C-88/03) [2006] ECR I-7115; [2006].

⁶¹ <https://www.fccaviation.com/regulation/france/airport-tax>

One possibility that could be investigated would be to define a new short-haul distance criterion for flights of less than 400 miles (this would broadly cover routes to the UK and the Republic of Ireland but not those to continental Europe). HMT's working group provides a possible vehicle to explore this option.

This may be of material benefit in helping Northern Ireland's airports to attract such un- or under-served links.⁶² It also has the benefit of creating a mechanism where all of Northern Ireland's airports could benefit irrespective of size. As highlighted in [section 5.2](#) size restrictions are likely to prohibit the application of several policy support measures for BFS.

Potential options for a more tailored APD discount strategy which would improve VFM which are bulleted below. As indicated these policies would be subject to State Aid review. This process increases risks that Northern Ireland could engage in a costly process of pursuing a policy which is eventually rejected and would likely lengthen the implementation period.

- Apply an APD discount—either generically across the UK or, if the ability to do so was devolved, to Northern Ireland alone—only to *new* routes or frequencies brought forward after a specified date. Support would be provided for a time-limited period that should be sufficient for the routes to become self-sustaining e.g. three years. Such a policy would be challenging to deliver, in practice, but we are aware that it is an option which has been promoted and pursued by other UK airports and, in our view, would be worth exploring with HMT.⁶³
- Include a commitment from airlines to deliver a fixed number of additional seats in return for the removal of APD. In both the Republic of Ireland and Scotland (less successfully, proposed) changes of APD were informally choreographed with indicative prior commitments by airlines on how they might respond. In the Republic of Ireland, the scrapping of APD was introduced as a trial.

Concluding remarks

Overall, we think that the generic discounting of APD on Band A flights by Northern Ireland would be beneficial to supporting route development. However, such a policy is unlikely to deliver VFM given the likely loss of revenue through the block grant and the implicit subsidy that will be delivered to a large number of already commercially viable routes, as well as the more limited additional benefits offered from the redirection of Northern Ireland-residents from Dublin. A more targeted discount strategy could help to ameliorate these issues but would face much greater issues with State Aid compliance.

⁶² This should occur irrespective of the extent of pass through from the tax reduction to ticket prices. To the extent that it is not, this should improve the yield and hence the operational economics of a route.

⁶³ We understand that DfE has explored this option with DfT over the past 12-18 months and it was rejected on the grounds that it would penalise existing routes to the same destination. However, we consider that since this analysis is focused on new currently unserved routes this rationale should not apply.

5.6 ROUTE-FOCUSED MECHANISMS

In this section, we discuss policy mechanisms that are route specific (in contrast to generic APD discounting). They also differ from APD in that they need to demonstrate not just commercial need, but also—crucially, under State Aid rules—a clear and material *economic case*.⁶⁴ Such a case needs to demonstrate an expected net positive impact for the relevant geography. The Commission may request Member states to communicate, within two months:

- a document justifying the need for the public service obligation and its compliance with the criteria mentioned in Article 16;
- an analysis of the economy of the region;
- an analysis of the proportionality between the envisaged obligations and the economic development objectives;
- an analysis of the existing air services, if any, and of the other modes of transport available which could be considered a substitute for the envisaged imposition.

Separately, the appraisal of likely returns in terms of VFM is an essential consideration for the sponsoring authority.⁶⁵

5.6.1 Public service obligations (PSOs)

In the context of the aviation sector, a PSO provides an obligation to run a route between two designated airports. Should it be the case that no airline can be found who is interested in servicing the route then it is possible for the relevant Member State to create a monopoly and compensate the carrier for any operational losses.

The academic literature illustrates that PSOs can vary substantially in their aims and objectives and provides examples of this from across Europe.⁶⁶ The ITF forum on Government Support Measures for Domestic Air Connectivity, mentioned earlier in this chapter, also provides evidence to this effect.⁶⁷ These objectives can be broadly categorised as follows:

Economic objectives:

- connecting all regions into national and global economic and political centres;
- enabling access to, and the exporting of, natural resources;
- enhancing mobility of labour; and

⁶⁴ PSOs must respect the conditions and requirements set out in Articles 16 – 18 of the Air Services Regulation 1008/2008. Within this, Article 16(3)(a) states that the obligations themselves should be in proportion to the economic development needs of the region concerned. The PSOs cannot impose restrictions on the provision of air services that go beyond what is necessary to fulfil the needs in question. Most importantly a PSO route must be “being considered vital for the economic and social development of the region which the airport serves”.

⁶⁵ As described by the [Commission](#) for a company to receive state aid means that they have gained an advantage over its competitors. Therefore, it is prohibited unless it can be justified by reasons of general economic development.

⁶⁶ For example, see analysis in G, Fewings, R and Fuglum, K Williams, "Airport provision and air transport dependence in European countries", *Journal of Airport Management*, 4 (2007): 398-412.

⁶⁷ ITF (OECD): Ibid (Dec 2018).

- enhancing productivity and investment.

Social objectives:

- access to healthcare;
- access to social services;
- access to education; and
- access to social networks, family, and friends.

Strategic objectives:

- economic rebalancing; and
- national integration.

Regulation (EC) No 1008/2008 details that PSOs can only be imposed to routes that fulfil transport needs which cannot be adequately met by an existing air route or by other means of transport. This regulation also details that PSOs are only permitted for scheduled air services between an airport in the EC and an airport serving a peripheral or development region in its territory or on a thin route to any airport on its territory any such route being considered vital for the economic and social development of the region which the airport serves.

Current application of PSOs across the EU

PSO type programs exist around the world wherever air markets become disadvantaged and economically unviable as a result of at least one origin or destination of an air route being located in a peripheral or economically underdeveloped region. In this report we have focused on PSOs operational in the EU since these can offer the most direct and applicable insights for Northern Ireland.

As of September 2018, there were 176 PSOs operating across the EU of which 22 were run by the UK (Fig. 30). The vast majority of these supported domestic routes with just seven linked to international routes within the common market.⁶⁸ These are as follows:

- Larnaca to Brussels;
- Brno to Munich;
- Mariehamn to Stockholm;
- Strasbourg to Amsterdam;
- Strasbourg to Madrid;
- Strasbourg to Prague; and
- Vilnius to London City (announced but not yet operational).

Both Brno and Vilnius airports operate within predefined category 'a' economic areas according to the current Guidelines whilst Mariehamn is defined as within a sparsely populated area. We explore the feasibility of operating an international PSO further down in this section.

⁶⁸ A number of French PSOs support routes with French dependencies in the Caribbean e.g. Martinique, Reunion, French Guyana and Guadeloupe. However, we do not consider these to be relevant to this research and have therefore not expanded

Fig. 30. of EU28 PSOs by country

Country	Total	Domestic	International
Croatia	10	10	0
Cyprus	1	0	1
Czech Republic	1	0	1
Estonia	3	3	0
Finland	2	1	1
France	40	37	3
Greece	28	28	0
Ireland	3	3	0
Italy	14	14	0
Lithuania	1	0	1
Portugal	20	20	0
Spain	20	20	0
Sweden	11	11	0
UK	22	22	0
Total	176	169	7

Source: European Commission, Oxford Economics calculations

UK PSOs in operation are focused on the Scottish Highlands, which is classified as a sparsely populated economic area under the current guidelines.⁶⁹ Outside of the Highlands there are four other PSO routes in the UK as follows:

- Cardiff to Anglesey;
- Newquay to London Gatwick;
- Dundee to London Stansted; and
- LDY to London Stansted.

The link between PSOs and APD

PSOs for domestic routes benefit from an important dispensation in respect of APD, whereby passengers do not pay the duty. Since APD applies in both directions on domestic routes, this can provide a significant indirect subsidy, relative to the default position that would apply were the route not subject to a PSO. From discussions with DfT and HMT (in the context of other work), we understand the rationale for this exemption was that taxing routes subsidised by the public sector would simply recycle public funds at an administrative cost. Moreover, the expectation was that PSOs would principally be used in the UK to support “lifeline” services and would therefore require material public subsidy in any case. This is reinforced by the fact that, with the exception of current PSOs from Newquay, City of Derry, and Dundee to London, all other PSOs in the UK are paid for by the Devolved Administrations.⁷⁰

⁶⁹ <https://www.gov.uk/government/consultations/assisted-areas-map-2014-to-2020-stage-2>

⁷⁰ Examples include: Transport Scotland's PSOs into Glasgow (Barra, Tiree and Campbeltown); the Stornoway to Benbecula PSO; the Orkney and separately the Shetland intra-island PSOs; and the Cardiff – Anglesey PSO.

DfT has also indicated to Northpoint, in the context of other discussions, that it considers this exemption to be an unintended consequence. Indeed, a number of public authorities have used it as a means to incentivise new route development, given that PSOs do not have to involve a subsidy to be in conformity with the relevant regulations. This is because the case required to support a PSO application is principally socio-economic rather than financial, albeit it does need to be demonstrated that a market failure has occurred. However, this could take the form of slot shortages at appropriate times at the preferred destination, rather than being related to the commercial viability of the service.

The acceptability of the measure is also dependent on meeting a range of qualifying rules, of which transparency, proportionality, and avoiding potential market distortions are the most important. These are codified in the relevant 2008 Regulation, and explained in the context of subsequent case law and the usual interpretation in the updated 2017 EU Guidelines.⁷¹ Hence, by adopting a PSO (closed or open), airline operators can benefit from the APD discount, even if the route does not require financial subsidy.

Based on interactions with DfT on other PSO-related projects, Northpoint has formed the view that there is a risk that the UK Government may seek to close this possibility. This may result from the review on the UK's use of PSOs that is likely to form part of the Aviation Green Paper consultation. Furthermore, we consider it likely the UK Government will continue to apply its own interpretations of the EU Guidelines that will restrict use of PSOs, most notably on non-London cross-country routes.

The feasibility of an international PSO

As described, although the majority of PSO routes currently operating in the EU28 support domestic routes a handful of international versions also exist. Our consultation work suggested a broad degree of support within the aviation industry for the use of a PSO to support the development of certain short-haul international routes.

A complexity of such an initiative is that it would require the support of both countries, in addition to the relevant airport operators. Moreover, such a proposal is likely to be subject to more scrutiny from DG-MOVE. It is also unclear as to how DfT would react to the use of the PSO mechanism for such purposes, even if it was not directly responsible for promoting or funding the PSO. Historically, we are aware that although DfT did not object to the LDY-DUB PSO, it has not *encouraged* other such applications.⁷²

The Green Paper consultation will influence the extent to which DfT adopts a formal policy position in relation to this type of route, or indeed to internal UK domestic routes offering cross-country services (on which the 2016 Guidelines are also silent). In effect, proposals for PSOs to support routes of this nature

⁷¹ EU Commission: Interpretative Guidelines on Regulation (EC) No 1008/2008 - Public Service Obligations (PSO), June 2017.

⁷² One example was the expression of interest received for a PSO-supported service between Rostock and Stansted in the early 2000s, which was not pursued followed consultations with UK DfT.

would need to be determined based on the EU Regulation and Guidelines, as there is no UK-specific policy that has been published which is applicable.

Market distortion is a concern that has been expressed by DfT officials in the context of discussions with Northpoint about other PSOs, particularly if there is a proliferation in the use of the mechanism. This suggests that DfT may seek to constrain the use of a support mechanism, on the grounds that failure to do so may create precedent that risks PSOs being used much more widely in the UK.

Prima facie, the existence of international PSOs within the EU implies that they could be used to support the international short-haul route development advocated in this report. However, we acknowledge that their implementation would be more complex and subject to greater risks associated with State Aid compliance.

Given the prevailing political climate we think that DfE will need to come to a view on how far it wishes to advance its views about the use of PSOs as a policy mechanism. This could involve testing the possibility of securing a block exemption or special status, that would allow more extensive use of PSOs from Northern Ireland's airports than might be permitted elsewhere in the UK.

A lengthy undertaking?

In our consultation work a reservation expressed around PSOs is that they typically are time-consuming to implement. From experience it would take at least nine months to establish, even in the absence of resistance (requests for clarification) from DfT or DG-MOVE. A PSO application requires a report documenting the socio-economic rationale and a minimum six-month tendering process. However, we would note that this process does have the advantage of helping to drive market responsiveness and developing a better and more transparent understanding of the market on routes that are important for Northern Ireland's economy.

Concluding remarks

Based on our analytical review and stakeholder consultation discussions, we think that PSOs offer an effective, targeted, and easily-administered form of route intervention. Airports, some airlines, and many regional and local stakeholders are likely to find the option attractive. They have the following advantages:

- being an efficient mechanism for careful targeting of resources, even to the extent of focusing on specific airport-to-airport pairs;
- being predicated on the notion that the aid being given should be proportional and subject to open tender procedures which, implicitly, should drive transparency and value for money; and
- allowing onward connectivity to be used as a justifying criterion.

It may be possible to apply this form of support to short-haul international routes. However, such a scheme would require the support of DfT as well as the recipient country and airport authority. As described, there are legitimate grounds to be sceptical that this could be secured. Moreover, an international PSO would almost certainly imply additional scrutiny from DG-MOVE. The

likely additional complexity and lower probability of success should be weighed carefully in any decision to pursue an international PSO.

5.6.2 Route Development Funds

RDFs provide an instrument to allocate financial support to airports to boost connectivity. There is no template for how such schemes are operated in terms of: the funding mix; the identity of stakeholders that would be involved (either financially or operationally); or the type of financial support that would be delivered.

Current state of play in the UK

In 2014 the UK Government announced their intention to establish a Regional Air Connectivity Fund (RACF), with funding of £56 million made available to cover start-up aid for routes during the first three years of operation.⁷³ A total of 19 routes applied for financial assistance including the LDY-DUB service and a weekday route between LDY and Birmingham.⁷⁴

In general, industry feedback on the creation of RACF was supportive among those that were eligible, but some criticisms were expressed around the scope, process and timeline. These reflected issues with the application process, and the eligibility and VFM appraisal criteria. The scheme was effectively put on hold, once the UK's coalition government left office, after the initial round of applications had been approved in November 2015 before being finally withdrawn in March 2018. However, two routes covered by the scheme continue to receive financial support (Newquay-Leeds Bradford and Norwich-Exeter).⁷⁵

Evidence from previous experience in the UK⁷⁶

In Scotland an RDF was established in November 2002 with the objectives of improving business connectivity and the volume of inbound tourism. It was a public-private partnership involving the Scottish Government, Scottish Enterprise, Highlands and Islands Enterprise and Visit Scotland.⁷⁷ The initial budget was £6.8 million spread over three years, a figure which was subsequently raised to £13 million.⁷⁸

A 2009 evaluation study offered a broadly positive review of its impact.⁷⁹ Key findings included:

⁷³ <https://www.gov.uk/government/news/19-new-regional-air-routes-bid-for-start-up-aid-funding>

⁷⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684993/start-up-aid-applications-received.pdf

⁷⁵ <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2018-06-11/152101>

⁷⁶ We acknowledge that Northern Ireland also ran its own RDF established in November 2003 by DETI NI. We have assumed that the target audience of this report has a good awareness of the success or otherwise of this policy.

⁷⁷ <https://centreforaviation.com/analysis/reports/uk-regional-air-connectivity-fund--which-airports-does-it-help-and-what-is-a-region-anyway-160650>

⁷⁸ Ibid.

⁷⁹ S Wilson, "Evaluation of the Scottish Air Route Development Fund "(Study Report, November 2009), 106.

- 63 services were offered RDF investment, of which 55 services went ahead with 28 of them operating at the time of the review (seven years after implementation);
- Over the period of the review there had been a steep rise in the number of domestic and international passengers on routes operated with RDF investment;
- Based on analysis of CAA data the author concluded that the use of an RDF had been much more successful in establishing new routes in Scotland compared to other areas of the UK; and
- The total Net Present Value (NPV) for all RDF services was estimated to be £406 million at 2002 prices with a benefit-cost ratio of 23:9.

The experience of RDFs used in other parts of the UK has been less positive. In Wales an RDF was introduced in the summer of 2006. It was designed to support new international services by offering discounts on airport aeronautical charges and assistance in marketing the route for up to three years.⁸⁰ Two new routes were established run by Lower Cost Carriers (LCCs) between Cardiff and Barcelona and Paris. Support was also offered for routes between Cardiff and Brussels and Manchester, but the proposed operator—Air Wales—failed.⁸¹

An RDF was also introduced in the North East of England during the financial year of 2006/7. Routes supported included four from Newcastle airport (Bergen, Copenhagen, Inverness and Krakow) and one between Durham Tees Valley Airport and Brussels. At the time of writing all of these routes were still operational with the exception of Newcastle-Inverness.

Route applicability

Experience from schemes across Europe suggests that RDFs tend to produce modest results whose greatest value is in bringing forward short-haul and domestic route formation or frequency enhancement. Just as significantly, the experience from elsewhere is that they tend not to succeed when used on marginal routes where despite the aid package route profitability is not established within the first two years of operation.⁸² Therefore, we consider that they are primarily designed for routes that need modest encouragement, rather than those which are fundamentally uncommercial; the latter are much better suited to support by PSO.

It is also worth recognising that evidence from previous schemes suggests RDFs tend to be most attractive to LCCs. This reflects the fact that any state aid offered must be limited to a small increment of the average ticket price.⁸³ This type of funding contribution has a larger impact on the route economics of LCCs operating into airports with higher charges. In these cases, the benefits can be worth over 10 percent of the ticket price. In contrast, for network or regional carriers operating into smaller regional airports, the cost saving will typically amount to less than five percent of the average fare.

⁸⁰ <https://centreforaviation.com/analysis/reports/uk-regional-air-connectivity-fund--which-airports-does-it-help-and-what-is-a-region-anyway-160650>

⁸¹ Ibid

⁸² S Wilson, "Evaluation of the Scottish Air Route Development Fund "(Study Report, November 2009), 106.

⁸³ The rules are set out in the 2014 EU Regional Airports State Aid Guidelines.

How would it be established and operate? Concerns were expressed during stakeholder consultations that RDFs take a long time to set up. However, in our view, if a scheme for Northern Ireland, consistent with that approved in 2014 for the UK, were to be notified to the EU, the existence of a clear precedent means there is a reasonable prospect that it would not take much longer than four months to be approved. If advanced preparations, including inviting applications on a conditional basis, were put in place, it should be possible for an RDF to be operational within 6 to 9 months. This is shorter than the time required for a PSO tender, and probably not much longer than would be required to develop and agree an appropriately specified co-operative marketing agreement. Moreover, at least during this period of negotiation and formal notification, discussions and even invitations to bid could be held with airlines on a without-prejudice basis.

Issues with applicability in Northern Ireland

It is unclear whether the mechanism previously used in Northern Ireland to support long-haul routes under special dispensations that the UK secured in 2002/03 is still deliverable.^{84 85}

Moreover, even if it were, we think that there are grounds to question the commercial value that would be supported by an RDF in Northern Ireland. These chiefly relate back to the characteristics of Northern Ireland's airport sector as described in [section 5.2](#). The fact that BFS has a throughput of over five million ppa would limit its capacity to draw financial support to 'exceptional circumstances' where a clear market failure can be demonstrated. Moreover, although BHD does currently comply with size criteria the fact that it has an overlapping catchment area with BFS is likely to also severely limit the extent to which it could draw upon any available route support. It could be an effective means to support routes out of LDY and it is possible to specify airports, rather than a region, to which the scheme applies.

Concluding remarks

In our view, adapting the RACF approach to the specifics of Northern Ireland is unlikely to be of significant value due to the State Aid restrictions which will limit its applicability to the two major airports.

5.6.3 Co-operative marketing agreements

Co-operative marketing agreements—which, if correctly configured, need not be notified—are suitable for all routes designed to attract material *inbound* business passengers, tourism visitors, or inward investment flows. In the context of Northern Ireland, they have a number of major advantages. Notably, this type of arrangement means that support can be offered to airlines for route development purposes without restrictions based on the size of airport, the

⁸⁴ EU: State aid No N 303/2005 – United Kingdom Air Route Development Funds (2006).

⁸⁵ EU: Guidelines on State aid to airports and airlines 2014/C 99/03.

geography of the destination or the route length of the air link that would serve it.⁸⁶

Such agreements provide a means to inject substantive sums into new routes in a manner that encourages collaborative working.⁸⁷ In addition to the airline, this may also involve airports, tourism and economic development agencies, and other stakeholders at *both* ends of the route. This results in a shared commitment to the project, a feature which airlines find attractive, and helps to ensure compliance with state aid considerations linked to proportionality.⁸⁸ In this respect, the key tests are whether the funds offered, and the nature of the cooperative agreement reached, would result in:⁸⁹

- an overall marketing budget consistent with what a *market investor* would consider reasonable for the commercial returns that could accrue to the enterprise; and
- each partner clearly outlining their responsibilities and making a financial investment consistent with the benefits they expect to gain.

Experience from elsewhere in the UK

In Scotland and Wales, co-operative marketing arrangements have been used to attract long-haul services. The countries' respective tourist boards were used as gateways for funding from their respective devolved administrations.

In Scotland, the majority of co-operative marketing is financed and allocated by VisitScotland. We think that Scotland has some useful parallels with Northern Ireland as a market for inbound tourism which makes VisitScotland's activities a useful reference point

Based on NorthPoint's dealings, it would be reasonable to say that VisitScotland view themselves as a resource that the airports can call upon if there is a route under review that has inbound tourist potential and is a current strategic priority. It focuses on developing routes which they anticipate will make a significant contribution to the Scottish economy.

Certain features of VisitScotland's operating model which we think are of potential relevance to this report include:

- Primary route intervention is informed by tourist survey data which may also be a useful source for airlines. This includes exploring trip motivations, residency and mode of arrival.

⁸⁶ Intra-EU or ex-EU, international or domestic, short haul or long haul.

⁸⁷ Often well beyond what might be possible under RDF rules (this is particularly important in the context of long-haul routes where the aircraft, and therefore the capacity provided, is frequently larger, and the investment risk therefore that much greater); or with a funding draw-down profile that is typically far more front-end than on offer via PSOs, especially where the route(s) concerned is/are not expected to make a profit.

⁸⁸ As described in order to comply with State Aid considerations start-up financial support should be limited to a share of operating costs depending on the airport size: 25 percent for airports with 3-5 million ppa; 50 percent for airports with 1-3 million ppa; and 75 percent for airports with less than 1 million ppa.

⁸⁹ Competition Law has notions of proportionality and other tests such as Market Economy Operator (MEO) Principle to cover state intervention. If the state can show that it is acting in a way that a rational investor would, for example, in providing loans or capital on terms that would be acceptable to a genuinely private investor who is motivated by their financial return rather than policy objectives then it is not providing state aid as defined by Article 107(1).

- Any financial commitments made for new routes are typically matched by inputs from the airline.
- In some cases, there is close coordination with other Scottish stakeholders such as Scottish Development International or Scottish Enterprise. This helps to simplify the process for airlines.
- At route launch airlines are typically required to provide additional marketing development support e.g. by offering additional editorial and marketing coverage (potentially via their website) as part of their matching effort.

THE ROLE AND VIEWS OF TOURISM IRELAND

Our stakeholder consultations highlighted the consistent view that tourism is considered an important component of Northern Ireland's economy. The province has a strong product offer, with iconic attractions capable of drawing international visitors from a wide range of destinations—both long haul (North America and Australasia) and short haul (Europe)—while also supporting a strong UK domestic visitor market.

In March 2016, prior to the suspension of the Northern Ireland Assembly, the Enterprise, Trade and Investment Minister, Jonathan Bell, announced £4 million of additional support over a three-year period to encourage improved air connectivity. Enhanced co-operative marketing was a focus for this funding, with unserved routes with a high potential for inbound tourism and business identified as key targets.

Tourism Ireland has since picked up this mantle, running a co-operative marketing project with Irish Airports using a fund applied according to its inbound tourism priorities and criteria that is open to all Irish Airports (north and south of the border). Both the Department of Tourism in the Republic of Ireland and Transport and DfE have occasionally offered additional resources for specific purposes e.g. in Northern Ireland's case, on the recent Norwegian route that may be considered more strategic.

In terms of the project's operation, appeals for support come from many quarters. Where the cooperation agreement is directly with an airline, TI has never exceeded 50 percent match funding. It will, however, consider tripartite agreements, with airports and other stakeholders included as partners. TI works creatively to stretch the impact of the budget and has longstanding relationships with the main airlines in Northern Ireland. For example, it has helped on Easyjet's UK domestic routes (and hopes to extend that to France this year), and also on Flybe and flybmi's UK domestic routes. TI takes a pragmatic view of its role, suggesting its job is to help at the margin, and this will not happen if the underlying fundamentals are poor.

TI recognises it does not spend as much as is probably needed to support route development to Northern Ireland, and that to attract more routes, Northern Ireland's contribution to the co-operative marketing arrangement may need to increase (two-thirds of current tourism development funds come from the south of the border). It was suggested that TI could then target routes where it already spends money—in Germany, for example, this means the services to Düsseldorf, Cologne, Munich, Berlin, and Frankfurt. However, it should be noted that, despite it being the sole mandate of TI, tourism promotion is not the only benefit of a new route. Other NI agencies may see the potential for a fruitful return on investment.

Concluding remarks

Overall, we think that extending Northern Ireland's co-operative marketing support can be an important device to support priority route development. Although the activities of TI do provide some valuable existing support, further funding is likely to be required to deliver the priority routes identified in this paper. Increased marketing support should be matched by airline commitments to boost VFM. It may also be of value to develop a broader stakeholder group to participate in the schemes via the inclusion of Local Authorities, the hospitality sector and local tourism direct marketing organisations.

5.7 AIRPORT-FOCUSED MECHANISMS

For smaller airports such as LDY, operating losses are likely to be incurred when accommodating commercial air transport services. This implies the need for an ongoing operating subsidy. Such an arrangement is currently offered by Highlands and Islands Airports Limited (HIAL) to its smaller airports and by Cornwall Council to Newquay Airport. It is likely to be a key component of the support for their air services, helping to ensure that airport charges to airlines (and hence passengers) do not reach a level that would be prohibitive for small regional airlines which tend to operate routes.

This type of subsidy is currently permitted without the need for notification if the airport concerned has a throughput of less than 200,000 passengers per annum—or one million ppa if the airport is notified under SGEI rules.⁹⁰ The latter would require a supporting economic or social rationale. Alternatively, if the owner or operator of the airport is a public authority—and can demonstrate there is a market investor case for doing so—they can also borrow to fund operating losses. In doing so, they would need to demonstrate that it is for a temporary period and is in line with what a sector market investor might reasonably be expected to do.

In contrast, larger airports are more likely to seek contributions to surface access improvements to increase their catchment areas, investment in specialist projects e.g. cargo sheds, bonded warehouses, or aircraft hangars, or in airport-related commercial development e.g. site preparation, access roads.⁹¹ Such support should ultimately increase the commercial incentives they can then offer to airlines.

As part of our research we have also assessed funding options described by the generic term “risk sharing”. While there are examples of public authorities

⁹⁰ Public authorities can define certain economic activities carried out by airports or airlines as SGEI within the meaning of Article 106(2) of the Treaty and the *Altmark* case-law and provide compensation for discharging such services. In such cases, the SGEI Communication and Commission Regulation (EU) No 360/2012 provide guidance on the conditions under which the public financing of an SGEI constitutes State aid within the meaning of Article 107(1) of the Treaty. Aid in the form of public service compensation will be assessed under Commission Decision 2012/21/EU and the SGEI framework. Together those four documents form the ‘SGEI package’, which also applies to compensation granted to airports and airlines. (2014 State Aid to Aviation Guidelines)

⁹¹ Examples of this type of support include a contribution to Birmingham's runway extension project and station improvements at Gatwick, including an additional platform, access upgrades and extensive refurbishment. In Scotland, Transport Scotland bought two specialist twin-totter aircraft to ensure continuation of services to the remote and peripheral areas.

who have entered the riskiest parts of the aviation industry—owning an aircraft or operating an airline— they typically steer clear of such actions.⁹² Instead they are more likely to rely on the other mechanisms we have discussed in this report to influence the risk-reward balance positively for potential air service operators. It is very unusual for this to extend to directly underwriting airlines' losses. However, the scale of financial support could be linked to the level of passenger flow compared to actual break-even points so as to incentivise commercial stability rather than maximising passenger volumes.

There are also examples of financial support packages being structured on the basis of:

- volume incentives, with airport charges and the quantum of state aid support being designed accordingly; and
- the basing of an aircraft. Such a policy is typically associated with a commitment to provide an agreed number of additional seats.

These types of support packages are not uncommon in commercial agreements between LCCs and airports and have often been drawn up on the basis that they are compatible with MEO principles.

In Northpoint's experience, the former package has also been frequently used by Newquay airport. Heavier discounts were offered to airlines if they proposed new route capacity above a pre-agreed threshold. Funding support to be able to do this was provided in the form of enhanced operating subsidies and co-operative marketing. The latter is a common commercial arrangement that has been used by several small and medium-sized airports across the UK.

5.8 CONCLUSIONS

Drawing together this discussion, Fig. 31 summarises the policy levers described in this chapter across a number of relevant criteria for Northern Ireland's policymakers. Providing a formal VFM assessment for the various policy levers on specific routes is beyond the scope of this study. As such, the qualitative rating provided reflects the judgements of NorthPoint aviation based on their industry experience.

The table highlights the complexities and trade-offs that are likely to exist in this process. The policies which might offer the best VFM such as an international PSO or route specific APD discounting are not in the control of the Northern Ireland's Executive. Moreover, as described, the former is likely to require a lengthy period to implement and would encounter scrutiny from both DfT and the Commission.

Policies which are within the remit of Northern Ireland's Executive under the current devolutionary settlement are generic APD discounting and co-operative marketing support. These have the merit of being quicker and easier to introduce as well as offering greater certainty of a successful implementation. However, a generic short haul APD discounting scheme is likely to offer poor VFM. On the other hand, co-operative marketing and long haul APD

⁹² Transport Scotland purchased two twin otter aircraft from Viking Aviation in Scotland and leases them to airlines for operation. The States of Guernsey bought Aurigny to ensure it would keep operating.

discounting are likely to offer superior VFM making them preferable from a policy perspective.

Fig. 31. Qualitative evaluation of applicability of policy levers to Northern Ireland's route development needs

Policy lever	Legal power with the NI Executive?	VFM	Issues with State Aid Compliance	Time scale
APD discount (short haul) generic	No	-	None	Lengthy
APD discount (domestic) new band	No	✓	Low	Medium
APD discount (short haul) route specific	No	✓✓	Medium	Lengthy
APD discount (long haul)	Yes	✓✓	None	N/A
Domestic PSO	No	✓✓	Medium	Lengthy
International PSO	No	✓✓✓	High	Very lengthy
RDF	No	✓	Low	Lengthy
Co-operative marketing	Yes	✓✓	Low	Medium

Source: Northpoint Aviation

6. RECOMMENDATIONS

Drawing together this analysis, we now set out policy recommendations. These reflect a combination of the Northpoint team's own expert judgment, and views collected from a variety of consultees as part of this study's stakeholder engagement work.

6.1 POLICY RECOMMENDATIONS FOR PRIORITY ROUTES

In line with DfT's anticipated preference for concise and simple policy mechanisms for intervention in air route development markets, Northern Ireland should select two or three main route development mechanisms. We therefore suggest exploring the use of a single support package capable of funding:

- The continuation of zero APD on Band B (long-haul) routes;
- PSOs to the maximum extent possible; and
- co-operative marketing agreements with matched support by airlines and other stakeholders.⁹³

An indicative estimate of the scale of funds likely to be needed to deliver the priority routes is set out in Fig. 32 on a qualitative basis. As a guide, these descriptors can be expected to translate to the following approximate financial bands:

- Low: up to £300,000
- Medium: between £300,000 and £1 million
- High: over £1 million

The table also identifies potential support mechanisms for each of the services in question.

Fig. 32. Overview of recommended policy options and ballpark costs, by route

Destination	Financial requirement	Recommended policy lever
Long Haul International (YR: 5-6x weekly in summer, 3x weekly in winter)*		
Doha	High	Co-operative marketing
New York	High	Co-operative marketing
Toronto	High	Co-operative marketing
Boston	High	Co-operative marketing
Short Haul international - Hubs (YR: 4-7x weekly summer; 3-6 weekly winter)**		
Frankfurt/Dusseldorf	Low	PSO/Co-operative marketing
Zurich	Medium	PSO/Co-operative marketing
Scandinavian hub	Medium	PSO/Co-operative marketing
Brussels	Medium	PSO/Co-operative marketing

⁹³ The airline would need to cover a significant portion of the total package to comply with State Aid legislation. A 50:50 funding share is most typically used but it may be useful for some discretion to be applied depending on an assessment of the underlying route economics.

Madrid	Medium	PSO/Co-operative marketing
Munich	Low	PSO/Co-operative marketing
Short Haul International - Other (YR: x3-4 weekly summer; x2 weekly winter)**		
Budapest	Low	Co-operative marketing
Bucharest	Low	Co-operative marketing
Riga	Low	Co-operative marketing
Short Haul (LDY) - 12 per week (x2 weekdays, x1 weekends)		
Dublin	Medium	PSO
Manchester	Low	PSO
Birmingham	Medium	PSO

Source: Northpoint analysis and estimates

* Assumes Band B APD discount continues to apply

** Discounting Band APD for new routes/frequencies only could also be considered

6.2 WIDER REFLECTIONS AND CONSIDERATIONS

The purpose of this study has been to identify a set of priority routes to boost aviation connectivity in Northern Ireland and to evaluate potential policy levers that could be used to support these routes. In this section we present a set of wider recommendations provided by Northpoint Aviation based on their industry expertise.

In practice, it would be best to develop a multi-faceted agreement which engages all of Northern Ireland’s airports in a common cause with other key stakeholders with an interest in improving the Province’s air connectivity and allows access to funding from the Northern Ireland Executive using a number of carefully tailored mechanisms. To be successful, this will require all the airports concerned to:

- recognise that they each have specialist niches (sectoral or geographical) that they are best placed to serve, but that they will continue to compete on designated thick routes (e.g. London, Manchester, Amsterdam), outbound leisure routes, and for business and general aviation;
- acknowledge their mutual interest in avoiding public arguments about specific disbursements of any public sector support. It is likely that this will be particularly important in relation to LHR and other hub connections; and
- collaborate in a more structured and pro-active engagement with each other and business and tourism organisations, to develop a more accurate and timely set of passenger and freight data. This could be practically achieved through participation in Civil Aviation Authority and inbound visitor surveys. These can then be used both to inform market forecasts and to underpin route development investment assumptions. In our view, the Northern Ireland Executive should consider being a contributing partner to the associated cost of data collection.

6.3 ADDENDUM ON DFT’S AVIATION 2050 CONSULTATION

As this report was nearing completion the DfT published its Aviation 2050 Green Paper Consultation looking at aviation and aerospace strategy in the UK

to the year 2050 and seeking the views of stakeholders. The Consultation document addresses several issues of relevance to the conclusions and recommendations of this study and this Addendum endeavours to discuss these and provide a high-level review of their implications for our recommendations.

Start Up Aid (or Route Development Funding)

The Green Paper recognises that start-up aid aims to help address market failure by providing a time-limited subsidy for routes that require temporary financial support to become commercially viable.⁹⁴ It suggests that this may have some benefits compared to PSOs, by providing the market with information it needs on route characteristics and a short-term financial stimulus, allowing passenger demand to build-up to a commercially sustainable level.

However, it is also acknowledged that the internal review of the previous UK start-up aid scheme (the RACF), which was closed to new proposals in March 2018, suggested that its limited success could have been improved by a different application and assessment process. As a result, the paper indicates that the government will not commit further funding support for start-up aid at this stage. However, it has invited views on how both the process and assessment could be improved, to maximise the probability of a successful outcome.

The Green Paper consultation also noted that DG-COMP is entering a review of the State Aid Guidelines later this year, and it is possible that start-up aid will also be addressed as part of these deliberations. Since the RACF previously sought to comply with the 2014 State Aid Guidelines it is likely that reform at that level may now be required.

However, as described, this research concluded that the use of start-up aid (i.e. an RDF) is not an appropriate medium to incentivise route development in Northern Ireland. On the other hand, mechanisms such as co-operative marketing and PSOs were felt to offer superior means to support aviation connectivity in Northern Ireland. Therefore, we do not consider that the discussion of start-up aid in the Green Paper has material implications for the findings expressed in this report.

Public Service Obligations

The rules on PSOs are determined by Regulation 1008/2008 on common rules for the operation of air services in the Community. These rules have been clarified by DG-MOVE Guidelines published in 2016.

The Aviation 2050 consultation document suggests moving towards some UK interpretations and applications of the regulations. Their proposals include:

- continuing to support PSOs to London for routes vital for social or economic development, but ensuring that the responsibility for funding shifts towards local and regional authorities;⁹⁵

⁹⁴ HM Government, "Aviation 2050: The future of UK aviation" (Green Paper, Department for Transport, December 2018), paragraph 4.25.

⁹⁵ Ibid.

- expanding the scope of PSOs to support routes into airports, such as Manchester or Edinburgh, where this is justified through evidence of onward connectivity benefits that open up long-haul opportunities for international trade and tourism. These will be assessed on an 'airport to airport' basis, with a preference for routes which do not require government funding.⁹⁶

The Green Paper envisages that the proposed expansion in Heathrow's capacity should, in itself, assist in improving UK regional connectivity. The government anticipates that the increased capacity will lead to expanded domestic connectivity to at least 14 new airports.⁹⁷ To the extent that such an outcome does not result from 'market forces' the consultation document notes the following mechanisms which may be used to support domestic route development.

- Heathrow has guaranteed a 50 percent increase in the discount for domestic passengers and committed to a £10 million RDF to support the introduction of new routes.⁹⁸
- ring-fencing suitable time slots to ensure that at least 14 UK airports have routes to the expanded Heathrow. It is worth noting that the document makes clear that this proposal is advisory with the government explicitly seeking views on this point.⁹⁹
- where appropriate supporting routes through PSOs where this is justified through evidence of onward connectivity benefits. This will be judged on an airport to airport basis.¹⁰⁰

The report highlights that the government perceives that one of the key challenges of the current PSO process is that it does not "include a robust, transparent methodology for assessing applications including incorporating the non-monetised impacts of PSOs, such as the strategic benefits of these routes and unintended impacts on the rest of the transport network."¹⁰¹

As a result, the report proposes a new two-stage process for assessing applications in order to improve transparency and effectiveness as follows:

- Applications will be judged against a number of pre-requisite criteria, designed to assess their compliance with regulatory requirements set out in Article 16 of Regulation (EC) No 1008/2008. Passing all of these criteria will move the application to stage two.
- Stage two will assess the application against a range of criteria, enabling the government to reach more nuanced assessments on a case-by-case basis. This could include consideration of proposals that do not require government funding, and a thorough examination of cross-modal alternatives to the proposed air route. Stage two will not be judged on a pass/fail basis but will instead inform the strategic case

⁹⁶ Ibid.

⁹⁷ Ibid, paragraph 4.11.

⁹⁸ Ibid, paragraph 4.12.

⁹⁹ Ibid, paragraph 4.15.

¹⁰⁰ Ibid, paragraph 4.20.

¹⁰¹ Ibid, paragraph 4.24.

to support the traditional economic appraisal. The document also advocates the introduction of a review and evaluation process, to monitor the realisation of benefits and VFM considerations. The proposed criteria broadly fall within three categories:

- **regulatory considerations:** are these PSOs benefiting those from the most peripheral regions, without placing an undue burden on the taxpayer?
- **strategic benefits:** how well would the imposition of the PSO further the strategic objectives of DfT and the wider government?
- **market distortion:** are there negative second-order impacts of the PSO, and if so, how could these be avoided?

We consider that the contents of the Green Paper have the following points related to PSOs which are of potential relevance to the findings from this report:

- the potential role of PSOs to facilitate access to slots at congested hubs, such as an expanded Heathrow.
- the view that PSOs should be categorised on an airport-to-airport basis, a point that is of particular relevance to London, whereas previously the DfT has considered PSOs on an airport-to-city basis.
- the recognition of the importance of onward connectivity as a relevant justifying PSO criterion at the 'target' airport.
- the recognition of the importance of flight frequency and the associated capacity of the flyer to achieve an effective day's work at either end of the route.
- the signalling of an expectation that PSOs should be increasingly funded at a regional level rather than via central government.
- an expressed preference for PSO proposals which do not require government funding support.

On the other hand, in the context of the policy recommendations made in this report, we consider that it is noteworthy that the Green Paper does not comment on the following issues:

- the potential of international PSOs, which the report has considered in relation to both north-south and short-haul EU hub links.
- there is no explicit reference to development regions, which, for Northern Ireland, could act as a key justification criterion.
- the potential for the current PSO between LDY and London Stanstead to be transferred to an expanded Heathrow.

Air Passenger Duty

The Aviation 2050 document notes that APD is the policy responsibility of HMT and it remains under review. The UK government is establishing a technical working group to consider the practical and legal challenges to changing short-haul APD in Northern Ireland but there are no plans to formally consult more widely on APD.

APPENDIX 1 - PHASE TWO

STAKEHOLDER CONSULTATION

Mirroring the concepts explored in the data in Chapter 2, Oxford Economics and Northpoint Aviation Services engaged with key stakeholders to ascertain their views on:

- the current economic linkages that Northern Ireland (NI) has with external markets in relation to inward investment, inbound visitors, and external sales;
- the markets where future growth in inward investment, inbound visits, and export sales is likely to be concentrated;
- the current levels of aviation connectivity in NI, and how this supports or constrains inward investment, inbound visitors, and external sales from key growth markets; and
- the potential policy levers available to the NI Executive to support the enhancement of aviation connectivity.

We worked with the project's steering group to draw up and agree a comprehensive list of stakeholders for this project (see Appendix 3). These stakeholders could be broadly classified into the following groups: airports, airlines, local authorities, tourism public bodies, and Invest NI.

This appendix provides a comprehensive overview of the feedback we received from Invest NI, the tourism public bodies, and the airports. As will become apparent, each group of stakeholders focused their inputs on their specific area of expertise (i.e. tourism, investment, aviation operations, etc.).

Unfortunately, all local authorities contacted were unable to participate in the consultation process within the time constraints that the project team were working within.

Invest NI

Consultees from Invest NI indicated that Northern Ireland has strong inward investment links with the United States, the European Union—including the Republic of Ireland—and Great Britain. However, they said it does not have suitable air links to sustain relationships with these markets, and it is therefore important to develop these in future.

The point was made that for the US in particular, connectivity needs to be established into all regions: the North East; Midwest; South; and West.

The importance of aviation connectivity into London was also stressed, with consultees stating there is high demand for flights out of Belfast City Airport and Belfast International Airport into the London airports—and that this is evidenced by the high prices at certain points of the week for these flights. Consultees noted it will be important to increase the frequency of flights to London going forward.

Consultees stated that, in general, when companies consider future areas they could export to, or when governments think about the areas they could attract inward investment from, they think in terms of global regions rather than specific cities. Furthermore, it was felt that the structure of NI's economy (dominated by SME spread across a wide range sectors) would make it hard to develop a route strategy centred around individual cities.

However, consultees did note a number of key areas where future inward investment and export opportunities for NI are likely to come from. These included: East and South Asia, Africa

and Northern Europe. In particular, it was the view of consultees that establishing a gateway into Asia would offer significant future benefits to NI. This could be through a Middle Eastern hub—Qatar was thought to be a viable option. Within Northern Europe, Germany and Scandinavia were identified as major areas of commercial interest that could support future markets for exports and be future sources of inward investment. Flights into Düsseldorf were seen as particularly useful, as Invest NI have offices there and the region is the key location for trade shows in Europe.

A number of sectors were identified as being important for exports and inward investment. This included the material handling sector, which comprises companies such as Terex and McCloskey International. The USA was viewed as an important market for these companies and both Africa and Australia were viewed as areas where there is potential for strong export growth.

Aerospace was identified as another key sector. It was stated that connectivity into Europe and the USA is of paramount importance here—Toulouse, Washington and Southern US states were all namechecked. This reflects the complex supply chains that air transport sector has. For example, Airbus' main plants are in Hamburg, Seville and Toulouse, but its new A220 fleet will be built in Alabama alongside the A320 operation that Airbus already use to supply the US market. Mirabel in Montreal will retain 20 percent of jobs on the A220 and will continue to be the manufacturing centre for Bombardier's regional and Challenger Business jets.

Other sectors cited as being important included software engineering—it was stated that firms from the US have already invested heavily in NI's software sector, but there are also future opportunities in Germany, Scandinavia and Paris. Cybersecurity was identified as a sector that NI leads within the UK and has export potential. The food and drink sector was also mentioned, with one consultee noting that Mexican companies are showing increasing interest in NI food products.

There was a view that NI is unlikely to be able to generate a sufficient volume of business passenger flow alone to make a route commercially viable. Therefore, it would need to be supplemented by leisure / VFR passenger flows. In this context, routes which would either connect directly or via a major hub to markets with a large NI diaspora were seen as likely to be particularly relevant. Canada or the USA were cited as examples of these and specifically places like Newark, Atlanta and Toronto, but routes to these areas will have their challenges. Historically, these routes struggled to be commercially viable, either because of the type of aircraft used or due to the lack of onward connections.

Tourism public bodies

Consultees indicated that NI currently attracts large volumes of visitors from GB, France, Germany, the USA, Australia and New Zealand. Although it was recognised that the reason for many of these visits was to see family and friends, it was also felt that visitors were being drawn to NI because of an awareness of NI's tourism product offer. This offer consists of attractions like the Titanic Quarter, the Giants Causeway and Game of Thrones tours. As well as places of scenic beauty, such as areas along the Causeway Coastal Route, and great places to eat and drink.

The importance of not neglecting domestic tourism was stressed by numerous consultees, particularly given the depreciation of sterling (which incentivises staycations). NI continues to receive large numbers of visitors from GB and in particular from Scotland, the South East and Wales. It was remarked that people from GB seem increasingly interested in coming to NI as there is a growing recognition that there are many things to see and do.

It was noted that an enhanced network of local low-cost services could boost domestic arrivals from the rest of the UK. Increased access to the regions of NI was also suggested as a way of boosting tourism to NI. An example of this would be increased access to the City of Derry. A route from GB into Londonderry / Derry would improve the appeal of a weekend away for GB visitors. These flights would have to be available at the right time of the week (i.e. on the Friday and Monday) so that the route could effectively compete with other destinations in Europe as a location for a weekend away.

The point was made that although it is important to attract all forms of visitor—business, VFR and leisure—the focus has to be on attracting international leisure visitors. On average, these types of visitors stay longer and spend more per visitor and therefore create a larger economic impact.

A number of countries were identified that stakeholders felt offered future growth opportunities for tourism. These included Canada and the USA, which were identified as countries with a sizeable NI diaspora. It was noted that enhanced connections could help to leverage the potential for stronger inflows via VFR. A direct US East Coast (New York, Boston or Philadelphia) or North American Great Lakes (Chicago or Toronto) hub route would help to open up access to North America.

Australia and New Zealand were identified as emerging markets for inbound NI tourism. Stakeholders recognised that direct links are prohibited by distance and the size of the markets, but their emergence underlines the potential value of maintaining or enhancing connectivity with Heathrow and adding a route to a Middle Eastern hub.

Finally, China and India were identified as important markets for NI to develop because as their respective middle classes continue to expand, the prospective size of these tourism markets in the medium to long term represent key growth opportunities.

It was recognised that many of NI's international visitors reach NI via Heathrow and that there is sense in strengthening the frequency, capacity and competition of that route. This would also help NI avoid becoming increasingly dependent on Dublin Airport.

It was noted that there is evidence from Scotland that introducing direct services from established markets such as North America is an effective strategy, with the option for direct travel inducing longer average trip lengths. In contrast, a service to a Middle East hub was noted as being unlikely to be as effective in getting inbound long-haul tourists to fly direct to NI as the evidence is links of this nature to regional airports are predominantly used by outbound passengers and the inbound users tend to be overwhelmingly business or VFR passengers. Leisure tourists are much more likely to fly through London to allow a stopover there.

Day visitors from Dublin were viewed as both an opportunity and a threat. Majority of current inflows use Dublin as the primary base and only undertake a short (often day-trip) expedition to NI. Reversing this trend would offer economic value.

The airports

From an aspirational point of view, consultees stated that NI's tourism, inward investment and exports would benefit from having: enhanced connections to Northern Europe—Dusseldorf and Frankfurt were identified most frequently by stakeholders, enhanced connections to North America to better exploit economic value linked to the diaspora—Boston, JFK and Toronto were universally regarded as the most beneficial routes—and a direct route to a Middle Eastern hub, to act as a gateway to Asia.

It was also noted that increasing the frequency of some currently served routes could also deliver significant benefits to NI. Routes mentioned for this included GB, Amsterdam, Paris, Barcelona, Berlin and Milan.

The point was strongly made that the establishment of any new routes (either through increasing the frequency of a currently served route or establishing a new route to an unserved market) has to be commercially viable, especially in the long-run. The 'bread and butter' of NI aviation is outbound leisure, with the exception of business travellers into London, and any move away from that model will have its challenges and will need policy solutions to support it.

To that end, it was noted that some key UK routes would be capable of further enhancement through addressing APD anomaly between NI and RoI and focussed marketing of NI in GB.

In addition, European routes where there exists or is likely to exist significant levels of outbound tourism demand could also either be enhanced or newly secured through addressing the APD anomaly. For already established routes, this could apply to flights into Amsterdam, Paris, Berlin, and Milan. Routes that could be newly established could include flights to Prague, Budapest, Warsaw, Nantes, Lisbon, Porto, Pisa and Athens.

Consultees remarked that the major European network points, such as: Munich; Frankfurt; Dusseldorf; Cologne; Stockholm; Oslo; Zurich; and Rome, would be dependent upon balanced traffic flows from both ends. It was felt that this could only be delivered through interventionist route funding and a strongly supported and closely managed NI marketing message in the source markets.

Although it was recognised that long haul air services are economically important to NI, the point was made that these routes could not be delivered without a 'community stakeholder' mechanism—that is a blended package of support from multiple stakeholders, this could include: removal of APD, operating aid, capital investment aid and collaborative marketing. Given Belfast's relative proximity to London, Manchester and Dublin, stakeholders felt that the deliverable opportunities included a New York airport, Toronto, Boston, Australia and an 'Asian' hub (Doha, Abu Dhabi, Dubai or Istanbul) offering enhanced market access to Middle East, India, Far East, South Africa.

Consultees stressed the importance of taking the activities of Dublin Airport into account when considering any route development. Competing with Dublin would be very difficult and it would be best to develop complementary routes as opposed to developing a like-for-like offer.

APPENDIX 2 – OVERVIEW OF FINDINGS FROM AIRLINE CONSULTATION

As part of their research Northpoint Aviation conducted a detailed consultation exercise with airlines, either currently operating in NI or who may have an interest in the market. A full list can be found in appendix four. Representatives contacted at each airline varied in terms of seniority and primary job function.

The findings from these discussions have been documented in a detailed paper provided to DfE. The nature of many of these conversations is commercially sensitive. Therefore, in this chapter we have provided an overview of the findings from this exercise which redacts any information that was deemed as too sensitive to publish.

The main issues that Northpoint sought to address included:

- Discussion of the airline's current presence or interest in the NI market;
- Whether they would consider alternative routes into any NI airport or changes in frequency and/or capacity, and, if so, the type of aircraft and flight frequency that would be commercially viable;
- The effect of UK APD on actual or planned route development in NI;
- Other forms of incentives which might be helpful to encourage route development;
- The length of time that these incentives would realistically be required to be in operation in order to be effective; and
- The uncertainties, challenges and possible opportunities surrounding Brexit.

THE ROLE OF APD

Several airlines suggested that APD discounting would be an effective form of policy support and that its removal could have a significant impact on aviation connectivity in NI. Indeed, one airline suggested that its modelling showed that NI's short-haul market would be 30 percent larger with the removal of APD.¹⁰² The fact that DUB operates with zero APD on all routes was also identified as a factor which made APD a relatively more significant obstacle to route development within NI.

However, there were some contrarian voices with one airline indicating that the removal of APD would not have a material impact on its routing plans. Their view was that the impact on net yields would be largely eroded by subsequent market adjustments. However, the contact did admit that this is a minority view within the industry.

OTHER TYPES OF ROUTE INCENTIVES

In general, the consultation exercise highlighted the potential for a wide range of policy support mechanisms. One airline suggested that an RDF would be a useful policy support mechanism for Northern Ireland, but this mechanism was not mentioned by other interviewees. Other

¹⁰² The airline conceded that this estimate was in contrast to another estimate by Mott MacDonald in its NI Passenger Study but felt that a number of modelling assumptions used had led to a very conservative estimate.

possibilities cited included more extensive co-operative marketing support (beyond that currently on offer via Tourism Ireland) and some sort of passenger service discount.

A further issue raised was that in making its commercial decisions airlines like to be informed by extensive market intelligence which might include the following:

- Demographic and economic data.
- Delineation of the airport catchment and demand including estimates of potential catchment and trans-modal leakage;
- Demand forecasts split between business, VFR and leisure and the split between inbound and outbound passengers by ultimate origin;
- Evidence relating to potential diurnal, weekly and seasonal variations in demand;
- Evidence that will help to determine breakeven yields such as passenger surveys, comparative data from other routes, from the airport or data from other airports;
- An assessment of the airport's catchment area for the business travel market, focusing on any potentially large organisations or employers that may be frequent users and corporate hospitality providers; and
- For leisure markets discussions with travel agents and the hospitality industry and resident surveys can also provide useful evidence.

It could be that some or all of these could be provided by Northern Ireland's wider aviation stakeholder group, which would provide a form of incentive in kind. Other types of options discussed included free advertising support from local media and discounted pricing from local hospitality service providers, notably hotels, that could house airline staff, thereby reducing overheads.

TIME HORIZON OF SUPPORT PACKAGE

Most airlines consulted indicated that policy support would need to be maintained over a three-year horizon. This was expected to be sufficient for the route to become sustainable. However, some airlines indicated that shorter timeframes of between 1-2 years may be possible on short-haul routes and those where latent demand was closer to a sustainable level. Within this it was mentioned that the scale of financial support could be tapered over time.

APPENDIX 3 - METHODOLOGICAL OVERVIEW OF DEMAND ANALYSIS

INTRODUCTION

The function of the commercial demand analysis within the overall arc of the study was to:

- Assess which of the long list of destinations identified as prospectively being of economic value if linked to Northern Ireland by enhanced air connections, appeared to have sufficient existing or potential demand to justify shortlisting on the grounds that it may be commercially deliverable by carriers already with a presence in Northern Ireland or thought capable of being attracted.
- Identify any destinations outside the long list, where there appears to be significant latent demand that is not currently being met, but if served by air could potentially give rise to positive economic benefits – this includes for example, links serving external labour markets within the EU/EEA which are important to Northern Ireland (e.g. Poland, Lithuania) and strong inbound tourism and tertiary education markets, but excludes ‘sun routes’ that are primarily designed to serve outbound leisure markets from the province.
- Allow key destination or market opportunities identified during discussions with stakeholder, especially with airports in the initial phase of consultations, and then with airlines in subsequent stages, to be cross-checked for commercial realism before being included as a short-listed destination.

Our starting point was to gather publicly available data on passenger and freight activity at Northern Ireland's airports and that of their principal competitor (due to size and geography)—Dublin International. We used this to develop an overview of the current market by airport, and then by using a recent 2017 household survey in Northern Ireland, identified which parts of Northern Ireland make the greatest use of which commercial airports north and south of the border.

CATCHMENT AREAS

Critical to this analysis and the assessment of the market positioning of potential long and short-listed destinations is an understanding of catchment areas and interactions. Some standardisation here is helpful; hence, the travel times isochrones that are often used by airlines when evaluating the potential market for different types of air service are set out in Fig. 33, overleaf. In the case of domestic services (which are typically business and VFR orientated) a median of 45 minutes that is often considered, especially where the origin and destination airports are small; it may be 60 minutes for larger airports. Services flying into hubs and major international gateways may draw from slightly further afield 60-75 minutes because of the attractiveness of the destination, and secondary business cities further still because the lower density market will need to rely on a larger catchment to achieve satisfactory load factors. In the case of leisure and long-haul services lower values time and longer overall journeys passengers tend to result in passengers being drawn from 90-120 minutes respectively

Fig. 33. Typical catchments associated with services to different destination types

Type of Destination	Extent of catchment in minutes*	Isochrone Used (Mins)
Domestic**	30-60	45
Hub Airports and Major Business Gateways in EU	60-75	60
Secondary Business Destinations in the EU	75-90	75
Inbound Leisure Markets	90	90
Outbound Leisure Markets in EU	60-120	90
Long Haul	90-180	120

* Range reflects different value typical of different types of carrier (e.g. network vs LCC and regional vs LCC)

** Includes destination airports in the RoI and Crown Dependencies

The blended catchment area for an airport is then determined by a range of considerations such as:

- the business model of the airport(s) concerned;
- the number, location and type of destinations served (i.e. network density and profile);
- the equivalent available at other (nearby) airports;
- the quality of road and public transport links;
- the time-sensitivity of the passenger mix; and
- the extent to which the airport serves local residents travelling outbound or visitors coming to the area.

With this in mind, we have generated two catchment maps to illustrate the potential interplay between the airports in Northern Ireland currently supporting commercial air transport services and Dublin. The first, looks at one-hour catchments for each airport, commonly associated with domestic or international short haul flights (see Fig. 34, overleaf) and illustrates:

- how closely the catchments of the two Belfast's overlap—essentially, they serve the same market;
- that Londonderry has its own discrete market, although there is some overlap with BFS;
- that Dublin market encroachment should only become material for services drawing from outside the one-hour contour; and
- that the south West of Northern Ireland (with Enniskillen at its centre) and the adjacent area across the border are not well served by any of the four main airports.

Fig. 34. 60-minute drive time catchments for City of Derry, Belfast International, and George Best City airports, plus Dublin city centre

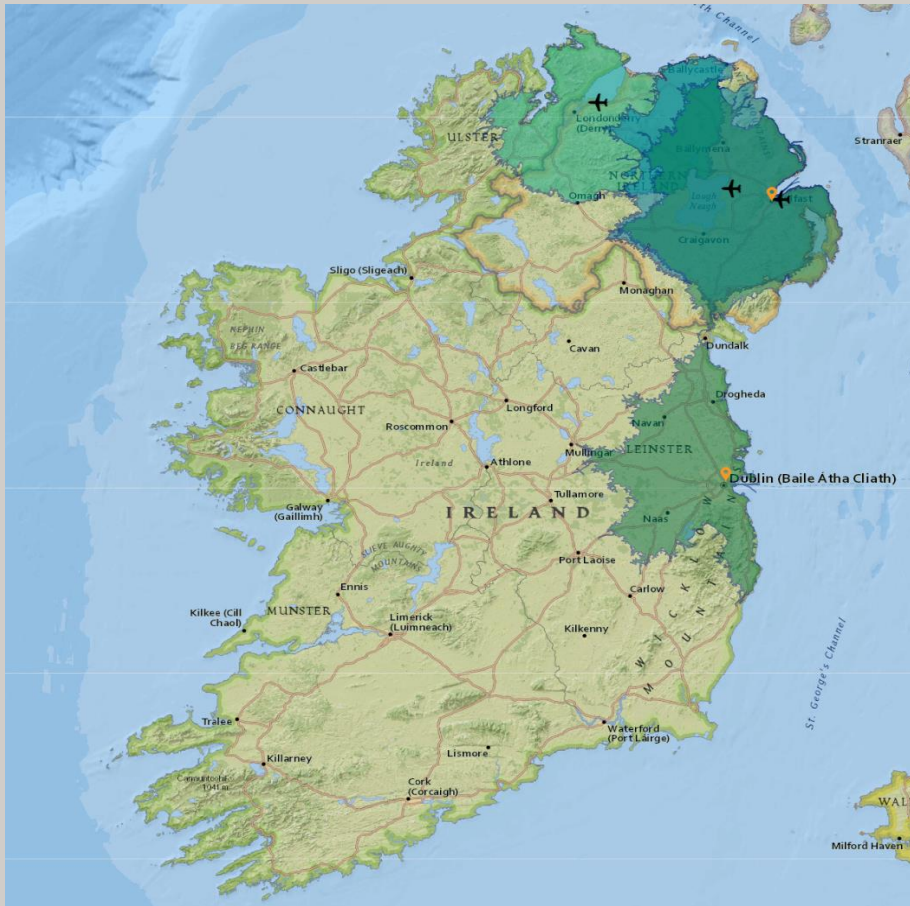
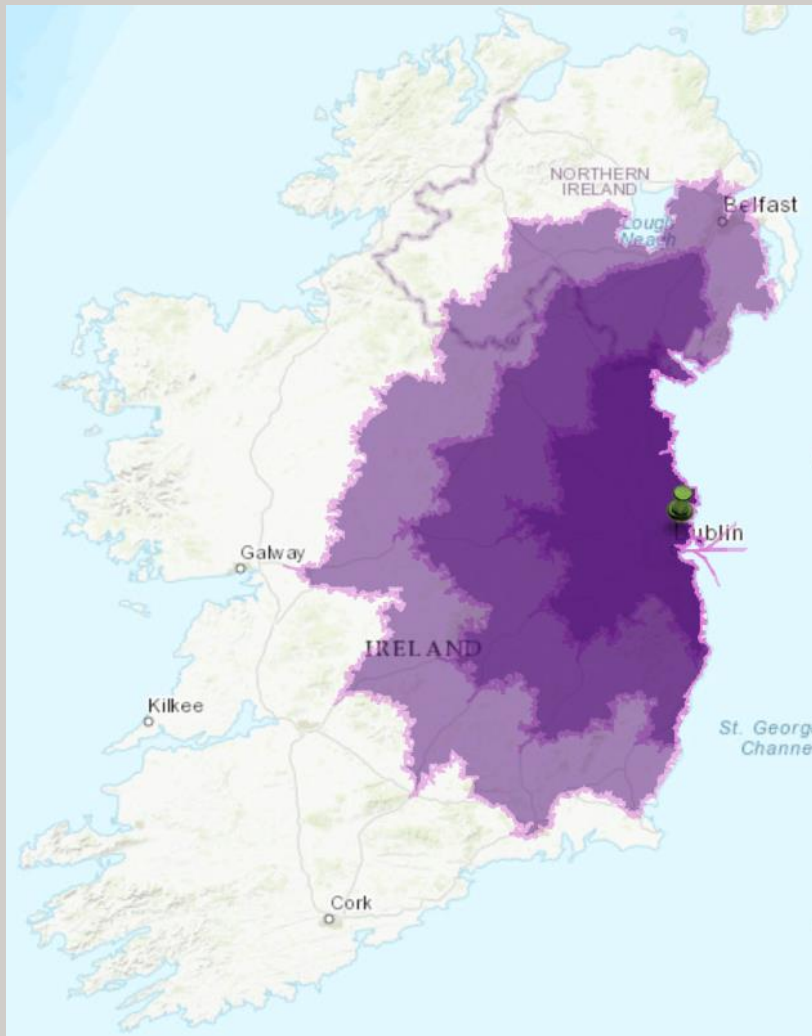


Fig. 35, overleaf, examines extended catchments from Dublin associated with LCC carrier services to secondary EU cities and mid and long-haul destinations. At two hours there is significant overlap with the Belfast one-hour catchments, but relatively little with that of Derry. At 1.5 hours the draw from Dublin across the border is likely to be quite modest, hence why LLC leisure routes continue to work well out of Belfast international, and business and domestic services out of Belfast City are very competitive.

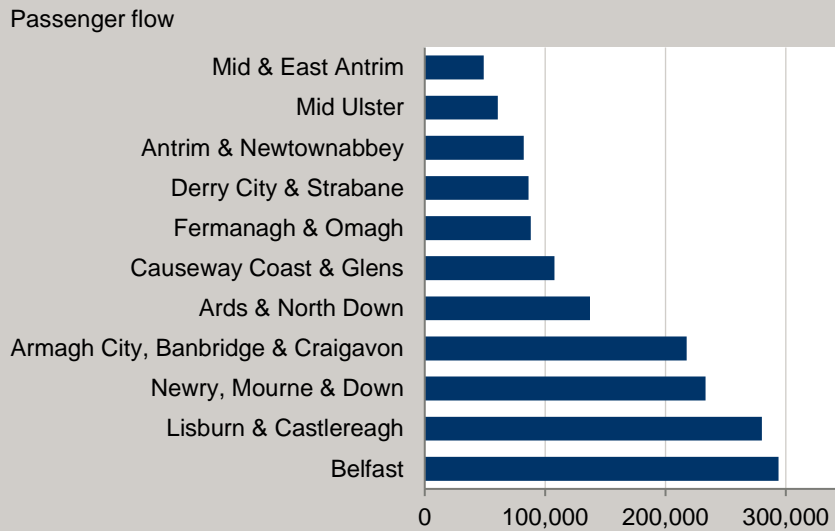
Fig. 35. 60, 90, and 120-minute drive times to Dublin Airport



ESTIMATING LEAKAGE TO DUB

We have used NSRI household survey data to allocate passengers numbers from different parts on the province to each of the four airports (i.e. including DUB) which serve it. The implied leakage by Local Government District (LGD) is summarised in Fig. 36, overleaf. At over one-sixth, Dublin's share is material (although there is traffic from the Republic of Ireland moving in the other direction (particularly to Belfast International), making the net effect somewhat smaller).

Fig. 36. Implied leakage to DUB, by Local Government District



Source: Northpoint estimate

Turning to currently un- or under-served routes, our analysis sought to establish a picture of current direct city to city (as opposed to airport pair) traffic flows, alongside evidence of an indirect market that could be used to underpin a new route or higher frequency on an existing route. The major constraint that we faced in under-taking this route focused passenger demand analysis of the long list of routes (identified by the initial economic analysis), is that suitable data on the Northern Irish and Republic of Ireland's air markets is either:

- out-of-date (the last CAA surveys of Northern Ireland's airports were in 2006 and 2007);
- too aggregated (available data is passed on passenger counts on an airport pair basis with no attempt to distinguish the characteristics of the passengers); or
- simply unavailable publicly or very expensive to acquire from private commercial sources, especially as those remunerated sources (e.g. MIDT, IATA) are limited in scope.

This means that to derive a comprehensive set of route-based data by airport, that is reliably sourced and offers some sort of understanding of the potential geographic (i.e. cross-border) nature of demand, requires assumptions and a considerable level of data manipulation. Yet even with this, NISRA data (which is based on mandatory airport returns to the CAA as the Northern Irish airports economic regulator), does not allow cross-tabulation of Airport/route data by passenger O&D, business/leisure split, in/outbound split or passenger fare/yield in the same way that the annual in-depth surveys of UK airports by the CAA. Without this information a fully informed route analysis is difficult, and the limitations of the results we report later must be recognised in that context.

To at least partially overcome these shortcomings, we therefore developed a methodology that allocated airports from Northern Ireland and Republic of Ireland route-specific passenger volumes (a common data set both north and south of the border) to be combined and compared with propensity to fly (PTF) estimates based on population and GNI data (also available north and south of the border), apportioned based on current market share. This allows routes where Northern Ireland's airports are under-represented relative to their PTF to be identified, and an estimate of the scale of market that should be supportable by Northern Ireland's share of originating passengers to be provided. The basis for the analysis is described in the table below.

Fig. 37. Overview of market based on Propensity To Fly methodology

Metric	Northern Ireland	Republic of Ireland	Total
Population	1,876,000	4,792,000	6,668,000
Population share	28.1%	71.9%	100.0%
GNI per capita ratio	1.0	1.9	
Total PAX from RoI and Northern Ireland	8,539,129	33,642,315	42,181,444
Propensity to fly as multiplier of population	4.55	7.02	6.33
Proportional share (economics and population combined)	1,876,000	9,104,800	10,980,800
Proportional share	17.1%	82.9%	100.0%
PAX using proportional share	7,206,432	34,975,012	42,181,444

Source: Northpoint analysis

APPENDIX 4 - LIST OF STAKEHOLDERS BY PHASE

Stakeholder category	Organisation Name	Stage one	Stage two	Stage three
Airports	Belfast International Airport	x	✓	✓
	George Best Belfast City Airport	x	✓	✓
	St Angelo Airport, Enniskillen	x	✓	✓
	City of Derry Airport	x	✓	✓
	Heathrow Airport	x	✓	✓
	Dublin Airport	x	✓	✓
Airlines	Norwegian Air	x	x	✓
	Ryanair	x	x	✓
	IAG	x	x	✓
	easyjet	x	x	✓
	Aer Lingus Regional	x	x	✓
	Flybe	x	x	✓
	Logan Air	x	x	✓
	Lufthansa/Swiss	x	x	✓
	United Airlines	x	x	✓
	Qatar Airways	x	x	✓
	KLM	x	x	✓
Other	Invest NI	✓	✓	✓
		✓	✓	x
		✓	✓	x
	ONS	✓	x	x
		✓	x	x
	NISRA	✓	x	x
		✓	x	x
	Department for International Trade	✓	x	x
	NITA	x	x	x
	DfE State Aid Unit	x	x	✓
	DfE Tourism Liaison	x	✓	x
x		✓	x	
Tourism Ireland	x	✓	x	
Tourism NI	x	✓	x	

Lisburn and Castlereagh City Council, Belfast City Council, Antrim and Newtownabbey Borough Council, Derry City and Strabane District Council, and Fermanagh and Omagh District Council were not able to participate in the consultation process of this project.

**Global headquarters**

Oxford Economics Ltd
Abbey House
121 St Aldates
Oxford, OX1 1HB
UK

Tel: +44 (0)1865 268900

London

Broadwall House
21 Broadwall
London, SE1 9PL
UK

Tel: +44 (0)203 910 8000

New York

5 Hanover Square, 8th Floor
New York, NY 10004
USA

Tel: +1 (646) 786 1879

Singapore

6 Battery Road
#38-05
Singapore 049909

Tel: +65 6850 0110

**Europe, Middle East
and Africa**

Oxford
London
Belfast
Frankfurt
Paris
Milan
Cape Town
Johannesburg
Dubai

Americas

New York
Philadelphia
Mexico City
Boston
Chicago
Los Angeles
Toronto
Houston

Asia Pacific

Singapore
Sydney
Melbourne
Hong Kong
Tokyo

Email:

mailbox@oxfordeconomics.com

Website:

www.oxfordeconomics.com