COVID-19 and the Northern Ireland Economy:

A Short to Medium Term Mitigation Strategy to Address the Access Challenges posed by the Pandemic for the Business and Tourism Sectors in Northern Ireland

Report

Prepared by

Professor Austin Smyth
Transport Analysis & Advocacy Ltd
and
Maureen O'Reilly Economist

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The Authors

A transport economist by training **Professor Austin Smyth** is Professor Emeritus in the field of transport. Appointed to the first Chair in Transport on the island of Ireland at the University of Ulster (1989-1999) he has also been held Professorships at four universities in the United Kingdom. He is Director of Transport Analysis & Advocacy Ltd.

Professor Smyth has acted as Advisor to Governments, Devolved Administrations and Local Authorities throughout the UK and Ireland as well as the USA, The Middle East and Russia. Professor Smyth was appointed by **Department for Transport (DfT)** in relation to Aviation Market Maturity and Econometrics Advice to provide analysis and advice on air passenger market prospects, including advice on econometrics tools developed and applied by DfT. Professor Smyth was the technical lead in the Economic Evaluation of the Scottish Air Route Development Fund undertaken on behalf of **Scottish Enterprise and the Scottish Government.** This provided an informed assessment of the balance between economic benefits and financial costs/environmental disbenefits arising from provision of subsidies for air services for peripheral areas. The project endorsed public funding of air routes.

The current study arose from research into the potential impacts on external travel into and out of Northern Ireland of various outcomes to the Brexit trade negotiation process and original research since the 1990's on the implications of external connectivity for the relative competitiveness of the Northern Ireland economy.

Maureen O'Reilly B.Sc. M.Sc. is a professional economist and has undertaken considerable research into the tourism/hospitality and business sectors in Northern Ireland, both in her role as economist with the **Northern Ireland Chamber of Commerce** and in undertaking a number of tourism specific economic impact studies. Maureen was responsible for undertaking the NI Chamber of Commerce and Industry Business Consultation process in this research programme.

Recently **Maureen O'Reilly** and Professor Smyth have been undertaking investigations into the accessibility needs of the region in the wake of the COVID-19 crisis, particularly with regard to tourism and external business markets. These recognise the importance of accessibility (air and sea connectivity) to Northern Ireland for Foreign Direct Investment, tourism and outward facing businesses.

Disclaimer

This Independent Research Paper is intended to make its findings available to Government, officials and officers, and key industry providers and stakeholders. The research was undertaken between late August and the late November 2020 in advance of the signing of the Trade and Cooperation Agreement (TCA) between the EU and the UK and reflects the situation prior to the confirmation of the TCA. The report describes in-depth results identified by the authors. Its publication is intended to stimulate discussion on issues encompassing trends in Northern Ireland's external connectivity, the factors shaping reported travel behaviour and future market projections for a range of Pandemic scenarios, as well as informing potential public policy interventions to address the immediate external access challenges posed for Northern Ireland by COVID-19.

The authors wish to place on record their gratitude to the Department for the Economy for its support towards this independent research and in publishing the final report. **Any findings, interpretations and conclusions expressed herein however, are entirely those of the authors and do not necessarily reflect the views of the Department for the Economy.**

Acknowledgements

This report and its recommendations are the outcome of an independent programme of research undertaken by Professor Austin Smyth and Maureen O'Reilly. The authors wish to express their gratitude to the Department for the Economy in sponsoring the research and for the encouragement given to advancing the work. We would also like to thank Mr. Jeff McGuinness, Acting Head of Central Expenditure at the Department of Finance for information on public spending allocations and assistance in interpreting relevant data.

Additionally, we wish to express our thanks to the NI Chamber of Commerce and Industry, in particular Ann McGregor, Chief Executive and Christopher Morrow, Head of Communications and Policy, in facilitating the Business Consultation exercise and encouraging engagement by its members. While a comprehensive list of all those involved would not be practical, we would like to put on record the support of those listed below. This includes other key consultees.

The study has benefitted greatly from the contribution to the audit by Dr Nigel Dennis, Senior Research Fellow at the University of Westminster. Dr. Dennis is a leading authority on air transport both in the UK and internationally and has published widely on research on regional air airport and connectivity. The research has drawn from a wider programme of research led by Transport Analysis and Advocacy Ltd in association with NEMS Ltd. We would like to thank its Director, Richard Lindsay and his colleagues for their important contribution to this research. Our thanks also go to Alyson McNutt, Power 10 for her contribution to production of this report.

The study could not have been completed without the enthusiastic engagement of key figures in the ferry and air transport industries. We would like to express our sincerest gratitude for the cooperation and engagement of Mr. Paul Grant, Trade Director Irish Sea, Stena Line, Mr. Graham Keddie, Managing Director, Belfast International Airport and Mr. Uel Hoey, Business Development Director, Belfast International Airport. Mr. Steve Frazer, Managing Director, City of Derry Airport, and Ms. Ellie McGimpsey, Aviation Development Manager, Belfast City Airport.

NI Chamber of Commerce and Industry Business Consultation Process

Organisation
NI Chamber of Commerce and Industry
Bombardier
Fintru
AllState
Ryobi
Rubblemaster
Mercer
PWC
KPMG
BT
McAleer & Rushe
Beyond Business Travel
The Electric Storage Company
BubbleBum
Belfast City Airport
City of Derry Airport
Dublin Airport
TourismNI
NISRA
InvestNI

Table of Contents

Executive Summary

Overall Aim and Objectives

The overall aim of the research is the preparation of a short to medium term Access Mitigation Strategy to respond to the challenges posed for the business, travel, leisure and tourism sectors by the physical and psychological impacts on travel access to/from Northern Ireland during/post the COVID-19 Pandemic. The research programme reflects the need to understand the implications of the COVID-19 crisis on accessibility to/from Northern Ireland given the region's heavy reliance on air and sea access for trade, Foreign Direct Investment (FDI) and tourism. This includes the fall-out from COVID-19 (and additional factors including Flybe, Brexit) on the capacity of air and sea routes, how demand has and will be impacted in the future because of changing behaviours and what actions need to be taken to minimise these effects and keep Northern Ireland open for business.

The project objectives are as follows: to establish the current position and near to medium term prospects for air and sea connectivity to Northern Ireland (including Irish Sea ports and airports); review the contribution of air and sea links to the performance of the Northern Ireland Economy and wider society; assess the factors shaping this position and their impact on demand for external travel before, during and post the Coronavirus Pandemic; develop a range of future scenarios around passenger transport by air and sea to inform the development of a range of mitigation policy interventions to maximise the accessibility of the region; table recommendations for a mitigation policy to maximise accessibility of the region; and assess the potential for funding and financing a short to medium term Access Mitigation Strategy for the region. The research findings and its recommendations are informed by robust empirical evidence bases and include proven public policy interventions to maximise the region's access and openness to business and tourism related travel going forward.

The Context: External Connections matter hugely for Northern Ireland

Northern Ireland has made significant strides in recent years to make the region more attractive and externally focused. That has been rewarded through increased trade, investment and tourism reaching a much more expansive range of countries, businesses and people located across the globe. The movement of goods, services and people to and from the region has grown significantly in importance.

Great Britain is Northern Ireland's largest partner in terms of Inward Investment, Tourism and Trade and those connections filter through to every region of the UK although to varying degrees. Across a range of areas including trade, tourism, FDI, foreign students and international workers a total of 30 countries across the world are listed as top 10 partners for Northern Ireland highlighting just how extensive its reach is as a very small region within a much larger trading entity in the UK.

Northern Ireland does have that unique position in having a 'sea barrier' between it and the rest of the UK which makes connectivity by air and sea critical to how the region trades with Great Britain (and worldwide) and a major influence on how the local economy prospers and grows. Thus, connectivity matters hugely in terms of what has and will drive improvements in economic growth, productivity and job quality in Northern Ireland.

The importance of connectivity and its contribution to the economy is further emphasised in terms of considerations around student access, migration and work travel patterns. Accessibility is important to student flows with around 18,000 students travelling to Great Britain to study annually and 7,400

students coming from Great Britain and other parts of the world to Northern Ireland to study. Northern Ireland has the lowest share of international students across the UK regions and connectivity is likely to play some part in the decision to come and study in the region. Although Brexit has impacted on the numbers of EU residents coming/staying in Northern Ireland, non UK/Irish workers make up around 7% of the labour force in Northern Ireland. These workers come from EU26 countries (56%) and countries outside the UK and EU (44%), again involving many global destinations. On a weekly basis, 5,000 people in Northern Ireland travel to Great Britain to work. All of this activity around education and work supports the local economy along with existing and potential jobs again emphasising the critical role that connectivity plays in economic development and growth.

External Connectivity: The Challenges for Northern Ireland before COVID-19 and posed by the Pandemic, Government Lockdowns and other Public Health Measures

The audit of external connectivity demonstrates that overall, the air connectivity of Northern Ireland has highlighted improving performance in relation to the overall extent of air links offered by Belfast's two airports taken together over the 20-year period 1999 – 2019. However, the audit also revealed in recent years Belfast's connectivity performance trailed behind a number of its peer regions in these islands. Moreover, before the emergence of the COVID-19 Pandemic Belfast exhibited relatively weak global connectivity.

Self-evidently Northern Ireland's geography points to the importance of sea transport to provide a key element of its external connectivity. The network of ferry services catering for passenger movements across the Irish Sea has in recent years exhibited consolidation in the Northern Corridor in particular. Across the Diagonal Corridor the pattern of routes has tended to exhibit greater stability. The dependence of Northern Ireland on air and sea transport to provide its external connectivity, both domestically and internationally, is well illustrated by the audit as is the frailty of its air links in the wake of the COVID-19 Pandemic and the collapse of a dominant carrier (Flybe).

The first half of 2020 witnessed a dramatic decline in Northern Ireland's connectivity by air with threats to its connectivity by sea. For a period of up to three months the vast majority of domestic air routes did not operate. No air connections were available to Scotland and regions of England and Wales. This loss of supply is reflected in and reinforced by the collapse in demand for air travel. The Belfast - Heathrow route was down to 5% of normal passenger numbers in the Spring of 2020 while overall demand for air travel to/from Northern Ireland was as little as 0.5% of 2019 levels. The in-depth assessment reported in this document prompts the following overall observations:

- External travel has exhibited a dramatic and unprecedented decline outside of wartime or during the very short-term disruption caused by the Icelandic Ash Cloud incident in 2010.
- There is evidence of substantial changes in the relative significance of selected trip origins and destinations both among residents and prospective visitors to Northern Ireland.
- There is a significant change in mode of travel used from air to ferry.

The research demonstrates the massive impact of the collapse of air connectivity on travel behaviour wrought by the COVID-19 Pandemic and the loss of former Flybe routes. For instance, among residents of Great Britain who had travelled to Northern Ireland 15% had done so during the first 6-month period last spring and summer after the pandemic emerged. 35% had done so during the previous six months

covering the autumn and winter of 2019/20. The imbalance in travel was most marked in areas that had lost air services. In contrast in the case of London that retained its links with Northern Ireland 38% of residents of London who reported travelling to Northern Ireland had done so within the first six months following emergence of the pandemic. For the previous six months the figure for London residents the figure was 12%. The key factors underpinning these unprecedented changes include the following:

- It is evident that during the weeks running up to announcement by the Government of the first UK wide lockdown air travel was already experiencing a significant reduction in demand.
- Initially this decline appears to have been prompted by fear of contracting the virus from fellow passengers or crew while travelling on a plane.
- The rate of decline in demand for air travel increased significantly in the wake of Government regulation, guidance and public health messaging relating to the COVID-19 Pandemic.
- The evidence suggests approximately half the population are unlikely to return to air travel under current circumstances while for ferry this figure is markedly lower.

These have significant implications for Northern Ireland's connectivity in the absence of effective mitigation measures and preferably the development and distribution of an effective vaccine across the population. Addressing this situation points to a requirement in the first instance, to establish both the perceived and objective level of risk by air and sea. The research reported in this document indicates between 45% and 60% of people believe it is likely or very likely they would become infected if they travelled by plane. Among UK residents this figure is highest for Northern Ireland (58%). These findings contrast with the perceived risk of travel by ferry. 29% of residents of Northern Ireland believe it is likely or very likely they would become infected if they travelled by ship. This figure is the lowest in the UK.

This loss of domestic regional connectivity by air by up to 100% is also reflected in an increased share for ferry travel across the Irish Sea, including for business purposes, albeit at very reduced overall levels of demand. In relation to connectivity by sea the network in the Northern Corridor and the Irish Sea's Diagonal Corridor has exhibited considerable resilience in the face of the pandemic and the first UK wide lockdown since the summer of 2020. In effect the ferries to/from Belfast and Larne plus the two remaining operational air routes performed the role of lifeline services between Northern Ireland and Great Britain. The importance of these links is demonstrated by the rate of recovery in demand exhibited by routes to/from Northern Ireland to key destinations in Great Britain compared to the rate experienced on domestic air routes operating entirely within Great Britain. This highlights not only the importance of air travel for Northern Ireland but the significance of the Irish Sea and the time penalties it imposes on surface travel in 'promoting' flying, where rail or fast road links are not available.

Elsewhere in the UK the regions of Great Britain continued to be linked together by a largely full operational mainline rail system funded in England by an additional COVID-19 Pandemic subsidy of some £500 million per month from the UK Government. Similar arrangements have been applied by the devolved administrations in Scotland and Wales. The implications for the Northern Ireland economy of this significant loss of external connectivity, and in particular external domestic connectivity, is likely to have significant implications for business confidence, including the tourism and hospitality sectors, at least for the short to medium terms. Whether through trade, investment, tourism, jobs or studying Northern Ireland is connected to hundreds of countries globally and that has played a large part in

ensuring that Northern Ireland becomes a more outward looking region in how it drives economic and wider growth. However, what the research has also emphasised is just how critical the more near market destinations in Great Britain are. Those more local connections by air and sea make the most significant contribution to the way that the Northern Ireland economy works.

The COVID-19 Pandemic fall out on the Northern Ireland, UK and international economies is unprecedented. The most recent forecasts suggest that the Northern Ireland economy will contract by an historic -11% in 2020. The expectation is it will be 2023/24 before the severe contraction in GDP experienced by the Northern Ireland economy in 2020 will be fully recovered. The evidence suggests two of the most negatively impacted sectors will be tourism and trade. At best the tourism sector in Northern Ireland is estimated to contract by around one third in 2020 but more likely by around 50% and arguably more which could amount to a loss of £300m to £500m in direct spend alone. While the quality of external connectivity is not the only factor impacting tourism re-establishing external connectivity is a prerequisite for rebuilding inbound tourism from Great Britain and further afield.

Global economic forecasts suggest that global trade will also be one of the mostly negatively impacted parts of the economy, not least because of the scale of the contraction in economies and where companies might consider more 'near market' locations due to relative ease of access to goods/services. The potential damage caused by Brexit is also relevant. Invest NI stress it is essential to maintain connectivity for Northern Ireland making the point that '*any country wanting to attract FDI has to have access by flight'*.

Business travel has been severely disrupted by the COVID-19 Pandemic and the lockdowns imposed across the world. Our research suggests that only a quarter of business travel spend will be incurred in 2020 compared to the same period last year and for many businesses travel spend has been effectively reduced to zero. Expectations are that business travel might reduce by one third in 2021. The impact of the pandemic varies between businesses, some times in the same sector. It is the case that some businesses were able to secure new business without face-to-face interaction. However, for the majority there is a need for face-to-face interaction. Therefore, the main consideration in terms of future business travel is a concern around the potential to secure new business going forward, even among those who believe that they can travel less in the short term. The longer-term negative impact of business travel restrictions on securing new business is acute.

Implications of Lockdowns and Vaccines for the Propensity for Air Travel

As of the summer of 2020 the evidence and analysis for the remainder of 2020 pointed to a likely reduction in demand for air travel overall in the case of Northern Ireland of at least 50% in the near term, marginally more than for Great Britain. This was based on evidence collated before Northern Ireland's second partial lockdown was introduced and the announcement by the UK Government of a further lockdown in England beginning on 5th November 2020. This projection is one of a number of outcomes encompassing no further or repeated lockdowns and the success or otherwise of development, distribution and take up of really effective vaccines and other medical measures to tackle the COVID-19 Pandemic. The current restrictions in Northern Ireland and the second lockdown in England, along with restrictions in Scotland and Wales, will have the effect of significantly blunting recovery of external travel to/from Northern Ireland. These are likely to reduce air travel to 20% - 30% of normal levels with a slower recovery in 2021 after the restrictions are eased than was experienced in the summer of 2020. This could push back recovery of demand for external travel by a further 6 months depending upon when these restrictions are lifted.

A significant caveat to anticipating the future path for external travel is the potential impact of widely distributed and effective vaccines with high rates of take up in the wider population. At the time of writing (late November 2020) considerable uncertainty remains about the efficacy, approval and the logistics of distributing enough vaccines and securing confidence in its effectiveness among the population to complete mass vaccination in the short term. This will most likely require a further period of 6 months to a year before any such vaccine has been widely taken up in Northern Ireland. However, if this outcome emerges the evidence set out in this report suggests air travel could recover to around 90% of 2019 levels by 2023 or 2024. Conversely, the absence of such a turning point would lead to demand being suppressed significantly below 2019 levels for many years to come. The implications of any of these scenarios unfolding for external connectivity are likely to be very significant in the short term. Evidently even under the most optimistic of these scenarios air fares are likely to rise significantly while services will be cut and/or routes abandoned. The question that arises is what public policy measures mitigate erosion of external connectivity and how can these be funded and financed?

Principal Study Recommendations

The study recommendations take into consideration the limitations in the latitude the Northern Ireland's Executive, along with the other devolved administrations, enjoys in relation to its authority in air and sea transport matters. The recommended short-term access mitigation strategy to respond to the challenges posed by COVID-19 Pandemic and the public health measures envisages a stepwise approach to safeguarding external domestic connectivity that could comprise the following steps:

Air Transport APD discount scheme for domestic routes (Time Limited)

Subject to agreeing extension of APD rate setting powers to Northern Ireland during the current emergency it should be feasible to design and implement within 2-3 months after agreement is reached with the UK Government, a time limited air transport APD discount scheme for domestic routes involving substantial distance across water e.g. the Irish Sea. This would be time limited to the period of the COVID-19 Pandemic/lockdowns and for a recovery period thereafter. Under an APD discount scheme ferries could be put at a relative competitive disadvantage. Measures are put forward in this report to address this. It is estimated the overall cost for Northern Ireland of implementing the proposal to introduce an APD discount for the specified services at 100% would be in the range £1.5 - £3.5 million per month, after allowing for a split in accrual of costs between the UK Government and the Northern Ireland Executive. The estimated cost range also reflects the very substantial suppression of travel that is anticipated during the period of recovery even under the most optimistic background conditions.

Public Service Obligations (PSOs)

This would take the form of extensive PSO designation of additional domestic air routes serving airports in Northern Ireland involving substantial distance across water e.g. the Irish Sea. These would be in addition to the existing PSO designated City of Derry – Stansted route. Given their vital role as lifeline services during the current crisis it is also appropriate to apply continuing PSO status to Northern Ireland's ferry routes as happened during the later stages of the first UK wide lockdown. Finally, in the context of the Common Travel Area consideration should be given to the merits of designating PSO status to a future City of Derry – Dublin route. Routes designated with PSOs in the UK are exempt from passengers being charged APD and therefore the PSO model could incorporate any existing APD discount on those routes designated PSO status. The PSO mechanism provides security to prospective users as well as wider beneficiaries of the service will continue to operate. The PSO mechanism does

not imply an automatic subsidy being paid to airlines awarded contracts. It is estimated the overall cost of implementing the proposal to introduce PSO arrangement for a limited number of destinations in Great Britain would be in the range £2.5 million - £5 million per month. Based on airline industry costs for operating existing PSO routes in the UK this could be expected to cover at least 10 thin routes serving at the lower end of the overall cost range. The estimates also allow for potential support to PSO designated ferry services during lockdowns or similar periods when passenger traffic is severely limited by Government regulation and guidance or high levels of infection. An important consideration with PSOs as noted above is they usually take more time to set up than establishing an APD discount scheme. However, during the Pandemic the UK Department for Transport (DfT) for air links was able to fast track designation to permit emergency payments to be made. Moreover, an 'Open PSO' offers a streamlined application process to establishing services.

Route Development Funds (RDFs)

An alternative to PSO designation is the use of Route Development Funds (RDFs). In combination with a co-operative marketing agreement it may be more attractive to LCCs in enhancing services frequencies more tailored to business needs.

Funding the Study Recommendations

COVID-19 recurrent funding from the UK Government to the Northern Ireland Executive has risen further to £2.8 billion in the wake of the second lockdown in England. The £121 million (£15.1 million per month) received by the Northern Ireland Executive from emergency COVID-19 spending on public transport in Great Britain (outside London) represents an underestimate of the total funding received by the Northern Ireland Executive attributable to spending on public transport elsewhere in the UK. Moreover, Northern Ireland's transport connectivity needs have different characteristics to those that exist in GB. Among the UK's four nations it depends uniquely on external links by sea and air to ensure its connectivity with the rest of the UK.

A thorough review of the funding streams that have been allocated to all public transport modes in Northern Ireland indicates, at the time of writing, that those modes have received substantially less in emergency COVID-19 allocations in aggregate than their counterparts in GB. Funding equates to approximately 58% of what it would have received elsewhere in the UK. On 24th September 2020 the NI Executive £54.8 million of the funding set aside for Transport (and PPE) had yet to be allocated. At that point limited amounts of funding from the Executive had been allocated to maintaining external domestic connectivity support.

Both the UK Government and NI Executive have had to deal with a wide range of complex and competing demands as they have shaped their response to the pandemic. However, it is evident that for this financial year sufficient funding has been made available by the UK Government to the Northern Ireland Executive to meet both the on-going funding requirements for public transport in Northern Ireland and the funding and financing required to sustain operation of both Northern Ireland's key infrastructure Gateways. Should flexibility with funding at year end be possible and additional COVID-19 emergency funding be made available for 2021/2022 it is vitally important that both the UK Government and the NI Executive seek to prioritise funding both now and over the recovery period in order to support maintenance of these vital external links, given the profound economic and social need that has been identified in this report for sustained connectivity between NI and GB.

1. Overall Project Aim

The overall aim of the research is the preparation of a short to medium term Access Mitigation Strategy to respond to the challenges posed for the business, travel, leisure and tourism sectors by the physical and psychological impacts on travel access to/from Northern Ireland during/post the COVID-19 Pandemic. The research findings and its recommendations are informed by robust empirical evidence bases and include proven public policy interventions to maximise the region's access and openness to business and tourism related travel going forward.

2. Project Context & Objectives

2.1 Context

The research programme reflects the need to understand the implications of the COVID-19 crisis on accessibility to/from Northern Ireland given the region's heavy reliance on air and sea access for trade, Foreign Direct Investment (FDI) and tourism. This includes the fall-out from COVID-19 (and additional factors including Flybe, Brexit and any Trade and Cooperation Agreement reached between the EU and the UK) on the capacity of air and sea routes, how demand has and will be impacted in the future because of changing behaviours and what actions need to be taken to minimise these effects and keep Northern Ireland open for business.

2.2 Project Objectives

The project objectives are as follows:

- To establish the current position and near to medium term prospects for air and sea connectivity to Northern Ireland (including Irish Sea ports and airports).
- Review the contribution of air and sea links to the performance of the Northern Ireland Economy and Wider Society.
- Assess the factors shaping this position and their impact on demand for external travel before, during and post the Coronavirus Pandemic.
- Develop a range of future scenarios around passenger transport by air and sea to inform the development of a range of mitigation policy interventions to maximise the accessibility of the region.
- Table recommendations for a mitigation policy to maximise accessibility of the region.
- Assess the potential for funding and financing a Short to Medium Term Access Mitigation Strategy for the region.

3. Statement of Methodology

3.1 Overall approach

The overall approach to the proposed research has been developed as a series of Work Packages (WPs) as follows:

- WP1: Audit of current air and sea connectivity.
- WP2: Review of the contribution of air and sea links to the performance of the Northern Ireland Economy and Wider Society.
- WP3: Assessment of factors shaping demand for external travel before, during and post Coronavirus pandemic.
- WP4: Elements of a mitigation strategy.
- WP5: Funding and financing a Short/Medium Term Access Mitigation Strategy.

These are described in more detail below.

3.2 Aspects of the Methodology

The methodology adopted to address the objectives of this research encompasses collation, analysis and interpretation of international, national and regional official statistics (e.g. UK, EU/ Eurostat statistics, CAA , DfT, DfI, NISRA, NI Census, Government Trade, Tourism NI, Tourism Ireland, Visit Britain statistics). These work packages are also informed by the relevant literature, both peer reviewed and grey literature.

The study design also involves critical reviews of international, national and regional macro-economic and sector analyses and projections as well as detailed interrogation and analyses of sector data drawn from published and unpublished sources. WP3 and WP4 take advantage of on-going comprehensive research on the impact of the COVID-19 Pandemic on travel and behavioural response to the perceived risk posed by the virus and Government public health regulations, guidance and messaging across the UK being led by TAA in association with NEMS Ltd.

WP3 and WP4 are also informed by in-depth in-house research including consultation and engagement with Northern Ireland Chamber of Commerce Member companies, stakeholders (airports, ports, sector groups etc.), Government as well as other key actors and stakeholders. This element of the work will also take advantage of bespoke data sets and detailed supporting analyses of:

- Company profiles, their markets and supply chains.
- Market and supplier locations.
- Identification of firm travel policies before, during, and after the COVID-19 Pandemic.

Synthesis of these sources provides insights into business, long distance external commuter and leisure travel patterns, propensities and sentiment before, during and after the Pandemic, including establishing the significance of a range of factors affecting demand. These include the roles of anxiety and fear engendered by the Pandemic and the impacts of Government guidance in shaping organisation strategies and policies for business travel and in influencing the behaviour of individuals during the last

nine months. For commuting, job availability and location are important long-standing considerations. In the case of leisure additional factors are likely to include destination attractiveness, income and employment levels, engrained behaviour, culture/language, VFR links and seasonality. Further features of the methodological approach include application of scenario construction and market projection tools.

4. Audit of the current connectivity of Northern Ireland and Overall Patterns of Travel by Air and Sea

4.1 Audit of the current connectivity of Northern Ireland

External Connectivity: A Northern Ireland Perspective

External connectivity can be defined as the ability and ease with which passengers (and freight) can reach destinations by land, air or sea. Facilitating connections between individuals and firms can promote the diffusion of ideas, and hence to spur innovation and technological development. The potential for air connectivity to deliver economic benefits increases as air travel becomes less costly and more accessible.

The performance of Northern Ireland's connectivity is important. Connections to the rest of the world facilitates business meetings, foreign direct investment, knowledge sharing, and cultural exchange. Enhanced improvements in connectivity will raise productivity and stimulate a larger economy and more jobs.

Northern Ireland's Executive has articulated its medium-term and long-term strategy to spur economic growth, including increasing in bound tourism. It places emphasis on boosting Northern Ireland's external competitiveness, including by improving its transport connections. The air connectivity of Northern Ireland has, in recent years, trailed well behind most of its peer competitors, including that enjoyed by the Republic of Ireland.

The first half of 2020 has witnessed a dramatic decline in Northern Ireland's air connectivity and to a lesser extent by sea and land. This reflects the collapse of the airline Flybe and the drastic reductions and cuts in air services with the onset of the Coronavirus Pandemic. As the lockdown imposed on society is loosened the current limitations in external connectivity currently being experienced will inevitably constrain the pace of economic recovery.

To develop a strategy to mitigate the impacts of such constraints it is first vital to understand the extent to which that external connectivity has weakened, both in absolute terms and relative to other areas. The first step in that process is to carry out an audit of the current connectivity of Northern Ireland.

External Connectivity: What is it and how can it be measured?

External connectivity can play an important role in fostering local economic development and supporting national long-term economic growth objectives. Through facilitating the movements of goods and services, people, ideas, knowledge and investment, connectivity supports a country's integration into the global economy. Connectivity provides direct benefits to the users of air and sea services and wider benefits to the entire economy through its positive impacts on productivity and economic performance.

External air and sea connectivity in the context of this investigation can be broadly defined as ability and ease with which passengers and freight can reach destinations by air and ferry. Increasingly, governments recognise that connectivity plays a crucial role in enhancing economic growth by facilitating tourism and inward foreign direct investment and supporting trade in goods and services.

The potential of connectivity to deliver socio-economic benefits increases as external transport becomes less expensive and more accessible.

Air connectivity at its most basic is viewed as the availability of flights offered by an airport or a system of airports. This definition does not explicitly include airside, landside, or surface access considerations, which can also be important to policy makers. Where the focus is on the passenger experience, ideally this would involve an in-depth analysis of the entire door-to-door connectivity offered to travellers.

There is no single best approach to defining and measuring connectivity. In the case of air transport, the approaches range from simple metrics that are relatively easy to obtain from schedule or traffic data to more complex metrics that rely on modelling techniques, multiple data sets, and expert judgment. Simple connectivity metrics provide easy-to-interpret information about the characteristics of an airport system, but they are not suitable for analysing the connectivity impacts of any changes to the route network.

More complex connectivity metrics based on modelling can provide such insights. One approach, network quality models, can be particularly useful tools for understanding how an airport links passengers and freight to the rest of the world. These models can account for both direct connectivity and connectivity via other airports, hence reflecting the destination choices that passengers have. Indirect connections are weighted according to their quality, based on connecting time and detour involved in the indirect routing. Network quality models also provide a measure of hub connectivity of an airport, by including the number of connecting flights that can be facilitated by the hub airport in question, taking into account connecting times, and weighting the quality of connections by connecting times and the detour involved. Air connectivity metrics can inform assessment of the performance of the air transport sector at a national, regional, and airport level. They can also provide valuable insights into potential consequences of changes to policy. Despite air connectivity having become an important tool for decision-making, systematic approaches to using air connectivity metrics in project appraisals or in policy-making more broadly, have not yet been developed.

Governments should consider making a systematic use of a combination of different approaches to measuring air connectivity to allow for tracking air connectivity trends over time and help improve appraisal of any potential investments in air transport.

Developing network connectivity metrics

Network connectivity assessments are being extensively used by the air transport sector to measure network connectivity performance of airports against one another. Comprehensive network connectivity assessments capture the following components:

- Direct connectivity: The level (number and quality) of connections offered from the assessed airport.
- Indirect connectivity: the level (number and quality) of reasonable connections offered from one assessed airport indirectly through other airports.
- Hub connectivity: The level (number and quality) of reasonable indirect connections offered through the assessed airport.

Tracking these various components over time can help airlines, airports, and governments analyse the evolution of network connectivity over time, benchmark network connectivity performance against

main airport/airline competitors, and perform scenario analyses to estimate the possible impacts of business or policy decisions on the route network.

Measuring direct and indirect connectivity provides insights into all reasonable connections available to passengers and freight shippers. This is an important consideration for policy-makers as higher levels of direct and indirect connectivity improve social welfare by diminishing the generalised cost of travel. Shorter travel times, more convenient schedules, and lower air fares translate into lower travel costs, which benefit the users of air transport.

Measuring an airport's hub connectivity, on the other hand, provides insight into the scale of connecting flights that can be provided by the airport. Transfer traffic improves direct connectivity by increasing demand for direct routes from the hub. This enables a hub carrier and its partners to offer more destinations and higher frequencies than it would otherwise be possible.

Approaches to measuring network connectivity: An overview

A review of different approaches to measuring network connectivity reveals that there are at least three that account for all three components of connectivity referred to above and are capable of assessing changes to the route network from different exogenous factors, such as changes to government policy or airline business models serving the network. These are:

- Network quality models,
- Quickest path length models, and
- Generalised travel cost models.

Network quality models identify all direct and all reasonably indirect and hub connections that are available for a defined period of time. Network connectivity metrics based on quickest path length models estimate direct and indirect connectivity by measuring the average travel time along the quickest path to reach all other airports in a network within a certain time threshold. Network connectivity metrics based on generalised travel cost models assess the generalised travel cost of reaching a selection of destinations (or all reasonable destinations) in a network. The generalised travel cost includes cost of tickets (average air fare, and sometimes average charges related to getting to the airport), as well as the monetised value of time spent travelling. Some generalised cost estimates include costs due to delays or schedule delays. Metrics based on generalised travel costs models produce monetary estimates reflecting welfare impacts of connectivity changes on the users of aviation. However, aggregate air connectivity estimates based on generalised cost of travel are often challenging to interpret.

Network connectivity metrics however, based on each of these techniques requires significant resources in terms of modelling capacity, data collection, and expert judgment. For instance, estimating accurate maximum and minimum connecting times at different airports requires expert knowledge of airport operations and obtaining information on the actual duration of flights.

Approaches to measuring network connectivity: Approaches by Governments

Most network connectivity studies conducted by governments do not rely on such modelling techniques. The most common connectivity metrics used by policy makers are derived from statistics on flight schedules, as well as passenger and cargo flows data.

The most common metrics derived from such statistics include the number of available destinations, flight frequencies, seat capacity, seat-kilometres, cargo-hold capacities, passenger and cargo volumes, and market shares (for example, of transfer traffic in total traffic). Such metrics can provide insights into how the route network has developed over time, across different passenger segments (business, leisure, visiting friends and relatives) or sector lengths (domestic, short-haul, and long-haul). The advantage of such metrics is that they are easy to interpret, and comparable over time and across different airports or network systems. They are, however, of more limited value for policy or business analysis.

The decision on the choice of an appropriate approach to measuring connectivity depends upon the objectives and resource availability. The research design provided for the choice for this investigation would be finalised during the inception stage of the work and taking into account the availability of resources available to the study.

Approach to measuring network connectivity for this study

The approach to assessing connectivity and choice of measurement metric(s) has been informed by the considerations set out in the preceding sub-sections of this section of the report.

Regions of the UK are in direct competition with each other for FDI, domestic investment, trade in business services and manufacturing, and tourism. Northern Ireland also faces competition in a variety of ways from the Republic of Ireland. Thus, in assessing the region's competitiveness it is appropriate to do so on the basis of relative competitiveness including in relation to the connectivity enjoyed by competitors.

In the case of passenger travel by sea the role of ferries is to act as a bridge between Great Britain and the island of Ireland. It is quite simple in terms of the numbers of routes and largely caters for road based onward travel. Therefore, connectivity for passenger movements can be reviewed on the basis of route development.

In the case of air transport another approach was adopted that seeks to benchmark Northern Ireland with airports serving other areas of the UK and the Republic of Ireland. Moreover, it is important to recognise the scale of air traffic at Northern Ireland's airports. The two Belfast airports are significant airports serving the majority of Northern Ireland's external passenger travel requirements. In the case of Belfast International Airport, it caters for substantial international travel, catering for a burgeoning tourism market and the wider leisure sectors. Belfast City Airport's primary focus is on domestic movements, most importantly the UK's principal hub and gateway at London Heathrow.

To assess air connectivity the following airports were selected to compare their performance with Belfast. They are;

- Dublin
- Edinburgh
- Glasgow
- Newcastle
- Manchester
- Leeds Bradford
- Bristol
- Cardiff

Given the resources available to this investigation and these features of Northern Ireland airports' market profiles it was deemed appropriate to assess connectivity on the basis of a bespoke approach focusing on what we have termed **Basic Connectivity, Frequency and Business Connectivity,** and **Hub Connectivity.** The measurement of each of these was undertaken for the first week of July over a twenty-year period 1999 – 2019. This week was chosen for analysis as that represents the peak summer season, but it does also include business routes which are reduced or withdrawn during the holiday period later in July and August.

Three years were selected for detailed measurement for the study: 2019 which represents the most recent situation before the COVID-19 crisis and before the collapse of Flybe - which was a major provider of services at many of the UK regional airports. 2007 is used as the midpoint, which represents the previous peak before the downturn during the economic crisis or 'credit crunch' period from 2008-10. 1999 is taken as the historic base position in the heyday of the traditional airline industry before the '9/11' downturn and the rapid growth of the Low Cost Carriers (LCCs) which changed airline networks dramatically during the 2000-04 period.

Basic Connectivity

The measure adopted here is the number of destinations with non-stop scheduled service from the city during the study periods. Locations with multiple airports such as Belfast City/International and Glasgow/Prestwick are grouped together for this purpose to look at the combined route network from the region. For destination points however, different airports are treated as separate destinations so Heathrow, Gatwick, Stansted, Luton, London City count as five different routes if served. Similarly, Milan Malpensa, Linate and Bergamo would count as three separate routes.

This takes no account of the frequency of operations, so a once a week service to e.g. Verona counts the same as a ten times per day service to Birmingham – each represents one destination served. It is a simple measure of the number of places to which the passenger can take a direct flight, although many of these are only suitable for leisure purposes. Destinations with an intermediate stop are not included e.g. a service that routes Belfast City-Edinburgh-Aberdeen is only counted under Belfast-Edinburgh. This is because one stop flights are little different in most cases from connections of which there are thousands of possible combinations, whereas non-stop is a clearly defined category. (US carriers often have 'through' flights to various US destinations using the same core transatlantic flight with different flight numbers and an aircraft change, so Delta had a Glasgow-Boston which was also a Glasgow-Boston-Atlanta and a Glasgow-Boston-New York through service. Only Boston is therefore treated as a directly

served destination). It is acknowledged that this eliminates a few long-haul services which had a stop for technical purposes or to pick up passengers only e.g. Singapore flying Manchester-Munich-Singapore which would not be counted at all if it does not carry local traffic between Manchester and Munich.

In the earlier years, charter services, which are not included in this analysis, were more significant, so some of the growth in scheduled operations has come from charter to scheduled substitution.

Table 4.1 demonstrates Belfast has seen a significant expansion, in line with Glasgow or Newcastle but it is now far behind the network scale of Dublin, Edinburgh or Manchester. It has been also overtaken by Bristol, while Leeds Bradford has caught up.

Table 4.1: Basic Connectivity at Sample Cities 1999-2019

	1999	2007	2019
Belfast	24	51	67
Dublin	67	141	178
Edinburgh	33	67	143
Glasgow	41	74	89
Newcastle	21	47	57
Manchester	74	118	186
Leeds Bradford	13	38	63
Bristol	15	47	100
Cardiff	10	19	31

Source: OAG, Dennis, TAA

Frequency and Business Connectivity

As the basic connectivity takes no account of frequency or schedule, some additional measures have been created to assess the suitability of flights for business travel or other time sensitive or urgent requirements. There are two measures adopted here – the first is the number of routes with at least 2 frequencies per day in each direction on Monday-Friday (see Table 4.2) (this still takes no account of the schedule but indicates where passengers have a reasonable choice of frequency on the route concerned, it will include many popular holiday destinations such as Malaga or Palma) and the second is one we have called the business connectivity where the route has a flight departing before 10.00 hrs and after 16.00 hrs in both directions so permitting a day trip between both airports concerned, starting from either end of the route (Table 4.3). The frequent routes have been stable over the years at most locations, only showing significant growth at the two largest airports Dublin and Manchester where a range of busier routes have reached the threshold to support at least 2x737 or A320 flights per day. This implies that most of the expansion in Basic Connectivity has come from low frequency routes, typically to leisure destinations. Belfast has 20 frequent routes but 16 of these are domestic and 3 are holiday routes to Alicante, Faro and Malaga; Amsterdam is the only major European city served twice per day.

Table 4.2: Frequent routes at Sample Cities 1999-2019

	1999	2007	2019
Belfast	19	18	20
Dublin	32	44	54
Edinburgh	20	28	26
Glasgow	25	24	26
Newcastle	13	16	10
Manchester	35	44	48
Leeds Bradford	10	11	8
Bristol	9	13	12
Cardiff	6	8	5

Source: OAG, Dennis, TAA

Business connectivity has somewhat surprisingly stayed the same or declined over the twenty-year period at most of the cities in the sample (Table 4.3). Only Edinburgh has seen an increase and then by just one route. This is a function of larger aircraft sizes and the growth of LCCs who put price competition above frequency. It also reflects the low growth of the business market leading to a relative decline in its importance. Most routes in this category are either the longer domestic sectors or to major cities and hub airports in Europe. Thus, the key destinations haven't really changed very much over the years leading to stability in the network. At Belfast the 14 such routes are all UK domestic (helped by the sea crossing required in all cases). Improved rail services in Great Britain have reduced the need for some domestic air routes, particularly in the middle of the country, serving Newcastle, Manchester and Leeds.

Much of the business connectivity in Table 4.3 below was provided by Flybe in 2019, leading to concerns as to how essential business links will be maintained if these routes are taken over by LCCs at poor timings and frequency or dropped altogether. In a few cases, Loganair or Aer Lingus Regional (Stobart) have stepped in with small aircraft but it remains to be seen whether this is commercially sustainable where LCCs also have a service in the vicinity.

Table 4.3: Business Connectivity at Sample Cities 1999-2019

	1999	2007	2019
Belfast	17	17	14
Dublin	23	23	23
Edinburgh	17	19	18
Glasgow	19	18	17
Newcastle	11	13	4
Manchester	28	30	22
Leeds Bradford	8	9	3
Bristol	8	9	7
Cardiff	5	4	5

Source: OAG, Dennis, TAA

Hub Connectivity

To measure the potential links via hubs to the rest of the world from each regional centre, two measures have been adopted. One is the weekly frequency of services **by the hub airline** to airports which can be considered a hub for that traditional network airline who markets connecting flights (LCC bases are not hubs in this context even though e.g. Ryanair has a large number of flights at Stansted or Dublin) (Table 4.4). In contrast Dublin is a hub for Aer Lingus. Some airports are not hubs for the entire time period if they fall below a frequency of 500 flights per week e.g. BA at Gatwick was a hub in 1999 and 2007 but no longer in 2019.

Thus, KLM flights to Amsterdam will count as hub links but EasyJet or British Airways flights to Amsterdam do not count as hub links. There has to be a code-share in place with the hub carrier for third party services to be included in this category e.g. in 2019, Flybe on Cardiff-Paris has a code share with Air France hence is counted as Air France and similarly for Aer Lingus with BA on Belfast-Heathrow but Flybe on Manchester-Amsterdam has no code share with KLM and hence is not counted as a hub feeder. British Midland was treated as a hub link with Star Alliance carriers at Heathrow in 1999 and 2007.

Table 4.4: Hub Frequencies from Sample Cities 1999-2019 (per week)

	1999	2007	2019
Belfast	156	61	59
Dublin	197	262	446
Edinburgh	346	283	268
Glasgow	319	260	167
Newcastle	197	109	94
Manchester	498	498	421
Leeds Bradford	91	44	43
Bristol	64	54	49
Cardiff	27	27	38

Source: OAG, Dennis, TAA

Hub frequencies have declined everywhere except Dublin and Cardiff. Although starting from a much lower base than Manchester, Dublin has become a 'must have' location in the networks of major airlines. Belfast (which in previous years enjoyed service by KLM from Amsterdam, Sabena from Brussels, Continental from Newark and BA from the Birmingham Eurohub as well as both BA and bmi from Heathrow) is now down to only the BA Heathrow link, albeit at a high frequency. In contrast, in 2019 Cardiff Wales had no Heathrow link but adequate services to Amsterdam and Paris CDG as well as Qatar operating daily to Doha.

To provide a combined measure of both the frequency of hub feeder links and the scale of the hub they are connecting with, a Hub Connectivity measure has been derived (Table 4.5). This multiplies the weekly frequency from the regional airport with the weekly frequency from the hub to all destinations. In all cases only the hub airline and code-share partners are counted. This provides a crude measure of the total potential connectivity. Although it does not explicitly take account of scheduling for connections at the hub (which will improve the performance of some other smaller hubs compared to e.g. Heathrow or JFK), the frequency of the feeder route to some extent reflects this. It is also the case that very high frequencies (beyond about 8 per day) are of little further benefit in creating more connections as almost everywhere can be reached within a 3-hour connection window.

Table 4.5: Hub Connectivity from Sample Cities 1999-2019 (thousands)

	1999	2007	2019
Belfast	426	144	321
Dublin	860	951	2231
Edinburgh	981	1054	1124
Glasgow	904	803	724
Newcastle	590	436	572
Manchester	1642	1614	1721
Leeds Bradford	243	146	176
Bristol	197	267	174
Cardiff	108	121	180

Source: OAG, Dennis, TAA

The table above indicates that Belfast has very weak global connectivity, behind all the airports in the table except Leeds Bradford, Bristol and Cardiff. The take-over of bmi by BA did improve the situation compared to 2007 however when only bmi operated on Belfast-Heathrow. Dublin has powered ahead while Edinburgh, Manchester and Newcastle have also held their ground. Glasgow and Leeds/Bradford are the other big losers, suffering from being overshadowed by their larger neighbours in the same way that Belfast is by Dublin. It is more efficient for airlines to only serve one airport in a region than multiple ones although a wider network can help maximise market share (the strategy adopted by KLM in the UK and in past years, Continental).

As the size of almost all the hubs has grown over the years, the Hub Connectivity would be expected to increase if the same network and frequencies from the sample airports were maintained. That has not happened in some cases, indicating fewer frequencies or some hub links being dropped altogether (N.B. if e.g. Air France is replaced by EasyJet on a route to Paris this is no longer a hub link).

Connectivity by Passenger Ferry

The network of ferries catering for passenger movements across the Irish Sea can be grouped into main corridors, the Northern Corridor serving Northern Ireland, the Diagonal Corridor serving Northern Ireland ports from England, the Central Corridor linking ports in England and Wales with Dublin and the Southern Corridor linking West Wales with the southern part of the island of Ireland. The pattern of routes has in recent years experienced considerable consolidation in the Northern Corridor in particular. Advances in fast ferry technology acted as a catalyst for establishing longer routes and/or relocation of ferry routes to different or newly constructed port facilities. Ultimately these innovations proved unviable due in part to the economics of the operation of fast ferries with the result that in the Northern Corridor during the last decade the number of routes had reduced to two, Larne Cairnryan and Belfast Cairnryan. Across the Diagonal Corridor the pattern of routes has tended to exhibit greater stability. Further details are considered under Section 4.2.

Impact of the Coronavirus Pandemic and the Flybe collapse on Northern Ireland's External Connectivity

The COVID-19 Pandemic and the financial collapse of Flybe have had major impacts on Northern Ireland's external connectivity. Apart from two routes to London all scheduled passenger services ceased by the end of March 2020. Air travel from Northern Ireland was limited to Aer Lingus flights between Belfast City Airport and London Heathrow, and a Loganair link between City of Derry Airport (CODA) and London Stansted Airport. Other routes to Great Britain from CODA were suspended.

At Belfast City, Flybe, which operated 80% of flights and carried over 1.6 million passengers across 14 routes, ceased operations in March 2020. During last winter up to February 2020 Flybe provided around 500 flights a week to 12 destinations throughout Great Britain. The schedule included seven flight a day services from Belfast to Birmingham and Manchester. London City was served by six daily flights, and up to 5 per day to Leeds Bradford whilst Edinburgh and Glasgow each had up to four flights per day. Southampton and East Midlands were served by up to 3 per day to, with daily flights to Aberdeen, five flights per week to Exeter and four flights per week to Doncaster and Inverness. Belfast City Airport's only international flight to Amsterdam was also suspended. Thus, for a period of up to four months the majority of routes did not operate.

As of October 2020, a number of these routes had been re-established, albeit with lower capacity in many instances. Flights to Aberdeen, Glasgow, and Inverness restarted in March 2020. In August 2020 services to Birmingham, East Midlands, Edinburgh, Exeter, Leeds/Bradford and Manchester restarted while flights to London City restarted in September 2020.

The following routes are now served:

- London–Heathrow, London–City
- Aberdeen, Inverness Birmingham, Dundee, East Midlands, Edinburgh, Exeter, Glasgow, Leeds/Bradford, Manchester, Southampton, Teesside and Cardiff (from January 2021)
- Amsterdam

During last winter Belfast International Airport was served by the following scheduled services.

All year Round:

Alicante, Amsterdam, Bergamo, Birmingham, Bristol, Edinburgh, Faro, Glasgow, Isle of Man, Kraków, Lanzarote, Liverpool, London–Gatwick, London–Luton, London Stansted, Málaga, Manchester, Newcastle upon Tyne, Paris–Charles de Gaulle, Vilnius.

Seasonal:

Barcelona, Bordeaux, Dalaman, Gdańsk, Geneva, Ibiza, Jersey, Malta, Nice, Palma de Mallorca, Prague, Split.

All scheduled passenger services had ceased operation by late March 2020, a situation that continued through to June 2020. The airport's principal carrier, EasyJet announced it would resume flights to Birmingham, Bristol, Edinburgh, Glasgow, Gatwick, Liverpool and Newcastle from Belfast International

Airport from June 15. As of October 2020, the following domestic UK routes from Belfast International were operating: Birmingham, Bristol, Edinburgh, Glasgow, Liverpool, London (Gatwick, Luton, Stansted), Manchester, and Newcastle.

In summary, for a period of up to three months the vast majority of domestic routes did not operate. This is illustrated dramatically for the case of Belfast's two airports in Table 4.6. Connectivity fell by more than 90% across a range of indicators.

Table 4.6: Basic, Frequency, Business and Hub Connectivity by Air - Belfast 2019 and Spring 2020

	Basic			Frequency			Business			Hub		
To/from	2019	Spring 2020	% Chg	2019	Spring 2020	% Chg	2019	Spring 2020	% Chg	2019	Spring 2020	% Chg
Belfast	67	1	-99	20	1	-95	14	1	-93	59	5-10	-83/-92

Basic Connectivity = No. of Routes

Frequency Connectivity = No. of Frequent Routes (2 per day)

Business Connectivity = No. of Routes without & Back in 1 day facility

Hub Connectivity = No. of services per week (each way) to Hub

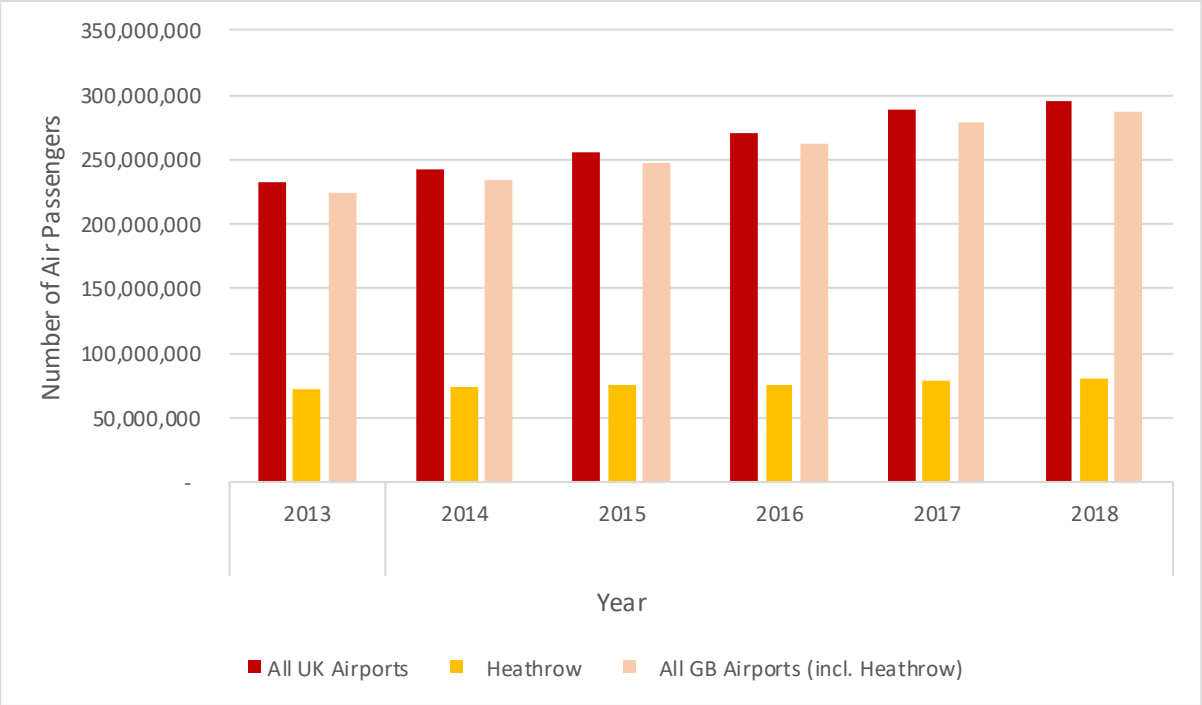
Source: OAG, Dennis, TAA

Northern Ireland's external connectivity was reduced to two to three flights per day between Belfast City and London Heathrow and City of Derry to Stansted. No air connections were available to Scotland and the regions of England and Wales for at least three months. The only alternative during that period for travel between Northern Ireland and these regions was by travelling to London and then taking onward transport or by ferry to Scotland or Liverpool imposing an additional 3 to 9 hours on overall journey times covering the majority of cases.

Overall Patterns of Demand for Travel by Air and Sea

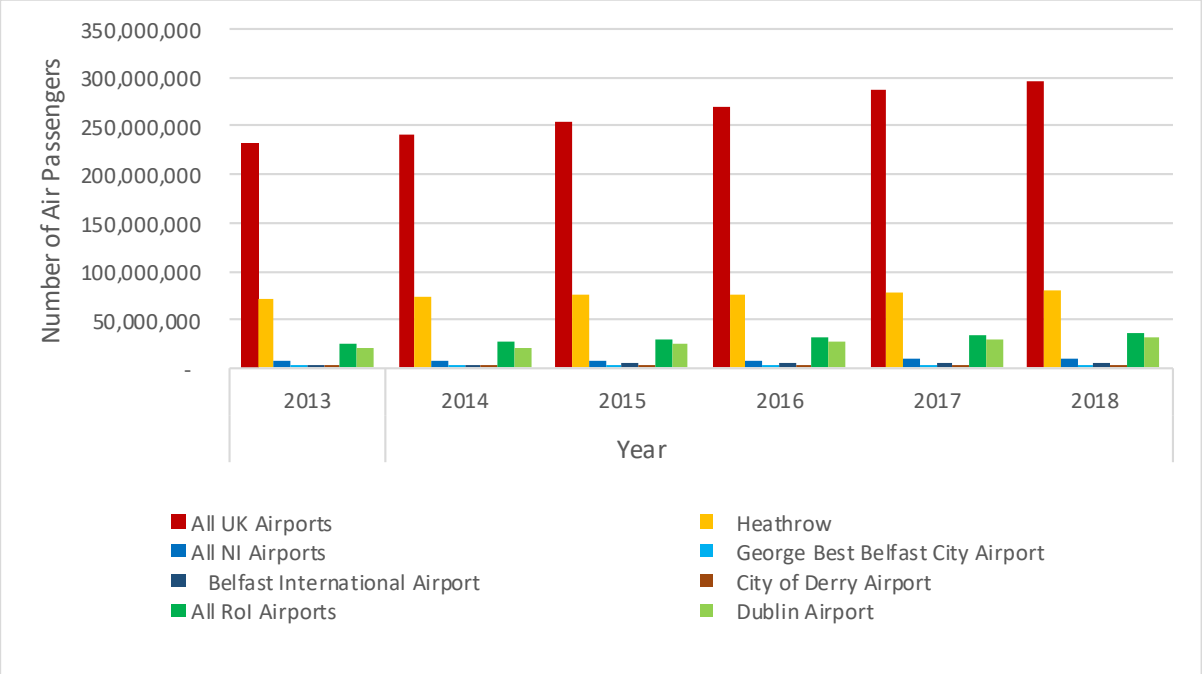
The patterns of connectivity set out below set the context for patterns of passenger flows by air and sea. For air transport it is important to recognise the significance of London Heathrow's contribution to the overall UK air transport market as demonstrated by Figures 4.1 and 4.2. This underpins the continuing importance of connectivity of the Belfast to Heathrow link across a myriad of trip purposes.

Figure 4.1 – Total Number of Air Passengers – UK Airports (2013 to 2018)



Source: CAA/ TAA

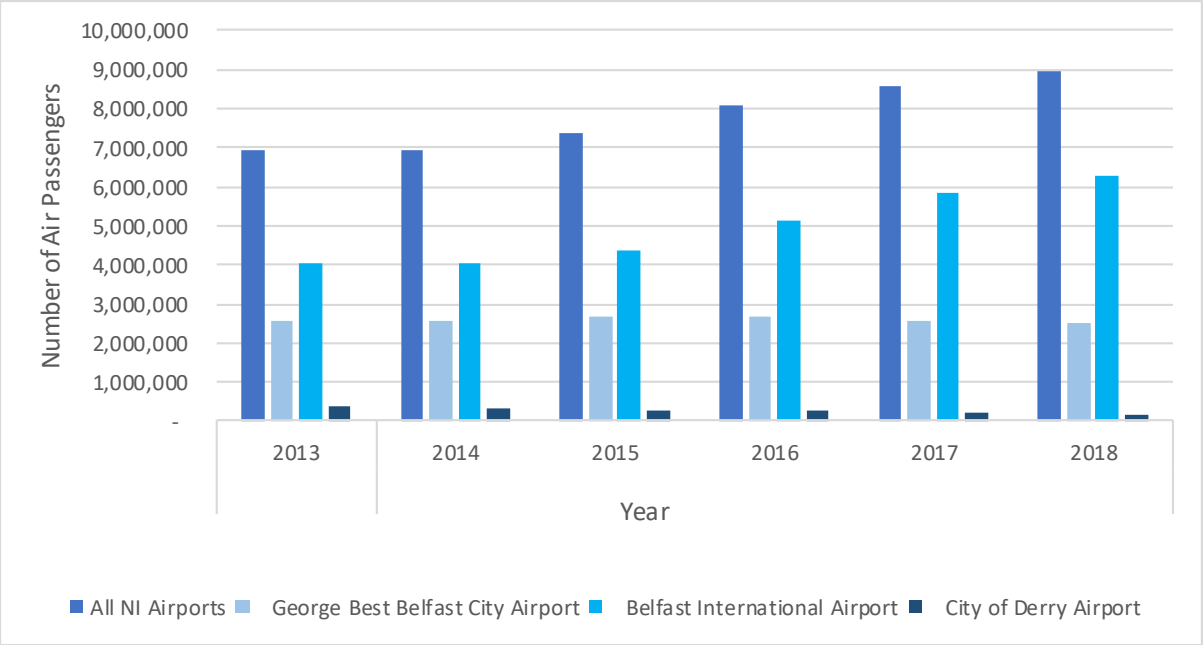
Figure 4.2 – Total Number of Air Passengers by Airport - Departure/Arrival (2013 to 2018)



Source: CAA/ TAA

At a Northern Ireland level, two airports cater for the vast bulk of traffic with Belfast International demonstrating a sustained increase during most of the last decade and also an increasing market share of Northern Ireland airport air passenger throughput (Figure 4.3).

Figure 4.3 – Total Number of Air Passengers – NI Airports (2013 to 2018)



Source: CAA/ TAA

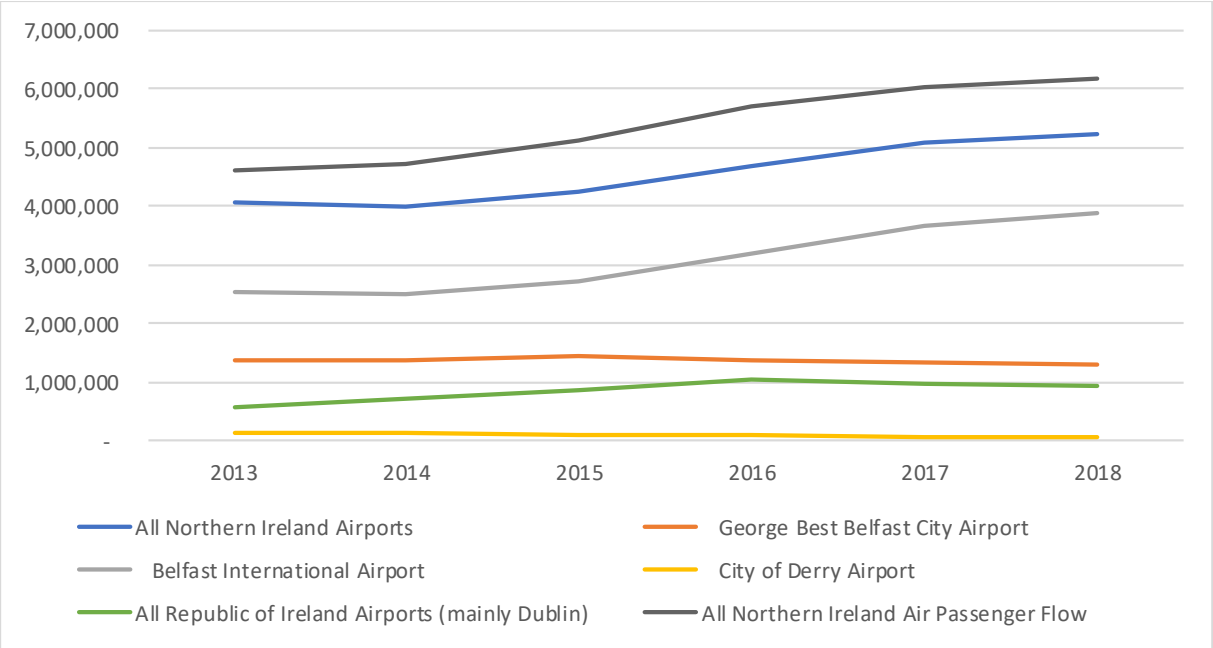
In the case of the Republic of Ireland as Figure 4.4 shows, air travel continued to grow at an even faster rate with the dominance of Dublin reinforced during the last decade with the airport catering for in excess of 30 million passengers by 2018 or twice the combined total of all other airport throughputs on the island of Ireland.

Figure 4.4 – Total Number of Air Passengers – RoI Airports (2013 to 2018)

Source: CSO/ TAA

The dominance of Dublin is reflected in the airport attracting 1 in 6 trips by residents of Northern Ireland, mainly on those direct routes to international destinations not served or as frequently served by airports in Northern Ireland. Figure 4.5 also demonstrates the growing market dominance of Belfast International in its share of the air transport market of Northern Ireland's residents.

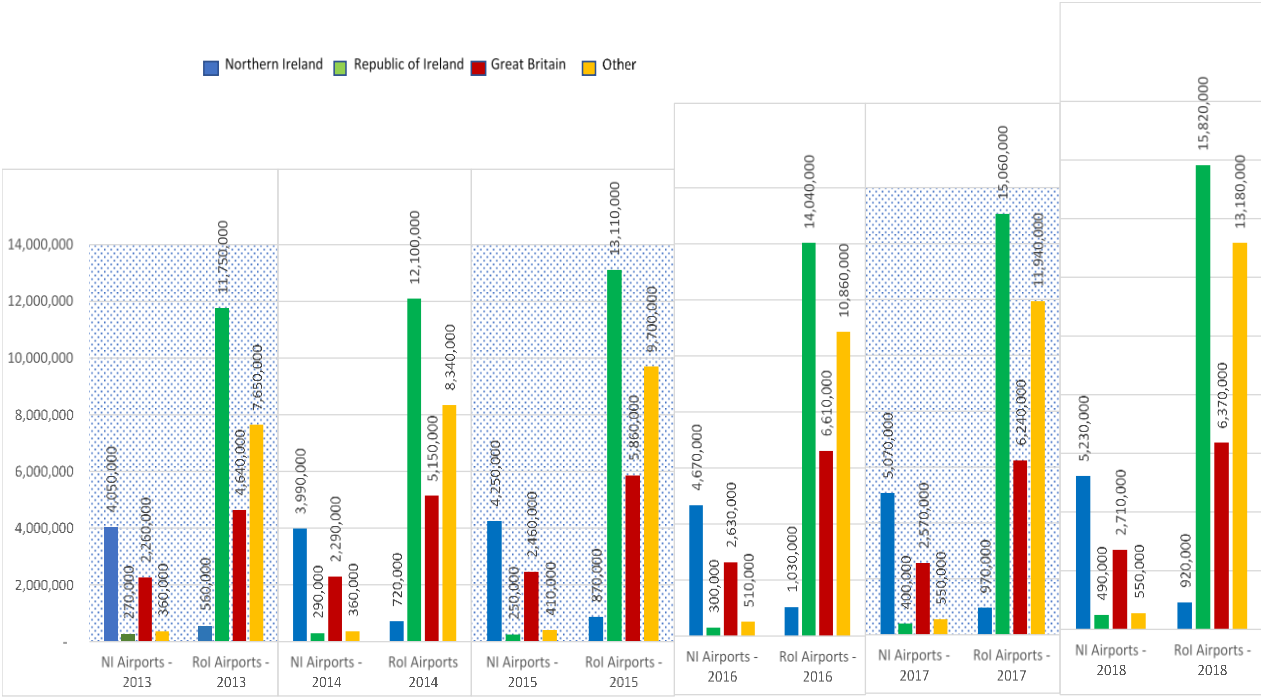
Figure 4.5 – NI Resident Air Passengers by Airport – Departure/Arrival (2013 to 2018)



Source: CAA/ NISRA/TAA

Figure 4.6 shows the wider pattern of air travel into and out of the island of Ireland by both residents and visitors. Again, this shows the dominance of Dublin but also highlights the significant proportion of its throughput made up of travellers who do not reside in the Republic of Ireland, Great Britain or Northern Ireland. With more than 13 million passengers living outside the British Isles that share reflects the network connectivity enjoyed by Dublin and highlighted in section 4.1. This is more than twenty-five times greater than the number of such travellers using Northern Ireland airports, once again reflecting the network connectivity performance differentials of Belfast and Dublin in the main. It is significant that twice as many residents of GB travel by air to the Republic of Ireland than to Northern Ireland. Also significant is the observation that while Dublin attracts around 0.9 million travellers residing in Northern Ireland almost 0.5 million residents of the Republic of Ireland travel through Northern Ireland's three airports.

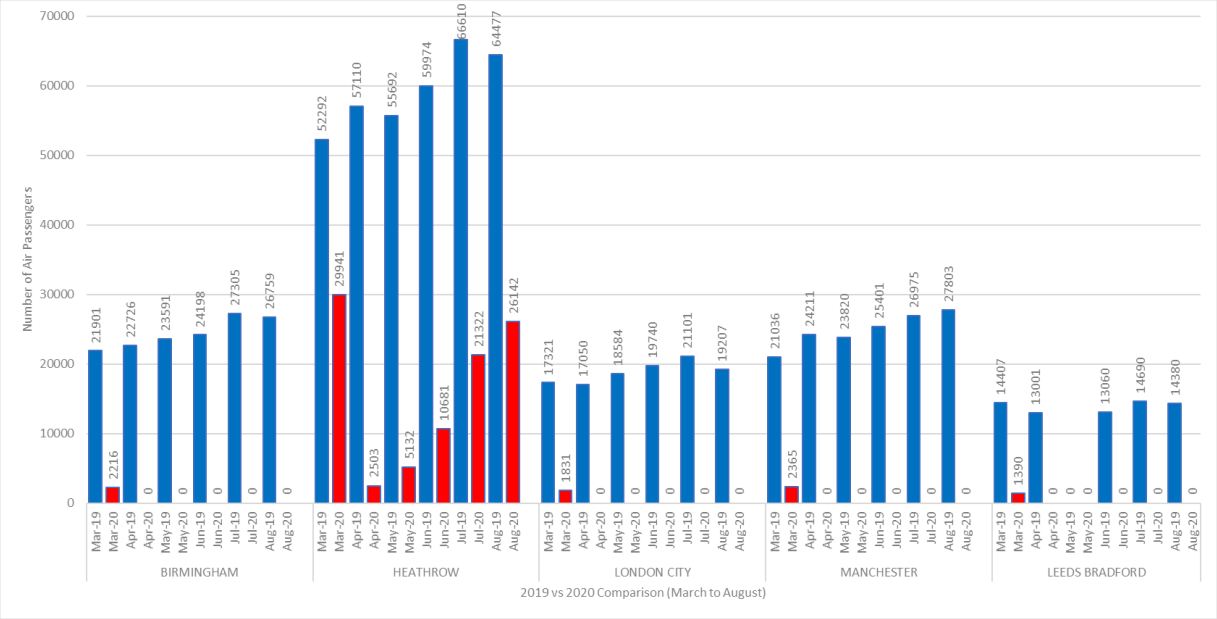
Figure 4.6 - Total Number of Air Passengers from NI/RoI Airports by place of residence (2013 - 2018)



Source: CAA/ NISRA/TAA

The period since early March 2020 has experienced dramatic changes in the pattern of air travel worldwide due to the impact of the COVID-19 Pandemic. In Northern Ireland the collapse of the airline Flybe came just before the UK Government imposed the first UK wide national lockdown. For Belfast City this resulted in the closure of most routes with only London Heathrow and a small number of other minor routes continuing to operate after cessation of Flybe's operations. These effects are graphically illustrated in Figure 4.7 for Belfast City covering the periods March – August 2019 and 2020. This figure highlights the loss of routes to Birmingham, London City, Manchester and Leeds Bradford all together and the reduction of passenger numbers on the Heathrow route by more than 95% in April 2020 compared to April 2019. Apart from the City of Derry to Stansted route this is the only route continuing to operate throughout the lockdown period and since the low point of April 2020 has managed to recover to around 40% of its normal carryings by August 2020 compared to August in 2019.

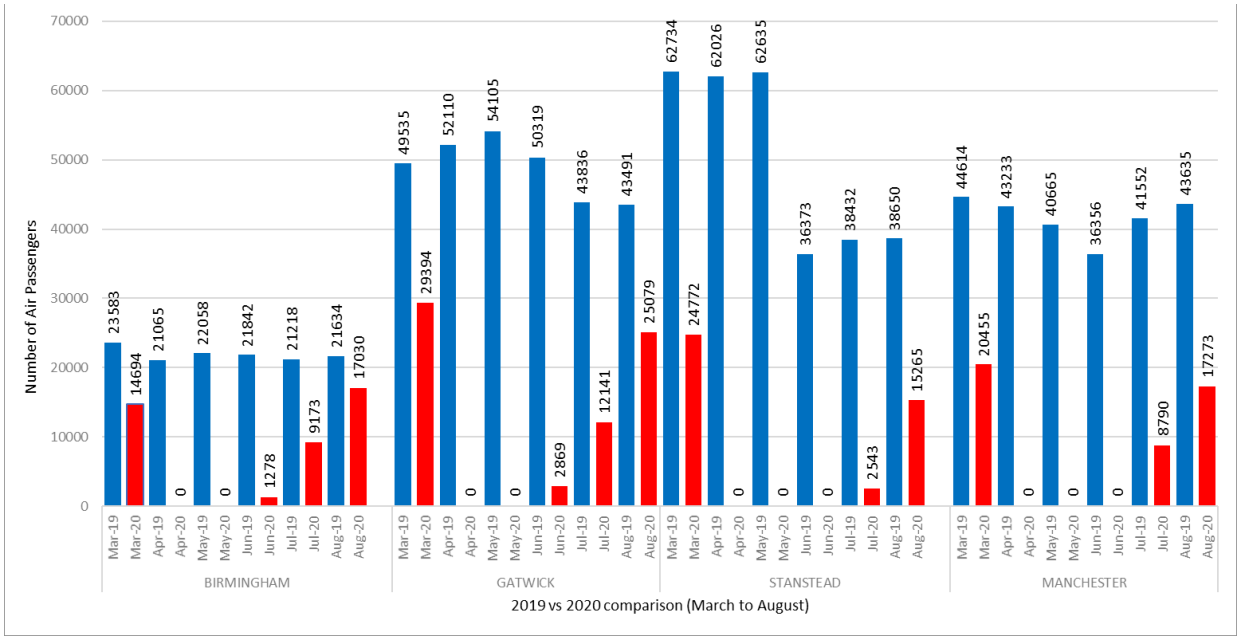
Figure 4.7 - Total Number of Air Passengers to and from Belfast City Airport by Route (March to August 2019 versus 2020)



Source: CAA/TAA

In the case of routes served by Belfast International the UK wide lockdown resulted in passenger flight ceasing by April 2020 as shown in Figure 4.8. A number of these ultimately resumed operation in mid-June 2020 with Birmingham route recovering 79% of the previous August, Gatwick 58% and Manchester to 40%.

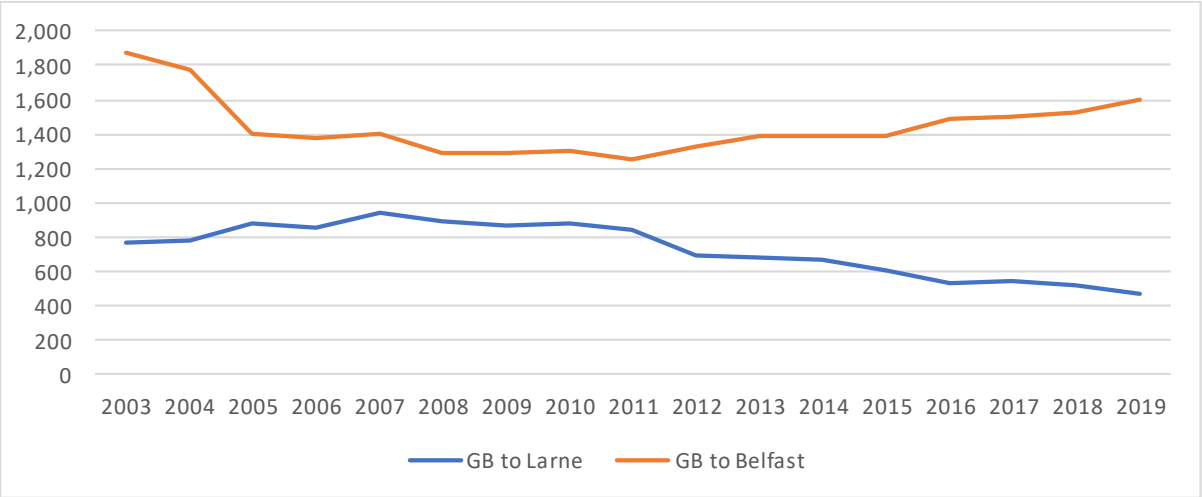
Figure 4.8 - Total Number of Air Passengers to and from Belfast International Airport by Route (March to August 2019 versus 2020)



Source: CAA/ TAA

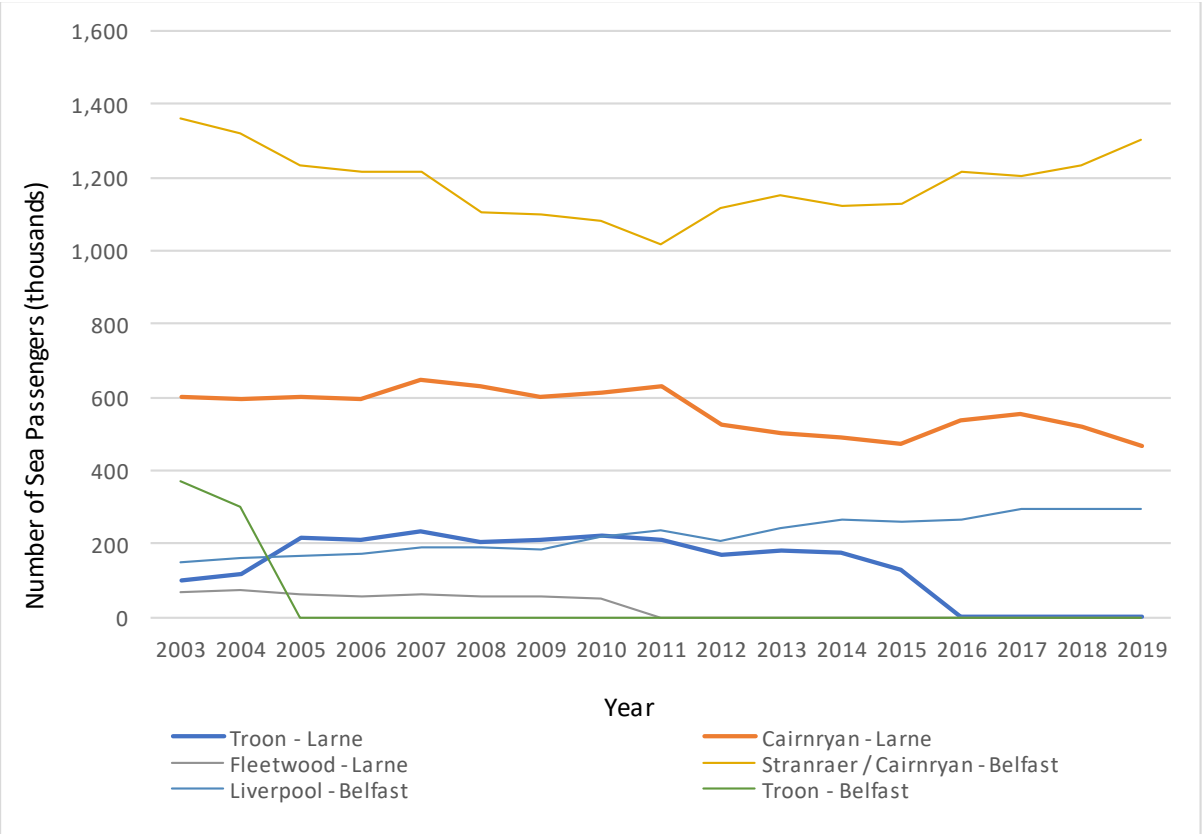
Turning to travel by sea, the overall pattern of passenger movement between Great Britain and Northern Ireland exhibits considerable stability during the last decade following a dip in the early 2000s (Figure 4.9). Within that overall pattern however, the growing share of traffic through Belfast at the expense of Larne is apparent (Figure 4.9). This coincided with changes to ferry port arrangements in Scotland and the demise of some smaller routes operated with fast ferry technology (Figure 4.10).

Figure 4.9 – Total Ferry Passengers – GB to/from Northern Ireland



Source: NISRA/TAA

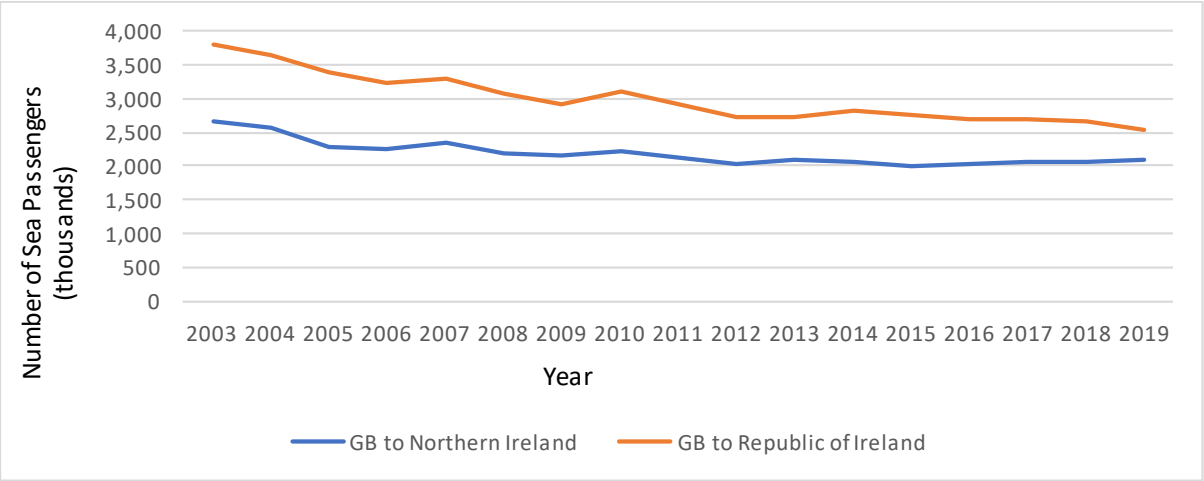
Figure 4.10 – Passenger Numbers by Ferry - GB to/from Northern Ireland by Route (2003 to 2019)



Source: Dft/ NISRA/TAA

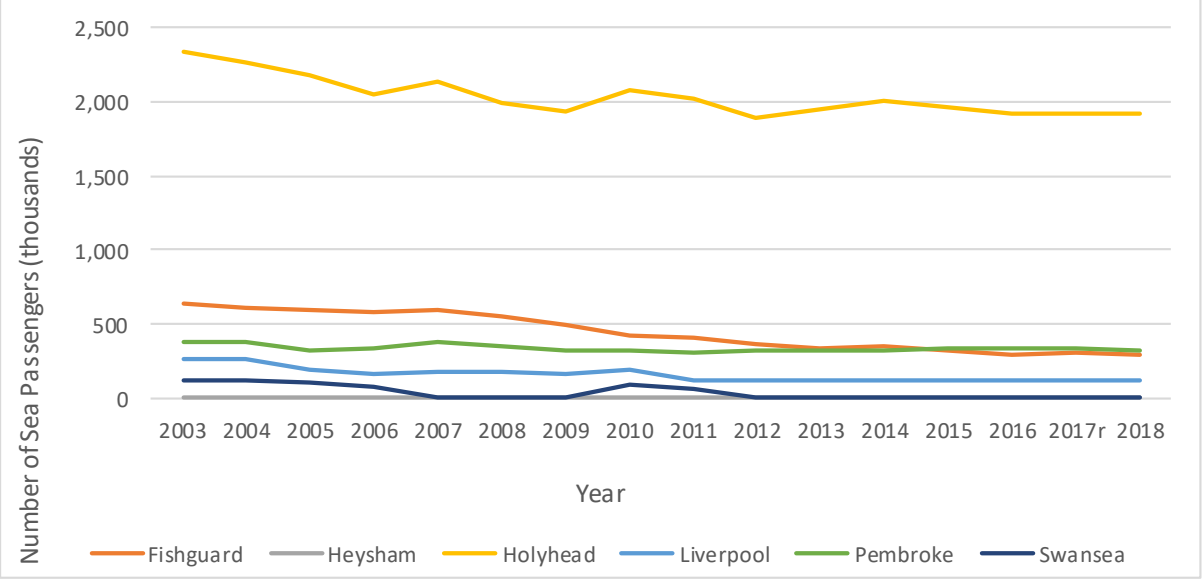
Overall, the pattern of travel across the Irish Sea shows a growing share moving through ports in Northern Ireland (Figure 4.11). Within that overall pattern Dublin - Holyhead continues to dominate flows between Great Britain and the Republic of Ireland (Figure 4.12).

Figure 4.11 – Total Ferry Passengers - GB to RoI & Northern Ireland (2003 to 2019)



Source: Dft/TAA

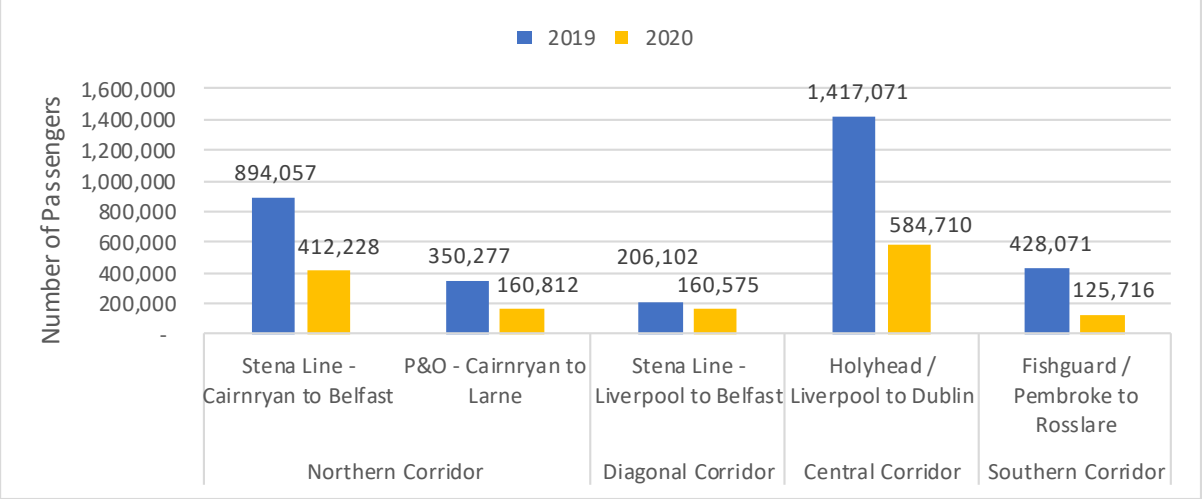
Figure 4.12 – Passenger Numbers by Ferry - GB to/from Republic of Ireland by Port (2003 to 2019)



Source: Dft/TAA

The period since early March 2020 has experienced very substantial reductions in the ferry travel across the Irish Sea (Figure 4.13). Within that overall pattern considerable volatility is evident with reductions of 90% in passenger movements following the imposition of the lockdown restrictions, regulation and guidance being followed by partial but significant recovery during the summer months. The position for the Year to date at August 2020 compared to the Year to date at August 2019 demonstrates an overall reduction of 54% on the Northern Corridor and 22% on routes serving the Diagonal Corridor and 59% on the Central Corridor.

Figure 4.13 – Total Number of Ferry Passengers – GB to NI and RoI (Yr to date at August 2019 & 2020)



Source: Dft/Ferrystat/TAA

The audit of Northern Ireland's external connectivity demonstrates that in terms of Basic Connectivity Belfast experienced a significant expansion in the two decades to 2019, in line with Glasgow or Newcastle but now trails behind Dublin, Edinburgh or Manchester. It has been also overtaken by Bristol, while Leeds Bradford has caught up. Frequent routes have been stable over the years at most locations. In 2019 Belfast had 20 frequent routes with 16 of these domestic and a further 3 holiday routes. Amsterdam has been the only major European city served twice per day. Business connectivity has remained stable during the same or declined over the twenty-year period for many cities. At Belfast the 14 such routes are all UK domestic routes. Much of the business connectivity was provided by Flybe in 2019, leading to concerns as to how essential business links will be maintained in the future. In some cases other regional carriers have stepped in with small aircraft but it remains to be seen whether this is commercially sustainable. In relation to Hub Connectivity Belfast is now down effectively to only the Heathrow link, albeit at a high frequency. Data for 2019 indicates Belfast had weak global connectivity.

Northern Ireland's geography points to the importance of sea transport to provide a key element of its external connectivity. The network of ferry services catering for passenger movements across the Irish Sea has in recent years exhibited consolidation in the Northern Corridor in particular. Across the Diagonal Corridor the pattern of routes has tended to exhibit greater stability.

The dependence of Northern Ireland on air and sea transport to provide its external connectivity, both domestically and internationally, is well illustrated by the audit as is the frailty of its air links in the wake of the COVID-19 Pandemic and the collapse of a dominant carrier (Flybe).

Domestic connectivity all but collapsed for a period of 3 months. Business connectivity needs went unmet. Hub connectivity also declined to minimal levels. In summary, Northern Ireland's external connectivity was reduced to two to three flights per day between Belfast City and London Heathrow and City of Derry to Stansted. No air connections were available to Scotland and the regions of England and Wales for at least three months. Even after the resumption of regional flights serving the two Belfast airports with demand suppressed these have been operated mainly at lower frequencies than before the first lockdown was imposed. This loss of supply is mirrored in a collapse in air travel with the Heathrow route down to 5% of normal passenger numbers in the Spring of 2020 and with overall demand for air travel to/from Northern Ireland down to as little as 0.5%. Further insights into the

behaviour changes are offered in Sections 6 and 7. The implications of these changes in access by air in particular for public policy are addressed in Sections 7 and 8.

5. Understanding Northern Ireland from the perspective of Business, Trade and Tourism and the contribution of air and sea links to the performance of the Economy and Wider Society

5.1 What has made Northern Ireland an attractive proposition?

This section provides an indication of what makes Northern Ireland an attractive proposition from a business, investment, and tourism perspective. The region has a population of almost 1.9m, just under 3% of the UK total. It has one of the youngest populations in Europe, with 55 per cent of the population under the age of 40. Around two-thirds of its population is of working age (16-64), similar to the UK.

The context to the region's economic performance is that it has only relatively recently come out of the period called 'The Troubles', a three-decade period of conflict in the region. As the Troubles took hold the private sector weakened, unsurprisingly Northern Ireland was severely challenged in promoting itself externally, both through Foreign Direct Investment (FDI) and Tourism. This led to a very internally focused economy that had to build on the strength of its indigenous business base because there was so little external investment in the region. Innovation became critical, from its history of shipbuilding to advanced engineering. As such, Northern Ireland has built a sound manufacturing base with particular strengths in engineering.

The region has made significant strides as it has emerged into a more peaceful society. Some of its key selling points include the following:

- Northern Ireland's strength in manufacturing, particularly around Engineering and pharma. Northern Ireland's manufacturing strengths span both traditional and advanced manufacturing sub-sectors.
- The region is Europe's 8th largest aerospace region in revenue terms, and the NI aerospace is a £1.24 billion industry[1].
- It has had very positive success in attracting FDI (see below), coming from a very low base. Northern Ireland is one of the top UK regions in terms of UK FDI Jobs per head and Belfast a top city[2].
- There have been significant strides in external and indigenous investment in key sectors in recent years including Fintech, Pharma (indigenous innovation Almac), Cybersecurity and Software.
- Northern Ireland has experienced the 2nd fastest growth in knowledge economy sector in 2018[3].

[1] https://www.investni.com/international/americas

[2] InvestNI FDI Intelligence sourced from *Financial Times – fDiMarkets.com*

[3] Catalyst (2019) The 2018 Northern Ireland Knowledge Economy Report available online at https://wearecatalyst.org/wp-content/uploads/2019/04/2018-report-final.pdf

- Northern Ireland has one of the fastest growing tech clusters in the UK. It is one of fDi Intelligence's Top 10 Digital Economies of the Future and is the world's top region for FinTech inward investment[4].

- It is very competitive in areas such as the cost of office space, water costs, house prices and wages, all of which are significantly lower than rest of UK/Western Europe e.g. operating costs are £23.00 per sq ft in the Greater Belfast area, compared to £54.00 per sq ft in Dublin and £70.00 per sq ft in London[5].

- Tourism had been performing well pre-COVID, particularly around Belfast with a number of new hotel investments and increasing numbers of international visitors. Belfast was named best city by Lonely Planet and one of safest cities[6].

- Belfast had been ranked number 2 overall in mid-sized and small global cities (FDi Global Cities for the Future, 2018/19). It is in the '*top 10 small European city for the future 2018/19'. While the most recent report shows the City has slipped down the rankings, Belfast been ranked fifth in the table of mid-sized 'European cities of the future'; and third for economic potential, behind only Zurich and Edinburgh*[7].

- There have been significant investment announcements more recently through the City Deals including Belfast (£1.2bn), Derry (£200m) along with Mid Ulster and Causeway Coast[8].

- Northern Ireland ranks highest across the 4 UK countries in terms of personal well-being - highest average life satisfaction, worthwhile and happiness ratings, and the lowest anxiety ratings[9].

- 55% of workforce is under 40 years old[10] – Belfast is one of the youngest cities in Europe with 41 per cent of our population under 30 years of age[11].

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[4] InvestNI (2019) Reasons to Invest in Northern Ireland https://www.investni.com/sites/default/files/documents/static/library/invest-ni/documents/reasons-to-invest-in-northern-ireland.pdf

[5] InvestNI (as above)

[6] Evening Standard (2017), Belfast named the best place to visit in 2018 by Lonely Planet available online at https://www.standard.co.uk/lifestyle/travel/belfast-causeway-coast-lonely-planet-best-destination-2018-a3666771.html

[7] FDi Intelligence (2020) FDi European Cities and Regions of the Future 2020/21 available online at https://www.fdiintelligence.com/article/76767

[8] Research and Information Service Briefing Paper (2020) City Growth Deals in Northern Ireland: Key Preliminary Considerations available online at http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2017-2022/2020/economy/3220.pdf

[9] https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/Personal%20Wellbeing%20in%20Northern%20Ireland%20201920.pdf

[10] InvestNI Key Facts (as above)

[11] https://www.belfastcity.gov.uk/council/international-relations/invest-in-belfast#:~:text=Belfast%20is%20a%20city%20brimming%20with%20talent%20We're,Belfast%20is%20a%20city%20of%20creators%20and%20inventors

- It has a young and well-educated population - 83% of Northern Ireland students achieved the three top grades in A-level exams, compared with 77.3% across the rest of the UK (although countered by fact that around 30% leave school with low/no qualifications) [12].
- Queen's University is a member of the Russell Group of 24 leading UK research-intensive universities and is ranked in the top 173 global universities[13].

5.2 How Northern Ireland connects nationally and internationally in terms of Trade, Tourism, Investment and Jobs

This section sets out a narrative around the way Northern Ireland trades as a region, attracts investment and tourists along with people and students seeking to work and study in the region. The importance of this approach is to help understand the links that Northern Ireland has nationally and internationally which require connectivity to maximise these critical flows in and out of the economy.

A summary of the main markets for each of the key sectors of investment/spend in Northern Ireland is set out below and discussed in more detail in each section. This excludes the Republic of Ireland which does not require external air or sea transport links.

The importance of Great Britain is clear as the number one key trading destination for Northern Ireland goods and services as highlighted in Table 5.1/1a. England specifically stands out as a critical market in terms of FDI, Tourism and Trade. Key trading destinations outside the UK includes the United States which is the region's most important export partner outside Ireland. Other key trading partners include Asia, Germany, France, Canada, the Netherlands, and Japan. Across a range of areas including trade, tourism, FDI, foreign students, international workers a total of 30 countries across the world are listed as top 10 trading partners for Northern Ireland highlighting just how extensive its reach is as a very small region within a much larger trading entity in the UK.

[12] InvestNI Key Facts (as above)
[13] https://www.qub.ac.uk/campaign/international/

Table 5.1: Key Markets outside Northern Ireland and the Republic of Ireland by Sector

Top 10 Markets	FDI (Companies)	Tourism (Trips)	External Sales/Exports (value) of Goods & Services - NISRA	Purchases/Imports Of Goods & Services (value) - NISRA[14]
1	Great Britain	England	Great Britain	Great Britain
2	United States of America	Scotland	North America	Rest of World (outside UK and EU)
3	Japan	United States	Asia	Rest of EU (outside UK and Ireland)
4	France	Germany	Germany	
5	Netherlands	Canada	Netherlands	
6	Canada	Australia	Middle East	
7	Singapore	France	France	
8	Sweden	Wales	Belgium	
9	Finland	Spain	Australia	
10	Denmark	Netherlands	Switzerland	

Table 5.1a: Key Markets outside Northern Ireland (and UK in terms of exports/imports) and the Republic of Ireland by Sector

Top 10 Markets	Exports outside UK - Goods - HMRC RTS (excl GB)	Imports Outside UK - Goods - HMRC RTS (excl GB)	Non-NI domiciled students	International Population inflows
1	United States	United States	Great Britain	Romania
2	Canada	China	China	Bulgaria
3	Germany	Netherlands	Malaysia	Poland
4	France	Germany	India	India
5	Netherlands	France	United States	China
6	Thailand	France	Canada	Syria
7	Belgium	Italy		Lithuania
8	Spain	Belgium		United States of America (USA)
9	China	Spain		Portugal
10		Japan		Spain and Balearic Islands

[14] Detailed country destination information is not available for purchases/imports from the BESES

Inward Investment/Foreign Direct Investment[15]

Northern Ireland has performed well from an inward investment/ FDI perspective in recent years. InvestNI has supported an estimated 1,100 international investments (333 companies, 1,152 offers) in Northern Ireland operations in the last 5 years and over 70 per cent of new investors have reinvested[16].

DfE research[17] undertaken by the University of Warwick into **Spillovers from inward investment – a comparison of Northern Ireland with the rest of the UK** suggests that the average spillovers from FDI in Northern Ireland is greater than the average effect for the UK, both of which are positive. This research highlights that although the volume of FDI is low in Northern Ireland the positive impacts on productivity are significant. This is critical in demonstrating the importance of inward investment/FDI as a key tool in boosting the region's low level of productivity, which has been an unshakeable feature of the region for decades.

The Invest NI *'Offers of Financial Support'* data source highlights that 333[18] externally owned businesses invested in Northern Ireland over 5 years between 2015/16 and 2019/20 with the support of InvestNI (Table 5.2)[19]. They represented 29 countries/areas outside Northern Ireland. The investment in Northern Ireland made by those countries is set out in Table 5.2 below.

Great Britain is the most significant investor in Northern Ireland in terms of the number of companies with 121 investors in total followed closely by the United States (US) with 93 companies. The US is the largest investor in terms of the 'value' of investment brought to the region. In fact, 37% of investment into Northern Ireland by assisted companies came through the US followed by 29% through Great Britain. Other important investors are Canada in terms of the value of investment (13% of total) and the Irish Republic in terms of number of companies (60).

[15] Inward investment includes Great Britain whereas FDI related to investment outside the UK
[16] InvestNI (2020) Northern Ireland: Reasons to Invest available online at https://www.investni.com/sites/default/files/documents/static/library/invest-ni/documents/reasons-to-invest-in-northern-ireland.pdf

[17] Driffield, N. and K. (2020) Spillovers from inward investment – a comparison of Northern Ireland with the rest of the UK, available online at https://www.economy-ni.gov.uk/sites/default/files/publications/economy/fdi-spillovers-ni.pdf

[19] NOTE: The InvestNI data is based on analysis of its 'Offers of Financial Support' spreadsheet data

Table 5.2: Inward Investment/FDI Supported through Invest NI, 2015/16 – 2019/20

Country of Ownership	Number of FDI Companies	Number of FDI Investments	Total Investment (Includes Invest NI Assistance) £m	Total Assistance Offered by Invest NI (£)
Great Britain	90	167	£286.0	£41.9
United States of America	76	137	£347.5	£46.3
Irish Republic	41	83	£85.6	£15.2
Japan	6	10	£8.4	£1.0
France	5	5	£7.8	£1.0
Netherlands	4	12	£12.7	£2.5
Canada	4	11	£136.8	£16.9
Singapore	3	5	£4.7	£1.1
Sweden	2	9	£4.3	£0.9
Finland	2	5	£18.5	£1.3
Denmark	2	3	£3.4	£0.4
Germany	2	3	£0.2	£0.0
Lebanon	2	2	£0.1	£0.0
Italy	1	6	£0.4	£0.1
Australia	1	5	£2.2	£0.3
China	1	3	£4.0	£0.3
Belgium	1	2	£2.2	£0.2
Brazil	1	2	£12.0	£2.3
Hong Kong	1	2	£0.5	£0.1
Lithuania	1	2	£0.1	£0.0
Norway	1	2	£0.3	£0.1
Austria	1	1	£0.3	£0.1
India	1	1	£0.0	£0.0
Qatar	1	1	£0.9	£0.1
Spain	1	1	£0.2	£0.1
United Arab Emirates	1	1	£0.2	£0.02
TOTAL	252	481	£939.3	£132.4

Source: Invest NI

Largest investors in Northern Ireland over the last 5 years are set out in Table 5.3 below. Bombardier, headquartered in Montreal in Canada, dominates as the key investor in Northern Ireland. The influence of investors with headquarters in the United States and Great Britain is clear. In the United States this includes California, Dallas, Virginia, Connecticut, and Texas. With Great Britain the focus is around the London/Greater London area.

Table 5.3: Largest Investors in Northern Ireland in receipt of Invest NI support, 2015/16 to 2019/20

Business Name	Total Investment (Includes Invest NI Assistance) £	Country of Ownership	State/City
Bombardier Aerostructures and Engineering Services (Belfast)	£934,973,533	Canada	Montreal
FinTrU	£670,096,694	Great Britain	England
Seagate Technology (Ireland)	£57,392,016	United States of America	California
PA Holdings Limited	£35,465,540	Great Britain	London
British Telecommunications Public Limited Company	£28,587,002	Great Britain	London
OneSource Virtual, Inc.	£24,472,490	United States of America	Dallas
Schrader Electronics Limited	£23,866,969	United States of America	Virginia
Pearson	£19,629,698	Great Britain	London
Stream Bioenergy Ltd	£19,075,000	Irish Republic	
Tullett Prebon	£18,420,200	Great Britain	London
Huhtamaki Foodservice Delta Limited	£18,169,841	Finland	Espoo (Helsinki)
Alchemy Technology Services	£16,612,446	Great Britain	Weybridge (London)
Terex	£16,520,343	United States of America	Westport, (Connecticut)
Moy Park Limited	£15,904,088	United States of America	Colorado
Imperva	£14,451,200	United States of America	California
Aflac Northern Ireland Ltd	£13,723,000	United States of America	Georgia
Survitec Group Limited	£12,957,210	Canada	? London
Bazaarvoice	£12,619,853	United States of America	Austin, Texas
Sensée	£11,513,384	Great Britain	London
JRL Brick Slip	£10,933,532	Great Britain	Hertfordshire London outskirts)
Allstate Northern Ireland Limited	£10,268,060	United States of America	Illinois, Chicago
ESO Solutions	£9,418,309	United States of America	Austin, Texas
Signifyd	£9,414,756	United States of America	California
Eirtech Aviation Composites Limited	£8,777,690	Irish Republic	Shannon, Cork

Source: Invest NI

More recent investments have retained that focus on the United States and Great Britain. For example, there have been 9 inward investment announcements made by Invest NI since May 2020 with investment totalling £44m[20]. Five of those investments, including a significant investment by Peak6 NI

[20] Information supplied directly by InvestNI as part of this research

Limited, have been made by United States based companies while the remaining 4 have been made by Great Britain based businesses.

External Ownership[21]

Another perspective on the geography of externally owned business is provided by NISRA through the Inter Departmental Business Register (IDBR). It suggests that of those businesses operating in Northern Ireland, 2.5% (1,935) are owned by an enterprise registered outside the region (Table 5.4). While these might appear small in number, these businesses account for almost one quarter of all employees in Northern Ireland emphasising the critical importance of external owned businesses in providing jobs.

The importance of Great Britain is again evident, representing two-fifths (41%) of external businesses in 2020 and 43% of jobs. The United States dominates businesses and jobs outside the UK and Ireland followed by Luxembourg and the Isle of Man.

Table 5.4: Number of foreign-owned businesses operating in NI by grouped Country of Ownership, 2020

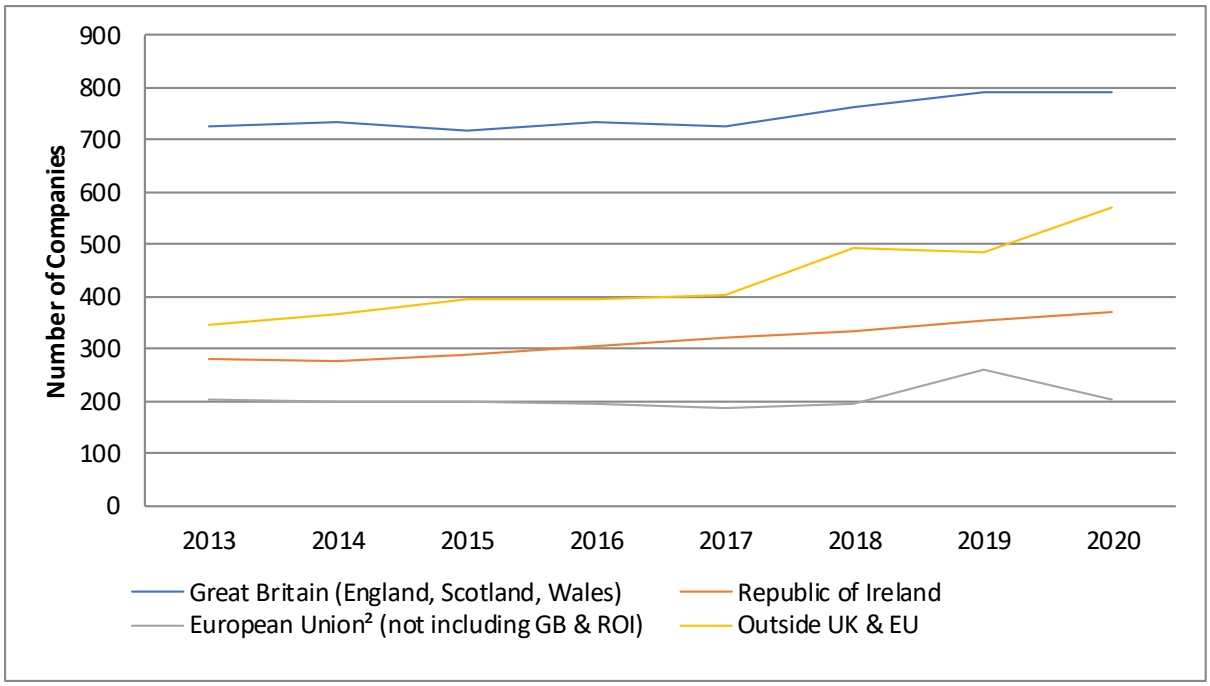
Country	2020	2020 Jobs
Great Britain	790	78,335
Republic of Ireland (RoI)	370	15,335
European Union (excl. RoI)	205	16,965
Outside the UK & Ireland	570	71,105
Total	**1,935**	**181,740**

Source: NISRA IDBR

The number of externally owned companies has been growing, up 24% in terms of companies and 8% in terms of jobs (companies and jobs were growing in the economy overall during this time). The data suggests that the most significant increase in externally owned companies over the last 7 years has been from countries outside the UK and EU, with 225 more companies in 2020 compared to 2013 (Figure 5.1). Outside the Republic of Ireland, the biggest increase in companies has been from the Isle of Man, Luxembourg and the United States. In terms of jobs, Luxembourg dominates followed by the Isle of Man and United States.

[21] NISRA (2020) Northern Ireland business; activity, size, location and ownership, 2020 available online at https://www.nisra.gov.uk/system/files/statistics/IDBR-Publication-2020_2.pdf

Figure 5.1: Number of Externally Owned Companies by Region, 2013 to 2020



Source: NISRA IDBR

NOTE: NISRA highlight that there are caveats to the data for a number of reasons including '*for a business to be classified as foreign-owned a single outside foreign investor must hold a greater than 50 per cent total shareholding. The estimates are limited to businesses that are part of an enterprise group. For these reasons these figures may be an underestimate'.*

Trade Nationally and Internationally

Northern Ireland trades externally with Great Britain and exports internationally with countries outside the UK. This is an important trading distinction for the region.

There are two main sources of data in terms of Northern Ireland trade including 1) NISRA's Broad Economy Sales and Exports Survey data which is survey based and includes data on both goods and services traded and 2) HMRC's Regional Trade Statistics (RTS) where data is taken primarily from Customs systems (for non-EU trade) and the Intrastat survey (for EU trade). The RTS does not include statistics for Great Britain.

External Sales/Exports from Northern Ireland (NISRA)

In terms of overall trade, Northern Ireland exported £17.6bn goods and services outside Northern Ireland and the Republic of Ireland while the region imported £18.4bn into the region from destinations outside the island of Ireland in 2018 (Table 5.5). The region trades similar amounts of exports and imports of goods and services with countries within the EU (outside IE) while it exports almost twice as much as its imports to destinations outside the EU.

Table 5.5: External Trade from and to Northern Ireland 2018 £bn

	External Sales/Exports £bn	External Purchases/Imports £bn
Great Britain	£10.6	£13.4
Republic of Ireland	£4.2	£2.8
Rest of EU	£2.5	£2.6
Rest of World	£4.5	£2.4
TOTAL	£21.8	£21.2

Source: NISRA Broad Economy Sales and Exports Survey

Selling outside a region/country is critical for growth in a place as small and detached as Northern Ireland. That external focus leads to larger, more productive businesses that create more jobs. On average, the turnover of Northern Ireland businesses that sell externally (outside NI) and/or export is roughly 5 times higher and they employ roughly twice as many employees as those that do not sell externally[22]. They provide higher value added to the economy and support higher skills and remuneration levels for employees. They are more productive, which is particularly important given that low productivity is one of the Northern Ireland economy's biggest concerns. The average GVA per head for exporting and externally selling businesses is double that of non-external selling businesses (Table 5.6).

Table 5.6: GVA (£) at basis prices per head (2016)

	Exports/External Sales Businesses	External Purchasing Businesses
All businesses	£38,296	£38,296
External (ex-NI) Sales businesses	£56,448	£43,554
Export (ex-UK) Sales businesses	£57,167	£46,377
Non-External Sales businesses	£27,944	£31,463

Source: DfE

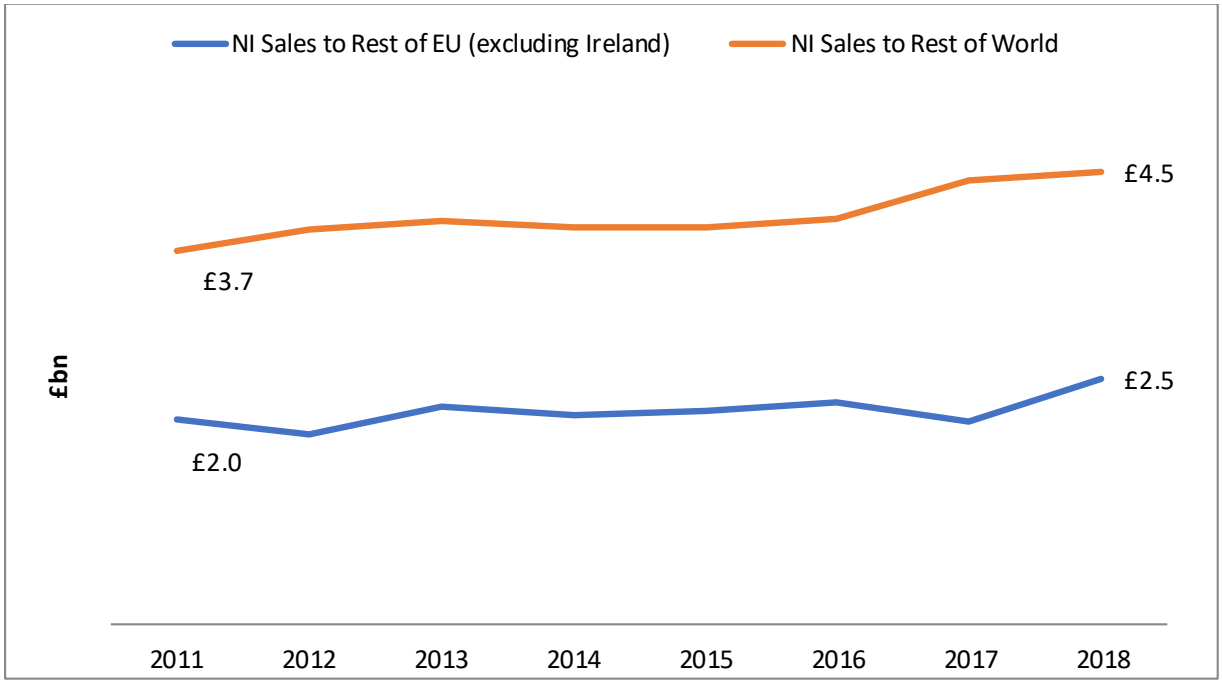
Northern Ireland sells 32%[23] of its sales outside the region amounting to almost £22bn of sales. This is small in comparative terms. For example, the Republic of Ireland sells 55% outside the country. Northern Ireland's largest trading partner is Great Britain (GB). In 2018 Northern Ireland sales to GB amounted to £10.6bn compared to £11.2bn sales outside the UK. The Republic of Ireland (IE) is Northern

[22] Alexander, A. and Duffy, M. (2019) Characteristics of Northern Ireland Firms Engaged in Trade available online at https://www.economy-ni.gov.uk/sites/default/files/publications/economy/Characteristics-Of-Northern-Ireland-Firms-Engaged-In-Trade.pdf

[23] NISRA (2019) Broad Economy Sales and Exports Statistics available online at https://www.nisra.gov.uk/statistics/business-statistics/broad-economy-sales-and-exports-statistics

Ireland's largest single export (ex UK) partner accounting for £4.2bn sales outside Northern Ireland in 2018.

Figure 5.2: Northern Ireland Sales to the Rest of EU (excluding GB & Ireland) and Rest of the World



Source: NISRA Broad Economy Sales and Exports

Northern Ireland sales outside the UK and Ireland amounted to almost £7bn in 2018. This was made up of £2.5bn sales to other parts of the EU outside Ireland and £4.5bn of sales to other parts of the world (Figure 5.2). Trade outside Northern Ireland has been growing, particularly to others parts of the world outside the EU which since 2011 have grown by 20%.

The NISRA Broad Economy Sales and Exports statistics provide an important distinction between goods which are considered tangible products and services which are considered intangible products (for example, IT and professional services). Northern Ireland has seen significant growth in trading in international services, albeit from a relatively small base. In 2018 sales outside the UK and Ireland were split 80% goods and 20% services. This compares to 90% goods and 10% services in 2011. That growth has been particularly strong to sales outside the UK and EU. Between 2011 and 2018 Northern Ireland's trade with services to the rest of the world has more than tripled, from £316m in 2011 to £1,022 in 2018. In fact, the growth in tradeable services to other parts of the EU (ex IE) and world have accounted for 70% of the increase in sales to these destinations over the last 7 years.

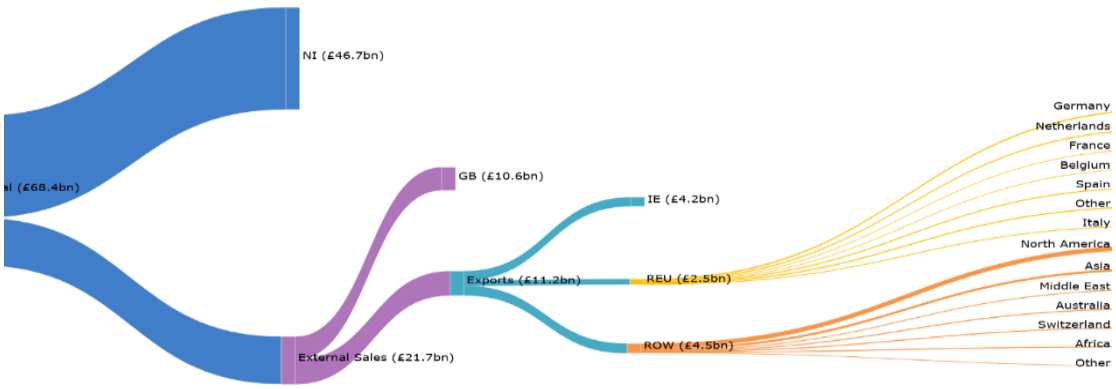
Figure 5.3: Northern Ireland Sales to the Rest of EU (excluding UK & Ireland) and Rest of the World

	2011	2012	2013	2014	2015	2016	2017	2018
Other EU (ex IE) Goods	£1,799	£1,661	£1,869	£1,869	£1,807	£1,814	£1,814	£2,076
Other EU (ex IE) Services	£246	£250	£308	£308	£327	£412	£412	£383
RoW Goods	£3,426	£3,518	£3,520	£3,408	£3,365	£3,349	£3,548	£3,510
RoW Services	£316	£437	£533	£571	£612	£722	£901	£1,022

Source: NISRA Broad Economy Sales and Exports

Northern Ireland's most significant trading partners outside the UK and Ireland is North America (the United States followed by Canada) and Asia. This is followed by countries including Germany, the Netherlands, Middle East, France and Belgium (Figure 5.4).

Figure 5.4: Extent of trade of Northern Ireland Goods and Services (2018)



Source: NISRA Broad Economy Sales and Exports Statistics (2018)

In value terms, the extent of internationally traded goods and services sold outside Northern Ireland is as follows:

Table 5.7: Value of Northern Ireland Sales by Destination outside NI and IE £m (2018)

	Northern Ireland Sales 2018 £m
Great Britain	£10,556
North America	£2,091
Asia	£1,036
Germany	£561
Netherlands	£490
Middle East	£417
France	£328
Belgium	£306
Australia	£249
Switzerland	£229
Africa	£194
Spain	£183
Italy	£118

Source: NISRA

Larger businesses (250+) dominate the Northern Ireland economy and contribute more, particularly in external trade (ex-NI) and exports (ex-UK). Large businesses make up only 1% of trade by number of businesses but account for nearly half of the value of exports (48%) and over half of the value of external sales (54%). Northern Ireland is also heavily reliant on a small number of key traders. The **Top 5 external** (ex-NI) selling businesses account for **29%** of all external sales. The **Top 5 exporting** (ex-UK) businesses account for **23%** of exports. Sectors that make up a large proportion of trade include parts of Manufacturing and Food.

The Irish market matters more to Northern Ireland's small/micro[24] businesses. Northern Ireland's small and micro businesses (0-49 employees) account for 94% of those exporting to the Republic of Ireland and 47% of the value of exports to the Republic of Ireland. Two-thirds of cross border trade between Northern Ireland and the Republic of Ireland involves supply chain activity.

External Purchases/Imports (NISRA)

Great Britain accounts for the largest share of purchases into Northern Ireland, making up almost two-thirds (63%) of the total (Table 5.8).

Table 5.8: External Purchases/Imports 2018 £m (NISRA data)

Trade Partner	Total Purchases	Total Purchases of Goods	Total Purchases of Services
NI Purchases	£24,607	£17,981	£6,626
GB Purchases	£13,379	£10,400	£2,979
IE Imports	£2,825	£2,383	£442
REU Imports	£2,628	£2,382	£245
ROW Imports	£2,447	£2,113	£334
Total Imports	£7,900	£6,879	£1,021

Source: NISRA Broad Economy Sales and Exports

[24] Less than 10 employees

Table 5.9 highlights that Northern Ireland purchased £13.4 billion of goods and services from Great Britain (GB) in 2018 (the latest statistics available). That represents 30% of Northern Ireland's total purchases for that year (just to put that in context Ireland made up just 6% of NI's purchases/imports). GB made up 46% of external purchases, that is, what Northern Ireland purchases from outside the region meaning that nearly half of what Northern Ireland purchases/imports from outside Northern Ireland comes from GB. Two-thirds of what Northern Ireland purchases from GB are wholesale/retail goods. In terms of services, Northern Ireland's construction sector purchased just over £1bn of services in 2018, followed by manufacturing (£395m), wholesale/retail (£352m) and information and Communication (£295m).

Table 5.9: Northern Ireland Total Purchases from Great Britain 2018 by Sector (£m)

Industry Section	GB Total Purchases £m	GB Purchases Goods £m	GB Purchases Services £m
Agriculture, Forestry and Fishing	£3	£1	£2
Mining & Quarrying	£24	*	*
Manufacturing	£2,806	£2,411	£395
Electricity, Gas, water supply	£466	£303	£47
Construction	£1,603	£560	£1,043
Wholesale/Retail	£6,882	£6,530	£352
Transport & Storage	£527	£246	£281
Accommodation and Food	£48	£33	£14
Information and Communication	£384	£90	£295
Real Estate	£11	*	*
Professional Services	£184	£88	£96
Admin and Support	£315	£34	£281
Others	£126	£57	£70
All	***£13,379***	***£10,400***	***£2,979***

Source: NISRA Broad Economy Sales and Exports

NOTE: Figures made not add due to disclosure and rounding issues

Purchases from the rest of the EU (ex IE) totalled £2.6bn in 2018 and £2,4bn for the rest of the world.

As with external sales/exports, there has been a strong growth in externally purchased services from other EU (ex IE) and world destinations over the last number of years with substantial growth in imports from both (Table 5.10). Services imports accounted for 23% of the increase in imports over the 7 years to 2018 although goods import still dominate overall purchases into Northern Ireland.

Table 5.10: Change in Value of Imports, 2011 to 2018

	Goods	Services
REU Imports	+67%	+266%
ROW Imports	+24%	+220%

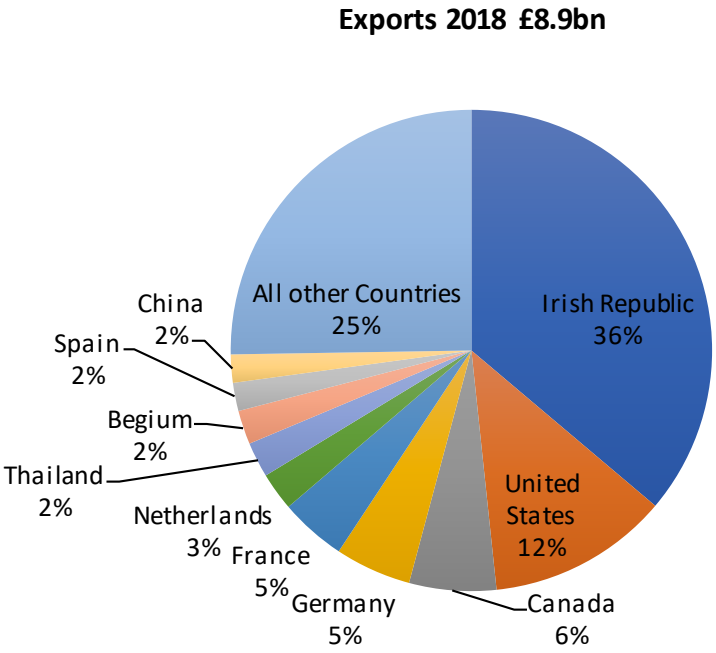
Source: NISRA Broad Economy Sales and Exports

Export/Imports (HMRC RTS data, excludes GB trade)

HMRC Regional Trade Survey data is focused on trade in goods only.

Research by DfE[25] pre-COVID highlighted that in 2018 goods exports amounted to £8.7bn according to HMRC data and goods imported £7.7bn. Northern Ireland had a trade surplus therefore of just over £1bn with exports 14% higher than imports. Both had increased between 2016 and 2018, up 13% for exports and 12% for imports over the period. The Republic of Ireland is NI's biggest trading partner for both imports and exports. Outside of the EU the US is a key market for imports and exports. The share of exports outside the UK is highest for the Republic of Ireland (36%) followed by the United States (12%), Canada (6%), Germany (5%) and France (5%). The Republic of Ireland (28%) is also Northern Ireland's largest import partner followed by the United States (11%), China (9%), the Netherlands (8%) and Germany (7%).

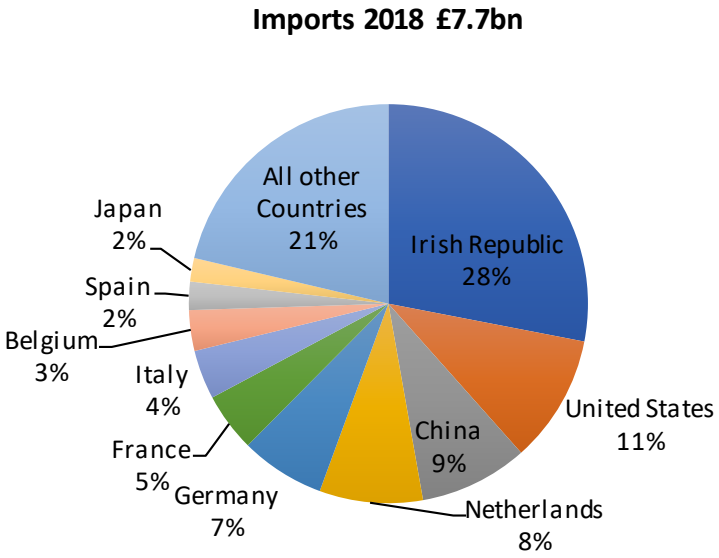
Figure 5.5: Exports of Goods from Northern Ireland 2018



Source: HMRC Regional Trade Statistics

[25] Department for the Economy (2019) Trade in Goods Data Analysis Northern Ireland (2016-2018) available online at https://www.economy-ni.gov.uk/sites/default/files/publications/economy/rts-trade-in-goods-data-analysis-northern-ireland-september-2019.pdf

Figure 5.6: Imports of Goods to Northern Ireland 2018



Source: HMRC Regional Trade Statistics

Machinery & transport and food & live animals accounted for 53% of total NI exports in 2018. Machinery & transport and food & live animals accounted for 45% of total imports in 2018.

Tourism

One of the most encouraging aspects to the move to a more peaceful society in Northern Ireland has been the very positive growth experienced in the tourism sector in Northern Ireland. In 2019 5.3 million trips were taken in Northern Ireland, amounting to just over £1bn in spend and supporting around 71,000 jobs[26] which is 9% of all employee jobs in Northern Ireland in 2019. The sector has enjoyed consecutive year on year growth for much of the last decade. Trips (domestic and international) taken have increased by 31% between 2013 and 2019 with spend increasing by 46% over the same period.

Overnight trips to Northern Ireland increased by 7% in 2019. That growth can be largely attributed to an increase in holidays, up 14% on the year while trips by those visiting friends and relatives and making business trips fell by 1% and 2% respectively. Findings from TNI's Dec 2019 Tourism Industry Barometer indicate a mixed performance in 2019, with some operators performing well and others seeing a decline in business.

Table 5.11: External[27] Overnight Trips, Nights & Expenditure

	2013	2014	2015	2016	2017	2018	2019
Overnight Trips ('000s)	2,089	2,179	2,301	2,587	2,658	2,809	3,001
Number of nights ('000s)	9,817	10,033	10,680	11,361	11,646	11,776	11,815
Expenditure (£m)	524	507	545	613	657	669	731

Source: NISRA

[26] NISRA, Northern Ireland Annual Tourism Statistics (2020) available online at https://www.nisra.gov.uk/publications/annual-tourism-statistics-publications

[27] Excluding domestic (NI) trips, nights, spend

External visitors from outside Northern Ireland were responsible for 3m trips, 11.8m nights and £731m spend in the region in 2019[28]. Great Britain, particularly England and to a lesser extent Scotland, is Northern Ireland's largest tourism market, accounting for 50% of trips and a similar share of nights and spend. Other important markets include the Republic of Ireland, mainland Europe (Germany, France) and North America, particularly the United States but also Canada. Australia is also a small but important market for tourism to Northern Ireland. The largest contribution to overall tourism spend comes from England, Ireland and Scotland followed by the United States, Australia and Canada.

Spend per trip ranges from £188 (Republic of Ireland) to £362 per trip (Australia). The highest spending countries per trip include Australia, New Zealand, the Netherlands and the United States. Spend per night ranges between £36 (Spain) to £76 (Republic of Ireland) with highest levels of spend per night among visitors from Wales, Scotland and Republic of Ireland. Other countries among the highest spend per night include the United States, Netherlands, and Australia.

Table 5.12: External (ex-NI) Trips, Nights and Spend (2019)

	Trips (mn)	Nights (mn)	Spend £m	Spend Per Trip	Spend per Night
Great Britain	1.46	5.71	£369.0	£253	£65
England	1.07	4.20	£267.8	£251	£64
Scotland	0.35	1.34	£89.5	£256	£67
Wales	0.04	0.17	£11.7	£260	£70
Republic of Ireland	0.76	1.86	£141.7	£188	£76
Mainland Europe	0.34	1.92	£83.9	£248	£44
France	0.05	0.30	£12.1	£222	£40
Germany	0.06	0.37	£13.9	£215	£37
Netherlands	0.03	0.15	£9.1	£301	£59
Italy	0.02	0.10	£4.7	£232	£47
Spain	0.04	0.25	£8.9	£232	£36
Other Europe	0.13	0.74	£35.3	£271	£48
North America	0.28	1.34	£78.7	£281	£59
USA	0.21	0.97	£60.7	£287	£63
Canada	0.07	0.37	£17.9	£263	£48
Other overseas	0.17	0.99	£57.4	£347	£58
Australia	0.07	0.42	£24.5	£362	£59
New Zealand	0.01	0.08	£3.3	£323	£42
Other	0.09	0.49	£29.5	£338	£60
Total	3.00	11.81	£730.7	£244	£62

Source: NISRA Tourism Statistics (2020)

[28] NISRA External Overnight Trips to NI 2019 Additional Tables

Almost half (43%) of external overnight trips are visiting friends and relatives (VFR) while 39% are Holiday trips and 18% are business/other trips (Table 5.13). This pattern does differ by country/region with a greater focus on VFR by more 'near market' visitors from Great Britain.

Countries where holiday visitors account for the highest share of external visitors include Australia, the United States, Italy and the Netherlands. The Business/other visitor share is highest from Great Britain (particularly Wales and England), the Republic of Ireland and Italy.

Table 5.13: External Overnight Trips to Northern Ireland by Reason for Visit and Place of Origin, 2018

	VFR	Holiday	Business/ Other	Total
Great Britain	52%	27%	21%	100%
England	51%	26%	23%	100%
Scotland	55%	32%	13%	100%
Wales	47%	26%	27%	100%
Republic of Ireland	36%	43%	22%	100%
Mainland Europe	37%	52%	11%	100%
France	33%	55%	13%	100%
Germany	32%	58%	10%	100%
Netherlands	27%	60%	13%	100%
Italy	12%	68%	21%	100%
Spain	45%	50%	5%	100%
Other Europe	45%	44%	11%	100%
North America	32%	62%	6%	100%
USA	30%	63%	8%	100%
Canada	38%	59%	2%	100%
Other Overseas	31%	62%	7%	100%
Australia	29%	68%	3%	100%
New Zealand	65%	34%	1%	100%
Other	28%	61%	10%	100%
Total	43%	39%	18%	100%

Source: NISRA

Spend per trip is significantly higher among business visitors compared to holiday visitors and particularly those visiting friends and relatives. In overall terms, external spend by business visitors in 2019 amounted to £362 per trip compared to £255 for holiday visitors and £191 per trip for VFR. In terms of origin of visit, business spend per trip was highest in North American and Other Overseas markets. Holiday spend per trip was highest among Great Britain visitors. VFR spend differs significantly per trip depending on market with VFR spend from North America and Other Overseas two to four times higher compared to VFR spend from Great Britain and the Republic of Ireland. Longer travel distances mean greater spend per trip.

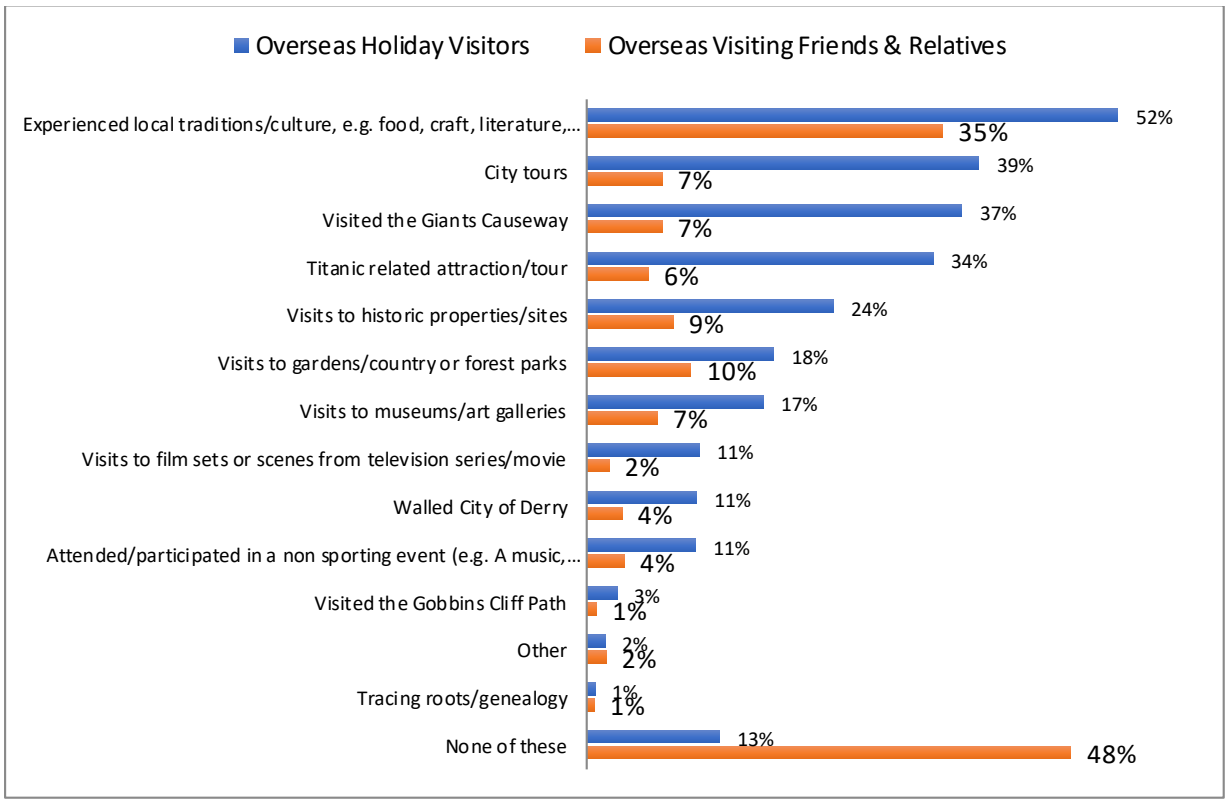
Table 5.14: External Overnight Spend per Trip to Northern Ireland by Main Market and Reason for Visit (2019)

	VFR	Holiday	Business	Other
Great Britain	£179	£305	£377	£242
Republic of Ireland	£107	£254	£205	£177
Other Europe	£249	£202	£379	£770
North America	£349	£175	£751	£1,136
Other Overseas	£398	£282	£664	£868
Total	£191	£255	£362	£302

Source: NISRA

Spending patterns are very different depending on whether overseas visitors are on holidays or visiting friends and relatives. Overseas visitors spend is much higher in terms of experiencing local traditions/culture, taking city tours and visiting attractions including the Giant's Causeway (Figure 5.7). It is telling that in 2018 almost half of those visiting friends and relatives (48%) did not take part in any cultural events.

Figure 5.7: Overseas Participation in Cultural Events (2018)



Source: Tourism NI

The reason for visiting does dictate very different spending patterns. Business tourists are much more likely to spend on accommodation and food which make up 76% of spend. This compares to 64% of those on holiday and 46% of those visiting friends and relatives. Those visiting Northern Ireland on holiday are most likely to take part in sightseeing/entertainment while those visiting friends and relatives are more likely to spend money on shopping.

Table 5.15: Reason for Visit by Spend Category (2018)

Accom.	Food/drink	Entertainment/sightseeing	Internal transport	Shopping	Other	Total
46%	30%	1%	8%	4%	11%	100%
10%	36%	6%	9%	23%	15%	100%
38%	26%	9%	9%	10%	8%	100%
41%	25%	5%	7%	8%	14%	100%
27%	31%	7%	9%	15%	12%	100%

Source: Northern Ireland Passenger Survey (NISRA)

The cruise ship market has been a very positive feature of Northern Ireland's expanding tourism economy in recent years. In 2019 167 cruise ships docked in Northern Ireland ports with 290,168 passengers on board. Cruise ships and passenger numbers are almost 3 times higher in 2019 that they were in 2013.

5.3 Migration, Jobs and Students Movements to/from Northern Ireland

Migration

A smaller share of Northern Ireland's population is a non-UK resident when compared to other parts of the UK and Ireland. Around 6.5% of the population is non-UK resident, half the UK figure for example (13.3%)[29]. Following the economic downturn in the late-2000s more people left Northern Ireland than entered. This led to a significant population loss – although not as large as 'Troubles' related migration. Net migration began to rise again in 2013/14 entirely due to people from outside the UK coming into the region. Residents from Poland have tended to dominate migration into Northern Ireland although increasing numbers have been coming from Romania and Bulgaria[30]. Therefore, while the numbers of non-UK residents in NI are low compared to the UK, the numbers been growing here in recent years, although Brexit has reduced overall numbers which is particularly striking in terms of polish migrants.

Table 5.16: International Migration into Northern Ireland

	2009	2016	2019
Romania	167	1,262	1,138
Bulgaria	160	493	899
Poland	2,750	1,370	860

Source: NISRA Long Term Migration 2019

The latest figures for 2018 from NISRA from the Labour Force Survey suggest that there were 99,000 people active in the labour market in Northern Ireland who came from outside the UK and Ireland, around 7% of the labour force. This is made up of 55,000 people from the EU26 and 44,000 from outside the UK, Republic of Ireland and the EU. Almost 70% of that number was in work, largely in the sectors such as Manufacturing, Distribution/Hotels/Catering and Public Admin/Education Health. They work across all occupations in the economy including professional services, skilled trades, process/plant operatives and elementary occupations that includes cleaners, caretakers, and porters.

[29] NISRA/ONS population surveys
[30] NISRA Long Term Migration Statistics

In terms of EU26 countries, most of these, some 49,000, were aged 16 or over. Of those of working age 38,000 (78%) were employed and working in Northern Ireland, largely in low skills jobs[31]. Around 1 in 5 (20%) of non-UK born people aged between 16-64 who are living and working in NI are employed in low skilled jobs compared to 9% of their UK born counterparts.

Students

In 2018/19 17,425 students went on to study in Great Britain Higher Education Institutions with a further 235 students studying in FE colleges in Great Britain. This means that almost 18,000 students or 23% of NI domiciled students went on to study in Great Britain institutions over that year. This is up from just over 16,000 in 2014/15, an increase of 10% over the last 4 years.

Table 5.17: NI Domiciled students enrolled on Higher Education courses at UK and RoI institutions - 2014/15 to 2018/19[32]

Institution type	2014/15	2015/16	2016/17	2017/18	2018/19
NI HEIs (excl. OU)	44,295	43,415	42,505	41,755	42,165
NI FE colleges	11,055	11,140	10,725	11,400	10,310
GB HEIs (excl. OU)	15,870	16,450	16,955	17,440	17,425
Open University	3,800	3,740	3,610	3,735	3,950
GB FE colleges	190	190	225	240	235
RoI colleges	1,075	1,200	1,160	1,330	1,500
CAFRE	495	475	455	470	525
Total	**76,480**	**76,310**	**75,275**	**75,935**	**75,645**

Source: Department for the Economy HE Statistical Factsheet

The North West of England (5,520) and Scotland (4,050) are the most popular regions for Northern Ireland students studying at HEIs[33] in 2018/19. Other popular regions are the North East of England (1,495) and London (1,050).

The most popular Great Britain university location for NI student enrolments is Liverpool John Moores University (2,075) in the North West. Liverpool Hope University (765) also had a substantial number of NI domiciled enrolments. In Scotland, the University of Glasgow, the University of Dundee (both with 660) and the University of Edinburgh (535) are most popular. In the North East, the University of Northumbria at Newcastle had 630 students from NI in 2018/19. It is worth noting that NI students were enrolled at 165 of the publicly funded HEIs in the UK.

In 2018/19 83% of students registered in Northern Ireland's HEIs were from NI, 6% from GB, 4% from the Republic of Ireland (RoI), 0.7% from other EU countries and 6.3% from non-EU countries. Compared

[31] NISRA Labour Force Survey

[32] Department for the Economy (2020) Higher Education Statistical Fact Sheet 8: Total NI Domiciled HE Enrolments: 2014/15 to 2018/19 available online at https://www.economy-ni.gov.uk/publications/ni-domiciled-students-enrolled-he-courses-uk-and-roi-201415-201819

[33] Department for the Economy (2020) Enrolments at UK Higher Education Institutions: Northern Ireland Analysis 2018/2019 available online at https://www.economy-ni.gov.uk/sites/default/files/publications/economy/HE-Enrolments-bulletin-2018-19.pdf

to 2017/18, the largest increase in enrolments related to those from non-EU countries (up almost 10% to 3,510).

Table 5.18: HE Enrolments at campuses in NI by country of domicile – 2018/19

	Number	Percentage (%)
Northern Ireland	46,110	82.7%
Republic of Ireland	2,245	4%
Great Britain	3,470	6.2%
Other EU	420	0.7%
Non-EU	3,510	6.3%
Total	55,755	100%

Source: Department for the Economy HE Statistical Factsheet[34]

In 2018/19, students from 117 different countries throughout the world were enrolled at NI HEIs. The countries outside NI, GB and the RoI with the most students enrolled at NI campuses (not including those registered to Ulster University but based in Birmingham or London) were China (1,305), Malaysia (365), India (230), United States (205) and Canada (125).

Research by the Higher Education Policy Institute (HEPI) in 2018[35] suggested that international students were worth £170m to the Northern Ireland economy. However, Northern Ireland has by far the lowest share of international students across any UK region.

5.4 External Commuting and Business Travel

Working Travel Patterns

In 2019 5,000 people (aged 16+) in Northern Ireland commuted to Great Britain to work on a weekly basis. This makes up 0.6% of the numbers employed in the region[36]. Unfortunately, the sample size means that this cannot be broken down further to understand regional commuting patterns further. Some 9,000 people commuted to work outside the UK, just over 1% of the numbers employed. One would expect this to largely include those commuting to the Republic of Ireland for work.

There has been a significant expansion in the number of people commuting to Great Britain to work in the last decade or more. In 2006 just 1,000 people commuted to work in GB. This increased to 3,000 in 2009 and sits at 5,000 in 2019.

[34] NISRA/DfE (2020) Higher Education Statistical Factsheet 8 available online at https://www.economy-ni.gov.uk/sites/default/files/publications/economy/HE-Statistical-Factsheet-8-Total-NI-dom-enrolments.pdf

[35] London Economics on behalf of Higher Education Policy Institute (HEPI) Kaplan International Pathways (2018) The costs and benefits of international students by parliamentary constituency available online at https://www.hepi.ac.uk/wp-content/uploads/2018/01/Economic-benefits-of-international-students-by-constituency-Final-11-01-2018.pdf

[36] NISRA (2020 Labour Force Survey

Business Travel Patterns

Detailed information on business travel patterns is not readily available for Northern Ireland and therefore an integral part of this research approach has been to establish a better understanding of the extent and importance of business travel to local businesses. This section sets out detailed feedback from 31 companies who are NI Chamber of Commerce and Industry members. This includes a number of NI Chamber Council Members, a senior group of businesspeople that supports the work of the Chamber[37]. These include a number of significant and influential indigenous and externally owned businesses in Northern Ireland including:

- Bombardier
- FinTru
- Allstate Northern Ireland
- KPMG
- Mercer
- Ryobi
- Rubblemaster
- PWC
- British Telecom (BT)
- McAleer & Rushe
- Beyond Business Travel
- The Electric Storage Company
- BubbleBum

Together these businesses employ over 15,000 people across a wide range of sectors including manufacturing, construction, professional services, and financial and insurance activities. A number are part of a national/international group.

This section focuses on business travel patterns pre-COVID to provide a sense of its scale and importance. Section 7 sets outs how COVID-19 has impacted on the business community's ability to trade/travel to do business to date and how that might impact on doing business going forward, either because of the physical barriers caused by fewer travel routes and/or the psychologically barriers/changes that the business might make because COVID-19 has presented a different way of working.

Market Orientation

The 31 businesses were located across a wide range of sectors including manufacturing, construction, accommodation & food, ICT, Professional Services and others. Turnover ranged from less than £100k for one business to a number of Northern Ireland's largest businesses with turnover in excess of £50m.

Sales destinations were expansive with some more focused on the UK and Republic of Ireland markets while others had a completely international focus. The smallest businesses in terms of employment size

[37] We would like to acknowledge and thank the NI Chamber of Commerce and Industry, particularly Christopher Morrow and Ann McGregor, for supporting us in engaging with their members for the purposes of this research. Thank you to the members also who gave their time to provide these invaluable insights to this research

tended to focus on more, but not exclusively, on more near market destination. Sales within Great Britain included all parts of the GB economy i.e. London, the Midlands, North of England, South West, Scotland and to a lesser extent Wales. Destinations to other parts of the EU focused on Germany, France, Spain and the Netherlands. The United States and Canada were the most popular markets for international sales. Some businesses had an exclusive concentration on one international market e.g. United States, Thailand.

Four businesses sold 100% of their sales within Northern Ireland. Three of those businesses still engaged in business travel for a number of reasons including supplier meetings, attendance at trade shows and staff training.

Key Business Travel Destinations

The top travel destinations cited by respondents are set out in Table 5.19 were as follows:

Table 5.19: Most Used Business Travel Destinations

National
London
Glasgow
Birmingham
Manchester
Edinburgh
Leeds Bradford
Liverpool
Bristol
Manchester
International
Germany
Chicago
Austria
United States
Munich
San Francisco
Paris
Singapore
India
Netherlands
Canada
Australia
Cologne
China
Montreal

Great Britain, but particularly London, is the most important business travel destination among respondents (see section 8). In fact, around half of businesses highlighted that London was their top business travel destination. The findings have also reinforced the importance of regional business travel destinations across Great Britain including Scottish and English destinations. The diversity of international travel destinations is clear with local businesses accessing all continents of the world to do business.

Frequency of Travel

Frequency of travel is largely linked to near market locations as highlighted in Table 5.20 below. London is a particularly important destination with some consultees having staff travelling numerous times weekly. Other regional airports in the North and South of England and Scotland are again very important although lesser so to Wales. Travel to EU and other European destinations tend to be less frequent, largely involving travel on a monthly to annual basis. International travel is similar and firm specific. For example, one company said that it had 10 people travelling to the United States every week. Some company's only travel focus was to international destinations including the United States, Thailand, and China.

A number of companies have staff travelling at different frequencies throughout the year. For example, one Construction company had people travelling to sites in parts of England more than once a week, weekly, once every two to three weeks. Another professional services company highlighted that Partners would travel more than once a week to London, Directors once a month with other staff travelling every 6 months for training.

Table 5.20: Frequency of Travel

	More than once a week	Once a week	Once every 2 to 3 weeks	Once a month	Once every 2 to 3 months	Once every 6 months	Once a year plus
London							
Midlands							
North England							
South England							
Scotland							
Wales							
Germany							
France							
Spain							
Netherlands							
Rest of EU							
Rest of Europe							
America							
Canada							
Asia							
Other (Austria, Australia)							

Key Access Routes

	5 or more respondents
	3 to 4
	1 to 2

Key Reasons for Business Travel

The main reason for business travel is to meet customers/buyers (Table 5.21). This accounted for 81% of consultees. There was also a strong demand for travel to attend trade shows, conferences (74%). Staff travel for training is another important aspect of business travel (63%). Around 2 in 5 are also

travelling to meet suppliers, to visit other site locations in Great Britain and for staff travel for work. Business travel is a key feature of travel to headquarter destinations nationally and internationally.

Table 5.21: Key Reason for Travel

Main Air and Ports/Routes Accessed

In total, 35 airport and port routes are typically used by businesses to access national and international destinations (Table 5.22). The most popular departure points are Belfast City and Belfast International Airports. Belfast City appears to be accessed more by Belfast City Centre based businesses, particularly Professional Services whereas anecdotal evidence would suggest that Manufacturers and Construction businesses are more likely to use Belfast International. City of Derry airport is used by businesses with locations in the wider area.

Heathrow is the most important destination route followed by Manchester. Dublin Airport is used by around half of businesses, largely for international flights but also one border-based business found Dublin as/more accessible for travel. Consultees mentioned the importance of Dublin Airport for most international travel, reflecting on its better connectivity (and pricing on flights) and being able to clearing US immigration on departure. One consultee highlighted that since the M1 to Dublin has been built it is quicker to take a direct flight to Paris rather than go indirectly through London to Paris. Dublin was considered as more accessible to international travel and one consultee believed that 'Heathrow is really hard work to stop at'.

Around 40% of consultees did use the Ports to travel to do business.

Table 5.22: Main Air and Sea Routes Accessed

	Airports Accessed
Belfast City Airport	26
Belfast International Airport	25
Heathrow	20
Manchester	15
Dublin	13
Gatwick, London City, Glasgow	11
Edinburgh, Liverpool, Birmingham	8
Stansted, Leeds Bradford	7
City of Derry Airport, Bristol	5
East Midlands	4
Luton, Newcastle, Cardiff, Amsterdam, Paris	3
Larne to Cairn Ryan	2
Southend, Aberdeen, Newark, Dubai, Vienna, Cologne, Dusseldorf, Hannover, Inverness	1

	Ferry Routes Accessed
Belfast to Cairnryan	8
Belfast to Liverpool	5
Dublin to Holyhead	4
Larne to Cairnryan	2

Information secured from a specialist business travel company that supports many of the larger businesses in Northern Ireland provides further perspective to this evidence. Their data highlights that during the period from January to September 2019 the most commonly accessed UK routes were Belfast and London, particularly London Heathrow. Dublin airport is also a key strategic route for business travel outside the island of Ireland. Outside London, East Midlands and Birmingham were the most significant Great Britain routes. After this, the main routes accessed were London routes (City, Stansted, Luton, Gatwick) and Manchester. Boston was the most accessed United States destinations followed by Chicago. The largest route to mainland Europe was Amsterdam (see Table 7.10 for detail).

Extent of Staff Travel

The number of consultees while small do give a sense of the frequency of travel of staff. Table 5.24 shows that there is a wide spread of travel frequency among staff. For example, almost half of consultees stated that less than 10% of their staff travelled frequently while 42% said that 10% to 25% travelled frequently. One in 10 highlighted that more than 25% of staff travelled frequently. Around 2 in 5 consultees said that 10 to 25% of staff travelled occasionally. Speaking with consultees, size doesn't necessarily matter with some of the smallest businesses engaged in extensive business travel. Some of the largest engage in limited business travel while for other large businesses travel is extensive e.g. professional services.

Table 5.24: Extent of Staff Travel

Share of staff	% whose staff Travel Frequently	% whose staff Travel Occasionally
Less than 10% of staff	47%	29%
10% to 25% of staff	42%	42%
26% of staff plus	11%	29%

5.5 What does this evidence suggest for connectivity?

Northern Ireland has made significant strides in recent years to make the region more attractive and externally focused. Policy has centred on strengths including Northern Ireland's competitiveness, particularly in terms of wages and wider costs, and appeal as a place to work, invest and visit. A more peaceful society has provided a very strong impetus for growth. That has been rewarded through increased trade, investment and tourism reaching a much more expansive range of countries, businesses and people located across the globe. The movement of goods, services and people to and from the region has grown significantly in importance.

Typically, economies tend to trade most with those countries and regions that are closest to them. Northern Ireland is no exception. The region is first and foremost a small, open region that is part of the wider UK economy and therefore the rest of the UK is Northern Ireland's most important economic affiliate. Great Britain is Northern Ireland's largest partner in terms of Inward Investment, Tourism and Trade and those connections filter through to every region of the UK although to varying degrees. Northern Ireland does have that unique position in having a 'sea barrier' between it and the rest of the UK which makes connectivity by air and sea critical to how the Northern Ireland trades with Great Britain (and worldwide) and a major influence on how the local economy prospers and grows.

Northern Ireland's links internationally outside the island of Ireland are first and foremost centred on North America. This continent has the greatest influence on trade, investment and tourism outside the UK and Ireland. The United States is the most significant inward investor in Northern Ireland in terms of the total value of its investment. American tourists are one of the top spenders per trip compared to most other destinations. The United States also tops the list for goods and services exported outside the region. Other important economic allies for Northern Ireland include Asia, Germany, France and the Netherlands. Across a range of areas including trade, tourism, FDI, foreign students, international workers a total of 30 countries across the world are listed as top 10 trading partners for Northern Ireland highlighting just how extensive its reach is as a very small region within a much larger trading entity in the UK.

This connectivity matters hugely in terms of what has and will drive improvements in economic growth, productivity, and job quality in Northern Ireland. Foreign Direct Investment is a strong case in point in terms of its positive influences on the local economy. The spill overs from foreign direct investment are high and productivity impacts are significant. Northern Ireland needs to continue to attract more FDI. The importance of sustaining that connection with the United States is key. Since May 2020 5 of the 9 inward investment announcements by Invest NI have been made by United States based companies.

Northern Ireland needs connectivity to support all businesses to trade but the importance of trade to larger businesses is clear. The evidence highlights the direct connection between firm size and external connectivity with larger businesses much more likely to trade externally. Some of this can be explained by the fact that those foreign-owned firms located here tend to be larger in size. However, it also reflects the fact that in simple terms in order to grow any business based in Northern Ireland that business has to look outside the Northern Ireland marketplace to scale up and grow. The Republic of Ireland is a good starting point to export and that is highlighted by the extent of trade by smaller firms with that market. However, business internalisation needs that wider geographical reach and connections outside the island of Ireland are critical in that respect.

In recent years the region has seen strong growth in tradeable services, albeit from a relatively small base, which reflects a combination of targeted inward investments and the start-up and growth of some innovative indigenous companies. In fact, growth in tradeable services outside the UK and Ireland has accounted for 70% of the increase in total sales to these destinations over the last 7 years[38]. While some of these services, (including legal, accounting, IT support and is particularly prevalent among growth/emerging sectors such as cybersecurity and fintech) can be provided remotely, they are more likely to involve the movement of people compared to more traditional sectors focused on goods. This is an important point in understanding the extent to which connectivity is needed to ensure that the growth in tradeable services, particularly around the NI Executive/Department for the Economy target sectors, is supported through route connectivity outside the island of Ireland.

There have been some very positive strides in Northern Ireland's tourism sector in recent years including a wider tourism offering, more and better accommodation and strong marketing of the attractiveness of the region and its historic interest. The sector has enjoyed consecutive year on year growth in the last decade. The Great Britain market has been critical to that performance but the global exposure of Northern Ireland (in large part helped by connectivity) has meant that Northern Ireland's destination reach has expanded significantly. More visitors, particularly business and tourists, means more spend in the economy on visitor and cultural attractions and the hospitality and retail sectors with wider knock-on effects on the local economy. External connections are and will continue to be critical to success going forward.

The business consultation process involved detailed discussions around business travel with some of Northern Ireland's largest and most international companies. It highlighted the extensive range of business travel patterns globally for many locally based businesses while at the same time emphasising that the regional connections with the UK, particularly London, are critical. Frequency of travel is largely linked to near market locations, largely within Great Britain although some consultees, particularly those with international Headquarters, involved international travel on a weekly basis. Heathrow is the most important destination followed by Manchester. Dublin Airport is used by around half of businesses, largely for international flights but also one border-based business found Dublin as more accessible for travel. That need for face-to-face connection with customers/buyers is the main reason why local businesses travel. However, there are a whole host of reasons why business travel is important and that includes event attendances/trade shows and meetings with suppliers. Around two thirds of staff travel

[38] NISRA (2019) Broad Economy Sales and Exports Statistics available online at https://www.nisra.gov.uk/statistics/business-statistics/broad-economy-sales-and-exports-statistics

for training while 40% travel for work purposes emphasising that for some companies and some parts of their workforce frequent travel is a large part of how they do their job.

The importance of connectivity and its contribution to the economy is further emphasised in terms of considerations around student access, migration, and work travel patterns. Accessibility is important to student flows with around 18,000 students travelling to Great Britain to study annually and 7,400 students coming from Great Britain and other parts of the world to Northern Ireland to study. In 2018/19, students from 117 different countries throughout the world were enrolled in Northern Ireland's Higher Education Institutes from countries/regions including China, Malaysia, India, the United States and Canada[39]. Northern Ireland has the lowest share of international students across the UK regions and connectivity is likely to play some part in the decision to come and study in the region. Although Brexit has impacted on the numbers of EU residents coming/staying in Northern Ireland, non UK/Irish workers make up around 7% of the labour force in Northern Ireland. These workers come from EU26 countries (56%) and countries outside the UK and EU (44%), again involving many global destinations. On a weekly basis, 5,000 people in Northern Ireland travel to Great Britain to work. All of this activity around education and work supports the local economy along with existing and potential jobs again emphasising the critical role that connectivity plays in economic development and growth.

What this section has strongly emphasised is that external connections matter for Northern Ireland. Whether through trade, investment, tourism, jobs, studying Northern Ireland is connected to hundreds of countries globally and that has played a large part in ensuring that Northern Ireland becomes a more outward looking region in how it drives economic and wider growth. However, what the research has also emphasised is just how critical the more near market destinations in Great Britain are. Those more local connections by air and sea make the most significant contribution to the way that the Northern Ireland economy works, providing important evidence for the further discussion in the remaining sections of this report around how to focus supports on mitigating against the impacts of the COVID-19 pandemic.

[39] NISRA (2020) Enrolments at UK Higher Education Institutions: Northern Ireland Analysis 2018/2019 available online at https://www.economy-ni.gov.uk/sites/default/files/publications/economy/HE-Enrolments-bulletin-2018-19.pdf

6. In depth assessment of changes in and factors shaping external travel patterns in the wake of the Coronavirus Pandemic

6.1 Strategic Overview of the Key Factors Shaping UK Demand for Air Transport

The key factors shaping UK demand for air transport in the long term include an increase (or decrease) in income (GDP) and a long-term decline in the real cost of air fares. According to the UK Department for Transport (DfT) the factors identified can be divided into two broad groups: those affecting the level of economic activity and those affecting air fares. The former includes UK Consumer Expenditure, UK GDP and Foreign GDP while the latter includes Oil Prices, Airline Costs, Carbon Prices Exchange Rates and Load Factors.

For the future there is a need to consider how these drivers of demand may change and how their impact varies across different parts of the aviation market. Environmental challenges, such as tackling Climate Change also shape future demand in the medium and longer terms. Unanticipated shocks to economies and societies, including recessions or oil price shocks, military conflicts or terrorism can also impact on demand for travel.

To provide an insight into how current patterns of demand for air travel in Northern Ireland have evolved there is a need to understand how demand responds to:

- Changes in the real cost of air fares
- Changes in fiscal arrangements in relation to air travel and the sector generally
- Changes in the regulatory framework governing the air transport sector, including environmental mitigation measures
- Technological and behavioural changes, e.g. the impact of improvements in videoconferencing on business travellers; and
- Unanticipated periodic shocks to economies and societies (e.g. environmental events such as the 2010 Icelandic volcano eruption and the ash cloud this created.

In all cases these have represented short term fluctuations and long-term trends have re-established themselves. The case of the 'ash cloud' produced by the 2010 volcanic eruption is pertinent as at that time no one could predict with any certainty how long the disruption it created would last. Fortuitously it was relatively restricted geographically and impacted for only a matter of weeks.

The COVID-19 Pandemic is very different. Its impacts have been worldwide and pervasive and it has been present for the greater part of a year at the time of writing with no predictable end in sight either through mutation of the virus to a more benign strain (as with the ' Spanish Flu' one hundred years ago) or the creation and distribution globally of effective treatments.

The factors that underpin forecasts of demand for travel in the medium to longer term are therefore hard to predict, and a wide range of outcomes can occur during the period being forecast. With the COVID-19 Pandemic this uncertainty applies even in the very short term on a week to week if not daily basis. The first step therefore in developing even a Short to Medium Term Access Challenge Mitigation Strategy

to address the access challenges posed by the Pandemic is to establish the changes in behaviour patterns that it has wrought and why these have come about. Understanding the behavioural response to the virus and the measures implemented by Government, public authorities and private suppliers and operators is the essential second step to developing an effective Access Challenge Mitigation Strategy.

Section 6 of this report sets out in detail the patterns of external passenger movements that are apparent for travel into and out of Northern Ireland (excluding cross border movements), and how these have changed since March 2019. It then goes on to offer an initial insight into the perceptions of prospective travellers into the current risks they face in undertaking such journeys by a range of modes, including air and sea. It attempts to benchmark the level of these risks across a range of situations beyond travel. It then goes on to anticipate the potential behavioural responses of prospective travellers to a range of measures. That assessment is reported in Section 7 and provides the basis for defining a series of scenarios incorporating economic, public health and public policy interventions that will inform the formulation of the Short to Medium Term Mitigation Strategy to address the access challenges previously referred to.

6.2 The Air Transport Market in Northern Ireland: The Context

The principal elements of Northern Ireland's external passenger travel market are:

- Business Travel
- In-Bound Tourism (including VFR)
- Out-Bound Tourism (including VFR)

In this section the primary focus is on identifying and informing an understanding of the patterns, including recent changes in these market segments. Having set out an overview of the key factors shaping UK demand for air transport, here we will consider in more depth the various factors impacting demand for travel before, during and post the Coronavirus pandemic. For business travel, in addition to the attractiveness of destination, (potentially reflected in market size and population, income levels, cultural similarities and shared language, market and supplier locations), these could include the firm's travel policies before, during, and after the Pandemic (see Section 5 and 7).

Additionally, such considerations as Government regulations, guidance and public messaging during the first UK wide lockdown coupled with anxiety and fear on the part of prospective travellers are likely to have impacted underlying propensity to travel. Any changes in air connectivity before and during the Pandemic are also likely to be manifest in travel patterns.

In the case of leisure travel before the onset of the Pandemic, cost and distance, connectivity, as well as border controls, family ties, cultural similarities and seasonality, were likely to be important determinants of travel. As for business travel the impacts of Government guidance and legal restrictions coinciding with the first UK wide lockdown and emergence of the Pandemic, together with the anxiety and fear instilled in prospective travellers are further considerations not only for the period of the lockdown but also after easing of restrictions, as they may become engrained in behaviour. For long distance commuting a particular consideration is that of job location and the policies of employers towards remote working and take up of the UK Government's furlough scheme during the Pandemic.

In the period up to the COVID-19 Pandemic the long-term rise in demand for air travel in particular has been noted, notwithstanding sudden jolts produced by economic crises, outbreaks of wars and periodic terrorism campaigns at an international level. The propensity to fly had increased steadily during the latter half of the 2000s and then again in the recent decade albeit at a reduced rate. This study has identified the importance of business and trade and in-bound tourism for the Northern Ireland economy. Moreover, it is recognised that the profile of passengers on most routes indicates the greater proportion of trips are initiated from Northern Ireland. Thus, the viability of many routes depends upon a healthy outbound market. The research has also highlighted the growing share of air trips made for leisure purposes, whether on holiday or to visit friends and relatives. In informing an understanding of the COVID-19 Pandemic for the Northern Ireland economy as a whole it is vital to understand how the travel patterns of residents of Northern Ireland have been impacted as much as prospective visitors to the region for leisure and business.

6.3 The COVID-19 Pandemic and Patterns of External Travel to/from Great Britain and Northern Ireland

Evidently people who live elsewhere in the UK have a wide range of choices where, if at all, they choose to visit for discretionary trips. It is important therefore to establish how the pattern of trips made by people living outside Northern Ireland has changed as a result of the Pandemic and how the profile of trips for residents of Northern Ireland has also been impacted during the same period.

Turning to the ways in which the profile of trips has changed, since 2019 the percentage of people indicating they had undertaken no overseas short breaks increased markedly across all regions of the UK. This is most marked in the case of London where it had increased from 51% to 83% compared to the same period in 2019 (See Appendix A Table A1 and Table A2). In the case of Northern Ireland, the equivalent figure rose from 71% to 88%, a rate of change broadly similar to the UK as a whole. For longer holidays the reduction in trips was even greater. In the case of Northern Ireland, the percentage not taking overseas trips rose from 52% to 87%. This is similar to the UK as a whole. However, this is markedly less than in Scotland where the gap between 2019 and 2020 is 49% and London at 46%.

A similar pattern is apparent in the case of Scotland for UK short breaks where the number reporting not having undertaken such a trip rose from 45% to 84%. This compares to 14% in the case of London. The overall figure for Great Britain is 27% while for Northern Ireland the percentage taking no UK short breaks rose 43% to 75%. The reduction in propensity for taking longer UK holidays exhibited lower levels of reduction between 2019 and 2020, overall rising from 72% to 86% in the case of Northern Ireland and 64% to 84% for Great Britain as whole. For Scotland the change was only 2%, for London it was 14% and for the remainder of Great Britain it was approximately 20%. Overall short overseas breaks and holiday trips have reduced by at least 50% while for UK breaks and holidays such trips have reduced by 45% and 33% respectively (Table 6.1 and Table 6.2).

Table 6.1 Annualised mean number of trip types taken by residents between March 2019 and August 2019 by Area

Mean (trips)						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
Overseas short breaks (1-3 nights)	0.8	0.7	0.4	1.7	0.4	0.7
Overseas holidays (4+ nights)	0.9	1.0	0.9	2.1	0.7	0.9
UK short breaks (1-3 nights)	1.1	1.4	1.3	2.2	1.6	1.3
UK holidays (4+ nights)	0.9	1.1	0.9	1.9	0.7	1.0

Source: TAA

Table 6. 2 Annualised mean number of trip types taken by residents between March 2020 and August 2020 by Area

Mean (trips)						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
Overseas short breaks (1-3 nights)	0.4	0.3	0.1	0.9	0.1	0.3
Overseas holidays (4+ nights)	0.4	0.4	0.2	1.3	0.2	0.3
UK short breaks (1-3 nights)	0.6	0.7	0.3	1.7	0.4	0.6
UK holidays (4+ nights)	0.6	0.6	0.3	1.6	0.1	0.5

Source: TAA

6.4 Visitor Destinations among GB and NI Residents

The patterns of external movement indicate that among the respondent's resident in Great Britain 7% have visited Northern Ireland at least once during the last 5 years for any purpose (Table 6.3). The figure for residents of Scotland is 23% while, apart from London at 11%, for the remainder of the UK less than one in ten have visited Northern Ireland for any purpose during the last five years. In the case of Northern Ireland residents 66% report having visited England and Wales at least once in the last five years while for Scotland the figure is 40%. It is noted more residents of Northern Ireland have visited Spain (47%) than Scotland while significant proportions of NI residents have visited Italy (23%) and France (22%). In the case of France, Germany Portugal and Greece at least one in ten people in Northern Ireland have visited these countries at least once (any purpose) during the last five years.

Table 6.3 Which of the following have you visited in the last 5 years (for any trip purpose)?

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
United Kingdom						
England	64%	12%	85%	0%	0%	6%
Scotland	40%	29%	0%	28%	30%	32%
Wales	12%	37%	17%	29%	38%	42%
Northern Ireland	0%	7%	23%	11%	6%	4%
European Union						
Republic of Ireland	66%	9%	17%	14%	7%	8%
Spain	47%	44%	44%	44%	42%	44%
Italy	23%	29%	27%	38%	27%	28%
France	22%	34%	27%	42%	34%	34%
Portugal	17%	19%	21%	23%	27%	17%
Germany	15%	19%	28%	26%	19%	16%
Netherlands	14%	14%	16%	19%	9%	15%
Greece	11%	21%	14%	22%	17%	22%
Scandinavia (Denmark, Iceland, Finland, Norway, Sweden)	9%	10%	17%	17%	13%	7%
Austria	6%	8%	8%	15%	12%	6%
Other EU states	16%	18%	18%	26%	18%	17%
Elsewhere						
North America (USA & Canada)	10%	11%	9%	10%	21%	9%
Switzerland	3%	9%	6%	16%	7%	8%
Africa	2%	3%	2%	2%	3%	3%
South America	2%	3%	3%	2%	5%	3%
Turkey	1%	3%	1%	2%	2%	4%
Asia	1%	4%	5%	3%	5%	4%
Middle East	1%	3%	2%	6%	2%	3%
Australia / New Zealand	1%	3%	5%	4%	7%	2%
Caribbean	1%	3%	0%	5%	8%	2%
Elsewhere	2%	2%	1%	2%	7%	1%
Haven't visited anywhere in the last 5 years	5%	12%	4%	3%	11%	15%

Source: TAA

When did you most recently visit Northern Ireland?

Research points to the impact of the COVID-19 pandemic and the loss of most former Flybe routes on inbound travel to Northern Ireland from Great Britain. Of those who had travelled from elsewhere in the UK to Northern Ireland 15% had done so during the 6-month period since the pandemic emerged (Table 6.4). 35% had done so within the previous six months covering last autumn and winter. It is noteworthy that 38% of those residents in London had done so within the last six months while that figure drops to 0% for the wider South East outside London and 10% for other areas of England and Wales. For the previous six months the respective figures were 12% and 39%. For Scotland 11% had visited Northern Ireland during the 6-month period since the pandemic emerged. 30% had done so within the previous six months covering last autumn and winter.

Table 6.4 When did you most recently visit Northern Ireland?

	Great Britain	Scotland	London	South East	GB elsewhere
Within the last week	4%	0%	0%	0%	10%
Within the last month	4%	0%	21%	0%	0%
Within the last 3 months	5%	11%	9%	0%	0%
Within the last 6 months	2%	0%	8%	0%	0%
Within the last year	35%	30%	46%	12%	39%
Within the last 5 years	47%	58%	16%	88%	43%
Don't know / can't remember	3%	0%	0%	0%	8%

Source: TAA

6.5 Main purpose of last visit to Northern Ireland

Turning to the trip purposes reported for their most recent trip to Northern Ireland overall 40% of residents of Great Britain indicate the primary purpose as holidays/short breaks and a further 22% reported visiting family/friends (Table 6.5). 14% reported their last trip was for business and the same proportion reported for work or commuting trips.

Within the overall figures for Great Britain 30% of Londoners reported the primary trip purpose was for work or commuting with similar number for holidays/short breaks while VFR travel is the same as Great Britain overall. Business trips for London accounted for 19% of the most recent trips. It is worth pointing out that for the wider South East beyond London that figure rises to 42% almost as large a proportion as the 46% reporting holidays/short break as the primary purpose.

Table 6.5 - What was the main purpose of your last visit to Northern Ireland?

	Great Britain	Scotland	London	South East	GB elsewhere
Holiday / short break	40%	55%	29%	46%	34%
Business	14%	4%	19%	42%	9%
Work	14%	9%	30%	12%	9%
Commuting	0%	0%	0%	0%	0%
Visiting family / friends	22%	23%	22%	0%	29%
Other social or leisure reasons	6%	5%	0%	0%	12%
Education	1%	4%	0%	0%	0%
Other	0%	0%	0%	0%	0%
Don't know / can't remember	3%	0%	0%	0%	8%

Source: TAA

6.6 Inbound Trips: Routes and Modes

Of those residents in GB who travelled to Northern Ireland 27% left from London's airports, at least 33% travelled from Cairnryan Port or Liverpool by ferry with smaller numbers below 10% by plane from Manchester, Liverpool, Birmingham, East Midlands, Edinburgh and Glasgow. For trips from Scotland almost half reported their most recent trip was made by ferry from Cairnryan Port. The three main points of arrival were Belfast Port and the city's two airports. Overall, 53% reported travelling by plane although, in the case of Scotland, this fell to 36% while for the South East it was 78%. The remainder travelled by ferry in combination with other surface modes including private vehicles. Notably in the case of London 19% reported travelling by rail and ferry.

6.7 Outbound Trips: Routes and Modes

Among residents of Northern Ireland 31% reported England as the destination outside the island of Ireland of their last external trip. Spain was reported by 23% as the last external destination and Scotland 11% (Table 6.6). No other destination among a long list was reported by more than 7% with the Netherlands at that level.

Table 6.6 - Which of the following did you last visit (for any trip purpose)?

United Kingdom	
England	31%
Scotland	11%
Wales	3%
European Union	
Spain	23%
Netherlands	7%
France	3%
Greece	3%
Portugal	2%
Italy	1%
Scandinavia (Denmark, Iceland, Finland, Norway, Sweden)	1%
Austria	0%
Germany	0%
Other EU states	4%
Elsewhere	
Switzerland	1%
Elsewhere	7%
Don't know / can't remember	4%

Source: TAA

Of those making trips beyond the island of Ireland 76% left from Belfast International Airport, Belfast Harbour (Ferry) or Belfast City Airport, with one third travelling from Belfast International and slightly fewer via Belfast Port (Table 6.7). 8% reported travelling via Dublin Airport (consistent with official statistics) and 3% via Dublin Port. For travel to England 71% reported travelling by air with the remainder by ferry with all bar 2% travelling onward by private vehicle. For travel to Scotland the respective figures were 34.4% by air and 66% by ferry, with 14% travelling onward by public transport vehicle. For Wales 20.1% reported travelling by air and 79% by ferry with 12% onward by public transport.

Table 6.7 Which airport or port did you depart from when you last left Northern Ireland to go to (a list of destinations)?

Air routes		**Ferry routes**	
Belfast City Airport	18%	Belfast	24%
Belfast International Airport	34%	Dublin	3%
City of Derry Airport	2%	Larne	2%
Dublin Airport	8%	Warrenpoint	0%
Other air route	0%		
Other routes			
Other route	0%		
Don't know / can't remember	6%		

Source: TAA

19% of people reported London across its 5 airports as the first location where they arrived after departure from Northern Ireland (Table 6.8). This includes travellers transiting London. 32% reported arriving by sea at ports in Scotland and England while 25% reported international points of first arrival.

Table 6.8 - Which destination listed below after leaving Northern Ireland was the NEXT airport or port you arrived at or transited through?

Air routes (Great Britain)		**Air routes (International)**	
Aberdeen	2%	Amsterdam	3%
Birmingham	1%	Paris	3%
Bristol	0%	Other international air route	19%
Cardiff	4%		
East Midlands	0%		
Edinburgh	1%	**Ferry routes**	
Glasgow	3%	Cairnryan	12%
Leeds Bradford	1%	Heysham	2%
Liverpool	2%	Holyhead	0%
London City	1%	Liverpool Birkenhead	18%
London Gatwick	7%		
London Heathrow	5%		
London Luton	3%	**Other routes**	
London Stansted	3%	Other route	4%
Manchester	3%	Don't know / can't remember	0%
Newcastle	2%		
Southampton	3%		
Teesside	0%		

Source TAA

6.8 Main purpose of outbound air travellers from Northern Ireland (2014-2019)

The profile of trips made by residents of Northern Ireland up to the emergence of the Pandemic demonstrated 21% were made for business reasons compared to around 50% on holiday and an approximate 25% to visit friends and relatives (VFR) (Table 6.9).

These percentages vary by airport of departure with some 40% of Belfast City's traffic accounted for by business travel, approximately 30% on holiday and similar proportion on VFR trips. In contrast at Belfast International some 60% of trips are holiday trips, approximately 20% are VFR trips and 20% are on business. Given the difference in throughput business travel is broadly evenly split between the two Belfast Airports. Overall, the figures exhibit considerable stability over the 5 years up to 2019, albeit with a modest rise in leisure travel overall.

Table 6.9 - Trip Profiles for Northern Ireland Residents (2014-2019)

		Departure Airport				
		George Best Belfast City Airport	Belfast International Airport	City of Derry Airport	Dublin Airport	All (including other airports)
BY TRIP PURPOSE AT EACH AIRPORT						
April 2014 - March 2015	Holiday	33%	57%	49%	61%	51%
	Visiting Friends and Relatives	27%	22%	41%	28%	25%
	Business	34%	17%	10%	7%	20%
	Other	7%	4%	0%	3%	5%
	All	100%	100%	100%	100%	100%
April 2015 - March 2016	Holiday	26%	58%	24%	60%	50%
	Visiting Friends and Relatives	28%	18%	38%	30%	23%
	Business	42%	21%	35%	7%	23%
	Other	4%	3%	3%	4%	3%
	All	100%	100%	100%	100%	100%
April 2016 - March 2017	Holiday	33%	61%	68%	68%	55%
	Visiting Friends and Relatives	25%	22%	30%	17%	22%
	Business	36%	16%	x	13%	20%
	Other	6%	1%	x	2%	3%
	All	100%	100%	100%	100%	100%
April 2017 - March 2018	Holiday	33%	59%	38%	69%	55%
	Visiting Friends and Relatives	30%	23%	61%	17%	24%
	Business	36%	16%	-	12%	19%
	Other	2%	2%	x	2%	2%
	All	100%	100%	100%	100%	100%
April 2018 - March 2019	Holiday	23%	65%	39%	63%	55%
	Visiting Friends and Relatives	30%	20%	54%	21%	23%
	Business	44%	14%	x	15%	21%
	Other	2%	1%	-	1%	2%
	All	100%	100%	100%	100%	100%
% MARKET SHARE FOR EACH AIPORT BY REASON OF TRIP						

		George Best Belfast City Airport	Belfast International Airport	City of Derry Airport	Dublin Airport	All (including other airports)
April 2014 - March 2015	Holiday	18%	61%	2%	20%	100%
	Visiting Friends and Relatives	31%	48%	3%	18%	100%
	Business	48%	46%	1%	6%	100%
	Other	31%	38%	0%	9%	100%
	All	28%	54%	2%	16%	100%
April 2015 - March 2016	Holiday	12%	62%	1%	24%	100%
	Visiting Friends and Relatives	28%	42%	4%	26%	100%
	Business	42%	48%	4%	6%	100%
	Other	24%	52%	2%	22%	100%
	All	24%	54%	2%	20%	100%
April 2016 - March 2017	Holiday	15%	58%	2%	25%	100%
	Visiting Friends and Relatives	29%	52%	2%	16%	100%
	Business	45%	42%	x	13%	100%
	Other	58%	24%	x	17%	100%
	All	25%	53%	2%	20%	100%
April 2017 - March 2018	Holiday	13%	60%	1%	25%	100%
	Visiting Friends and Relatives	27%	54%	5%	14%	100%
	Business	40%	47%	-	13%	100%
	Other	21%	59%	x	19%	100%
	All	22%	56%	2%	20%	100%
April 2018 - March 2019	Holiday	9%	68%	1%	22%	100%
	Visiting Friends and Relatives	29%	51%	3%	17%	100%
	Business	46%	40%	x	13%	100%
	Other	34%	54%	-	13%	100%
	All	22%	58%	1%	19%	100%

x=sample size too small to provide a reliable estimate
1 Data was collected on 'other airports' but sample size too small to provide any breakdown on reason
2 Final Destination - sometimes recoded to a larger area

Source: NISRA

6.9 Perceived risk of becoming infected by the Coronavirus travelling by plane and ferry

The dramatic reduction in demand for travel by air can be attributed mainly to the perceived risk of infection and Government regulations, guidance, and messaging on travel. Turning to the assessment of risk of becoming infected by the Coronavirus the evidence from the research indicates between 45% and 60% of people believe it is likely or very likely they would become infected if they travelled by plane. This figure is highest for Northern Ireland (58%), London (57%) and England and Wales beyond the South

East (56%) (Table 6.10) (Figures 6.1 and 6.2). In contrast the perception of being likely or very likely to become infected in Scotland and the South East is markedly lower at 45%.

These findings contrast with the perceived risk of travel by ferry in relation to which 29% of residents of Northern Ireland believe it is likely or very likely they would become infected if they travelled by ship. This figure is lowest for Northern Ireland, with London estimating the risk as likely or very likely at 49% and Scotland at 32% and Great Britain overall at 37% .

Table 6.10 How likely do you think it is that you would potentially catch the Coronavirus and / or COVID-19 at the moment when using each of the following methods of transport?

Air						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
1 - Not at all likely	10%	11%	4%	6%	7%	14%
2 -	6%	8%	11%	9%	9%	7%
3 -	20%	22%	31%	24%	36%	17%
4 -	25%	25%	21%	30%	16%	26%
5 - Very likely	33%	30%	26%	27%	29%	31%
Don't know	6%	5%	8%	5%	4%	5%

Sea (e.g. ferry, boat, ship)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
1 - Not at all likely	13%	13%	7%	8%	8%	15%
2 -	19%	18%	19%	10%	28%	17%
3 -	31%	25%	32%	22%	31%	23%
4 -	18%	20%	14%	26%	12%	22%
5 - Very likely	11%	17%	18%	23%	16%	15%
Don't know	8%	8%	10%	11%	6%	7%

Source: TAA

Figure 6.1`

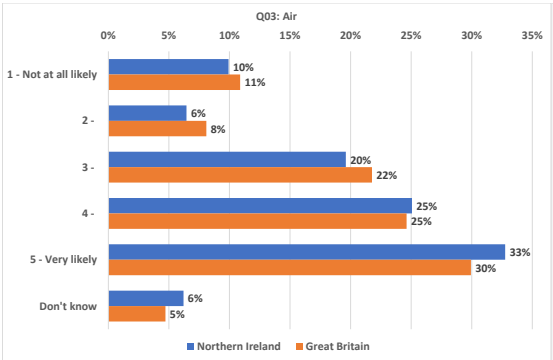
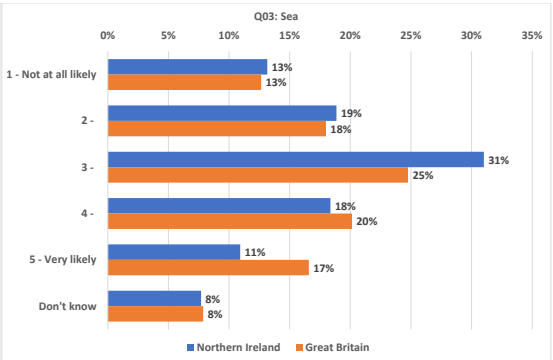


Figure 6.2



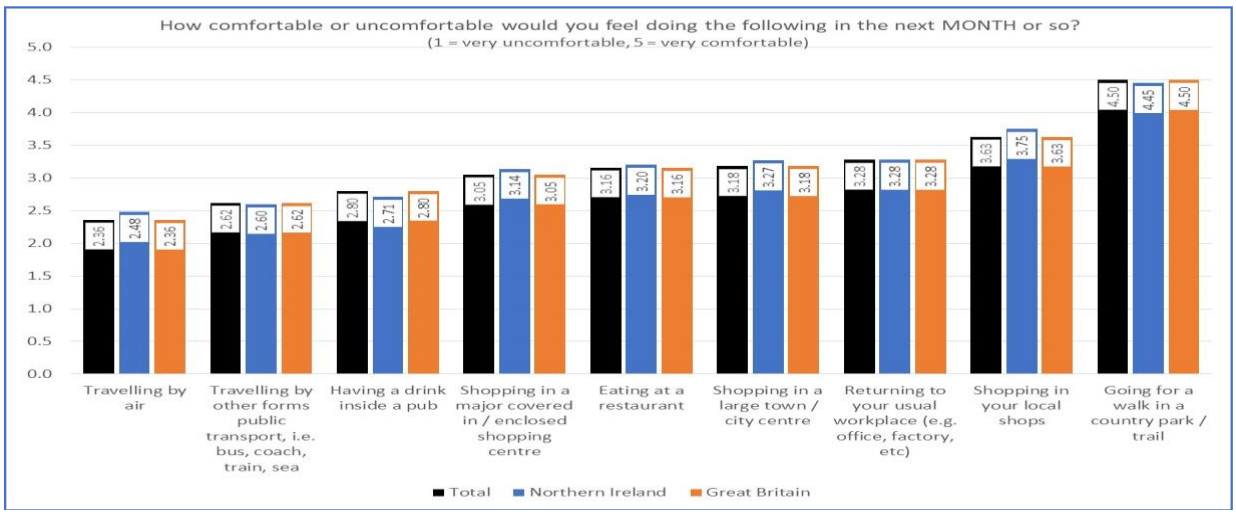
Source: TAA

6.10 Risk of Infection and the role of the virus in shaping behaviour

A manifestation of the role of the virus in shaping behaviour is evident from assessments of how comfortable people feel about engaging in a range of activities from simple walks in semi-rural areas to travelling by plane or ferry. The evidence suggests the greatest levels of feeling uncomfortable or anxious is travelling by air or going for drink to a pub (Figure 6.3) (See Appendix A Table A3). Among Northern Ireland residents 45% reported they would be uncomfortable or very uncomfortable about

the prospect of travelling by air. For public transport and ferry the equivalent overall figure is 50% but with fewer perceiving they would be very uncomfortable. Respondents perceive all other activities including visiting shopping centres and city/town centres, eating in restaurants or working from the workplace as being markedly more comfortable. Such assessments of risk are broadly consistent across the UK although notably for London, in the case of air and using public transport and Scotland using public transport including ferries, they record significantly lower levels of anxiety than in other parts of the country. The same applies to shopping in city centres although not in relation to returning to work from workplaces.

Figure 6.3: How comfortable or uncomfortable would you feel doing the following in the next MONTH or so?



Source TAA

6.11 Observations on changes shaping Northern Ireland's external travel patterns and the Coronavirus

The in-depth assessment reported in this section of changes shaping Northern Ireland's external travel patterns in the wake of the Coronavirus Pandemic prompts the following observations:

- External travel has exhibited a dramatic and unprecedented decline outside of wartime or during the very short-term disruption caused by the Icelandic Ash Cloud incident in 2010.
- There is evidence of substantial changes in the relative significance of selected trip origins and destinations both among residents and prospective visitors to Northern Ireland.
- There is a significant change in mode of travel used where trips are made from air to ferry. This can in part be attributed to the cessation of regional air routes linking Northern Ireland with the regions of Great Britain, in part by the fear instilled in prospective passengers concerning air travel and in part by Government public health related messaging about travel in particular external travel.
- There is evidence of significant changes in the profile of trips by purpose.

The key factors underpinning these changes unprecedented in modern times include the following:

- It is evident that during the weeks running up to announcement by the Government of the first UK wide lockdown air travel was already experiencing a significant reduction in demand.

- Initially this decline appears to have been prompted by fear of contracting the virus from fellow passengers or crew while travelling on a plane.

- The rate of decline in demand for air travel increased significantly in the wake of Government regulation, guidance and public health messaging relating to the COVID-19 Pandemic.

- The evidence suggests approximately half the population are unlikely to return to air travel under current circumstances while for ferry this figure is markedly lower.

- This has significant implications for NI's connectivity in the absence of effective mitigation measures and preferably the development and distribution of an effective vaccine across the population.

- Addressing this situation points to a requirement in the first instance, to establish both the perceived and objective level of risk by air and sea.

These are issues that will be addressed in Section 7 in informing the specification of short-term scenarios encompassing:

- the performance of the local, UK and international economy; and

- the level of infection prevalent in Northern Ireland and in the main markets for Northern Ireland outbound travellers and inbound travellers.

These scenarios will provide the context for developing a *Short to Medium Term Mitigation Strategy to Address the Access Challenges posed by the Pandemic for the Business and Tourism Sectors in Northern Ireland.*

7. Towards a Short to Medium Term Mitigation Strategy to Address Challenges for NI's Domestic External Connectivity

7.1 The Economic Outlook and Future Scenarios for the Northern Ireland Economy

Section 7.1 sets out to understand how the COVID-19 pandemic has and will continue to impact on the Northern Ireland, UK and international economies. The actual performance of the local, national and international economies will be key determinants of the market for external travel to/from Northern Ireland and the passenger carryings for the region's air and sea links during the short to medium term.

This section brings together a range of forecasts setting out predictions around economic contraction and growth dependent on the circumstances the local and wider economies find themselves in during the ever-changing health, social and economic environment brought about by the COVID-19 pandemic. This process underpins specification and construction of near-term scenarios encompassing firstly, a range of macro-economic conditions, Coronavirus infection rates and availability of effective medical measures to combat the virus, secondly, the extent to which Governments continue to discourage and impose restrictions on travel and thirdly, outcomes to the UK's transition out of the EU, including reinstatement of more restrictive border controls, as well as potential connectivity futures.

Summary of Northern Ireland, National and International Forecasts

The COVID-19 pandemic fall out on the Northern Ireland, UK and international economies is unprecedented and that is reflected in growth forecasts (Table 7.1). The most recent forecasts has been provided by Ernst & Young (November 2020) and suggests that the Northern Ireland economy will contract by an historic -11% in 2020, with most forecasters estimating that the Northern Ireland economy will contract at a slightly faster rate than the UK as a whole. The expectation is that the economy will grow by +5.5% in 2021, similar to expectations around the UK recovery suggested by the OECD forecasts. What the forecasts generally have tended to predict for Northern Ireland is that some, but not all, of the contraction in the economy will be recovered in 2021. The EY forecasts suggest that it will be 2023/24 before the severe contraction in GDP experienced by the Northern Ireland economy in 2020 will be recovered. The challenge with any forecasts at present is accommodating further restrictions. For example, the NI Executive brought further restrictions into place in Northern Ireland in mid-October 2020. This will have further negative economic impacts and place downward pressure on near term forecasts, although the extent of the impact is not expected to be as negative as the contraction experienced in Spring 2020.

Table 7.1: Short Term Forecasts for NI, UK, World Economies – OECD/Ernst & Young November 2020[40][41]

GDP	2020	2021	2022	2023
- NI	-10.9%	+5.5%	+2.5%	+1.8%
- Republic of Ireland	-3.9% (-7.7%)	+3.5% (+5.5%[42])	+3.8% (+3.9%)	+2.8% (+2.1%)
- UK	-10.1%	+6.0%	+2.9%	+1.9%
- Euro	-7.9%	+5.1%		
- US	-3.8%	+4.0%		
- World	-4.5%	+5.0%		

EY predict a relatively modest fall in jobs in Northern Ireland during 2020, down 0.8% followed by a larger job's contraction in 2021 at -2.9%. They suggest that parts of the economy including accommodation and food, retail and transport won't recover 2019 jobs levels until 2025.

The Office for Budgetary Responsibility (OBR) recently released its Economic and Fiscal Outlook[43] which predicts that UK GDP is set to fall by -11 per cent this year, making it the largest drop in annual output since the Great Frost of 1709. The OBR expects growth of +5.5% in 2021 and 6.6% in 2022 but after this growth is expected to slow with GDP forecast to increase by just +1.8% anticipated in 2025. This is based on a central forecast scenario where more stringent public health restrictions remain in place over the winter with an easing of the restrictions as better weather arrives in spring 2021. It is also based on an effective vaccine becoming widely available in the latter half of 2021 with a slow return to some sense of 'normality'. The OBR's central assessment suggests a lasting adverse impact of the pandemic on the economy.

Forecasting Scenarios and implications for Economic Growth Prospects

The OECD and IMF are among the most respected forecasters of global economic growth. Their most recent forecasts indicate how the global, EU and UK economies might perform in the next few years based on a set of assumptions around how the virus manifests itself, what impact this has on consumer and business confidence and the likelihood of a vaccine becoming available in the future.

OECD Forecasts

The OECD predict that the world economy will contract by -4.5% in 2020 (see Table 7.1 above). It has focused its most recent Economic Outlook on a core model of gradual recovery in its September 2020 report[44]. It makes it estimates on the basis that strict confinement measures are being eased and

[40] EY (2020) Economic Eye Report Winter 2020 available online at https://www.ey.com/en_ie/strategy-transactions/economic-eye-report-winter-2020-bouncing-back-or-stepping-forward#new

[41] OECD (2020) OECD Economic Outlook, Interim Report September 2020 available online at https://read.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2020/issue-1_34ffc900-en#page6

[42] Figures in brackets shows modified domestic demand excluding trade and the impacts of IP leasing and aircraft leasing

[43] Office for Budgetary Responsibility (2020) Economic and Fiscal Outlook available online at http://cdn.obr.uk/CCS1020397650-001_OBR-November2020-EFO-v2-Web-accessible.pdf

[44] OECD (2020) OECD Economic Outlook, Interim Report September 2020 available online at https://read.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2020/issue-1_34ffc900-en#page6

business is being re-opened, although uncertainty remains high and confidence is still fragile. Recovery is being driven by certain geographies e.g. China and US and certain types of spend e.g. some aspects of consumer spending reflecting some pent-up demand and increases in durables spending (e.g. household goods, cars etc). Temporary fiscal incentives have also provided a boost to many economies globally. However, recovery in industrial production has been milder and export orders are a constraint on growth. OECD make specific mention of the exceptional weakness of international tourism, with international passenger traffic revenue in July still over 90% lower than a year earlier and with global commercial flight numbers in August around 40% below their pre-pandemic level.

Table 7.2: OECD Scenario Forecasting (September 2020 report)

Downside Scenario – heightened uncertainty and a widespread resurgence in infections	Gradual Recovery – moderate growth amongst persistent uncertainty	Upside Scenario – a resurgence in confidence
• Consumer confidence declines as the virus increases in intensity again leading to weaker spend and demand with the knock-on effects for business and investment • World GDP is reduced by 3% points • Global trade would decline by over 7% in 2021 • Lower risk and investment appetite	• Gradual recovery in certain geographies (China, US) and types of spend, particularly consumer spend as confidence improved • +5% World GDP growth in 2021 • Global trade remains subdued	• Renewed outbreaks prove milder and more easily controlled enhancing consumer and business confidence meaning a strong rebound in spending and output • World GDP boosted by 2.5% in 2021 • World trade is strengthened substantially, rising by around 6% on average in 2021

The OECD has recently released its December 2020 Economic Outlook entitled 'Coronavirus: Turning hope into reality'[45]. It highlights that the outlook is brighter with vaccines in sight along with the strong and continuous policy support provided by many economies. The uncertainty brought about by the pandemic remains with a swing from a faster recovery in demand to the potential for a more prolonged weakness in the economy. These forecasts predict that the UK economy will contract by 11.2% in 2020 with a world contraction of 4.2%. The UK is still predicted to suffer from one of the largest contractions in GDP across the world.

International Monetary Fund (IMF) Scenarios

The IMF project world GDP to contract by -4.4% in 2020, similar to the OECD forecast (Table 7.3). This has been revised upwards from June 2020 reflecting better than expected Quarter 2 GDP outturns, mostly in advanced economies. Global growth is projected at +5.2% in 2021 which while positive reflects expectations of continued social distancing in 2021. After 2021 the IMF project modest growth that is projected to slow meaning that it likely that there will be limited progress towards catching up on the 2020-25 growth forecasts projected before the pandemic hit. This subdued outlook will impact

[45] OECD (2020) Economic Outlook December 2020 available online at https://www.oecd.org/newsroom/Summary-handout-for-December-2020-OECD-Economic-Outlook-news-conference.pdf

negatively on jobs, living standards, investment, and productivity. The post 2021 forecasts assume that social distancing will fade over time as vaccine coverage expands and therapies improve. Local transmission levels are assumed to be low everywhere by 2022.

The IMF acknowledges that the uncertainty around the baseline projection is 'unusually large'. Their projections rely on public health and economic factors that in the current circumstances are inherently difficult to predict. There are so many influences from the path of the pandemic, first and foremost on the public health response required and with that subsequent reduction in economic activity and the strong impact on contact intensive sectors. The pandemic also influences uncertainty around global spill overs from soft demand, weaker tourism and lower remittances (payments including invoices). There is also uncertainty around damage to supply chains. With that, the IMF believes that the risk of worse growth outcomes than projected remain sizeable. It highlights that if progress on treatments and vaccines is slower than expected then economic activity could be lower than expected.

Table 7.3: IMF Forecasts to 2025 (October 2020)[46]

GDP, constant prices	2020	2021	2022	2023	2024	2025
UK	-10%	6%	3%	2%	2%	2%
World	-4.4%	5.2%	4.2%	3.8%	3.6%	3.5%
United States	-4.3%	3.1%	2.9%	2.3%	1.9%	1.8%
Euro Area	-8.3%	5.2%	3.1%	2.2%	1.7%	1.4%
Value of exports of goods and services	2020	2021	2022	2023	2024	2025
UK	-14.6%	5.7%	4.4%	1.9%	2.1%	2.1%
World	-10.1%	7.9%	5.3%	4.3%	3.8%	3.5%
United States	-12.6%	7.2%	4.6%	4.0%	3.0%	2.4%
Euro Area	-13.0%	8.3%	5.9%	4.3%	3.6%	3.3%
Value of imports of goods and services	2020	2021	2022	2023	2024	2025
UK	-20.0%	12.7%	4.3%	1.9%	1.9%	1.9%
World	-10.7%	8.7%	5.5%	4.4%	3.8%	3.6%
United States	-12.6%	7.2%	4.6%	4.0%	3.0%	2.4%
Euro Area	-11.7%	7.8%	5.7%	4.2%	3.6%	3.3%

Source: IMF World Economic Outlook Database (October 2020)

The IMF predicts that the UK will suffer the strongest economic contraction in 2020 set against the performance of the Euro Area and the United States, both major trading partners for Northern Ireland. The impact on global trade particularly stands out with a 15% contraction in exports and 20% contraction in imports of goods and services predicted for 2020. What the forecasts also suggest is that the UK's global trade prospects will be more severely affected that other major economies over the 5-year time horizon to 2025 which will also take into account the potentially negative impacts of Brexit.

[46] IMF (2020) World Economic Outlook reports available online at https://www.imf.org/en/Publications/WEO

7.2 COVID-19 Tourism Impact on Northern Ireland

Economic factors play a major part in the tourism and travel industry globally and locally. Recession brings with it lower profits/wages, increased unemployment and economic inactivity, all of which means lower disposable income and on top of this uncertainty which changes spending patterns. This means cutting back costs, reducing discretionary spending generally and typically cancelling/downsizing of planned vacations. During the 2008/09 global economic crisis, international tourism was severely impacted, causing a decline of -4% in international tourist arrivals and a decrease of international tourism revenues by 6% in 2009. Travel stocks were particularly badly hit with airline stocks down 68% and hotels, resorts and cruise lines down by 74%. The fallout from the 2008/09 financial crash pales into insignificance when compared to the fall out for the tourism and travel industry brought on by the COVID-19 pandemic. The UNWTO highlights that international tourist arrivals (overnight visitors) declined 70% in the first eight months of 2020 over the same period of last year. It estimates the loss in international tourism revenue more than 8 times the loss experienced in the 2008/09 crisis. This reflects the sheer scale of the contraction in international tourism which has obvious knock-on effects both at home and abroad. Ernst and Young (EY) recently undertook an 'Economic Impact Assessment of COVID-19 on the Tourism and Hospitality sector in Northern Ireland' (July 2020) on behalf of Tourism NI and the Tourism Working Group. It highlighted that COVID-19 will have a severe impact on the tourism sector in 2020 which will contract by between -37% and -48%, putting between 23,900 and 31,000 direct jobs at risk without public support. The EY report puts forward three scenarios to support this range of impacts that depend on the health situation, the magnitude of the economic crisis and the scale of behavioral changes.

Table 7.4: Ernst and Young (EY) Scenarios - Economic Impact Assessment of COVID-19 on the Tourism & Hospitality Sector in Northern Ireland, December 2020

Scenario	Scenario 1	Scenario 2	Scenario 3
Assumptions	Slow but steady recovery Return to pre COVID-19 levels by the end of 2022	Extended health crisis Will not return to pre COVID-19 levels by the end of 2022	Structural health, economic and tourism crisis Will not return to 2019 levels by the end of 2022
2020 potential impact on activity	-37%	-44%	-47%
2020 potential tourism jobs lost	-23,900	-28,000	-31,000
Probability	1/5	2/5	2/5

Source: TourismNI

Under EY's **Scenario 1**, a 40% drop in spending is estimated from GB tourists in 2020 with the need to access Northern Ireland through air or ferry travel a key driver in that contraction. Demand should still be depressed in the first half of 2021 as a result of COVID-19. However, this scenario presumes a sharp

rebound in spending by GB tourists in 2022 with spend up 11% on 2019. The rest of the world travel is not expected to fully recover until 2022.

Under EY's **Scenario 2**, with an extended health crisis, due to restrained travel restrictions GB tourism is not projected to recover 2019 levels in 2022. The reduction in rest of world tourism would be more marked, with factors such as health insurance coming to the fore. Motivation to travel would remained hampered by lack of events, gatherings etc.

Under EY's **Scenario 3**, tourism spend from outside the UK and Ireland falls by 80% in 2020. Travel by plane or cruise ships would not be permitted until the second half of 2021 and even at that further impacts might be felt as travelers take time to gain confidence to travel. EY highlight that under this scenario Northern Ireland would be disproportionally affected with continuing lower spend, particularly from international visitors outside the UK and Ireland estimated to reduce by 68% compared to pre-COVID.

The EY research highlights that the *'impact on tourism spending in the next 12 months should be far worse than the one experienced in the wake of the 2008 economic crisis*'. By way of example the report cites the fact that in May 2020, 47% of American tourists expected that they would spend less on tourism in the next 12 months compared with 30% during summer 2008.

The EY report makes a number of recommendations, largely focused on how to boost near market tourism numbers and spend. However, it does call for a coordinated communications and public engagement plan to include messaging on welcoming visitors and responsible community behaviour. It recommends a timeline for removal of quarantine restrictions. It also suggests a temporary Air Passenger Duty Exemption on all domestic flights.

7.3 Public Health Restrictions and impact on economic performance

During October and November further restrictions have been put in place across the four countries of the UK to varying degrees and with varying timelines. The term 'circuit breaker' has been introduced meaning restrictions take place over a shorter period of time with the aim of slowing the spread of infection. This has included the closure of some businesses, largely accommodation, hospitality, personal services, attractions and generally those businesses involving 'close contact' with members of the public. We know that the first lockdown in March/April saw an historic collapse in economic activity with official statistics suggesting a contraction in the Northern Ireland economy in Q2 of 13.6% (18% private sector) in real terms and 17.8% over the year (23.3% private sector). UK GDP fell by 19.8% over the quarter and 21.5% over the year to Q2 2020. More recent evidence would suggest that there was some improvement in the performance during Q3, not surprisingly given that almost all of the economy had been reopened. More people were returning to work and just 7.5% of the UK's workforce was on furlough. EY forecasts[47] suggest the UK economy grew by 17% in Q3, recovering some but not all of the Q2 contraction.

The EY forecast, compiled before the announcement of the second 'lockdown', had forecast growth of just 1% for the UK economy in Q4 2020 reflecting a cooling off of the initial bounce back from what was

[47] https://www.ey.com/en_uk/growth/ey-item-club/challenges-still-face-uk-economy-despite-strong-q3-2020-bounce-back

an effective closure of the economy in Q2. The National Institute of Economic and Social Research had predicted Q4 UK growth of +1.5% before the second lockdown was announced but has since revised this downwards to a contraction of -3.3% contraction to GDP in the 4th quarter which would be the steepest quarterly fall since 1955, bar the record 19.8% decline in Q2 2020[48]. The general consensus among economists is the economy will contract between 5% and 10% in November alone.

Table 7.5: Initial and Revised Forecasts for Q4 UK GDP Pre and Post UKG Decision on Second Lockdown

	Revised Q4 (November 2020)	Initial Q4 pre-second lockdown
NIESR	-3.3%	+1.5%
Oxford Economics	-3.0%	+1.6%
Goldman Sachs	-2.4%	+3.6%
Deutsche Bank	-2.5%	+2.0%

Source: As referenced above for each forecaster

The changes in themselves highlight the negative impact of lockdowns on the economy, swinging from an average Q4 UK GDP growth estimate of +2.2% estimated pre-second lockdown to a contraction of -2.8% after the second lockdown has been announced. That's a 5%-point contraction over just one quarter when lock down circumstances change for the worse. However, the forecasts do suggest that the economic cost of a second lockdown will not be as great as the first although the anticipated economic cost is still significant by historical standards. Part of the context to this is the extent to which sectors/parts of the economy are closed. With this second lockdown many parts of the business economy have remained open as have schools meaning few parents have had to take time off work. Many businesses have learned to adapt to the changing circumstances that the first wave brought to bear. The government policy response is obviously critical in mitigating against the inevitable fall out on the economy and needs to be large enough to give some form of 'comfort' to businesses and the economy. The importance of extending the Job Retention (furlough) scheme has been viewed as a critical response against substantial job losses to the economy. What all of this inevitably points to though is the fact that any recovery will be far from smooth and growth/contraction will become a core feature of the economy as it deals with the economic consequences of the pandemic and associated government responses.

Brexit Implications

The fall-out from Brexit also looms large in terms of a further shock to the Northern Ireland and UK economies (and indeed Ireland). Northern Ireland has the potential to be particularly badly hit and that has become increasingly evident from the contentious issue of the Northern Ireland Protocol agreement and early signs of its implications on the non-tariff aspects of how Northern Ireland trades with Great Britain. Therefore, while at the time of writing it was hoped a Trade and Cooperation Agreement[49] would be reached between the UK and EU avoiding a 'no deal' scenario, which had been a particular concern

[48] National Institute of Economic and Social Research (NIESR) (November 2020), Prospects for the UK Economy available online at https://www.niesr.ac.uk/publications/prospects-uk-economy-38

[49] The EU-UK Trade and Cooperation Agreement (December 2020) was confirmed after completion of this study and is available online at https://ec.europa.eu/info/relations-united-kingdom/eu-uk-trade-and-cooperation-agreement_en

to Northern Ireland's business community[50], many unknowns remain. This includes any impact of the new arrangements on how Northern Ireland trades externally with particular emphasis on its trading relationship with its largest trading partner Great Britain, but also in how this might affect costs, competitiveness, FDI attractiveness, access to skills and attractiveness as a destination (tourists, students, workers). There are some early indicators of potential concerns. The NI Chamber of Commerce and Industry/BDO Quarterly Economic Survey for Q4 2020 highlighted that 51% of members had concerns about Great Britain customer attitudes towards business in Northern Ireland after transitioning out of the EU. Early indicators suggest some disruption, particularly in terms of Great Britain to Northern Ireland trade. At this stage in the exit process this is very much a 'watching brief' as to how Brexit will impact on how Northern Ireland trades outside the island of Ireland, but this should be considered in the context of how this affects and could potentially weaken the region's connectivity both within the UK and internationally going forward.

The Implications for the Northern Ireland economy

What the available evidence around the economic impact of COVID-19 highlights is a huge uncertainty around prospects for any economy going forward. There are so many confounding factors to take into consideration around the evolution, impact and treatment of the virus. This includes the roll out and reach of the vaccine in its various forms, success rates and whether/how any new variants emerge and can be dealt with. The government response as we know is critical both in terms of managing the virus but also in influencing consumer confidence and the impact on the economy. This in turn influences how sectors of the economy respond and are impacted and ultimately what lasting damage/scarring might occur because of the path that both the virus and governments take. We know that there are immediate and significant impacts at present from restrictions put in place, for example the estimated £400m contraction in the Northern Ireland economy from the October/November 2020 'circuit breaker' and the 5%-point contraction predicted for the UK economy over just one quarter when lock down circumstances changed for the worse. The scale of these changes in forecast scenarios/economic impacts is in itself unprecedented.

From a Northern Ireland perspective there are a number of very specific concerns going forward in relation to the predictions around economic recovery and links to connectivity. The region is expected to recover at a slightly slower rate than the UK economy as a whole which is concerning because the UK is expected to be one of the most badly impacted of the advanced economies, contracting at more than twice the rate of the United States for example. The evidence suggests that two of the most negatively impacted sectors will be **tourism** and **trade.** The tourism sector in Northern Ireland was only beginning to gain some real momentum but all of the evidence suggests that for a number of reasons, particularly around safety issues among the general population, this sector of the economy is expected to take longer to recover. At best the tourism sector in Northern Ireland is estimated to contract by around one third in 2020 but the more likely estimate is around 50% and arguably more which could amount to loss of £300m to £500m in direct spend alone in 2020 not taking into account the knock on effects into the rest of the economy. Restoring public confidence in resuming national and particularly international travel does depend in large part on the speed with which the vaccine is rolled out. At this point there is no known timescale for when the current vaccine programme will be concluded (and indeed its success). Until a vaccination programme has been successfully implemented/concluded it is anticipated that land

[50] NI Chamber of Commerce and Industry/BDO Quarterly Economic Survey Q3 2020

based travel is the most optimistic scenario which means that based on 2019 figures a significant portion of Northern Ireland's £590m tourism spend by Great Britain and international visitors (excluding Ireland) is at risk with obvious knock on effects for connectivity to the region.

Global economic forecasts suggest that trade will also be one of the mostly negatively impacted parts of the economy, not least because of the scale of the contraction in economies meaning a reduction in global demand for goods and services but also for reasons including potential impacts from 'deglobalisation' where companies might consider more 'near market' locations because of ease of access to goods/services which were restricted because of COVID and linked to this the potential damage caused by Brexit where Northern Ireland has already seen some negative trade impacts in terms of EU customers and suppliers seeking to trade with customers/suppliers within the EU jurisdiction. This also applies to migrant workers whose numbers have already been eroded by Brexit and arguably further so when the new UK Immigration policy[51] comes into play on 1st January 2021. What will support external trade in the Northern Ireland economy will be those connections to the Great Britain market, Northern Ireland's largest market and the United States whose recovery path does appear somewhat stronger.

Discussions with Invest NI suggest that the negative impacts of the pandemic could be potentially less in terms of inward investment. 2020 has been relatively unaffected with FDI projects already in the pipeline. Invest NI already has in place a 'virtual selling programme' so make pitches to international companies remotely. The business development body has found that a number of its more recent investments are more open to remote working and less travel because of the technology involved. It has seen an upsurge in interest in Northern Ireland as an investment location with some investors who see a land border with the EU as an advantage. Invest NI do however stress that it is difficult to predict the impact on the inward investment pipeline going forward because of the extent of uncertainty, both COVID and Brexit driven. They also point out that it is essential to maintain connectivity for Northern Ireland making the point that '*any country wanting to attract FDI has to have access by flight*'.

Three outline scenarios are presented in Table 7.6 below. These take into account the range of projections by IMF/OECD and Northern Ireland forecasts to provide an indication of the extent of impact that largely hinges on the speed and reach of a successful vaccination programme. The downside scenario is most pessimistic in that the virus keeps resurging, the government responds with subsequent lockdowns/circuit breakers and a vaccine is not distributed at sufficient scale and reach. This is most damaging to the economy and has very serious and continuing consequence for economic growth in Northern Ireland, particularly around tourism and trade. A gradual recovery is predicated on the basis that the virus becomes less prevalent, the potential for a vaccine raises consumer confidence but there is still uncertainty as to how that is managed. This is still likely to impose economic damage on the economy, again particularly tourism and trade, although to a lesser degree. In the upside scenario the vaccine becomes available quickly, consumers become more confident and there is a strong easing of restrictions allowing the economy to open up. This is likely to lead to a return to economic growth although at a slower rate. Tourism is still expected to be one of the last sectors to recover given the need for strong consumer and business confidence to allow for a full restoration of international travel.

[51] https://www.gov.uk/guidance/new-immigration-system-what-you-need-to-know

It is worth noting that most of the forecasts referenced over the next 5 years suggest that there will be a 'bounce back' of kinds in the 2021/2022 period which will be followed by a slower growth path from 2023 onwards as the economy begins to settle back down into a more 'normal' cycle. This slower international growth forecast will have obvious knock on effects for the Northern Ireland economy, particularly again around international trade and tourism. The outcome of an agreement, if any, reached with the EU and how the UK transitions out of the EU will obviously play a large part in how the UK, Northern Ireland and Irish economies recover going forward.

Table 7.6: Outline Scenarios and indicative impact on the economy

	Downside Scenario	Gradual Recovery	Upside Scenario
Conditions	• Virus resurgence • Continual lockdowns/circuit breakers impacting negatively on the economy • Failure to get vaccine out at speed and with significant reach	• Virus impact lessens with fewer lockdowns and less impact on the economy • Promise of vaccine raises consumer confidence gradually • Concerns remain around timing and access to vaccine	• Certainty that vaccine is available and accessible within a few months • Lockdowns/restrictions ease significantly • Consumer confidence is partially **restored**
Impacts			
- GDP	↓↓↓	?	↑↑
- Trade	↓↓↓↓	↓↓	↑
- Tourism	↓↓↓↓↓	↓↓	↓
- FDI	↓	?	↑↑
- In-Migration	↓↓	↓	↓
- GB travel to work	↑	↑	↑
- External students	↓↓	↓	↑

↓ = Contraction (number of arrows denotes scale of contraction/growth)
↑ = Growth
? = Uncertain

These scenarios provide the context for the future of external connectivity and the demand for travel. How these three scenarios could impact external domestic connectivity is addressed in Section 7.6. In the next section (Section 7.4) evidence from the consultation with businesses concerning their future position on business travel is presented. In Section 7.5 attention turns to sentiment concerning tourism and travel in the near term.

7.4 How COVID-19 has influenced business and consumer sentiment towards travel

COVID-19 Impacts on Business Travel

In Section 5 business travel patterns pre-COVID were outlined in the context of discussions with over 30 local businesses including some of the region's largest inward investors. In this section the impacts of COVID-19 on travel patterns on those consultees is set out in order to understand what difference the pandemic has and will make to business travel intentions going forward and what the key influencers in those decisions will be.

Business Travel Share of Turnover

To give a sense of scale of investment in business travel, consultees were asked about the share turnover that relates to business travel, how it has changed thus far in 2020 and expectations around business travel in 2021. Business travel share of turnover pre-COVID was relatively small among consultees, averaging around 1.9% (Table 7.7). However, to put that in context if this 1.9% is applied to the turnover of only the Manufacturing and Professional Services sectors in Northern Ireland this would amount to spend of around £341m[52].

The findings suggest that only a quarter of that spend will be incurred during 2020. Expectations are that business travel might reduce by one third in 2021, although this ranges from some companies that believe their spend on business travel will reduce to zero to some expecting it to expand next year.

Table 7.7: % Business Travel as a Share of Turnover

	2019	2020	2021
Business Travel Share of Turnover	1.9%	0.5%	1.3%

Source: NI Chamber of Commerce and Industry Business Consultation

Some of the largest firms found it challenging to answer this question as these costs are taken as part of their wider group costs. A few simply stated that they did not know what business travel spend would be in 2021 because of the extent of uncertainty that stills exists.

[52] Based on 2018 turnover figures from the Annual Business Inquiry

Case Study A – Large Construction Company

Background

- Construction Company
- Employing 340 people with an annual turnover of £340m
- Largely operating in Great Britain

Extent of Business Travel

- Spending £1m a year on flights largely to journey to development site locations but also for some staff travel
- Mostly use Belfast International Airport (90%) and also City of Derry (5%) and Dublin (5%) airport
- Destination airports include Gatwick, Luton, Stansted, Edinburgh, Leeds Bradford and Manchester

COVID-19 Impact on Travel

- Business travel spend has reduced by 40% in 2020
- During COVID-19 lockdown used Belfast to Cairnryan, Dublin to Holyhead and Belfast to Liverpool ports as had to find a way to get workers to site locations. This was not ideal because it took too long and the prices were too high
- However, expect this to settle when COVID-19 restrictions settle down but still expect to reduce business travel by 10%, particularly around some aspects of customer engagement and some professional services aspects of business that can be done remotely

Travel Restrictions Impact on Performance

- No major impact on business to date as they had to find a way around restrictions and manage it to deliver existing work
- Slight but growing frustration that there is a need to get back to work

Business Travel going forward

- Need to ensure that client-facing access is available from Northern Ireland. Client facing meetings are key to relationship building and **securing new business**
- Company would consider using Dublin airport more if flights not available here
- Or sending everyone to London and make plans from there but suboptimal
- Would also consider using local workers adjacent to GB sites if travel become an issue, although reticent as preference to use NI workers
- The company would also have concerns in terms of not being able to work as effectively with other parts of the business

Other Key Issues

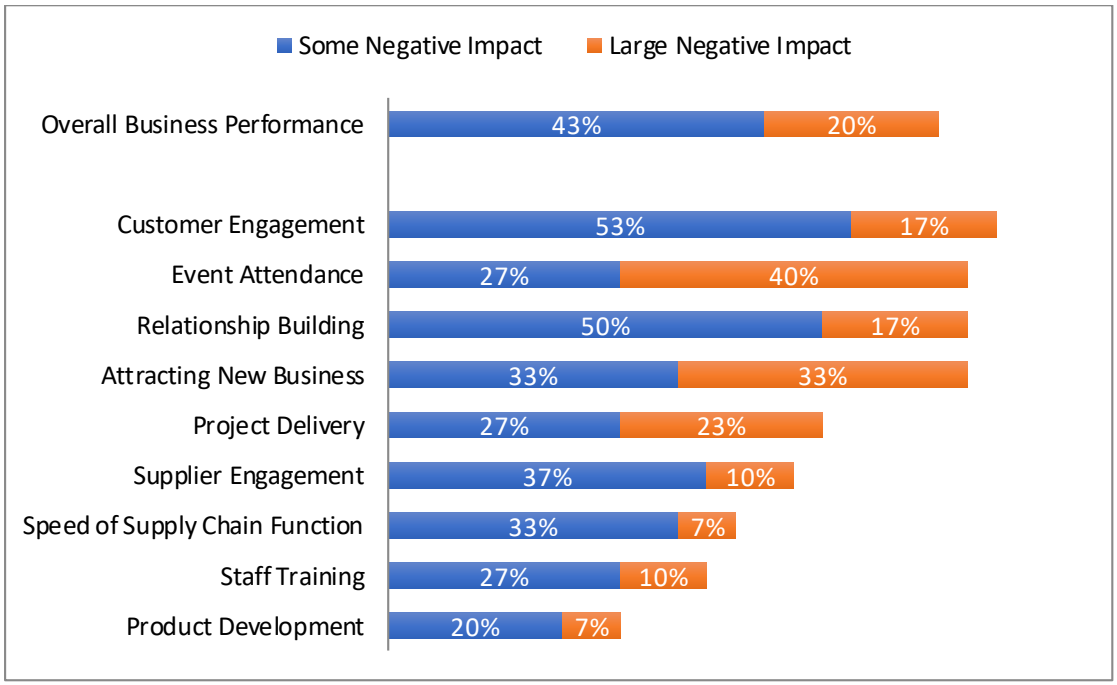
- Importance of UK regional flight connections e.g. no flights to Bristol and Glasgow. EasyJet flights/access is critical for the construction sector
- Flight numbers have been condensed making it harder to get workers to/from sites for adequate time e.g. 3pm flight back not feasible for site closure at 5pm. Also cost implications as flights more expensive. There needs to be an acceptable level of flights
- Parking costs at Belfast City Airport

Impact of travel restrictions on business performance

Travel restrictions have had some impact on the majority of businesses, although to different extents. Some 1 in 5 consultees state that the lack of business travel had had a large negative impact on their business performance. A further 43% state that it had some impact.

The main negative impacts among consultees focus largely on the whole business engagement piece including engaging with customers, attracting new business, and building relationships (Figure 7.1). There has also been a large negative impact in terms of event attendance. For 1 in 4 consultees the COVID travel restrictions have had large negative impacts on project delivery.

Figure 7.1: Extent of Negative impact from COVID-19 on aspects of business



Source: NI Chamber of Commerce and Industry Business Consultation

Some comments on the implications of restrictions on business travel include both negative and positive commentary including …

On the negative side …..

'In process of building new dealer networks but not able to get dealer to buy stock if don't meet face to face. This has negatively impacted on doing business'

'In EU/US this is more manageable, whereas in Asia face-to-face & relationship building is more important (and harder to do via Teams, for example)'

'We have decided not to attend trade conferences for the next 2-3 years'

'Unable to meet new customers'

'Loss of momentum on deals'

'Loss of face to face interaction and slowdown in transactions '

'As a public sector organisation we rely on international travel to increase Northern Ireland exports through trade fairs and also to meet with potential new foreign direct investors'

'Limitations due to inability to visit Asian suppliers'

'With the lack of travel, alternative arrangements have been sought e.g. employees are staying away longer and therefore not travelling as frequently'

'Visit to USA cancelled: impact on growth'

'People stay in the markets that we serve longer'

On the plus side ….

'No significant impact as we can work fully virtually'

'Made us aware that a lot of travel is unnecessary'

'None really, we now use zoom effectively for meetings'

Impact of travel restrictions on business travel patterns

The evidence suggests a more negative effect on business travel going forward. Around 50% of consultees believe they would engage in less business travel in the future while 27% said that they wouldn't reduce business travel. Around 37% believe that it is very likely that they will reduce business travel to Great Britain going forward and 33% believe it very likely that they will reduce international business travel (Figure 7.2).

These findings reveal very mixed views among consultees about the impact of the virus on business travel patterns going forward. Those that need to get to destinations where they are involved in, for example, construction or manufacturing saw a largely full return to business travel, nationally and internationally. The one proviso related to some aspects of services within those companies that have been proven to work effectively remotely because of the pandemic or at least involve less frequent travel.

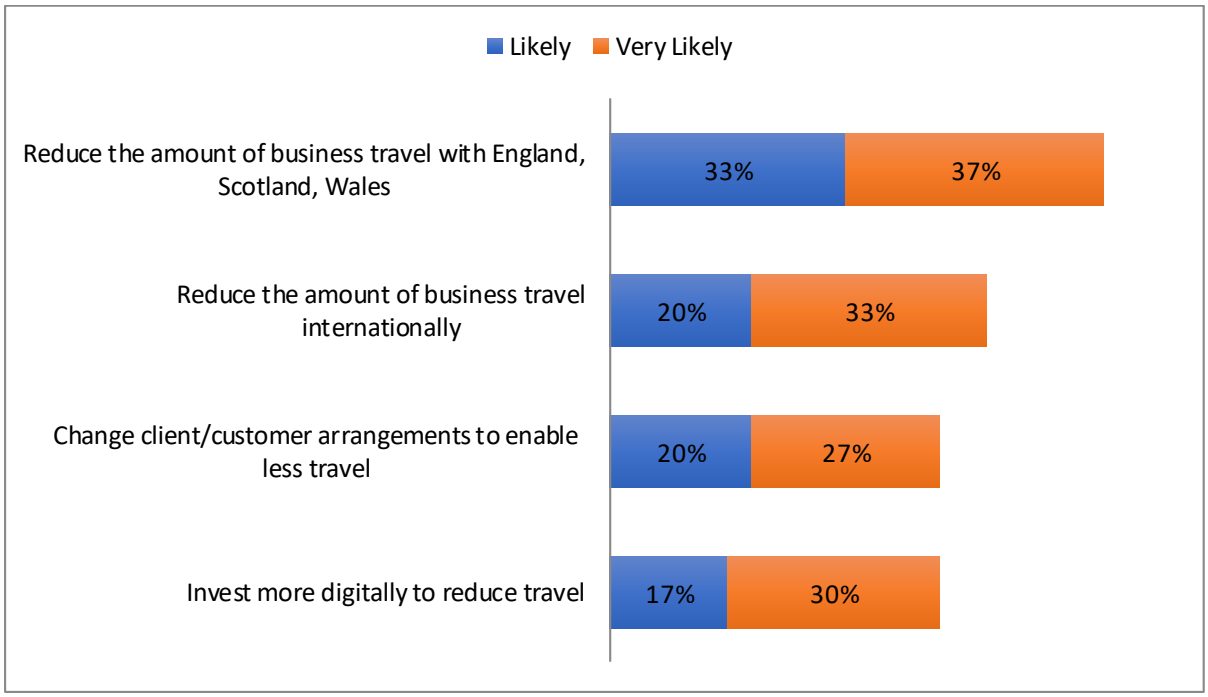
On the other end of the spectrum are those businesses that have found remote working has worked largely well since the crisis emerged and has had little impact on productivity within the business. These are more likely to be professional services type businesses that don't have the same requirement to be 'on site'. These businesses are also more likely to cite the positive implications of lower travel on their carbon footprint and the fact that the company was already reviewing travel policy in this context pre COVID.

'In the short term it won't affect business but in the long term it would. At the moment customers understand so there is an accommodation. However, over time need to be our visiting customers'. (Large NI Manufacturer)

The main consideration in terms of future business travel is a concern around the potential to secure new business going forward. This is viewed as being of critical importance, even among those who believe that they can engage in less business travel in the short term. The longer-term negative impact of business travel restrictions on securing new business is acute.

Fewer thought they would invest more digitally to reduce travel, largely because a number of employees had already invested in digital technology that has worked well during the pandemic.

Figure 7.2: Likelihood of reducing business travel



Source: NI Chamber of Commerce and Industry Business Consultation

The greatest concerns going forward focused around not having face-to-face contact with customers/clients, the limitations posed by quarantine measures in place, the availability and cost of travel services and not being able to attend trade shows/events. For those with headquarters or operations in other parts of the UK/Internationally there is a concern around not being able to work as effectively with other parts of the business.

Case Study B - Business Travel Specialist

Background

- Business Travel Specialist Company
- Employing 25 people with an annual turnover of between £5m and £10m
- Servicing many large local businesses
- Service includes a 'booking tool' for companies to control and monitor business travel

Travel Patterns Pre-COVID

- Their main connections pre-COVID were London (Heathrow/London City), Manchester, Birmingham, Glasgow and East Midlands nationally and the United States, UAE/Dubai, India, China and increasingly South America

COVID-19 Impact on Business Travel

- Business travel stopped overnight
- Although there was some increased activity through Belfast and Dublin Ports as people thought the ferry was safer
- Some pick-up in activity since May, largely in Construction, but extremely patchy
- The TV film business also picked up
- But Manufacturers are not travelling as much and Fintech/IT have taken a 'minimal travel' view but were significant travellers pre-COVID
- Pharma has also been quiet in terms of travel
- Challenge in getting business travellers on exemption list e.g. discussions with the European Commission
- Extensive lobbying with business bodies and a larger group of travel management companies

Travel Restrictions Impact on Performance

- The business went into negative trading as had to make refunds for existing bookings
- The furlough scheme has been critical in business survival

Business travel going forward

- Definite implications for reduced business travel. Some business travel is now considered unnecessary – 'permissible travel' has become a more common phrase, particularly for professional services
- Potential for roles to be filled 'in country' if accessibility becomes a concern

Other Key Issues

- APD is a critical concern. It needs to be the same in order to allow Northern Ireland to compete, particularly with the Republic of Ireland and a more competitive airport in Dublin. There does appear to be some traction with this and it has been brought back to the House of Commons
- Economies of scale from having one airport in NI?
- Testing has to be better. This is a key component of confidence to travel
- Consider All Island implications of business travel

Evidence from a local Business Travel Company

The research team were able to source information from one business travel company who participated in the consultation process. This company provides business travel services to many of Northern Ireland's largest companies. The findings of the impact of COVID-19 are stark. Transaction numbers over the year to September 2020 are down 61% year on year, from 23,127 to 8,995 (Table 7.8). The number of destinations travelled to fell by 18% from 490 to 403.

Table 7.8: Business Travel Transactions – Year to September 2019 & 2020

	Year to September 2019	Year to September 2020	% Change
Number of Transactions	23,127	8,995	-61%
Destinations	490	403	-18%

Source: NI Chamber of Commerce and Industry Business Consultation

Business travel transactions across the largest UK routes fell by around 60% to 70% in the 10 months to September 2020 compared to the same period in 2019. Transactions out of Dublin airport fell by a lower number, down 50%. The largest contractions in travel to the United States was to JFK in New York, down 78% over the period. The smallest contraction in travel was to Paris, down 28% albeit from a much smaller base.

Latest monthly changes in destinations are even more pronounced. When July and August transactions are reviewed, for example, the number of transactions is down by around 80% in each month compared to the same month last year and destinations reduced by around 75% compared to the same month last year (Table 7.9).

Table 7.9: Business Travel Transaction – August/September 2019/2020

	August 2019	August 2020	% Change
Number of Transactions	1,936	390	-80%
Destinations	193	55	-72%
	September 2019	September 2020	% Change
Number of Transactions	2,782	584	-79%
Destinations	227	56	-75%

Source: NI Chamber of Commerce and Industry Business Consultation

Transactions were up between August and September 2020 but the number of destinations accessed was largely unchanged.

Bookings in August/September 2020 were predominantly domestic with the majority of flights flying out of Belfast to the UK (largely London) reflecting the flight restrictions in place. Monthly transactions were largely in single digit numbers for most destinations. One of the big impacts has been the United States ban with little to no flights to Boston, Chicago, New York which would be busy destinations for business clients. The smallest contraction in transactions through Belfast International where transactions fell by just 16% in August 2020 compared to the same month in 2019.

Table 7.10: Business Travel Transactions – Comparing 9 months to September 2020 to same period 2019

Top 20 Destinations 2019	2019	2020	% Change 2019/20
Belfast	5,605	2,185	-61%
London	4,168	1,499	-64%
East Midlands	1,232	317	-74%
Dublin	1,034	514	-50%
Birmingham	657	269	-59%
Manchester	568	179	-68%
Boston	513	213	-58%
Chicago	427	148	-65%
New York John F Kennedy	274	59	-78%
New York Newark Liberty	262	90	-66%
Leeds	257	97	-62%
Amsterdam	222	101	-55%
Paris	187	134	-28%
Philadelphia	182	59	-68%
Edinburgh	182	65	-64%
Munich	179	31	-83%
Liverpool	176	90	-49%
Atlanta	132	66	-50%
Singapore	129	38	-71%
Dallas Fort Worth	127	75	-41%

Insights from a Global Travel Perspective

A Business Travel Association (GBTA) poll (October 2020) into current and future business travel during the on-going COVID-19 pandemic suggests that:

- 3 in 4 (76%) respondents believe that **rapid testing prior to departure**, and waiving quarantining requirements for those who test negative, to be the best way to open up international travel.

- **63%** of European GBTA members and 43% globally, cite government travel restrictions and policies, such as quarantine and entry restrictions, as the greatest barrier to travel, 32% cite company policy as the next barrier to travel, with employee unwillingness/ reluctance to travel (9%) and company cost savings (6%) issues to a much lesser extent.

- Despite the rapid growth and necessity for virtual meetings, **82%** of respondents still feel face-to-face meetings are 'more' or 'much more' effective. Fewer feel virtual meetings are equally effective (14%) and just 2% see virtual meetings as more effective.

- Almost all GBTA members (94%) flew for business prior to March 2020, before the start of the pandemic, but just 6% have flown since.

- The current short-term forecast for travel remains unchanged with 90% of GBTA member companies still not open to International travel and 68% domestically, as companies continue to cancel and / or suspend almost all business travel regardless of destination.

Observations and Policy Suggestions from the Business Community

'We need a coherent message from both NI Executive major parties that UK and Irish air ports and Sea ports are essential to our business' (Business Consultee)

Business travel has been severely disrupted by the COVID-19 pandemic and the lock downs imposed across the world. This research involving detailed consultation with over 30 NI Chamber of Commerce and Industry members suggests that only a quarter of business travel spend will be incurred in 2020 compared to the same period last year and for many businesses travel spend has been effectively reduced to zero. Expectations are that business travel might reduce by one third in 2021 although this ranges from some companies that believe their spend on business travel will reduce to zero to some expecting it to expand next year on the basis that some recovery might take place.

Three in 5 consultees have been negatively impacted by the inability to travel for business and for 1 in 5 that negative impact has been significant. Those negative impacts were focused largely on the whole business engagement piece including engaging with customers, attracting new business and building relationships. For 1 in 4 the travel restrictions had negatively impacted on project delivery.

There were very mixed views among consultees about the impact of the virus on business travel patterns going forward but ultimately the findings suggest that COVID restrictions have led to a changing mindset among some firms that they can work as productively with less business travel. Around 50% of consultees believed they would engage in less business travel going forward while 27% said that they could not because of the nature of the work they do. Those that needed to get to destinations where they are involved in, for example, construction or manufacturing saw a largely full return to business travel, nationally and internationally. The one proviso relates to some aspects of services within those companies that could be done remotely or at least involve less frequent travel. On the other end of the spectrum are those businesses that have found remote working has worked largely well since the crisis emerged and has had little impact on productivity within the business. These are more likely to be professional services type businesses that don't have the same requirement to be 'on site'. In the case of one of the largest consultees, a financial services company, business has grown during COVID without any face-to-face contact with new clients. These businesses are also more likely to cite the positive implications of lower travel on their carbon footprint and the fact that the company was already reviewing travel policy in this context pre COVID.

The main consideration in terms of future business travel is a concern around the potential to secure new business going forward. This is viewed as being of critical importance, even among those who believe that they can engage in less business travel in the short term. The longer-term negative impact of business travel restrictions on securing new business is acute.

Some policy suggestions by consultees around business travel considerations going forward include:

- Providing clarity on restrictions to allow business planning.
- Convincing people it is safe to travel.
- Removal of flight taxes.
- Making flight timings work for business – convenience of schedule is critical to business.

- Subsidising main business travel routes to ensure connectivity.
- Introducing greater connectivity through Belfast City to Europe (e.g. direct link to Paris, Frankfurt).
- Revive the old model of business travel at a higher price but ensuring few people on flights.
- Highlighting the need to maintain sea as well as air routes.
- Review of short haul APD.

These suggestions have informed policy proposals later on in this section and in section 8.

7.5 COVID-19 Impacts on Consumer Sentiment around Travel and Tourism

A number of Tourism bodies located in the UK and Republic of Ireland have undertaken consumer sentiment studies in recent months to gauge their views on the pandemic and its impact on their attitudes and behaviour to travel. Sources include TourismNI[53], Tourism Ireland[54] along with VisitBritain[55].

The main findings suggest that most people believe the worst is still to come in terms of the pandemic with only 20% or less believing that the worst has passed (although this sentiment pre-dates the recent news on the vaccine trials). The pandemic is making people anxious and most are particularly stressed about holidaying abroad and being in enclosed spaces including bus tours and indoor attractions. Confidence is low to travel within the island of Ireland (39%, confidence to travel in Ireland, RoI 37%). The trajectory for any recovery in confidence increases from April 2021 onwards when around three-quarters of respondents believe it will be safe to travel inside Ireland (although the survey was undertaken in September before the new restrictions were introduced). The UK consumer tracker undertaken in October suggest that the majority of the U.K. adult population (61%) don't believe life will 'return to normal' before July next year and for 22% it will be 2022 or later while 6% believe it will never return to normal. Confidence in the ability to take an overnight trip in the UK is at just 20% in October 2020. That rises to 71% from October 2021 onwards. The evidence suggests that it could take at least a year for the majority of consumers to feel confident to travel and with that largely within their own jurisdiction. Tourism Ireland evidence suggests that people are making travel decisions on the ability to self-repatriate quickly and ease of changing plans. This is reflected in the fact that cross-border travel by car is a relatively comfortable travel option for holidaymakers based in mainland Europe.

[53] TourismNI (2020) Consumer Sentiment Survey September 2020 available online at https://covid19.tourismni.com/support-centre/business-support-advice/insights-and-intelligence/consumer-sentiment-survey-ni-market---september-2020/

[54] TourismIreland (2020) COVID-19 research available online at https://www.tourismireland.com/Research/COVID-19-Research

[55] VisitBritain (2020) Covid-19 Consumer Sentiment Tracker available online at https://www.visitbritain.org/covid-19-consumer-sentiment-tracker

Northern Ireland has been particularly badly impacted in terms of willingness to travel, most notably in the GB market which is one of its most important tourism markets. The VisitBritain research (October 2020) suggests that Northern Ireland is least likely to receive visitors from the rest of the UK. Only 1% of GB residents are planning to visit Northern Ireland for their next UK overnight trip in early winter rising to 4% for late winter trips. This preceded the latest set of restrictions introduced in England in November 2020. The findings from each of the surveys are as follows.

Northern Ireland Consumer Sentiment

Tourism NI has undertaken research to understand the influence of consumer sentiment on travel behaviours/patterns brought about by the pandemic. Its September 2020 Consumer Sentiment market reports for NI and the RoI reveals the following key findings:

- 56% of people believe the worst is yet to come in terms of COVID impact, particularly among young/mid families and working class people. Only 14% believe the worst has passed
- 36% suffer from frequent/severe anxiety over the virus, mainly through concerns that they/family/friends might contract it, particularly older people
- In September 65% of respondents were concerned about a second wave
- Stress levels are highest around participating in indoor activities including Bus tours, being in pubs/bars, holidaying abroad, participating in indoor attractions and outdoor festivals along with being on public transport. People are more comfortable with outdoor activities
- Only 39% were confident about being able to holiday on the island of Ireland in September. Confidence in travelling inside Ireland rises to 77% from April 2021 onwards.
- Two thirds (66%) have had travel plans on the island or abroad affected by COVID. Travel plans abroad have been most impacted (44% affected)
- Overnight stays in Northern Ireland are limited with competition with the Republic of Ireland a significant challenge.
- Longer stay holiday makers within NI are reluctant to make plans

UK Consumer Sentiment

The VisitBritain COVID-19 consumer tracker (Wave 17 October 2020) suggests that:

- 66% of the adult population feel 'the worst is still to come' in relation to COVID-19. Only 8% believe the worst has passed
- The majority of the U.K. adult population (61%) don't believe life will 'return to normal' before July next year. Only 19% of Wave 17 respondents expect some sort of 'normality' by March next year. 22% believe it will be 2022 or later and 6% never
- 15% of U.K. adults claim to have been on a U.K. overnight trip since September; three times as high as the proportion that took an overseas trip in this period. Only 2% took a trip to Northern Ireland
- 33% intend to take the same or more U.K. short breaks compared to normal between now and the end of the year. 49% feel they are likely to take fewer overnight domestic trips and around 1 in 5 remain unsure.
- 24% of U.K. adults intend to take more or about the same number of overseas short breaks (1-3 nights) and longer breaks (4+ nights) by the end of the year compared to normal. Just over half the UK adult population anticipate taking fewer overseas trips between now and the end of the year compared to normal.
- Confidence in the ability to take an overnight trip in the UK is at 20% in October. That rises to 71% from October 2021 onwards
- 'Restrictions on travel from government', by a significant margin, the leading reason that U.K. adults do not feel confident about taking an overnight trip in either early or late winter. Concerns about catching COVID-19 is the second most cited reason
- Northern Ireland is least likely to receive visitors from the rest of the UK. Only 1% were planning to visit Northern Ireland for their next UK overnight trip in early winter rising to 4% for late winter trips

Republic of Ireland Consumer Sentiment

- The outlook is less negative in the RoI with 43% believing the worst is yet to come and 20% believing the worst has passed
- 40% suffer from frequent/severe anxiety over the virus, mainly through concerns that they/family/friends might contract it. This is more prevalent among older generations. Uncertainty and money worries are more prevalent among younger groups
- People are particularly nervous about holidays abroad and as with Northern Ireland, concerns are highest around being inside including bus tours, indoor attractions and public transport
- Only 37% were confident about being able to holiday on the island of Ireland in September. Confidence in travelling inside Ireland rises to 75% from April 2021 onwards.
- 64% had plans to take a holiday pre COVID, 23% in NI, 33% in the RoI and 43% abroad
- 18% had taken some form of holiday in NI since July compared to 60% in the RoI

International Consumer Sentiment

COVID-19 research from Tourism Ireland survey was undertaken in Great Britain, Germany, France and USA (where 1,000 outbound holidaymakers were surveyed) and Spain, Italy, The Netherlands, Switzerland, Denmark, Canada and Australia (where 500 outbound holidaymakers were surveyed). Fieldwork was conducted 8th – 20th September. The findings suggest that:

- The COVID-19 situation around the world had deteriorated since the July research wave
- Comfort with taking short breaks or holidays in Europe remained significantly depressed due to COVID-19 and in some markets comfort levels had reduced since the July research wave
- Holidaymakers in the United States were particularly bullish in their response to the survey, although even there, the proportion comfortable to holiday in Europe in the next three months remained just below half
- Ireland and Northern Ireland have retained a good competitive position as a destination that holidaymakers were comfortable visiting in the future during social distancing. Almost three in ten outbound holidaymakers across all markets were comfortable taking a short break in Northern Ireland while social distancing is in place
- Summer 2020 provided an opportunity for most holidaymakers to get away; however in the majority of cases this was a domestic trip. Only 14% of holidaymakers across Europe took a break in another European country. This did vary with those well positioned to drive to neighbouring countries seeing the greatest intra-Europe holiday taking. Great Britain is notable for the lack of holidays taken both domestically and within Europe
- The ability to self-repatriate and ease of changing plans resulted in cross-border travel by car providing a relatively comfortable travel option for holidaymakers based in mainland Europe
- The fundamental desire for travel remains, with almost all respondents expecting to get away in the next two years and about three-quarters expecting to take a European break by the end of 2021

The results of these various 'sentiment surveys' are broadly consistent with the findings presented in Section 7.7 below.

7.6 Connectivity Challenges for Northern Ireland posed by the COVID-19 Pandemic

To understand how the three foregoing economic scenarios could impact external domestic connectivity in the short to medium term it is useful to revisit the insights offered in section 4 above regarding the audit of external connectivity. Section 7.6 therefore provides a synthesis of the findings from the audit of external connectivity (Section 4) together with key findings from Section 6. In Section 7.7 the behavioural impacts of the first wave of the COVID-19 Pandemic are also revisited as well as the expectations of people resident in Northern Ireland and Great Britain concerning the outlook for the

course of the Pandemic and their stated intentions about future longer distance travel. The implications for their propensity to travel by air under a range of conditions are also addressed.

The audit of external connectivity reported in Section 4, demonstrates that overall the air connectivity of Northern Ireland has, in recent years, trailed behind many of its peers, including that enjoyed by the Republic of Ireland. Nevertheless, the audit has highlighted the positive, albeit relatively modest improving performance in relation to overall air connectivity enjoyed by Belfast's two airports taken together over the 20-year period 1999 – 2019.

On a basic indicator of routes, Belfast performed sixth in 2019 across a sample of 9 regional airports. Dublin, Manchester and Edinburgh all massively expanded their reach during that period seemingly leaving Leeds Bradford, Glasgow and Belfast in their respective shadows. In the case of Manchester and Dublin their overall networks offer direct connections to more than twice as many destinations as Leeds Bradford and Belfast. Business connectivity had somewhat surprisingly stayed the same or declined over the twenty-year period at most of the cities in the sample. On an indicator focusing on the needs of business, while Belfast's reach by direct flights declined marginally during the same period it performed significantly better than Newcastle, Leeds Bradford, Bristol and Cardiff. Arguably this reflects improvements to mainline rail facilities serving the catchment areas of Newcastle, Leeds Bradford, Bristol and Cardiff during the last two decades.

Finally, in relation to Hub Connectivity, reflecting links with the rest of the world, Belfast's connectivity fell by 60% in the wake of the September 11th attacks in New York falling to fifth and similar to Leeds Bradford. Conversely Dublin's hub frequencies increased by 126% with all other airports exhibiting modest falls. After considering the scale of the hub and service frequencies to the hub having declined by 66% between 1999 and 2007, Belfast's performance improved by 123% between 2007 and 2019. This rate of improvement exceeds significantly that of Leeds-Bradford and Cardiff which found themselves in similar positions to Belfast in 2007 and Bristol that declined by 35% between 2007 and 2019. Nevertheless, Belfast has weak global connectivity. Dublin has powered ahead while Edinburgh, Manchester and Newcastle have also held their ground. Glasgow and Leeds/Bradford are the other airports suffering from being overshadowed by their larger neighbours in the same way that Belfast is by Dublin. It is more efficient for airlines to serve only one airport in a region than multiple ones.

In relation to connectivity by sea in recent years the network of ferries across the Irish Sea has experienced considerable consolidation in the Northern Corridor. The network in the Northern Corridor and the Irish Sea's Diagonal Corridor has exhibited considerable resilience in the face of the Pandemic and UK Lockdown since the summer of 2020.

The first half of 2020 however, witnessed a dramatic decline in Northern Ireland's connectivity by air with threats to connectivity by sea. This reflects the collapse of the airline Flybe and the drastic reductions and cuts in air services with the onset of the Coronavirus Pandemic and the restrictions, regulations and guidance under the first UK lockdown imposed on society. Much of the business connectivity was provided by Flybe, leading to concerns as to how essential business links would be maintained if these routes are taken over by LCCs with timings and frequency unsuited to the needs of business, or dropped altogether. Latterly and especially from late summer 2020 some smaller regional carriers did step in with small aircraft but it remains to be seen whether this is commercially sustainable where LCCs also have a service in the vicinity.

These effects are highlighted by the loss of routes from Belfast City Airport to Birmingham, London City, Manchester and Leeds Bradford all together and the reduction of passenger numbers on the Heathrow route by more than 95% in April 2020 compared to April 2019. Apart from the City of Derry to Stansted route this is the only route continuing to operate throughout the lockdown period. Since the low point of April 2019, it had managed to recover to around 40% of its normal carryings by August 2020 compared to August 2019. Belfast City Airport's only international flight to Amsterdam was also suspended. For a period of up to four months the majority of routes did not operate. As of October 2020, a number of these services and a limited number of others had been re-established, albeit with lower capacity in many instances. At Belfast International Airport all scheduled passenger services had ceased operation by late March 2020, a situation that continued through to June 2020. A number of these ultimately resumed operation in mid-June 2020 with the Birmingham route recovering 79% of the previous August, Gatwick 58% and Manchester to 40% by late summer.

In summary, for a period of up to three months the vast majority of domestic routes did not operate. Northern Ireland's external connectivity was reduced to two to three flights per day between Belfast City and London Heathrow and City of Derry to Stansted. No air connections were available to Scotland and the regions of England and Wales for at least three months. The only alternative during that period for travel between Northern Ireland and these regions was by travelling to London and then taking onward transport or by ferry to Scotland or Liverpool imposing an additional 3 to 9 hours on overall journey times covering the majority of cases. This loss of domestic regional connectivity has been demonstrated in the previous section in the massive drop in travel demand for regional air routes, by up to 100% and the increasing share of reduced levels of overall ferry travel across the Irish Sea for business purposes.

In effect the ferries to/from Belfast and Larne plus the two remaining operational air routes performed the role of lifeline services between Northern Ireland and Great Britain. This is in marked contrast to the other regions of the UK located within Great Britain that continued to be linked together by a largely full operational mainline rail system funded in England by an additional Pandemic subsidy of in the region of £500 million per month from the UK Government. Similar arrangements are applied by the devolved administrations in Scotland and Wales.

The implications for the Northern Ireland economy of this significant loss of external connectivity, and in particular domestic connectivity for at least an economic quarter, is likely to have significant implications for business confidence, including the tourism and hospitality sectors, at least for the short to medium terms. This is reinforced by recent decisions by the UK's principal low-cost carrier to cease most operations to/from Belfast in the wake of the announcement by the UK Government of a second lockdown on 31st October. The Irish News reported on 07 November 2020 EasyJet had suspended flights between Belfast International and five key airports in Britain for the month of November. Flights from Belfast International Airport to London Stansted, London Luton, Manchester, Edinburgh and Newcastle for November were no longer available until December 2020.

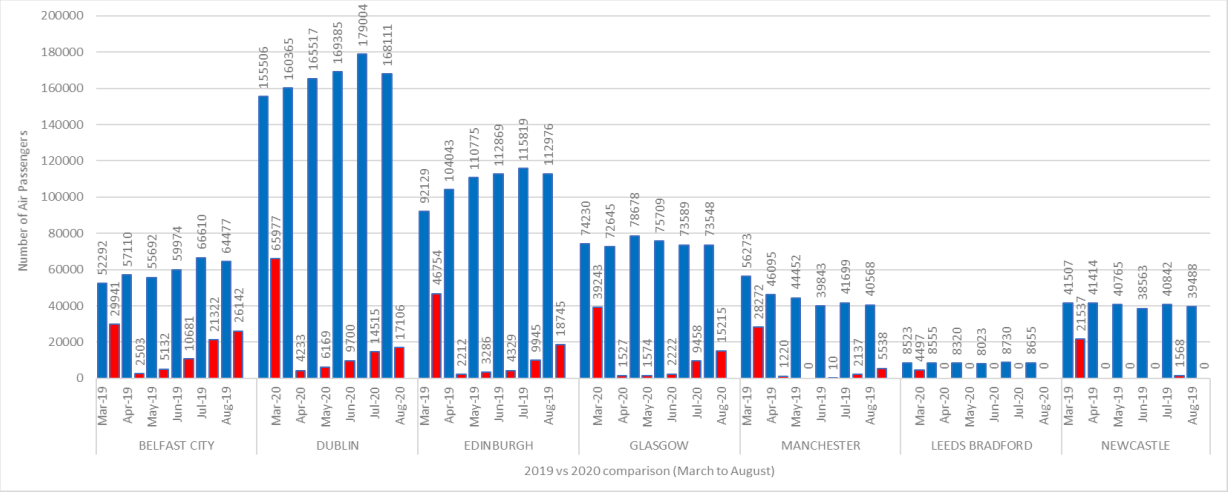
The importance of these links is demonstrated by the rate of recovery in demand exhibited by routes to/from Northern Ireland to key destinations in Great Britain compared to the rate experienced on domestic routes operating entirely within Great Britain.

Figures 7.3-7.6 highlight how in the case of London Heathrow, Gatwick, Stansted and London City routes serving Belfast's two airports had recovered significantly greater proportions of their normal market

than Glasgow, Edinburgh or Manchester. In all cases the Belfast routes carried more passengers than the latter, even if in normal conditions the Belfast routes typically carried fewer passengers. This highlights not only the importance of air travel for Northern Ireland but the significance of the Irish Sea and the time penalties it imposes on surface travel in 'promoting' flying where rail or fast road links are not available.

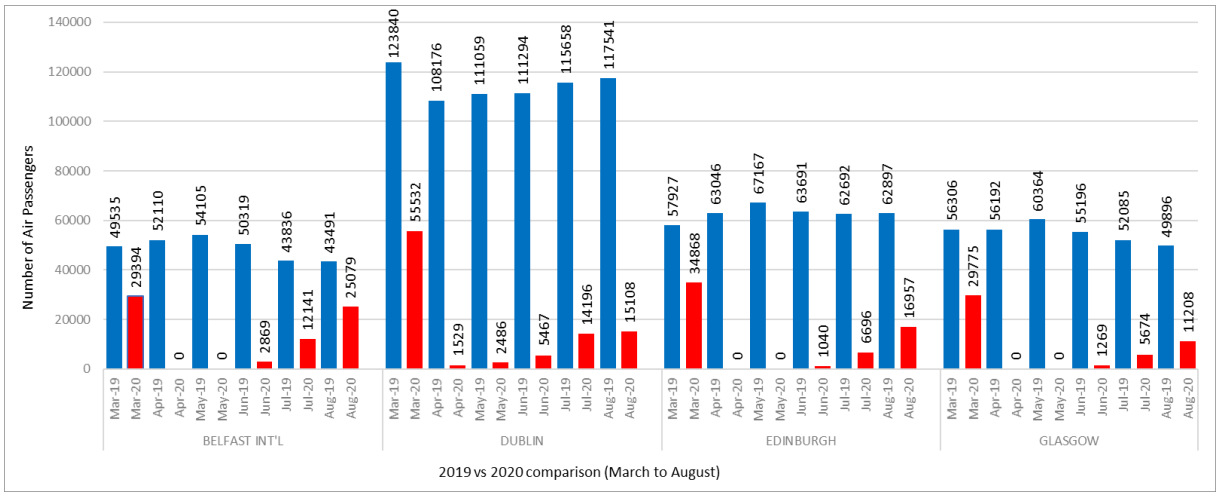
It is also worth pointing out that in almost all cases demand for air travel from Dublin to destinations in Great Britain exceeded that for Belfast under normal conditions and in many cases significantly more. For instance, in the case of services to Heathrow the ratio of passenger numbers was 3:1 in the case of Dublin - Heathrow versus Belfast - Heathrow. By mid-summer air travel on the Dublin route had recovered to 10% of its pre COVID-19 level compared to Belfast at 40%. This illustrates graphically the significance of government messaging in suppressing air travel, in this case the Irish Government's requirement of travellers from Great Britain being required to quarantine for 14 days notwithstanding the existence of the Common Travel Area.

Figure 7.3 – Number of Air Passengers to and from Heathrow for selected UK/RoI Airports (March to August 2019 vs 2020)



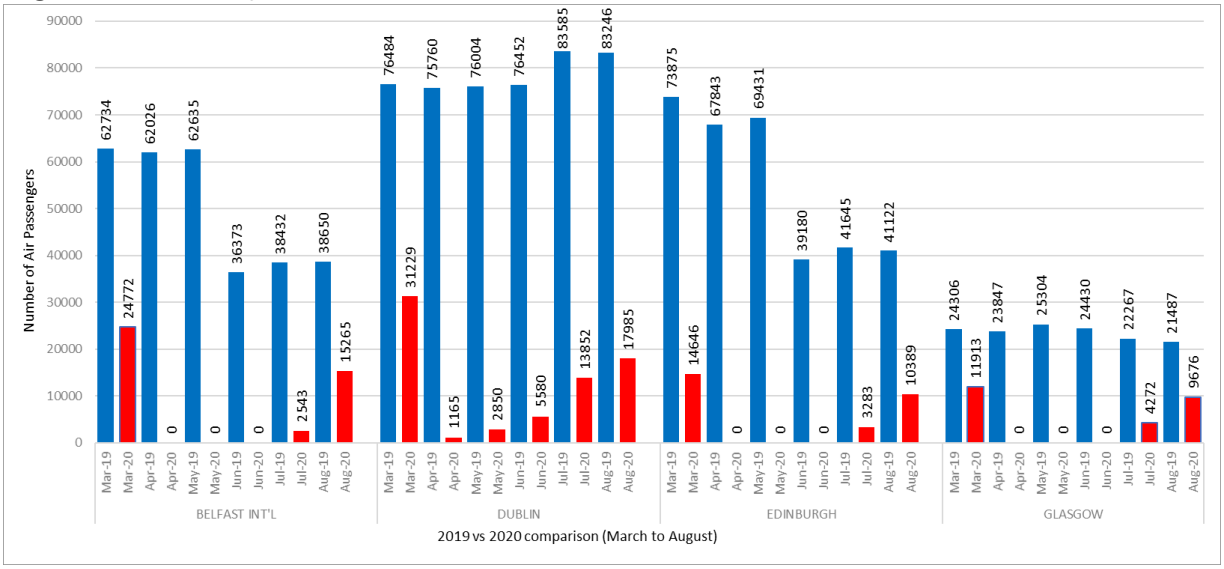
Source: TAA/CAA

Figure 7.4 – Number of Air Passengers to and from Gatwick for selected UK/RoI Airports (March to August 2019 vs 2020)



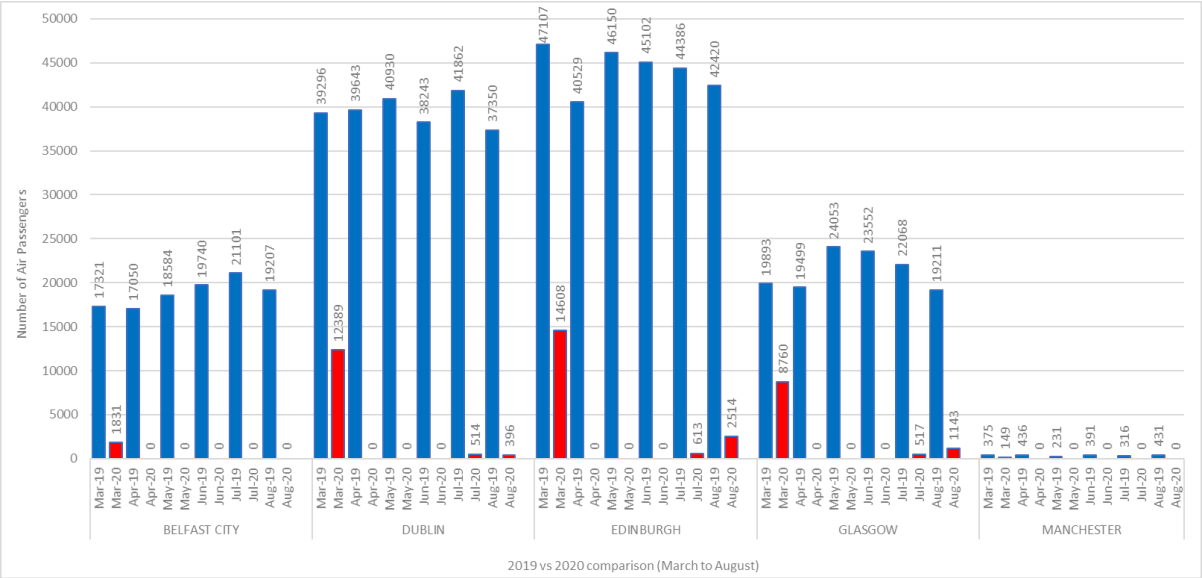
Source: TAA/CAA

Figure 7.5 – Number of Air Passengers to and from Stansted for selected UK/RoI Airports (March to August 2019 vs 2020)



Source: TAA/CAA

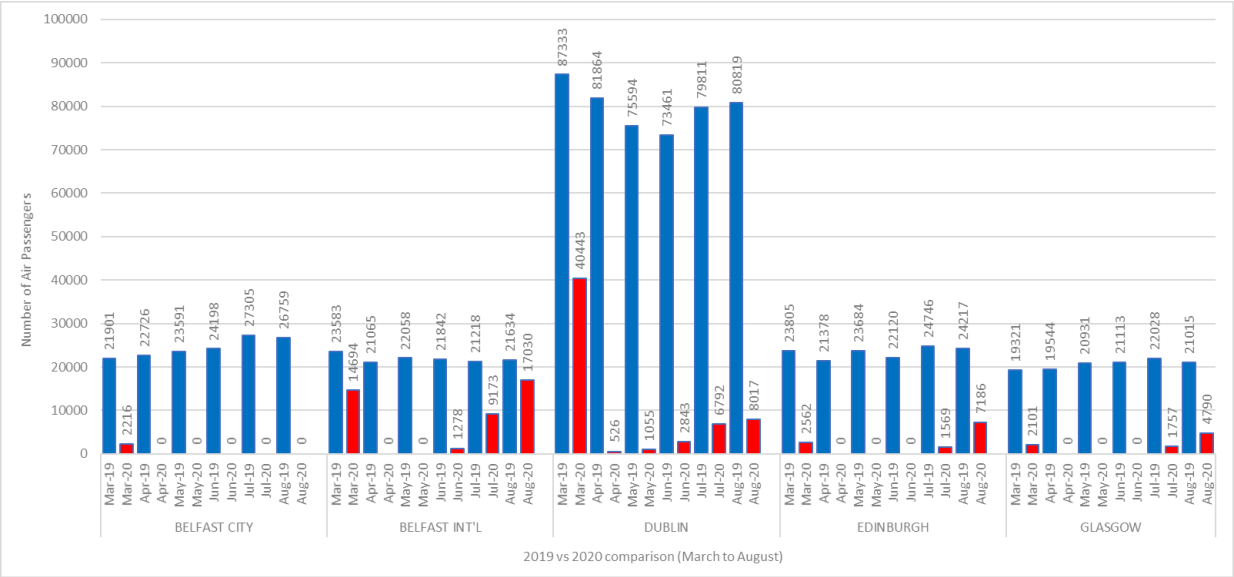
Figure 7.6 Number of Air Passengers to and from Stansted for selected UK/RoI Airports (March to August 2019 vs 2020)



Source: TAA/CAA

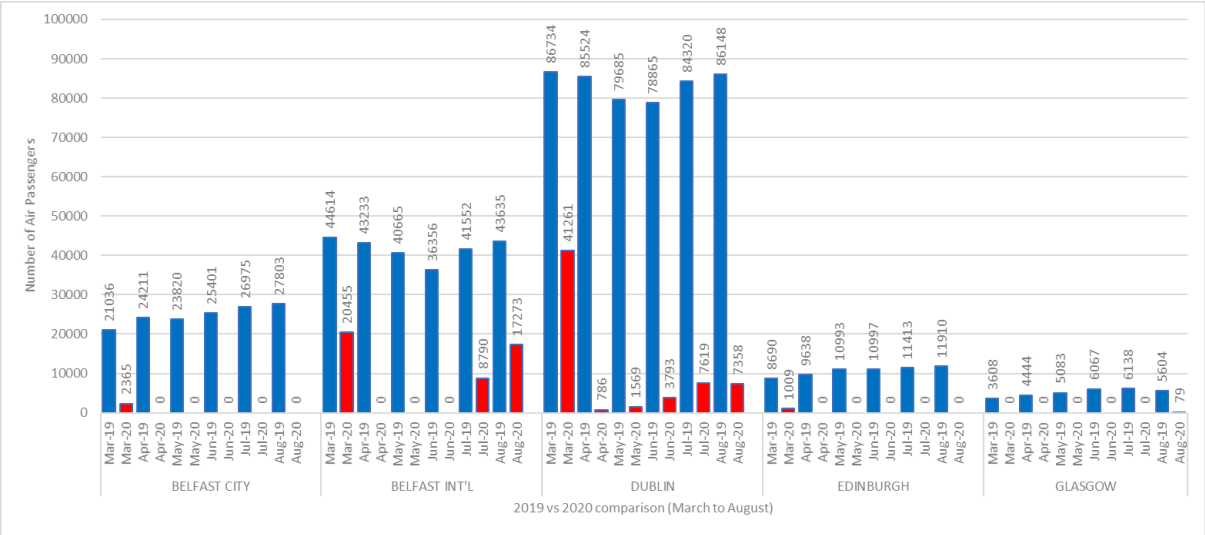
Similarly, in the case of demand for travel between Manchester and Birmingham and Belfast, the Belfast International Airport route had recovered and increased to a level greater than for any other airport in Great Britain (Figures 7.7 and 7.8).

Figure 7.7 Number of Air Passengers to and from Birmingham for selected UK/RoI Airports (March to August 2019 vs 2020)



Source: TAA/CAA

Figure 7.8 Number of Air Passengers to and from Manchester for selected UK/RoI Airports (March to August 2019 vs 2020)



Source: TAA/CAA

On 31st October 2020 the UK Government announced a second lockdown for England from 5th November. As early as the 2nd November significant cuts to services linking Belfast and Heathrow were already evident. Significant further cuts in services by LCCs and to regional centres in England in particular will also become evident before mid-November.

The prospects of repeated periodic lockdowns under two of the Scenarios set out above and perhaps another two lockdowns either in Northern Ireland or in Great Britain under the most optimistic scenario raises great uncertainty about the sustainably of domestic air services to/from Northern Ireland over the next two to five years. In this section (Section 7), given the importance of these links to the Northern Ireland economy, we outline a framework and suite of potential tools to ensure accessibility to the regions of Great Britain to meet the needs of business both directly and via their customer base and how it is sustained during a period of unprecedented uncertainty and financial challenge for service providers.

7.7 The COVID-19 Pandemic, Expectations about Future Longer Distance Travel and Travel to/from Northern Ireland

Expectations about future propensity to undertake longer distance travel are likely to reflect what course people think the COVID-19 Pandemic will follow in the coming months and years. The evidence available to this study indicates that in late summer only 16% of people resident in Northern Ireland thought the worst had passed while 46% anticipated the worst was yet to come (Table 7.11). The views of people in Northern Ireland were marginally more pessimistic than those in Great Britain as a whole while residents of London were significantly more optimistic than people here. The values for this indicator were broadly consistent with a more detailed assessment of when things were expected to 'return to normal'. 72 % of residents of Northern Ireland anticipated it would be at least late 2021 before things returned to 'something close to normal' while 9% thought this would never happen. These figures were broadly consistent with those for Great Britain although a greater proportion of residents in

London anticipated an earlier return to normality with fewer pessimistic about the very long-term outcome. Fewer Scots (4%) also reported they anticipated no 'return to normality' could be expected.

Table 7.11 Regarding the situation of Coronavirus in the UK and the way it's going to change in the coming month, which if the following best describes your opinion?

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
The worst has passed	16%	18%	10%	27%	16%	18%
Things are going to stay the	38%	44%	48%	49%	50%	41%
The worst is still to come	46%	38%	42%	24%	34%	41%

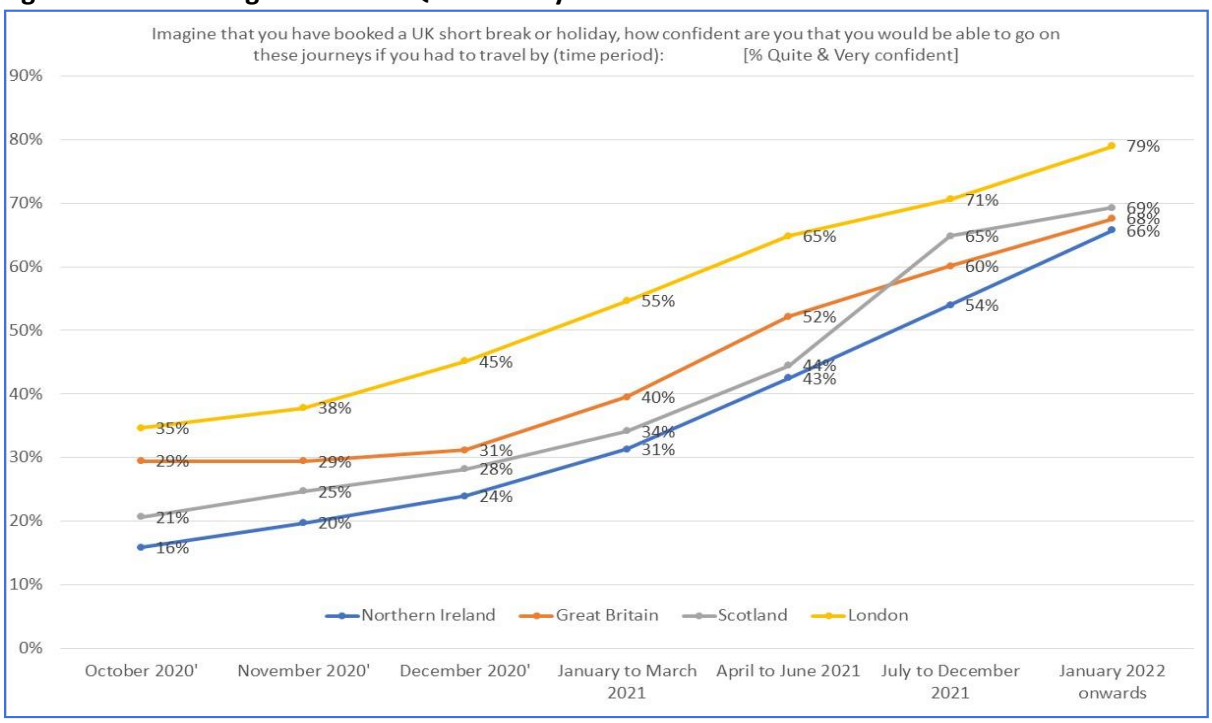
Given what you know today, when do you think life will return to something close to normal?

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
October - December 2020	3%	2%	1%	11%	0%	1%
January - March 2021	17%	16%	19%	25%	16%	13%
Later 2021	41%	50%	45%	41%	51%	53%
2022 or later	30%	23%	30%	18%	27%	22%
Never	9%	9%	4%	4%	6%	11%

Source: TAA

This provides the context for consideration of future expectations about travel. In response to questions concerning how confident people were about taking short UK breaks or holidays fewer than a third were confident of doing so this year in Great Britain (Figure 7.9). The figure in Northern Ireland was less than a quarter and the evidence suggest it would be the second half of 2021 before a small majority of people here would be confident of taking a short UK break or holiday. Even for early 2022 one third of residents of Northern Ireland were not confident of being able to take such a trip, a figure slightly more than Great Britain as a whole. The main outlier in this pattern was London where a small majority indicated they were confident of making such a trip by the spring of 2021.

Figure 7.9 Percentage who were Quite & Very Confident



Source: TAA

The principal factors discouraging people taking UK holidays and short breaks were fear of infection, 75% in the case of Northern Ireland (similar to GB), and it not being responsible to travel during the

Pandemic (54% and 49% respectively) (Table 7.12). Government messages about the use of publicly available transport was reported by approximately 40% of UK residents as a deterrent.

Table 7.12 Which of the following factors are contributing to you being 'not very confident' or 'not at all confident' about taking a UK short break or holiday?

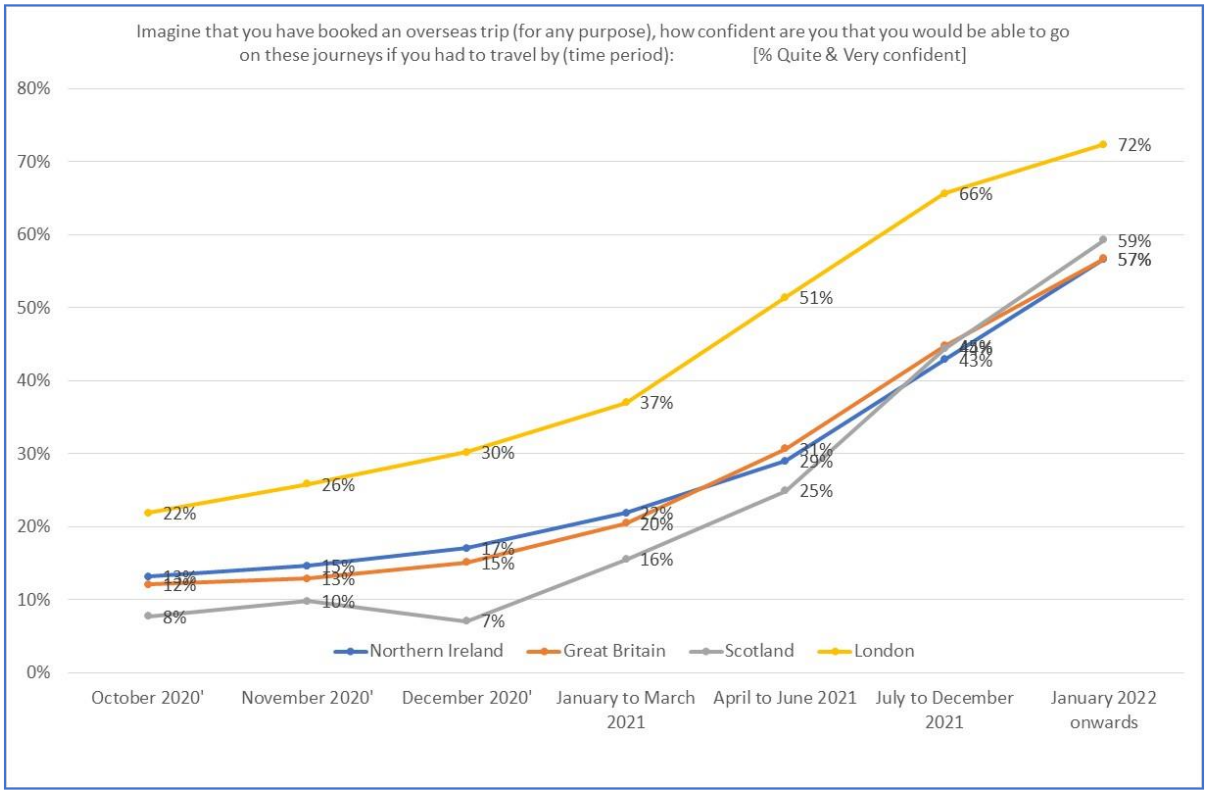
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
I have concerns about catching Covid-19	75%	73%	74%	75%	75%	72%
It's not responsible to travel in this period	54%	49%	49%	44%	49%	49%
Government (national, devolved or local) advice on avoiding / using public transport	42%	39%	46%	30%	33%	42%
I have a general unease about travelling	38%	38%	51%	36%	31%	38%
Restrictions on opportunities to socialise	35%	35%	31%	35%	38%	35%
Few opportunities to eat / drink out	32%	29%	26%	28%	28%	30%
Financial reasons	25%	28%	23%	32%	18%	29%
Local residents may be unwelcoming	22%	24%	27%	25%	27%	23%
Limited available annual leave	4%	7%	5%	2%	6%	8%
Other	1%	1%	2%	0%	0%	1%

Source: TAA

Turning to consideration of future expectations about overseas travel only 17% of Northern Ireland residents were confident of doing so this year, marginally higher than for residents of Great Britain (Figure 7.10).

The findings indicate that it would be early 2022 before a small majority reported they would be confident again about overseas travel. Again, London residents were noticeably more confident with once again a small majority expressing confidence in travelling overseas by next spring. Other restrictions about destinations and socialising were also significant deterrents to such trips.

Figure 7.10 Percentage who were Quite & Very Confident



Source: TAA

The principal factors discouraging people taking an international trip were fear of infection, 67% in the case of Northern Ireland (similar to GB), and risk of the UK Government introducing quarantine restrictions while people are abroad at 52% (56% GB) or because other countries were already subject

to quarantine restrictions upon return 47% (50% GB) (Table 7.13). 50% of Northern Ireland residents reported it not being responsible to travel during the Pandemic (48% GB).

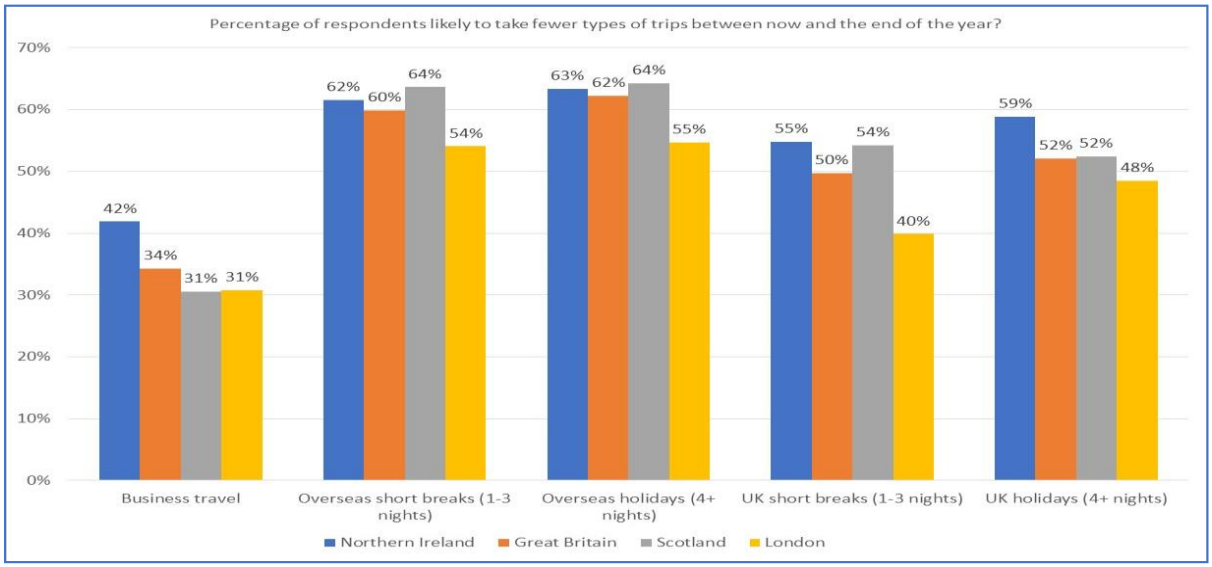
Table 7.13 Which of the following factors are contributing to you being 'not very confident' or 'not at all confident' about making an overseas trip?

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
I have concerns about catching coronavirus / Covid-19	67%	66%	64%	61%	70%	66%
Risk of UK Government introducing quarantine restrictions on other countries while away and having to then quarantine upon return	52%	56%	62%	47%	65%	55%
Existing quarantining restrictions when returning home from countries where it is advised against 'all but essential' international travel	47%	50%	61%	43%	55%	49%
It's not responsible to travel in this period	50%	48%	50%	44%	49%	48%
I have a general unease about travelling	31%	34%	35%	33%	34%	34%
Restrictions on opportunities to socialise	34%	29%	34%	28%	26%	29%
Financial reasons	25%	27%	24%	34%	22%	26%
Few opportunities to eat / drink out	29%	21%	26%	25%	22%	19%
Local residents may be unwelcoming	20%	20%	15%	27%	15%	21%
Limited available annual leave	6%	7%	7%	12%	6%	6%
Prefer not to say	2%	2%	1%	1%	2%	2%

Source: TAA

These reported levels of confidence are also broadly consistent with reported numbers of trips likely to be made during the second half of 2020 across a range of trip purposes. For all trip purposes a greater proportion of Northern Ireland residents report fewer trips are likely to be made than among people in Great Britain. The evidence suggests that as of the summer 2020 trips during the remainder of the year were likely to be reduced overall by at least 50% in the case of Northern Ireland, marginally more than for Great Britain (Figure 7.11). For business travel, the reduction could be somewhat less particularly for residents of Great Britain while for overseas leisure travel it is likely to exceed 60%.

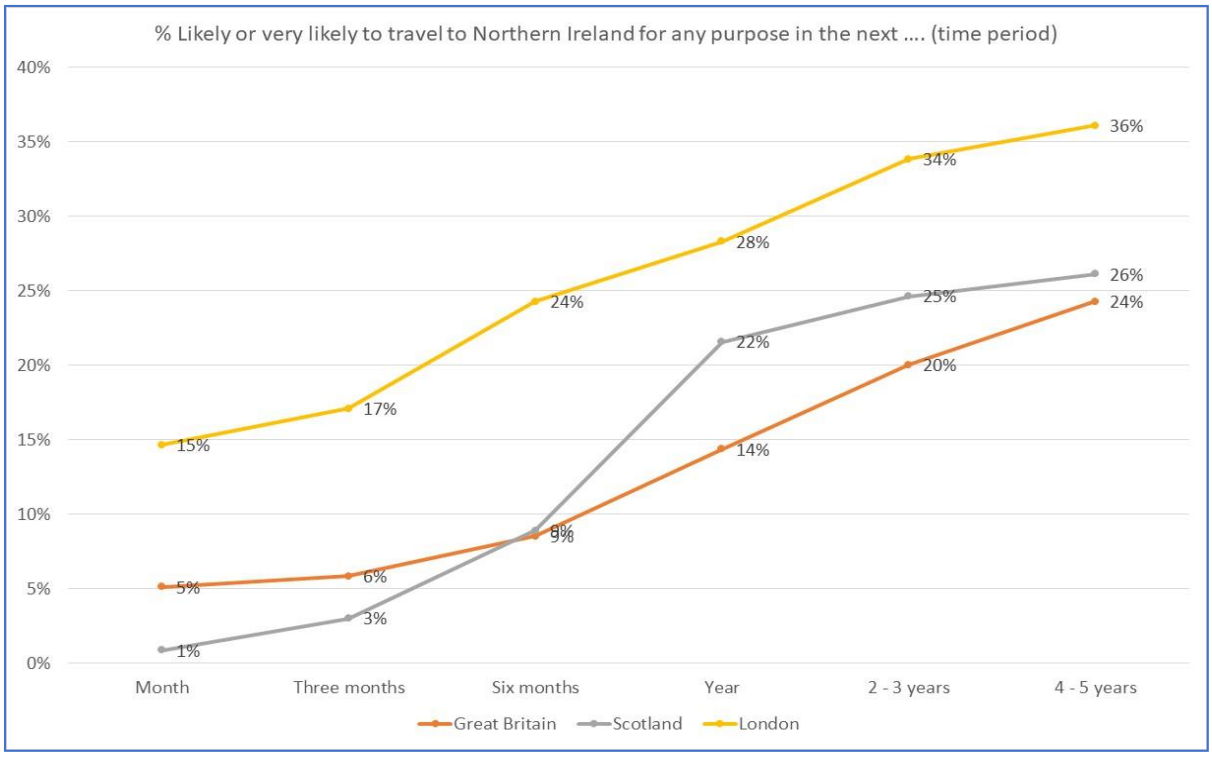
Figure 7.11 Percentage of respondents likely to take FEWER trips



Source: TAA

Turning now to the likelihood of people living in Great Britain visiting Northern Ireland in the foreseeable future the reported responses suggest that overall, 9% would be likely to visit Northern Ireland within the following six months across all purposes (Figure 7.12). If it is assumed a 'very likely' response to a question on travelling to Northern Ireland equates to an approximate 90% probability of actually undertaking such a trip within 6 months the likelihood of such trips reduces to approximately 4% of the residents of Great Britain. Over a year the value rises to 7% undertaking a trip to Northern Ireland. Within 2-3 years that percentage rises to 10% and 11% over 5 years.

Figure 7.12 Percentage of respondents likely or very likely to travel to NI



Source: TAA

7.8 Implications of Quarantine Restrictions and Industry Initiated Mitigation Measures for the Propensity for Air Travel

These findings suggest that air travel will be suppressed significantly at least until 2022 or 2023 and possibly for many years to come. It has been highlighted above that the Coronavirus generates greater levels of anxiety for air travel than travel by ferry. It is worth noting that 70% of people in Northern Ireland would be reassured about travelling by air if they were confident other people would abide by existing self-isolation/quarantine regulations (Table 7.14). The figure for GB is however less at 63%.

What measures are likely to impact strongly on that outcome either encouraging or discouraging travel by plane? The evidence presented in Table 7.14 indicates that deep cleaning of the plane after each flight is the measure that most strongly encourage or encourage air travel (80% of NI residents indicated this with 75% among GB residents) followed by guaranteed refunds in the event of not being able to travel (73% NI and GB residents). Temperature checks before departure was reported by 69% in both NI and GB residents as strongly encouraging or encouraging air travel followed by 68% of NI residents reporting the effect of HEPA filters (ensuring the air in aircraft cabins is replaced ever 2-3 minutes) (67% in GB). Reducing flight occupancy was reported by 63% of residents of Northern Ireland (61% GB) as strongly encouraging or encouraging air travel followed by 90-minute Coronavirus testing facilities at airports (51% NI residents and 49% GB residents).

Among the main deterrents to air travel are higher fares to ensure an adjacent empty seat to the traveller. 45% NI residents indicated this would strongly discourage or discourage air travel (46% GB residents) although 27% said this would encourage them to fly. The other main deterrent at 35% is the

UK Government imposing quarantine restrictions on other countries while travellers are abroad and requiring returning travellers from those countries having to quarantine upon arrival back in the UK. On the other hand, 44% said this would encourage them to fly.

Table 7.14 Now thinking specifically about air travel, using a scale of 1 – 5, where 1 equals strongly discourage and 5 equals strongly encourage, how much would the following measures encourage or discourage you from travelling by air?

Temperature checks on all passengers before boarding						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	4%	3%	3%	3%	2%	4%
2 -	4%	4%	1%	3%	4%	4%
3 -	19%	20%	22%	14%	30%	19%
4 -	21%	25%	31%	24%	19%	25%
5 - Strongly encourage	48%	44%	36%	52%	43%	43%
Don't know	5%	5%	7%	3%	1%	5%

Deep cleaning after each flight						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	3%	2%	1%	4%	0%	3%
2 -	2%	3%	2%	2%	3%	3%
3 -	11%	16%	12%	9%	16%	17%
4 -	21%	24%	27%	24%	31%	22%
5 - Strongly encourage	59%	51%	51%	60%	48%	49%
Don't know	4%	5%	6%	2%	2%	6%

Existing quarantining restrictions when returning home from countries where it is advised against 'all but essential' international travel						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	14%	15%	18%	7%	21%	15%
2 -	7%	11%	11%	11%	14%	10%
3 -	17%	19%	19%	19%	21%	19%
4 -	19%	17%	12%	18%	14%	18%
5 - Strongly encourage	37%	31%	31%	39%	28%	30%
Don't know	5%	7%	9%	6%	2%	8%

Risk of UK Government introducing quarantine restrictions on other countries while away and having to then quarantine upon return						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	25%	26%	36%	17%	33%	25%
2 -	10%	15%	9%	10%	25%	14%
3 -	17%	16%	18%	19%	16%	15%
4 -	16%	14%	7%	21%	7%	16%
5 - Strongly encourage	28%	23%	19%	27%	19%	23%
Don't know	4%	6%	11%	7%	1%	7%

Paying 50% more to ensure that the seat next to me / my family was left empty						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	31%	30%	44%	17%	35%	29%
2 -	14%	16%	12%	17%	19%	16%
3 -	21%	21%	17%	23%	23%	22%
4 -	13%	11%	7%	15%	11%	10%
5 - Strongly encourage	14%	15%	9%	24%	10%	15%
Don't know	6%	7%	10%	4%	2%	8%

90-minute coronavirus testing at the airport						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	18%	13%	14%	9%	16%	13%
2 -	11%	10%	12%	9%	15%	8%
3 -	15%	24%	19%	16%	22%	27%
4 -	22%	20%	17%	27%	20%	18%
5 - Strongly encourage	29%	29%	27%	34%	25%	29%
Don't know	5%	4%	10%	5%	1%	4%

If I knew refunds would be guaranteed and automatic						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	3%	2%	4%	1%	0%	3%
2 -	3%	3%	2%	1%	2%	3%
3 -	14%	16%	19%	11%	15%	17%
4 -	20%	22%	18%	25%	34%	19%
5 - Strongly encourage	53%	51%	51%	60%	47%	50%
Don't know	6%	6%	7%	2%	3%	7%

If I knew people would self isolate / quarantine if told to do so						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	4%	3%	1%	5%	3%	3%
2 -	6%	4%	4%	2%	4%	4%
3 -	18%	25%	21%	14%	34%	25%
4 -	22%	25%	22%	28%	27%	24%
5 - Strongly encourage	46%	38%	45%	46%	29%	37%
Don't know	4%	6%	6%	5%	3%	7%

Reducing the occupancy levels on aircraft to a quarter of what they were previously						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	5%	3%	2%	4%	4%	3%
2 -	6%	4%	2%	3%	5%	4%
3 -	20%	26%	24%	13%	37%	27%
4 -	25%	27%	24%	33%	28%	26%
5 - Strongly encourage	38%	34%	41%	44%	23%	33%
Don't know	6%	6%	7%	3%	3%	7%

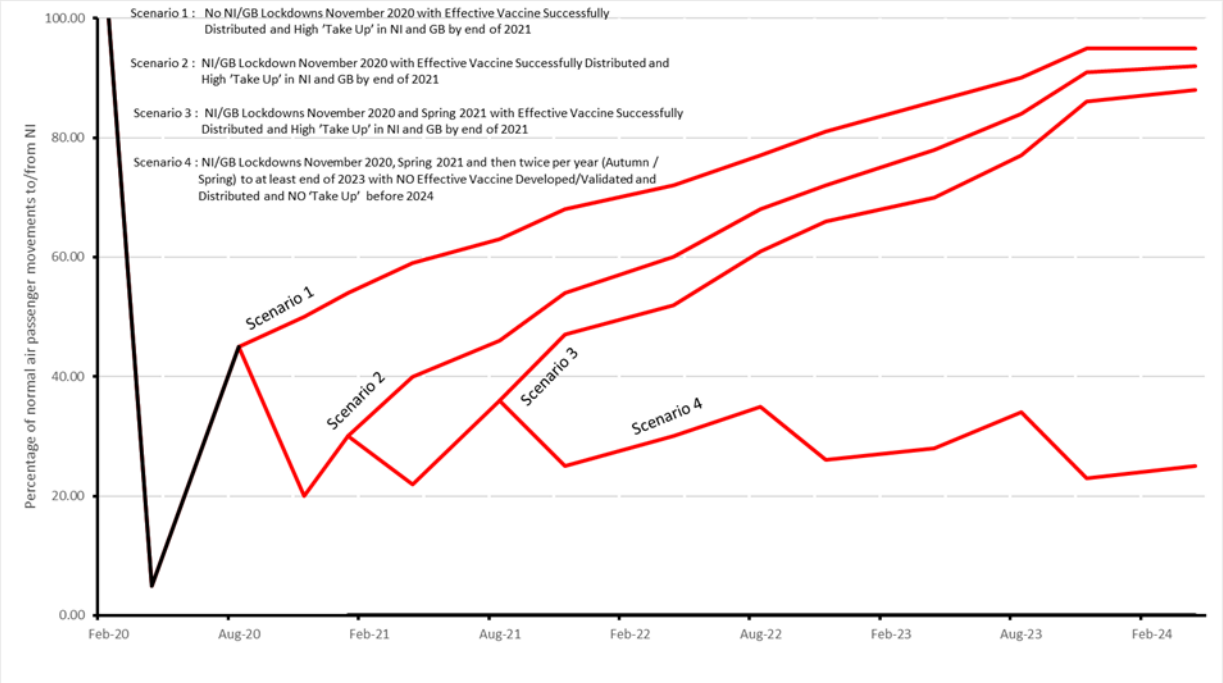
The knowledge / fact that the air on board modern planes is completely replaced every 2-3 minutes (not recycled air)						
	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Strongly discourage	3%	3%	1%	4%	1%	4%
2 -	4%	4%	0%	2%	5%	4%
3 -	16%	19%	19%	17%	28%	18%
4 -	26%	22%	25%	21%	23%	22%
5 - Strongly encourage	43%	45%	46%	49%	39%	45%
Don't know	8%	7%	8%	7%	5%	8%

Source: TAA

7.9 Implications of Lockdowns and Vaccines for the Propensity for Air Travel

What does this evidence suggest for future demand for air transport in the near term? As of the summer of 2020 the data and analysis for the remainder of 2020 pointed to a likely reduction overall of at least 50% in the case of Northern Ireland, marginally more than for Great Britain. This was based on evidence collated before Northern Ireland's partial lockdown was implemented in October and the announcement by the UK Government of a further England wide lockdown beginning on 5th November 2020. This scenario is illustrated in Figure 7.13. It also sets out a number of other outcomes encompassing no further or repeated lockdowns and the success or otherwise of the development and distribution of really effective vaccines and other medical measures to tackle the COVID-19 Pandemic.

Figure 7.13 Air Travel Market Projections for Scenarios 1-4



Source: TAA

Figure 7.13 demonstrates the current restrictions in Northern Ireland and the second lockdown in England, along with restrictions in Scotland and Wales, will have the effect of significantly blunting recovery of external travel to/from Northern Ireland. These are likely to reduce air travel to 20% - 30% of normal levels with a slower recovery in 2021 after the restrictions are eased than was experienced in the summer of 2020. This could push back recovery of demand for external travel by a further 6 months depending upon when these restrictions are lifted.

A significant caveat to anticipating the future path for external travel is the potential impact of a widely distributed and effective vaccine with high rates of take up in the wider population. Considerable uncertainty remains about the confirmation of the development of one or more successful vaccines, the logistics of its distribution and securing confidence in its effectiveness among the population. This will most likely see a further period of 6 months to a year before it has been widely taken up in Northern Ireland. However, if this outcome emerges the evidence reported suggests that air travel could recover to around 90% of 2019 levels by 2023 or 2024. The absence of such a turning point could well lead to demand being suppressed significantly below 2019 levels for many years to come.

The implications of any of these scenarios unfolding for external connectivity are likely to be very significant in the short term. Evidently even under the most optimistic of these scenarios air fares are likely to rise significantly while services will be cut and/or routes abandoned. One very likely outcome will be the loss of 'out and back in a day' opportunity to/from many regional centres in Great Britain. The implications for businesses located in Northern Ireland and their competitiveness will be readily apparent from the evidences presented in the audit of external connectivity in Section 4 of this report and from the consultation exercise with Northern Ireland firms out in Section 5. The question that arises is what public policy measures could be applied to mitigate this erosion of external connectivity and how can these be funded and financed? We turn to consideration of the potential public policy

intervention tools below and offer some observations on their likely efficacy and the practicality of their implementation.

7.10 Consideration of Public Policy Intervention Tools to Address Access Challenges posed by the COVID-19 Pandemic for Northern Ireland

The risks to the sustainability of Northern Ireland's external connectivity posed by the impacts on travel behaviour arising from individuals' fear of the Coronavirus and the run up to and the first UK lockdown, as well as the UK Government and Devolved Administrations' public health regulations and guidance has been highlighted and the evidence synthesised above. The implications for Northern Ireland's economy of the decline in both its absolute and relative accessibility as a result of route/service cuts has also been alluded to. Detailed estimates of the economic cost of those impacts would require further in-depth analysis. Nevertheless, it would seem that there is an imperative to seek to offset potential losses in connectivity and associated absolute and relative accessibility (with their attendant financial and economic costs and wider disbenefits) with effective mitigation measures to ensure Northern Ireland is in a position to meet these threats to its economic competitiveness.

Various public policy interventions are available to address these challenges both domestically and on the international stage. The range of public policy tools encompasses Air Passenger Duty discounts/exemptions (APD), Designation of Public Service Obligations (PSOs) and associated measures specific to particular circumstances, Route Development Funding (RDF), Cooperative Marketing support and a variety of operational subsidies and support for capital funding. This research focuses primarily on the domestic context and in particular, meeting the needs of locally based businesses and the transport requirements of the local tourism and wider leisure markets. In the next section we review these and assess their likely efficacy in addressing the connectivity challenges currently being faced by Northern Ireland. This provides the basis for an outline short term Access Mitigation Strategy to respond to the challenges posed for the business, travel, leisure and tourism sectors by the impacts on access to/from Northern Ireland by the COVID-19 Pandemic and the public health measures implemented to overcome it.

8. Public Policy Intervention Tools and Recommendations for a Short/medium Access Mitigation Strategy to Address Challenges posed by the COVID-19 Pandemic for Northern Ireland

8.1 Air and Sea Travel and Connectivity; Key Challenges for Northern Ireland

The audit of Northern Ireland's external connectivity reported in Section 4 demonstrated that in terms of Basic Connectivity Belfast has seen a significant expansion in the two decades to 2019, in line with Glasgow or Newcastle but now trails behind Dublin, Edinburgh or Manchester. It has been also overtaken by Bristol, while Leeds Bradford has caught up.

Route coverage that provides more than a very limited frequency and meets basic business needs has exhibited considerable stability over the years at most locations. Significant growth is only evident at the larger airports such as Dublin and Manchester. Belfast has 20 frequent routes but 16 of these are domestic and 3 are holiday routes. Amsterdam has been the only major European city served twice per day. Business connectivity has somewhat surprisingly stayed the same or declined over the twenty-year period for many cities including Belfast. Key destinations have not changed much over the years leading to stability in the network. At Belfast the 14 such routes are all UK domestic routes. Much of the business connectivity was provided by Flybe in 2019, leading to concerns as to how essential business links will be maintained in the future. In some cases other regional carriers have stepped in with small aircraft but it remains to be seen whether this is commercially sustainable.

In relation to Hub Connectivity Belfast (which in previous years enjoyed services by KLM from Amsterdam, Sabena from Brussels, Continental from Newark and BA from the Birmingham Eurohub as well as both BA and bmi from Heathrow) is now down to only the Heathrow link, albeit at a high frequency. In contrast, while Cardiff for instance had no Heathrow link in 2019 it enjoyed services to Amsterdam and Paris CDG as well as Qatar. The data for 2019 indicates Belfast had weak global connectivity. The take-over of bmi by BA did however, improve the situation compared to 2007. Over the last two decades Dublin has improved its hub connectivity substantially while Edinburgh, Manchester and Newcastle have also held their ground. Glasgow and Leeds/Bradford are the other UK losers, overshadowed by their larger neighbours in the same way that Belfast is by Dublin.

Self-evidently Northern Ireland's geography points to the importance of sea transport to provide a key element of its external connectivity. The network of ferry services catering for passenger movements across the Irish Sea has in recent years exhibited consolidation in the Northern Corridor in particular. Across the Diagonal Corridor the pattern of routes has tended to exhibit greater stability.

The dependence of Northern Ireland on air and sea transport to provide its external connectivity, both domestically and internationally, is well illustrated by the audit as is the frailty of its air links in the wake of the COVID-19 Pandemic and the collapse of a dominant carrier (Flybe). Flybe provided 80% of flights at Belfast City.

The first UK lockdown led to cessation of all services on 21 out of 22 routes serving Belfast. Air travel from Northern Ireland was limited to 1-2 services per day between Belfast City Airport and London Heathrow, and a Loganair link between City of Derry Airport (CODA) and London Stansted Airport. All other routes were suspended. Almost all of these routes were domestic connecting Northern Ireland

with regional centres in Scotland, the North of England, the West and East Midlands, the West and South of England and Wales. Domestic connectivity all but collapsed for a period of 3 months. Business connectivity needs went unmet. Hub connectivity also declined to minimal levels. In summary, Northern Ireland's external connectivity was reduced to two to three flights per day between Belfast City and London Heathrow and City of Derry to Stansted. No air connections were available to Scotland and the regions of England and Wales for at least three months.

The only alternative during that period for travel between Northern Ireland and these regions was by travelling to London and then taking onward transport or by ferry to Scotland or Liverpool imposing an additional 3 to 9 hours on overall journey times covering the majority of cases. Fortunately, the key ferry service providers proved resilient during the lockdown in the face of significant falls in demand and in the case of the Belfast routes exhibited a remarkable recovery during the summer of 2020.

This loss of supply was reflected in and reinforced by a collapse in air travel with the Heathrow route down to 5% of normal passenger numbers in the Spring of 2020 and with overall demand for air travel to/from Northern Ireland down to as little as 0.5%.

The findings from the Business Consultation exercise reported in Sections 5 and 7 demonstrated a variable picture across sectors in relation to their ability to carry on and promote their business through the use of technology rather than face to face engagement. For any business requiring to travel very substantial time penalties and extra financial costs were faced by firms in Northern Ireland. These have been typically much greater than for many firms based in Great Britain when dealing with domestic customers and suppliers or those in near markets in Continental Europe. Elsewhere in Great Britain the long-distance rail network had remained almost fully operational.

Even after the resumption of regional flights serving the two Belfast airports with demand suppressed these have been operated mainly at lower frequencies than before the first lockdown was imposed and typically do not offer an out and back in a day facility, something businesses needing to travel often seek.

In the wake of the massive rise in COVID-19 infections from late summer 2019 it will be relative infection rates in Northern Ireland, compared to other regions of the UK, the Republic of Ireland and further afield, that act as key drivers of trip making propensity and outturn travel behaviour. However, when Northern Ireland has achieved a sustained relatively lower incidence of infection compared to potential external travel originating locations, limitations in and uncertainty about connectivity will curtail the extent of a recovery in in-bound leisure as well as business travel. The consequences for the economy in the medium as well as the very short term are most likely to be severe. What effective mitigation measures can be put in place to ensure Northern Ireland is in a position to meet the challenges to its economic competitiveness in the short term, in particular during the next 1 -3 years ?

8.2 A Strategic Assessment of Public Policy Intervention Tools to Address Challenges

A suite of public policy interventions is available to address current and future connectivity challenges facing Northern Ireland, both domestically and internationally. This research focuses primarily on the domestic context and in particular, meeting the needs of locally based businesses and the transport requirements of the local tourism and wider leisure markets. Ensuring that the continued connectivity

and accessibility requirements of business and tourism are met must also recognise the viability of many links serving outbound leisure and tourism sectors. This reflects the imbalance in trips generated from Northern Ireland's airports and ports versus inbound travel generated elsewhere in the UK or further afield.

The range of public policy tools encompasses Air Passenger Duty discounts/exemptions (APD), Designation of Public Service Obligations (PSOs) and associated measures specific to particular circumstances, Route Development Funding (RDF), Cooperative Marketing support and a variety of operational subsidies and support for capital funding. Each of these could potentially help sustain Northern Ireland's external connectivity. However, they would offer varying levels of effectiveness and require different levels of support from public funds. Moreover, at the time of writing, as the UK is in the transition period after leaving the European Union (EU) it remains subject to varying legal regulations inherited from its membership of the EU. These are unlikely to be changed in the short term as they are now generally enshrined in UK domestic legal arrangements. Notwithstanding any Trade and Cooperation Agreement that might be reached between the EU and the UK it may well be easier for the UK to adopt variations or make changes to regulations and other arrangements at a time of emergency. There are already precedents for public funding to be allocated to the region's external connections during the current COVID-19 Pandemic without apparently going through comprehensive processes of economic appraisal. These can take the form of ad-hoc payments and financial bailouts allocated to the sector.

Ad-hoc Payments and Bailouts

We will start with an assessment of ad-hoc payments to support continued operation of services by sea and air. During the first UK wide lockdown the UK Government allocated funding to Belfast City Airport and Aer Lingus to sustain one flight a day each way between Belfast City airport and Heathrow airport. This was made available at a time when passenger carryings on that route had declined during the first UK wide lockdown to 5% of normal and flights from the airport had fallen by around 97%. It catered for no other services. In total the UK Government advised it was allocating almost £6 million. Similarly, the UK Government reported that it had made available £17 million to safeguard ferry links between Northern Ireland and Great Britain. In realty the actual amount allocated was £0.7 million that was paid to P&O to support its Larne Cairnryan service. No payments were received by Stenaline. It seems the process set up for payments that employed a variant of the Public Service Obligations (PSOs) took a considerable time to establish. By the time the first UK wide lockdown restrictions were eased and the funding stream became operational Stenaline had achieved a strong recovery of its market and did not pursue any of the funds for its Irish Sea operations that might have accrued to the company under the UK Government scheme.

In the case of the payments to Aer Lingus and Belfast City Airport it was arguably fortuitous that no other passenger service operated out of either Belfast City Airport or Belfast International Airport at that time. Had services been operating from Belfast International at that time this would have posed issues related to airport proximity considerations and competition policy. Airports are regarded as being in direct competition if they are within 100 km or 60 minutes-drive-time of each. Both airports would be viewed as direct competitors of each other. If one airport benefitted from public funding and the other didn't this could raise allegations of unfair competition.

Ad-hoc payments may be necessary in an extreme emergency, with its attendant financial consequences, to enable continued operation of a facility and service that would otherwise close or cease to operate. For instance, on November 19th NI's Infrastructure Minister announced funding of £1.23m for City of Derry Airport. The Minister noted this is intended to keep the airport operational "at this time of economic challenge". Such public policy interventions are necessary to ensure access to Northern Ireland's key external air and sea Gateways is maintained to enable airlines and shipping and ferry companies to operate to/from the region. However, the requirements of a capital-intensive industry such as air transport or sea ferries include securing income (or funding) over at least the medium term. Transport users, particularly business and the leisure and tourism sectors, require continuity of service of a specified capacity and cost. In the case of sea transport freight and logistics customers tailor their own operations to avail of a guaranteed service frequency by ferry. Thus, if Ro-Pax services face a collapse in their markets and future volatility in demand it will be difficult to sustain those requirements whether for out bound business travellers and long-distance commuters, inbound and outbound tourists or freight customers of Ro-Pax services.

We have demonstrated that the future market for modern air travel in particular will exhibit unprecedented long-term suppression and quite possibly extreme volatility. Noting Northern Ireland's dependency on air and sea links to maintain connectivity with the rest of the UK and the guaranteed substantial additional public funding offered by the UK Government to ensure continued operation of the railways in Great Britain evidently this puts Northern Ireland business and the tourist sector at a severe competitive disadvantage to other regions of the UK.

Given the unsuitability of ad hoc bailout payments what alternative tools are available to the Northern Ireland Executive and how effective are they likely to be in enabling this region to address the access challenges posed by the COVID-19 Pandemic? In the remainder of this part of the report we consider the following public policy interventions and tools and their potential application to the challenges posed by the COVID-19 Pandemic for sustaining Northern Ireland's domestic external connections by air and sea:

- Air Passenger Duty – Discounting or removal
- Designation of Public Service Obligations to Routes
- Route Development Funding
- Route targeted Marketing Programmes supported from Public Funds
- Bespoke financial support for small airports

Air Passenger Duty

Northern Ireland currently offers a full discount of the duty for passengers using Band B APD long-haul flights. No scheduled service that could take advantage of this is currently operational. The UK Government previously consulted on APD for short-haul and domestic (Band A) routes, including whether responsibility for setting Band A rates should be devolved to Northern Ireland. The Government announced in October 2018 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. In this case evidence suggests that the benefits arising from discounting APD to connectivity are derived from two sources; reduction in air fares, and its impact on passenger demand; and securing and potential expansion of capacity. This reflects improved net revenues from improved operating economics, and lower risk assessments associated with adding new routes and frequency.

Some commentators suggest discounted short-haul (or Band A) APD or its removal would have positive benefits for Northern Ireland. The aviation market serving Northern Ireland is dominated by domestic routes that have lower average fares compared to international flights. Domestic routes typically exhibit greater price elasticity. This would suggest that a reduction of Band A APD in Northern Ireland would stimulate the market. However, it would incur a substantial public expenditure liability for the region. APD discounting of Band A routes also has a number of less desirable features from a Value for Money (VFM) perspective. It would apply to all routes including those which do not require a subsidy. In normal circumstances the Northern Ireland Executive would be required to compensate the UK Exchequer for loss of tax revenues. The policy's cost is likely to be high and it would need to be assessed in relation to the economic value of protected or enhanced connectivity.

While it may be possible to introduce adaptations to a generic discounting scheme which would help to improve the policy's cost effectiveness such changes would likely require consideration in relation to State Aid requirements even in a post EU membership/transition situation. Moreover, such a policy would also need to be approved by the UK Government.

One potential variant to meet the needs of Northern Ireland in the current environment would be to define a short-haul distance eligibility criterion for flights up to around 400 miles involving crossing substantial tracts of sea but modified to limit impacts on adversely affected surface transport modes. This could take the form of a minimum threshold of equivalent centre to centre journey times by surface transport of say 6 hours. Allied to a discount on APD this would be applied only if a commitment was given by carriers to deliver a minimum frequency and seats. Support could be time-limited, sufficient for affected routes to regain commercial viability. Such a public policy tool could be subject to State Aid review which at the very least would lead to delay in implementation.

Network wide discounting of APD on Band A flights by Northern Ireland could support route/frequency retention. However, the economic costs and benefits of such a temporary measure would need to be assessed in the context of potential loss of revenue through the Northern Ireland block grant. A more targeted discount strategy could possibly address this conundrum but need to consider potential State Aid compliance issues.

Route Based Public Policy Intervention

In contrast to network APD discounting route specific tools differ from APD. They require not only a strong financial argument but also a solid economic case.

Public Service Obligations (PSOs)

A Public Service Obligation (PSO) provides an obligation to run a route between two designated airports. If no airline can be found to operate the designated service on the specified route the State can establish a monopoly and put out a tender for its operation, with or without a requirement for provision of funding support. PSOs cannot impose restrictions on the supply of air services to fulfil the requirements specified by the PSO. Most importantly a PSO route must be "being considered vital for the economic and social development of the region which the airport serves". PSOs can vary substantially in their aims and objectives. They can be broadly categorised under

- Economic objectives:
- Social objectives:
- Strategic objectives:

At the time of writing PSOs must respect the conditions and requirements set out in Articles 16 – 18 of the Air Services Regulation 1008/2008. Regulation (EC) No 1008/2008 details that PSOs can only be applied to routes that fulfil transport needs which cannot be adequately met by an existing air route or by other means of transport. Moreover, a transport company receiving state aid gains an advantage over competitors. This is prohibited unless justified on grounds of economic development. The case for a PSO is economic but market failure does not need to be demonstrated. This has potentially important implications locally given the characteristics of Northern Ireland's air transport infrastructure and network.

The link between PSOs and APD

PSOs for domestic routes in the UK benefit from passengers not having to pay APD. This can provide a significant implicit subsidy to services operated designated as being provided under PSO arrangements but PSOs do not have to involve an explicit subsidy to accord with PSO regulations. As noted there is no requirement to establish market failure has occurred. Agreement to PSO designation is dependent on transparency, proportionality, and not introducing market distortions.

Therefore, up to recently at least airlines could benefit from the APD discount, even if the route does not require financial subsidy. During its period of EU Membership the UK Government has interpreted the EU Guidelines in accordance with its perceived needs, limiting use of PSOs. It is also unclear whether the DfT has a standard view on use of the PSO mechanism for international services although it did not object to a proposal for a City of Derry -Dublin PSO.

Given current circumstances it may be timely for the Northern Ireland Executive through the Department for the Economy (DfE) to consider seeking a block exemption for APD in conjunction with use of PSOs from Northern Ireland's airports. This could however be a time-consuming process. However, PSOs afford a targeted and potentially effective intervention tool that could be attractive to airports and airlines if market distortion in particular can be guaranteed both in the air transport sector and for surface transport.

Route Development Funds (RDFs)

Route Development Funds (RDFs) provide a public policy tool to enable public funding to be allocated to airports to underpin the introduction of new routes thereby enhancing wider connectivity. There is no particular financial template for RDFs. An RDF scheme was established for Scotland in 2002 with the objectives of improving business connectivity and the volume of inbound tourism. The Scottish variant was a public-private partnership. The partners encompassed the Scottish Government, Scottish Enterprise, Highlands and Islands Enterprise as well as Visit Scotland. A comprehensive evaluation study in relation to which Professor Smyth was a lead author and principal economic adviser, confirmed the scheme produced a significant positive net economic benefit (benefit-cost ratio of 23:9). However, the RDF had been much more successful in Scotland compared to other areas of the UK. When introduced more widely in the UK in 2014 in the guise of a Regional Air Connectivity Fund (RACF) there was generally a positive reaction to the establishment a RACF. However, limitations were levelled in relation to the scheme's applicability, criteria for approval and the application process. The scheme was short lived.

In general RDFs tend to produce modest results. The effectiveness of the RDF mechanism appears best in promoting short-haul and domestic routes or increasing service frequencies in situations where only limited financial support is required rather than those which are fundamentally uncommercial; the latter are much better suited to support by PSO. Nevertheless, 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 under normal conditions and probably similar to a co-operative marketing agreement.

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. Even if this is the case 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. The fact that Belfast International Airport 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 Belfast City Airport currently operates at severely reduced levels of passenger throughput, and this could potentially comply with size criteria, the fact that it has an overlapping catchment area with Belfast International Airport is likely to severely limit route support. However, this mechanism continues to be an effective means to support routes out of city of Derry. Nevertheless, it would be possible to specify a series of airports for application of the scheme.

Co-operative Marketing

Co-operative marketing agreement may be useful 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 location of the destination or the route length.

Airport-Focused Mechanisms

For smaller airports there may be a requirement for an operating subsidy. This would help ensure landing and other charges to airlines are not prohibitive and prevent operation of routes and services. Under current regulations this applies to airports catering for up to 200,000 passengers per year although this can be extended to 1 million passengers under certain circumstances. It is unclear how this may vary in the future. Under normal circumstances this would rule out provision of such subsidies by the state.

Day to day financial support through reduced charges to airlines and other subsidies can also be tied to route capacity incentives. Even larger reductions have been offered if planned route capacity exceeded designated levels.

8.3 Synthesis of the Potential Application of Public Policy Interventions and Study Recommendations

Synthesis of the Potential Application of Public Policy Interventions

An in-depth economic appraisal of the application of a range of public policy interventions in the current circumstances will require more extensive analysis. At this point it is nevertheless possible to provide a commentary on the trade-offs between such measures at a UK Domestic level and recommendations for an outline strategy most likely to offer the greatest efficacy. These considerations are summarised in Table 8.1.

Table 8.1 Summary of Trade-offs between Efficacy and Practicalities of Public Policy Interventions to Address Northern Ireland's Connectivity Challenges facing Northern Ireland

Existing Public Policy Measures

Public Policy Intervention	Efficacy	Authority Devolved to NI Executive	State Aid Compliance / Competition Issues	Time scale	Comments
APD discount (long haul)	++	Yes	None	Already Available	No Current Route Beneficiary Not Applicable to this Study Subject Matter

Potential Strategy Measures for Very Short/ Short Term

Public Policy Intervention	Efficacy	Authority Devolved to NI Executive	State Aid Compliance / Competition Issues	Time scale	Comments
APD discount (domestic) band	+	No	Limited	Short/Medium	Potential benefit to NI economy limited to emergency period - ease of implementation on time limited geographically restricted basis SEE PSO Domestic
APD discount (short haul) route specific	++	No	Medium	Medium/Lengthy	Potential benefit to NI economy post emergency period – part of recovery strategy -- implementation on time limited geographically restricted basis
PSO Domestic	++	No	Medium	Medium	Can incorporate APD discount facility. Potential benefit to NI economy - implementation on Open PSO basis for specified routes on time reviewed/limited geographically restricted basis SEE PSO Domestic
RDF	++	No	Limited	Short/ Medium	Effectiveness best in promoting short-haul/domestic routes/ increasing service frequencies where limited financial support required
Co-operative marketing	++	Yes	Limited	Short/Medium	

Potential Strategy Measures for Short/Medium Term

APD discount (short haul) non domestic	+*	No	Limited	Lengthy	Non domestic. Requires more in depth appraisal of net benefits
PSO International	++*	No	Substantial	Potentially lengthy	Requires more in depth appraisal of net benefits

Any recommendations must consider the limitations in the latitude the Northern Ireland's Executive, along with the other devolved administrations, enjoys in relation to its authority in air (and sea) transport matters.

As noted above Northern Ireland's Executive currently has devolved powers that encompass partial control of APD discounting as well as co-operative marketing support. The former measure devolves air passenger duty (APD) rates to the Northern Ireland Assembly (NIA) in respect of passengers travelling from Northern Ireland on direct long-haul flights. The devolution of this authority reflects the Government's recognition that Northern Ireland operates in unique circumstances within the UK. However, in normal circumstances this impacts on no more than 2% of trips out of Northern Ireland and excludes domestic routes. The focus of this report is on domestic connectivity. Current circumstances call for radical action to secure Northern Ireland's connectivity with the remainder of the UK. Emergency measures have already been implemented to avoid cessation of otherwise commercially viable routes serving the region. More extensive application of APD discounting might be implemented expeditiously. As noted above prior to the pandemic the UK Government also carried out extensive consultation and analysis of the extension of APD powers to other routes without coming to a conclusion on its merits.

The precedent for full devolution of APD powers for short haul flights within the UK was set with the devolution of such powers to Scotland. Air Passenger Duty was devolved by the Scotland Act 2016, enabling Scotland to make its own arrangements for the design and collection of its replacement, ADT. The Air Departure Tax (Scotland) Act 2017 made provision for such a tax. The UK Government and Scottish Government however, agreed that introduction of ADT would be deferred beyond April 2020 to take account of the established Highlands and Islands exemption from APD. In the interim both the Scottish Government and the UK Government agreed the application of Air Passenger Duty in Scotland would be maintained. Nevertheless, at least under normal trading conditions there are question marks concerning the efficacy of a generic short haul APD discount scheme. A specific argument against its implementation would be the likely requirement of the Northern Ireland Executive to refund the UK Government for any loss of tax revenue resulting from implementation of such a policy.

These issues of governance, regulation and state aid also have implications for the practicalities and timescale required to achieve implementation of particular policy interventions. These challenges are highlighted in Table 8.1. Nevertheless, it is considered feasible for implementation of a number of these measures, including those either under the control of the Northern Ireland Executive (and other Devolved Administrations) or reserved to the UK Government, to be fast tracked. Precedent has already been set in relation to ad hoc emergency funding distributed via PSOs to ferry companies, airlines and airports. It is after taking account of this last consideration, together with reviewing the efficacy of individual measures and the market context and infrastructure supporting external connectivity, that the following recommendations are tabled in relation to supporting external connectivity.

Study Recommendations

The recommended short-term access mitigation strategy to respond to the challenges posed by the COVID-19 Pandemic and the public health measures envisages a stepwise approach to safeguarding external domestic connectivity that would comprise the following steps:

Air Transport APD discount scheme for domestic routes (Time Limited)

Subject to agreeing extension of APD rate setting powers to Northern Ireland during the current emergency it should be feasible to design and implement within 2-3 months after agreement is reached with the UK Government a time limited air transport APD discount scheme for domestic routes involving substantial distance across water e.g. the Irish Sea. This would be time limited to the period of the

COVID-19 Pandemic/lockdowns and for a recovery period thereafter. It can be anticipated the scheme would apply to a two to three-year period. Such schemes do not pose major problems for the NI Executive save the argument about returning any loss of tax revenue to the UK Government.

There are several points to note that would limit any loss in the main Block Grant for Northern Ireland. First the funding that could offset the cost of such a scheme has already been allocated by the UK Government through the operation of the Barnett Consequentials in its emergency additional Pandemic funding support (subsidies) for long distance transport in England (see below). In the current financial year sufficient funding has been made available by the UK Government to the Northern Ireland Executive to meet both the on-going funding requirements for public transport in Northern Ireland and to sustain operation of both Northern Ireland's key infrastructure Gateways. However, at the time of writing this report limited amounts of funding from the Northern Ireland Executive had so far been allocated to maintaining external domestic connectivity. Should flexibility with funding at year end be possible and further COVID-19 emergency funding from the UK Government be made available for 2021/2022 this funding could help address the costs incurred. Secondly, the very significant suppression of demand for air travel to between 25% and 50% of normal levels will continue for at least 2 years with the effect of significantly reducing any potential loss of tax revenue and therefore the scale of any repayment of funds to the UK Government.

Finally, it can be argued that as the greater proportion of travel originates from Northern Ireland the proportion of actual tax revenue foregone that would require repayment to Her Majesty's Treasury should reflect this. It would be reasonable for the Department of the Economy/Department of Finance to promote this argument. With say an assumed ratio of 2:1 for Northern Ireland: Great Britain originating air travel under such an arrangement the Northern Ireland Executive would repay around 65% of any tax foregone. However, in the light of evidence for supressed demand reported here the figure ultimately to be returned to the UK Exchequer, from the additional COVID-19 funding already received by Northern Ireland from the UK Government, would lie in the range 16%-32% of what might be anticipated under normal conditions. Under the latter conditions 100% of potential tax income would be required to be repaid. It is estimated the overall cost for Northern Ireland of implementing the proposal to introduce an APD discount for the specified services at 100% would be in the range £1.5 - £3.5 million per month, after allowing for a split in attribution of reduced APD taxes between the UK Government and the Northern Ireland Executive. A key factor in this calculation is a continued suppression of demand for air travel during the next few years that will feed through in a reduction in potential tax revenues that would otherwise be generated by current APD arrangements.

One further issue to consider with this proposal is the potential competition implications for ferries across the Irish Sea. The evidence from this study indicates these ferries attracted a significant amount of passenger business from air in particular from parts of Scotland and North West England. It could be anticipated that under an APD discount scheme ferries would be put at a relative competitive disadvantage. Two approaches can be considered to address this. First the air routes to benefit from the scheme would exclude destinations within a broad five/six-hour surface travel time in line with those locations where ferry and onward land travel is reasonably competitive overall with air travel. The alternative would be to offset the effect of the air subsidy with a compensating mechanism for passenger travel by sea. This could be addressed through the second step in the proposed strategy to safeguard domestic external connectivity in the short term through PSOs as set out below.

Public Service Obligations (PSOs)

This would take the form of extensive PSO designation of additional domestic air routes serving airports in Northern Ireland involving substantial distance across water e.g. the Irish Sea. These would be in addition to the existing PSO designated City of Derry – Stansted route. Routes designated with PSOs in the UK are exempt from passengers being charged APD and therefore the PSO model could incorporate any then existing APD discount on those routes designated PSO status. It is recognised however, that the PSO mechanism is likely to be less attractive to Low Cost Carriers (LCCs).

Designation as a PSO route places greater accountability responsibilities on the airline (or ferry company) benefitting from the scheme while at the same time affording the prospective traveller greater certainty as to how the service will operate at a frequency more likely to be tailored to the needs of business. Contracts awarded under the mechanism typically last for 4-5 years. This means PSO arrangements for a carrier can specify a guaranteed frequency that for instance permits out and back in a day travel. In the next few years this would be of potentially great value to business located in Northern Ireland. Its existence on the City of Derry to Stansted route has demonstrated guaranteed service to users of that route, operating throughout the first UK wide lockdown and now during the second England wide lockdown when many routes have ceased operating once again. We have noted above the other benefits of PSO designation.

The PSO mechanism does not imply an automatic subsidy being paid to airlines (or ferries) awarded contracts. It is important to note that any funding to defray shortfall in operational costs, including those incurred by the airport (or port) served, made available to the airline (or ferry) operating under such designation is audited on a regular basis to reflect the financial viability of the operation at any point during the contract. Under the current extreme uncertainty and unprecedented suppression of demand it provides the security to prospective users as well as wider beneficiaries the service will continue to operate. It is estimated the overall cost of implementing the proposal to introduce PSO arrangement for a limited number of destinations in Great Britain would be in the range £2.5 million - £5 million per month. This does not include any specific allocation of costs between the UK Government and the Northern Ireland Executive.

This estimate of the cost of implementing a PSO arrangement is based on confidential data provided to the team encompassing airline industry costs, passenger income and funding support payments received for operating existing PSO routes in the UK. On the basis of this data the figure of £2.5 million could be expected to cover approximately 10 thin routes linking Northern Ireland on the basis of two services per day in each direction, operated by 50 seater jet powered aircraft. The estimates also allow for potential support to PSO designated ferry services during lockdowns or similar periods when passenger traffic is very severely limited by Government regulation and guidance or high levels of infection. An important consideration with PSOs as noted above is they usually take more time to set up than establishing an APD discount scheme, requiring an in-depth analysis of the economic case for such designation, considering state aid rules and competition issues. As a result they are more targeted and are likely to achieve greater efficacy. However, during the Pandemic it has become apparent such schemes can be fast tracked to permit emergency payments to be made. The precedent was set during the first UK wide lockdown when funding from the UK Department for Transport (DfT) for air links was secured in less than 6 weeks. Moreover, an 'Open PSO' offers a streamlined application process to establishing services. The latter would not necessarily involve subsidy payments to any airline running the designated service. Nor would it necessitate setting regulations limiting operation to one carrier.

Within the UK however, an important barrier in more normal times to securing such arrangements is the UK Government's attitude to PSOs for routes other than to/from London. In current circumstances, given Northern Ireland's dependency on air and sea transport to maintain its domestic external connectivity, it would seem to be a reasonable argument for the Northern Ireland Executive and the Department for the Economy to request the UK's DfT agree to selected links between Northern Ireland and Great Britain being accorded PSO status. This would ensure Northern Ireland's external connectivity is secure rather than being effectively cut off from much of Great Britain for 3-4 months in the spring of 2020 and now to a lesser extent during the second lockdown in England. Moreover, it appears also appropriate to apply continuing PSO status to Northern Ireland's ferry routes as happened belatedly under the first UK wide lockdown. Once again it is stressed PSO designation does not imply an automatic subsidy is paid to operators but it does guarantee vital services when these ceased to be available to Northern Ireland for 1 day in every 3 during the last 8 months. Finally, in the context of the Common Travel Area consideration could be given to the merits of designating PSO status to a future City of Derry – Dublin route taking into account the findings of the Northern Ireland Business Consultation exercise and the positions of both the UK and Irish Governments and the Northern Ireland Executive should such a proposal be advanced.

Route Development Funds (RDFs)

An alternative to PSO designation is the use of Route Development Funds (RDFs). Typically, these provide a public policy tool to enable public funding to be allocated to airports to underpin new routes. However, the effectiveness of the RDF mechanism appears best in promoting or increasing service frequencies on short-haul and domestic routes in situations where only limited financial support is required rather than support by PSO. While it could be possible for an RDF to be operational within 6 to 9 months this is arguably not sufficiently fast in current circumstances. However, in combination with a co-operative marketing agreement it may be more attractive to LCCs in enhancing services frequencies more tailored to business needs. While there are no recent examples of its application locally its potential should be investigated to facilitate route enhancement less suited to PSO designation. It could well be that Belfast International Airport would be a beneficiary of financial support given the 'exceptional circumstances' and where there is substantial evidence of market failure. This could assist addressing issues that might arise with extended application of PSOs to Northern Ireland if LCCs do not express interest in them, given the presence of overlapping catchment areas with Belfast City Airport.

Funding the Study Recommendations

With expansion and extension of the UK Government's Job Support Scheme (JSS) announced on 9th October additional COVID-19 recurrent funding from the UK Government to the Northern Ireland Executive increased to £2.4 billion. This is over and above Spring Budget 2020 funding. This rose further to £2.8 billion in the wake of the second lockdown in England. A key driver for deriving this additional funding are Barnett Consequentials. In the case of transport substantial additional subsidies/funding have been allocated to ensure the continued operation of rail services in England, Scotland and Wales. Funding to ensure the railways in Great Britain continue to operate and their private company providers do not collapse financially has been allocated in two phases. The so-called Emergency Management Agreements that for railways in England saw the UK Government pay to private train companies an additional COVID-19 subsidy of £2,279.9 million between March and September 2020. This excludes subsidies to the London Underground and Transport for London or bus services throughout Great Britain. On the basis of the Barnett formula In Scotland a further £250million was provided to ensure

the continued operation of Scotrail by the private company Abellio ScotRail Limited. The second phase of this supplementary subsidy for rail in Great Britain, the so-called Emergency Recovery Management Agreements provides for example £100 million to keep Scotrail running until January 2021. Again, this is derived from the Barnett formula.

The application of the Barnett formula here means Northern Ireland has benefited from COVID-19 spending on rail in GB to an estimated total of £114.6million for the period March 2020 to January 2021 (£11.5 million per month approximately). In the case of bus services in England the UK Government allocated £750 million in COVID-19 emergency financial support up to October 2021. Applying the Barnett formula indicates that Northern Ireland's Barnett Consequential is £28.5 million (£3.6 million per month). This excludes the effect of Barnett Consequentials for spending on transport in London. The £121 million (£15.1 million per month) already received by the Northern Ireland Executive from emergency COVID-19 spending on public transport in GB (outside London) represents an underestimate of the true funding received attributable to public transport spending elsewhere in the UK.

A thorough review of the funding streams that have been allocated to all public transport modes in Northern Ireland indicates, at the time of writing, that those modes have received substantially less in emergency COVID-19 allocations in aggregate than their counterparts in GB. Recognition is given to this in the Executive Minister of Finance's Written Ministerial Statement on 2020-21 COVID-19 Allocations, published on Thursday 24 September 2020 [56]. This noted that, following allocations set out in that statement, £54.8 million of the funding set aside for Transport (and PPE) remained unallocated.

Of the four parts of the United Kingdom, Northern Ireland depends uniquely on external links by sea and air to ensure its connectivity with the remainder of the United Kingdom. Up to now very small amounts of funding from the Executive has been allocated to support these links. Moreover, internal public transport has been allocated less than 60% of what has been received by the Northern Ireland Executive on the basis of the level of emergency COVID-19 funding for public transport provided to private companies in Great Britain.

Both the UK Government and NI Executive have had to deal with a wide range of complex and competing demands as they have shaped their response to the pandemic. However, it is evident that for this financial year sufficient funding has been made available by the UK Government to the Northern Ireland Executive to meet both the on-going funding requirements for public transport in Northern Ireland and the funding and financing required to sustain operation of both Northern Ireland's key infrastructure Gateways. Should flexibility with funding at year end be possible and additional COVID-19 emergency funding be made available for 2021/2022 it is vitally important that both the UK Government and the NI Executive seek to prioritise funding both now and over the recovery period in order to support maintenance of these vital external links, given the profound economic and social need that has been identified in this report for sustained connectivity between NI and GB.

[56] http://www.niassembly.gov.uk/globalassets/documents/official-reports/written-ministerial-statements/2020-2021/wms_dof_240920.pdf

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APPENDIX A (Section 6)

Table A1 How many of these types of trips did you make between March 2019 and August 2019?

Overseas short breaks (1-3 nights)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
None	71%	75%	82%	51%	79%	78%
1	16%	11%	9%	18%	12%	10%
2	5%	5%	3%	8%	5%	5%
3	3%	3%	2%	7%	3%	3%
4	1%	1%	1%	5%	0%	0%
5	1%	1%	1%	4%	0%	0%
6	0%	1%	1%	1%	1%	0%
7	0%	1%	1%	1%	0%	0%
8	1%	0%	0%	0%	0%	0%
9	0%	0%	0%	0%	0%	0%
10	0%	0%	0%	1%	0%	1%
11	0%	0%	0%	0%	0%	0%
12	0%	0%	0%	0%	0%	1%
More than 12	1%	1%	0%	3%	0%	1%

Overseas holidays (4+ nights)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
None	57%	53%	56%	27%	51%	59%
1	27%	26%	23%	28%	33%	24%
2	8%	12%	15%	16%	13%	10%
3	3%	3%	0%	9%	1%	2%
4	1%	3%	3%	9%	0%	2%
5	1%	1%	1%	5%	0%	0%
6	0%	0%	0%	0%	0%	1%
7	0%	0%	0%	1%	0%	0%
8	0%	1%	1%	0%	0%	1%
9	0%	0%	0%	0%	0%	0%
10	0%	0%	1%	3%	0%	0%
11	0%	0%	0%	1%	1%	0%
12	0%	0%	0%	0%	0%	1%
More than 12	1%	0%	0%	1%	0%	0%

UK short breaks (1-3 nights)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
None	53%	45%	45%	44%	40%	46%
1	26%	24%	26%	14%	32%	23%
2	9%	15%	11%	14%	8%	17%
3	4%	7%	10%	7%	10%	6%
4	3%	2%	1%	2%	1%	2%
5	1%	2%	2%	6%	3%	1%
6	1%	2%	2%	4%	2%	1%
7	1%	0%	0%	1%	0%	0%
8	0%	1%	1%	1%	2%	1%
9	0%	0%	0%	0%	0%	0%
10	0%	1%	1%	1%	0%	0%
11	0%	0%	0%	1%	0%	0%
12	0%	1%	1%	2%	0%	1%
More than 12	1%	1%	0%	2%	2%	0%

UK holidays (4+ nights)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
None	72%	64%	57%	57%	67%	65%
1	15%	20%	29%	15%	20%	20%
2	5%	6%	9%	5%	7%	5%
3	2%	3%	2%	5%	3%	2%
4	2%	1%	1%	3%	0%	1%
5	1%	1%	0%	3%	0%	2%
6	0%	0%	0%	3%	0%	0%
7	1%	1%	0%	3%	0%	0%
8	0%	1%	0%	1%	0%	1%
9	1%	0%	2%	0%	0%	0%
10	0%	0%	0%	0%	0%	1%
11	0%	0%	0%	4%	0%	0%
12	0%	0%	0%	0%	1%	0%
More than 12	2%	2%	1%	3%	1%	2%

Table A 2 How many of these types of trips did you make between March 2020 and August 2020?

Overseas short breaks (1-3 nights)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
None	88%	92%	97%	83%	94%	93%
1	7%	3%	1%	3%	2%	3%
2	1%	1%	1%	1%	3%	0%
3	0%	2%	0%	6%	0%	1%
4	0%	1%	0%	0%	1%	1%
5	0%	0%	0%	1%	0%	0%
6	0%	0%	0%	1%	0%	0%
7	0%	0%	0%	1%	0%	0%
8	0%	0%	0%	1%	0%	0%
9	1%	0%	1%	0%	0%	0%
10	0%	0%	0%	0%	0%	0%
11	0%	0%	0%	0%	0%	0%
12	0%	0%	0%	0%	0%	0%
More than 12	0%	1%	0%	2%	0%	1%

Overseas holidays (4+ nights)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
None	87%	89%	94%	73%	87%	92%
1	7%	5%	4%	6%	6%	4%
2	1%	2%	1%	4%	6%	1%
3	2%	1%	0%	2%	0%	1%
4	1%	1%	0%	5%	1%	1%
5	0%	1%	2%	3%	0%	1%
6	0%	1%	0%	3%	0%	1%
7	1%	0%	0%	0%	0%	0%
8	0%	0%	0%	0%	0%	0%
9	0%	0%	0%	1%	0%	0%
10	0%	0%	0%	0%	0%	0%
11	0%	0%	0%	0%	0%	0%
12	0%	0%	0%	0%	0%	0%
More than 12	1%	1%	0%	3%	0%	0%

UK short breaks (1-3 nights)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
None	75%	72%	84%	58%	78%	72%
1	17%	18%	10%	19%	15%	19%
2	2%	4%	4%	3%	3%	4%
3	1%	2%	0%	5%	1%	2%
4	1%	1%	1%	1%	1%	0%
5	1%	1%	0%	3%	0%	0%
6	0%	1%	0%	2%	1%	1%
7	0%	1%	0%	2%	0%	0%
8	0%	0%	1%	0%	1%	0%
9	0%	1%	0%	1%	0%	1%
10	0%	0%	0%	1%	0%	0%
11	0%	0%	0%	0%	0%	0%
12	0%	0%	0%	0%	0%	0%
More than 12	0%	1%	0%	4%	0%	1%

UK holidays (4+ nights)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
None	86%	84%	86%	71%	89%	86%
1	7%	9%	11%	8%	10%	8%
2	1%	2%	2%	3%	0%	2%
3	2%	1%	0%	1%	0%	1%
4	0%	1%	0%	2%	1%	0%
5	0%	1%	0%	3%	0%	0%
6	0%	1%	0%	2%	0%	1%
7	0%	0%	1%	1%	0%	0%
8	1%	0%	0%	0%	0%	0%
9	0%	0%	0%	2%	0%	0%
10	0%	0%	1%	1%	0%	0%
11	0%	0%	0%	1%	0%	0%
12	0%	0%	0%	0%	0%	0%
More than 12	1%	2%	0%	4%	0%	2%

Table A 3 Using a scale of 1 – 5, where 1 equals very uncomfortable and 5 equals very comfortable, broadly speaking, how comfortable or uncomfortable would you feel doing the following in the next MONTH or so?

Going for a walk in a country park / trail

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Very uncomfortable	3%	3%	2%	1%	0%	4%
2 -	3%	2%	4%	1%	0%	3%
3 -	9%	8%	5%	8%	9%	9%
4 -	17%	15%	14%	14%	11%	16%
5 - Very comfortable	66%	70%	73%	72%	79%	68%
Don't know	2%	2%	2%	3%	1%	1%

Shopping in a major covered in / enclosed shopping centre

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Very uncomfortable	13%	14%	15%	10%	13%	15%
2 -	14%	19%	24%	20%	9%	20%
3 -	31%	29%	24%	17%	34%	32%
4 -	25%	21%	26%	29%	28%	18%
5 - Very comfortable	15%	15%	10%	23%	16%	14%
Don't know	2%	1%	1%	1%	0%	2%

Shopping in a large town / city centre

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Very uncomfortable	12%	11%	6%	6%	10%	13%
2 -	14%	18%	22%	18%	11%	19%
3 -	26%	28%	33%	24%	26%	29%
4 -	29%	22%	24%	20%	31%	21%
5 - Very comfortable	17%	18%	14%	31%	21%	15%
Don't know	2%	2%	1%	1%	0%	3%

Shopping in your local shops

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Very uncomfortable	5%	6%	3%	5%	3%	7%
2 -	7%	8%	11%	5%	8%	8%
3 -	24%	25%	20%	19%	20%	28%
4 -	35%	36%	38%	41%	44%	33%
5 - Very comfortable	26%	23%	26%	28%	25%	21%
Don't know	2%	2%	1%	2%	0%	3%

Eating at a restaurant

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Very uncomfortable	17%	14%	13%	13%	13%	15%
2 -	12%	18%	12%	14%	8%	21%
3 -	24%	23%	25%	22%	31%	21%
4 -	26%	25%	29%	23%	29%	24%
5 - Very comfortable	19%	18%	18%	27%	19%	16%
Don't know	3%	2%	2%	1%	0%	3%

Travelling by air

	Northern Ireland	Great Britain	Scotland	London	South East	GB elsewhere
1 - Very uncomfortable	36%	38%	40%	24%	38%	40%
2 -	17%	20%	19%	18%	20%	21%
3 -	16%	15%	16%	23%	17%	13%
4 -	16%	11%	11%	11%	18%	10%
5 - Very comfortable	11%	11%	9%	23%	6%	10%
Don't know	4%	5%	5%	1%	2%	6%

Travelling by other forms public transport, i.e. bus, coach, train, sea						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
1 - Very uncomfortable	28%	25%	25%	14%	26%	26%
2 -	22%	26%	22%	15%	28%	28%
3 -	22%	20%	22%	28%	16%	18%
4 -	14%	16%	17%	18%	21%	14%
5 - Very comfortable	11%	11%	9%	22%	9%	10%
Don't know	3%	3%	3%	2%	0%	3%

Having a drink inside a pub						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
1 - Very uncomfortable	30%	23%	24%	21%	23%	23%
2 -	15%	20%	19%	17%	20%	20%
3 -	22%	22%	17%	18%	22%	24%
4 -	14%	16%	22%	17%	18%	15%
5 - Very comfortable	15%	15%	15%	23%	16%	14%
Don't know	4%	3%	3%	3%	1%	4%

Returning to your usual workplace (e.g. office, factory, etc)						
	Northern Ireland	**Great Britain**	**Scotland**	**London**	**South East**	**GB elsewhere**
1 - Very uncomfortable	14%	11%	15%	18%	8%	9%
2 -	11%	12%	16%	9%	14%	12%
3 -	20%	22%	18%	19%	20%	24%
4 -	19%	18%	19%	21%	22%	16%
5 - Very comfortable	22%	20%	20%	21%	21%	19%
Don't know	13%	18%	12%	12%	16%	20%