



Photo from Envato



SCOTLAND

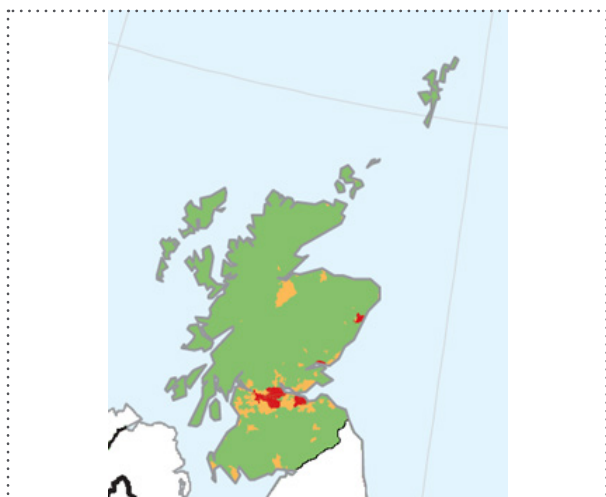
INSIGHT PAPER

Authors: John Nelson, Mark Beecroft, Richard Mounce
University of Aberdeen

Date: 20.04.2019

RURALITY (1)

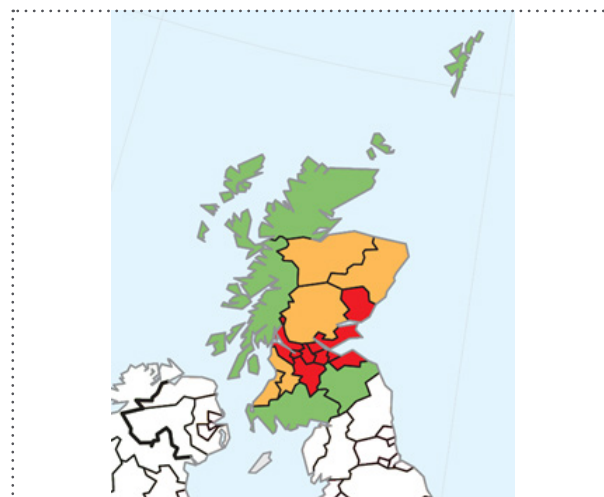
Degree of urbanisation for local administrative units level 2 (LAU2)



- Cities
- Towns and suburbs
- Rural Areas
- Data not available

Source: Eurostat, JRC and European Commission Directorate-General for Regional Policy, May 2016

Urban-rural typology for NUTS level 3 regions



- **Predominantly urban regions**
(rural population is less than 20% of the total population)
- **Intermediate regions**
(rural population is between 20% and 50% of the total population)
- **Predominantly rural regions**
(rural population is 50% or more of the total population)
- **Data not available**

Source: Eurostat, JRC, EFGS, REGIO-GIS, December 2016

DISTRIBUTION OF POPULATION

34.6%

Share of people living
in cities

48.2%

Share of people living
in towns and suburbs

17.2%

Share of people
living in rural areas

Source: Scottish Government, 2016

GEOGRAPHY

Scotland is a country that is part of the United Kingdom, covering the northern third of the island of Great Britain. Although in political union with the other countries of the United Kingdom of Great Britain and Northern Ireland (i.e. England, Wales and Northern Ireland), Scotland has a distinct legal system; as well as autonomy in sectors such as education and taxation, which have come about through the devolution of powers from the UK government since the re-establishment of a Scottish Parliament in 1997.

Scotland has a low population density, of approximately 69 people per km², compared with the population density of the UK which is approximately 271 people per km². A high proportion of the population lives in dispersed rural areas. Delivering services (including public transport) to such a population is costly, and generally results in poor service provision for those living in rural and remote areas. These factors result in a lack of mobility for people without access to a car (or for those unable to drive such as children, the elderly, or disabled people). The lack of rural mobility opportunities compounds the difficulties in delivering other services, such as healthcare. The age distribution of rural areas compared to the rest of Scotland is markedly different. Rural areas have a much lower proportion of the population in the age range 16 to 34, but a higher proportion of people aged 45 and over. Factors influencing migration decisions of young people moving out of rural areas include higher education and employment opportunities, housing and public transport availability.

Scotland has a high degree of rurality. Around 5.3 million people live in Scotland, with almost 1 million living in rural areas. Population growth in rural areas is disproportionately high.

Figure 1 highlights the poor levels of access provided to key services by public transport in rural areas. A lower percentage of people in rural areas find key services convenient, when compared to the rest of Scotland. This is particularly noticeable for hospitals, dentists, chemists, public transport, banking services and cash machines. For example, 54% of residents of remote rural areas find the nearest dentist convenient, compared to 79% of rest of Scotland residents.

As a result, 61% spent over £100 / week on fuel compared to 47% in the rest of Scotland. 84% of people in remote rural areas and 99% of people in accessible rural areas live within a 15-minute drive time to a GP compared to 100% of the population in the rest of Scotland. In remote rural areas, 56% people live within a 15-minute drive time to a secondary school, compared to 89% of people in accessible rural areas and 100% of people in the rest of Scotland.

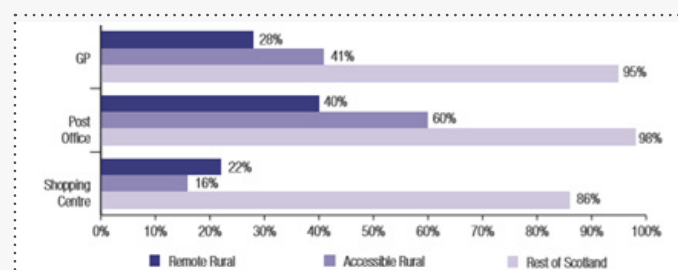


Figure 1. Percentage of population within 15-minutes' drive time by public transport of service, by geographic area, 2016 (Scottish Government, 2018a)

Unemployment is higher in Urban Scotland (6%) than in either of Remote or Accessible Rural Scotland (both 4%) (Scottish Government, 2018b). Table 1 shows that the percentage of the total population that is income and employment deprived is lower in rural areas than in the rest of Scotland, and is lowest overall in accessible rural areas. In 2017, 4% of 16-19 year olds were not participating in education, employment or training (NEET) in Scotland (UK Parliament, 2018). There is a trend for the proportion of young people that were NEET to decrease as the area categories become more rural.

	Remote Rural	Accessible Rural	Rest of Scotland
Number income deprived	26,240	44,900	588,780
Number employment deprived	13,305	24,915	331,440
Percentage of the population that are income deprived	8%	8%	13%
Percentage of the working age ¹ population that are employment deprived	7%	7%	11%

Table 1. Income and employment deprivation by geographic area, 2016 (Scottish Government, 2018a)

NATIONAL POLICIES RELATING TO RURAL MOBILITY AND PUBLIC TRANSPORT

Transport plays a critical role in meeting the Scottish Government's "Purpose". An efficient transport system is one of the key enablers for enhancing productivity and delivering faster, more sustainable economic growth. Enhancing Scotland's transport infrastructure and service provision can help open up new markets, increase access to employment and help build a critical mass of business that can drive up competitiveness and deliver growth. The progress of government in Scotland is measured via the National Performance Framework. The NPF includes two transport indicators: "Reduce the proportion of driver journeys delayed due to traffic congestion" (currently: Performance Maintaining) and "Increase the proportion of journeys to work made by public or active transport" (currently: Performance Maintaining).

- Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport.

Rural transport receives relatively limited specific attention with relevant issues being largely discussed within the context of Improved Quality, Accessibility and Affordability of transport. The NTS Refresh (2016) confirms the three key strategic outcomes identified in 2006:

- Improved journey times and connections between our cities and towns and our global markets to tackle congestion and lack of integration and connections in transport
- Reduced emissions to tackle climate change, air quality, health improvement



Photo by Blair Fraser on Unsplash

The **National Transport Strategy** was published in 2006 and contains the following objectives:

- Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency;
- Promote social inclusion by connecting remote and disadvantaged communities, and increasing the accessibility of the transport network;
- Protect the environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy;
- Improve safety of journeys by reducing accidents and enhancing the personal safety of pedestrians, drivers, passengers and staff;

- Improved quality, accessibility and affordability of transport, to give choice of public transport, better quality services and value for money, or alternative to car

The regulatory frameworks for transport in Scotland are provided for under UK-wide legislation (see section on Regulatory framework).

INSTITUTIONAL FRAMEWORK

At national level, transport falls under the portfolio of the Cabinet Secretary for Transport, Infrastructure and Connectivity, whose responsibilities include:

- Transport and public transport;
- Infrastructure investment policy;
- Islands (cross-government co-ordination)

Transport Scotland is the national transport agency for Scotland, delivering the Scottish Government's vision for transport. The agency has six directorates:

- Aviation, Maritime, Freight and Canals
- Finance, Corporate and Analytical Services
- Major Transport Infrastructure Projects
- Transport Policy
- Rail
- Trunk Road and Bus Operations

Transport Scotland works in partnership with private sector transport operators, local authorities, government and regional transport partnerships (RTPs). Regional Transport Partnerships (RTPs) were established under the 2005 Transport (Scotland) Act to strengthen the planning and delivery of regional transport to better serve the needs of people and businesses. The main task of each of the seven RTPs (see Figure 2) is to prepare a Regional Transport Strategy (some RTPs are also responsible for the delivery of transport services). Annual monitoring reports are produced. Each of the 32 local authorities is responsible for the production of a Local Transport Strategy. Research on transport governance in Scotland concluded that progress in governance of strategic transport issues hinges on closer integration between spatial planning and transport planning processes.

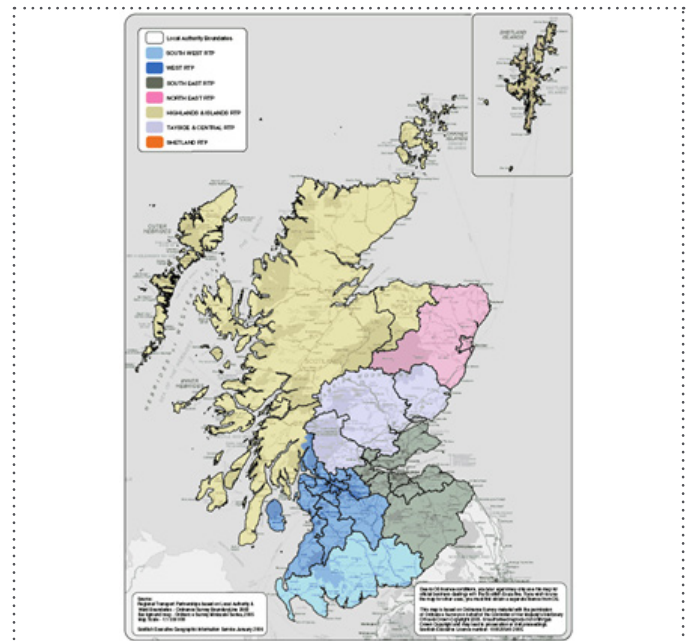


Figure 2. Map of RTPs

(source: www.webarchive.org.uk/wayback/archive/20180517081957/http://www.gov.scot/Publications/2006/03/06145237/10)

The research found evidence of 'over-stuffing' of Scottish transport governance structures – the creation of more layers of governance that can lack integration leading to difficulties in effectively taking action on transport issues. Some consolidation of local government could enable Regional Transport Partnerships to be reformed, and, where there are still partnerships of multiple local authorities, they would be more efficient were they to have fewer constituent local authorities. The research notes that the work of Regional Transport Partnerships was hampered by political cycles at local and national levels.

ORGANISATIONAL FRAMEWORK

Buses are Scotland's most-used form of public transport. Four times as many journeys were made by bus than train in 2015-16. In Scotland, 80% of bus services are commercially operated with the remaining 20% supported by transport authorities (Transport Scotland, 2017b). Bus routes are run on a commercial basis unless a local authority or other funder provides a subsidy on a route it feels is a necessary or lifeline service to the local community and it cannot be provided on a purely commercial basis (see Regulatory framework). This varies significantly across the country,

particularly with some rural areas being more heavily subsidised owing to lower patronage. Local Authorities are responsible for local infrastructure associated with the provision of buses. This includes bus shelters, lanes and the provision of subsidies to bus operators to run buses on non-commercially viable routes that they feel are important to communities in that area. In more rural areas the low population density means it is becoming increasingly difficult for services to remain commercially viable and hence for the network to be maintained.

ORGANISATIONAL FRAMEWORK

In some instances, especially where patronage would be too low to justify conventional scheduled bus services, authorities provide demand responsive (DRT) or dial-a-ride services using a mix of providers using bus and taxi firms and community transport groups. DRT services are for the general public or more commonly through dedicated services (i.e., transport for specific groups of the population, e.g., the elderly). Rural Flexible Transport Services (FTS) are characterized by flexible routing and scheduling of small to medium-sized vehicles operating in shared-ride mode between pick-up and drop-off locations according to passengers' needs, usually resulting in a "door-to-door" service. A study from 2006 (Scottish Executive, 2006) indicated that there were around 140 FTS schemes in Scotland with more than 50% of these being dedicated to mobility impaired clients. Dedicated FTS are generally standalone services, meaning that the transport resource remains poorly coordinated (Mounce et al., 2018).

- providing safe, accessible and attractive bus stops, bus stations and transport hubs; and
- working with bus operators and Traveline Scotland (a nationwide journey planner) to ensure that there is good access to information about routes, timetables and fares, including in real time.

There are a range of powers available to authorities – including powers to introduce local franchise schemes (or 'quality contracts'), statutory quality partnerships and ticketing schemes – but key to all of these is a recognition by operators and authorities that they have a shared interest in and a positive contribution to make towards securing good, cost effective local public transport services; and a willingness to work together to make this happen, including by sharing information on plans and concerns, whilst acknowledging the different commercial and policy imperatives to which they are subject.



Photo by Daniel MacDonald on Unsplash

There is increasing concern over the availability of bus services in rural areas. Some transport authorities report challenges with reducing market competition pushing costs up and making services vulnerable.

A significant minority of services that would not otherwise be viable receive additional financial support from local authorities in order to meet social needs in line with their local transport strategies and plans. Local authorities have a crucial role to play in creating good operating environments for bus services by:

- using the planning system to control development and the availability and cost of car parking;
- managing traffic and roads efficiently and providing and enforcing bus lanes and bus priority at junctions, enabling operators to run services quicker, more reliably and at lower cost;

Scotland has an extensive railway network using cross country links across the country, and connections to England, as well as local commuter links to the major cities. The railway network is owned by Network Rail, the non-profit organisation responsible for all of the railway infrastructure. Rail services are provided under franchises awarded by the government. The current holder of the Scottish franchise is Abellio ScotRail. Intercity services are also operated by CrossCountry, TransPennine Express, Virgin Trains and London North Eastern Railway. Within Scotland, 95% of passenger service trains are operated by ScotRail, with the remaining 5% being cross border (Rail Delivery Group, 2017).

ORGANISATIONAL FRAMEWORK

Much of the Scottish railway network provides links within and between urban areas. However, the railway in Scotland also plays an important role supporting rural areas, providing both lifeline services for local populations as well as acting as a gateway for visitors. The challenge the railway faces in rural areas is to ensure that it delivers public transport relevant to the markets it serves: the railway is often uncompetitive with roads in terms of journey times and with buses in terms of service frequency. Rural services are crucial for sustaining local populations: health, education and other social services are essential for rural areas to function properly. They are important in providing a lifeline to the markets they serve: the number of passengers carried can be small, but the economic and social impact of not having them would be immense. They are often challenging to manage. Many rural routes are single track, relatively minor incidents can quickly escalate if the causes are not identified and addressed promptly.

Targeted mobility services are provided for school transport and whilst these service provisions are not exclusively rural in character, they are most often applied in rural and remote-rural contexts. There is free transport provided by the local authority for pupils if their school isn't within 'walking distance' or:

- their family has a low income
- they have certain 'additional support' needs - for example a disability

- they cannot attend a school in their catchment area
- their walk or cycle to school is not safe
- they have a health issue that affects their mobility

In relation to health and social care transport services (Audit Scotland, 2011), The Scottish Ambulance Service has a statutory duty to provide the Patient Transport Service (PTS) for hospital access. Only patients with a medical need are eligible to access the PTS, for example if their condition needs to be monitored or they are not mobile enough to travel any other way. The PTS undertakes 1.5 million journeys to and from NHS appointments each year. There are over 600 patient transport vehicles, including ambulances, specialist vehicles and cars based throughout Scotland. Specially trained ambulance care assistants and volunteer drivers deliver the service. NHS boards provide transport for healthcare, for people who are not eligible for the PTS or when a patient is not able to get to their appointment or to get home from hospital. Local authorities provide transport to take people to social care services, such as day centres, and transport to schools, for example for pupils with special educational needs. They may also provide transport such as dial-a-ride services for people who cannot access regular public transport. All 32 Scottish councils operate their own fleet, either by commissioning services from the private sector or via contracts or service level agreements with the voluntary sector for health and social care transport.

REGULATORY FRAMEWORK

Regulatory frameworks for transport in Scotland are provided for under UK-wide legislation. There are two principal forms of regulation imposed on public transport operations. The first, safety regulation, is undisputed as necessary and can cover safe operations, for example driver hours, but also construction and use characteristics as well as emissions standards. The second, economic regulation, is more controversial in its application. Under the provisions of the 1985 Transport Act the UK has a deregulated bus market outside London (including Scotland) with competitive tendering being used to support services not provided by the market but which are deemed socially necessary. This means that in Scotland the same regulatory framework applies across the whole country.

Rail services were privatised under the provision of the Railways Act (1993) which resulted in a separation of track and infrastructure.

As noted in the organisational framework section the railway network is owned by Network Rail, the non-profit organisation responsible for all the railway infrastructure, whilst rail services are provided under franchises awarded by the government to private operators. In Scotland, Transport Scotland (the national transport agency) is responsible for the ScotRail franchise which has been held by Abellio since 2015. The franchise agreement requires that the franchisee "shall particularly in rural areas and areas where onward forms of public transport are less frequent work with other public transport operators to maximise public transport service timetable integration and cross connectivity". There is also a specific requirement to promote rural routes via the operator's communication and marketing strategy. Coastguard and maritime and air traffic control remain a UK government responsibility under the (UK) Department for Transport.

FINANCIAL FRAMEWORK

The refreshed National Transport Strategy of the Scottish Government (Transport Scotland, 2016) places a focus upon tackling geographical inequality by investing in transport services and infrastructure (particularly in rural and remote places) and supporting inclusive growth by enhancing regional cohesion. It invests annually over £1bn in public transport, through rail franchise payments, concessionary fares, grants to bus operators, and other sustainable transport options, though this is not designated specifically by area type e.g. urban or rural. The Government has committed to a £5bn programme of investment in Scotland's railways over five years to 2019, including the ScotRail franchise commitment to significantly enhance trains to support the Great Scenic Railways of Scotland package on Borders, Far North, Kyle & West Highlands routes. They are also committed to the largest road investment programme to date, including the dualling of the A9 between Perth and Inverness by 2025 (£3bn), the A96 dualling between Inverness and Aberdeen by 2030, and A82 improvements. These strategic routes link cities which are separated by significant rural and remote-rural population areas. The Government is also committed to further extension of the national cycle network, in urban, suburban and rural areas of Scotland and the delivery of new community cycling links in urban, suburban and rural areas of Scotland.

Scotland, with its extensive rural areas of very low population density, has historically spent a larger proportion of its global transport budget on revenue subsidy for 'lifeline' bus, rail and ferry services than is the case elsewhere in the UK. This brings a consequent reduction in the amount of money available for infrastructure development from the total transport pot. Policy initiatives from the early 2000s, such as providing free bus travel for every adult aged over 60, and subsidised ferry and air travel to the Scottish islands, help perpetuate this high revenue spending profile.

Bus operators in Scotland received £695 million in revenue in 2016-17, an increase of 4% on the previous year and a 9% increase over the last 5 years. Almost half (£298 million, 43%) of operator revenue came from Local or Central Government: through concessionary travel reimbursement, Bus Service Operators Grant (BSOG) or supported services. Transport Scotland also provides funding for local bus provision through the Bus Service Operators' Grant. Passenger revenue (i.e. ticket sales to non-concessionary passengers) accounted for around 57% of operators' revenue (£396 million) (Transport Scotland, 2017a). These are national figures and do not allow for area type disaggregation (e.g. urban, rural, remote-rural).

OTHER INFORMATION

According to MaaS Scotland, there is general agreement that the role of Central Government should be to enable innovation and delivery of shared mobility services not to act as the aggregator or provider. A major part of this role is ensuring that regulation and legislation support delivery of shared mobility services. However, much of the current regulation and legislation does not provide this support and needs to change. It is also important to use the potential of shared mobility services to address environmental, social equity and wider economic issues including rural concerns. If not, there is a danger that shared mobility service providers will concentrate on urban, high income areas. Some positive signs of innovation in this area are emerging.

In particular, the Mobility Innovation Living Laboratory (MILL) is a new innovation centre to establish the city of Dundee as a real-life test and experimentation environment for smart mobility solutions, encompassing new technologies, business models and regulatory frameworks.

KEY STAKEHOLDERS AND MINISTRIES ADDRESSING RURAL AREAS

TITLE	ROLE
Scottish Government	Provides investment for transport services and infrastructure; as well as a National Transport Strategy
Transport Scotland	National transport agency for Scotland, delivering the Scottish Government's vision for transport
Scottish Rural Parliament	Brings together representatives of rural communities from across Scotland together with decision-makers, to raise the profile of rural issues and identify solutions to rural challenges. It started in 2014 and takes place every two years. It is organised by Scottish Rural Action, which is a non-profit organisation.

LINKS TO WEBSITES

- www.gov.scot
- www.transport.gov.scot
- www.scottishruralparliament.org.uk

REFERENCES

- Audit Scotland (2011) Transport for health and social care: www.audit-scotland.gov.uk/docs/health/2011/nr_110804_transport_health.pdf
- MaaS Scotland (2018). Mobility as a Service: Positioning Scotland for an Emerging Global Market: https://maas-alliance.eu/wp-content/uploads/sites/7/2018/02/MaaS-Positioning-Scotland-for-an-Emerging-Global-Market_PUBLIC.pdf
- Mounce, R, Wright, S, Emele, C D, Zeng, C and Nelson, J D (2018) A tool to aid redesign of flexible transport services to increase efficiency in rural transport service provision. Journal of Intelligent Transportation Systems, 22(2), 175-185.
- Office for National Statistics (2018) Revised population estimates for England and Wales: mid-2012 to mid-2016: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2012tomid2016>
- Pangbourne K. The Changing Geography of Scottish Transport Governance. A thesis submitted for the degree of Doctor of Philosophy at the University of Aberdeen. 2010. Available from: <http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.531896>
- Rail Delivery Group (2017) Scotland's rail Infrastructure: The rail industry's advice for 2019 onwards: www.raildeliverygroup.com/component/arkhive/?task=file.download&id=469771815
- Scottish Executive (2006) Review of demand responsive transport in Scotland. www.webarchive.org.uk/wayback/archive/20180602072439/http://www.gov.scot/Publications/2006/05/18112606/0
- Scottish Government (2014) Scottish Household Survey: www.gov.scot/Topics/Statistics/16002/LATables2014/2014Excel
- Scottish Government (2015) Rural Scotland Key Facts 2015: People and Communities Services and Lifestyle Economy and Enterprise: www.gov.scot/Resource/0047/00473312.pdf

REFERENCES

- Scottish Government (2016) Scottish Index of Multiple Deprivation: <http://simd.scot/2016/#/simd2016/BTTTT/9/-4.0000/55.9000>
- Scottish Government (2016) Urban Rural Classification. www.gov.scot/publications/scottish-government-urban-rural-classification-2016/pages/4
- Scottish Government (2018a) Rural Scotland Key Facts 2018. www.gov.scot/publications/rural-scotland-key-facts-2018/pages/3
- Scottish Government (2018b) Understanding the Scottish rural economy: research paper. www.gov.scot/publications/understanding-scottish-rural-economy/pages/4
- Transport Scotland (2016) National Transport Strategy (NTS), 2016: www.scotland.gov.uk/Resource/Doc/157751/0042649.pdf
- (The refreshed NTS document (2016): www.transport.gov.scot/media/10310/transport-scotland-national-transport-strategy-january-2016-final-online.pdf
- Transport Scotland (2017a) Scottish Transport Statistics, No 36, 2017 Edition: www.transport.gov.scot/publication/scottish-transport-statistics-no-36-2017-edition
- Transport Scotland (2017b) Local Bus Services in Scotland - Improving the Framework For Delivery: A Consultation: www.transport.gov.scot/media/39681/local-bus-services-in-scotland-a-consultation.pdf
- UK Parliament (2018) House of Commons Library BRIEFING PAPER Number SN 06705, 24 August 2018. <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06705#fullreport>
- Velaga, N R, Nelson, J D, Wright, S D and Farrington, J H (2012) The Potential Role of Flexible Transport Services in enhancing Rural Public Transport Provision. Journal of Public Transportation. 15(1), 111-131.