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Public Service Obligation (PSO) Funding for Public Transport

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Summary

This Social Impact Assessment (SIA) provides a socioeconomic and demographic profile of the users of Public Service Obligation (PSO) funded public transport services in Ireland. SIAs provide information on the profile of users of public services that may be valuable for the budgetary process as decision-makers consider the possible distributional effects of various budgetary options in relation to a given policy area. Many of the public transport services in Ireland are funded under the Public Service Provision Payments expenditure programme which includes the PSO as well as other smaller programmes, such as the Rural Transport Programme. The main purpose of the PSO is to subsidise Dublin Bus, Iarnród Éireann, and Bus Éireann to provide socially necessary but financially unviable public transport services.

The PSO outturn accounted for €288.8 million of Government expenditure in 2018, having increased from a low of €209.7 million in 2015. The PSO outturn was at its highest in 2008 at €308.9 million.

Key Findings

In line with the available data and in order to focus on the services funded under the PSO, the analysis concentrates on the population aged 15 and over using public transport to get to work. Given the complexity of this policy area, there are a number of limitations associated with the analysis and the interpretation of its findings that are highlighted in the paper. The key findings are:

- **Overall number of users:** The bus (111,400) accounts for almost twice the number of people using public transport to get to work as rail (63,100).
- **Rural/Urban use:** 92.8 percent of those who use the bus to get to work and 92.8 percent of those who use rail to get to work live in urban areas.
- **Age:** Younger workers (between 20 and 39) account for a larger percentage of those using public transport to get to work than older workers (40+). 61.9 percent of rail users and 62.8 percent of bus users are between 20 and 39. Relative to the size of their populations, higher proportions of young workers use public transport to get to work compared to older workers.
- **Gender:** Females account for 51.5 percent of those living in rural areas who use the bus to get to work and 55.6 percent in urban areas. Males account for 52.4 percent of those living in rural areas using rail to get to work and 51.1 percent in urban areas.
- **Occupation:** Professional occupations account for the largest share of those using rail to get to work (29.7%) and those using the bus to get to work (17.1%). Sales and customer service, elementary, and administrative and secretarial occupations have the highest relative shares of bus use compared to their population shares. Administrative and secretarial, professional and associate professional occupations have the highest relative shares of rail use compared to their population shares.
- **Income:** Those using rail to get to work have the highest median income (€41,700) of any mode of transport; those using the bus have a median income (€27,400) which is below the national median (€32,500).
- **Nationality:** 72 percent of those using the bus to get to work and 79.1 percent of those using rail are Irish nationals. Non-Irish nationals have a high relative share of bus and rail use compared to their population share, particularly for bus.
- **Level of education:** Individuals with third-level education or higher account for the majority of those who use rail to get to work (76.1%) and those who use the bus to get to work (54.2%). They also have a high relative share of rail use compared to their population share.

Introduction

This paper examines the socioeconomic and demographic characteristics of the users of public transport services funded under the Public Service Obligation (PSO) as part of the Department of Public Expenditure & Reform's Social Impact Assessment (SIA) series.¹ The PSO is a subvention payment to meet the difference between income from fares and the cost of operating services for public transport providers. The main providers of PSO services are Dublin Bus, Bus Éireann and Iarnród Éireann. This SIA builds on previous Spending Review papers on PSO funding for public transport² and performance measurement of the PSO.³

The SIA series aims to provide a systematic analysis of the socioeconomic and demographic characteristics of users of public services. SIAs form an important part of the development of a process of 'budget and policy proofing as a means of advancing equality, reducing poverty and strengthening economic and social rights', as set out in the Programme for Government published in May 2016.⁴ These analyses provide valuable information for the budgetary process as their findings may inform decision-makers of the likely distributional effects of various budgetary options in relation to a given policy area. This paper is the first SIA conducted on PSO-funded public transport services to date.

Extending the SIA methodology to the area of public transport is important as public transport services have direct impacts on society. Firstly, public transport is an important service provided by the State to "transit-dependent" individuals, meaning those who cannot travel by their own means, whether due to not owning a car or having a disability. Furthermore, public transport provision advances other Government goals such as reducing greenhouse gas emissions, improving environmental quality, reducing regional socioeconomic disparities, promoting social inclusion, enhancing transport system efficiency and improving quality of life.⁵

Within the outlined SIA Framework, this paper will be structured as follows:

- Overview of public transport policy, services and the level of expenditure within.
- Discussion of data and methodology used in the analysis and associated limitations.
- Analysis of the profile of public transport users, across the following variables: area (urban/rural), age, gender, income, socioeconomic group, occupation, household composition, nationality and level of education.

¹ [Lawless, J., Reilly, D. \(2016\). *Social Impact Assessment Framework*.](#)

² [O'Callaghan, D. \(2017\). *Public Service Obligation \(PSO\) Funding for Public Transport*.](#)

³ [Prior, S. \(2018\). *Public Service Obligation \(PSO\) Funding for Public Transport: Analysis of Performance Measurement*.](#)

⁴ [Lawless, J., Reilly, D. \(2016\). *Social Impact Assessment Framework*.](#)

⁵ [A Programme for a Partnership Government, May 2016.](#)

Overview and Rationale of Public Transport Policy and Spending

This section of the paper provides a brief overview of public transport services funded under the PSO (and reference to other public transport in the State), the rationale of State funding for public transport services and overall spending on PSO-funded public transport in Ireland.

Overview of State Funding for Public Transport Services

Funding for the majority of public transport services is provided under the Public Service Provision Payments (PSPP) expenditure programme. The PSO subsidy, which funds the majority of public transport services, is the largest component of the PSPP. As well as the PSO subsidy, the PSPP also includes programmes such as the Rural Transport Programme and the Green Schools Programme. The PSO is a subvention payment to meet the difference between income from fares and the cost of operating the services for public transport providers. The main providers of PSO services are Dublin Bus, Bus Éireann and Iarnród Éireann. The PSO also includes payments to other minor operators that provide regular services in rural areas.

The PSO subsidy represents one of multiple operator revenue streams; other sources include State funding through the Free Travel Scheme and school transport funding provided to Bus Éireann by the Department of Education and Skills, as well as fare revenue and independent sources such as advertising revenue. The State does not subsidise the costs of operating the LUAS service, but has provided financial capital to pay for the LUAS' infrastructure. LUAS services are available entirely in Dublin.

This SIA focuses primarily on Dublin Bus, Iarnród Éireann and Bus Éireann, as these are the main public transport services subsidised under the PSO scheme. The LUAS is also included in the analysis due to its inclusion in the "Train, DART or LUAS" category of the available data.

Rationale of the PSO Subsidy

The overall rationale of subsidising public transport services is to provide socially necessary but financially unviable services, as well as encouraging greater public transport use. The effective and efficient operation of a public transport system can lead to a situation where society benefits overall.

The objectives of the PSO are as follows:

- To provide transport services that are socially beneficial but financially unviable.
 - Examples of social benefits include reducing negative externalities such as air pollution, greenhouse gas emissions, and congestion and safety concerns associated with private car driving.

- To encourage a modal shift to public transport through higher service provision and lower fares.
- To increase accessibility and social equity
 - Such as greater access for transit-dependent individuals, including those with disabilities, the elderly or people on lower incomes without access to a car.
 - Public transport can connect rural areas to urban centres even if it is not financially profitable. These services have a role in connecting communities and promoting social cohesion.

See O’Callaghan (2017) for a more detailed theoretical overview of the rationale and objectives of the PSO subsidy.⁶

Overview of Spending on Public Transport

The PSO outturn, having risen in line with increased economic activity and Exchequer revenue to a peak of €308.9 million in 2008, was curtailed significantly between 2008 and 2015 to €209.7 million. Since 2015, there has been a notable increase in the PSO outturn to €288.8 million in 2018. The PSO accounts for the vast majority of PSPP expenditure. In 2018, the PSPP outturn was €303.4 million.⁷

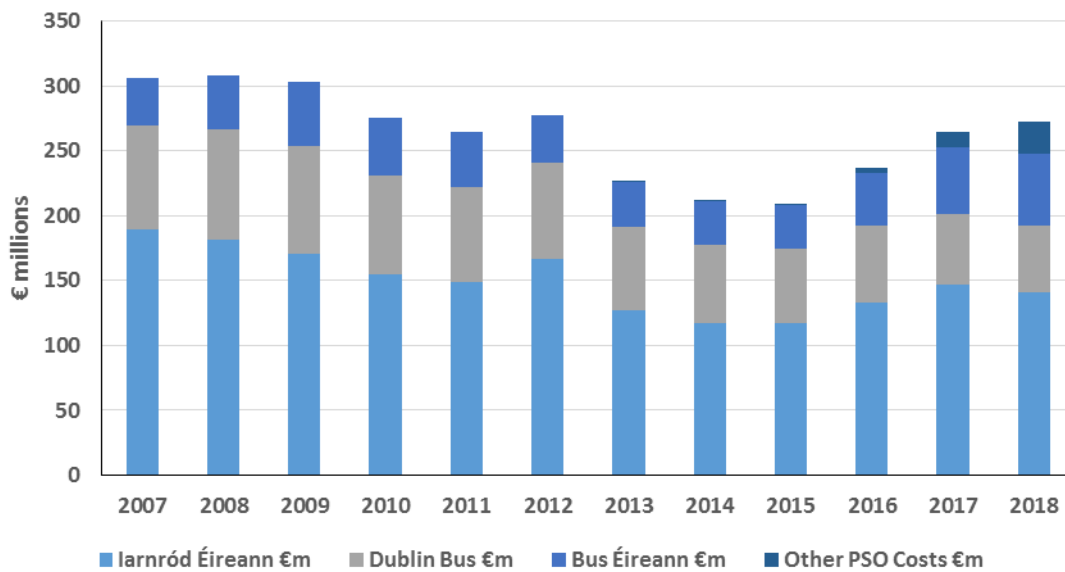
Figure 1 provides an indication of the scale of expenditure on the PSO by operator between 2007 and 2018. Iarnród Éireann has received the largest portion of the PSO subsidy each year, accounting for an average of 56.7 percent of the PSO over this period. Iarnród Éireann has, however, accounted for a generally declining share of the overall PSO over this time. Dublin Bus has accounted for a broadly constant share of the PSO over this time period, averaging 26 percent, though this has declined considerably since 2016. Bus Éireann has been receiving a relatively higher proportion of the PSO in recent years, increasing from 11.9 percent in 2007 to 20.1 percent in 2018. Other services, such as the Local Link, have accounted for a relatively small share of the PSO since 2013. The Exchequer does not provide subsidy payments for the operation of the LUAS; it is operated and maintained by the private company Transdev. It does, however, contribute significantly to the cost of the infrastructure which the LUAS relies on. Since 1999, the State has spent €1.4 billion on LUAS red and green line construction, Cross City and Green Line Capacity Enhancement.⁸

⁶ O’Callaghan, D. (2017). *Public Service Obligation (PSO) Funding for Public Transport*.

⁷ Source: Department of Public Expenditure and Reform Databank.

⁸ Figures provided by the Department of Transport, Tourism and Sport.

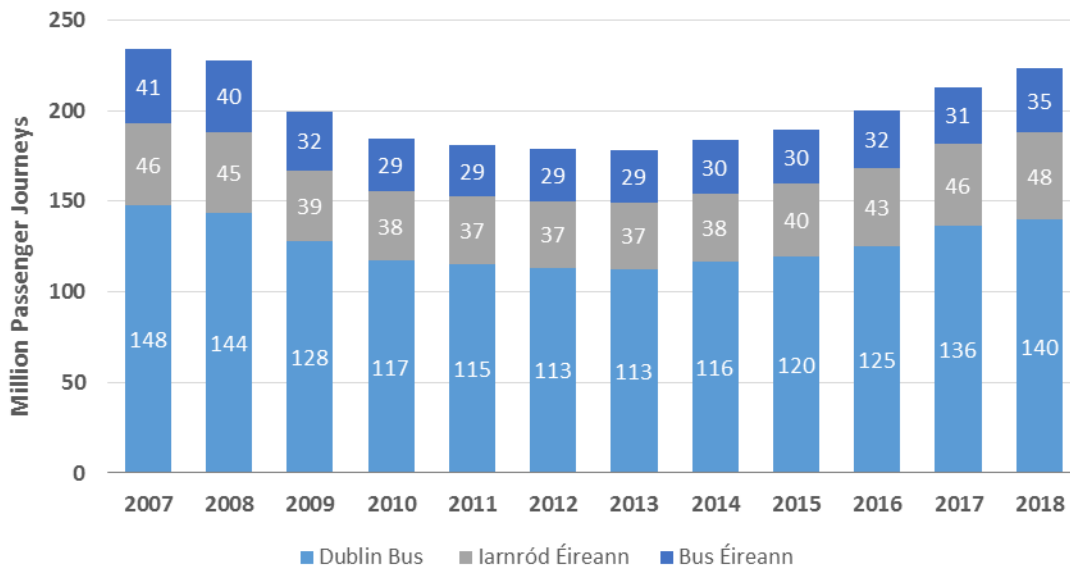
Figure 1: PSO Subsidy Payments by Operator, 2007 – 2018



Source: 2006-2014, NTA; 2015-2018 DTTaS. Note: All € Million. Rounding applied *2012 figures for Dublin Bus and Iarnród Éireann includes supplementary funding provided during the year; figures amounted to €6 million for Dublin Bus and €30 million for Iarnród Éireann. **2014 figures includes €2.5 million in supplementary funding for Bus Éireann PSO services. ***In 2015 and 2016 Iarnród Éireann received €19.17m and €22.5m respectively for Heavy Maintenance expenditure which has been capitalised as a fixed asset, this expenditure was funded by PSO and is recorded as Deferred Grant Income in the balance sheet. The Deferred Grant Income will be released in line with the depreciation of the Heavy Maintenance Asset. 2017 split unavailable.****The payment of €11.23m in 2017 includes payment for the Gross Cost Operators, support costs and a once off payment €6.68m to TII for Luas CrossCity mobilisation costs.

Figure 2 illustrates annual passenger journey numbers for the three main PSO operators between 2007 and 2018. Passenger numbers for the three main PSO operators have increased year-on-year since 2013, with total passenger journeys for these operators reaching 223.3 million in 2018. Counting all other PSO services, such as Local Link, journey numbers totalled 226.8 million by public transport. Dublin Bus has the highest number of passenger journeys overall, accounting for 140 million in 2018.

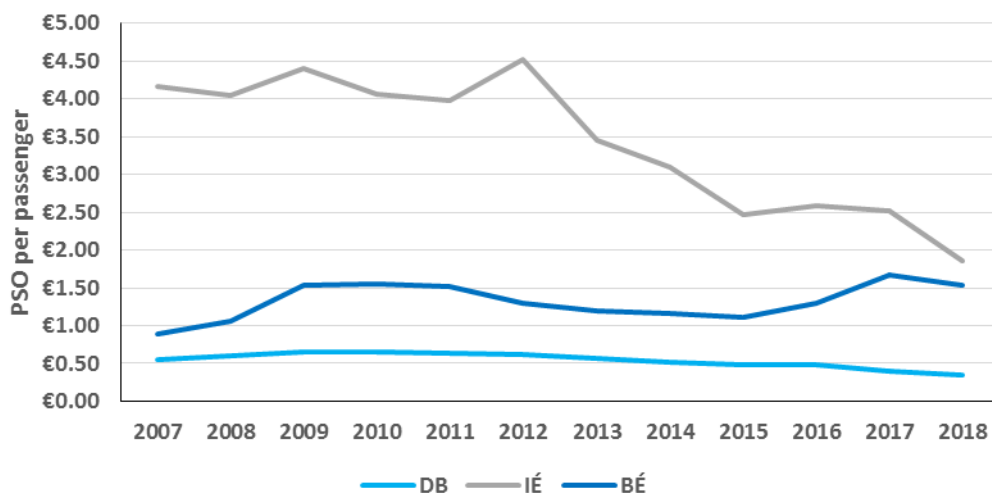
Figure 2: Passenger Journeys by Main Operator, 2007 – 2018



Source: NTA Bus and Rail Statistics

Figure 3 illustrates the PSO per passenger between 2007 and 2018. This metric is calculated by dividing the total PSO subsidy for each service by the number of passengers that use the service annually. Dublin Bus consistently had the lowest PSO per passenger between 2007 and 2018. In 2018, Dublin Bus’ PSO per passenger was €0.34. Since 2007, Iarnród Éireann’s PSO per passenger has declined significantly, from €4.17 in 2007 to €1.86 in 2018. This trend appears to be mostly driven by a decrease in the overall PSO allocated to Iarnród Éireann between 2012 and 2015, rather than increasing passenger numbers during this time. The further decline in PSO per passenger since 2015 appears to be driven more by increasing passenger numbers. Bus Éireann’s PSO per passenger has increased considerably between 2016 and 2018 to €1.54 in 2018.

Figure 3: PSO per Passenger, 2007 – 2018



Source: NTA Bus and Rail Statistics & Operator Annual Reports. Authors’ own calculations.

Analysis of Users of PSO Funded Public Transport

This section of the paper provides analysis of the characteristics of users of PSO-funded public transport in Ireland. The main data sources used to conduct this analysis include 2016 census data from the Central Statistics Office (CSO) and another CSO dataset linking census 2016 data with the Person Income Register which was produced as the basis of the Geographical Profiles of Income in Ireland Publication.⁹

The variables that are considered here are area (urban/rural), age, gender, income, socioeconomic group, occupation, household composition, nationality and education level. The categories of public transport in the census include 'bus, minibus or coach'; and 'train, DART or LUAS'. Throughout the analysis 'bus, minibus or coach' will be referred to as bus; and 'train, DART or LUAS' as rail. The data on mode of transport includes LUAS users in the rail category. Although the LUAS is not part of the PSO, LUAS users are included in the analysis throughout.

Overview of Methodology and Data Sources

The following section details the data sources used within this SIA. It covers the sources of data, definitional issues and limitations/constraints with the analysis.

Census 2016 – As part of Census returns, households are asked about their travel behaviours to get to work. The responses include categories for public transport, active travel (bike or walking), private car use (driver or passenger) and others including motorcycles, lorry, van and those who work mainly from home. It is possible to get these data along with other variables from the census, including home address, age, gender, nationality, occupation, employment type and nationality. These are available online on the CSO Statbank.

Place of Work Census of Anonymised Records 2016 (POWSCAR) – POWSCAR is the definitive source of data on travel to work, school and college. All workers and students resident in Ireland on Census night were coded to their place of work, school or college. A detailed microdata file was prepared containing demographic and socioeconomic characteristics for these residents, as well as information on the origin and destination of their journeys. POWSCAR has detailed regional data, as well as variables on education, household composition, industrial group, socioeconomic group, journey time and total passenger numbers.

⁹ Methodology notes on the dataset underlying the Geographical Profiles of Income in Ireland Publication; <https://www.cso.ie/en/releasesandpublications/ep/p-gpii/geographicalprofilesincomeireland2016/backgroundandmethodology/>

CSO Geographical Profiles of Income in Ireland – This dataset provided by the CSO is the result of a data-linking exercise between the Person Income Register and the Census of Population Analysis Dataset. The Person Income Register is derived from administrative holdings by the Revenue Commissioners and the Department of Employment Affairs and Social Protection. This provides a near-complete picture of individual level income. This allows for new analysis of income by mode of transport used to get to work.

Limitations of Analysis

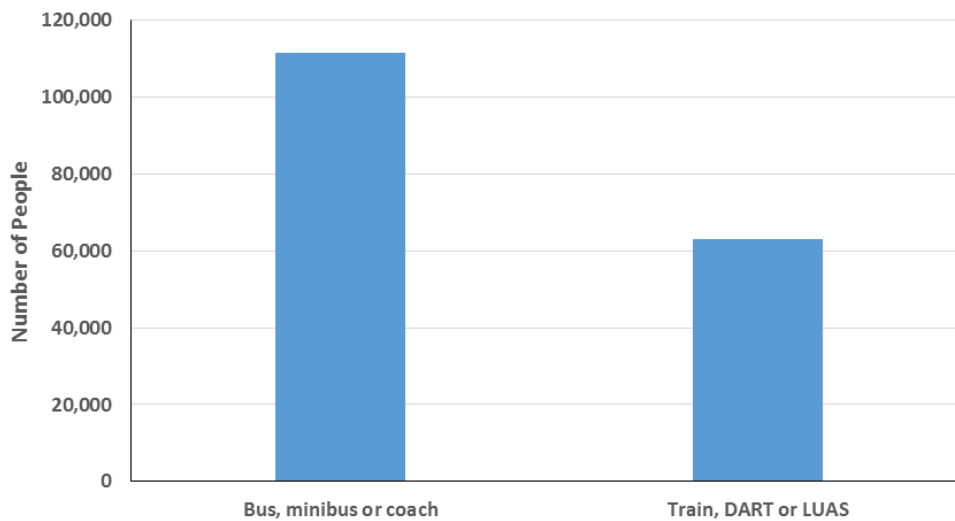
At the outset it is useful to outline some of the limitations involved with the analysis. Firstly, to focus the analysis on users of PSO services, and exclude non-PSO public transport, the analysis is restricted to the population over 15 and at work who use public transport to get to work. Thus certain journeys and individuals are not represented in the analysis. Public transport is not only used for work purposes; it is also used for engagement in educational, social and civic life. The Census, however, only captures data on transport use to work, school or college. Students are excluded as most public transport services used by students are provided as part of the School Transport Programme which is outside the scope of this SIA. Similarly, by focusing on those using public transport to get to work, this should exclude most of those who avail of the Free Travel Scheme which is also outside the scope of this SIA. The Census data used in this analysis are from the 2016 Census, which are the most recent data available, but the profile of public transport users may have changed somewhat in the intervening years. Finally, caution is advised in interpreting these findings as public transport is a complex policy area with significant challenges of endogeneity. For example, public transport is concentrated in urban areas, where different profiles of people (e.g. income) to rural areas reside. Furthermore, investments in public transport can, in time, have impacts on local development and house prices¹⁰, affecting the profile of public transport users over time.

Overall Number of Workers Using Public Transport

As seen in Figure 4, the total number of people over 15 travelling to work by bus in 2016 was around 111,400. The total number of people over 15 using rail to get to work in 2016 was around 63,100.

¹⁰ Daft.ie LUAS and DART House Price Stop Map <https://www.daft.ie/blog/2017-luas-and-dart-house-price-stop-map/>

Figure 4: Total number of people over 15 using public transport to get to work, 2016

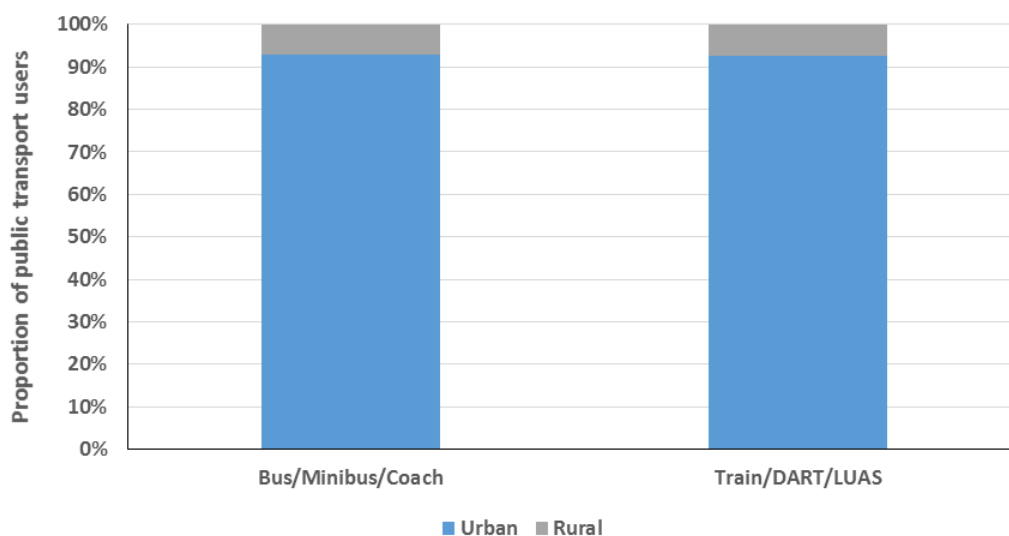


Source: CSO StatBank. Census of Population. Profile 6 – Commuting in Ireland.

Public Transport in Rural and Urban Areas

Public transport use is largely determined by public transport infrastructure. The viability of public transport infrastructure, in turn, is affected by regional population density. People living in urban areas account for the largest share of public transport users. 69 percent of all bus and 76 percent of all those using rail to travel to work are taken by people living in Dublin. Figure 5 shows the urban/rural profile of public transport users. 92.8 percent of all bus users and 92.8 percent of all rail users live in urban areas. 7.2 percent of bus and rail users are from rural areas.

Figure 5: Proportion of public transport use for journeys to work, urban and rural areas, 2016

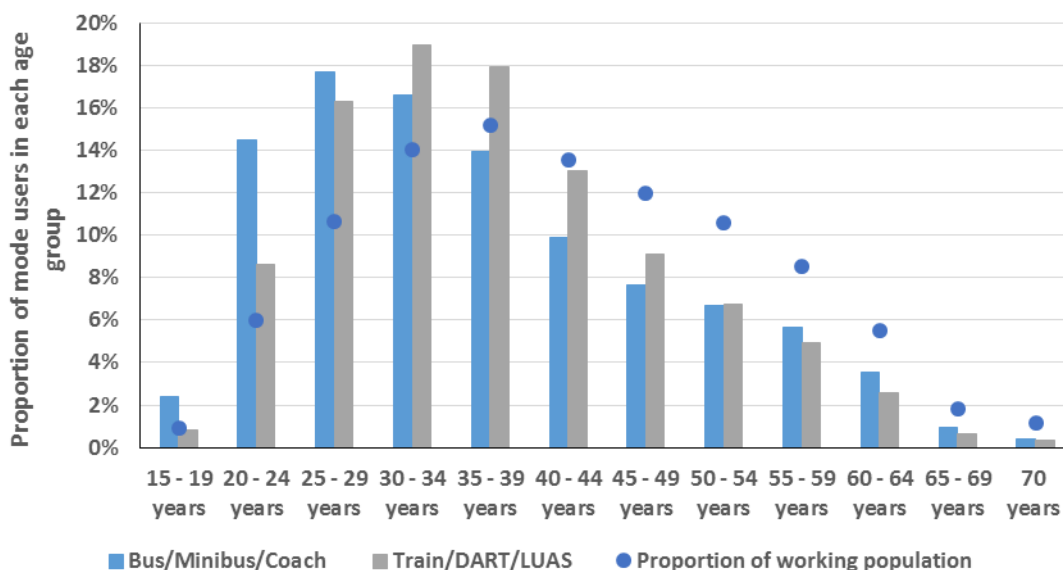


Source: CSO StatBank. Census of Population. Profile 6 – Commuting in Ireland. Note: aggregate town or urban area is defined as settlements with a total population of 1,500 people or more. Aggregate rural area refers to the population outside aggregate town areas and includes the population of settlements with a population of less than 1,500 persons.

Age of Those Using Public Transport to Travel to Work

Figure 6 shows the age profile of the population aged 15 and over at work who use public transport to get to work. The majority of these public transport users are workers aged between 20 and 39. 61.9 percent of these rail users are aged between 20 and 39; and 62.8 percent of these bus users are aged between 20 and 39. This graph also illustrates that younger workers have a higher proportional usage of public transport than older workers. For individuals aged between 20 and 35, the numbers using both modes of public transport to get to work are higher than their respective proportions of the working population. It should also be noted that Dublin, where public transport is more readily available, has a high percentage of young workers. 33.8 percent of people aged 20-39 live in Dublin compared to 28.3 percent of the overall population, as of 2016.¹¹

Figure 6: Age profile of public transport users over 15 at work, 2016



Source: CSO StatBank. Census of Population. Profile 6 – Commuting in Ireland.

¹¹ CSO Statbank;
<https://statbank.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=E2022&PLanguage=0>

Gender of Those Using Public Transport to Travel to Work

Figure 7 shows the gender profile of the population aged 15 and over at work who use public transport to get to work. In urban areas, 55.6 percent of these bus users are female and 51.1 percent of rail users are male. In rural areas, 51.5 percent of bus users are female and 52.4 percent of rail users are male. As a proportion of their populations, females have higher proportional usage of the bus than males (6.8% Vs 4.7%), while usage of rail is similar (3.4% Vs 3.1%).

Figure 7(a): Gender profile of public transport users over 15 at work in urban areas

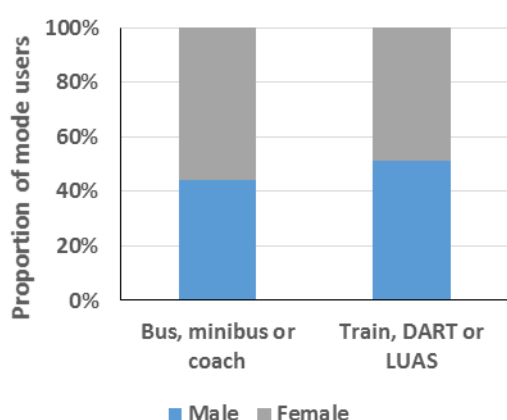
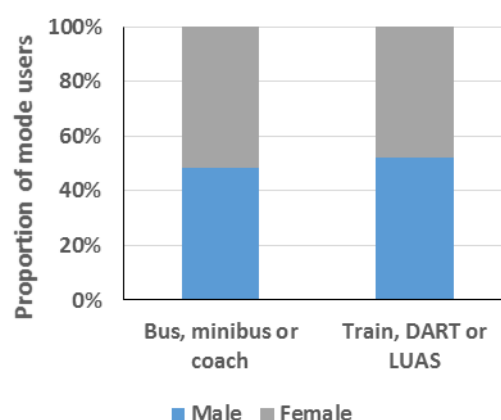


Figure 7(b): Gender profile of public transport users over 15 at work in rural areas



Source: CSO StatBank. Census of Population. Profile 6 – Commuting in Ireland.

Earned Income of Those Using Public Transport to Travel to Work

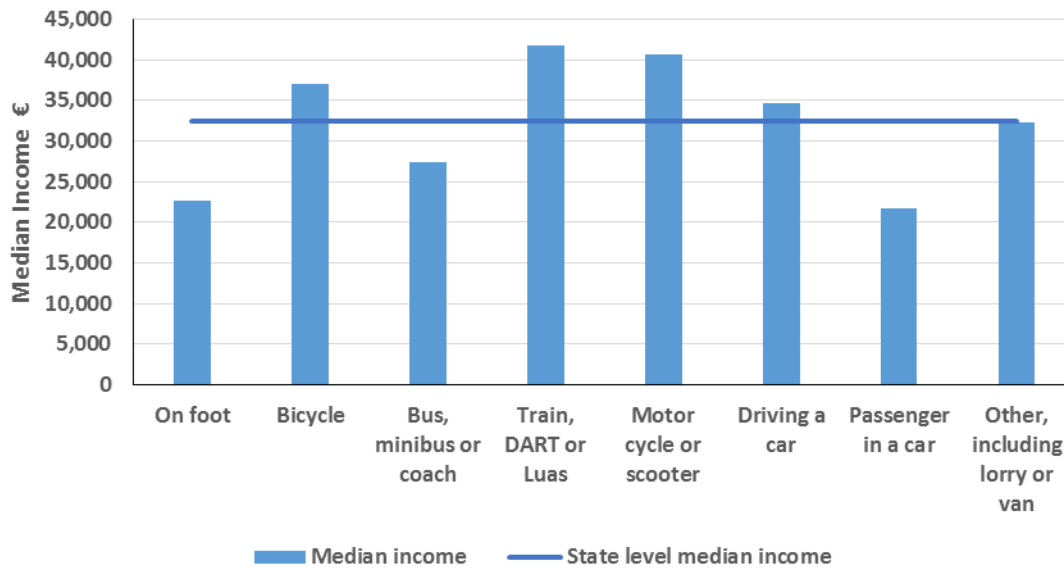
Figure 8 shows the national annual median earned income¹² for the population at work using all modes of public transport, active travel and car to get to work. The State-level median income for the population at work (€32,500) is shown for comparison. Rail users have the highest median income of around €41,700, which is €9,200 above the national median. Caution should be exercised in interpreting this finding, however as rail use is predominantly located in urban areas, where incomes are generally higher¹³. Furthermore, the existence of rail infrastructure impacts house prices over time, which affects the income profile of users. Individuals who walk to work have the lowest median

¹² Annual gross earnings for 2016 from P35 employee income and IT form 11 self-employed trading income before deductions such as tax and PRSI from Revenue unadjusted for hours and/or weeks worked – CSO Geographical Profiles of Income in Ireland <https://www.cso.ie/en/releasesandpublications/ep/p-gpii/geographicalprofilesincomeireland2016/backgroundandmethodology/>

¹³ CSO Geographical Profiles of Income in Ireland - <https://www.cso.ie/en/releasesandpublications/ep/p-gpii/geographicalprofilesincomeireland2016/incomeireland/>

income at around €22,600, which is €9,900 below the national median. Bus users have a lower median income than rail users, at around €27,400, and this is €5,100 below the national median. Those who travel to work by rail, bicycle, or as drivers all have median incomes above the State-level median income for all means of travel. Those who walk, use the bus or are passengers in a car all have median incomes below the national median.

Figure 8: Median income (€) of the population at work by mode of transport, 2016



Source: CSO StatBank, Geographical Profiles of People in Ireland

The high median income of rail users compared to the median income of the whole population does not appear to be a Dublin-driven phenomenon as rail users have a higher median income than the whole population in 26 of the 29 local authorities for which data are available. A case-study analysis in Box 1 below, focusing on four of the highest median income electoral districts in Dublin where both bus and rail are available, shows that rail users have a higher median income than bus users and often higher than the general median income in the electoral division.

Box 1

The graphs below show the median incomes of those using public transport in four electoral districts (EDs) in Dublin that are amongst the highest median income EDs in the county and have populations of over 5,000. It highlights that, for these particular EDs, where both modes exist, rail users have a higher median income than bus users and often higher than the general median income in the ED.

Figure 9 (a) Median Income (€) of mode users in Castleknock-Park

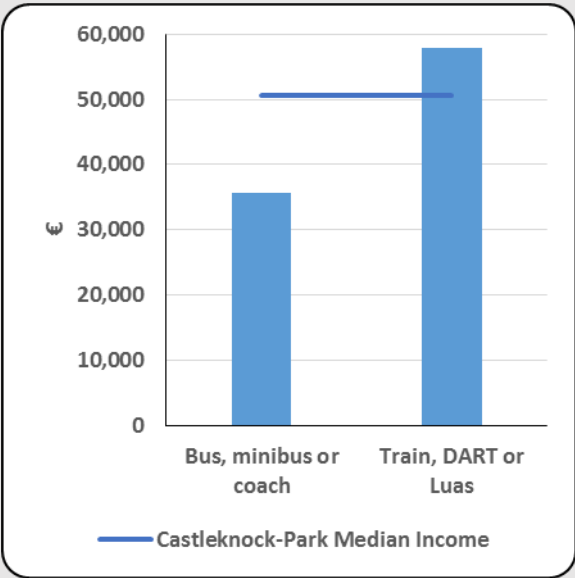


Figure 9 (b) Median Income (€) of mode users in Clontarf East B

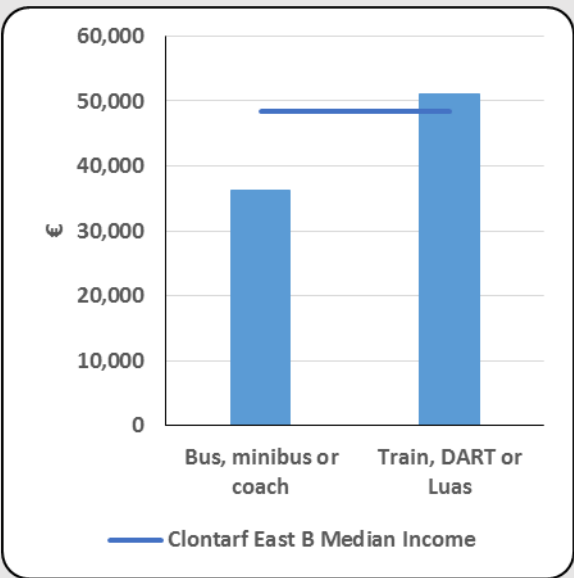


Figure 9 (c) Median Income (€) of mode users in Blackrock-Carysfort

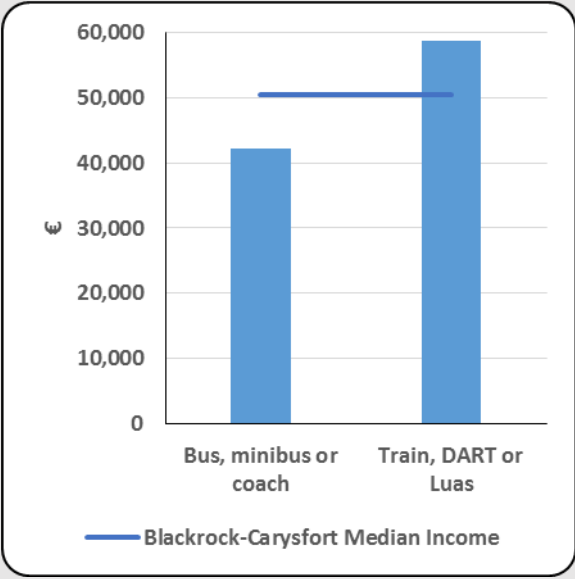
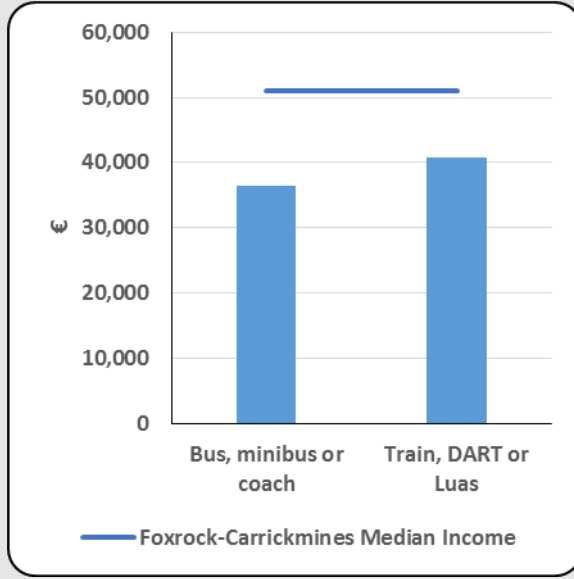


Figure 9 (d) Median Income (€) of mode users in Foxrock-Carrickmines

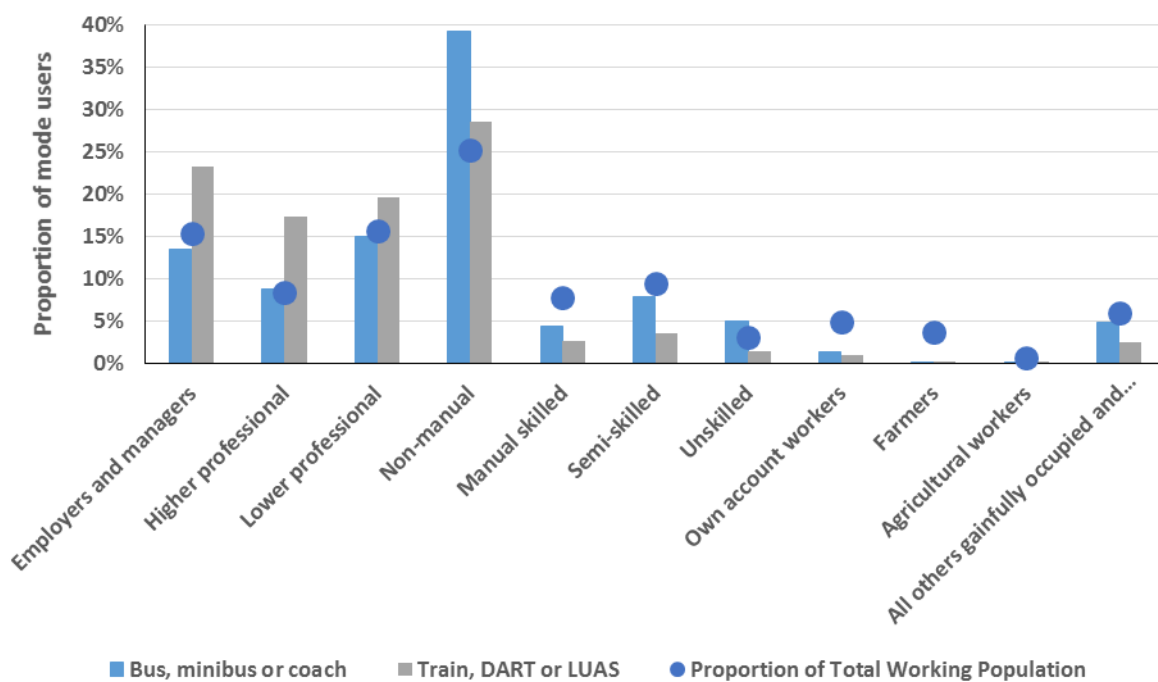


Source: Underlying data of Geographical Profiles of People in Ireland

Socioeconomic Group of Those Using Public Transport to Travel to Work

Figure 10 shows the socioeconomic profile of the population aged 15 and over who use public transport to get to work. 76.5 percent of these bus users and 88.9 percent of rail users are in the socioeconomic groups: employers and managers, higher and lower professionals, and non-manual. These groups also disproportionately use rail, relative to their share of the population, as they collectively only account for 64.5 percent of the working population. The single socioeconomic group with the largest number of people using public transport to get to work is non-manual, with 39.3 percent of bus users and 28.5 percent of rail users. This is mostly driven by the fact that non-manual workers account for most of the population, with around 496,500 (25.2%) people in this socioeconomic group. 12.7 percent of these bus users and 4.9 percent of rail users are in unskilled or semi-skilled socioeconomic groups. 12.7 percent of these bus users and 4.9 percent of rail users are in unskilled or semi-skilled socioeconomic groups.

Figure 10: Socioeconomic profile of those using public transport to travel to work, 2016



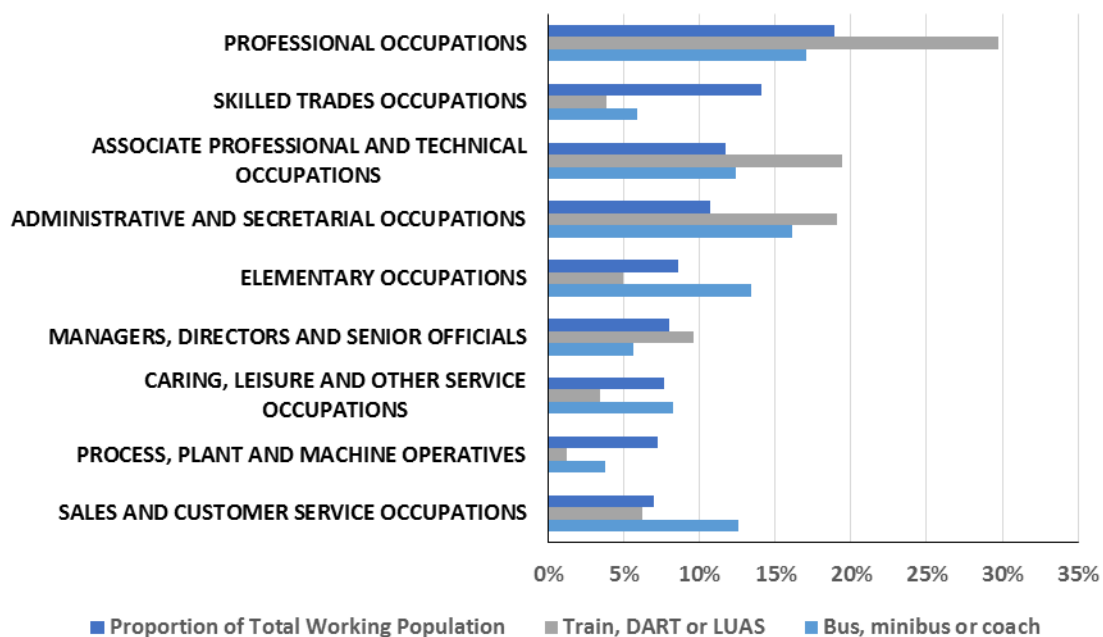
Source: CSO POWSCAR.

Occupation of Those Using Public Transport to Travel to Work

Figure 11 shows the occupational profile of the population aged 15 and over and at work who use public transport to get to work. The highest proportion of both bus and rail users are in professional occupations. 29.7 percent of these rail users are in professional occupations and 17.1 percent of these bus users are in professional occupations. 1.2 percent of these rail users and 3.8 percent of these bus users are process, plant and machine operatives. They account for the lowest proportion of public transport users.

Professional, associate professional and technical, and administrative occupations are disproportionately represented on rail, compared to their share of the population. Elementary, administrative and secretarial, and sales and customer service occupations are disproportionately represented on the bus, compared to their population share. Geographical and income factors likely affect this distribution.

Figure 11: Occupational profile of public transport users, 2016

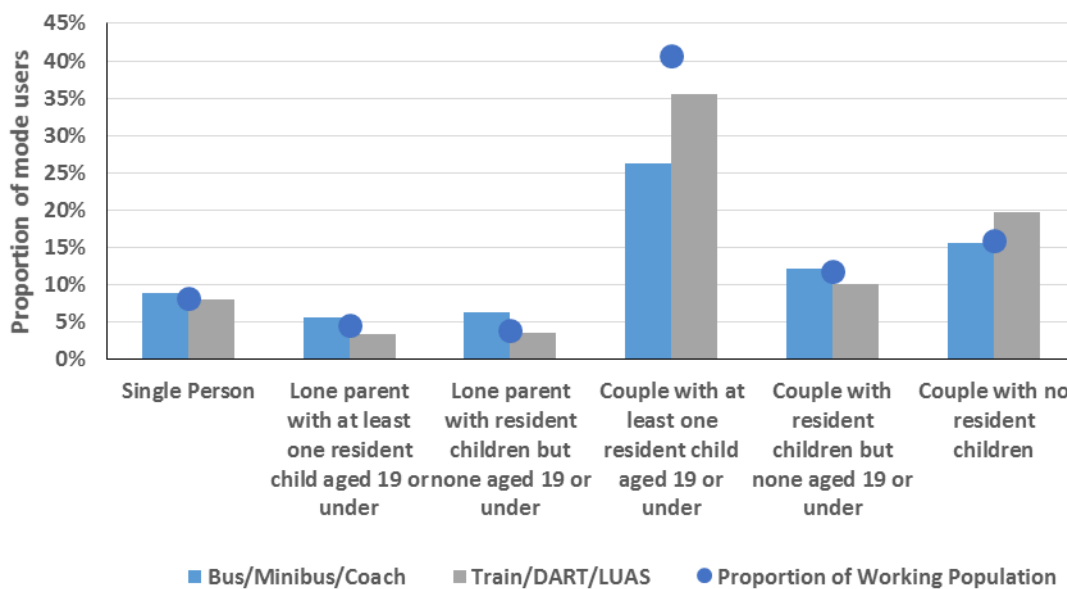


Source: CSO StatBank. Census of Population. Profile 6 – Commuting in Ireland. Intermediate occupational groups are aggregated into broad occupational groups. Other / not stated excluded from chart.

Household Composition of Those Using Public Transport to Travel to Work

Figure 12 shows the household composition profile of the population over 15 and at work who use public transport to get to work. 40.7 percent of the working population are in couples with at least one resident child aged 19 or under, and they account for 26.2 percent of bus users and 35.6 percent of rail users. Thus, given their relatively high share of the population, this group accounts for a smaller share of public transport users than would be expected, particularly for bus. 4 percent of the working population aged 15 and over at work are households with a lone parent with resident children but none aged 19 or under, and they comprise 6.4 percent of bus and 3.7 percent of rail users. Like the finding on socioeconomic groups, this profile is mostly driven by the household composition profile of the general population.

Figure 12: Household composition profile of those using public transport to get to work, 2016

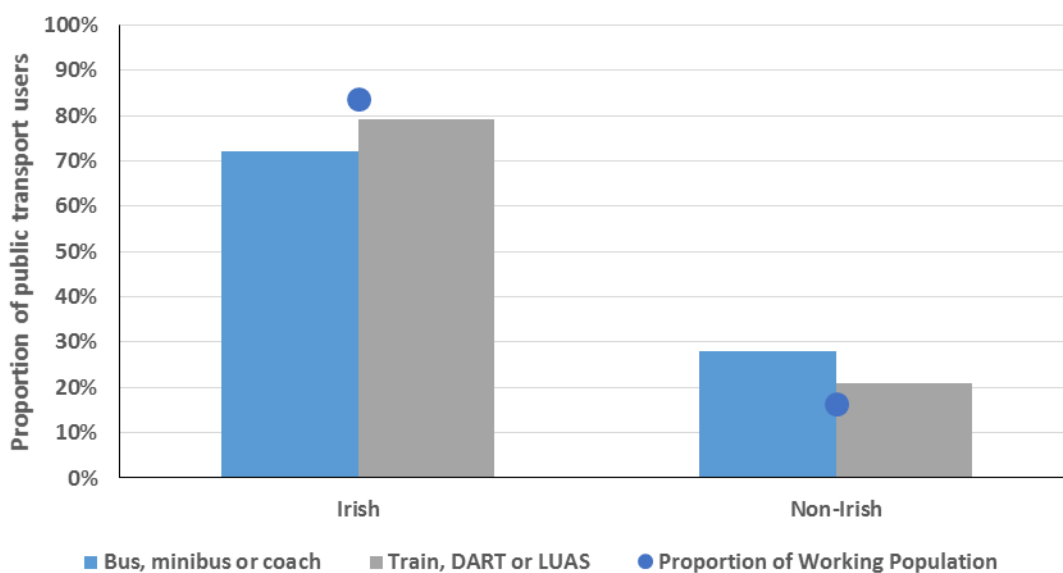


Source: CSO POWSCAR

Nationality of Those Using Public Transport to Travel to Work

Figure 13 shows the national profile of the population over 15 and at work who use public transport to get to work. 72 percent of these bus users are Irish and 79.1 percent of these rail users are Irish. It should be noted that Irish people account for the majority of the population. Figure 12 also illustrates the relative sizes of the Irish and non-Irish population in the overall population of workers. Irish people account for 83.6 percent of the working population, though they account for 72 percent of bus users and 79.1 percent of rail users. Non-Irish people account for 16.4 percent of the population, but 28 percent of bus users and 20.9 percent of rail users.

Figure 13: Nationality profile of those who use public transport to travel to work, 2016

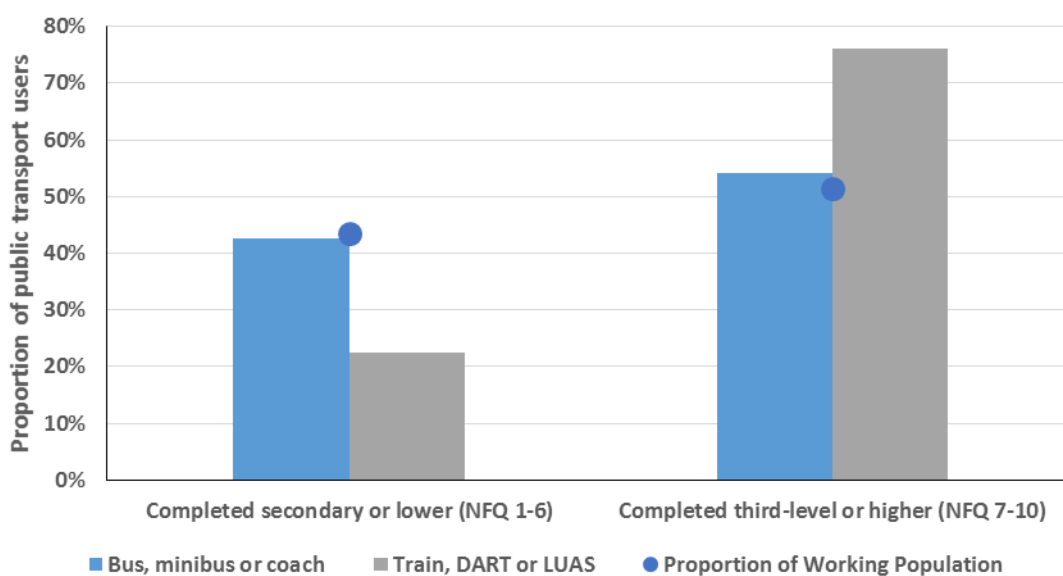


Source: CSO StatBank. Census of Population. Profile 6 – Commuting in Ireland. Note: non-Irish includes not-stated/no nationality

Education Level of Those Using Public Transport to Travel to Work

Figure 14 shows the education level profile of public transport users aged 15 and over and travelling to work in 2016. 76.1 percent of these rail users have third-level education or higher (NFQ 7-10), while 22.5 percent have second-level education or lower (NFQ 1-6). 54.2 percent of bus users have completed third-level education or higher and 42.6 percent of bus users have completed second-level education or lower. Figure 14 also shows the proportion of the working population by educational attainment. 51.5 percent of the working population have completed third-level education or higher. Therefore, this group's level of bus use is in line with their relative size in the population of workers, whereas their level of rail use is higher than their relative size in the population. Similarly, although workers who have completed second-level education or lower represent 43.4 percent of the working population, this group accounts for 22.5 percent of rail use.

Figure 14: Educational profile of those who use public transport to get to work, 2016



Source: CSO POWSCAR. Not stated excluded from chart.

Key Findings and Conclusion

In conclusion, this SIA has established a baseline demographic and socioeconomic profile of the users of PSO-funded public transport services who use these services to get to work. The key findings of this SIA are as follows:

- **Overall number of users:** The bus (111,400) accounts for almost twice the number of people using public transport to get to work as rail (63,100).
- **Rural/Urban use:** 92.8 percent of those who use the bus to get to work and 92.8 percent of those who use rail to get to work live in urban areas.
- **Age:** Younger workers (between 20 and 39) account for a larger percentage of those using public transport to get to work than older workers (40+). 62.8 percent of bus users are between 20 and 39 and 61.9 percent of rail users are between 20 and 39. Relative to their population size, higher proportions of young workers use public transport to get to work compared to older workers.
- **Gender:** Females account for 51.5 percent of those living in rural areas who use the bus to get to work and 55.6 percent in urban areas. Males account for 52.4 percent of those living in rural areas using rail to get to work and 51.1 percent in urban areas. Relative to the size of their respective populations, females have a slightly higher proportional use of bus to get to work than males.
- **Occupation:** Professional occupations account for the largest share of those using rail to get to work (29.7%) and those using the bus to get to work (17.1%). Associate professional and technical occupations account for the next highest share of rail users (19.4%) and one of the highest shares of bus use (12.4%). Sales and customer service, elementary, and administrative and secretarial occupations have high relative shares of bus use compared to their population shares. Administrative and secretarial, professional and associate professional occupations have high relative shares of rail use compared to their population shares.
- **Income:** Those using rail to get to work have the highest median income (€41,700) of users of any mode of transport; while those using the bus have a median income of €27,400, which is below the national median of €32,500.
- **Nationality:** 72 percent of those using the bus to get to work and 79.1 percent of those using rail are Irish nationals. It should be noted that Irish people comprise 83.6 percent of the working population. Non-Irish nationals have a high relative share of bus and rail use compared to their population share, particularly for bus.

- **Level of education:** Individuals with third-level education or higher account for the majority of those who use rail to get to work (76.1%) and those who use the bus to get to work (54.2%). Individuals with third-level education or higher represent 51.5 percent of the working population, so this group has a particularly high relative share of rail use compared to their population share.

Further Considerations

- In order to better understand the complexity of public transport policy and how use varies geographically, further analysis at the area of Local Authority or Electoral Division would be beneficial, if the data allow. The heterogeneity of how public transport is used within and across regions should be better understood to inform policy.
- It would be beneficial to explore, using econometric techniques, the determinants of public transport use where public transport infrastructure exists, at the area of Electoral Divisions or Local Authorities. This might provide insights into the factors affecting modal use, such as price, distance to transport mode, and quality of service. Active travel could also be considered.
- As stated earlier in the paper, the rationale and objectives of the PSO are manifold. When considering the findings of this SIA, it would be valuable to interpret them with reference to specific objectives, to enquire as to what extent the various objectives are met, and how the profile of users might be different according to the objective. For instance, around the objective of accessibility, it would be beneficial to examine public transport use for specific groups, such as those with a disability, the elderly or students, and compare this internationally.

Quality Assurance process

To ensure accuracy and methodological rigour, the author engaged in the following quality assurance process.

Internal/Departmental

- ✓ Line management
- ✓ Other divisions/sections

External

- ✓ Other Government Department
- ✓ Quality Assurance Group (QAG)



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