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Addressing transport barriers to work in low income neighbourhoods

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A review of evidence and practice

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Executive Summary

Introduction

This evidence review explores the links between poverty and transport to support a wider study into how the transport barriers to work for residents in low income neighbourhoods can be addressed. It argues that transport issues faced by households in poverty are **not just a matter of physical infrastructure but are shaped by the nature and location of both housing and employment**. For this reason, the review includes discussion of how poverty interacts with these domains in ways that often reinforce transport barriers for low income households. It also considers how these barriers are not just practical or material but also shaped by **a range of social, cultural and psychological factors** in terms of attachment to place and 'spatial horizons'.

Transport, poverty and access to work

- Key **transport barriers** faced by low income households include:
  - Limitations in the provision of transport services
  - Resource constraints on using transport
  - Travel times and their interaction with caring responsibilities.
- Residents of low income neighbourhoods **rely heavily on bus services** and often face issues regarding the frequency, timing, reliability of bus services as well as the range of places served.
- The **limited financial resources** available to such residents restricts the locations where they can realistically find paid employment; this particularly applies to those most likely to be engaged in low paid work.
- Transport issues affect **different groups** to varying extents with evidence to show that age, ethnicity and, in particular, gender can exacerbate the barriers to accessing and using transport.

How housing and labour markets shape the link between transport and poverty

- There is a growing **'spatial mismatch'** between the location of housing and major centres of employment. This is especially the case for lower income groups as low-skilled occupations have become increasingly dispersed to out-of-town locations.
- At the same time, the wage levels on offer in these types of jobs may be **insufficient to cover the costs of commuting**. This issue has become more acute in recent years as public transport fare increases have been consistently above average inflation.
- **Residential mobility** may offer households a way of increasing employment opportunities, but a lack of affordable housing limits options for low income families.
- Long waiting lists for social housing and limited stock choices make it difficult to arrange transfers even within the same area, let alone as a means of moving to another part of the country with more job opportunities.

- Moving may not always be the best option as many low income neighbourhoods also offer a high degree of community stability, with **essential support networks** that not only help people get by, but can also serve to facilitate people moving into work.

Perceptual barriers

- Much of the research on spatial horizons and attachment to place has emphasised **the 'local' nature of people's mental map**s in low income neighbourhoods. This may prevent them from considering employment in places outside these areas, even if they are accessible and affordable.
- **Limited propensity to travel** is shaped by a number of factors including unfamiliarity, lack of confidence and concerns about safety.
- That said, some members of low income households are **comfortable travelling further afield**, partly because of past experience but also to pursue career ambitions.

Policy interventions

- Policy interventions that have been used to improve low income residents' connectivity to areas where there are employment opportunities may be divided into five types:
  - **Transport-related schemes** such as new public transport links and vehicle loan schemes;
  - **Employment- and job search-related intervention**s involving a combination of financial support and personalised advice;
  - **Land use planning** and the designation of land for employment-related uses adjacent to low income neighbourhoods;
  - **Facilitation of residential mobility** through financial and practical support;
  - **Overcoming perceptual barriers** to using transport.
- A key finding is that physical changes such as the installation of new transport infrastructure and the development of more mixed land use patterns are unlikely to be sufficient on their own in connecting large numbers of jobseekers in low income neighbourhoods to employment opportunities.
- Similarly, facilitating housing mobility may improve residents' general quality of life, but it does not appear to lead to better employment outcomes.
- Rather, each of these approaches needs to be complemented by targeted interventions that help people overcome financial, informational, perceptual and emotional barriers to making trips to hitherto unfamiliar destinations, or to overcome stigmatised perceptions of their home area. Such interventions also need to be of sufficient scale and duration to have a significant effect.

1. Introduction

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1.1. Background to the research project

Transport is a key factor shaping experiences of poverty. The ability of households in poverty to find paid work often depends on access to affordable, regular and reliable transport. This can make it harder to secure and sustain employment for those living in low income neighbourhoods in more peripheral locations that are poorly served by public transport or involve long distance commuting by private transport. These difficulties may be compounded by the nature of work where low wages make transport costs unviable; regular or unsocial hours do not fit around timetables; employment locations are increasingly peripheral e.g. out-of-town retail centres; and workers are expected to frequently change their working location.

Housing issues can also exacerbate barriers to using transport and accessing work. Changes in the location of social housing through the extension of Right to Buy to housing associations and the potential sale of 'high value' council housing may further residualise stock in more peripheral locations. This may make it more difficult for tenants to commute, or move into appropriate accommodation nearer to employment opportunities.

All this means that transport policy can play a key role in supporting poverty reduction and mitigation through making it easier for households in poverty to access work. Devolution of funding and powers to city regional level in England provides new opportunities for Local Enterprise Partnerships (LEPs) and combined authorities to embed objectives around poverty reduction in transport strategies and policy. To date, however, these new city regional institutions have tended to focus on generating economic growth in the hope that the benefits will trickle down rather than explicitly linking policy interventions to poverty reduction (see for example Crisp *et al.*, 2017). The current focus on supporting economic growth in areas best placed to prosper also reflects wider economic thought that uneven growth is an inevitable, indeed necessary, corollary to national economic prosperity; and that those left behind in declining places could and should adapt through greater residential mobility (see for example Overman, 2011).

At the same time, urgent discussions across a range of UK-based and international institutions about the need to promote 'inclusive growth' (Beatty *et al.*, 2016) highlight possibilities for embedding anti-poverty objectives across a range of policy areas including transport.

This evidence review seeks, therefore, to explore the links between poverty and transport as the basis for wider research into how city regions can address the transport barriers to work for residents in low income neighbourhoods, particularly in more peripheral locations. It rests on the assumption that growth itself is not enough. Moreover, it contends that a better understanding of how connectivity shapes poverty can, through further engagement with stakeholders, support co-ordinated action across different policy domains to maximise the ability of members of households in poverty to find and sustain employment. Clearly, transport issues are not just a

matter of transport infrastructure alone and will be shaped by the nature and location of both housing and employment. For this reason, the review moves beyond a narrow focus on transport to include discussion of how poverty interacts with other domains - housing and employment - to inform and often reinforce transport barriers for low income households. It also considers how barriers to using transport are not just practical or material but also shaped by social and emotional perceptions in terms of attachment to place and 'spatial horizons'.

1.2. Aims and objectives of this review

This review of evidence and practice forms the first strand of this research project, which will later include stakeholder and resident interviews followed by policy development work. The review is based on a rapid search of evidence with a particular focus on relevant documents that sets transport provision and travel behaviour in its wider socio-economic context. Evidence was assembled on a targeted (and hence selective) basis as a means of building upon previous reviews, using specific search terms in web-based engines such as Ingenta Connect, Mendeley, Scopus and Google Scholar. This review has **three main aims**:

- To understand how **the links between transport and poverty** have been conceptualised and researched as a basis for identifying gaps in knowledge.
- To explore how other variables - particularly **employment and housing** - mediate the relationship between transport and poverty.
- To identify the full range and **effectiveness of policy interventions** around connectivity that have been trialled to date to inform our policy testing work.

The research will focus primarily on issues of connectivity in terms of *commuting* to work but will also, as a secondary objective, explore options for residential *mobility* in terms of moving house to secure work.

1.3. Transport policy and devolution

Transport policy has historically been highly centralised in the UK outside London but this has started to change under the 'devolution revolution' initiated in 2010 by the then Coalition government. The bulk of capital funding for transport projects has been devolved to Local Enterprise Partnerships through the Local Growth Fund (Butcher, 2016a). This is only one of a number of sources of funding, however, that can be used to fund capital or revenue costs for local public transport [1].

Devolution deals agreed with recently formed Combined Authorities have also seen further funding and powers ceded to city regions that include:

- bus franchising powers to set routes and let franchises to bus companies for operating those services;
- the ability to introduce multi-modal 'smart' ticketing systems (like the London Oyster card);
- multi-year integrated transport budgets;
- a commitment to joint working between each Combined Authority, Network Rail, Highways England and (where relevant) HS2.

(Butcher, 2016a)

[1] Others include central government grant; the Local Majors Fund; the Regional Growth Fund; the Access Fund; local authority property taxes and localised charges; and local authority capital finance (Butcher, 2016a).

Of all these powers, **bus franchising** is perhaps the most significant (Raikes, 2016). The Bus Services Act passed in 2017 will enable local authorities and combined authorities to determine bus routes and fares and let franchises to private bus companies. It will also permit city regions to develop more horizontally integrated transport systems through powers to co-ordinate timetables and align ticketing (ibid.) These powers could be used directly to benefit low income households by, for example, introducing concessionary fares for jobseekers to support job search or for low paid workers to mitigate transport costs (Raikes, 2016).

This devolution of powers will bring some city regions closer into line with London which saw responsibility for London's buses, Overground trains, Underground system, traffic lights and river transport devolved to Transport for London in 1999 (Butcher, 2016a). All statutory responsibilities lie with the Mayor who has a duty to produce an integrated transport strategy (ibid.).

Re-regulation of bus services in England would see a divergence from Scotland where a deregulated framework will continue, similar to the system in England before the Bus Services Act became law. However, there is growing interest in regulating buses in Scotland following recent developments in England (Butcher, 2016b). By contrast, the award of the ScotRail franchise is already devolved, as is responsibility for tramways and guided transport systems, e.g. the Edinburgh tram (ibid.).

Alongside devolution deals with individual combined authorities, the UK government has also legislated through the Cities and Local Government Devolution Act 2016 to provide for the creation of Sub-national Transport Bodies (STBs). These invest legal powers and duties in pan-regional STBs to advise transport ministers on investment priorities in their own areas (Butcher, 2016a). The first STB, Transport for the North (TfN), has been set up to coordinate government investment in the 'northern powerhouse' and is expected to gain statutory status later in 2017. Spanning the North of England, TfN is currently working on a multi-modal Strategic Transport Plan that will outline investment priorities in terms of smart ticketing and integrated travel, major highways, pan-Northern rail, strategic access for freight and logistics, and interventions to support international connectivity (TfN, 2017).

This growing devolution of transport powers and funding responds to longstanding calls for greater local, sub-regional and regional control over transport policy (Butcher, 2016a). However, it remains to be seen if devolution will transform transport networks to support economic growth and, pertinent to this research, increase economic opportunities for low income households. It must be remembered that this process is occurring at a time of **acute fiscal challenges** when transport will be expected to achieve more with less resources (Raikes, 2016). For example, despite two-thirds of public transport journeys being made by bus, funding for supported bus services has been reduced by 25 per cent between 2010 and 2016, resulting in alteration, reduction or complete withdrawal of services on 2,400 routes (Campaign for Better Transport, 2016; Isaac, 2015). Indeed, some local authorities no longer spend anything on supported bus services (a discretionary action), including towns and cities such as Blackpool, Cardiff, Darlington, Hartlepool and Stoke-on-Trent (Campaign for Better Transport, 2016). One consequence has been year-on-year increases in bus fares in excess of average inflation since 2010 (ibid.).

At the same time, devolution provides **genuine opportunities** for city regions to develop integrated transport systems that are designed to meet wider economic, social and environmental objectives. Transport operators have stated a willingness to act in partnership with local and regional agencies, but at the same time emphasise the need for long-term planning and commitment in order to justify new investment and route innovation (Chartered Institute of Logistics and Transport, 2016). Moreover, current attempts to align public service agendas by local and city regional institutions

could see greater emphasis on co-ordinating policies around transport, housing, planning, employment and skills to improve connectivity for low income households to employment and training opportunities.

1.4. Structure of this review

The remainder of the report is structured around the following sections:

- Section 2 outlines the main dimensions of **transport and travel difficulties faced by residents of low income neighbourhoods** in accessing work. It focuses on practical issues such as transport connections, costs and travel times. It also explores conceptualisations of **'transport poverty'** as well as how the barriers faced vary by social group.
- Section 3 covers the **changing geographical distribution of employment opportunities**, highlighting the selective decentralisation of certain types of economic activity to peripheral 'out-of-town' locations often at some distance from social housing estates. It moves on to consider **housing market and neighbourhood factors** that make commuting to work or moving to take up employment difficult such as allocation and residential 'choice'; balancing housing costs; and not wanting to leave behind informal support networks.
- Section 4 explores the **perceptual barriers** around travel, including spatial horizons and attachment to place.
- Section 5 examines both transport-related and employment and job-search related **policy interventions** and their effectiveness.
- Section 6 offers some overarching conclusions from the review and recommends a series of research questions for subsequent strands of this research to explore.

2. Transport, Poverty and Access to Work

2

2.1. Introduction

The JRF study of Transport and Poverty (Titheridge *et al.*, 2014) and the more recent review of the links between transport and poverty by Lucas *et al.* (2016) have highlighted the ways in which the transport system can pose difficulties for residents of low income neighbourhoods in taking up paid employment. In broad terms these issues can be grouped under three interrelated headings:

- Limitations in the provision of transport services;
- Resource constraints on using transport ;
- Travel times and their interaction with care responsibilities.

These difficulties have been captured within with broader conceptualisations of the links between poverty, transport and work. These include notions of **transport poverty and social exclusion**. The latter in turn opens up the differential access to and use of transport by different social groups, for example those defined on the basis of age, gender and ethnicity.

Residents of low income neighbourhoods generally have a significant reliance on bus services. This can create **issues regarding variable frequency, timing, reliability and range of places served**. In parallel, the limited financial resources available to such residents restricts the locations where they can realistically find or hold down paid employment. This particularly applies to those in receipt of welfare benefits or engaged in low paid work. For women and lone parents, amongst others, the time required to fulfil caring responsibilities militates even more strongly against longer journeys to work.

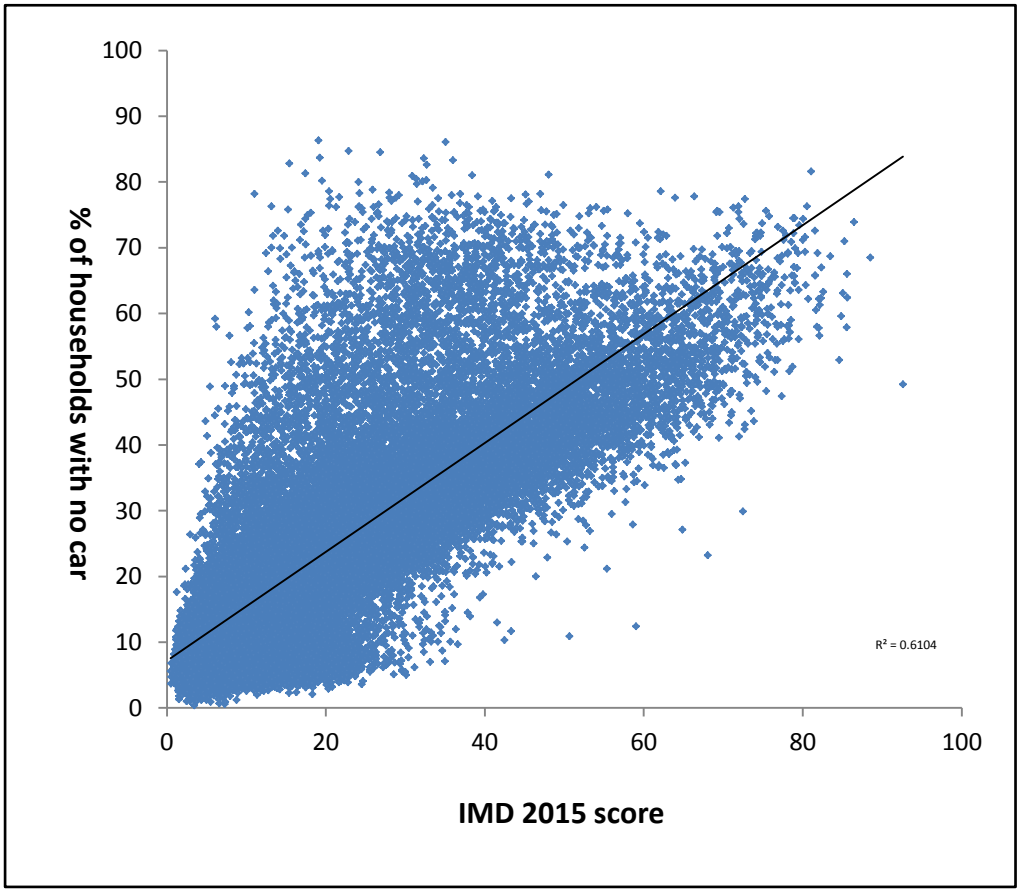
Indeed, there is considerable evidence that **transport issues affect different groups to varying extents** and in particular ways, especially in terms of gender. What emerges clearly from this section is the finding that connectivity difficulties are not just shaped by the nature of the local transport system and the economic circumstances of individuals and households, but also the relative locations of housing and employment as well as a range of social, cultural and psychological factors. These factors are explored in more depth in later sections.

2.2. Limitations in the provision of transport services

A distinguishing feature of low income neighbourhoods is the relatively **low incidence of motor vehicle ownership** (see Figure 1 below). This means that residents have a much higher reliance on public transport than those living in middle- and high-income areas (Campaign for Better Transport, 2011; Scottish Association of Citizen Advice Bureaux, 2016; Taylor *et al.*, 2009). Census 2011 data shows that,

for those who are in work, use of different modes of transport varies considerably by occupation, with those in lower paid categories much **more reliant on public transport**, cycling and walking (Table 1). Even so, access to a car as either a driver or passenger remains important for more than half of all workers in such jobs. As Jeekel's (2014) review of existing research notes, poorer and carless households can be faced with real accessibility problems in reaching work as well as health services and cheap shopping.

Figure 1: Levels of area deprivation and lack of access to a motor vehicle in England



Source: Census 2011 (via NOMIS); English Indices of Deprivation 2015 (via DCLG)

In more fragmented urban areas such as certain former coalfields, access to a car may be vital to finding and keeping a job or attending education and training classes. Research by Mahieux and Mejia-Dorantes (2017) in the Béthune/Lens part of the Pas de Calais region of northern France revealed a "vicious circle" of no job, no money - no money, no car (or even driving licence) - no car, no job. Survey respondents also claimed that many employers in the area were unwilling to take on people who did not have a driving licence. An important implication of this is that **access to private transport needs to be a consideration in the transport policy mix** to support members of low income households into paid work.

Table 1: Mode of Travel to Work by Occupation, England and Wales, 2011

	Managerial/ professional	Clerical/ secretarial	Skilled/ plant & machine operator	Elementary/ service sector	All occupations
Working at or from home	13.2	7.8	12.4	6.2	10.4
Public transport	17.0	20.1	7.4	18.2	15.9
Motor vehicle	59.2	60.4	68.6	53.2	59.4
Non-motorised	9.1	10.8	8.6	20.7	12.6
Other (e.g., ferry)	1.5	0.9	3.0	1.7	1.8

Source: Census of Population 2011 (via NOMIS)

There is also evidence that those who are out of work are **particularly reliant on bus services.** Raikes (2016) cites studies showing that jobseekers are more than twice as likely to use buses as anyone else (see also PTEG 2015). Moreover, poor services can constrain the ability to find and sustain work. One study found that that 19 per cent of workers have turned down a job because of poor-quality bus services (Mackie *et al.* 2012 cited from Rowney and Straw, 2014). Reliance on buses is even greater for certain groups such as women, young people and those with lower skills (Johnson *et al.*, 2014). Their survey also found that a third of unemployed respondents thought finding a job would be easier if bus services were improved (in terms of lower fares, higher average speeds and more early morning/late evening provision) (ibid.).

While a small number of low income areas are connected to rail or tram networks, the vast majority are served exclusively by buses. Although clearly there will be marked variations between such neighbourhoods, a report by the Social Exclusion Unit (2003) noted a number of key **reservations concerning the quality of these services**:

- The **frequency and timing** of services is often seen to be inadequate to meet all needs, particularly with regard to early morning and late evening departures that fit with the growing trend in flexible working, whether this be standard shift patterns or more changeable rotas.
- There are major concerns about **reliability**, with cancellation or late running of services potentially causing arrival at workplaces after the contracted start time, and the penalties that this might incur.
- These problems are compounded where the **distances from homes to workplaces are prolonged**, especially if they entail interchange between different services and the consequent reliance on making connections as scheduled.

Issues around frequency and timing have also been noted in several other studies, although the constraints are not always widely appreciated. Thus, research by Hebditch (2012) found that Jobcentre Plus staff did not always recognise that working early mornings, evenings or weekends may not be suitable for those reliant on public transport in areas where there are no bus services outside core hours. The study cites one case where a man faced sanctions for six months due to his inability to take up a job where the shift pattern involved starting or finishing at 10.00pm and 6.00am but where the first bus he could take was at 7.30am and the last at 6.00pm.

All of these issues apply particularly to peripheral social housing estates, although low income areas closer to the urban core are not always immune from the constraints imposed by fixed bus service patterns and networks, generally following a 'hub and spoke' model based on town and city centres. Cross-city routes can help with this to some extent, but there are severe limits on the number of localities which can be reached by any one of these (Currie, 2010).

Private bus companies dominate provision outside London with three-quarters of bus services planned and provided commercially (House of Commons Transport Committee, 2012). In a largely deregulated environment, the **strategies and practices of bus companies** are, therefore, a key factor shaping the accessibility and affordability of provision. Recent reports have raised a number of concerns in this respect. A Competition Commission (2011) report found evidence of a lack of head-to-head competition between operators in some areas. Where this happened, bus operators were able to reduce the quality of service they offered to customers (through, for example, shorter hours of operation or less frequent services), or increase fares above the level that would otherwise apply (ibid.) However, more competition itself may not be the answer. Even where two or more of the 'big five' bus companies operate in the same area, this has not always led to streamlined services or cheaper fares (Butcher, 2010).

Regulation of fares rather than greater competition may better help to increase the access of low income households to bus services, with evidence that lower fares increase bus usage. Rowney and Straw's (2014) analysis shows that the more regulated bus network in London experienced growing patronage with usage doubling (up 99 per cent) since deregulation elsewhere in 1986. This compares with falls of a third (32.5 per cent) over the same period in the rest of Britain where bus networks are less regulated. Moreover, London experienced a noticeable spike in patronage after the formation of Transport for London (TfL) in 1999 when TfL held fares below inflation (ibid.). Such findings have important implications for the Bus Services Act which provides the powers for city regions outside London to take on similar franchising powers. The ability to regulate bus fares in particular may provide opportunities to increase access to buses for low income families.

2.3. Resource constraints on using transport

Transport can account for **a significant proportion of household expenditure**. As Table 2 demonstrates, the most recent figures for household expenditure reveal that transport now accounts for the greatest proportion of household budgets in the UK (ONS 2017). The average UK household spends £72.70 per week on transport costs, 20p more than the net costs of housing, fuel and power.[2]

[2] This excludes mortgage interest and Council Tax (GB)/domestic rates (NI).

Table 2: Average household expenditure by COICOP category and total household expenditure

UK, financial year ending 2016

COICOP category	£ per week	% of total expenditure
Transport	72.70	14
Housing (net)[1], fuel and power	72.50	14
Recreation and culture	68.00	13
Food and non-alcoholic drinks	56.80	11
Restaurants and hotels	45.10	9
Miscellaneous goods and services	39.70	7
Household goods and services	35.50	7
Clothing and footwear	23.50	4
Communication	16.00	3
Alcoholic drinks, tobacco and narcotics	11.40	2
Health	7.20	1
Education	7.00	1
Total COICOP expenditure	**455.30**	**86**
Other expenditure items	**73.60**	**14**
Total expenditure	**528.90**	**100**

Source: Office for National Statistics

Notes:
1. Excluding mortgage interest payments, council tax for households in Great Britain and domestic rates for households in Northern Ireland
2. Totals may not add up due to the independent rounding of component categories.

Households and individuals with relatively low incomes, however, have fewer financial resources to pay for transport services. This is partly related to the priority given by many households to meet essential needs such as shelter, food and heat. The importance attached to covering transport costs as part of household budgeting almost certainly depends on how much income is taken up by consumption of these other items, and how much is left over for further activities. Indeed, recent data shows that lower income households **spend far less on transport and far more on housing, fuel and power** relative to more affluent households (Figures 2 and 3). It is not possible from this data to determine the degree to which low transport expenditure is determined by a lack of need to use transport or inability to afford transport which households would otherwise use. This is something which can be further explored once our research looks at the needs, perceptions and experiences of low income households.

Figure 2: Expenditure on transport by income decile

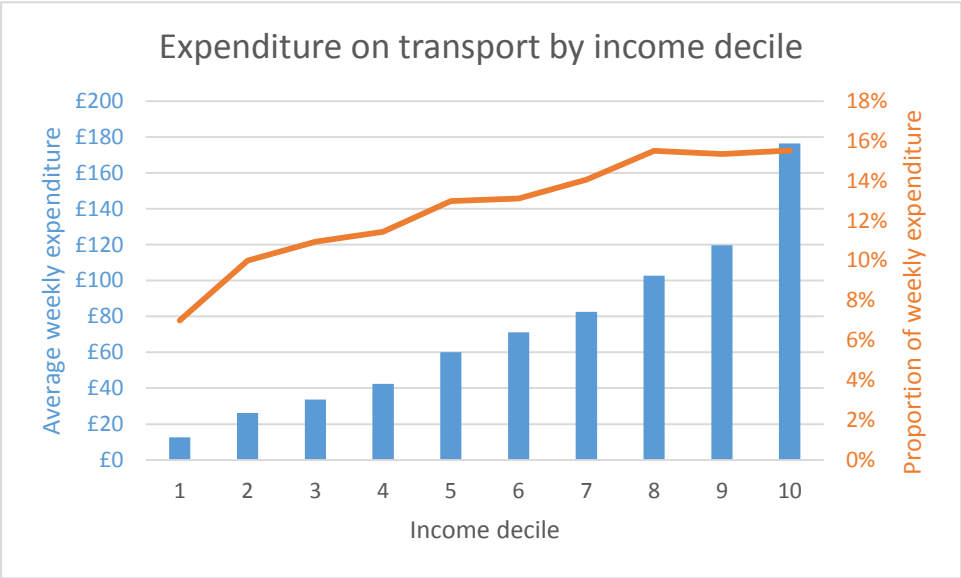
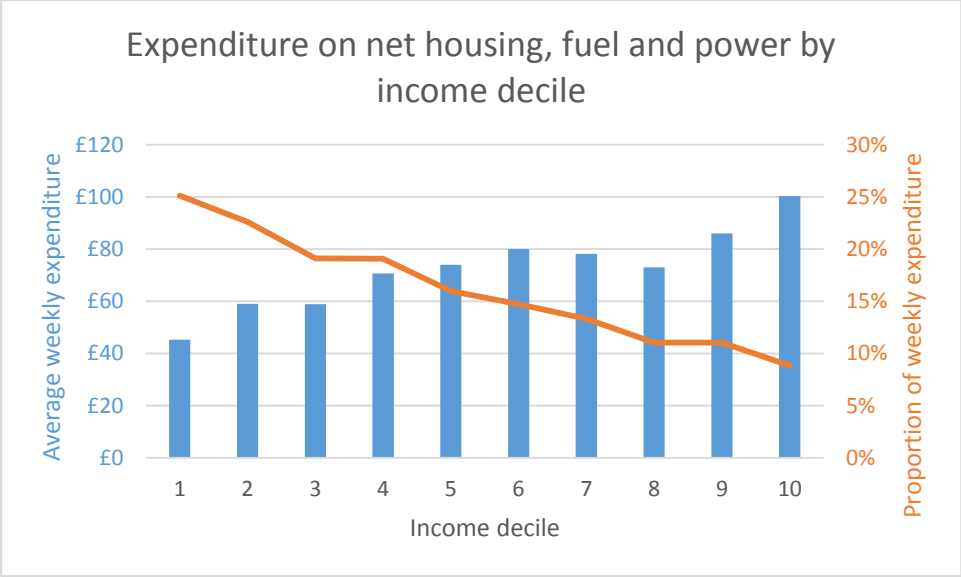


Figure 3: Expenditure on net housing, fuel and power by income decile



Sources: ONS (2017)

The low car ownership rates already mentioned are closely related to **a lack of sufficient income to meet both the relatively high entry (vehicle purchase, excise duty and insurance) and running costs** (fuel, servicing and any loan repayments) (see Taylor *et al.*, 2009). This excludes many residents from the most flexible mode of transport available, and hence constrains their access to employment zones established because of their proximity to motorway and trunk road networks (see Section 3 for further discussion of this). Many (though not all) of these are by their very nature characterised by out-of-town locations seldom well served by public transport services. Where bus services are provided as part of a planning agreement (e.g. Section 106) these may be low quality or low frequency services, or subject to the lifetime of the agreement or any subsequent renegotiation.

At the same time, it is important to recognise the possibility of **'forced car ownership'** where households feel compelled to run a car to access employment and essential services despite high costs (Sustrans, 2012). This can be a particular problem in rural areas where residents face higher transport costs, but are more likely to use a car, and they face longer walks to public transport stops and less frequent public transport services (LGA and PHE, 2017).

Fares for using **public transport may also be relatively expensive** for those on low incomes (PTEG, 2009). This is particularly the case for railways, where a premium tends to be charged for tickets valid for use on peak time services. However, it can also apply to buses and trams, especially for longer distance journeys. While taking out a season ticket (weekly, monthly or yearly) or using family-based discounts can reduce the unit cost of each journey, these often require investment of a relatively large lump sum at the outset. Many people may simply be unable to afford such an outlay at any given point in time; for others lack of awareness of such offers stems from inadequate promotional activity (Mahieux and Mejia-Dorantes, 2017).

A further issue, which is particularly relevant to workers on shift patterns or casual contracts, is the cost of using different operators on a single journey. Operators normally reserve their cheapest tickets for use on their own services, while fares using multiple providers can be considerably more expensive. This is a problem where transport authorities commission tendered bus services to run early morning or late night services on a particular route. Such services are not normally provided by the normal daytime operators, meaning passengers using them cannot benefit from cheaper operator-specific tickets. This approach may make sense for individual companies, but given the broad consensus that public transport use is fare sensitive relative to income (Bresson *et al.*, 2003; Paulley *et al.*, 2006), then it is likely to be counter-productive in stimulating increased patronage overall.

In many areas it has proved difficult to overcome such obstacles by the introduction of integrated or multi-modal ticketing systems, where a given ticket is valid on different modes run by a range of operators. Successful schemes of this type, such as the London Oyster card and equivalents in UK metropolitan areas, rest on existing strong institutional and governance frameworks, easy to understand validity, ready availability and improved value (Marsden and May, 2006; Redman *et al.*, 2013). The main constraints in launching such initiatives for bus, rail and multi-modal schemes alike are not so much unwillingness on the part of providers, but a lack of clarity in terms of the upfront investment required, opaqueness of proposals in terms of potential returns (including perceived financial risks involved in revenue sharing), and lack of trust in the back office control system (Lyons and Harman, 2002; National Audit Office, 2017).

2.4. Travel times and care responsibilities

The combined time required to meet the contractual demands of a given job plus the travel there and back can also interfere with other responsibilities such as child care. The implication would be to work fewer hours or find another job closer to home (if suitable opportunities are available within that smaller radius) – or to eschew work until these responsibilities are past. Any of these choices implies a lower wage or income, and may make a subsequent move to a post with longer hours and/or better pay more difficult to secure, due to competition from more experienced candidates (Skinner, 2003; 2005).

This constraint is particularly severe for lone parents with school age dependents; these are likely to be over-represented in low income neighbourhoods. Even two parent families can suffer if one has to work long hours and is thus unable to contribute to post-school hours caring. Others may have caring responsibilities for

their own elderly parent(s) or other family members, which means that they cannot be away from home or their neighbourhood for too long (Geurs *et al.*, 2009). As explored in Section 3 below, such support activities are a crucial feature of how households and individuals in such areas get by.

2.5. Conceptualising the link between transport and poverty

Transport poverty

Difficulties in meeting the costs of transport from current incomes have given rise to the concept of 'transport poverty'. It has been deployed especially by campaigning groups and sub-national government bodies to justify a range of proposed changes to transport policy priorities. Its attraction is that it potentially provides transport-related issues of accessibility and affordability with similar prominence to influential notions such as housing and fuel poverty. However, it suffers from the twin problems of a lack of definitional clarity and the intractability of setting a common threshold for individuals rather than households.

Lucas *et al.* (2016) have sought to address the former by deconstructing the term into its four main components:

- **Transport affordability:** the inability to meet the cost of transport to key activities such as employment, education, health care services, shops and so on due to a lack of financial resources.
- **Mobility poverty:** the lack of availability of a means of transport (usually a motorised vehicle but also including public transport) to reach those activities.
- **Accessibility poverty:** the difficulty of reaching the places where those activities are available in a reasonable time and with reasonable ease (due to geographical distance and/or the nature of the transport network between homes and that locality).
- **Exposure to negative transport externalities:** being disproportionately affected by adverse side effects of the transport system such as road traffic casualties and chronic illness or deaths caused by pollution.

These components obviously display considerable overlap; indeed the authors have presented them as a Venn diagram in which the severest levels of transport poverty occur where the affordability, accessibility and mobility circles intersect. However, the concept of transport poverty perhaps privileges transport issues without fully accounting for how these interact with housing and labour markets. These interactions are discussed further in Section 3 which follows.

Transport and social exclusion

All alternative conceptualisation of the transport barriers faced by low income households is to frame this in terms of social exclusion. Kenyon *et al.* (2006: 210) define transport-related social exclusion as "the process by which people are prevented from participating in the economic, political and social life of the community because of reduced accessibility to opportunities, services and social networks, due in whole or in part to insufficient mobility in a society and an environment built around the assumption of high mobility." This broadens the scope to link travel-based deficiencies to their social, cultural and physical context. At the same time it provides consideration of individuals' differing cognitive, technical, social and economic capabilities, and how these combine to create different levels of **'mobility capital'** in terms of ability and propensity to travel (Kaufmann *et al.*, 2004).

The emphasis here is firmly on processes leading to, and the outcomes stemming from, barriers to access. These barriers are not merely to do with spatial distance or lack of physical transport connections, but also include physical impairments, affordability, time limitations, fear of crime and regulatory restrictions (Church *et al.*, 2000). The implication of this type of analysis is that any adjustments to the physical environment or transport provision should be complemented by actions to help people to overcome this wider set of barriers to access, in a more holistic package of measures. The incorporation of perceptual and behavioural aspects is a useful addition too, albeit one that often remains detached from transport-related research. We examine these dimensions of connectivity in more detail in Section 4 below.

In terms of policy responses, the social exclusion perspective aligns closely with the idea of social justice. In this respect, recent years have seen the stirrings of a debate about the need to define a **'right to good transport'** (see for example Coggin and Pieterse, 2015). In turn, Levy (2013) reframed the notion of 'travel choice' away from its original roots in neo-classical economic rationality to a concept embedded in everyday social realities, arguing that it should be included as an integral part of the 'right to the city'. On similar lines Balsas (2017) has also argued that the right of all individuals to public environments that ensure health, safety and well-being should extend to the provision and design of built environment elements that facilitate non-motorised transport modes such as walking and cycling.

Transport barriers by social groups

Transport barriers are not uniform across low income households. Variations between and within social groups with respect to levels of mobility have received greater prominence in recent years. These have been noted on the basis of age, ethnicity, cultural background and gender. The latter has provided a particularly fruitful lens, with a growing body of literature on women's distinctive transport needs. As Uteng and Cresswell (2008: 2) remark in the introduction to their collection of papers on the subject, "how people move (where, how fast, how often) is demonstrably gendered and continues to reproduce gendered power hierarchies". A recent contribution to this strand of work by Loukaitou-Sideris (2016: 547) contends that "women's mobility in cities is challenged (not only) by physical, economic, cultural and psychological constraints, but also (by) inadequate transportation policies that often neglect or disregard women's needs". She has usefully catalogued the specific contextual factors and the ways in which they operate to differentiate women's travel patterns. Her analysis is reproduced in Table 3 in adapted form.

Table 3: Barriers affecting women's travel patterns

Category of barrier	Specific barrier	Impact on travel patterns
Cultural	• Religious norms/practices • Women as primary caregivers for children and parents • Women primarily responsible for domestic chores	Women excluded from public transport, cycling etc.
		Shorter trips
		Accompanied by (dependent) others in travel
		Multi-purpose trips/trip chaining
		Need to carry large and/or heavy items during travel
Economic	• Lack of financial/economic resources for car ownership • Residential segregation in peripheral/poorly served locations	Transit dependency on others
		Lack of access to public transport services
		Localised mobility patterns: mostly on foot
Physical	• Car-oriented urban form/sprawl • Lack of adequate infrastructure for (safe) walking • Limited public transport networks	Over-reliance on (other people's) private cars
		Long journey times on public transport services
		Unsafe and uncomfortable travelling conditions
Psychological	• Fear of harassment and victimisation • Fear of 'stranger-danger'	Avoidance of public transport services, cycling, etc.
		Avoidance of particular routes
		Travel only during daylight hours
		Travel only when accompanied by others

Source: adapted from Loukaitou-Sideris (2016:554)

Of course, these broad patterns should not obscure the variations that exist *between* women inhabiting different places in contrasting circumstances. Wachs (2010), for example, has noted how these tend to be associated with differences in marital status, age, race/ethnicity, and geographical setting. There is also evidence that the gap between men and women in terms of mobility and travel patterns is closing, due to a range of factors. These include higher labour market participation rates, associated changes in the distribution of household responsibilities, a reduction in the prevalence of two-person two-gender households, and broader cultural shifts (Crane, 2007; Rosenbloom, 2004; Emond *et al.*, 2009).

Socio-cultural contexts can also play an important role here. A study of immigrant women from non-EU countries now living in Norway by Uteng (2009), for example, revealed that they tended to develop 'differentiated mobilities' compared with the average, emanating from variations in family structure, education, participation in the labour market and access to income, along with poor public transport provision. While the women may feel liberated from an oppressive situation in their former home country, nevertheless their constrained mobility in an otherwise affluent society can make them feel trapped. These findings are partially echoed by a study of poverty and ethnicity in Wales which found that some members of Bangladeshi, Pakistani and Somali households sometimes felt reluctant to leave their own areas for fear of racism (Holtom *et al.*, 2011).

There is also a range of evidence of the issues and barriers facing several other social groups with regard to transport. These include young people, older people, those from black and minority ethnic communities and the disabled (see, for example, Banister and Bowling, 2004; Burnett and Baker, 2001; Davey, 2007; Delbosc and Currie, 2011; Giuliano, 2003; Hodgson and Turner, 2003; Jones *et al.*, 2000; Schmöcker *et al.*, 2008). In general such research is not explicitly framed around either access to work or low incomes per se, but given the nature of the groups certainly the latter often acts as an underlying factor.

Variations among low income groups in term of access to, and use of, transport are not simply about who you are but also where you live. The impact of barriers to access appears to vary by relative location, whether between urban and rural areas or between different parts of a city. Thus, research by Pritchard *et al.* (2014) in Lisbon revealed that people with low incomes living in central areas tend to have higher mobility (in terms of number of trips as well as more complex trip chains) than their equivalents in more suburban and peripheral locations, particularly those areas that have historically been disadvantaged and under-served by transport. On a broader canvas, Mattioli (2014: 379) has used data from the British National Travel Survey to illustrate "how the socio-demographic composition and travel behaviour of carless households vary systematically across different types of area".

These studies of the differences in connectivity by social group and location highlight the importance of understanding how socio-demographic and other contextual factors shape access to and use of transport. It is essential to recognise these variations to enable a more nuanced and targeted approach to developing policy solutions to address the transport barriers faced by different groups.

3. How do housing and labour markets mediate the link between transport and poverty?

3.1. Introduction

This section examines how labour and housing markets shape the link between transport and poverty. In particular, it focuses on the notion of **spatial mismatch** in terms of how low income neighbourhoods have become more distanced geographically from major centres of employment. This is especially the case for lower income groups as low-skilled occupations have become increasingly dispersed to out-of-town locations. At the same time, the wage levels on offer in these types of job may be **insufficient to cover the costs of commuting**. This issue has become more acute in recent years as public transport fare increases have been consistently above average inflation.

In terms of the housing market, it is well known that **limited availability of affordable homes** is currently a key issue facing many parts of the UK. This lack of affordable housing is an important factor behind the **limited levels of residential 'choice' and mobility amongst tenants of social housing,** which may constrain employment opportunities. Once offered a suitable property a family or household is likely to take it, irrespective of its location with respect to employment opportunities. Long waiting lists and limited stock choice also make it difficult to arrange transfers even within the same area, let alone as a means of moving to another part of the country with more job opportunities. At the same time, it is important to note that many low income neighbourhoods also offer a high degree of community stability, with **essential support networks** that not only help people get by, but can also serve to facilitate people moving into work. Immobility will not inevitably, therefore, restrict job choices.

3.2. How do labour markets impact on poverty and connectivity?

Spatial mismatch

Many residents of low income neighbourhoods have few or no qualifications, whether school- or college-based or of a vocational nature. This restricts them mainly to unskilled job vacancies in sectors such as low value retail, cleaning, security, social care, warehousing and distribution. While some of these occupations can be found in central places that are reasonably well served by public transport, **many of them are located in less accessible locations**. The need for certain activities like distribution and logistics to have quick links to the motorway and trunk road networks, and their consequent location on a disparate range of out-of-town sites, has already been mentioned above. In the case of occupations such as social care the work may

involve a peripatetic need to visit a number of clients in their own homes, thus **requiring use of a car**. A similar constraint applies to jobs in the construction industry, where workers have to be able to travel to a range of different sites over the course of time (although the number of unskilled jobs in this sector has reduced considerably in recent years).

In other words, the places where there are likely to be suitable job opportunities for residents of low income neighbourhoods are very often not only a considerable distance from such neighbourhoods, but also can be poorly served by public transport links between them. In basic terms this forms the basis of the **spatial mismatch hypothesis**. This holds that low income residential neighbourhoods have become increasingly distant from, and poorly connected to, major centres of employment. This may be a particular issue given the **limited propensity to commute** of low income households. For example, the 2011 Census showed that 56 per cent of lower-paid workers[3] in England and Wales travel less than five kilometres (three miles) to their place or work.

Seven possible **underlying mechanisms** of spatial mismatch have been identified in a review paper by Gobillon *et al.* (2007). The first four of these relate to aspects of labour supply, while the other three are to do with labour demand.

- **Travel cost/wage imbalance:** residents of low income neighbourhoods will refuse (or not even seek) jobs located in places that involve a long commute, the cost of which would take up too high a proportion of the wages received;
- **Vacancy information deficit:** the ready availability of information about job vacancies is thought to decrease with distance, resulting in residents of low income neighbourhoods being exposed to fewer work opportunities in general, and remaining unaware of the larger number on offer in more distant locations;
- **Less intensive job search:** the combined effect of the first two mechanisms may be to make people look for work less regularly than before, on the grounds that there are few or no suitable jobs accessible to them;
- **Higher job search costs:** people may restrict their job search horizons because they cannot afford the costs that a longer commute would entail, so that places where employment openings are many and frequent do not come within their purview;
- **Employer discrimination:** there is strong evidence that certain employers will not recruit residents of low income neighbourhoods that have become stigmatised;
- **Productivity and absenteeism:** some employers may not hire people who live at some distance from the workplace because they fear that the long journey to work will make them less reliable (in terms of time-keeping or absenteeism) and less productive (because of tiredness);
- **Racial discrimination:** as well as this emanating directly from prejudicial attitudes on the part of the employer or manager, hiring decisions may also take into account the unwillingness of White co-workers to have BME colleagues, or of customers to be served by a BME person (this is probably more apposite in certain parts of the US than elsewhere).

One interesting element of the spatial mismatch thesis is that it proposes that the geographical distribution of jobs not only shapes individual job search behaviour but

[3] Defined as those in occupations in the three classes 'Caring, leisure and other services', 'Sales and customer services' and 'Elementary'.

also the propensity of employers to hire. In other words, it impacts both on the supply-side (i.e. related to labour) and demand-side (i.e. related to jobs) of the labour market.

Whilst the spatial mismatch hypothesis emerged in the US, there has been research on how this plays out in a UK context. Spatial mismatch in the UK means that housing areas are often distanced from areas dense with job opportunities (Gobillon *et al.*, 2007), a particular concern where former mining towns and villages are poorly served by transport to job opportunities, as in the South Wales Valleys and parts of South and West Yorkshire (Gore *et al.*, 2007; Crisp *et al.*, 2017). Research by the Centre for Cities (Tochtermann and Clayton, 2011) found that the geography of jobs is changing such that higher skilled jobs are increasingly concentrated in cities along main transport corridors and in city centres whilst low-skilled jobs are dispersed outside of city centres. This concurs with earlier research by Houston (2005) who found that restricted access to jobs for people living in peripheral housing estates resulted from the interaction between spatial and skills mismatches. In other words, many of the **jobs most appropriate to low-skilled workers are precisely those that have become less accessible.**

A spatial division of labour was cited as a significant contributory factor feeding into neighbourhood disconnection in a study by Rae *et al.* (2016). They found that localised employment opportunities had become scarcer, leaving the more peripheral estates isolated. In one of their case study areas – Bristol – a spatial shift of jobs to the city centre and to the docks in the north served to limit localised employment opportunities in the south of the city. Evidence of spatial disconnection also came up in Tochtermann and Clayton (2011). The authors cite an example of a participant who had found work at a commercial estate but lived in an edge-of-town housing estate some distance away. Eventually he had to give up his job because he could not afford the costs of owning and running a car and there was no suitable alternative public transport services connecting his home and workplace.

One final but important caveat is that **the location of employment is not always a defining barrier to accessing paid employment**. Areas of poverty can and do exist next to job opportunities which suggests that location is not always a determining factor in shaping access to work (Crisp *et al.*, 2017). Other factors such as skills, qualifications and experience; personal characteristics such as age, health and disability; and commitments around childcare or family members can play a part too. Nonetheless, locational issues undoubtedly play a role in making it harder for some members of households in poverty to take up work.

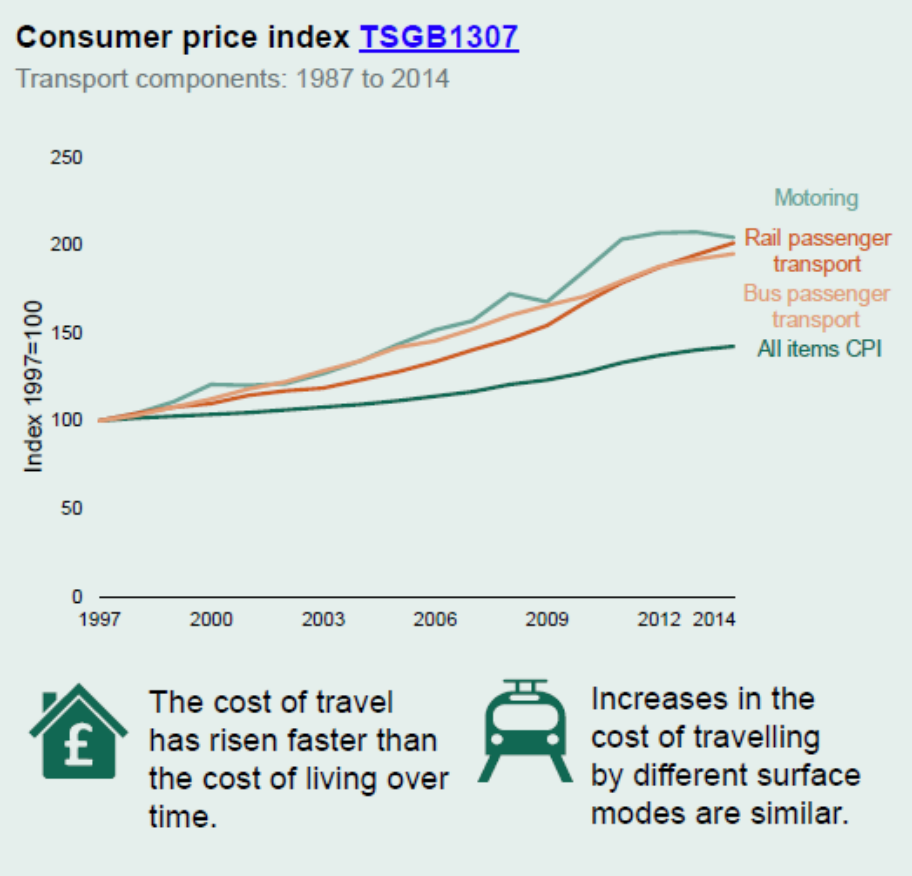
Low wages and transport costs

One aspect of spatial mismatch dealt with extensively in existing literature is **the relationship between wages, transport costs and propensity to commute**. For workers with limited skills, being restricted to low wage work limits the amount that can be spent on travel to work, and hence constrains the feasible distances between homes in low income neighbourhoods and potential workplaces (see Tochtermann and Clayton, 2011). Finding a job to begin with is thus more difficult because of the more restricted range of opportunities within a feasible travel radius. The option of commuting to work from disconnected communities is diminished for lower-income groups due to high public transport costs (Zenou, 2009); poor availability and reliability of public transport (Thakuriah *et al.*, 2013); and a lack of car ownership (Ong and Miller, 2005). There is a particular problem of disconnection in rural areas, especially among those without access to a car and where transport provision is poor (Department for Transport, 2011; Hebditch, 2012).

Once in work, any subsequent **public transport fare increases** without any commensurate rise in pay may then have an impact on job retention, where the worker in question is no longer able to afford that particular journey to work (PTEG, 2009). Of course, this might actually be the case at the outset, effectively dissuading people from applying for available jobs in that locality in the first place. Indeed, it might well dissuade them from applying for any jobs at all.

Given the growing need for private transport to access work from or to more peripheral locations, it is instructive to look at how **the costs of motoring and public transport** have increased. These have consistently risen above the rate of inflation over the last two decades (Figure 4). While the costs of motoring are more volatile (reflecting oil price fluctuations), significant components of running costs may disproportionately affect low income motorists, including higher rates of insurance based on parking location (such as lack of off-street parking, or higher crime rates) and the potentially regressive nature of a Vehicle Excise Duty (VED) system that is based on emissions (Snowdon, 2013; see also HC Deb 26 October 2015, cc54-57)[4].

Figure 4: Transport costs and inflation.



Source: DfT (2015, p.32) Transport Statistics Great Britain 2015 (p. 32)

Relocation is an alternative to commuting, but this may bring with it even greater costs. Relocation involves significant financial costs, which may be prohibitive for low income households (Gore, 2005), and insecure employment hardly compensates for the loss of local support networks in current neighbourhoods (Crisp *et al.*, 2009), or for leaving behind other family commitments (keeping children in their current school or having access to children if couples are separated, for instance).

[4] Changes to VED due to implemented in April 2017 may soften the regressive impact.

3.3. How do housing markets impact on poverty and connectivity?

While the research highlighted above defines connectivity issues from a labour market perspective, **studies often tend to underplay the role of housing market processes and housing system allocations** on the one hand, and transport system provision and travel mode options on the other. That said, some authors who have examined the spatial mismatch hypothesis have broadened the scope to include such matters (see, for example, Dujardin *et al.*, 2008; Gobillon *et al.*, 2007; Martin, 1997; Weinberg, 2000). Indeed, residential segregation formed the original starting point for James Kain (1968), the pioneer of spatial mismatch studies back in the 1960s.

Housing clearly plays a role in shaping access to employment, particularly where housing in more peripheral locations means households are distanced from centres of employment that could provide work (Gibb *et al.*, 2016). Given this mismatch, it could be expected that people should move closer to employment opportunities.

These expectations often fail to take into account, however, the **lack of affordable housin**g to move into, especially any located closer to job opportunities. However, 'choice' of residence is far less of an option for low income household than for the more affluent and while they may **'opt' for more affordable, less accessible housing** this might be seen as a necessary rather than desirable situation (Gibb *et al.*, 2016). In a pressurised housing market, the full costs of transport may not be factored into the process of deciding residential location (Curl *et al.*, 2017).

Moving into and between social tenancies is also **a difficult and lengthy process** which may deter people from low income neighbourhoods from moving for work. This problem is perceived to have worsened as a result of the decline in social rented housing, and the selling off of council housing under the Right to Buy which has **residualised stock** in more peripheral locations (Jones and Murie 1999; Murie and Ferrari 2003; Pawson et al, 2002). Tenants may finder it harder to commute, or move into appropriate accommodation nearer to employment opportunities. Additionally, the increased reliance on the private rented sector and the tenure insecurity that accompanies it may feed people's reluctance to move if it means giving up a secure social tenancy (Gibb *et al.*, 2016). This is further exacerbated by insecurity in the labour market, and the seasonal or casual nature of contracts that create additional barriers to mobility.

Other aspects of the housing system may inhibit quick relocation for work, such as **limited stock choices and long waiting lists** meaning that social renters may be 'locked in' (Battu *et al.*, 2008; Batty *et al.*, 2011). Housing affordability will also impact on the perceived ability of individuals to take up work in relation to the costs of commuting and likely financial benefits of working. Housing costs are one of a number of expenses, therefore, that are likely to shape widely-held perceptions that taking on employment would make people worse off (Gibb *et al.*, 2016).

It is important to note as well that ***im*mobility may actually increase the prospects of work** in some cases. Gibb *et al.* (2016) found plentiful evidence to suggest that neighbourhoods are a source of support networks that enable employment. First, they act as informal job information channels, where jobs are advertised and recruited for through word of mouth and local connections. Second, they provide support that facilitates working. Support with childcare from friends and relatives who lived locally was cited as a vital enabler for people with children to work (Gibb *et al.*, 2016; see also Crisp *et al.*, 2009). This suggestion that networks in low income neighbourhoods are facilitators of employment runs counter to many arguments in the literature and policy discourse that place attachment inhibits employment and social mobility.

4. Perceptual barriers to accessing transport

4.1. Introduction

The conventional response amongst engineers and economists to gaps and constraints in the provision of transport services and network coverage is to seek improvements in the physical transport links between residential areas and employment zones (Levy, 2013). In consequence solutions tend to focus on **'hard' technological fixes** such as installation of new links (e.g. rapid transit systems), changes to network design and service patterns, alterations in highways design and engineering, automation and common validity in ticketing systems, and more efficient vehicle technology. All of these may be valuable improvements in their own right, but are likely to be insufficient in helping to resolve the transport issues faced by disadvantaged people. Indeed, as Jeekel (2014) observes, **transport policy-making has only managed to incorporate on a fragmentary basis the various insights provided by recent social and behavioural research**.

It is important to remember that barriers relating to location and transport are not simply ***objective*** reflections of the time, distance, cost and ease of moving between places. Physical disconnection is also shaped by residents' ***subjective*** perception of their relationship to their place of residence, spatial horizons and willingness to travel, which will vary from one person to another. It is this emotional and psychological element of mobility behaviour that this section focuses on by exploring:

- Spatial horizons and attachment to place;
- Perceptual barriers.

This review of the evidence regarding perceptual barriers to mobility highlights the **limitations of assumptions that disconnection may be addressed through improvements to physical transport infrastructure alone**. Enhanced links may make little difference, for example, if individuals are reluctant to travel far from their neighbourhood of residence or have a fear of using public transport. It should be emphasised here that **perceptual barriers are not somehow irrational or ungrounded**. They may reflect factors such as the high cost of travel and low wages on offer; previous negative experiences of using public transport; and the positive sense of security and well-being that can be derived from immersion in social networks in particular places. At the same time, it may be possible for policymakers and practitioners to design and implement interventions to **'expand' individual travel horizons** and address perceptual barriers to mobility. This is considered in more detail in the following section on the effectiveness of policy interventions to improve connectivity.

4.2. Spatial horizons and attachment to place

Understanding the role of psychological and social factors in mobility decisions and behaviour can offer alternative insights to dominant methods of mobility research which, in the main, rely on large-scale datasets and surveys. A range of studies on the emotional geography of place have explored the importance of attachment to place and how it influences decisions to travel and, by extension, the types of employment opportunities people will consider. An earlier study by Green and White (2007) is one of the key pieces of research in this area. It focussed on young people's mobility and attitudes towards education, training and work opportunities across three case study areas in Hull, Walsall and Wolverhampton. The authors found that young people had accurate basic knowledge of the geography of employment opportunities and were willing to travel but most **'mental maps' were highly localised**.

This study is important in terms of highlighting how geography matters: where people live not only affects access to transport and employment opportunities but also affects the horizons that they have. In other words, "where people are looking from affects what they see, or choose to see" (Green and White, 2007: ix). In this sense, place attachment held some young people back from traveling further afield and from realising career aspirations so that they were seen as being **'trapped by space'** (p.67).

A similar finding is reported by Rae *et al.* (2016) in their in-depth analysis of patterns of neighbourhood deprivation and disconnection across the United Kingdom. As well as the structural factors associated with de-industrialisation, focus group participants from local authorities also perceived 'a lack of aspiration, ambition, and an insular outlook' (ibid., 64) as explanations for why certain areas had not experienced positive change. This was attributed to a reluctance to travel and a 'culturally isolationist outlook'. In Glasgow, this localised outlook was reinforced by the withdrawal of certain bus services from peripheral parts of the city. In these neighbourhoods, there was also a reluctance to move as communities were longstanding and any resident moves within them tended to on a local scale.

Localism and fear tied people to their areas in a study in Northern Ireland by Shuttleworth and Green (2009), though it was unclear how far this immobility was a result of 'normal' factors or place-specific sectarian issues (see below). Likewise, Green *et al.* (2005) focused on relatively disadvantaged young people in Belfast and their understanding of the geography of labour market opportunities in the city and locations they were prepared to travel to for work. Factors of limited mobility, lack of confidence and religion intertwined in complex ways to limit perceived opportunities.

There have been relatively few contributions made to the literature on place attachment and mobility since this earlier body of work. Evans (2016) is one exception: this work highlights the complex web of social, economic and psychological factors which influence how local contexts frame spatial aspirations by looking at young people living in two de-industrialised regions in South Wales. Perhaps unsurprisingly, given the findings of previous studies, most young people aspired to forms of employment which were known to exist locally; which they could physically 'see'; and which would allow them to live locally. A minority of young people from both the Rhondda and Newport expressed a longing to stay local, underpinned by family and kinship ties; an attachment to the social landscape; and a 'community feel'.

However, other young people had **aspirations to be more geographically mobile**. In both locations, some aspired for employment in professional spheres and expressed a willingness to move in order to realise these ambitions. In contrast to

previous studies, this research highlighted that young people living in areas with limited employment opportunities did not always have more limited spatial horizons. While this recent study underlines the spatial nuance of young people's mobility, it is also worth noting that aspirations and intentions may be poor indicators of actual travel behaviour.

Kidd's (2016) study, as part of the wider GoWell Programme, investigated legacy impacts of the 20th Commonwealth Games for young people living in the East End of Glasgow. As part of this, it considered young people's social and spatial horizons; the extent to which they identified with the East End; and the impact of place attachment on their future spatial horizons. Their findings were complex: one group longed to 'escape' the East End for a better life elsewhere; another group realised the advantages of moving out of the area to find opportunities elsewhere but felt conflicted about leaving behind family and friend networks; and a third group showed strong attachment to place to such a degree that life outside the East End was beyond contemplation. Indeed, the improved transport infrastructure that had been implemented as part of the Games had mainly been used by existing sports participants and had not resulted in changes in young people's spatial behaviour.

Another recent study by Maia *et al.* (2016) looked at mobility and horizons in the context of low income populations in the city of Recife, Brazil. The authors focused on two diverse case study areas - the first was centrally located within the city; the second on the periphery. The majority of participants were not car owners and did not have a driver's license. Their relatively low incomes made them dependent on public transport to travel beyond their community. Employing focus groups and a cognitive mapping exercise, the study aimed to explore what factors accounted for people's decisions to make or not make a trip within and beyond their local communities. They also explored the extent to which public transport was part of the problem and/or solution to mobility. The results of the study showed that participants in both parts of the city facilitated most of their daily activities locally and on foot. Maia *et al.* (2016) translate this into policy recommendations: "[it is] not about providing more big public transport projects. Instead, it is more about introducing micro-level interventions to reduce the cost of fares, providing more complementary community transport services and improving the conditions of their walking environments" (p.141). A less explored issue in this study was the extent to which improvements to public transport services in the city can and should take account of the needs of low income communities who currently say that they will not use them.

4.3. Perceptual Barriers

A range of studies have drawn attention to the perceptual barriers – such as fear, imperfect knowledge and lack of (spatial) confidence – which inhibit spatial mobility. Mental and perceptual barriers are often far more difficult to break down than physical barriers through the provision of public transport services alone (Shuttleworth and Green, 2009). Limited perceptual horizons mean that destinations for prospective employment can be seen as too far away regardless of their accessibility and physical distance. An example of this can be seen in Green and White's (2007) study, where transport barriers to accessing opportunities emerged as more 'perceived' than real.

Perceptual barriers often revolve around fear. In their study in Northern Ireland, Shuttleworth and Green (2009) found that several respondents from marginalised groups experienced a sense of fear around travelling out of known areas, but found it difficult to conceptualise exactly what this fear was. As well as a broader place-based fear of travelling out of familiar areas, fear can be specific to certain modes of transportation. For instance, the wider literature shows that barriers to car sharing often revolve around the personal, such as being cautious of sharing with strangers

and issues around safety and security (Behavioural Insights Team, 2017). With this study as the exception, there is a gap in the literature around spatial horizons around transport mode and whether an individual has greater spatial confidence if travelling by one form of transport over another.

There is some evidence that spatial horizons and **perceptual barriers vary across social groups or by past individual experiences**. Section 2 has already shown how gender can shape propensity to travel. In addition to these findings, research on travel horizons in Greater Manchester revealed that while safety and security implications affected all age and social groups, those that had been **victims of crime** were less likely to travel after dark (Morris, 2006). **Elderly residents** also considered safety a key travel concern and had reduced their travel horizons as a result.

Previous work for JRF on the links between former coalfield areas and their neighbouring cities produced a number of findings which complement these studies (Gore *et al.*, 2007; Gore and Hollywood, 2009):

- The extent of interaction between former coalfield areas and their neighbouring city in terms of employment take-up is only partly a matter of proximity and good transport links (and hence travelling times). It is also related to the existence of alternative, possibly more accessible employment centres.
- Travelling to the neighbouring city for work is also dependent on whether it falls within what an individual identifies as his or her 'local area'. This is less likely to arise in a polycentric conurbation such as South Yorkshire or a fragmented and sprawling environment like the South Wales Valleys than it is in a monocentric city like Edinburgh and its hinterland.
- In the former case, the tendency for low income residents of the South Yorkshire coalfield not to make trips to Sheffield fostered a lack of familiarity with the city centre, which in turn deterred people from thinking of it as a place to seek employment. In contrast, a tradition of travelling to Edinburgh from the Lothian coalfield meant that the reverse was the case there.

Even where former coalfield residents in South Yorkshire and South Wales had made journeys to their neighbouring city for retail or leisure purposes, this did not automatically transfer into thinking of such places as sources of employment opportunity. This was partly because the nature of the journeys involved was different to what travel to work would involve: they generally went at weekends, when alternative arrangements for any caring responsibilities could be made; and they went with one or more friends or family, rather than on their own. This **social aspect to feeling secure** when travelling and navigating to a given destination has received little further investigation by researchers.

5. The effectiveness of policy in improving connectivity

5

5.1. Introduction

This section examines the range of policy interventions that have been used to improve unemployed job seekers' connectivity to areas where there are employment opportunities. These may be divided into four broad types:

- **Transport-related initiatives:** these mainly involve the provision of alternative travel modes, including new public transport links and vehicle loan schemes. Housing associations can also provide a direct role in facilitating access to public or private transport.
- **Employment- and job search-related interventions:** these generally entail a combination of financial support and personalised advice to assist people in travelling to interviews as well as to work during the early stages in a new job.
- **Land use planning and the designation of land for employment-related uses adjacent to low income neighbourhoods:** here the goal is to obviate the transport problem by providing job opportunities next door (and hence within easy walking distance) of people's homes.
- **Facilitation of residential mobility:** financial and practical support is provided to help families move from a poor to a better neighbourhood, as a means of improving their access to services, amenities and employment and through this an improved quality of life.
- **Expanding travel horizons:** some initiatives have sought to overcome the perceptual barriers to commuting through encouraging residents in low income areas to travel further afield.

The main finding of this section is that **physical changes such as the installation of new transport infrastructure and the development of more mixed land use patterns are likely to be insufficient on their own** in connecting large numbers of jobseekers in low income neighbourhoods to employment opportunities. Similarly facilitating housing mobility may improve residents' general quality of life, but it does not appear to lead to better employment outcomes. Rather each of these approaches **needs to be complemented by targeted interventions that help people overcome financial, informational, perceptual and emotional barriers** to making trips to hitherto unfamiliar destinations, or to overcome stigmatised perceptions of their home area. Such interventions also need to be of sufficient scale and duration to have a significant effect.

5.2. Transport-related initiatives

Provision of new transport links

A comprehensive review of impact evaluations by the What Works Centre for Local Economic Growth (2015) concluded that there was **mixed evidence** of the effects of new transport links. The review examined a large number of evaluations, focusing in particular on the following:

- upgrading and/or expansion of existing road networks;
- construction of new road links;
- installation of new railway lines and networks (including high speed, conventional and light rail).

For roads there was mixed evidence on their impact on general employment growth. Even for those where a positive effect was shown, there appeared to be a large element of **displacement** from other areas, such that any net gains were fairly marginal. There was similarly mixed evidence in terms of increased wages and improved productivity. Where the wages impact was positive it was associated with places where a high proportion of the workers were in skilled occupations (Michaels, 2008). Productivity and performance enhancement were perhaps not surprisingly most prevalent in sectors that are heavily dependent on road transport, such as manufacturing and logistics (Gibbons *et al.*, 2012). However, none of these studies tried to assess the extent to which residents of low income neighbourhoods had been afforded better access to job opportunities by the new road links.

In terms of new railways the available evidence is even patchier. Indeed, none of the evaluations actually included employment growth or wages in their list of potential impacts, mainly because of the difficulties of attributing them directly to the new link. However, two studies of high speed rail links did reveal a positive effect on productivity and business performance (Ahlfeldt and Feddersen, 2010; Bernard *et al.*, 2014), whilst evaluations of new light rapid transit systems in the USA have detected variable impacts in terms of new developments and other changes in land use patterns. These range from the very small and localised in Minneapolis to fairly substantial in Dallas, where complementary actions to bring forward site developments near stations were pursued (Hurst and West, 2014; Arndt *et al.*, 2009). In the former Guthrie and Fan (2016) found that while the developing network slightly improved accessibility to white collar jobs in the city centre, it had brought little benefit for those looking for blue collar jobs. This was mainly because such jobs were now largely decentralised to urban fringe locations not connected via the new network to their neighbourhoods. Elsewhere cases of transit-oriented urban development were found to be predominantly residential rather than employment-related in nature (Ingvardson and Nielsen, 2017).

One piece of work that did assess the immediate impact of a new transport link on the local labour market was the evaluation of the Sheffield Supertram (see Dabinett *et al.*, 1999; Lawless and Gore, 1999). The three prongs of the network serve a number of low income neighbourhoods, particularly Netherthorpe/Upperthorpe and the Manor estate. Again, the effects were predominantly small-scale. Thus, there appeared to be **little advantage bestowed on those living within the tram corridor** in terms of recruitment to major employers in the city. For the **majority of jobseekers in the city the links were irrelevant** as they did not serve their home areas, nor the places where they were looking for work. However, a quarter of those living within the corridor agreed that it had helped them to widen the geographical scope of their job search activity. In addition, the service had helped a small number of women in low income neighbourhoods to reach previously inaccessible retail and

cleaning jobs in shopping centres to the north and south-east of the city. Similar marginal impacts on improved employment access were found by evaluations of different phases of the Metrolink tram network in Manchester (Law *et al.*, 1996; Transport for Greater Manchester, 2016).

Previous JRF-sponsored research has also looked at the **benefits of providing new public transport links for deprived areas** (Lucas *et al.*, 2008). Three of their four case studies involved the introduction of **new bus services** on a subsidised basis. Two of these followed a conventional fixed route and timetable approach, whilst the third was a flexible door-to-door service based around advance customer bookings. The main **benefits** identified by service users were as follows:

- expanded horizons and choice: in general people were enabled to get out and about more than before;
- greater choice of shopping locations and outlets;
- easier and more affordable access to hospitals and other health facilities;
- access to employment opportunities and subsequent job retention.

However, there were no data available to quantify the scale or reach of these benefits, and hence the difference they made to all residents of the neighbourhoods served. Moreover, all three services were inaugurated and operated using resources from a short-term funding stream (the Department for Transport's Urban Bus Challenge). As they were unlikely to become commercially viable, all were predicted to cease operation once this funding ended.

Provision of **new bus services does not automatically guarantee use** either, even if usage involves no payment. One example of this was the introduction of a free bus between deprived estates in Birkenhead and a large warehouse park near Chester as part of the local Working Neighbourhoods Pilot initiative funded by DWP. This generated very few passengers, and it had to be withdrawn after a year (see Dewson *et al.*, 2007).

Direct provision of private transport

At present there are 45 **'wheels to work'** (W2W) schemes operating in the UK. These typically offer the loan or rental of a scooter or moped, a small motorcycle, or a bicycle to help people gain or retain access to employment, education and training. The schemes are generally operated by local authorities, charities, social enterprises and community interest companies on a not-for-private-profit basis. The vast majority are organised on a county-wide basis and focus particularly on overcoming transport barriers in rural areas. However, many of these are also available for residents of towns and cities within the area of operation, and a few are focused on specific urban areas (e.g. Oxford and Swansea). There is just one example where **eligibility** is restricted to a smaller subset of residents. This is the scheme run by the Weaver Vale Housing Trust for its tenants.

Each beneficiary is required to pay a small fee of between £20 and £35 per week to make use of the scheme, depending on the type of vehicle. W2W schemes cover compulsory basic training, insurance, Vehicle Excise Duty, and maintenance of the vehicle. In most but not all cases clients also receive any necessary protective equipment (e.g. helmets, gloves and jackets). The loan of the vehicle usually lasts until the person has succeeded in obtaining their own transport to enable them to travel to work. This generally occurs after about six months.

There is a Wheels to Work Association which helps schemes to get off the ground, provides information and advice about ongoing funding, and generally shares

intelligence between members. Where project impact evaluations have been undertaken the findings have been remarkably consistent (Benington, 2007; ERS Research and Consultancy, 2009; Lane *et al.*, 2008; The Motor Cycle Industry Association, 2010; Steer Davies Gleave, 2005). They can be summarised as follows:

- The loan of a scooter or moped for up to 9 months has **assisted users in attending training courses, and in finding and retaining paid employment**. This is especially the case for young people living in rural areas (these are often, but not always, key eligibility criteria).
- It has also enabled several beneficiaries to **work more flexible or longer hours**, thus giving them an improved financial situation. This in turn has helped to improve their motivation in work, and to develop broader horizons in terms of future work opportunities.
- More broadly it has fostered **greater independence, confidence and self-esteem**, allowing beneficiaries to pursue a more active social life and in turn to enhance their social skills. This has also had a positive effect on their mental health too.
- Although not quantified in most cases, the implication is that the majority of beneficiaries have worked out their own transport option by the end of the loan, usually an upgrade to a more powerful motor cycle, but occasionally a car.
- The expenditure on vehicle provision, user training and fleet management is estimated to be far lower than the Exchequer **savings** associated with cessation of welfare benefit payments. Interestingly, none of these calculations factors in potential savings to health budgets.
- Typically schemes have **assisted relatively small numbers** each year (in the tens or hundreds depending on their scale). However, across all schemes and over the many years they have been running, this equates to a substantial total.
- Some schemes have expanded their scope to include **disconnected and disadvantaged areas in urban settings**, with some success. There may also be some scope to extend eligibility to older age groups, although some feasibility testing did find resistance to the idea of a moped rather than a car (many saw it as a 'young person's vehicle').
- Virtually all projects are run on the basis of **time-limited funding**. Many have managed to survive through a succession of funding arrangements, as well as changes in both funding streams and the broader policy environment, but there have been some casualties. There appears to be little scope to develop robust self-funding mechanisms: the most innovative managed to cover just 50 per cent of its costs. Finding a stable and sustainable resource base has been described as "a real challenge" (ERS Research and Consultancy, 2009).

Promotion of more efficient vehicle usage

One approach that brings together potential economic efficiency and environmental improvement benefits is the encouragement of car sharing. Official car sharing schemes can be split into two types. First, there are those that are fully integrated, in the sense that it provides a fleet of vehicles and administers a list of eligible members who can make use of the vehicles according to need. This may apply just to a single employer, or may operate on a city-wide basis. The second version tends to be specific to particular workplaces, whereby employers encourage workers who use a motor vehicle to travel to work to provide lifts to carless colleagues. This may form part of a larger 'sustainable travel plan' whereby employees are encouraged to reduce their environmental 'footprint' in their journeys to work. This is unlikely to be of

assistance to job seekers in low income neighbourhoods unless they are recruited by that employer.

A recent paper by Kim (2015) examined the leading provider of formal car sharing in New York City, in order to assess socio-demographic variations in usage. The analysis revealed that, far from the widely perceived exclusivity of take up by middle income groups, white and young people, the **extent of car sharing in low income neighbourhoods was similar to other locations**, allowing for differences in number of vehicles available and walking distances to dedicated parking spaces. What mattered above all was **affordability**. The conclusion was that there might be scope for expansion of such car sharing to those areas suffering most from accessibility constraints, a position endorsed by Kodransky and Lewenstein (2014). They suggested that such **vehicle share 'clubs' could achieve a wider reach into low income neighbourhoods** through a combination of pilot schemes, hybrid for-profit and non-profit business models, integration with long-term transportation planning, incorporation with other social and economic support structures and use of intermediaries to spread the message.

On the other hand, a study by Clark and Curl (2015) in Glasgow suggested that the location of stations for both car and cycle share schemes were optimised from both a commercial and a mode-shift perspective. This does not always favour low income households. Indeed, the need for investment returns meant that the share schemes were **less accessible to those most at risk of transport-related social exclusion**. This echoes the findings of a Europe-wide review by Loose (2010), which estimated that only around 12 per cent of users lived in areas of social housing. Such findings in fact highlight the potential **tensions between sustainability and social justice** aims. Achieving vehicle use reduction targets related to sustainability requires limiting both trips and distances travelled, whereas social justice may require increased travel among disadvantaged socio-demographic groups.

As well as formally constituted sharing schemes, friends and colleagues may make informal arrangements to travel together to workplaces in the same vehicle. Those involved tend to share not only the immediate travel costs, but also to take it in turns to supply the vehicle where the group includes more than one car owner. Anecdotally, this appears to be typical mode for journeys to work in sectors where there are multiple and/or changing work sites, such as the construction industry, agriculture and home care services. However, there is no reason why this same approach could not be promoted for workers and potential workers in single site workplaces which are located at some distance from their homes and which lack direct public transport connections. Unfortunately it appears that little or no research has been undertaken on this form of transport.

Housing associations and transport initiatives

There are also a number of a number of current or recent examples where housing associations have helped plan, fund, or operate transport schemes although not always explicitly to increase access to employment. For instance, Apex Housing Association run a community transport scheme designed to help tenants get 'to and from day centres and work placements'[5]. This targets both access to employment opportunities, but also leisure and social activities. Merlin Housing Association run a scheme where volunteers are asked to use their own cars to provide transport to other tenants, in return for out-of-pocket expenses[6]. Other housing associations

[5] See http://www.apex.org.uk/news/apex-community-transport-adds-2-new-minibuses-to-its-fleet/
[6] See http://www.communityignite.org.uk/volunteering-opportunity/transport-volunteers-merlin-housing-association

have trialled electric bicycle leasing initiatives[7]. In Scotland, efforts have been made to introduce car clubs, for both tenants and housing association staff, in a bid to widen transport options and limit the use of staff personal vehicles.[8] However, none of these initiatives have been evaluated so it is not possible to reflect on outcomes and the extent to which they have increased access to work.

Beyond this direct involvement in transport provision, housing associations have also provided funding for local bus services, for instance in rural Cumbria[9]. In addition, where housing associations have been engaged in large-scale housing developments, they have helped shape local transport plans[10]. Nonetheless, there would appear to be no widely accepted role for housing bodies in the planning and delivery of transport services. Housing associations appear to be responding in ad hoc ways to varying local needs and contextual factors, such as rurality. That said, it does highlight the different interventions which housing associations might develop or fund to increase access and affordability of transport to lower income households.

5.3. Employment- and job search-related interventions

A key barrier for unemployed job-seekers has already been identified as **affordability of public transport fares**. This has long been recognised by those working in employment support activities, including DWP and Jobcentre Plus. Some community-based regeneration initiatives have sought to go further than the basic assistance provided by these mainstream agencies in addressing issues with transport costs. Mechanisms that have been put in place include:

- Free one-day travel passes (or daily fares paid) for travel to interviews (standard for those in receipt of Jobseekers Allowance) or to training courses.
- Free one to three month travel passes to cover the initial period in a new job, to tide someone over until they have received their first wage packet, or have had chance to build up some savings.
- Half-price travel passes for people who are out of work, to enable them to expand their job search horizons.
- Full subsidisation of driving lessons by construction employers who have provided job and apprenticeship openings for residents of nearby disadvantaged areas in connection with public infrastructure works, so that recruits can travel to other sites once the first project is completed (see While *et al.*, 2016).

Apart from cataloguing these, little research has been undertaken to assess how successful they have been.

At the same time, some practitioners have argued that, while financial assistance is important, on its own it is unlikely to overcome the strong perceptual and emotional barriers examined in Section 4. They contend that it needs to be complemented by a suite of **personalised measures** that will help jobseekers to acquire the knowledge and to develop the skills required to plan and undertake journeys to previously unfamiliar destinations, as well as support in beginning to put these into practice. A good example of this personalised approach is the Work Wise project in the West Midlands. Although it started in 2003, this was incorporated as one of a series of initiatives supported by the Local Sustainable Transport Fund from 2011 to help

[7] See https://www.transportxtra.com/publications/local-transport-today/news/48503/housing-association-residents-get-electric-bike-share
[8] See https://www.carplus.org.uk/wp-content/uploads/2015/03/Benefits-of-housing-association-Scotland-pdf.pdf
[9] See https://www.edenha.org.uk/2015/08/kids-go-for-1-on-the-106-bus-service-on-selected-dates-in-august/
[10] See http://www.ridge.co.uk/traffic-transport-team-works-closely-with-housing-association/

jobseekers back into employment. As well as travel passes for those invited to interviews or starting a new job, Work Wise offered the following:

- **Personalised journey plans** for jobseekers heading to interviews and recruits heading to new workplaces.
- **Travel training and information sessions** for unemployed people in Jobcentres and Work Clubs.
- Trial offer of a free refurbished bicycle, plus equipment and training.

Although the support was available across the whole region and focused on the 'work ready' (those on the Work Programme were already eligible for similar support), **most of the beneficiaries reported that they would have been unable to take up their jobs without the help of Work Wise**. Roughly 5,000 people were helped in terms of travelling to an interview, and around 15,000 in terms of sustaining a new job for the first two months. After six months about three quarters of these were still in the same job, with the majority making the journey to work by bus.

5.4. Land use planning and the designation of land for employment-related uses

One approach to addressing the 'spatial mismatch' problem examined in Section 3 has been for the land use planning system to **designate areas for employment-related activitie**s adjacent to low income neighbourhoods. This has also been associated with the regeneration of former industrial areas, and the redevelopment of sites which used to provide the principal employment opportunities in the locality. Indeed, in the UK the third generation of Enterprise Zones developed in the late 1990s and early 2000s were explicitly delimited so that they would offer job opportunities to neighbouring areas of deprivation. However, the experience was that, as with earlier iterations of the concept in the UK and elsewhere, **little benefit in terms of job take-up** was gained by local residents (Crisp *et al.*, 2014).

One small-scale initiative that attempted to address this issue was the Holmewood Employment Project, part of a wider Working Communities Programme being implemented on this social housing estate on the outskirts of Chesterfield. The Holmewood Industrial Park was developed as part of the East Midlands Enterprise Zone initiative, with the intention of helping local people find work. However, this did not happen, and relations between employers and the local community were limited. The project followed a two-pronged, two phase approach. Firstly it improved the presence and coordination of key agencies on the estate, using this to engage with local residents and to help them address any barriers to employment they were facing. The second strand was identifying suitable employment openings, especially with firms on Holmewood Industrial Park. Following a number of successful applications, some of the employers then started to take a more active role, using the project as a first port of call when they were seeking new members of their workforce. Although the numbers involved were relatively small and only made a small dent in the estate's unemployment figures, the project did have **a valuable demonstration effect** in terms of what might be achieved with concerted effort and more resources (Botterill and Gore, 2008).

It also endorses the evidence from similar Federal Employment Zones in the United States which points to **a positive effect on both unemployment and poverty rates** in the surrounding area (Ham *et al*, 2011; Squires and Hall, 2013) where programmes have incorporated **complementary 'place-based people' measures** over and above fiscal incentives and deregulation. These were aimed at equipping

local residents with appropriate skills for (and in some cases directly matching them with) the new employment opportunities.

5.5. Facilitating residential mobility

Section 3 has highlighted the lack of residential mobility experienced by low income households, and the potential effect this has on their access to employment opportunities. In the UK assistance is available for specified 'key workers' in certain public services to relocate to high cost areas, although its effectiveness has recently been questioned (White, 2017). Given its threshold of a maximum household income of £60,000 and the levels of skill associated with its list of eligible job roles, it is unlikely to apply to many low income individuals or families. Otherwise there appear to have been **no comprehensive interventions in the UK that help low income households move to find work**, despite some high profile academics advocating this approach (e.g. Overman, 2011).

Perhaps the most celebrated example of a residential mobility scheme designed to help low income families occurred in the United States as part of the **HOPE VI programme** to revitalise the most rundown public housing estates into more densely developed low-rise mixed tenure areas. As part of this, the **Movement to Opportunity (MTO) demonstrator project** was implemented in five of the largest US cities. This offered selected families vouchers which enabled them to relocate to a more affluent neighbourhood. The scheme ran on an experimental basis, with a control group of households which applied for vouchers but were denied the opportunity on a random basis. Analysis of the outcome data revealed **several marked benefits** for those who had moved compared to the control group, including:

- higher satisfaction levels with the new neighbourhood, especially in terms of safety;
- higher levels of satisfaction with the quality of housing;
- improvement in both adult and child health.

However, the moves had **no discernible effect on employment, earnings or receipt of welfare benefits** (Orr *et al.*, 2003; Feins and Shroder, 2005; Gay, 2005; Ludwig, 2014). Picking up earlier observations about complementary employment-related support, it is worth noting that the MTO programme design did not include any interventions along these lines.

5.6. Overcoming perceptual barriers to using transport

As Section 4 detailed, programmes to overcome physical barriers can only go so far if perceptual obstacles exist. The literature refers to several schemes that take account of these psychological barriers, although evidence on impact is scant. Shuttleworth and Green (2009), for instance, refer in detail to an approach aimed at tackling perceptual barriers. This includes **personalised travel information schemes**, which have been put in place in selected local areas in the UK as part of local travel plans. The 'travel' element was embedded in a wider programme which aimed to enhance confidence, self-esteem and broaden horizons more generally. This study also makes reference to the use of personal mentoring and assistance with journeys to help people get used to the idea of travelling. There is also evidence that spatial confidence can be enhanced indirectly as a result of schemes with a focus on the practicalities and affordability of travel. Goodman *et al.* (2014) examined the effect of universal provision of free bus travel on young people's mobility in London. They found that as well as enhancing young Londoner's capabilities to travel

by increased financial access, free bus passes also facilitated the acquisition of the necessary skills, travelling companions and confidence to make a journey by bus.

A range of **social factors which boost spatial horizons and confidence to travel** are evident in the literature, and could be of significance to policymakers. Green and White (2007) suggest that exposure to other areas through social contact when young impacts on spatial horizons in relation to education, training and employment at a later age. It should be noted, however, that while wider spatial horizons are likely to improve chances of finding work, it does not guarantee employment (Green and White, 2007). Broadening travel horizons in the sphere of employment opportunities might best be achieved through non-work domains: through leisure activities or residential trips which 'break down barriers' and 'stretch people by separating them from their comfort zone' (Green and White, 2007: 83). If this is the case, policy initiatives to widen horizons might take a different form, focusing on social activities designed to provide new experiences and enhance confidence in addition to transport and employment initiatives. This process relates to what Chatterjee and Scheiner (2015: 11) term 'mobility socialisation', a process that helps an individual become a part of a mobile society. The family, schools, peer groups and the media can all play a part in educating children in terms of travel behaviour. However, evidence on the existence and impact of such schemes is lacking.

6. Implications for the research

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This report has examined a wide range of evidence on the links between transport and poverty and how this can shape capacity to look for, and sustain, work. Key findings are outlined in brief in the executive summary. The review has also identified a number of gaps in existing knowledge that could be usefully explored in subsequent phases of this study. These include:

- The degree to which **low transport expenditure** by households in poverty is determined by a lack of need to use transport or inability to afford transport which households would otherwise use.
- The extent to which the **jobs most appropriate to low-skilled workers have become less accessible** through decentralisation of economic activity.
- Consideration of individuals' differing cognitive, technical, social and economic capabilities, and how these combine to create different levels of **'mobility capital'** in terms of ability and propensity to travel.
- Differences in levels of connectivity by social group and location highlight the importance of understanding how **socio-demographic (e.g. age, gender and ethnicity) and other contextual factors** shape access to, and use of, transport. It is essential to recognise these variations to enable a more nuanced and targeted approach to developing policy solutions to address the transport barriers faced by different groups.
- The possibilities for supporting individuals to **broaden travel horizons** through a range of activities outside their immediate neighbourhood as the basis for increasing propensity to commute to work.
- **The social aspect of feeling secure** when travelling and how this might be understood or enhanced to increase individuals' willingness to travel in order to look for, or sustain, work.
- The potential for **informal sharing of private transport** in helping small groups to access work sites e.g. in construction, agriculture and home care.
- The **role of employers** and/or of intermediaries in resolving travel to work difficulties through personalised solutions; and by extension the extent to which better information increases capacity and willingness to look for, or undertake, paid employment.

These gaps in existing knowledge will be explored in interviews with stakeholders and residents as the research moves into subsequent phases.

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Addressing transport barriers to work in low income neighbourhoods: A review of evidence and practice

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