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Transport, Economic Competitiveness and Competition: A City Perspective

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Abstract

Stimulating the economy is a dominant policy objective, but on what basis are decisions being taken around transport and growth? We describe how transport studies and political geography offer two related, but poorly connected, theoretical approaches purporting to explain the relationship between transport and the economy. Yet in what ways does it matter that two different world views exist? We test these questions through an empirical case study of how city and regional officials use transport in attempting to realise economic objectives. Echoing theoretical approaches based in political geography, we find officials' own reasoning places emphasis on supply side improvements, especially connectivity within regions and on a high quality urban environment hoped to attract high GVA jobs. The decision-support tools are not well aligned to this reasoning, focussing on time savings and the justification of the value for money of proposed schemes relative to other investments in the region and nationally. In contrast to much theoretical work on competitiveness, employment growth is treated as exogenous with less emphasis given to which areas win and lose in the region. It is competition between weaker regional towns and cities that is prominent in officials' discourse. Such a gap between the thinking by officials, and the types of available transport investment decision-support tools, is of international significance. Given the centrality of the economy to where and what we invest in, the paper suggests a need for better knowledge about the efficacy of urban realm and other supply side improvements on job creation and on the influence of local autonomy in decision-making on investment selection and outcomes.

Keywords: cities, evidence base, competitiveness, transport, economic growth

Highlights:

- Identifies divergent accounts of the economic role of transport
- Questions the basis on which transport is used to support competitiveness in cities

- Finds a weak evidence base on impact of supply side and urban realm improvements
- Employment and retail bring conflicting pressures on transport planning
- Recommend re-thinking decision-support tools and governance arrangements

1. Introduction

Over the last two decades a prominent vein of research has investigated the role of cities as potential agents of economic competition and development (Camagni, 2002; Kresl, 2012; Krugman, 1993; 1996; Lever, 1999; Porter, 1985; 2003; Snowdon and Stonehouse, 2006). In various manifestations, it is suggested that city and regional officials have come to 'focus upon competitiveness as a key economic tool' (Boland, 2007, p. 1021; see also Begg, 1999; Peck and Tickell, 2002). Researchers have raised questions of which, if any, of the multiple ideas of economic competitiveness explain the motivations that officials do, or should adopt (Agnew, 2000; Begg, 1999; Boland, 2007; Florida, 2005; Ward and Jonas, 2004).

Transport investment has reasserted itself as a central tool in the post-recession 'growth agenda' across the globe (OECD and ITF, 2013; DfT, 2013) and cities are seen as key engines of growth where transport investments can help transform city economies by generating jobs for the longer term (Clayton, et al., 2011). Economic theory indicates that transport is a significant factor influencing costs of production and access to labour markets (Eddington, 2006; SACTRA, 1999). Beyond this, there are empirical and theoretical studies of how transport might play a role in a variety of broader economic objectives such as parking policy, and development of supply side conditions to attract knowledge-based industries (Banister, 2012; Docherty et al., 2009; Graham et al., 2010; Marsden, 2006). Investigation and representation of the ways in which city officials use transport in pursuit of economic growth objectives, however, are more limited than might be expected (Banister, 2012). There are significant debates about the extent to which rational economic analysis matters and the degree to which apparently economic decisions are in fact determined by political contexts, competition or struggles (Lovering, 1999; Ward and Jonas, 2004), or distributive concerns (Basolo, 2000; Ranci, 2011). There is a question as to whether the accounts of the role of transport in making cities more competitive are more or less rhetorically or evidence based.

This paper investigates representations and tools which aim to explain the role of transport in competitiveness and economic development, and explores how officials' themselves understand that role. First, we identify a fundamental distinction between the accounts which inform transport models and which draw on economic theory, and those based in political geography. Then we report an empirical case study of how city and regional officials' perceive the relationship between transport and economy, and how they use transport in attempting to realise economic objectives. The study reported in this paper involved English cities, a town, and their regions. The findings indicate that officials' perceptions are frequently closer to representations found in political geography than to those assumed in transport models. Given the stark contrast between the accounts by officials and the approach drawing on economic theory which underpins existing decision-support tools (which are in widespread use across the world – see Mackie and Worsley, 2013) this raises questions for transport decision-making far beyond the English case studies.

We begin by setting out contrasting accounts of city competitiveness drawn from literature on political geography. These are then compared with accounts of the role of transport in economic development and an outline of the assumptions which frame decision-making tools for transport (Section 2). From this, in Section 3, we set out questions developed and methodology used in our empirical study. In Section 4, the interview analysis considers the economic objectives of city and regional officials, how they view competitiveness in relation to these objectives and how transport is used in attempting to achieve these objectives. Section 5 discusses the implications of the findings. We extend the representations of transport decisions with respect to competitiveness, identify uncertainty and limitations in evidence supporting those decisions, and so offer a contribution to the development of tools which better support actors' concerns and priorities.

2. Accounts of city competitiveness

In this section we describe and contrast accounts of city competitiveness and the economic role of transport found within and between political geography and the economic theory underpinning most transport decision-making tools. As primarily a descriptive, rather than an evaluative review, this does not attempt to assess the likely impact on economic prosperity of applying measures or interventions informed by any one or other account of competitiveness and how that competitiveness might be facilitated (cf. Turok and Docherty, 2004, p. 14).

2.1 Competing and competitive cities in political geography

A striking feature of literature on city and regional competitiveness is the degree of contestation about what the term 'competitiveness' should be taken to mean. Begg draws the following distinction:

'At one level, [competitiveness] is equated, usually loosely, with the 'performance' of an economy, an absolute measure. At another, because it relates to competition, it implies a comparative element, with the implication that to be competitive, a city has to undercut its rivals or offer better value for money. In this sense, competitiveness is essentially about securing (or defending) market-share' (1999, p. 796).

Two points can be clarified at this stage. First, city or regional competitiveness is often understood as concerned with attracting investment, or gaining from exporting goods. However, it would be misleading to consider this as equivalent to company competitiveness. Cities and regions cannot compete, fail and exit the market in the way that firms can (Krugman 1993). Second, not all city or regional competitiveness is concerned with trade or business investment. Lever (1999), suggests that cities might also compete for infrastructure, population, and for public funds.

Alongside debate on its meaning, are significant disputes on how competitiveness can be supported. Ward and Jonas (2004) describe a broad perception in which city and regional competitiveness is concerned with trade and attracting investment and involves 'supply side' development. Ward and Jonas further maintain that 'the dominant neo-Smithian approach' aims to increase division of labour (2004, p. 2121) thus creating greater specialisation (2004 pp. 2120-3). The contestation surrounds the type of supply side developments which would support competitiveness, and the role governments should have in providing these developments. Underpinning these debates are quite different accounts of the influence and value of city or regional competitiveness, and the power that governments can have in encouraging this competitiveness. Porter, in an interview with Snowden and Stonehouse,

maintains that competition with others is an important feature in explaining relative prosperity of cities and regions, but that:

‘the true metric of competitiveness is the productivity of the resources utilised in that location.... The competitiveness of locations is not a zero-sum game’ (Snowdon and Stonehouse 2006, p. 165).

Porter further claims that a locations’ competitiveness is associated with the relative strength in their field, of clusters defined as ‘geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions’ (Porter 2000, p. 15; also Porter 2003). Significantly Porter argues that governments have a role in providing a physical and regulatory environment in which firms can improve their competitiveness, and so can ‘act as a catalyst, helping companies to improve their competitive position’ (Snowdon and Stonehouse 2006, p. 165). Conversely Krugman (1996), who accepts that there are cases in which clusters can bring economic benefits of improved productivity, maintains the impact is not nearly so comprehensive as others have argued. He claims that while there might be a reason to favour government intervention to provide supply side conditions to support development of clusters, in practice such attempts are rarely effective.

Florida (2005) makes the somewhat different claim for the economic benefit of improving quality of life in a city in order to attract ‘creative people’ and secure the knowledge and creative industries that they will bring. Some authors accept the plausibility of Florida’s argument, and argue that decisions should be directed to attracting these creative people by efforts to make the city ‘somewhere worth going to’ (Docherty et. al., 2009, p. 323). Kresl (2012), who conducted an analysis of 23 major US cities over three time periods, found that competitiveness is associated with range of factors including the endowment in cultural institutions (see also Comunian, 2011), the percentage of university educated workers, and manufacturing value added. Kresl also found adequate transport infrastructure to be among factors significant in attracting and retaining educated workers. However others have challenged the underlying evidence base for this position (Boland, 2007, pp. 1022-3; Christophers, 2008, pp. 2319-2320; Clifton, 2008).

The significance of city and regional competitiveness is challenged by authors who claim that while competitiveness may be an objective, it is not overwhelming and decisions are influenced by other factors including the ‘politics of collective consumption’ (Ward and Jonas, 2004, p. 2121). Basolo (2000) claims there is a role for progressive policies, such as those concerned with re-distribution, and Ranci (2011) also notes the importance of social cohesiveness in urban policy, although this is less significant in the UK than some other Western European contexts. Without attempting to exhaust the potential forms of divergence from a competitive approach, this list points to some of the ways in which one might consider the operation of approaches not driven solely by a narrative of competition.

Given the uncertainty about competitiveness, further striking aspects of the literature are reports of the force of competitiveness in public policy (Begg, 1999; Bolland, 2007, p. 1021; Peck and Tickell, 2002). Explanations given for this are variable if not necessarily contradictory. Bolland suggests that emphasis on decision-making at the city or regional level may be a result of ‘globalisation [which] affected the power and functionality of the state and has affected the scale of state territoriality’ and in this context, the focus on competitiveness may be a response to ‘intensified global competition’ (2007, p. 1021). Others argue, drawing on public choice theory, that competitiveness is a normative aim towards which governing bodies should seek to construct or facilitate forms of competitiveness including inter-jurisdictional competition which

'deters officials from pursuing policies that do not maximize aggregate preferences' (Macey, 1988, p. 506; also Thompson, 2008).

Curiously then, despite significant theoretical debate, the literature suggests that the basis on which regional and city competitiveness has been adopted as an objective in policy remains unclear. Begg (1999, p. 795) and Peck and Tickell (2002, p. 381) suggest that competitiveness is an article of faith, Krugman (1996) questions the extent to which policy-makers have a coherent notion of what they mean when advocating competitiveness, while Bristow (2005) and Lovering (1999) imply that accounts of competitiveness tend to be post-hoc justifications of policy decisions. An exploration of these narratives therefore forms a key strand of the empirical goals of the paper.

2.2 Ideas and evidence of the economic role of transport

Decision-support tools in the transport sector tend to be based on theories of welfare economics (Cowie, 2009). In this theory, each individual is a 'utility maximizer,' who will make rational choices in order to maximise fulfilment of their preferences (Mueller, 2003, pp. 1-2). These models hold 'that people minimise their generalised costs of travel, mainly operationalised through a combination of the costs of travel and the time taken for travel' (Banister, 2008, p. 73). Time savings to business are estimated through wage rates. Factors including congestion, transport infrastructure and investment, and pricing may all have a welfare impact by influencing travel time and costs (Calthrop et al., 2000; Cowie, 2009; Hyman and Mayhew, 2002). Welfare gains, on this account, translate into 'economic benefits ... through the conversion of reduced journey times into improved productivity and enhanced consumption opportunities' (Docherty et al., 2009, p. 322). In decision-support tools drawing on welfare economics, those making decisions on behalf of a population are considered to have the aim of maximising welfare, understood as maximising the overall fulfilment of preferences of members of that population (see Koh et al., 2012).

Changes to the transport system impact on accessibility which, in turn impacts on land-use through changes to the attractiveness of areas, the opening up of employment access opportunities and land-prices. These feedback loops are captured in some of the more advanced land-use transport models (Hunt et al., 2005; Feldman et al., 2008). These models recognise that there is an interaction between transport and employment, but they act to redistribute a 'known set' of employment opportunities provided as exogenous inputs rather than being linked in any way to their generation (Balijepalli 2011). Further the models tend not to distinguish between different types of employment so there is no way of capturing a desire to attract high GVA (Gross Value Added) jobs in the creative industries for example. Finally, partly because of computing capabilities and partly because of governance boundaries, models have tended to exclude consideration of the impact that other, potentially competing, cities or regions might have on the impact of transport decisions (see Koh et al., 2012 for an exception).

There have been recent attempts to broaden the effects represented within the modelling toolbox. In particular, agglomeration effects are now an important feature of the benefits of transport investments in the UK as they are held to offer potential for gaining economic benefit of transport interventions 'over and above direct time savings of a transport intervention currently captured in appraisal' (Eddington, 2006, para. 2.33; Graham et al., 2010).

Despite the apparent importance of transport to the economy, Banister maintains there are 'many issues arising from the potential link between transport investment and economic growth, namely as to whether there is an implied causality, whether any economic development

is new or merely a transfer from elsewhere' (Banister, 2012, p. 1; also Chatman and Noland, 2011). It is worth noting that assumptions which treat travel time as unproductive are challenged to some extent by studies suggesting that finding that travel time can be, and often is, used for business and leisure activities especially since there are opportunities made available by new communication technologies, (Lyons and Urry, 2005; Lyons et al., 2007). Moreover some of the economic dis-benefit of commuting time might be diminished by prospects of increases in remote working made possible by ICT (see Vilhelmson and Thulin, 2001; DfT 2011). Nevertheless, recent empirical work indicates a continued importance of the relationships between accessibility and local employment centres (Giuliano et al., 2011) and between agglomeration, accessibility and business location (Baker et al. 2015; Cidell, 2014; Mejia-Dorantes et al., 2012).

Whilst transport analytical tools have become more sophisticated and incorporate the relationship between accessibility, transport, employment and land-use they remain somewhat distant from the debates raised in Section 2.1. The tools support the analysis of a small sub-set of supply side improvements for cities seen to be acting in isolation. In what follows we explore empirically the extent to which the tools bring together or generate conflicts between narratives of competitiveness and transport.

3. The Study: City-competitiveness in transport decisions

The diverse accounts of the nature, relevance and applicability of competitiveness in relation to cities and regions, coupled with the differing ideas about the economic role of transport, raise questions of whether or how transport is being used to support city or regional competitiveness, and if so, how is that competitiveness understood? If officials are conceiving the role of transport in ways which diverge from transport decision-support tools then what types of evidence do they draw on to support their decision-making? We use an empirical case study to explore these two questions with a view to understanding how this matters to decision-making on city and regional transport. The study comprised in-depth interviews with officials in four English city-regions to explore the following issues:

- how city and regional authority officials use the transportation system and associated public realm investments (such as pedestrianisation) in their accounts of competitiveness and economic development;
- whether or how transport decisions and the priorities that transport supports reflect accounts of city competitiveness described in wider research in political geography;
- whether or how officials' representations and priorities diverge from assumptions and characterisations underpinning most transport models.

Given uncertainty not only in the understanding of transport officials' aims, but also in expectations of what those aims might be, it was decided to conduct a qualitative study using in-depth interviews, providing scope for a nuanced exploration. There were 20 semi-structured interviews with 21 transport, planning, and economic officers from local authorities, county-wide transport authorities and regional partnerships, and the interviews were held between November 2010 and March 2011 (see Table 1). Four city regions were chosen to give a range of urban areas from across England (excluding London and South East). The major regional city and a smaller city or town in each region were involved to allow comparison and investigation of relations between neighbours and between places with diverse economies (see Table 2 for an indication of industrial profile of each city region). Interviewing regional or county-wide officers allowed an examination of priorities at a regional level. While the specific cities and regions were determined in part by agreement of relevant actors to participate in the research, the extent of agreement was such that the character of the overall sample was not affected. Indeed

of those approached, only one city and one transport authority declined to participate. The interviewees were public officials, accountable to the electorate through elected local authority members, and with responsibility to fulfil relevant statutory duties. The officials all operate within the broader national political circumstances, which at the time of the study, was dominated by economic downturn and public spending cuts, and with a Conservative-Liberal Democrat coalition government with its policy aim of reducing public sector spending and increasing private sector growth (BIS, 2010).

The first round of interviews was a broad exploration of how the participants viewed the role of transport in economic development. This involved a small number of open questions to guide the topics while enabling participants to explain their opinions in their own terms rather than attempting to structure the discussion. Further probing questions were asked in order to explore participants' perceptions in more detail and to examine the basis on which they held the views they do. The second round involved a larger number of scripted questions designed to add to the account of transport and economy developed after the first round, and to examine the structure of participants' views of the role of transport investments and demand management policies in promoting competitiveness. We were not given permission to use direct quotes, so in keeping with our ethical approval, the case study analysis presented is our summary of the main arguments and counterarguments which indicate contextual differences from our overall analysis.

[Table 1]

[Table 2]

4. Case study findings

The cities and city regions in our sample seek to advance their economic competitiveness in multiple ways. In encouraging economic development and particularly employment growth, officers perceive their area as in competition both with other UK cities, and regions, and in some cases with other European and international cities. Nevertheless this sense of being in competition with others is not pronounced, with much greater emphasis being simply on attempting to support economic performance in their area (cf. Begg, 1999). As we show in the following discussion, there are some prominent sites of competition between areas. However, these concern very local competition for retail sales, and competition for funding from national government, with transport being seen to be a significant factor in pursuit of each of these notions. Officers' notions of competitiveness and economic development, and of the role of transport, draw on a complex mix of ideas. These include ideas described in literature on political geography, ideas underpinning transport models and empirical studies of transport, as well a range of political considerations and perceptions. Perhaps unsurprisingly, these ideas are sometimes in conflict.

4.1 Supply side transport interventions and employment growth

Employment growth was cited by officers as the major economic priority in each of the study areas, reflecting the influences of the global economic downturn and recession in the UK. Some of the officers explained the objective of supporting employment growth as resulting from the national economic context, especially public sector job losses. The interviews revealed

ambitions to use a diverse range of transport related supply side measures to facilitate employment growth (cf. Ward and Jonas, 2004). This emphasis might appear to imply that officers are reflecting ideas described in political geography rather than considering demand for travel to available work in the way that would be assumed by the many of the transport models and assessment tools. As we suggest in what follows, the influences on officers' decisions are slightly more complex. First, there is a strong focus on urban realm improvements intended to encourage growth of 'higher value' or high GVA jobs, including those in knowledge based and creative industries.¹ The other involves a broader concern with connectivity, access, and capacity as means of supporting economic development, still with a strong focus on increasing employment but with less focus on a specification of GVA.

First, most accounts concerned measures to attract jobs in knowledge based or creative industries bringing high GVA. Closely associated with this ambition are plans by the towns, cities and regions to protect and improve the quality of the urban areas, through measures such as traffic control, pedestrianisation and development of major urban attractions. The motivation for seeking high GVA jobs is, for some, a function of awareness of constraints of space and infrastructure, which would present substantial problems for accommodating industries requiring, for instance, large warehouses and roads capable of taking freight. However the built environment only featured in some of the explanations for attracting high GVA industries. The interviewees expressed a rationale that everyone would be better off through more high skilled employment due to spill over benefits to the local economy. This wider account broadly reflected ideas in literature, especially Florida's arguments of the case for, and approach to, attracting creative and knowledge based industries to an area (Florida, 2005; Kresl, 2012, and see also Hrelja 2015). However the account given by officers was somewhat limited. On one hand, while there was discussion of transport measures aimed at improving the attractiveness of the city or town, there was relatively little emphasis on some of the factors such as improving frequency, reliability or comfort of public transport, which according to literature, might be expected to do this (cf. Docherty et al. 2009). Nevertheless, in relation to this point it may be worth noting that public transport is largely privatised and that the English transport authorities have relatively little influence over public transport services (see Shaw and Doherty 2014). However a further point is that the evidence base to support this approach was largely absent. Officers who discussed this objective did so as if it were simply established that high GVA industries could be attracted to an area, and that the means of doing this involved improving the urban realm. We can add that none of the transport assessment tools incorporate type of job as a variable, nor do they include relationships within them which describe how quality of urban realm affects employment. On top of this, the exogenous forecasts of employment growth which cities are told to use in transport assessments, do not, by definition, allow for the influence of city strategy. Consequently it is difficult to see how officials might attempt to assess whether (or which) urban realm improvements would support high GVA industries.

4.2 Employment, travel to work, and the limited influence of transport models

Transport, and particularly, connectivity, accessibility and capacity, were cited among the significant factors influencing attractiveness to employers, and the prospects of supporting employment growth. A notable aspect of this discussion was the prominence of the city region as the area over which cities and towns, as well as regional bodies, consider connectivity and access in relation to employment. That is not to deny that there was significant consideration of

¹ 'Urban realm' is a term commonly used in policy discussion to refer to the built environment of a city, town or conurbation

both intra-city networks and connectivity to places beyond the city region. So, there was discussion of the value of transport connections for business travel to other areas, and for enabling both employers in the region to attract employees from surrounding areas (cf. Docherty et al. 2009), and for business travel to other regions. Nevertheless the major emphasis was on the city region. The city region focus involves collaboration between constituent cities and towns and this echoes suggestions that under some conditions cities find it 'economically advantageous to develop collaborative arrangements' (Ward and Jonas 2004, pp. 2122). Officers did argue that despite tensions in collaborative agreements, individual towns and cities would benefit from the greater economic growth which they believed city regions could facilitate. However that is not the sole explanation for looking to the city-region. As officers explained, national government in recent years has put in place a policy approach favouring decision-making, and funding, for regions considered to be functional economic areas (discussed in more detail below).

A key concern expressed by officers is to ensure there is the ability for people to travel to work, and particularly to connect residential areas with relatively high unemployment, to areas of existing or planned large scale business investment (cf. Clayton, et al., 2011). Accounts given by interviewees did not feature reference to ideas that productive activities can occur while travelling (e.g. Lyons and Urry, 2005; Lyons et al., 2007), or that ICT might reduce the need for commuting (for at least for some types of work). In short, interviewees assume that if people are employed, they travel to work. Beyond this there is a significant ambiguity about the sense in which facilitating travel to work is expected to support employment. Language used by both economic and transport officers, implied that supply side improvements to transport could be expected to contribute to creating new employment. As such it could be thought that in this, there is an appeal to accounts of economic development which take more from ideas described in political geography literature than from assumptions underpinning transport models in which employment is treated as exogenous. This view was supported by the officials who described how they promote the quality of their transport network in attempting to attract business investment. However we should not overstate this idea of using supply side provision to facilitate growth. Much of the language of growth is more rhetorical than an expression of ambition. When considered in the context of officers' accounts of how connectivity might act to encourage employment, we would suggest transport improvements are expected to enable uptake, or prevent constraints on uptake, of employment which would be anticipated to increase for other reasons. So in this respect, officers appear to conceive of the relation between transport and employment in a way that reflects the understandings provided through transport models.

While broadly accepting these assumptions about transport and employment, the interviewees revealed major limitations in the detail and influence of many of the available transport models. In contrast to the detail found in transport models, officers described how their own monitoring revealed need for attention to, and support for, residents on matters beyond straightforward provision of transport services, connectivity and capacity. They found that some residents have difficulty in accessing transport to work often for reasons not directly associated with availability of transport but because of factors such lack of knowledge and confidence to travel beyond familiar areas (cf. SEU, 2003, pp. 28-31).

Several interviewees expressed the view that unless mitigated, congestion is expected to limit competitiveness, and particularly growth in employment. All of the study regions are in the worldwide top 100 cities for road congestion, and each has congestion levels over 25%, according to TomTom data for 2014 (online). Despite this, interviewees expressed ambivalent attitudes towards demand management measures which, according to the models, could be expected to alleviate congestion. Parking policy, is potentially an effective method of reducing

congestion (Calthrop et al., 2000; Marsden, 2006; Leape, 2006) yet its use for this purpose in the study areas is greatly restricted by a combination of factors, including limited public control, and, as we discuss below, perceptions of the influence of parking provision on retail. The hypothetical idea of a congestion charge was widely supported by the interviewees. However this support stemmed from the prospect of receiving funding for transport investment associated both with collection of the charge and, significantly, with the anticipation of advance payments from national government to encourage adoption of a charge (in the mid-2000s such an advance payment had been offered (see also Börjesson and Kristoffersson 2015)). This position is at odds with literature on transport and the economy suggesting that there could be a benefit in the charge alone if that brought sufficient improvements through reduced congestion (see Cowie, 2009; Eddington, 2006). Given the importance which officials appear to attribute to congestion as a constrainer of growth, it is interesting to note this widespread ambivalence to demand management policies and to their associated models. This gives an insight into the influence models have when used as part of the city or regions own decision-making.

A further observation on perceptions of the significance of congestion emerges by contrasting the approach used to developing a case to central government for infrastructure funds with the arguments put forward for inward investment. At one moment the authorities described how they presented the case to central government for investment to address large congestion problems which generate very high benefits and unlock jobs that otherwise would not come. The next, they described how they advocated their city as a place to invest in with good public transport and road access to strategically important transport links.

Further discussion of congestion charging reveals a sense in which officials perceive that they are competing with other cities, towns and regions to attract investment. For larger cities this was not a substantial concern, and this indicated that there was little perceived risk of losing investment due to the vastly improved transport alternatives that a charge could bring. However this did matter for officials who considered that their overall attractiveness to business was weaker than that of neighbours. Finally, as was found in other studies (Gaunt et al., 2007; Schade and Baum, 2006), political problems of public acceptability were identified as substantial factors which make infrastructure investment an easier proposition to promote. The discussion on congestion charging was very much hypothetical.

In summary then, access to employment is important for a range of reasons. Particularly in relation to the general desire to increase growth by attracting high GVA employment, there is a focus on supply side solutions. It is significant that this objective has force in policy discourse, but there are questions in literature about its potential for improving economic development.

4.3 Retail competition and beliefs about parking

A perception of competition between areas is not a prominent feature of the concern to support employment. However it is quite visible, albeit in a localised context, in relation to retail. The study findings indicate that we should distinguish cities with shops which are considered sufficiently attractive to bring visitors from outside of their area as well as their own residents from places which understand their retail as something that serves more local demand. For both types, parking availability is considered necessary to support retail and this, it is recognised by officers, limits the use of parking restraint as a form of demand management. Further, for both types, there is an awareness of facing competition from out of town shopping centres offering plentiful and free parking. However, it is primarily the areas with weaker retail for which it is maintained that there is significant competition from neighbouring cities and

towns, and that parking cost and provision are relevant factors in this competition. One city was described as having had a 'policy of desperation for quite some time' in which 'they see parking as one of the ways in which they can compete'. These perceptions of parking and its influence on retail are not well supported by evidence from other studies, although out of town centres do draw shoppers away from cities and towns (Marsden 2006). Further it is not even apparent that they are well supported by officials' own understanding of retail trips in their area. Officers in areas with weaker retail, themselves' suggested that large numbers of the people travelling into their centre for shopping arrive by public transport or on foot or by bike. Interviewees' reported politicians' strongly held belief in the competitive value of parking provision at this very local level.

4.4 City region collaboration and competing for funding

The study findings suggest that competition between areas is particularly apparent, and influential, in relation to seeking transport funding from national government. In the earlier discussion we described how interviewees identified their city region as the primary area over which they consider connectivity, access and capacity as factors contributing to their economic priority of employment growth. Interviewees acknowledged commonly agreed investment priorities across their city regions, where the expectation is that the priorities will maximise benefits to the region as a whole. However, as we noted above, this is not the sole reason for collaboration. National government's expectation of how areas should bid for transport funding is a significant influence on the formation and sustainability of regional partnerships. Whilst the detail of regional and sub-regional partnerships seems to be in a state of permanent flux in England, in recent decades, governments of different colours have shown a preference or even requirement for transport scheme bids to stem from regional partnerships. Moreover, it is in this competition for national government funding that decision-support tools using assumptions based in economic theory can be strongly influential. In other words, interviewees would discuss the economic potential of a given piece of investment by drawing on ideas not reflected in decision-support tools, but would then explain their case for government funding on the basis that the intervention also scores well according to the decision-support tool.

Given this difference between the approaches of national government and city and regional officials to assessing the role of transport in supporting economic objectives, tensions involved in seeking government investment are not unexpected. Those investments considered by city or regional officials to improve supply side conditions were not always seen to be part of the most attractive packages that would attract central government support as they did not maximise the value to the capital infrastructure base. This could be a particular problem for smaller regional cities or towns with their smaller economies and consequently their tendency to have a lower magnitude of expected gains from investment. This tension is significant given the influence of local politics on city-region decisions about the distribution of funds so that authorities receive their "fair share".

5. Conclusion

This case study has identified stark divergences between officials' perceptions of the role of transport, and assumptions informing transport investment decision-support tools. Whilst efforts have been made to integrate economic, land-use and transport models they still take employment to be exogenous and focus on redistributive effects. This contrasts with officials' significant emphasis on creating supply-side conditions believed to encourage economic growth and their perception that distinctiveness and skills mix matter as much as transport networks.

So, although cities we studied do compete for inward investment, they do so largely in isolation from the technical tools which are available.

Further the study has found some important and unresolved contradictions in the debate on the role of transport in economic development and city competitiveness. Simultaneously cities compete for inward investment by means of promoting the quality and distinctiveness of their supply-side infrastructure offer whilst competing for future investment from central government on the basis of the damaging economic consequences of over-crowded, congested or ill-maintained networks. Such a contradiction is underpinned by the technical tools which run through the heart of transport decision-making. Whilst city officials believe that enhancements to the urban realm to attract creative and high value GVA industries are critical for future growth, this is, as yet poorly represented in travel demand models. The key to promoting an effective transport scheme is a high benefit-to-cost ratio which will typically be dominated by large volumes of relatively small scale time savings.

In urban areas which suggest that they face major growth restrictions from congestion, it is striking that demand-management measures are largely absent from the debate. This is particularly true in the second tier cities that are likely to be followers, not leaders, of such policies from their bigger neighbours. The political difficulties of congestion charging following on from the failed referenda in Manchester and Edinburgh have relegated this to a virtual option in Britain. It remains a theoretically appealing option but largely for the investment it would unlock. There was little reported influence of the actions of one geographically distant city on another. The smaller cities and towns in a city region are different. Typically weaker economically, these towns would follow the major city's lead on congestion charging and price set parking with a strong eye on the actions of other adjacent towns and out of town retail park competition. Anything that is perceived to be a risk to jobs in these towns is rejected even though this sometimes works against anticipated transport welfare outcomes. Transport networks in urban areas have not been able adequately to keep pace with demand and there is little prospect of this happening. Indeed, the recent period of fiscal austerity suggests that even maintaining network conditions in the face of population growth and a return to employment growth will be a challenge. Unsurprisingly perhaps the debate on transport and city competitiveness appears to unfold into a competition for resources, dominated by demands for infrastructure.

This paper provides some important evidence, previously missing, on the understanding of officials perceptions of the role of transport in facilitating city growth. Given the importance of transport to our cities, there is a clear need to increase the quality of the evidence base underpinning the supply-side growth strategies and to close the gap between how we understand the value of city investment strategies from the perspective of transport planning and broader economic development. The research has adopted a case study approach leaving open questions of whether similar approaches are adopted in other countries, regions and cities. In particular, the importance of the conflicts identified may diminish where greater local autonomy over financial resources and prioritisation exists. Consequently we suggest there would be value in extending the empirical study begun in this paper. This potential value exists since issue of growth and employment in cities is of international relevance and the decision-tools described here are applied in a wide variety of settings. We suggest therefore that these findings will have significant geographic reach and relevance.

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Transport, Economic Competitiveness and Competition: A City Perspective

Table 1: Study Participant Structure

Study Area	Participant	Role (and participation in 1 st and/ or 2 nd round)
City Region A: Population > 2,000,000 ¹ GVA per hour worked (2011) where UK = 100: in range 90-95 ²	County Wide Integrated Transport Authority	Development Director (1 st round); Passenger Services Director (2 nd round)
	Major regional city	Senior Transport Policy Officer (one interview)
	Smaller city in city region	Senior Transport Planning Officer (1 st and 2 nd round); Senior Economic Regeneration Officer (1 st round)
City Region B Population > 1,000,000 ¹ GVA per hour worked (2011) where UK = 100: in range 90 - 95 ²	County-wide Integrated Transport Authority	ITA Officer (1 st and 2 nd round)
	Major regional city	Senior Transport Planning Officer (1 st and 2 nd round) ; Transport Planner (1 st and 2 nd round)
	Smaller city in city-region	Transport Planning Manager (1 st and 2 nd round) ; Economic Development Manager (1 st round)
City Region C Population > 2,500,000 ¹ GVA per hour worked (2011) where UK = 100: in range 85-90 ²	County-wide Integrated Transport Authority	Former officer –Passenger Transport Authority (one interview)
	Major Regional City	Senior Transport Policy Officer (1 st and 2 nd round); Senior Economic Development Officer (1 st round)
	Smaller Town in City Region	Transport Policy Manager (1 st and 2 nd round); Economic Development Manager (1 st round); Planning Policy Manager (1 st round)
City Region D Population > 1,000,000 ¹ GVA per hour worked (2011) where UK = 100: in range 100-105 ²	Regional Partnership	Chief Executive (one interview); Head of Transport (one interview)
	Smaller city in city-region	Planning and Transport Policy Manager (1 st and 2 nd round); Strategic Transport Projects Manager (1 st round); Economic and Business Development Manager (1 st round)

Notes: Integrated Transport Authorities were established by the Local Transport Act 2008, as statutory bodies covering English metropolitan areas (outside Greater London). The Regional Partnership was a voluntary agreement between local authorities not within a metropolitan area. it should be noted that the Liberal-

Conservative Government brought in a number of changes affecting transport planning and funding affecting the scope and remit of the Integrated Transport Authorities and superseding Regional Partnerships.

Sources: ¹ Office for National Statistics (2012) Region and Country Profiles: Key Statistics: 7 Local authority population statistics, mid-2010

² Office for National Statistics (2013) Region and Country Profiles – Economy: GVA per hour worked

Table 2: Workplace industrial sector as a percentage of total regional GVA (2010)

Region ¹	Manufacturing	Construction	Accommodation and food service activities	Information and communication	Finance and insurance activities	Professional, scientific and technical	Public administration and defence; compulsory social security	Education	Human health and social work activities	Arts, entertainment and recreation
For city region A	15.5	7.3	3.0	3.8	5.0	4.4	8.2	8.3	11.0	1.4
For city region B	15.5	6.7	3.2	4.0	6.9	5.9	5.2	7.5	9.3	1.5
For city region C	15.3	6.6	2.9	3.6	7.3	4.7	5.7	7.7	9.2	1.4
For city region D	12.4	6.8	3.5	4.2	7.6	5.7	6.9	6.8	8.3	1.4

Source: Office for National Statistics (2013) Region and Country Profiles – Economy: Workplace based gross value added (GVA): by industry groups at current basic price, 2010

¹ City regions are part of larger geographical regions, and these statistics refer to the larger regions. Each city region in the study came from a different geographical region.