

Executive Summary

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Introduction

Understanding the role of transport in decisions made by businesses on where to locate or relocate is a crucial element in our ability to assess the impact of our transport system on people's lives. The DfT have commissioned the Transport Research Institute and Employment Research Institute at Napier University, Edinburgh to review the current level evidence of the issues considered by businesses in choosing where they locate / relocate and in particular, the significance and importance to which transport is a factor within that decision-making process.

This is a complex subject area. There are many types of businesses - each with their individual transport needs and considerations - and the task of unpacking and isolating the influence of transport is a complicated and difficult process. As such, there is very little significant consensus concerning the overall effects of transport on business location and wider economic development and it is recognised that considerations need to be made almost entirely on a case-by-case basis.

Naturally, this reflects the differing needs and demands relating to different firms the various characteristics different locations provide. The review itself breaks these issues down into a number of areas - the impact of technology; by business type; firm characteristics, labour supply; spatial scale, and; growth / displacement. This summary, highlights a number of generic considerations the review has identified, inherent when thinking about the role of transport on businesses.

Changes in the Business Environment

Firstly, the environment within which different businesses operate is complex and ever changing. Advances in ICT provision has altered this context in a number of significant ways which have an impact on the way the world - and transport - is viewed and utilised. ICT has allowed us to develop new ways of working and communicating instantaneously with a large number of people, spread across a range of physical locations and distances, and provided us with the potential flexibility to work wherever and whenever we want.

This is a complex interrelationship with better communication potentially reducing the need for travel, but on the other hand reinforcing or possibly expanding travel demand as new markets and localities are opened.

This is still a relatively nascent area of study and not surprisingly, there is little hard evidence - nor consensus - over the potential impacts that ICT has on travel demand. This study therefore, attempts to synthesise research into the influence of transport provision in this complex and dynamic process.

A Necessary, but not a Sufficient Condition

Compiled from business surveys, important factors commonly cited as important in considering a location include:

- the quality and scope of physical and business infrastructures;

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- factor cost and supply, especially labour;
- market demand and links to international markets;
- institutional infrastructure and networks;
- a 'culture' supporting 'civicness' and entrepreneurship;
- indigenous company growth;
- agglomeration economies;
- technological development;
- as well as more social factors such as climate, lifestyle, image and crime rates.

Although some of these have an element of transport within these, none *directly* relate to transport *per se*. As a general rule, studies suggest that transport is only an important factor, once the decision to set up in an area has been taken. This is thought to be attributable to a number of factors:

- The review notes that - within certain parameters, such as, access to airports or major motorway interchanges where absolutely necessary - levels of transport provision are generally seen as ubiquitous within developed countries and as such transport is seen as a necessary, but not a sufficient condition for influencing business location.
- Transportation costs are typically found to be only a very small proportion of firms' total costs - usually less than 5%. As such, any improvements to the transport infrastructure is likely to yield small cost savings and gains to firms.
- The decision to move may be prompted by transport difficulties and inaccessibility. However, it is argued that the transactions cost to any change in transport may be too high to enable the firm to respond fully to a change in transport costs. Therefore the review notes that businesses are likely to change operations in discrete steps, and it is only when certain cost thresholds are reached that it becomes efficient to the firm to revise its number or location of depots.

It should be noted therefore that although influential, transport costs are not the primary business location driver on an international and national scale. An interesting conclusion to be drawn from the review is that on the one hand, transport being such a small proportion of a firm's costs implies that minor changes in provision and function of the infrastructure is likely to have little impact on businesses. Improvements in *transport provision* therefore are only likely to have a limited impact since firms are only making savings on a small proportion of cost. However, this assumes firms have perfect information on their costs.

The review identified that current and expected levels of services provided by transport infrastructure (e.g. the quality, reliability, time, the width of the supplier/customer market and financial costs of journeys using it etc.) are a crucial component in the actual location decisions themselves. To this end, *perceptions* of improved travel time were considered an important factor in considering business investment.

It is important to note however that research has historically tended to focus on the provision of new transport - opening up new markets and opportunities for businesses - rather than improving existing provision and this latter issue requires further investigation.

Transport as Part of a Package

Where transport is of obvious importance, is where improvements in the transport system opens up new, previously untapped areas and markets. However, as noted above, improvements in the transport system in itself would not usually be thought sufficient to stimulate (re)location. It is important therefore that investment is considered as part of a wider package in support of other factors or initiatives supporting other economic or social regeneration factors and spatial policies.

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The review notes that large-scale transport infrastructure policies are likely to be successful in supporting *latent* growth in under-developed regions, but is likely to be ineffective in *stimulating new* growth.

Related to this issue is that transport is important in business relocation only when the decision to move has already been taken.

New transport infrastructure may influence business location, but this can often involve displacing business from one area to another. This can be beneficial if redistribution from congested to stagnant areas; however, evidence suggests that transport investment will tend to displace business activity towards congested areas.

The Logistics Sector

A further factor which may explain a firm's degree of responsiveness to transport is the recent expansion in the logistics market. The increased speed and complexity of distribution networks has meant a significant increase in the number of firms outsourcing many of their transport functions to specialist firms in recent years. As such, direct transport considerations have become less important and become more secondary as specialist logistics companies take on the role.

As logistics firms develop their distribution networks to incorporate practices such as *Just In Time* delivery, an issue of increasing importance is the reliability of the transport network. A number of studies noted that it was not the amount of time taken that was important to logistics firms, but being able to deliver when scheduled. For example, it was suggested that whether a delivery takes 8 hours or 5 hours is relatively unimportant. The key consideration, is that the delivery firm can rely on the journey taking 8 hours, so that it can be factored into the timing of the logistics chain.

It is argued that this is an area of increasing significance and importance although the impact and demands of the changing logistics industry is an area not currently well understood.

Differences in Needs by Spatial Scale

It is noted that ICT and the expansion of firms allows them to have a wider geographical focus and become more dispersed as different elements of firms' business can be outsourced or relocated.

The review notes that the globalisation of the business environment, means that it is increasingly important to consider the national transport system as a whole, and its connectivity with the rest of the world. It is recognised however that the importance of transport on an area or country's *international* competitiveness is an area where little is understood.

Within this context, transport networks are becoming broader and the importance of being near transport hubs - be they air, sea, road or rail - is crucial. A key conclusion to be drawn therefore is that the reliability and connectivity of the transport system is of concern.

Studies note that good air connectivity is vital to businesses operating on an international scale, and for the development of 'world cities' as business locations. It is suggested that air transport *per se* is not a necessary condition, but what is important are: the extent to which that area is plugged directly in to other major international hubs - availability and efficiency of routes (direct, hubbed); costs and the level of competition in global transport market, and; perceived and actual interchange efficiencies. This is a key consideration in the level of foreign investment into an area and is most important for firms with international trading or contacts such as, high-tech firms, financial services and pharmaceutical firms.

It is perhaps unsurprising that air transport has a greater influence on the location of *foreign* investors and business services, whereas it is the road transport has a larger influence on *domestic* investment. The evidence suggests however that transport becomes an increasingly important factor for businesses as the geographical scale is reduced from supranational down to local.

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Recent trends indicate a general movement of businesses locating away from large cities to urban fringes. This is in part at least facilitated by the development of technology, allowing the decentralisation and spread of firms, or their component parts over a wider geographical area, opening up choice of location.

It is noted that heavy industries are likely to incur the highest transport costs and are likely to be the most location dependent. However, there is growing evidence on the location dependency of light manufacture and service firms - particularly with regard to road and air access. It is recognised that high-technology *manufacturing* and service businesses often 'cluster' together. In this context however, transport is a secondary consideration to face-to-face networking, and that this - coupled with the preference for a type of location - that is a key locational factor. This 'clustering' effect is compounded by allowing firms to take advantage of location specific factors which drew the firm there in the first place - such as labour source, the cost of premises. The review notes however, that the exact effect and importance of transport to these firms is inconclusive.

At a local level, again there is limited consensus, with research highlighting that schemes can increase the attractiveness of city centre locations, whereas others show that the development potential is limited. In particular, it is noted that - for example - the impact of traffic reduction measures such as bus priority measures, charging, limiting parking and the effects of by-passes on location decisions, is not yet widely understood.

Regardless, transport policies aimed at moving business into cities are most effective if combined with other policies. Ideally, it is argued, transport planning should be *integrated within* land-use planning and regeneration policies, if it is to be effective in meeting objectives.

Accessibility

Labour supply is often cited as the most important single factor in business location and that the ability of employee / customer access is perhaps the key transport consideration. Transport investment has an obvious role to play in reducing travel time and increasing the labour pool from which firms can draw. Transport can be used as a tool to boost labour supply, through increasing workplace accessibility and therefore labour market size.

However, it is noted that there is little literature considering evidence of the reverse effect: means of encouraging businesses to locate in accessible areas to allow wider labour market participation and reduce travel demand. Studies note however, that higher-skilled workforces are prepared - or are more able - to be more mobile and tend to 'follow' firms to areas where they are established.

This paper represents a brief summary of the key issues emerging from the review of literature on the importance of transport in business location decisions.