



**The Retail Planning Knowledge Base
Briefing Paper**

Linked Trips

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Introduction

Interest in linked trips is not new. Back in 1998 when the National Retail Planning Forum knowledge base was set up, the database included a number of references on linked trips. Further studies of linked trips have however been intermittent occurring in relation to travel agendas or the impact of new retail formats on shopping patterns. There is not a fully formed body of knowledge on the topic. This briefing highlights the nature of research on linked trips and suggests that contemporary challenges demand new understandings of linked trips, particularly in a UK context.

linked trips and town centre viability

Neil Wrigley, Dionysia Lambiri and Katherine Cudworth report new evidence on linked trips and town centre viability obtained from a study of the relocation of an 'out-of-centre' foodstore to an 'edge-of-centre' site



Research

The term 'linked trips' is variously used to include trips that consumers make which include a variety of types of shopping goals, a variety of different activities including shopping and non-shopping or trips which include visits to different types of shopping location. Linked trips are also acknowledged to be an integral part of outshopping from remote areas, particularly island communities.

Three very different approaches to linked trips appear in the literature. The first is a theoretical modelling approach to understanding likely patterns of trips including multipurpose shopping trips, diverse activity trips and the relationship between multipurpose trips and retail agglomeration. The term multipurpose trips (which includes shopping) encompasses a wider range of shopping trips and also of other activities than the use of the term linked trips in the UK. In the current discussions about town centres in the UK and the growing importance of service and leisure uses

in town centres we would do well to use this wider definition. Much of this modelling research is undertaken in the context of the Netherlands; none of it is contextualised within the UK.

The second approach is a body of research which relates to the impact of new grocery stores on linked trips. This topic was of importance in the 1990s, was influential in the concept of the sequential test and continues to be a justification of edge of centre development. It was thought that edge of centre stores would encourage linked trips and thus expenditure in town centres. Evidence from retailers and researchers in the late 1990s showed that those shopping in town centre stores engaged in more linked trips than out of town stores. As edge of centres stores were studied, they too showed a greater propensity for linked trips than out of town stores, although less than for town centre stores. Several researchers found that whilst this pattern existed, the spin off for town centres of linked trips from edge of centre grocery developments was actually quite small and some found it to be non-existent. Retailers such as B&Q argued that certain product types such as DIY retailing were unlikely to be included in linked trips, as part of their justification for continuing a policy for out of town locations on the basis that their goods were “bulky”. This, of course, led some time later to modification of the original PPG6. The most frequent reason for linked trips was for financial reasons. Cliff Guy concluded that there are mitigating factors such as the town offer, the relative size of the store and connectivity between the town and store which will influence whether linked trips between edge of centre grocery stores and town centres benefit town centres.

A group at the University of Southampton recently reviewed these findings from the late 1990s, and in particular the Department of the Environment, Transport and the Regions report ‘**The impact of large foodstores on market towns and district centres**’. Using survey work from the south of England between 2007 and 2009 they looked at before and after experiences of edge of centre food retail developments. They concluded that the findings of the late 1990s underestimated the importance of linked trips. This was partly because of the importance of clawback and town centre perception. Alan Hallsworth, however, continues to argue that in practice the effect of linked trips associated with edge of centre foodstores can be insubstantial and be less

than the trade diverted to a new edge of centre store (www.hands-off-hadleigh.co.uk/Professor_Hallsworth-objection.pdf).

A third strand focuses on travel behaviours and is concerned with greater awareness of carbon footprints and the role of linked trips in reducing carbon emissions. The key exemplar is from Sweden.

Difficulties in carrying out research relate to the problems of tracing actual behaviours. There are issues around memory of trips. Increasingly, tracking devices are being used. There are also issues around the changing nature of and opportunity for linked trips. As technology has altered business sectors and consumer behaviours, so the concept of linked trips may well have changed e.g. from a bank branch and a council office in a town centre to a coffee shop and an optician in a superstore.

Key Findings

1. Purchase categories impact on linked trip propensity (e.g. DIY).
2. Agglomeration increases multi-purpose shopping trips although single purpose shopping trips to larger agglomerations are also very significant.
3. People make multipurpose trips to reduce overall number of trips – in practice people do not minimise trips nearly as much as they could.
4. On-line retailing is reducing the shopping component of trips to the mainland from island communities.
5. Spatial planning of retailing will impact on linked trips. Out of town retailing is associated with fewer multi-purpose/linked trips.
6. Neighbourhood shopping trips involving linked trips are more predictable than out of town shopping trips.
7. GP tracers provide an accurate and contemporary way of measuring trips.
8. Linked trips are greater in edge of centre grocery stores than for out of town grocery stores.
9. Linked trips do occur from edge of centre stores although whether these compensate for trade diversion is contested and depends on other factors such as clawback potential, range of goods and wider shopping opportunities.

Conclusions

Research does not answer the key questions around the wider nature of linked trips in the context of UK town centre vitality and viability. Research suggests agglomeration potentially results in linked trips. However does the location of jobs, service functions or civic facilities impact on linked trips? Cultural differences in the location of civic activities and their decentralisation in the UK may mean that Dutch examples are not transferable. Further research on linked trips needs to take a wider and more nuanced approach accounting for non-retail (civic and service) trips if linked trips are to be understood in such a way as to ensure retail planning goals of more linked trips contributing to town centre vitality and viability are to be achieved.

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Outshopping and linked trips: eric.calderwood@stir.ac.uk

References

Theoretical Publications

Arentze, T. and Timmermans, H.

Deriving performance indicators from models of multipurpose shopping behaviour,
Journal of Retailing and Consumer Services, 8, 2001, 325-334.

A model of multipurpose shopping trips is built and contrasted with single purpose trip models to determine the likely effect on travel patterns. These models have the potential to establish the nature of the impact that a new centre or development would have both on travel patterns and on existing shopping centres. It is argued that the multipurpose model provides a more sophisticated measure. It is based on the theory that individuals have certain purchase frequencies and they make multipurpose trips to reduce the overall number of trips. For example if the multipurpose component can be increased what effect will this have on the travel for shopping patterns?

Dellaert, B., Arentze, T., Bierlaire, M., Borgers, A. and Timmermans, H.

Investigating consumers' tendency to combine multiple shopping purposes and destinations,

Journal of Marketing Research, 35(2) 1998, 177-188.

A choice based conjoint model is developed to assess how consumers make decisions about multiple destinations and multiple trips. The article is theoretical. Differences were observed in the propensity for multipurpose trips depending on purchase category. Many fewer purchases were combined than would have been expected if shopping trip planning were based on travel cost minimisation.

Popkowski Leszczyc, P., Sinha, A. and Sahgal, A.

The effect of multi-purpose shopping on pricing and location strategy for grocery stores,

Journal of Retailing, 80(2), 2004, 85-99.

A model of multipurpose grocery shopping trips is proposed. It is suggested that the model will offer a better understanding of the competitive market structure. Multipurpose shoppers will frequently travel further in order to obtain the selection they require. Outcomes from the theoretical model are compared with outcomes that would be achieved from a single purpose model. There are implications for decisions regarding store clustering as in retail warehouse parks or stand alone stores in terms of trip efficiencies and travel.

Rasouli, S. And Timmermans, H.

Assessment of model uncertainty in destinations and travel forecasts of models of complex spatial shopping behaviour,

Journal of Retailing and Consumer Services, 20, 2013, 139-146.

In the Netherlands it is normal to model aspects of store location such as travel patterns to a store as part of the planning process. The article begins with a review of different types of model – deterministic models, random utility models and models of complex behaviour. It uses the Albatross model and applies this to a case study in Rotterdam. The focus of the article is on what uncertainty the modelling process involves and how this uncertainty should be examined and understood. The Albatross model is an agent based model which is used to look at shopping trips as part of the sequence of trips across the day. Different runs of the model will yield different results. Studying uncertainty enabled the most predictable and least predictable elements of the patterns to be distinguished thus increasing the predictive value of the model. Neighbourhood shopping behaviours were more predictable than town centre shopping trips.

Carbon Footprint

Carling, K, Hakansson, J. and Tao, J.

Out-of-town shopping and its induced CO2 emissions,

Journal of Retailing and Consumer Services, 20(4), 2013, 382-388.

See also HUI Working paper 87 Available online at:

econpapers.repec.org/paper/hhshuiwps/0087.htm

CO₂ emissions are measured for different shopping locations. The results are based on a study of over 500 shopping trips in Sweden. The results found that out of town shopping trips generated more CO₂ emissions than edge of centre or in town trips. In town and edge of centre trips performed similarly. Multi purpose trips were less frequent to out of town locations increasing the significance of CO₂ emissions to out of town centres. Out of town shopping trips generated 60 % of emissions associated with shopping. Most trips to out of town centres were from home.

Data Collection

Moiseeva, A. and Timmermans, H.

Inputting relevant information from multi-day GPS tracers for retail planning and management using data fusion and context sensitive learning,

Journal of Retailing and Consumer Services, 17(3), 2010, 189-194.

The use of tracking devices such as GPS systems has the potential to provide a new source of data on shopping patterns. The data would be more accurate as it is not reliant on memory of trips made. An example of how the data can be used is reported.

Outshopping and Linked Trips

Calderwood, E. And Freathy, P.

Consumer mobility in the Scottish Isles: the impact of internet adoption upon retail travel patterns,

Transportation Research Part A, 59, 2014, 193-203.

This paper examines the impact of internet shopping on mobility patterns in island communities. Whilst grocery shopping remains a largely island based activity involving commuting to the major centres online retailing is popular for non-food items and is replacing catalogue ordering. However although the need for shopping on the mainland may be reduced travel to the mainland has not declined. This would

appear to be because shopping was only one reason for visiting the mainland with family and leisure also important. Shopping has declined as part of the mainland visit.

Linked Trips and Superstores

Bennison, D., Byrom, J., Hogg, S. and Pal, J.

Linked shopping trips: a report for Tesco Stores Ltd.

Manchester; Manchester Metropolitan University, 2000.

This report showed that non-food purchases on linked trips was relatively small. Spin-off advantages it concluded of edge of centre stores were not very substantial.

Bromley, R. and Thomas, C.

Food shopping and town centre vitality: exploring the link,

International Review of Retail, Distribution and Consumer Research, 12(2), 2002, 109-130.

This article reports on a study of Llanelli in South Wales. The impact of the new store on shopping behaviour is explored through a series of survey results. Satisfaction with the town centre increased following the opening of the town centre superstore. Evidence concerning linked trips showed no evidence that the new Asda had increased spend in the own centre.

CB Hillier Parker

B&Q warehouse research

London: CBHillierParker, 2002, 28p.

This report was commissioned to provide an informed assessment on bulky DIY shopping in relation to the current planning debate. The results are based on a telephone survey of 1000 households in Reading and an exit survey of 500 customers in Swindon. Trade draw, travel to the store, competitors, linked trips, frequency of visits and goods purchased were all considered. From a planning perspective the key findings were that DIY retailing did not in any way affect town centre vitality or

viability as there is no town centre competition in this sector and consumers wish to make purchases of bulky items in out of town stores. Indeed to disaggregate the stores would be to increase the number of trips consumers would need to make. It would also affect the very significant use of the stores by tradesmen.

Department of the Environment, Transport and the Regions

The impact of large foodstores on market towns and district centres.

London: HMSO, 1998, 186p.

This report is concerned with the viability of small market towns. Within this framework the significance of superstores on small market towns is investigated. A literature review is included. Then market towns are classified. English local authority views follow. Retailer perspectives are also included. The study takes 9 case studies. Local authorities did not have adequate research on the topic or sets of consistent criteria on which to make decisions.

Guy, C.

Planning for retail development,

London: Routledge, 2007.

Pages 182-85 deal with the subject of linked trips. They bring together research prior to 2007 on the topic.

Hass-Klau, C., Mobbs, I. and Crampton, G.

Accessibility, walking and linked trips,

London: National Retail Planning Forum, 1999, 88p.

This volume is concerned with the factors which affect people's attitudes to walking. Changes in trends in walking are evaluated. The distance that pedestrians think acceptable for different types of shopping activity are reviewed. The paper reports on linked trips on pages 36-41.

Jones, G. and Vail, M.

Environmental impact of retail stores,

Report for the Natural and Built Environment Professions, 3, 1995, 19-20.

The article reviews the main principles of PPG6 and PPG13. It then takes the case study of High Wycombe and looks at the confusion which exists over the definition of 'nature of impact' in the policy guidance statements. The role of car-borne travel and linked trips became key issues. It can readily be argued that town centre locations do not necessarily reduce car-borne trips or increase linked trips.

MacIver, A. and Dickinson, K.

A before-and-after study of four new Sainsbury foodstores,
Traffic Engineering and Control, 33, 1992, 447-453.

Data was collected at four Sainsbury stores in Christchurch, Poole, Swindon and Thanet. The intention was to quantify trip type proportions by store, identify trip type proportions by time of day, to determine the land use category of trip origins and destinations and to compare traffic levels before and after store openings. Data results and analysis are presented. It was found that new stores did not generate traffic but led to a redistribution of flows. The split between linked trips and primary trips varied by day of the week and time and also by store accessibility

Wrigley, N., Lambiri, D. And Cudworth, K.

Revisiting the impact of large foodstores on market towns and district centres.
Southampton: University of Southampton, Department of Geography, 2010, 248p.

This study takes the theme of the URBED 1992-1996 study and tests out the impact of superstores and large foodstores in a set of similar locations. The period 2007-2009 is used to obtain and before and after data on 8 centres with interviews of traders and consumers. It is concluded that edge of centre stores do not have a negative impact on existing centres and indeed may have positive benefits in generating linked trips and encouraging clawback and more localised shopping.

Wrigley, N., Cudworth, K. And Lambiri, D.

Further evidence on linked trips and foodstore development,
Town and Country Planning, 79 (April), 2010, 187-190.

Data from a wider study on the impact of large foodstores on market towns and district centres is used to study the change in linked trips which occurs when new edge of centre stores open. The study shows that some increase in linked trips occurs. A model of the factors which will impact on how many linked trips will be made is proposed and some calibration of expected levels of linked trips included. The importance of clawback and switching in linked trip propensity are noted.

Wrigley, N., Lambiri, D. and Cudworth, K.

Linked trips and town centre viability,

Town and Country Planning, 78(10), 2009, 432-438.

There has been an assumption that in market towns the existence of a large foodstore will result in more linked trips but this assumption is not evidence based. The article reports on a case study of the relocation of a Tesco store in Shepton Mallet to an edge of centre site. The new store led to some realignment of the town centre drawing it in the direction of the new edge of centres store. Those able to walk to the store did engage in more linked trips. The new store resulted in some changes within the town centre but did not result in any decline in the town centre. Overall linked trips were greater for the edge of centre store than they had been for the out of centre store. On a positive note the perception of the town centre improved and some clawback of trade took place.