Retail location analysis: An annotated bibliography

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Abstract The techniques associated with retail location and geographical market analyses are widely documented. A selection of the most useful are provided below. Where possible, abstracts, and links to Amazon.co.uk for books, have been provided, however a number of publications are marked as 'out of print' with Amazon. Particularly recommended titles are starred. It is hoped that readers find these suggestions useful.

BOOKS ON RETAIL LOCATION ANALYSIS

(★)Retail Geography and Intelligent Network Planning; M. Birkin, G. Clarke and M. P. Clark; £24.95; paperback; 296 pages; 26th April, 2002; John Wiley and Sons Ltd; ISBN 0471498033

'Retail Geography and Intelligent Network Planning' demonstrates the importance of geographical thinking in a wide variety of business situations. It illustrates the importance of modern location research through case studies and addresses the range of location, distribution and channel management issues which face retail and service businesses. This is the first book in this subject area to focus on geography and its usefulness in business throughout the analysis of real-world applications. It explores some of the trends taking place within the broad consumer-retailing sector, drawing on research undertaken in grocery, supermarket retailing, financial services, travel and leisure in Europe, North America and Australasia.

Numerous global case studies are used to

show key issues. It details how retailers can begin to develop information and analytical frameworks to better understand what is happening in the retail environment. It also describes how retailers can plan their cross channel network strategy for the future.

http://www.amazon.co.uk/exec/obidos/ASIN/0471498033/qid=1112264140/sr=8-1/ref=sr_8_xs_ap_i1_xgl/026-4935833-4546806.

Retail Location: A Micro-scale Perspective; Stephen Brown; hardback; 329 pages; 12th November, 1992; Avebury; ISBN 1856280497

This book focuses on the principles and practice of retail location at the micro-scale. It contains original research material as well as a synthesis of existing literature and should be of interest to retailers, town planners, shopping centre developers and retailing educators.

http://www.amazon.co.uk/exec/obidos/ASIN/1856280497/qid=1046686353/sr=1-9/ref=sr_1_1_9/202-6036983-6248634

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Applied GIS and Spatial Analysis; Graham Clarke and John Stillwell; hardback; 352 pages; 20th October, 2003; John Wiley and Sons Ltd; ISBN 0470844094

Spatial analysis is the use of geographical information and statistical methods for the analysis of specific applications, which can range from business location analysis to the study of inner city deprivation. Public and private sector organisations are increasingly looking towards spatial analysis and what it can do for their business or organisation. This book, structured in two complementary parts to convey a public-private focus, provides readers with a range of global applications for spatial analysis from business and local/national government. http://www.amazon.co.uk/exec/obidos/ASIN/0470844094/ref=pd_null_recs_b/026-2785997-6994804

Store Location and Store Assessment Research; R. L. Davies and D. S. Rogers (eds); hardback; 386 pages; 8th August, 1984; John Wiley and Sons Ltd; ISBN 0471903817

A comprehensive compilation of essays treating the principles and procedures involved in store location and store assessment research. Contributes both a theoretical perspective on the nature of the field and a series of case examples on how to undertake the research. Three fundamental components for developing an effective programme of store location and assessment research are provided: the changing environment of retailing, the establishment of a comprehensive information system, and a knowledge of a wide range of methodologies and techniques. http://www.amazon.co.uk/exec/obidos/ASIN/0471903817/qid=1077703060/sr=1-4/ref=sr_1_0_4/026-2785997-6994804

(*)Retail Impact Assessment: A Guide to Best Practice (Routledge/RICS Issues in Real Estate and Housing); John England; hardback; 240 pages; 19th October, 2000; Routledge, an imprint of Taylor & Francis Books Ltd; ISBN 0415216664

The rapid advances in retailing during the latter part of the 20th century have led to pressures for new forms of shopping development and conflicts with established planning policy on the location of new stores and centres. In response to these pressures, various methods have been devised to assess the potential impact of new retail developments on existing centres. This book reviews the methodology and emphasises a recommended best practice approach to the application of retail impact assessment. It shows why and how the current approaches to retail impact assessment need to be improved. It includes examples from all the major retail sectors, for example foodstores, retail warehouses, factory outlet centres and regional shopping centres. Evidence is given of the impacts different types of retail development have and an analysis is made of retail impact issues in Europe and North America, as well as the UK. Advice is given on the application of best practice, with an illustration of the impact assessment framework and a checklist for retail impact assessment. Conclusions are drawn on policy issues in retail planning and on the importance of a practical guide for assessing retail impact. The approach recommended has been tested through 12 years of practical experience in planning consultancy, specialising in retail planning. It has been shown to be a reliable method of predicting the impact of new retail developments and is sufficiently robust to cope with any future changes in government policy. The book has chapter summaries, as well as a glossary

and bibliography. 'Retail Impact Assessment' is an introduction to the subject for planners and surveyors working in this field and is a practical guide for new and experienced professionals involved with proposals for new retail development.
http://www.amazon.co.uk/exec/obidos/ASIN/0415216664/qid=1046687054/sr=1-5/ref=sr_1_0_5/202-6036983-6248634

Location Strategies for Retail and Service Firms; Avijit Ghosh and Sara L. McLafferty; hardback; 224 pages; August 1987; Lexington Bks, USA; ISBN 0669120324

Retail Location and Retail Planning in Britain; Clifford M. Guy; hardback; 202 pages; 1st May, 1980; Gower Publishing Co.; ISBN 0566002701

Advanced Spatial Analysis; P. Longley and M. Batty; paperback; 225 pages; 30th September, 2003; ESRI Press; ISBN 1589480732;
http://www.amazon.co.uk/exec/obidos/ASIN/1589480732/ref=pd_null_recs_b/026-2785997-6994804

Retail Location Analysis in Practice (Oxford Reports on Retailing); David Rogers; paperback; 62 pages; 10th February, 1992; Cartermill International; ISBN 0582088186

(*)Dynamics of Property Location; Russell Schiller; paperback; 192 pages; 6th September, 2001; Routledge, an imprint of Taylor & Francis Books Ltd; ISBN 0415246466

Why is property located where it is, and how has this process changed in recent years? A number of factors, such as social change and technological development, have affected location and these are

considered. Value, the way changing patterns of location are measured, is examined and a discussion of rent contours is given. The book considers location in the retail industry, looking at the theory, hierarchy, clustering and dispersal. The move to out-of-town sites, with its three waves of decentralisation, is described. Central place theory, dating from the 1930s, is discounted as being obsolete and misleading. Finally the book covers offices, industrial and residential property. Russell Schiller spent almost 30 years as a professional in the property sector. He sets out the text in a simple and non-technical manner imbued with a strong practical sense, to provide a solid textbook for the land economy or land management undergraduate student and junior professional.
http://www.amazon.co.uk/exec/obidos/ASIN/0415246466/qid=1046686921/sr=1-3/ref=sr_1_0_3/202-6036983-6248634

Store Choice, Store Location and Market Analysis; Neil Wrigley (ed.); hardback; 388 pages; 5th May, 1988; Routledge, an imprint of Taylor & Francis Books Ltd; ISBN 0415001994.

BOOKS ON CONSUMER BEHAVIOUR RELEVANT TO RETAIL LOCATION

Why We Buy: The Science of Shopping; Paco Underhill; paperback; 255 pages; 30th November, 2000; Texere Publishing; ISBN 158799044X

In an effort to determine why people buy, Paco Underhill and his detail-oriented band of retail researchers have camped out in stores for over 20 years, dedicating their efforts to the 'science of shopping'. Armed with an array of video equipment, store maps and customer profile sheets, Underhill and his

consulting firm Envirosell have observed over 900 aspects of shopper/store interaction. They have discovered that men who take jeans into the fitting room are more likely to buy than females (65 per cent to 25 per cent). They have learned how the 'butt-brush factor' (bumped from behind, shoppers become irritated and move elsewhere) makes women avoid narrow aisles. They have quantified the importance of shopping baskets, employees/shopper contact, the 'transition zone' (the area just inside the store's entrance) and 'circulation patterns' (how shoppers move throughout a store). And they have explored the relationship between a customer's amenability and profitability, learning how good stores capitalise on a shopper's unspoken inclinations and desires.

Lifestyle Pocket Book; NTC Publications

This book provides a detailed statistical profile of the British at work and play; how they spend their time and money — consumption and shopping habits, leisure activities, media usage, personal finance and many other 'lifestyle' indicators. Published with The Advertising Association.

GeoDemographic Pocket Book; NTC Publications

Practical information about the number, whereabouts, nature and spending patterns of the British consumer. 250 lifestyle indicators, market sizes and marketplaces, spending patterns across Britain, household incomes for 409 local authorities, household incomes at postcode level, shopping habits, population projections. 160 pages including profiles of Scotland and Northern Ireland, and ACORN group profiles.

The UK Market and Social Trends; NTC Publications

'The UK Market and Social Trends' provides long-term trends on consumer markets, the economy, population, retailing etc. Tables contain a minimum of ten years' data, and many tables extend 20, 30 or even 50 years. Published with the Advertising Association.

Targeting customers: How to Use Geodemographic and Lifestyle Data in Your Business; Peter Sleight; Third edition; NTC Publications, Henley-on-Thames

An extract of the chapter of this book reviewing geographic information systems appeared in the *Journal of Targeting, Measurement and Analysis for Marketing*, Vol. 12, No. 4, 2004.

PAPERS DEALING WITH STRATEGIC ASPECTS OF RETAIL LOCATION ANALYSIS

Mitchell, V. W. and McGoldrick, P. (1993) 'The role of geodemographics in segmenting and targeting consumer markets: A Delphi study', *European Journal of Marketing*, Vol. 28, No. 5, pp. 54–72, MCB University Press.

Devlin, J. F. (2002) 'Customer knowledge and choice criteria in retail banking', *Journal of Strategic Marketing*, Vol. 10, No. 4.

This paper presents an analysis of customer choice criteria in the retail banking market in the UK. Specifically, it investigated potential variations in the importance of various choice criteria, which were classified as either intrinsic or extrinsic in order to aid analysis, with respect to customer financial knowledge. A database of 6,700 respondents collected

by a commercial organisation was used in the analysis. The results suggest that all customers rely primarily upon extrinsic choice criteria when choosing a retail banking service. In addition, low financial knowledge is associated with a propensity to choose a bank purely on location or by recommendation and, while such factors are also important to higher financial knowledge groups, higher knowledge groups are more likely to take account of intrinsic attributes such as service features, rate of return and low fees in their choice.

Léo, P-Y. and Philippe, J. (2002) 'Retail centres: Location and consumer's satisfaction', *Service Industries Journal*, Vol. 22, No. 1.

This paper presents an analysis of consumers' shopping behaviour in metropolitan areas; assessment of consumers' shopping places providing global services; consideration of consumers regarding the availability of commercial malls; specificity of city centre commercial zones.

Pal, J., Bennison, D., Clarke, I. and Byron, J. (2001) 'Power, policy networks and planning: The involvement of major grocery retailers in the formulation of Planning Policy Guidance Note 6 since 1988', *International Review of Retail, Distribution & Consumer Research*, Vol. 11, No. 3.

This paper explores a neglected issue in the study of retail strategy and store location by considering the nature of policy networks operating at the interface between retailers and central government. It argues that informal networks, coupled with the economic power of retailers and the legitimisation of their activities with reference to the 'consumer interest', have served to provide retailers with an

influential avenue through which they can exert power over the nature of the regulatory environment within which they operate. The paper considers the limited extant 'evidence' of the operation of such networks before moving on to outline the results of a case study. The case study reflects on new store development in the UK grocery sector since 1988 as a backdrop to an analysis of the form of policy networks operating at the interface between government departments and retail organisations. It also explores the role of other stakeholders in this process. The existence of a number of such networks is described and their role explored with reference to the involvement of retailers in the formulation and evolution of Planning Policy Guidance Note 6 on retail development.

Popkowski Leszczyc, P. T. L., Sinha, A. and Timmermans, H. J. P. (2000) 'Consumer store choice dynamics: An analysis of the competitive market structure for grocery stores', *Journal of Retailing*, Vol. 76, No. 3.

This study aims at formulating and testing a model of store choice dynamics to measure the effects of consumer characteristics on consumer grocery store choice and switching behaviour. A dynamic hazard model is estimated to obtain an understanding of the components influencing consumer purchase timing, store choice and the competitive dynamics of retail competition. The hazard model is combined with an internal market structure analysis using a generalised factor analytic structure. The authors estimate a latent structure that is both store and store chain specific. This allows them to study store competition at the store chain level such as competition based on price such as everyday low

price (EDLP) versus a hi-lo pricing strategy and competition specific to a store due to differences in location.

Bennison, D., Clarke, I. and Pal, J. (1995) 'Locational decision making in retailing: An exploratory framework for analysis', *International Review of Retail, Distribution & Consumer Research*, Vol. 5, No. 1.

Competitive pressures on retailers in the 1990s led to a closer consideration and use of location as a source of competitive advantage. Increasingly, locational decisions involved not only the evaluation of potential new sites, but also the management of existing ones. This paper takes stock of the range of locational decision-making activity being undertaken by retailers through an exploratory study of 37 companies in the UK. The need for a strategic perspective for understanding locational decision-making activity is highlighted. A review and synthesis of work undertaken in the fields of strategic marketing and the geography of retailing leads on to the development of a conceptual framework for exploring the operational and strategic dimensions of location. The paper concludes with the identification of a research agenda for further work in this area.

Adams, D., Disberry, A., Hutchison, N. and Munjoma, T. (2002) 'Retail location, competition and urban redevelopment', *Service Industries Journal*, Vol. 22, No. 3.

This paper examines the interrelationship among retail location, competition and urban redevelopment in Great Britain; the impact of the availability of redevelopment sites for retailing activity; planning restrictions on retail development in off-centre locations; and implications for retail planning policy.

Hernandez, T. and Bennison, D. (2000) 'The art and science of retail location decisions', *International Journal of Retail & Distribution Management*, Vol. 28, No. 8/9.

This paper examines the extent to which retailers have taken advantage of the potential released by the developments in decision making; techniques for decision support; discussion of geographical information systems; application of location techniques; factors that influenced the variation in location decisions.

PAPERS DEALING WITH TECHNICAL ASPECTS OF RETAIL LOCATION ANALYSIS

Schellinck, T. and Groves, K. (2002) 'How low can you go? The value of sparse data in retail databases', *Journal of Database Marketing*, Vol. 9, No. 2.

This paper examines the effect of sparse data in retail databases on the ability of logistic regression, CHAID and neural networks to produce predictive models; methods of assessing the reliability and value of models; distribution of independent variable density; and gives an overview of recorded lifts for decreasing independent variable density matrices using sparse density matrices.

Jackson, C. (2001) 'A model of spatial patterns across local retail property markets in Great Britain', *Urban Studies*, Vol. 38, No. 9.

Jackson's paper examines the development of a cross-sectional model of retail property markets in towns and cities in Great Britain; the application of the multiple linear least-squares regression analysis; assessment of the spatial stability of the model; and identification of demand and supply measures.

Coates, D., Doherty, N., French, A. and Kirkup, M. (1995) 'Neural networks for store performance forecasting: An empirical comparison with regression techniques', *International Review of Retail, Distribution & Consumer Research*, Vol. 5, No. 4.

Dibb, S. and Simkin, L. (1994) 'Retail store performance model the impact of own-branch "Friendly Fire"', *International Transactions in Operational Research*, Vol. 1, No. 4.

Store location modelling is still far from accepted practice in most national retailers. A growing number, however, are implementing regression-based approaches. While, as a statistical technique, regression is far from innovative, its gradual acceptance in retailing is bringing welcome benefits to many companies. Implementation, though, requires careful planning. Developments have concentrated on incorporating competitive forces of two types — first the impact on sales of competitors' brands and store networks and secondly the fears of cannibalisation of sales as dense branch networks place a retailer's own stores in close proximity to each other, ie the impact of 'friendly fire'.

McGoldrick, P. J. and Thompson, M. G. (1992) 'The role of image in the attraction of the out-of-town centre', *International Review of Retail, Distribution & Consumer Research*, Vol. 2, No. 1.

The viability and impact of out-of-town, regional shopping centres is a crucial issue for developers, retailers, government and local planners. Location, transportation and accessibility are key determinants of success but many other factors exert strong influences upon patronage. This paper draws upon an empirical study, conducted between 1987

and 1990, of the Metro Centre, Europe's largest out-of-town shopping centre. The main elements of the centre's image are identified and compared with those of the nearby, in-town Eldon Square centre. Through the use of principal components analysis and multiple regression, an assessment is made of the power of image variables in helping to explain/predict relative patronage levels.

Kuo, R. J., Chi, S. C. and Kao, S. S. (2002) 'A decision support system for selecting convenience store location through integration of fuzzy AHP and artificial neural network', *Computers in Industry*, Vol. 47, No. 2.

This paper develops a decision support system for selecting a convenience store location; components of the proposed system; hierarchical structure of fuzzy analytic hierarchy process; accuracy of the proposed system.

Kumar, V. and Karande, K. (2000) 'The effect of retail store environment on retailer performance', *Journal of Business Research*, Vol. 49, No. 2.

Kumar and Karande discuss the effect of the retail store environment on retailer performance; internal and external store environment; segmentation of retail stores using socioeconomic characteristics; use of sales and sales per square foot as market-based measure.

Kaufmann, P. J., Donthu, N. and Brooks, C. M. (2000) 'Multi-unit retail site selection processes: Incorporating opening delays and unidentified competition', *Journal of Retailing*, Vol. 76, No. 1.

Multi-unit site selection models have long ignored the impact of time delays in store openings. To determine the effect of this limitation and to identify a solution, the authors compare three

multi-unit site selection procedures. The first is a sequential procedure that selects sites and then opens them one at a time. The second is a global approach that selects all future sites in a single decision process. Third is a proposed anticipated-delay procedure that incorporates opening delays, firm planning horizons and discount rates in determining appropriate sites for multi-unit retail systems. The authors further compare the results of these site-selection procedures to similar procedures that incorporate leakage to unidentified competitors when seeking locations for new outlets. They make the comparisons based upon discounted revenues by using a two-party, game-like simulation. The simulation estimates revenue results under the various alternatives while allowing for reactive and preemptive competitive store openings. Their results indicate that the anticipated-delay procedure incorporating leakage produces a significantly better revenue stream than either the standard sequential or global approach procedures.

Mahajan, V., Sharma, S. and Srinivas, D. (1985) 'An application of portfolio analysis for identifying attractive retail locations', *Journal of Retailing*, Vol. 61, No. 4.

This paper conceptualises retail store location decisions as a product-market portfolio problem. The portfolio approach is developed and illustrated for evaluating existing locations and identifying potential attractive locations for a financial institution. The major advantage of the proposed approach is that, unlike the existing models, it uses only secondary data which makes it inexpensive to implement.

Clark, I., Mackaness, W. and Ball, B. (2003) 'Modelling intuition in retail site

assessment (MIRSA): Making sense of retail location using retailers' intuitive judgements as a support for decision-making', *International Review of Retail, Distribution & Consumer Research*, Vol. 13, No. 2.

Analogues are used by retailers as a forecasting method and as performance benchmarks for new sites. This paper outlines an innovative analogue method that uses the 'intuitive' field-level judgments of retail directors obtained through cognitive mapping to classify sites according to their similarity to store analogues. The paper also discusses the problems of existing methods of site assessment relating to their tendency to underplay managerial judgments; outlines an innovative qualitative clustering method that mirrors decision-makers' knowledge to identify analogues by their degree of similarity to a new site; and assesses its value with reference to user responses in a live 'real-time' decision situation.

Schneider, K. C., Johnson, J. C., Sleeper, B. J. and Rodgers, W. C. (1998) 'A note on applying retail location models in franchise systems: A view from the trenches', *Journal of Consumer Marketing*, Vol. 15, No. 3.

In this paper it is asserted that the domestic fast food industry is undergoing a transition from growth to maturity. As a result, companies are fending off a flattening sales curve by looking abroad, searching out new target markets, crowding the market with more units. One form of assistance involves the development of mathematical models capable of determining "best" new locations. Using results from a survey of franchise owners in the fast food industry, reactions to methods by which franchisees are compensated for encroachment by the franchisor in the

context of mathematical location modelling are discussed. In general, franchisees expressed displeasure with the manner by which location models are applied to franchise systems to date.

USEFUL WEBSITES

MRS Geodemographics Knowledge Base
— <http://www.geodemographics.org.uk/index.html>

National Retail Planning Forum —
<http://www.nrpf.org/>
National Statistics Census —
<http://www.statistics.gov.uk/census2001/default.asp>
Office of the Deputy Prime Minister,
Town centre statistics sub-site —
http://www.odpm.gov.uk/stellent/groups/odpm_control/documents/contentservertemplate/odpm_index.hcst?n=2665&l=